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JD Edwards EnterpriseOne Configurator 9.0 Implementation Guide

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JD Edwards EnterpriseOne Configurator 9.0 Implementation Guide
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About This Documentation Preface

JD Edwards EnterpriseOne implementation guides provide you with the information that you need to implement and use JD Edwards EnterpriseOne applications from Oracle.

This preface discusses:

• JD Edwards EnterpriseOne application prerequisites.

• Application fundamentals.

• Documentation updates and downloading documentation.

• Additional resources.

• Typographical conventions and visual cues.

• Comments and suggestions.

• Common fields in implementation guides.

Note. Implementation guides document only elements, such as fields and check boxes, that require additional explanation. If an element is not documented with the process or task in which it is used, then either it requires no additional explanation or it is documented with common fields for the section, chapter, implementation guide, or product line. Fields that are common to all JD Edwards EnterpriseOne applications are defined in this preface.

JD Edwards EnterpriseOne Application Prerequisites

To benefit fully from the information that is covered in these books, you should have a basic understanding of how to use JD Edwards EnterpriseOne applications.

You might also want to complete at least one introductory training course, if applicable.

You should be familiar with navigating the system and adding, updating, and deleting information by using JD Edwards EnterpriseOne menus, forms, or windows. You should also be comfortable using the World Wide Web and the Microsoft Windows or Windows NT graphical user interface.

These books do not review navigation and other basics. They present the information that you need to use the system and implement your JD Edwards EnterpriseOne applications most effectively.

Application Fundamentals

Each application implementation guide provides implementation and processing information for your JD Edwards EnterpriseOne applications.

For some applications, additional, essential information describing the setup and design of your system appears in a companion volume of documentation called the application fundamentals implementation guide. Most product lines have a version of the application fundamentals implementation guide. The preface of each implementation guide identifies the application fundamentals implementation guides that are associated with that implementation guide.

The application fundamentals implementation guide consists of important topics that apply to many or all JD Edwards EnterpriseOne applications. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of the appropriate application fundamentals implementation guides. They provide the starting points for fundamental implementation tasks.

Documentation Updates and Downloading Documentation

This section discusses how to:

• Obtain documentation updates.

• Download documentation.

Obtaining Documentation Updates

You can find updates and additional documentation for this release, as well as previous releases, on Oracle's PeopleSoft Customer Connection website. Through the Documentation section of Oracle's PeopleSoft Customer Connection, you can download files to add to your Implementation Guides Library. You'll find a variety of useful and timely materials, including updates to the full line of JD Edwards EnterpriseOne documentation that is delivered on your implementation guides CD-ROM.

Important! Before you upgrade, you must check Oracle's PeopleSoft Customer Connection for updates to the upgrade instructions. Oracle continually posts updates as the upgrade process is refined.

See Also

Oracle's PeopleSoft Customer Connection, http://www.oracle.com/support/support_peoplesoft.html

Downloading Documentation

In addition to the complete line of documentation that is delivered on your implementation guide CD-ROM, Oracle makes JD Edwards EnterpriseOne documentation available to you via Oracle's website. You can download PDF versions of JD Edwards EnterpriseOne documentation online via the Oracle Technology Network. Oracle makes these PDF files available online for each major release shortly after the software is shipped.

See Oracle Technology Network, http://www.oracle.com/technology/documentation/psftent.html

Additional Resources

The following resources are located on Oracle's PeopleSoft Customer Connection website:

Resource	Navigation
Application maintenance information	Updates + Fixes
Business process diagrams	Support, Documentation, Business Process Maps

Resource	Navigation
Interactive Services Repository	Support, Documentation, Interactive Services Repository
Hardware and software requirements	Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Hardware and Software Requirements
Installation guides	Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Installation Guides and Notes
Integration information	Implement, Optimize + Upgrade; Implementation Guide; Implementation Documentation and Software; Pre-Built Integrations for PeopleSoft Enterprise and JD Edwards EnterpriseOne Applications
Minimum technical requirements (MTRs)	Implement, Optimize + Upgrade; Implementation Guide; Supported Platforms
Documentation updates	Support, Documentation, Documentation Updates
Implementation guides support policy	Support, Support Policy
Prerelease notes	Support, Documentation, Documentation Updates, Category, Release Notes
Product release roadmap	Support, Roadmaps + Schedules
Release notes	Support, Documentation, Documentation Updates, Category, Release Notes
Release value proposition	Support, Documentation, Documentation Updates, Category, Release Value Proposition
Statement of direction	Support, Documentation, Documentation Updates, Category, Statement of Direction
Troubleshooting information	Support, Troubleshooting
Upgrade documentation	Support, Documentation, Upgrade Documentation and Scripts

Typographical Conventions and Visual Cues

This section discusses:

• Typographical conventions.

• Visual cues.

• Country, region, and industry identifiers.

• Currency codes.

Typographical Conventions

This table contains the typographical conventions that are used in implementation guides:

Typographical Convention or Visual Cue	Description
Bold	Indicates PeopleCode function names, business function names, event names, system function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call.
Italics	Indicates field values, emphasis, and JD Edwards EnterpriseOne or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply. We also use italics when we refer to words as words or letters as letters, as in the following: Enter the letter *O*.
KEY+KEY	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press the W key.
`Monospace font`	Indicates a PeopleCode program or other code example.
" " (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meanings.
. . . (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe (	).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.

Visual Cues

Implementation guides contain the following visual cues.

Notes

Notes indicate information that you should pay particular attention to as you work with the JD Edwards EnterpriseOne system.

Note. Example of a note.

If the note is preceded by *Important!,* the note is crucial and includes information that concerns what you must do for the system to function properly.

Important! Example of an important note.

Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

Warning! Example of a warning.

Cross-References

Implementation guides provide cross-references either under the heading "See Also" or on a separate line preceded by the word *See.* Cross-references lead to other documentation that is pertinent to the immediately preceding documentation.

Country, Region, and Industry Identifiers

Information that applies only to a specific country, region, or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a country-specific heading: "(FRA) Hiring an Employee"

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

Country Identifiers

Countries are identified with the International Organization for Standardization (ISO) country code.

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in implementation guides:

• Asia Pacific

• Europe

• Latin America

• North America

Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in implementation guides:

• USF (U.S. Federal)

• E&G (Education and Government)

Currency Codes

Monetary amounts are identified by the ISO currency code.

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about implementation guides and other Oracle reference and training materials. Please send your suggestions to your product line documentation manager at Oracle Corporation, 500 Oracle Parkway, Redwood Shores, CA 94065, U.S.A. Or email us at appsdoc@us.oracle.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

Common Fields Used in Implementation Guides

Address Book Number	Enter a unique number that identifies the master record for the entity. An address book number can be the identifier for a customer, supplier, company, employee, applicant, participant, tenant, location, and so on. Depending on the application, the field on the form might refer to the address book number as the customer number, supplier number, or company number, employee or applicant ID, participant number, and so on.
As If Currency Code	Enter the three-character code to specify the currency that you want to use to view transaction amounts. This code enables you to view the transaction amounts as if they were entered in the specified currency rather than the foreign or domestic currency that was used when the transaction was originally entered.
Batch Number	Displays a number that identifies a group of transactions to be processed by the system. On entry forms, you can assign the batch number or the system can assign it through the Next Numbers program (P0002).
Batch Date	Enter the date in which a batch is created. If you leave this field blank, the system supplies the system date as the batch date.
Batch Status	Displays a code from user-defined code (UDC) table 98/IC that indicates the posting status of a batch. Values are:

Blank: Batch is unposted and pending approval.

A: The batch is approved for posting, has no errors and is in balance, but has not yet been posted.

D: The batch posted successfully.

E: The batch is in error. You must correct the batch before it can post.

P: The system is in the process of posting the batch. The batch is unavailable until the posting process is complete. If errors occur during the post, the batch status changes to *E*.

U: The batch is temporarily unavailable because someone is working with it, or the batch appears to be in use because a power failure occurred while the batch was open.

Branch/Plant Enter a code that identifies a separate entity as a warehouse location, job, project, work center, branch, or plant in which distribution and manufacturing activities occur. In some systems, this is called a business unit.

Business Unit Enter the alphanumeric code that identifies a separate entity within a business for which you want to track costs. In some systems, this is called a branch/plant.

Category Code Enter the code that represents a specific category code. Category codes are user-defined codes that you customize to handle the tracking and reporting requirements of your organization.

Company Enter a code that identifies a specific organization, fund, or other reporting entity. The company code must already exist in the F0010 table and must identify a reporting entity that has a complete balance sheet.

Currency Code Enter the three-character code that represents the currency of the transaction. JD Edwards EnterpriseOne provides currency codes that are recognized by the International Organization for Standardization (ISO). The system stores currency codes in the F0013 table.

Document Company Enter the company number associated with the document. This number, used in conjunction with the document number, document type, and general ledger date, uniquely identifies an original document.

If you assign next numbers by company and fiscal year, the system uses the document company to retrieve the correct next number for that company.

If two or more original documents have the same document number and document type, you can use the document company to display the document that you want.

Document Number Displays a number that identifies the original document, which can be a voucher, invoice, journal entry, or time sheet, and so on. On entry forms, you can assign the original document number or the system can assign it through the Next Numbers program.

Document Type Enter the two-character UDC, from UDC table 00/DT, that identifies the origin and purpose of the transaction, such as a voucher, invoice, journal entry, or time sheet. JD Edwards EnterpriseOne reserves these prefixes for the document types indicated:

P: Accounts payable documents.

R: Accounts receivable documents.

T: Time and pay documents.

I: Inventory documents.

O: Purchase order documents.

S: Sales order documents.

Effective Date	Enter the date on which an address, item, transaction, or record becomes active. The meaning of this field differs, depending on the program. For example, the effective date can represent any of these dates:

- The date on which a change of address becomes effective.

- The date on which a lease becomes effective.

- The date on which a price becomes effective.

- The date on which the currency exchange rate becomes effective.

- The date on which a tax rate becomes effective.

Fiscal Period and **Fiscal Year**	Enter a number that identifies the general ledger period and year. For many programs, you can leave these fields blank to use the current fiscal period and year defined in the Company Names & Number program (P0010).
G/L Date (general ledger date)	Enter the date that identifies the financial period to which a transaction will be posted. The system compares the date that you enter on the transaction to the fiscal date pattern assigned to the company to retrieve the appropriate fiscal period number and year, as well as to perform date validations.

JD Edwards EnterpriseOne Configurator Preface

This preface discusses:

• JD Edwards EnterpriseOne products.

• JD Edwards EnterpriseOne application fundamentals.

• Common fields used in this implementation guide.

JD Edwards EnterpriseOne Products

This implementation guide refers to these JD Edwards EnterpriseOne products from Oracle:

• JD Edwards EnterpriseOne Inventory Management

• JD Edwards EnterpriseOne Sales Order Management

• JD Edwards EnterpriseOne Procurement and Subcontract Management

• JD Edwards EnterpriseOne Manufacturing - Shop Floor

• JD Edwards EnterpriseOne Manufacturing - PDM

• JD Edwards EnterpriseOne Requirements Planning

• JD Edwards EnterpriseOne Manufacturing - ETO Foundation

• JD Edwards EnterpriseOne Quality Management

• JD Edwards EnterpriseOne Work Order Management

• JD Edwards EnterpriseOne Advanced Pricing

JD Edwards EnterpriseOne Application Fundamentals

Additional, essential information describing the setup and design of the system resides in a companion volume of documentation called *JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide.*

Customers must conform to the supported platforms for the release as detailed in the JD Edwards EnterpriseOne minimum technical requirements. In addition, JD Edwards EnterpriseOne may integrate, interface, or work in conjunction with other Oracle products. Refer to the cross-reference material in the Program Documentation at http://oracle.com/contracts/index.html for Program prerequisites and version cross-reference documents to assure compatibility of various Oracle products.

See *JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "JD Edwards EnterpriseOne Inventory Management Preface".

Common Fields Used in This Implementation Guide

Configured Item

Enter a number that identifies a configured item.

Cfg Item Alias (configured item alias)

Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the rule.

The Cfg Item Alias field on the assembly inclusion rule form provides the ability to reference a specific occurrence of an included item. This is not a required field. The Cfg Item Alias field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.

Important! You should use the Cfg Item Alias field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left and Configured Item Alias Right fields in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Configured Item Alias Left and **Configured Item Alias Right**

Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the left or right side of the condition.

The Configured Item Alias Left and Configured Item Alias Right fields on the cross-segment editing and assembly inclusion rule forms provide the ability to reference a specific occurrence of an included item. This is not a required field. The Configured Item Alias Left and Configured Item Alias Right fields are for use with duplicate components. If you do not use these fields with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.

Important! It is recommended that you use the Configured Item Alias Left and Configured Item Alias Right fields to ensure that the correct duplicate item is used in a configuration.

Derived Calculation

Enter an algebraic formula that specifies the quantity, price, hours, or a value associated with a rule.

These examples illustrate the syntax for possible derived calculations:

Segment References

S3 indicates segment 3.

S3=Piston= indicates segment 3 in item Piston.

Trigonometric and Logarithmic Functions

SIN(20) indicates the sine of 20.

COS(S3) indicates the cosine of segment 3.

TAN(S4) indicates the tangent of segment 4.

ARC(S3) indicates the arctangent of segment 3.

LOG indicates log to base 10.

LN indicates natural log.

2**5 indicates an exponent, 2 to the fifth power.

Substring

SUBSTR(S10,1,4) indicates that the substring from segment 10 starts at the first position of the string and includes the first 4 positions.

Concatenations

CONCAT(S3,S4) combines the values of segments 3 and 4.

External Fields

Specifies the fields from non-configurator tables that you want the system to access as part of a calculation. Use the ampersand character followed by the field name. For example, &T2AMTU(WD) indicates an amount field in the Item Supplemental Database table, and the WD data type.

External Programs

Specifies that a program external to the JD Edwards EnterpriseOne system from Oracle is to be used for the calculation. Enter the name of the external program and *EXTVAR* in the Derived Calculations field.

Smart Parts

'P'S4 indicates a smart part number P2000 when the value of segment 4 is 2000.

Description	Enter the name of the feature or option that is associated with the segment number.
Effective From, Effective From Date, Effective Thru (effective through) and **Effective Thru Date** (effective through date)	Enter dates that indicate when a rule takes effect or is no longer active in the JD Edwards EnterpriseOne Configurator system from Oracle. The dates determine whether the system processes the rule during configuration validation of the order. These dates apply to cross-segment editing and assembly inclusion rules.
External Program	Enter the name of the external program that will be providing values for external variables.
Line Type	Enter a code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interacts, such as JD Edwards EnterpriseOne General Ledger from Oracle, JD Edwards EnterpriseOne Job Cost from Oracle, JD Edwards EnterpriseOne Accounts Payable from Oracle, JD Edwards EnterpriseOne Accounts Receivable from Oracle, and JD Edwards EnterpriseOne Inventory Management from Oracle. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include: *S:* Stock item *J:* Job cost

N: Nonstock item

F: Freight

T: Text information

M: Miscellaneous charges and credits

W: Work order

Op (operator, operand, and and/or selection)	Enter a code that determines whether compound data selection logic is based on an A = AND condition or an O = OR condition. For configuration management, you can include parts, prices, costs, or routings with the configured item. Additional values include:

I: If

E: Else

*: Then

For example:

I Seg 1 = A

* Part B

E Part C

E Part D

If Seg 1 equals A, include part B.

If Seg 1 does not equal A, include part C and part D.

Product Code and **User Code**	Enter a code that identifies the table that contains user-defined codes. The table is also referred to as a UDC type.
	If you define a calculated segment, you do not need to enter a user-defined code.
Rel (relationship)	Enter a code that identifies the operands in Boolean logic. You can specify any of these codes:

CE: Can be equal to

EQ: Equal to

LT: Less than

LE: Less than or equal to

GT: Greater than

GE: Greater than or equal to

NE: Not equal to

NL: Not less than

NG: Not greater than

Rule Table and **Rules Table Name**	Enter the name of a collection of data that you set up to minimize the number of assembly inclusion rules that you need for a configured item. You must define rule table names in user-defined code table 32/TN. A rule table can be accessed by 1 to 20 keys and can return up to 99 values. When you reference a rule table in an assembly inclusion rule, the system uses the rule keys to

retrieve the values that are associated with the rule table. For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component when the customer enters Red for segment 10. In this example, the table would be:

Item Color: Value

Red: Red Component

The table would include the statement:

If the color segment value is red, then use item number Red Component on the configured item sales order and work order parts list.

You can create a configured table for any rule type except R (routing) rules.

Segment Branch and **Segment Branch/Plant**	Specify the branch/plant of the item in the Segment Item field.
	Enter a business unit, which is an accounting entity required for management reporting. It can be a profit center, department, warehouse location, job, project, work center, branch/plant, and so forth.
	This business unit is from the business unit entered on the header of a sales/purchase order for reporting purposes.
	This data is always right justified on entry (for example, CO123 would appear as _____CO123). A security mechanism has been provided to inhibit users from entering or locating business units outside the scope of their authority.
Segment Description	Enter the name of the feature or option that is associated with the segment number. This field is automatically populated, based on information from the Configured Item, Branch/Plant, Segment Number, and Segment Item fields.
	You can enter specific values for the segments that are included in a configured item. Segment values are separated by a special character, called the segment delimiter.
	For the JD Edwards EnterpriseOne Configurator system, this is the name of the feature or option that is associated with the segment number.
Segment Item	Reference a previously selected segment from a different configuration level.
Segment Number and **Seg Num** (segment number)	Enter a number that establishes the sequence in which the segments were defined in the system. Segment numbers are user-defined.
	Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.
	Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.
Smart Part	Enter a formula that calculates the part number associated with a rule. A smart part formula consists of a literal value (constant) and a segment answer (variable). The literal value must be in single quotes. For example:
	The part number consists of the literal ʹPʹ and the value of segment 4. If the smart part calculation and the value of Segment 4 is 2000, then the smart part would be P2000.

To reference segments that have already been entered on a different level, specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is:

`Derived Calculation S4=Piston=`

`SUBSTR(S4,2,3)` where 2 is the beginning position and 3 is the length of the substring.

To combine two fields, use the concatenation function. For example, `CONCAT(S3,S1)` which will combine the values of Segment 3 and 1 into one field.

Trans Type (transaction type)

Enter a value from UDC 32/DE that specifies the type of transaction that the component of a configured item should generate. If the conditions for the transaction, processing options, and branch/plant are not correct for the transaction type, then the system does not generate the transaction. You use the Trans Type field in combination with the Write Attached Detail Line field on the Assembly Inclusion Edit Group Revisions form. Values are:

0: Sales Order

1: Direct Ship

2: Transfer

3: Inter Branch/Company

4: Purchase Order

Note. If you select the direct ship or purchase order transaction type, you must enter a supplier number in the Supplier Number field for the component item.

This field works only with a P type rule.

When the value of the Trans Type field is *4* (purchase order), the system validates both the stocking type and line type of the component item. Items with a stocking type of phantom or a line type set to generate a purchase order or work order are not supported.

((bracket selection beginning) and **)** (bracket selection ending)

Enter a collection of open and closed brackets to group conditional configurator rules.

For example, to define the condition (Seg 1 = A OR Seg 2 = B) AND Seg 3 = C, use the brackets:

`(Seg 1 = A O Seg 2 = B) A Seg 3 = C`

CHAPTER 1

Getting Started with JD Edwards EnterpriseOne Configurator

This chapter discusses:

• JD Edwards EnterpriseOne Configurator overview.

• JD Edwards EnterpriseOne Configurator integrations.

• JD Edwards EnterpriseOne Configurator implementation.

JD Edwards EnterpriseOne Configurator Overview

Configurator is a tool that automates the selection and configuration of highly complex products. Highly complex products have related features and options. A relationship results when an association or correlation between the features and options or associated parts exists within its subassemblies. Configurator enables a manufacturer to configure its existing product to the detailed and specific requests of its customers. Configurator also guides users in the creation of configured end-item product through product definition (features and options), rules, and calculations. The result is a valid, highly configured product.

JD Edwards EnterpriseOne Configurator Integrations

JD Edwards EnterpriseOne Configurator from Oracle works with other JD Edwards EnterpriseOne applications to ensure that all information is fully integrated into supply chain management. The configurator is a business enabler for configuring manufactured and assembled end-item products. It is a front-office-to-back-office product. The JD Edwards EnterpriseOne Configurator features seamless integration with these Oracle products: JD Edwards EnterpriseOne Inventory Management, JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Procurement, JD Edwards EnterpriseOne Manufacturing, and JD Edwards EnterpriseOne Distribution systems. In its simplest form, it integrates sales with manufacturing—from entering the sales order to generating the work order to shipping the product to the customer.

JD Edwards EnterpriseOne Inventory Management

The JD Edwards EnterpriseOne Inventory Management system stores item information, sales and purchasing costs, and quantities that are available by location. You use JD Edwards EnterpriseOne Inventory Management to set up item information for configured items and their components, and configured subassemblies. Programs in JD Edwards EnterpriseOne Inventory Management define the configured item information, such as how the item is identified and stocked.

JD Edwards EnterpriseOne Product Data Management

The JD Edwards EnterpriseOne Product Data Management (PDM) system from Oracle enables you to organize and maintain information about each item that you manufacture. JD Edwards EnterpriseOne Configurator further defines the relationship between items and how they can be manufactured.

JD Edwards EnterpriseOne Shop Floor Management

The JD Edwards EnterpriseOne Shop Floor Management (SFM) system from Oracle enables you to control the flow of materials inside the plant by managing and tracking manufacturing work orders. It provides an effective way to maintain and communicate information that the system requires to complete production requests.

JD Edwards EnterpriseOne Configurator integrates with JD Edwards EnterpriseOne SFM to manage the work orders for configured items. However, before you can process work orders for configured items, you must enter business-specific information in the Shop Floor programs within the JD Edwards EnterpriseOne Manufacturing system.

JD Edwards EnterpriseOne Sales Order Management

The JD Edwards EnterpriseOne Sales Order Management system controls all aspects of processing sales orders. JD Edwards EnterpriseOne Configurator works with the JD Edwards EnterpriseOne Sales Order Management system to configure the way that you enter and process sales orders for configured items.

JD Edwards EnterpriseOne Procurement

The JD Edwards EnterpriseOne Procurement system controls all aspects of purchasing activities. JD Edwards EnterpriseOne Configurator works with JD Edwards EnterpriseOne Procurement to configure the way that you enter and process purchase orders for configured items.

JD Edwards EnterpriseOne Work Order Management

The JD Edwards EnterpriseOne Work Order Management system from Oracle controls the processing of work orders. JD Edwards EnterpriseOne Configurator works with JD Edwards EnterpriseOne Work Order Management to configure the way that you enter and process work orders for configured items.

JD Edwards EnterpriseOne Engineer to Order

The JD Edwards EnterpriseOne Engineer to Order (ETO) system from Oracle controls all aspects of project management, primarily in an engineer-to-order (ETO) environment. JD Edwards EnterpriseOne Configurator works with JD Edwards EnterpriseOne ETO to configure the way that you enter and process various order types for configured items, which are part of a project.

JD Edwards EnterpriseOne Configurator Implementation

This section provides an overview of the steps that are required to implement the JD Edwards EnterpriseOne Configurator system.

In the planning phase of the implementation, take advantage of all JD Edwards EnterpriseOne sources of information, including the installation guides and troubleshooting information. A complete list of these resources appears in the preface in *About This Documentation* with information about where to find the most current version of each.

When determining which electronic software updates (ESUs) to install for JD Edwards EnterpriseOne Configurator, use the EnterpriseOne and World Change Assistant. EnterpriseOne and World Change Assistant, a Java-based tool, reduces the time required to search and download ESUs by 75 percent or more and enables you to install multiple ESUs at one time.

See *JD Edwards EnterpriseOne Tools 8.98 Software Update Guide.*

Global Implementation Steps

This table lists the suggested global implementation steps for the JD Edwards EnterpriseOne Configurator system:

Step	Reference
1. Set up global user-defined code tables.	*JD Edwards EnterpriseOne Product Data Management 9.0 Implementation Guide*, "Setting Up Product Data Management," Defining Document Type Constants for Work Orders
2. Set up fiscal date patterns, companies, and business units.	*JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide*, "Setting Up Organizations"
3. Set up system next numbers.	*JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide*, "Setting Up Next Numbers"
4. Set up accounts.	*JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide*, "Creating the Chart of Accounts"
5. Set up general accounting constants.	*JD Edwards EnterpriseOne General Accounting 9.0 Implementation Guide*, "Setting Up the General Accounting System," Setting Up Constants for General Accounting
6. Set up multicurrency processing, including currency codes and exchange rates.	*JD Edwards EnterpriseOne Multicurrency Processing 9.0 Implementation Guide*, "Setting Up General Accounting for Multicurrency Processing"
7. Set up ledger type rules.	*JD Edwards EnterpriseOne General Accounting 9.0 Implementation Guide*, "Setting Up the General Accounting System," Setting Up Ledger Types for General Accounting
8. Set up address book records.	*JD Edwards EnterpriseOne Address Book 9.0 Implementation Guide*, "Entering Address Book Records"
9. Set up default location and printers.	*JD Edwards EnterpriseOne Tools 8.98 Development Tools: Report Printing Administration Technologies Guide, "Working with Report Printing Administration"*
10. Set up branch/plant constants.	*JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Entering Item Information," Entering Branch/Plant Information
11. Set up manufacturing and distribution automatic accounting instructions.	*JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Setting Up the Inventory Management System," Setting Up AAIs in Distribution Systems

Step	Reference
12. Set up document types.	*JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Setting Up the Inventory Management System," Setting Up Document Type Information
13. Set up shop floor calendars.	*JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide*, "Setting Up Shop Floor Management," Setting Up Shop Floor Calendars
14. Set up manufacturing constants.	*JD Edwards EnterpriseOne Product Data Management 9.0 Implementation Guide*, "Setting Up Product Data Management," Setting Up Manufacturing Constants

Configurator Implementation Steps

This table lists the suggested application-specific implementation steps for JD Edwards EnterpriseOne Configurator:

Step	Reference
1. Set up configurator constants.	Chapter 4, "Setting Up Configurator," Setting Up Configurator Constants, page 35
2. Set up configured item information.	Chapter 4, "Setting Up Configurator," Defining Configured Item Information, page 41
3. Set up configured item segments.	Chapter 4, "Setting Up Configurator," Setting Up Configured Item Segments, page 37
4. Set up cross-segment editing rules.	Chapter 4, "Setting Up Configurator," Setting Up Cross-Segment Editing Rules, page 50
5. Set up assembly inclusion rules.	Chapter 4, "Setting Up Configurator," Setting Up Assembly Inclusion Rules, page 59
6. Set up configured tables.	Chapter 4, "Setting Up Configurator," Setting Up Configured Tables, page 85

CHAPTER 2

Understanding Configurator

This chapter discusses:

- Industry environment and concepts for configurator.
- Configured items and the manufacturing environment.
- Configured items.
- Configurator features.
- Configurator system integration.

Industry Environment and Concepts for Configurator

This section discusses:

- Industry environment and configured items.
- Configuration methods used today.
- Definition of a configurator.
- Business environment and configurators.
- Benefits of a configurator.

Industry Environment and Configured Items

Customers today require manufacturers to build complex product configurations that follow detailed specifications. Manufacturers build a basic product to customer specifications and might even provide some level of customization.

Configured items are products that customers specify; they are not make-to-stock items that can be bought ready-made. Because customers specify configured products, features and options are associated with the final product. Thus, infinite combinations of the end item can exist.

In addition, customers want improved service, including detailed, real-time information at order entry and shorter lead times from order to delivery of the product.

Manufacturers need to respond to the pressure and opportunities that are presented by the configuration and customization needs of their customers. Currently, manufacturers struggle with manual paperwork, slow response times, lack of systems integration, and product volume versus complexity. Manufacturers need the agility to provide specialized (configured) products at a competitive price.

To be agile, manufacturers require assistance to input customer specifications that create a valid configuration of an end product. A manufacturer then needs to communicate the customers' requirements to the rest of its internal organization, associated branch/plants, and suppliers. A company's sales, manufacturing, and service organizations need a fast, accurate, and flexible system on which they can rely.

Configuration Methods Used Today

Typically, manufacturers use three different approaches to handling complex product configurations:

- The first approach is to create unique end-part numbers. This approach creates a part number for every combination of features and options that build a viable end-item product. This method can be cumbersome and not conducive to change because the quantity of part number can become too large to effectively manage.

- The second approach is to create generic end-part numbers with extended manual descriptions. Embedded in the text is critical information about the features and options that are included in a final product. All inventory records in the system appear as the same product because it bears the same part number, even though the features and options might be different for each end item. This technique leaves a poor audit trail for parts, priority and capacity planning are limited, and costs are distorted. These results occur because the software system has no way to retrieve and use the embedded text information.

- The third approach is to use a configurator—that is, a tool developed to handle complex products.

Definition of a Configurator

The configurator is a tool that automates the selection and configuration of highly complex products. Highly complex products have related features and options. A relationship results when an association or correlation between the features and options or associated parts exists within its subassemblies. A configurator enables a manufacturer to configure its existing product to the detailed and specific requests of its customers. It guides users to create a configured end-item product through product definition (features and options), rules, and calculations. The result is a valid, highly configured product.

The configurator formerly was called a *product configurator* because it configured an end-item product to customer specifications. Although the configurator performs the same function, the new term for a configurator is *sales configurator* because configurators are quickly becoming a vital part of automating the sales process.

Business Environment and Configurators

Configurators are used to assist sales order entry personnel during the sales process. The information gathered and generated during sales order entry is then communicated to the organization to support manufacturing and distribution processes.

In today's competitive business environment, the ability of a business to perform many types of transactions for configured items is becoming increasingly important. Thus, sales order systems need the ability to process sales quotes and manage credit, direct ship, transfer, interbranch, and combination orders for configured items. These transactions support companies that have global operations and work closely with their suppliers.

The ability to create a purchase order for configured items is also a necessity. Some companies have suppliers who manufacture the parent configured item or a configured component that goes into the end item. The electronics industry is such a case.

Some manufacturers might want the ability to create work orders for configured items without having to create a sales order. This ability gives the manufacturer flexibility to build configured items to stock.

In some instances, a need for integration with an engineering project management module might exist. Engineer-to-order environments might have a component of the projet that is a configured item. Thus, the ability to manage these items, whether purchased or manufactured, could be critical to the overall project.

Benefits of a Configurator

Although a configurator requires intensive, detailed, front-end setup, it provides benefits by enabling you to perform these tasks:

- Specify features and options.
- Establish relationships between features and options.
- Generate a configured parts list.
- Create a configured routing.
- Establish a configured price.
- Reduce order lead time.
- Improve customer service.
- Create fewer end part numbers.
- Produce a configuration audit trail.

When selling complex, highly configurable manufactured products, the presentation and quoting assistance that a configurator provides can be a powerful sales tool. Customer service representatives do not need to know the product intimately to enter an order. The configurator leads the customer service representatives through the configuration and provides error messages so that the customer can order a valid configured product. Customer service representatives also can communicate real-time information, such as price and weight, to customers.

After an order is complete and the customer accepts it, the order communicates appropriate and correct information to the manufacturing and distribution departments. An integrated system facilitates a correct product build in a timely manner.

Although a configurator requires detailed setup, as well as timely and careful maintenance for product changes, it is a powerful tool for which the benefits cannot be overlooked. A configurator communicates accurate specifications and product requirements throughout the entire organization to the customer, as well as to suppliers.

Configured Items and the Manufacturing Environment

You must understand both the configured item and manufacturing environment to determine if a configurator is suitable.

This section discusses:

- Configured items and the manufacturing environment.
- Configured item analysis.
- Configurator need assessment.

Configured Items and the Manufacturing Environment

A configurator is best suited for assemble-to-order and make-to-order manufacturing environments. Kit processing is usually better suited to pick-to-order environments if no relationships exist between kits or components within kits. An engineer-to-order environment produces one-of-a-kind items that might never be built again. Thus, investing in a configurator and the associated setup is usually not cost-effective in such an environment. The basic to-order environments are:

Pick-to-Order

The pick-to-order environment is the selection of kits (parts lists of components). The pick-to-order environment can use kit processing or a configurator. The tool that you use depends on the product specifications. In general, kit processing can process features and options. Usually, no relationship exists between the kits or the parts in each individual kit. All combinations of kits and parts are allowed. Thus, the kit processing technique can be used for validation. Kit processing might not be appropriate for complex specifications or conditional part requirements.

An example of a pick-to-order environment is the computer industry. When a customer selects a monitor, printer, and other items, you can select kits to include the appropriate cables, user guides, packaging materials, and so on that are required to ship with the customer's product.

Assemble-to-Order

Assemble-to-order manufacturing is a manufacturing environment in which the customer is contacted after the features and options have been fabricated, but before final assembly of the product. Thus, the raw material and components are built up to some subassembly level called features and options. After the customer has communicated specifications, the subassemblies are built into the final end-product.

An example of assemble-to-order environment is the touch-free car wash machine. Although relationships exist between the features and options, the individual features, options, and frame can be sub-assembled. After the customer's specifications are identified, the feature and option subassemblies can be mounted to the frame to build the final complete machine.

Make-to-Order

In make-to-order manufacturing, the customer communicates specifications before production begins at any level in the product structure. No subassemblies exist in this manufacturing method, only raw material and components. Production begins after the customer identifies specifications.

Examples of this production method are building products (lumber), windows, and doors. These products are make-to-order because the customer must specify the length, width, thickness, finish, style, and other attributes of these products before any production can begin.

Engineer-to-Order

Engineer-to-order starts at the raw material and component level, and builds to the end-item. No features and options exist at all in an engineer-to-order environment. Usually, engineer-to-order products are so specialized and for such a specific use that only one end-item is ever built. However, the use of the processes to build the product and some common components might be prevalent.

Examples of engineer-to-order end-item products are space shuttles; satellites; custom homes; and architectural projects, such as buildings and bridges. These products are usually built to special specifications only once.

Configured Item Analysis

You need to understand the product and manufacturing processes. To assist you in better understanding the product and manufacturing processes, perform extensive data gathering and product analysis.

To understand the manufactured product, gather and review sales and marketing materials. Determine the way in which the sales and marketing team understands the features, options, and final product. What is presented to the customer?

Review engineering drawings and bills of material. Also, review manufacturing routings for manufactured items and assemblies (features, options, final product). Determine how the engineering and manufacturing teams view the product. How is the product defined and manufactured?

Conduct interviews with people from sales and marketing, sales order entry, procurement, manufacturing, assembly, and engineering to better define and understand the features, options, final assembled product, and the relationships between these components. Determine whether everyone has the same understanding of the product, and if not, clarify discrepancies.

Before you work with a configurator, ensure that you can answer these questions about the configured items:

• How do the customers order the configured item?

• How will you price the configured item?

• Which features and options make up the configured items?

• Which routings do the configured items require?

• Which calculations are required to support prices, features, options, components, and routing steps?

The answers to these questions (and similar questions that arise) help you determine which features and options to consider for possible inclusion in the configured items that you intend to make available to the customers. You will also have solid information from which to develop the best strategy for assembling the configured items. Determining the strategy for assembling configured items can save time during the initial system setup and facilitate subsequent adjustments.

Configurator Need Assessment

After you determine the business manufacturing environment and gain an understanding of the product's features, options, final assembled product, and—most importantly—the relationships that exist among them, you can determine whether you need a configurator.

For a product that is manufactured in a to-order environment and that has no relationship between the features and options or the associated parts within those subassemblies, kit processing might be the best tool. However, a configurator is not a cost-effective tool for complex, one-of-a-kind end items that you manufacture in an engineer-to-order environment.

A basic decision point in determining the need for a configurator is that the final manufactured product is complex and based on customer specifications. Also, a relationship exists between features and options; and some might not be compatible with others. Manufacturing routings and product pricing also change, based on the final end-item configured product.

If the relationships among features and options need to be defined to prevent invalid product configurations in the to-order manufacturing environment, then a configurator might be a good tool for the company.

Configured Items

Many manufacturers sell configured items. A configured item is a product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power rating, color, materials used, and so on. For example, a forklift is a configured item that is assembled from an arrangement of features and options that might include the power source, counterweight, and paint color, as well as the boom assembly, the engine type, the hydraulics system, and so on.

Additional examples of configured items include:

- Furniture and fixtures.

- Paper products.

- Building products.

- Commercial printing.

- Control and measurement equipment.

- Transportation equipment.

- Windows, doors, and other dimensional products.

When customers place orders for configured items, they expect to be able to specify features and options about the items. The configurator enables you to respond to complex customer orders for configured items. Using the JD Edward EnterpriseOne Configurator system, you can assemble a large variety of configured items from relatively few components. You can set up configurations of features and options that constitute the configured items that you want to have available for sale, based on the best business practices and the needs of the customers.

When you enter an order for a configured item, the JD Edwards EnterpriseOne Configurator system queries you about the features and options of the item that you requested. After you respond to the query about the configured item, the system verifies the information that you provide with the setup information that you previously defined. If the configuration is valid, the system processes the order.

The system also offers kit processing that enables feature and option processing. However, kit processing might not be appropriate for features or complex specifications, such as conditional part requirements. The JD Edwards EnterpriseOne Configurator system is appropriate for items that have these characteristics:

- Complexity.

- Routings that change, based on features or options.

- Features that are not compatible with other features.

- Multiple work orders to define an assembly.

Use the JD Edwards EnterpriseOne Configurator system to facilitate these best business practices:

- Use fewer end-part numbers.

- Create dynamic work order parts lists and routings.

- Create order history and configuration audit trails.

- Improve order accuracy.

- Shorten lead times.

- Provide better margin information.

- Improve customer service.

This table defines key terms for the JD Edwards EnterpriseOne Configurator system:

Element	Description
Configured item	A product that is assembled from an arrangement of features and options. Features and options might include size, capacity, power type, color, materials used, and so on.

Element	Description
Multilevel configured item	A configured subassembly within a configured item. A configured item, such as a forklift, is sometimes referred to as a multilevel configured item because it includes subassemblies such as the boom, engine, hydraulics, and so on. Each subassembly can also include a subassembly, such as the carburetor assembly within the engine. A multilevel configured item has a tree structure, or hierarchy such as: 1. Forklift 2. Engine 3. Carburetor The JD Edwards EnterpriseOne Configurator system validates subassemblies in the same way that it validates end-product configured items. The segments that are included in each subassembly must be valid when the system queries the setup information which you provided. See the graphic at the end of this overview for an example of a multilevel configured item.
Segment	The features and options that constitute a configured item. Each segment represents a characteristic of the configured item. For example, the forklift that is used in the pristine data (configured item 6000) includes these segments: 10 Forklift rating 20 Power Type 30 Boom height 35 Interior 40 Paint 50 Propane Tank 60 Calculated Counter Weight You can further specify the options that are available within each segment. For example, these are available options within the forklift rating segment: 2000 pounds 4000 pounds 6000 pounds At order entry, a segment represents a question about a configured item attribute.
Segment value	The answer to a question about a configured item attribute that is entered at order entry.

Element	Description
Cross-segment editing rule	Logic statements that you use to establish the relationships between the segments of a configured item. For example:
	If segment 10 (forklift rating) equals 6000 pounds, then segment 20 (power type) must equal GAS.
	By using cross-segment editing rules, you can avoid invalid configurations, and end-users are less likely to enter invalid orders. The system validates the segments on the order with the cross-segment editing rules. Error messages appear for configurations that violate the rules.
Assembly inclusion rule	Rules that translate requested features and options from the order into the specific values, components, routing operations, and calculated values that are necessary to build and price the configured item. For example:
	If segment 10 equals 6000 and segment $30 \geq 10$, then use part F170, else part F175.
Duplicate component	Multiple instances of a configured component item in a configured parent item. A single part number is used, and each new instance of the component can be configured uniquely or be the same. Duplicate components are set up using P assembly inclusion rules.
Configured rules table	A configured rules table is a collection of data that you define for a configured item. During order processing, assembly inclusion rules can refer to tables to retrieve information. Tables can be used to reduce the number of assembly inclusion rules that are required. Although time is added to the setup process, the system processing time is improved because of the reduced number of assembly inclusion rules.
Configuration ID	An identifier that represents a unique configuration. It is generated from an encryption algorithm. Regardless of the number of segments or levels in the configured item, the system always converts the information into a 32-character digest. The digest is always a full 32 characters in length, consists of numbers and characters, and does not contain any blanks. You cannot determine the initial value from the digest, and it has no significant meaning.

Example: Multilevel Configured Item

This diagram illustrates an example of a multilevel configured item, a forklift (item 6000). Its subassemblies include the boom (item 6100) and fork (item 6200). For the forklift item and its subassemblies, segments represent features and options.
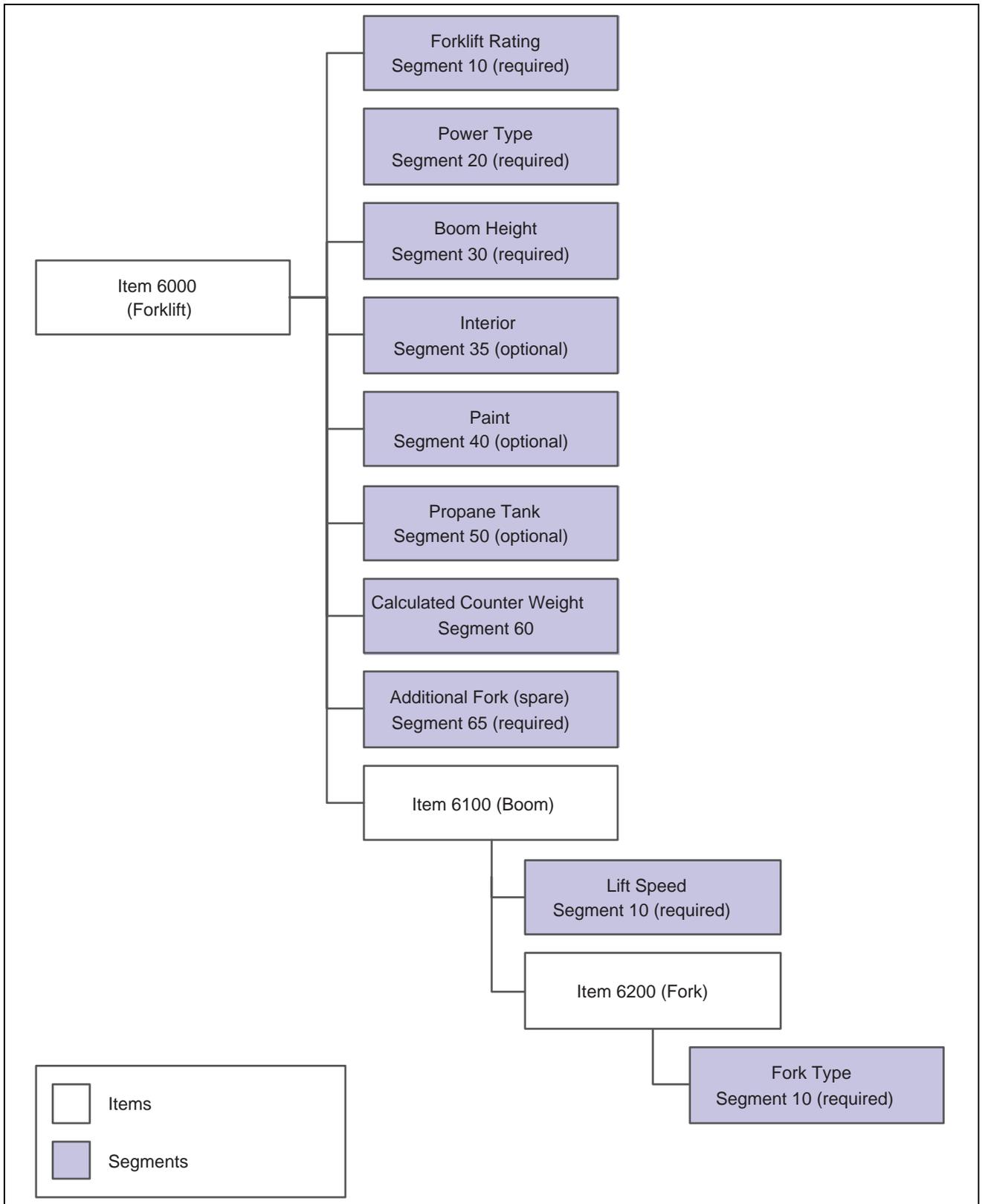
Multilevel Configured Item

Items	
Segments	

Configurator Features

The JD Edwards EnterpriseOne Configurator system enables you to perform these functions:

• Specify a variety of features and options within configured items.

• Establish relationships between segments to prevent invalid product configurations.

• Define multilevel configured items.

• Define multiple work orders resulting from and associated to each level of multilevel configured items.

• Establish default values or ranges for options and features.

• Calculate values for options with algebraic definitions.

• Create generic rules to use across branch/plants.

• Create assembly inclusion rules that control price adjustments, routings, and parts.

• Define a table of values that assembly inclusion rules reference.

The JD Edwards EnterpriseOne Configurator system creates configured bills of material, routings, pricing, and other important business information. Customer service levels are increased by providing real-time configured product specifications and information at order entry. Seamless integration from the front office to the back office improves communication with other departments within the company. This process, in turn, improves product quality by reducing errors.

Configurator System Integration

The JD Edwards EnterpriseOne Configurator system is one of many systems in the JD Edwards EnterpriseOne Supply Chain Management solution from Oracle. You use JD Edwards EnterpriseOne Supply Chain Management to coordinate the inventory and labor resources to deliver products according to a managed schedule. It is a closed-loop manufacturing system that formalizes company and operations planning, and the implementation of those plans.

The JD Edwards EnterpriseOne Configurator system is a business enabler for configuring manufactured and assembled end-item products. It is a front-office-to-back-office product. The JD Edwards EnterpriseOne Configurator system features seamless integration with the JD Edwards EnterpriseOne Inventory Management, JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Procurement, JD Edwards EnterpriseOne Manufacturing systems from Oracle, and JD Edwards EnterpriseOne Distribution systems from Oracle. In its simplest form, it integrates sales with manufacturing - from entering the sales order, to generating the work order, to shipping the product to the customer.

The JD Edwards EnterpriseOne Configurator system is used to define the configured components and configured end-items. Configured item segments define the features and options. Cross-segment editing rules then define the relationship and limitations between those features and options. Assembly inclusion rules define the parts; routing; price, cost, or both; and calculations. Configured tables can be used to reduce the number of assembly inclusion rules, thus improving processing time. You can even attach media objects to features and options to provide additional product information.

The JD Edwards EnterpriseOne Configurator is a self-contained system because it contains its own tables and programming to support the configuration process. The JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Procurement, and JD Edwards EnterpriseOne Work Order Management systems interact with the JD Edwards EnterpriseOne Configurator system to create the specific order type that is required by a business process. The JD Edwards EnterpriseOne Configurator system does not rely upon other systems for configuration processing.

Once the JD Edwards EnterpriseOne Configurator and other required JD Edwards EnterpriseOne systems are set up, configured item orders can be taken. Order requests can come from various sources, such as customers, internal demand, and associated branch/plants. Order entry personnel do not need in-depth product knowledge to input orders. The JD Edwards EnterpriseOne Configurator communicates the validity of a customer's choice of features and options through error messages and other visual cues. During order entry, rules for configured items can be processed dynamically or you can select to use the validate configuration feature.

The order entry points for configured items are:

• Sales Order Entry

• Transfer Order Entry

• Direct Ship Order Entry

• Purchase Order Entry

• Work Order Entry

• Project Workbench - Purchase Orders and Work Orders

JD Edwards EnterpriseOne also supports interbranch orders and combination orders for configured items.

If the configured item, order entry versions, and processing options are set up properly for the specific order type that is entered, then the appropriate business functions are performed in the system once the order is complete and approved.

If configured work orders are involved when the order entry is complete, you have a work order header to use in manufacturing the product. You use the Order Processing program (R31410) to generate:

• Work Orders (for configured components and configured end-item).

• Parts Lists.

• Routings.

• Work Order Costing.

Configured items continue through the JD Edwards EnterpriseOne system for invoicing and shipment.

CHAPTER 3

Understanding Kits and Configurator

This chapter discusses:

- Kits and Configurator tools.
- Kits and Configurator feature comparison.

Kits and Configurator Tools

Kits and configurator are tools that can be used to support the order entry, manufacture, and shipment of configured items. Each tool has a niche in the manufacturing and distribution model. Having a basic understanding of these tools helps you know which tool is most appropriate to use in a given business situation.

A kit is a collection of inventory items, called components, that are associated with a parent item. The components are stocked inventory items but are sold collectively as a parent item. Kit processing assists order entry personnel in completing an accurate customer order. Kits are used in pick-to-order environments and can even be used for simple products in an assemble-to-order environment. Computers and stereo systems are examples of items that use kit processing for order entry.

The configurator is used in the pick-to-order (if relationships exist between components), assemble-to-order, and make-to-order environments. Computers and garage doors are examples of items that use the configurator for order entry.

The configuration comparison chart highlights some of the main features and differences in functionality between kits and configured items.

Kits and Configurator Feature Comparison

This table describes the features available in the kits and configurator tools:

Feature	Kits	Configurator
Product structure	Single level	Multiple configured levels **Note.** Product structure refers to the levels, like levels of a bill of material or the configuration tree structure, and if the items within the structure are configured.

Feature	Kits	Configurator
End item identification	Single item number	Unique configuration ID **Note.** End item identification refers to the identification of the final parent end item.
Order entry method	Heads-down data entry	Heads-down data entry
Order entry user interface	Static grid	Static or dynamic format
Configuration validation	No cross-reference checking performed	Boolean (If-Then-Else) logic and tables used to perform cross- reference checking **Note.** Configuration validation refers to the cross-checking of components, assemblies, and configured item selections to ensure a valid configuration of the final parent end item.
Graphic confirmation	Static media object by sales order line item	Static media object by item or option
Configuration-specific calculations	No calculations	Calculations during the entry process
Work order hierarchy	Parent only; no child work orders	Multiple, multilevel work orders (parent/child relationship)
Bill of material and parts list	Defined by bill of material	Defined by assembly inclusion rules
Routing	Basic routing for the parent item	Configured routing

CHAPTER 4

Setting Up Configurator

This chapter provides overviews of configurator setup, setup prerequisites for configurator, configured item pricing on a sales order, configured item costing on a purchase order, configured item pricing and costing using based-on effectivity dates, rules processing, Boolean logic, duplicate components, and media object attachments for configured items, and discusses how to:

• Set up configurator constants.

• Set up configured item segments.

• Set up cross-segment editing rules.

• Set up assembly inclusion rules.

• Set up configured tables.

Understanding Configurator Setup

You must set up the JD Edwards EnterpriseOne Configurator system before you can enter orders for configured items.

JD Edwards EnterpriseOne Configurator system setup consists of setting up:

• Configurator constants.

• Configured item information.

• Configured item segments.

• Cross-segment editing rules.

• Assembly inclusion rules.

• Configured tables.

• Media object attachments.

Configurator constants control the JD Edwards EnterpriseOne Configurator system processing by branch/plant for the business. For example, constants control:

• Sales quote processing.

• Availability checking.

• Display of calculated segments.

Configured item information defines the format in which configured item information appears on order paperwork. You define the X assembly inclusion rule based-on dates for sales orders, purchase orders, and work orders. You can also activate dynamic configuration entry.

Segments are the features and options of a configured item. Segments represent product characteristics such as color, material, or size. For clarification purposes, you assign numbers to each segment of the configured item. Information from the Display Order field determines the order in which you specify the segment value during order entry.

You set up cross-segment editing rules with logic statements to establish the relationship between the segment values. Use these rules to prevent invalid configurations during order entry. You can define custom error messages for a cross-segment editing rule.

Assembly inclusion rules process requested features from order entry into the specific components and routing operations that are necessary to build the configured item. Different types of assembly inclusion rules enable you to define:

- Components.
- Price and cost adjustments.
- Routings.
- Calculated values.
- Hot spot values.

You can specify the type of transaction that the component of a configured item generates during order entry. Assembly inclusion rules also offer advanced logic, such as algebraic expressions, smart parts, and external program references.

You can also set up tables for assembly inclusion rules to reference information that is based on segment values. You can define tables for components, prices, and calculated values. Using tables reduces the number of required rules, simplifies rule maintenance, and improves processing time.

You can attach media objects such as text, image, and OLE to configured items. Media object attachments provide additional information about the configured item, components, and configured item segment values. The information could be useful to order entry personnel.

Note. You can define segments, rules, and configured items that are specific to a branch/plant or generic across all branch/plants. A blank Branch/Plant field identifies a generic branch/plant. If you do not use the generic branch/plant, then segment, rule, and item information should be the same across branch/plants. If you define generic branch/plant segments, you must also define generic cross-segment editing and assembly inclusion rules.

Understanding Setup Prerequisites for Configurator

The JD Edwards EnterpriseOne Configurator system works with other JD Edwards EnterpriseOne systems. Before you set up the JD Edwards EnterpriseOne Configurator system, you should be familiar with these JD Edwards EnterpriseOne systems:

- JD Edwards EnterpriseOne Inventory Management
- JD Edwards EnterpriseOne Product Data Management
- JD Edwards EnterpriseOne Shop Floor Management
- JD Edwards EnterpriseOne Sales Order Management

- JD Edwards EnterpriseOne Procurement

- JD Edwards EnterpriseOne Work Order Management

- JD Edwards EnterpriseOne Engineer to Order

Note. The information that is provided here is specific to setting up the JD Edwards EnterpriseOne Configurator system. For more information regarding setting up these other systems, please refer to the respective implementation guides.

JD Edwards EnterpriseOne Inventory Management and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Inventory Management system stores item information, sales and purchasing costs, and quantities that are available by location. The JD Edwards EnterpriseOne Inventory Management system is used to set up item information for configured items and their components, and configured subassemblies. Programs in the JD Edwards EnterpriseOne Inventory Management system define the configured item information, such as how the item is identified and stocked.

You enter Item Master information, such as item number, description, stocking type, cost, and price information, that is unique to the item across all branch/plants.

When processing Item Master Revisions, select *C* for configured item in the Stocking Type field.

If you want the system to automatically generate work order headers at time of order entry, then select the work order line type in the Line Type field. Select the line type for stock item if you do not need work orders.

To gather accurate costs for a configured item, select *3* in the Inventory Cost Level field, which identifies costs of the configured item at the item, branch/plant, location, and lot levels. Because configured items are specific and unique in their configuration, they must be set to this level of cost detail to obtain an accurate cost for configured components and the configured end-item.

The Configurator Costing Method field can also be used to indicate how the cost is calculated for a configured item on purchase orders only.

You have several options for pricing a configured item. You accomplish this pricing by selecting a value in the Kit/Configurator Pricing Method field. Select from these pricing methods:

- Total the list prices of components to determine the configured item price.

- Use the list price of the configured item.

- Use assembly inclusion pricing rules to determine the price.

- Total the discounted price of components.

Base prices can be established in the system for components and configured items. JD Edwards EnterpriseOne Advanced Pricing can be used with any price method code. You can also use price adjustment, or X assembly inclusion rules, to affect the price for the configured item, regardless of the price method that you chose. The X assembly inclusion rules also support cost adjustments.

Because configured items have the same item number in the Item Master (for example, the forklift is item 6000), the system requires additional information to stock the configured item in inventory. This information enables the system to differentiate one configuration from another. Thus, configured items must be lot controlled. Configured items also need to be stocked in a specific location. Using lot and location control identifies each configured item as unique.

You can have lot numbers automatically assigned to configured items by setting a value in the Lot Process Type field. Instead of turning on lot control, the system can be set up to assign the lot and location automatically during work order completions (by way of the processing options), or the lot and location can be manually entered (at completions). The method that is used to assign lot and location information to a configured item is a business process that you must determine.

In the Item Master program, you can define the level lead time for the configured item on the Additional System Information form. The system uses this value to calculate the start dates for work orders by using fixed lead times. The start dates on a work order header are usually back-scheduled, based on the request date of the order (such as a sales order). Because each configured item is unique and difficult to plan for in the planning system, this field is used to schedule the configured item work orders accurately.

After you enter generic item information, you can enter Item Branch (P41026) information that is unique to an item for a specific branch/plant.

You can define the stocking type, line type, lot process type, and location at the branch/plant level for the configured item, configured subassemblies, and components.

JD Edwards EnterpriseOne Product Data Management and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Product Data Management system enables you to organize and maintain information about each item that you manufacture. The JD Edwards EnterpriseOne Configurator system further defines the relationship between items and how they can be manufactured.

Although you do not need to create a bill of material for a configured item, you can create a bill of material for the manufactured components for the configured item. Use assembly inclusion rules to define component relationships for configured items. The system adds configured components to sales orders and work orders, based on these rules.

During setup, consider creating modular bills of material that group common parts for a specific feature or option. For example, a car might have an interior trim package with two choices: standard and deluxe. Each choice includes specific parts and might represent two different modular bills.

Although planning bills of material are not required for the JD Edwards EnterpriseOne Configurator system, you can use them to help manage demand for specific features and options.

You can define all possible routings for the configured item and define assembly inclusion rules to select which routing to attach to the work order. The routing assembly inclusion rule enables you to specify a complete routing or specific routing operations to attach to a configured item work order. You do not need to enter a routing for the configured item unless you also enter a routing inclusion rule.

JD Edwards EnterpriseOne Shop Floor Management and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Shop Floor Management system enables you to control the flow of materials inside the plant by managing and tracking manufacturing work orders. It provides an effective way to maintain and communicate information that the system requires to complete production requests.

The JD Edwards EnterpriseOne Configurator system integrates with JD Edwards EnterpriseOne Shop Floor Management to manage the work orders for configured items. Before you can process work orders for configured items, you must enter business-specific information in Shop Floor programs within the JD Edwards EnterpriseOne Manufacturing system from Oracle.

The system enables you to generate work order headers at the time of sales order entry. You must ensure that JD Edwards EnterpriseOne Sales Order Management is set up so that the interface exists with the JD Edwards EnterpriseOne Work Order and JD Edwards EnterpriseOne Shop Floor Management systems to support these order types.

The system also enables you to enter work orders for configured items directly through the Manufacturing Work Order Processing program (P48013). This functionality enables you to generate work orders for configured items that you might want to prebuild or stock in inventory to better meet the demands of the business.

After the work orders are created, they move through the JD Edwards EnterpriseOne Shop Floor Management system using Order Processing (R31410) and other shop floor programs as dictated by business processes.

JD Edwards EnterpriseOne Sales Order Management and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Sales Order Management system controls all aspects of processing sales orders. The JD Edwards EnterpriseOne Configurator system works with the JD Edwards EnterpriseOne Sales Order Management system to adapt the way that you enter and process sales orders for configured items.

Besides regular sales orders, the JD Edwards EnterpriseOne Sales Order Management system also supports sales quotes, credit, transfer, direct ship, interbranch, and combination orders for configured items.

Before you can enter orders for configured items, you must enter business-specific information in the JD Edwards EnterpriseOne Sales Order Management programs within the JD Edwards EnterpriseOne Distribution system from Oracle.

You must set up order line types and document types (order types) for the system to use. The order line type tells the system how to process each detail line that you enter for a specific order type (for instance, *T* is a text line). The document type identifies the origin and purpose of the transaction (for instance, SO is a sales order). The order activity rules are then set up by combination of an order type and a line type. The order activity rules define the specific steps in the order processing cycle for the business.

You set up new line types to generate work orders (in addition to sales orders) for configured items during sales order entry.

A typical sales order cycle includes sales order entry, packing, shipping, and invoicing. For a work-order-generated line type and sales order document type, you can add to the cycle steps for creating the work order parts lists and completing work orders for configured items. Optionally, both of these manufacturing processes can update associated sales order activity.

A work-order-generated line type and sales quote document type are typically used for entering sales quotes for configured items. However, additional system setup prohibits the creation of associated work order headers when a quote order is generated.

A credit order line type and credit order document type are used for entering credit orders for configured items. Because credit orders facilitate receiving product back from a customer, the system must be set up so that the configured item can be put back into inventory.

The appropriate line types, document types, and order activity rules should be set up to support transfer, direct ship, interbranch, and combination orders for configured items. You must also ensure that the Procurement system is set up so that the interface exists with the JD Edwards EnterpriseOne Sales Order Management system to support these order types.

JD Edwards EnterpriseOne Procurement and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Procurement system controls all aspects of purchasing activities. The JD Edwards EnterpriseOne Configurator system works with the JD Edwards EnterpriseOne Procurement system to adapt the way that you enter and process purchase orders for configured items.

Besides regular purchase orders, the JD Edwards EnterpriseOne Procurement system also supports purchase orders that are created at the time of sales order entry for transfer, direct ship, and combination orders for configured items. You can also generate a purchase order for a component of a configured item.

Before you can enter purchase orders for configured items, you must enter business-specific information in the JD Edwards EnterpriseOne Procurement programs within the JD Edwards EnterpriseOne Distribution system.

You must set up order line types and document types (order types) for the system to use. The order line type tells the system how to process each detail line that you enter for a specific order type (for instance, *T* is a text line). The document type identifies the origin and purpose of the transaction (for instance, *OP* is a purchase order). The order activity rules are then set up by combination of an order type and a line type. The order activity rules define the specific steps in the order processing cycle.

You set up a line type for configured items and a document type for the purchase order.

You also set up order activity rules to define the specific steps in the purchase order processing cycle. A typical purchase order cycle includes purchase order entry, printing and communicating the order, and receiving goods or services.

The appropriate line types, document types, and order activity rules should be set up to support transfer, direct ship, and combination orders for configured items. You must also ensure that the JD Edwards EnterpriseOne Sales Order Management system is set up so that the interface exists with the JD Edwards EnterpriseOne Procurement system to support these order types.

JD Edwards EnterpriseOne Work Orders and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Work Order Management system controls the processing of work orders. The JD Edwards EnterpriseOne Configurator system works with the JD Edwards EnterpriseOne Work Order Management system to adapt the way that you enter and process work orders for configured items.

Before you can enter work orders for configured items, you must enter business-specific information in the work order programs within the JD Edwards EnterpriseOne Manufacturing system.

The JD Edwards EnterpriseOne Work Order Management system is specifically designed to handle small, short-term tasks that are part of a major project. It is also designed for quick setup, simple cost accounting, and basic scheduling for projects that can be completed quickly.

Generating a work order is the activity that starts the process of completing a task. The work order identifies the work that needs to be done, and the information that is collected captures the history of the work that is performed.

The system enables you to enter work orders for configured items directly through the work order entry process. This process enables you to generate work orders for configured items that you might want to prebuild or stock in inventory to better meet the demands of the business.

To enter work orders for configured items, the Manufacturing Work Order Processing program (P48013) and processing options must be set up appropriately.

After the work orders are created, they move through the JD Edwards EnterpriseOne Shop Floor Management system by way of Order Processing (R31410) and other shop floor programs as dictated by the business processes. Thus, you must ensure that the JD Edwards EnterpriseOne Shop Floor Management system is set up.

The system also enables you to generate work order headers at the time of sales order entry. You must ensure that the JD Edwards EnterpriseOne Sales Order Management system is set up so that the interface can support the order types in the JD Edwards EnterpriseOne Work Order Management and JD Edwards EnterpriseOne Shop Floor Management systems.

JD Edwards EnterpriseOne Engineer to Order and JD Edwards EnterpriseOne Configurator

The JD Edwards EnterpriseOne Engineer to Order (ETO) system controls all aspects of project management, primarily in an engineer-to-order (ETO) environment. The JD Edwards EnterpriseOne Configurator system works with the ETO system to adapt the way that you enter and process various order types for configured items which are part of a project.

The JD Edwards EnterpriseOne ETO system supports sales orders, purchase orders, and work orders for configured items.

You must ensure that the appropriate systems (such as JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Procurement, and JD Edwards EnterpriseOne Work Order Management) are set up for integration with JD Edwards EnterpriseOne ETO and JD Edwards EnterpriseOne Configurator.

Understanding Configured Item Pricing on a Sales Order

The first step in pricing configured items is to set the Kit/Configurator Pricing Method field on the Item Master Revisions form. The kit/configurator pricing method is used to specify how the system determines the sales price of a kit or configured item. The price method code determines whether to price components or parent items.

This table describes the types of method codes that are used:

Method	Description
Kit/Configurator Pricing Method 1	The system totals the list prices of components to determine the price of the configured item. All of the component prices from the Item Base Price File table (F4106) are added to calculate the configured item price. The price of the configured item can then be discounted. The system also checks for any X assembly inclusion rules. Any existing X rules are added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges.

Method	Description
Kit/Configurator Pricing Method 2	The system retrieves the price of the configured item from table F4106. This price is the price of the configured item on the sales order and cannot be discounted. The system also checks for any X assembly inclusion rules. Any existing X rules added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges.
Kit/Configurator Pricing Method 3	The X assembly inclusion rules are the only source of pricing for the configured item. You can pull the base price into the configuration by using the Derived Calculation field in the assembly inclusion rule. The Derived Calculation field should be populated with *& BPUPRC* to pull in the base price from the F4106 table. Any other X rules are added to the price of the configured item. These X rules could be used for price add-ons, such as shipping or freight charges.
Kit/Configurator Pricing Method 4	The system uses the sum of the components' discounted prices for the price of the configured item. The parent has no discount. Thus, the configured item gets no further discounts. The system also checks for any X assembly inclusion rules. Any existing X rules are added to the price of the configured item. The X rules could be used for price add-ons, such as shipping or freight charges.

Note. If the Item Base Price table (F4106) is used for pricing the configured item and the X assembly inclusion rule contains *& BPUPRC* in the Derived Calculation field to pull the base price, the price is doubled on the order. If table F4106 is used to pull the base price, the X assembly inclusion rules should be used only for other price adjustments, such as shipping or freight charges.

After you define the Kit/Configurator Pricing Method on the Item Master Revisions form, you must define base prices for the components and the configured item in the F4106 table. The system uses the base price to price the item. If you define special pricing or discounts for the item, the system bases the calculation of the discounted price on the base price.

Use base pricing to define prices for:

• An item or group of items.

• A specific time period.

• Different units of measure.

• Different currencies.

Use pricing groups to group items or customers with similar characteristics. This method streamlines the processes of entering and maintaining base prices.

JD Edwards EnterpriseOne Advanced Pricing can also be used with any price method code. JD Edwards EnterpriseOne Advanced Pricing supports placing a new line item on the sales order, such as a line item for free goods.

You can use price adjustment, or X assembly inclusion rules, to affect the price for the configured item, regardless of the price method that you selected. X rules work with base and advanced pricing as well.

Understanding Configured Item Costing on a Purchase Order

The first step in costing configured items for purchase orders is to set the Configurator Costing Method field on the Item Master Revisions form. The configurator costing method is used to specify how the system determines the cost of a configured item. The cost method code determines whether to cost components or parent items.

This table describes the types of method codes that are used:

Method	Description
Configurator Costing Method 1	The system accumulates the base costs of the components with the configured cost adjustments, and then discounts the total.
Configurator Costing Method 2	The system accumulates the base cost of the parent item with the configured cost adjustments, and then discounts the total.
Configurator Costing Method 3	The system accumulates the configured cost adjustments, and then discounts the total.
Configurator Costing Method 4	The system accumulates the individually discounted costs of the components with the configured cost adjustments.

After you define the Configurator Costing Method on the Item Master Revisions form, you must define costs for the components and the configured item in the Item Cost File table (F4105). The system uses the base cost to cost the item. If you define special cost adjustments or discounts for the item, the system bases the calculation of the discounted cost on the base cost.

Additionally, JD Edwards EnterpriseOne Advanced Pricing can also be used with any cost method code. However, no general ledger entries are created.

You can use cost adjustment, or X assembly inclusion rules, to affect the cost for the configured item, regardless of the cost method that you selected. X rules work with base and advanced pricing as well.

Understanding Configured Item Pricing and Costing Using Based-on Effectivity Dates

You define price and cost information for configured items and components of configured items during item setup. Assembly inclusion rules for price and cost, X rules, further define price and cost adjustments at order entry time. The validation of X rules is based on a user-defined date which is also called the based-on date. The based-on date is defined separately for the sales orders, purchase orders, and work orders of a configured item.

The based-on date codes are setup at the item level on the Configured Item Information form (W3291A). Configured item information must exist before an order is entered for a configured item. The based-on date setting of the parent configured item is inherited by the child configured items.

The following table illustrates the selections for X rule based-on dates:

Based-on Date	Sales Order	Purchase Order	Work Order
Requested Date (Default)	X	X	X
Transaction/Order Date	X	X	X
Scheduled Pick Date	X		
Price Effective Date	X	X	
System Date	X	X	X
Promised Delivery Date		X	
Original Promised Date		X	
Planned Effective Date			X
Start Date			X

During assembly inclusion rule setup, effective from and through dates are entered for each rule. The effective from and through dates are then used in conjunction with the based-on date set up on the Configured Item Information form to determine which rules are valid at order entry. All X rules that are effective are applied to the order to calculate price and cost.

For example, a configured item is setup to use the order date as the sales order based-on date and requested date as the work order based-on date. If a sales order is entered for the item on August 15th, with a requested date of October 15th, the system searches for X assembly inclusion rules that are effective on August 15th. Valid X rules apply price adjustments to the sales order. If a work order is entered for the configured item, October 15th is used to validate X rules and apply cost adjustments to the work order

The based-on effectivity date functionality in the JD Edwards EnterpriseOne Configurator system is similar to the functionality in JD Edwards EnterpriseOne Advanced Pricing. JD Edwards EnterpriseOne Advanced Pricing enables the user to specify one or many dates, such as order and required, to use to include price adjustments. The based-on date code of *Price Effective Date* is used to sync with JD Edwards EnterpriseOne Advanced Pricing so that the system uses the same date as JD Edwards EnterpriseOne Advanced Pricing when validating X rules. This applies to both sales and purchase orders.

Understanding Rules Processing

When entering an order for a configured item, the Sales Order Entry (P4210), Purchase Order Entry (P4310), and Manufacturing Work Order Processing (P48013) programs call the Configured Item Revisions program (P3210). The Configure Item form (W3210B) of the Configured Item Revisions program is used to configure an item and perform rules processing.

During order entry, rules for configured items can be processed dynamically or you can select to use the validate configuration feature. Dynamic configuration entry is enabled or disabled at the item level on the Configured Item Information form (W3291A). Child-configured items inherit the dynamic configuration entry setting of the parent-configured item.

Regardless of whether dynamic configuration is enabled or disabled, the system processes only the rules associated with a changed segment. Each time a segment answer is changed and is valid; all of the configuration rules that reference the segment are marked for processing. The rules are then processed based on the dynamic configuration entry setting.

When dynamic configuration entry is enabled, the system dynamically validates the item configuration as the order is entered. Any time that a segment answer is changed, the entire configuration reflects the impact of the new value. When a segment answer is changed, all allowed values for other segments are updated to include only valid values based on the processed cross-segment editing rules. If there are no valid values left for a segment after the cross-segment editing rules are processed, then the system removes the segment from the configuration.

The processed assembly inclusion rules update components, price adjustments, cost adjustments, and hot spots.

Dynamic configuration entry provides immediate feedback as the product is configured and lessens the possibility of selecting invalid segment values. The configuration is in a state that can immediately be committed to an order.

When dynamic configuration entry is disabled, the Validate Configuration button appears on the Configure Item form. To enter an order for a configured item, you enter values for segments and click the Validate Configuration button. The system validates the item configuration by processing the rules associated with the changed segments.

This method of order entry and rules processing provides visibility to cross-segment editing rule error messages. Viewing the error messages gives you the opportunity to learn the configuration of the configured item. You can also provide an explanation to the consumer as to why their segment selections do not generate a valid configuration.

You click the Add to Order button to accept the configuration if there are no cross-segment editing rule errors.

You enter an order for a configured item once the Configured Item form is rendered and the grid is loaded. As you enter an order, the system verifies JD Edwards EnterpriseOne Configurator processes level by level in this order:

1. Change segment values or click the Add to Order button to accept all default values.

2. Validate segment agreement.

   System processing includes user-defined code (UDC) validation, range checking, alpha versus numeric checking, length checking, and required versus optional checking.

3. Process assembly inclusion rules that are related to segments that have been changed.

   a. Process C assembly inclusion rules and update C segments.

      The system processes C rules first because the calculated segment answer might be required to validate the configuration. The calculated segment answer might also be needed to perform additional calculations for the configured item.

   b. Process P assembly inclusion rules.

   c. Process Q assembly inclusion rules.

      The system processes Q assembly inclusion rules and stores the components in the Configurator Component table (F3215). The components are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the parts list and establish cost.

      d. Process R assembly inclusion rules.

      The system processes R assembly inclusion rules and stores the routings in the Configurator Routings table (F3212). The routings are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the routing and establish cost.

      e. Process X assembly inclusion rules.

      f. Process H assembly inclusion rules.

4. Process cross-segment editing rules that are related to segments that have been changed.

   If dynamic configuration entry is disabled, the system displays any error messages.

   If dynamic configuration entry is enabled, the system:

- Updates all allowed values for other segments to include only valid values.
- Sets the valid value if there is only one allowed valid value for a segment.
- Removes the segment from the configuration if there are no valid values left for a segment.

5. Enable the Add to Order button if no cross-segment editing errors occurred.

6. Click the Add to Order button.

The following diagram illustrates rules processing:

Rules processing

Note. The JD Edwards EnterpriseOne Configurator system supports upward and downward referencing within cross-segment editing and assembly inclusion rules. Upward and downward referencing has no limitations.

Work Order Processing

All components from both P and Q assembly inclusion rules are stored in the F3215 table. The routings, output of the R assembly inclusion rules, are stored in the F3212 table. When the Order Processing program (R31410) runs, the parts list and routing are retrieved from the F3215 and F3212 tables and passed back to the Parts List master business function (MBF) and the Routings MBF. Thus, the R31410 does not process configured item rules.

Error States

When entering orders for configured items, a few circumstances can cause the Configured Item Revisions program (P3210) to display errors.

First, when a segment is not attached to a UDC table, you are able to free-form type into the segment answer field. If a range of values is assigned to that segment, then a violation creates an error.

Second, again assuming that a segment is not attached to a UDC, a cross-segment editing rule can be created that generates an error when violated.

Finally, although perhaps the first to be encountered, multiple errors can be present when first entering the Configured Item Revisions program if the default segment values create an error state.

To minimize error states, attach UDCs to segments when possible. Also, review the default segment answers for a configured item to ensure that the default values represent a valid configuration.

When setting up a configured item, you can design the segment questions in such a way as to avoid errors. For instance, ask the most important questions first. Thus the consumer will not have visibility to choices that make the configuration invalid. For example, the first question should be whether the consumer wants a car or truck and not the color of the vehicle.

You can also use warning messages. Warning messages provide information regarding a choice that may or may not work in the configuration. The system does not remove the selected value, but the warning gives the user the opportunity to make a different selection.

Understanding Boolean Logic

Boolean logic is based on the binary number system, so it uses the bit system of 1 or 0 (true or false). Boolean logic uses statements that are written in an algebraic format to derive deductions using algebraic operations. The statements define the relationships between sets of ideas or objects. Boolean statements produce precision and control. The logic uses English words to make the statements more intuitive. However, it is not always simple or easy.

Boolean logic uses words that are called operators to determine whether the value of a statement is either true or false. Boolean operators are conjunctions that are used with terms and phrases to create precise conditional statements. Although the most common operators are AND and OR, different systems use various symbols for the Boolean logic operators.

Nesting

Nesting is the method of combining Boolean operators in a logical order when more than one Boolean operator is used in a statement. Parentheses are used to effectively sequence the operators and group variables. The parentheses offer substantial control in limiting and ordering the relationship between the variables.

Note. Complex nesting requires additional processing time.

When writing a nested Boolean logic statement using the operator OR, you must enclose the terms in parentheses. For example:

(Gas or Propane) and (08 or 10)

Conditional Logic

In its simplest form, a conditional statement is an IF-THEN statement and consists of two parts:

- Hypothesis: The hypothesis is preceded by an IF.
- Conclusion: The conclusion can be preceded by a THEN.

The IF-THEN statement is typically formatted like this:

IF *condition,* THEN *statement.*

IF is the beginning of the IF-THEN statement, and THEN identifies what actions should be taken if the condition in the IF statement is met. For example:

If the power type is not propane, then no propane tank should be selected.

Multiple Variables

If you use nesting, the condition and statement portions of the IF-THEN statement can be compound (several variables). For example:

If the forklift rating is 6000 pounds and the power type is propane, then the propane tank must be 50 pounds.

Conditional Statement with Else

The IF-THEN-ELSE statement is also used. The ELSE portion of the statement identifies what actions should be taken if the condition in the IF statement is not met.

The IF-THEN-ELSE statement is typically formatted like this:

IF *condition,* THEN *statement* (ELSE *statement*).

For example:

If the paint color is standard, then select part number S-200 or else select part number C-100.

Understanding Duplicate Components

You can add multiple instances of a configured component item to a configured parent item. Each new instance of the component can be configured uniquely or be an exact copy of an instance of the component that you previously configured. You can use a single part number to represent the various configurations of a component item, thus reducing the number of part numbers that you must manage.

To include multiple instances of a configured component item in a parent item, you add the appropriate P-type assembly inclusion rules to the parent item. You can include multiple instances of the configured component item within the configured parent item with unconditional or conditional rules.

Whether multiple instances of the configured component item are included as part of the default configuration (using unconditional rules) or as part of a subsequent configuration (using conditional rules), each instance can be configured differently, but have the same part number. Using a single part number enables you to set up all of the associated segments, assembly inclusion rules, and cross-segment editing rules for a single item, and then create various configurations for that item.

Currently, you can refer to an upper-level configured item in cross-segment editing rules, assembly inclusion rules, and derived calculations. The JD Edwards EnterpriseOne Configurator system correctly processes the rules, based on the upper-level configured item segment selection. With the introduction of duplicate components, referring to an upper-level duplicate configured item adds complexity.

The Configured Item Alias field on the cross-segment editing and assembly inclusion rule forms provides the ability to reference a specific occurrence of an included item. This is not a required field. The Configured Item Alias field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on system logic.

Important! You should use the Configured Item Alias field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left and Configured Item Alias Right fields in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Example: Duplicate Components

The cabinet can be configured with two or three drawers, depending on the height of the cabinet:

- * body (unconditionally add a configurable cabinet body to the configuration).
- * drawer (unconditionally add a configurable drawer to the configuration).
- * drawer (unconditionally add a configurable drawer to the configuration).
- I height = 36 * drawer (if the height of the cabinet is 36 inches, add a third configurable drawer to the configuration).

Each instance of the drawer in this example can be configured differently, but all have the same part number.

Understanding Media Object Attachments for Configured Items

You can attach media objects to configured Item Master records, segments, and UDCs to use within the JD Edwards EnterpriseOne Configurator system. This feature of the system enables you to include a visual cue of configured items, configured item segments, and UDC values, which can be used for segment answers within order entry. Media objects can be photos, graphics, files, or text documents, including information that might initially exist on a paper document.

Note. The media object is attached to the Item Master through the Internal Attachment option on the Row menu, not to the Item Branch/Plant.

The media objects that you define appear on the Configure Item form at order entry. As you select a configured item from the Item Filter option, the media object displays the image from the Item Master for the related configured item number. The segment or segment-answer user-defined code displays the media object when a row is selected.

The display of media objects at order entry is controlled by the processing options for the Configured Item Revisions program (P3210). The Media Object Display processing option controls whether an attached media object appears on the form during order entry. The Media Object Display Order processing option specifies the order in which media objects appear on the form if more than one media object type is attached to a configured item, configured segment, or UDC segment value.

Setting Up Configurator Constants

This section provides an overview of configurator constants and discusses how to define configurator constants.

Understanding Configurator Constants

Use configurator constants to control the JD Edwards EnterpriseOne Configurator system processing for the branch/plants. For each branch/plant, you can:

• Define the configured segment (string) delimiter.

• Define whether the calculated segments appear during order entry.

• Indicate the configurator error character.

• Verify parent availability during sales order entry.

• Determine whether the sales quote cost will include manufacturing labor and overhead.

• Define which stocked line type to use if the system finds a matching configuration in stock during sales order entry.

• Indicate sales quote document types.

The system stores configurator constants in the Configurator Constants table (F3209).

Form Used to Set Up Configurator Constants

Form Name	FormID	Navigation	Usage
Configurator Constants Revision	W3209B	Configurator Setup (G3241), Configurator Constants Click the Add button on the Work With Configurator Constants form.	Define configurator constants.

Defining Configurator Constants

Access the Configurator Constants Revision form.

Configurator Constants Revision form

You define configurator constants by branch/plant.

Segment Delimiter
Enter a character separator that you use with configured items during order entry. This character must be the same for each branch/plant. The default character is a /.

Although you can specify a different character, you should not use an * and you should not change the value after you specify it.

For the segment delimiter, use a character that could never appear within an answer to a segment question.

Configurator Error Character
Enter a code that indicates an error in the calculation, for example !. This code is a single character value. The default value is 1.

Display Calculated Segments
Enter a setting that indicates whether the system displays calculated segments during order entry. Values are:

0: Does not display calculated segments when you enter an order; however, it stores the value of the segment in history. When you enter a multilevel configured item, the system does not display levels that have only calculated segments. The default value is *0*.

1: Displays calculated segments.

Document Type List
Enter the document type from the Quote Document Type List UDC (32/QL) that is used to define valid document types for sales quotes. For example, you

could define sales quote document types by branch/plant or by type of quote, such as corporate or seasonal quotes.

Cost Sales Quotes Specify which costs accumulate when the order type matches one of the sales quote document types. If you select this option, the Order Processing program (R31410) calculates the cost of the configured item based on the P, Q, R, and X (cost) assembly inclusion rules. If you do not select this option, the costs of only the P and X assembly inclusion rules accumulate.

Check Availability Enter a code that specifies whether the system verifies that a configured parent item is in stock during sales order entry. The default value is *1*.

The system searches inventory for a configuration that matches the parent item during sales order update. If the system locates more than one item, a form displays all matching locations, lots, and their available quantities. From the form, you can select an item to hard-commit during the update. If the system locates only one item, the item is hard-committed to inventory during the update.

The check availability feature might negatively affect system performance.

Note. Checking the availability of the configured parent item only works for sales order entry.

In Stock Line Type Enter a code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interacts, such as Oracle's JD Edwards EnterpriseOne General Ledger, Oracle's JD Edwards EnterpriseOne Job Cost, Oracle's JD Edwards EnterpriseOne Accounts Payable, Oracle's JD Edwards EnterpriseOne Accounts Receivable, and JD Edwards EnterpriseOne Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Values are:

S: Stock item

J: Job cost

N: Nonstock item

F: Freight

T: Text information

M: Miscellaneous charges and credits

W: Work order

Setting Up Configured Item Segments

This section provides overviews of configured item information, configured item segments, and common attributes, lists prerequisites, and discusses how to:

• Define configured item information.

• Define a configured item segment.

• Define configured item segment detail.

- Set up user-defined segment values.

- Copy configured items.

- Locate configured item segment information.

- Print configured items.

Understanding Configured Item Information

To begin using the JD Edwards EnterpriseOne Configurator system, you must define configured item information and the segments of each configured item.

On the Configured Item Information form, you:

- Define the format in which configured item information appears on order paperwork.

- Define the X assembly inclusion rule based-on dates for sales orders, purchase orders, and work orders.

- Activate dynamic configuration entry.

Configured item information is setup at the item level and stored in the Configured Item Information (F3290) table.

Configured item information must exist before an order is entered for a configured item. If there is no configured item information set up for a new configured item, the system generates the information with default values when you define configured item segments in the Configured Item Segments Revision form (W3291L) for the item for the first time. The system sets the based-on date default values for sales orders, purchase orders, and work orders to the requested date.

You can copy configured item information from one configured item to another. When copying configured item information from one item to another, the system copies configured item information from the original (copy-from) item branch to the destination (copy-to) item branch only if a configured item information record does not exist for the destination item branch. If the record already exists for the destination item, the system does not perform the copy. If the information does not exist for the original item, the system issues an error.

If you run the Table Conversion for F3290/F3291 program (R893291), the conversion sets the X rule based-on dates to the requested date and dynamic configuration entry is disabled.

Understanding Configured Item Segments

Segments are the features and options of a configured item. Both cross-segment editing rules and assembly inclusion rules use segments within logic statements. Segments represent product characteristics such as color, material, and size. Segments define the choices that are available within a specific feature or option by using UDCs, ranges of values, or calculations. For clarification purposes, you assign numbers to each segment of the configured item. Information from the Display Order field determines the order in which you specify the segment value during order entry.

When adding new segments to a configured item, enter them at the end of the list of existing segments. This process keeps the configuration information in order, which is important if you will be using the Check Availability functionality.

You assign segments for a configured item in a numeric sequence.

Item 6000 (forklift) contains these segments:

- 10 Forklift Rating

- 20 Power Type

- 30 Boom Height

- 35 Interior

- 40 Paint

- 50 Propane Tank

- 60 Calculated Counterweight

- 65 Additional fork (spare)

You can define three types of segments:

- Required: During order entry, you must provide this required information. The system performs edit checking against a UDC table of values, a range of values, or numeric validation.

- Optional: During order entry, this information is optional. The system performs edit checking against a UDC table of values, a range of values, or numeric validation.

- Calculated: During order entry, the system calculates the value for this segment. You define the calculation with a C (calculation) assembly inclusion rule. Calculated segments do not need a UDC or range of values defined. Calculated segments can be numeric or alphanumeric.

Note. The segment information for a configured item should be the same across branch/plants to enable transfers to other branches.

During order entry, you can enter a value for each segment. The system restricts this value, using one of these:

- Numeric or alphabetic checking.

- Range checking.

- A UDC table that contains all values.

You can define multilevel configured items with no limit on the number of levels. In addition, no limits exist on the number of segments per level. You use assembly inclusion rules to define item levels and associated work orders.

You use segments to define cross-segment editing rules that ensure valid configurations. During order entry, the system verifies the combination of features and options to ensure that the item can be manufactured. You also use segments to define assembly inclusion rules that determine configuration-specific prices, components, calculated values, and routing steps.

Note. The segments can be set up so that a value from a C (calculated) assembly inclusion rule populates the answer field for a non-C segment (a required or optional segment).

Understanding Common Attributes

A common attribute in the JD Edwards EnterpriseOne Configurator system is a trait or characteristic that is shared by several segments in a configured item. You can set up and define a common attribute in Common Attributes UDC table (32/CA). You then attach the common attribute to a particular segment using the Common Attribute field in Configured Item Segments (P3291).

Note. If using common attribute functionality, set the Common Attribute Display and Common Attribute Display Scope processing options on the Processing tab for the Configured Item Revisions program (P3210).

You enter the value for the common attribute at order entry. When the value is entered in the Attribute Value field on the Configurator Common Attributes form, the value automatically fills the answer field for all of the segments that are associated with that common attribute. This process makes order entry input easier, reduces order entry time, and also reduces potentially costly order entry errors.

Example: Common Attributes

The furniture industry often uses common attributes. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and decorative pillows. After the customer picks a color, that value can be entered in the attribute field on the common attribute form. The color is then applied as the answer to all segments that are associated with that particular common attribute.

Prerequisites

Before you enter configured item segments, you must:

• Verify that the stocking type for a configured item is *C* (configured).

• Set the Kit/Configurator Pricing Method on Item Master Revisions.

• Verify that the manufactured configured components have bills of material.

• Create routings for the configured item and for the components that are manufactured.

See *JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Entering Item Information," Entering Item Master Information.

See *JD Edwards EnterpriseOne Product Data Management 9.0 Implementation Guide*, "Setting Up Bills of Material".

See *JD Edwards EnterpriseOne Product Data Management 9.0 Implementation Guide*, "Entering Work Centers and Routing Instructions," Creating Routing Instructions.

Forms Used to Set Up Configured Item Segments

Form Name	FormID	Navigation	Usage
Work with Configured Items	W3291K	Configurator Setup (G3241), Configured Item Segments	Review existing configured items by branch/plant.
Configured Item Information	W3291A	Select a configured item on the Work with Configured Items form and select Config Item Info from the Row menu.	Define configured item information.
Configured Item Segments Revision	W3291L	Select a configured item on the Work with Configured Items form and click the Select button, or select Segments from the Row menu.	Define configured item segments.
Configured Item Segment Detail	W3291M	Select a segment on the Configured Item Segments Revision form and select Detail from the Row menu.	Define a configured item segment.
User Defined Codes	W0004AI	Select a configured item segment on the Configured Item Segments Revision form, and then select User Defined Codes from the Row menu. Enter a product code and user-defined code on the Work With User Defined Codes form, and click the Add button.	Set up user-defined segment values.
Copy Configured Item	W3299C	Select a configured item on the Work with Configured Items form and click the Copy button, or select Copy Item from the Row menu.	Copy configured items. In this process, you copy its segments, cross-segment editing rules, and assembly inclusion rules to a new or existing configured item.
Segment UDC Where Used	W32910A	Configurator Setup (G3241), Segment UDC Where Used Enter a product code and UDC on the Segment UDC Where Used form, and click the Find button.	Locate configured item segment information. Review the segments that are associated with a specific configured item and the effect that table changes have on configured items.

Defining Configured Item Information

Access the Configured Item Information form.

Configured Item Information form

Print Related Elements

Print Components   Enter a code that specifies whether the system prints configured item information on the order paperwork. On a sales order, the system prints the pick slip and the invoice. On a work order, the system prints the parts list. Values are:

0: Do not print.

1: Print.

Text String   Enter a code that indicates whether the configured text string format or a user-defined format appears on the sales order (pick slip and invoice print) and work order (print parts list). You define the user-defined format for each segment. You can print the segment number, description, value, or value description in the user-defined format. Values are:

1: Configured text string.

0: User-defined format.

Display Item   Enter a code that indicates whether the system prints the configured item number. If selected, the item number will print before the segment value information either in the text string format or the user-defined format. Values are:

1: Print.

0: Do not print.

X Rule Based On Date

Sales Order Based-on Date   Enter a value from UDC 32/SB that specifies the date that the system uses to validate X rules before applying them to the price and cost calculation of a sales order for the configured item. Values are:

Blank: Requested Date

1: Transaction/Order Date

2: Scheduled Pick Date

3: Price Effectivity Date

	If you select this value, then the price effective date of the sales order will be brought in and used as the X rule based-on date. The price effective date will be determined by the JD Edwards EnterpriseOne Sales Order Management system when a sales order is entered, and it could be from the pricing constants, preferences, or manual entry.
	The price effective date is used to sync with JD Edwards EnterpriseOne Advanced Pricing so that the system uses the same date as JD Edwards EnterpriseOne Advanced Pricing when validating X rules.
	4: System Date
Purchase Order Based-on Date	Enter a value from UDC 32/PB that specifies the date that the system uses to validate X rules before applying them to the price and cost calculation of a purchase order for the configured item. Values are:
	Blank: Requested Date
	1: Transaction Date
	2: Promised Delivery Date
	3: Original Promised Date
	4: Price Effective Date
	If you select this value, then the price effective date of the purchase order will be brought in and used as the X rule based-on date. The price effective date will be determined by the JD Edwards EnterpriseOne Procurement system when a purchase order is entered, and it could be from the pricing constants, preferences, or manual entry.
	The price effective date is used to sync with JD Edwards EnterpriseOne Advanced Pricing so that the system uses the same date as JD Edwards EnterpriseOne Advanced Pricing when validating X rules.
	5: System Date
Work Order Based-on Date	Enter a value from UDC 32/WB that specifies the date that the system uses to validate X rules before applying them to the price and cost calculation of a work order for the configured item. Values are:
	Blank: Requested Date
	1: Transaction Date
	2: Planned Effectivity Date
	3: Start Date
	4: System Date

Note. The based-on date setting of the parent configured item is inherited by the child configured items.

Dynamic Configuration

Dynamic Configuration Entry	Select to activate dynamic configuration entry. When this functionality is enabled, any time that a segment answer is changed, the entire configuration will reflect the impact of the new value. Any configured components that are dependant on the segment value will be included or excluded. All hot

spot values will be recalculated. All pricing and costing will be recalculated. Only valid segment answers will be selectable.

This check box is cleared as the default value. Thus, dynamic configuration entry is off.

Defining a Configured Item Segment

Access the Configured Item Segments Revision form.

Configured Item Segments - Configured Item Segments Revision

	Seg Num	Description	Req	Default Value		Display Order	Common Attribute	Code Num	Product Code	User Code	Lower Limit of Value	Upper Limit of Value
☐	10	Forklift Rating	R	4000		10		Y	32	LR		
☐	20	Power Type	R	GAS		30		N	32	PT		
☐	30	Boom Height	R	10		20		Y	32	BH		
☐	35	Interior	O			60	PKG	N	32	IN		
☐	40	Paint	O	STD		50	PKG	N	32	PA		
☐	50	Propane Tank	O			40		Y	32	TK		
☐	60	Calculated Counter Weight	C			70		Y				
☐	65	Additional fork (spare)	R	NO		75		N	32	AF		
☐												

Configured Item Segments Revision form

Note. You cannot delete a configured item segment if cross-segment editing or assembly inclusion rules exist for that configured item.

Note. When you click OK on the Configured Item Segments Revision form, the system generates the Configured Item Information record for the configured item if the record does not exist.

Req (required or optional)	Enter a code that specifies whether a segment is required or optional in a configuration, or whether the system must calculate it to specification when you enter an order. Valid codes are:

R: Required.

O: Optional.

C: Calculated. You define the calculation with assembly inclusion rules. |
| **Default Value** | Enter an initial value on the data entry screen for the associated data item. Usually, the default values that are set up produce a valid configuration in order entry.

The value that you enter must be the exact same length as the data item size.

Place single quotes around the value if it contains any embedded blanks. The keywords *BLANK and *ZERO can be used as the default value. When you enter a numeric data item with default values, the system suppresses all leading zeros when it redisplays the data item.

Warning! If a blank entry is allowed, do not use default values. |

Display Order

Enter a number that establishes the sequence in which the JD Edwards EnterpriseOne Configurator system asks questions about features and options during order entry.

Because new segments should always be entered at the end of the list of existing segments to maintain the integrity of the configuration information, this field is used to reorder the segments that appear on the Configured Item Revisions form at order entry.

Common Attribute

(Optional) Enter a code that specifies a common attribute. A common attribute is a trait or characteristic that is shared by several segments in a configured item. When you enter an attribute value for a common attribute during order entry, the system updates the answer field for all segments that are associated with that common attribute.

Code Num (code numeric)

Enter a value that indicates whether the system edits a segment answer as numeric or alphanumeric during order entry. Values are:

Y: The answer is numeric and should be right-justified.

N: The answer is alphanumeric and should be left-justified.

Lower Limit of Value

Enter the lower allowed value of this specific segment to specify a range of acceptable values. If you enter a value here, then you must also enter an upper allowed value.

Upper Limit of Value

Enter the upper allowed value of this specific segment to specify a range of acceptable values. If you enter a value here, then you must also enter a lower allowed value.

If you define a calculated segment, you do not need to define range checking.

Note. When using a range of values, the entire range of values from the lower limit to the upper limit is acceptable. You cannot limit the answer to, for instance, even numbers, two decimal places, 1/4 inch, and so on. Any value within the range of values is a valid answer.

D C (derived calculation)

(Optional) Specify the number of positions to the right of the decimal that a derived calculation should be rounded.

For example, if the result of a derived calculation is 2190.123456789, enter *0* to round to the whole number 2190.

Enter *4* to round up to 2190.1235.

Leave the Derived Calculation Round field blank to avoid rounding.

The system rounds up by one any digit followed by 5 through 9. The system does not round any digit followed by 0 through 4.

Save Seg (save segment)

Enter a UDC (32/YN) that specifies whether the segment value is significant enough to make the configuration unique. Values are:

0: Not significant.

1: Significant.

If the configuration is unique, you must store the item in a separate location in inventory.

Updt CC (update category code)

(Optional) Enter which work order category code will be populated with the segment value during order entry.

To control the printing of configured item information on sales orders, purchase orders, and work orders, complete these fields.

SpB Nbr (number of spaces before) and **SpA Nbr** (number of spaces after)

Enter the number of spaces that should print before or after the segment information in the user-defined format.

Return and Start New Line

Enter a UDC (32/YN) that indicates whether the system starts a new line after it prints the segment information. Values are:

1: Start a new line after the segment information.

0: Continue printing on the same line.

If the system does not start a new line, it prints the Configurator segment delimiter from the Configurator constants.

Print Segment Number, Print Segment Description, Print Segment Value, and **Print Segment Value Description**

Enter a UDC (32/YN) that specifies whether the system prints the segment number, segment description, segment value, or segment value description on the order paperwork. Values are:

0: Do not print.

1: Print.

For a sales order, the system prints the segment number, segment description, segment value, or segment value description on the pick slip and invoice print. For a work order, the system prints the segment number, the segment description, the segment value, or the segment value description on the parts list print.

Note. You can select the format for displaying configured item text. You can display the system-generated configuration information or use the detail area to create custom text that prints on sales orders, work orders, pick lists, and invoices.

Defining Configured Item Segment Detail

Access the Configured Item Segment Detail form.

Configured Item Segment Detail form

Setting Up User-Defined Segment Values

Access the User Defined Codes form.

User Defined Codes form

Create a UDC table of segment values for a noncalculated segment. The UDC table that the segment references presents the choices that are available within that particular feature or option.

Note. You can use codes 55 through 59 for the UDC types. When you set up custom UDC tables for use with the JD Edwards EnterpriseOne Configurator system, you should use these system codes so that the custom UDCs are not overwritten during a software upgrade.

Note. If you associate a required segment with a UDC table, you must select a value from the table. If you associate an optional segment with a UDC table, do not enter a value or enter a value from the UDC table.

Codes	Enter the new UDC that you want to add to the UDC table.
Special Handling	Enter a code that indicates special processing requirements for certain UDC values. The value that you enter in this field is unique for each UDC type.
	The system uses the special handling code in many ways. For example, special handling codes that are defined for Language Preference specify whether the language is double-byte or does not have uppercase characters. Programming is required to activate this field.
Hard Coded	Enter a code that indicates whether a UDC is hard-coded. Values are:
	Y: Hard-coded
	N: Not hard-coded

Copying Configured Items

Access the Copy Configured Item form.

Copy Configured Item form

Note. When you copy a configured item, you can copy any attribute from the original item. However, you cannot copy from one rule type to another. For example, if the original item was set up with a P assembly inclusion rule, you cannot copy it to a Q assembly inclusion rule.

Copy Options

Configured Item Information, Configured Item Segments, Cross Segment Editing Rules, Cross Segment Editing Rules, Assembly Inclusion Rules, (C)alculations, (P)arts, Parts List Only (Q), (R)outings, Price (X), and **(H)ot Spots**	Select attributes in the Copy Options group box to copy the attribute information from the original configured item (in the From group box) to the new configured item (in the To group box). You can copy only the attributes that exist on the configured item that is being copied.
Component Branch	Enter a secondary or lower-level business unit. The system uses the value that you enter to indicate that a branch or plant contains several subordinate departments or jobs. For example, assume that the component branch is named MMCU.

The structure of MMCU might be:

Branch/Plant - (MMCU)

Dept A - (MCU)

Dept B - (MCU)

Job 123 - (MCU)

When the Component Branch field is used while copying a configured item, the system populates every line in the assembly inclusion rules with the specific branch/plant noted in the Component Branch field. Since there is no branch/plant field on the segments, there is no impact to the copied segments. The specified component branch will be reflected in *ALL* lines, so any changes to the branch/plant must be made manually if all the components are not expected to come from the specified branch/plant. If a copy is made from one branch/plant (for example, M30 to M10) without specifying a component branch, the system populates the Copy from branch/plant on all the new assembly inclusion rule records.

The specified component branch is only copied to those rules where the rule branch and the component branch are the same. For rules where the component branch is different from the rule branch, the difference is maintained.

For example, the rules for item 6000 are in branch M30 and the component branch for each item in the rules is also M30. If item 6000 is copied to item M40, then the component branch for all rules would be copied to M40 because the rule branch and component branch for item 6000 are both M30.

If a component of item 6000 is transferred from branch M10 to branch M30, then the rule branch and component branch do not match. Thus, when item 6000 in branch M30 is copied to branch M40, all rules with a matching branch of M30 will be copied to M40. The component rule with a branch of M10 will be copied, but the branch will remain M10 and will not change to M40. This preserves the transfer information set up in the rules. If required, the rule can be changed manually.

For an order to be created, items must exist in the specified component's branch/plant master. For instance, you must have M10 records for each component being ordered from the specified order process.

If you create a branch/plant that is different than the demand branch/plant, nothing will populate after running the Multi-Facility MRP Generation program (R3483). You must create the appropriate branch relationships for each item that will be provided from another branch/plant using the Branch Relationships Revisions program (P3403T). Simply adding the designator to the Component Branch field does not drive the planning system.

The Component Branch field allows the user to copy assembly inclusion rule records to any branch/plant, but they will not actually be planned appropriately across branches unless the appropriate multifacility planning relationships are also set up and the Multi-Facility Generation program is run.

A configured item itself cannot be planned across branch/plants, but the components to complete the configured item can be planned as supply from various branch/plants.

Configured items can be planned across branch/plants using ST/OT functionality.

Locating Configured Item Segment Information

Access the Segment UDC Where Used form.

For the UDC table that you specify, you can locate all configured items and segments that reference the table. This capability is useful for reviewing the effect of table changes on configured items.

Printing Configured Items

Select Print Segments from the Form menu on the Configured Item Segments Revision form.

Print a hard copy of the configured item segments. Use the hard copy to verify the accuracy of the configured item segment setup.

Note. On the Work with Batch Versions form, copy the version XJDE0001 that is delivered with the software to create another version of the program that you can modify.

Setting Up Cross-Segment Editing Rules

This section provides overviews of cross-segment editing rule logic and error messages and discusses how to:

- Define a cross-segment logic statement.
- Define values for cross-segment logic statements.
- Define ranges for cross-segment logic statements.
- Copy a cross-segment editing rule.
- Set up custom error messages.
- Review cross-segment editing information.
- Print cross-segment editing rules.

Understanding Cross-Segment Editing Rule Logic

The JD Edwards EnterpriseOne Configurator system uses cross-segment editing rules to ensure feature and option compatibility during order entry. These rules establish the relationships among the configured item segments with Boolean logic statements. During order entry, the cross-segment editing rules validate that the feature and option values that you select create a valid product configuration. This validation enables you to avoid invalid combinations of segments and prevent invalid orders. Error messages about invalid configurations appear based on segment information from the order and cross-segment editing rules.

For each cross-segment editing rule, you can define an if/then/else logic statement for many conditions. For example, a forklift might require a different value for segment 30 (boom height), depending on the value of segment 10 (lift rating). This cross-segment editing rule illustrates this situation:

If segment 10 equals 6000, then segment 30 must equal 12, else segment 30 must be less than or equal to 10.

See Chapter 4, "Setting Up Configurator," Understanding Boolean Logic, page 32.

Each phrase of the conditional logic statement is a separate record (written on a separate line).

The system automatically separates rules by highlighting them with different colors.

The system automatically assigns a rule number that is based on the order in which each rule is entered into the system. The rule number is the order in which the rules will be processed at order entry. You can change the rule number when setting up cross-segment editing rules by using the Insert Before and Insert After options on the Row menu on the Work with Cross Segment Editing Rules form.

The system automatically assigns a sequence number to each line within a rule, based on the order in which each line of each rule is entered into the system. The sequence number is the order in which each line within a rule will be processed during rules processing. You can change the sequence number by using the Insert Before and Insert After options on the Row menu on the Cross Segment Edit Group Revision form.

The system enables you to perform multi-level referencing. You can perform upward and downward referencing to access values from segments on various levels of the configured item. The system also enables you to perform segment to segment comparisons. For example, if segment 10 is greater than segment 20. You can perform comparison across levels as well. For example, if segment 10 (of item 6000 in branch/plant M30) is greater than segment 20 (of item 6100 in branch/plant M30).

You use the Segment Item Left, Segment Branch Left, Configured Item Alias Left, Segment Item Right, Segment Branch Right, and Configured Item Alias Right fields in cross-segment editing rules.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left and Configured Item Alias Right fields in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Note. No limit exists on the nesting of cross-segment editing rules. However, nesting does have an impact on system performance. The deeper the rules are nested, the slower the processing time.

When dynamic configuration is enabled and UDC values are used for segments, cross-segment editing rules affect the values listed for a segment during order entry. When a segment answer is changed, all allowed values for other segments are updated to include only valid values based on the processed cross-segment editing rules. If there are no valid values left for a segment after the cross-segment editing rules are processed, then the system removes the segment from the configuration.

Rules Authoring for Dynamic Configuration Entry

When you write rules to use with dynamic configuration entry, you must build the relationships properly by writing complimentary rules. In writing complimentary rules, you write rules for both sides of the relationship and are explicit about which values can and cannot be in the list of valid values for a segment. If you write a cross-segment editing rule to remove a valid value based on one condition, then you must also write a rule to add the value back into the list of valid values based on the opposite condition.

For example, you may have a home configuration that offers five bedrooms but only one master bedroom is allowed. You write a rule that if segment 10 is a master bedroom, then the value of master bedroom is removed as an allowed value for all other room segments. You must also write a rule that if segment 10 is not a master bedroom then add the master bedroom value back into the valid values list for the room segments.

If the value selected for segment 10 is master bedroom but is later changed to another value and the second rule shown in the example is not written, then the master bedroom value does not get added back into the configuration as a valid segment selection. Thus, you would encounter false processing.

Understanding Error Messages

As you enter an order using the validate configuration feature, error messages appear for invalid combinations that are defined by cross-segment editing rules.

These error messages might appear:

- Hard error message: For an invalid combination with a required condition, a hard error message appears. To proceed, you must correct the problem by changing segment values.

- Soft error message: For an invalid combination with an optional condition, a soft error message appears. You can either correct the segment value, or override the error message and continue configuring the item.

The two types of messages are:

- A system-generated message.

  When an error occurs, the system automatically generates an error message. System-generated error messages contain the cross-segment editing rule (Boolean logic) that has been violated. The system displays calculated segment values in cross-segment editing rule error messages. For example:

  IF Power Type {Seg 020} is not equal to PROPANE, THEN Propane Tank {Seg 050} should be equal to *BLANK. Power Type {Seg 020} is BATTERY. Propane Tank {Seg 050} is 50(Lb)TK.

- A custom or user-defined message.

  You can create error messages for cross-segment editing rules that contain specific or custom information. Custom error messages could include more detail or simplify the content to make the error message easier to understand. For example, a 6000-LB capacity forklift requires a gas or propane engine.

  You set up customer error messages by using the media object functionality that you access from the Cross Segment Edit Group Revision form.

You have three options for controlling which error messages appear during order entry. You can display only the system message (cross-segment editing rule), only the custom message, or both the cross-segment editing rule and the custom message. You must select a value from UDC 32/CM in the Custom Message field on the Cross Segment Edit Group Revision form.

Important! You should not add the custom message to the first sequence of the cross-segment editing rule. The custom message must be attached to the conclusion portion of a Boolean statement such as would follow the operators *then* and *else*. If a message is attached to any other sequence of the rule, it does not appear when the error occurs.

Forms Used to Set Up Cross-Segment Editing Rules

Form Name	FormID	Navigation	Usage
Work with Cross Segment Editing Rules	W3292B	Configurator Setup (G3241), Cross Segment Editing Rules	Add, change, and review cross-segment editing rules. Copy a cross-segment editing rule. Enter a branch/plant and configured item to locate a configured item on the Work with Cross Segment Editing Rules form. Review the * RANGE by selecting IF Range or THEN Range from the Row menu. Review the * VALUES for a rule by selecting IF Values or THEN Values from the Row menu.
Cross Segment Edit Group Revision	W3292A	• To add the first rule, select Revisions from the Form menu on the Work with Cross Segment Editing Rules form. • To add additional rules, select a record on the Work with Cross Segment Editing Rules form and, from the Row menu, select Insert Edit Group, and then select Insert Before or Insert After.	Define a cross-segment logic statement. Use one grid row for each phrase of the conditional logic statement. Set up custom error messages.
Values Revision	W32921B	Enter a new record on the Cross Segment Edit Group Revision form. Enter *Values in the Values field and click TAB.	Define values for cross-segment logic statements.
Range Revision	W32921E	Enter a new record on the Cross Segment Edit Group Revision form. Enter *Range in the Values field and click TAB.	Define ranges for cross-segment logic statements.
Rules Copy Window - Cross Segment Editing Rules	W3297A	Select a blank line on the Cross Segment Edit Group Revision form, and then select Copy from the Row menu. Select the rows to copy, and click Select.	Select the cross-segment editing rules that you want to copy. See Chapter 4, "Setting Up Configurator," Copying Configured Items, page 48.

Page Name	Definition Name	Navigation	Usage
Cross Segment Where Used Inquiry	W32920A	Configurator Setup (G3241), Cross Segment Where Used	Review cross-segment editing information. Review usage of cross-segment editing rules.

Defining a Cross-Segment Logic Statement

Access the Cross Segment Edit Group Revision form.

Cross Segment Edit Group Revision form

Important! You can reference any level of items in a cross-segment editing rule by using the Segment Item Left, Segment Branch Left, Configured Item Alias Left, Segment Item Right, Segment Branch Right, and Configured Item Alias Right fields. When writing the rule, you must first enter information in the Segment Item field before entering the segment number in the Segment Number field. This process tells the system from which configured item to retrieve segment information for the cross-segment editing rule.

Segment Number

Enter a number that the system uses to reference the answer to the question. Segment numbers are user-defined.

Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.

Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.

If this segment number is used in assembly inclusion rules or cross-segment editing rules, then this is the segment used for the left side of the condition.

Values

Enter an answer that is valid for the segment and rule relationship. You can enter a specific UDC value or one of these values:

VALUES: Provides multiple values lists for you to use in the logic rule. You can enter up to 45 values.

If you enter *VALUES* and press TAB to move out of the field, the system calls the Configured Item Rule Range or Values program (P32921), which enables you to revise values. Values are:

BLANK: Uses a blank value in the logic rule.

ZERO: Searches for amounts that are equal to zero as part of the logic rule.

RANGE: Uses a range of values (for example, 1 to 50) in the logic rule. You enter the range of values. The first value in the range must be less than the second value.

	If you enter *RANGE* and press TAB to move out of the field, the system calls the Configured Item Rule Range or Values program (P32921), which enables you to revise ranges.

ALL: Uses all values in the logic rule.

Segment Number	Enter a number that the system uses to reference the answer to the question. Segment numbers are user-defined.
	Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.
	Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.
	If this segment number is used in assembly inclusion rules or cross-segment editing rules, then this is the segment used for the right side of the condition.
Req (required or optional)	Enter a value from UDC 32/AQ that specifies the type of error that the system displays when it validates a cross-segment editing rule. Values are:
	O: Optional (issues warning)
	R: Required (issues error)
Custom Message	Enter a UDC (32/CM) that specifies the cross-segment error message that appears. Values are:
	0: Standard cross-segment error message.
	1: Custom error message.
	2: Cross-segment and custom error messages.
Segment Item Left	Enter a number that represents the item number of the parent configured item for the segment referenced in the left side of the condition. Use this field to reference a previously chosen segment from a different configuration level.
Segment Branch Left	Enter the branch/plant associated with the configured item that contains the segment number referenced in the left side of the condition. Use this value to reference a previously selected segment from a different configuration level, and to reference the branch/plant of the item in the Segment Item Left field.
Configured Item Alias Left	Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the left side of the condition.
	The Configured Item Alias Left field on the cross-segment editing and assembly inclusion rule forms provide the ability to reference a specific occurrence of an included item. This is not a required field. The Configured Item Alias Left field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.
	Important! It is recommended that you use the Configured Item Alias Left field to ensure that the correct duplicate item is used in a configuration.
	A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been

assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left field in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Segment Item Right
Enter a number that represents the item number of the parent configured item for the segment referenced in the right side of the condition. Use this field to reference a previously chosen segment from a different configuration level.

Segment Branch Right
Enter the branch/plant associated with the configured item that contains the segment number referenced in the right side of the condition. Use this value to reference a previously selected segment from a different configuration level, and to reference the branch/plant of the item in the Segment Item Right field.

Configured Item Alias Right
Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the right side of the condition.

The Configured Item Alias Right field on the cross-segment editing and assembly inclusion rule forms provides the ability to reference a specific occurrence of an included item. It is not a required field. The Configured Item Alias Right field is for use with duplicate components. If you do not use this field with duplicate components, then the system processes duplicate components based on the first duplicate item value that is stored in cache.

Important! You should use the Configured Item Alias Right field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Right field in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Defining Values for Cross-Segment Logic Statements

Access the Values Revision form.

Values Revision form

Values	Enter a list of valid answers to the configurator feature and option questions that appear during order entry.

When you define cross-segment editing rules, you compare the segment answers to values to determine invalid configurations. When you define assembly inclusion rules, you create unique configurations by comparing the segment answers to values to assign parts, prices, calculated values, or routing steps.

Defining Ranges for Cross-Segment Logic Statements

Access the Range Revision form.

Range Revision form

From Range and **To Range**   Enter the starting value or the ending value of a range of numbers. In the JD Edwards EnterpriseOne Configurator system, the *Range variable is used in the Values field that is associated with the cross-segment editing rules and assembly inclusion rules. The *Range values represent answers to the segment that is referenced by the rule. You can use a UDC table to act as a filter to narrow the possible values that the logic statement will return.

When you are using a range of values, the entire range of values from the lower limit to the upper limit is acceptable. The answer cannot be limited to, for instance, even numbers, two decimal places, 1/4 inch, and so on. Any value within the range of values is a valid answer.

Copying a Cross-Segment Editing Rule

Access the Work with Cross Segment Editing Rules form.

To save time during setup, you can copy a cross-segment editing rule from one configured item to another.

1. On the Work with Cross Segment Editing Rules form, complete the Branch/Plant and Configured Item fields, and click Find to locate a configured item.

2. Select a record, and select Insert Edit Group and then Insert Before or Insert After from the Row menu.

3. On Cross Segment Edit Group Revision, select a blank line, and then select Copy from the Row menu.

4. On Rules Copy Window - Cross Segment Editing Rules, locate the configured item from which you want to copy a rule.

5. Select a record or several records, and click Select.

6. On the Cross Segment Edit Group Revision form, modify the rule as required, and select OK.

Setting Up Custom Error Messages

Access the Cross Segment Edit Group Revision form.

1. Complete the Custom Message field with the appropriate value.

   Note. You should not add the custom message to the first sequence of the cross-segment editing rule. The custom message must be attached to the conclusion portion of a Boolean statement such as would follow the operators *then* or *else*. If a message is attached to any other sequence of the rule, it does not appear when the error occurs.

2. From the Row menu, select Custom Message.

3. On Media Object Viewer, select Text.

Reviewing Cross-Segment Editing Information

Access the Cross Segment Where Used Inquiry form.

Review cross-segment editing information to help you maintain the rules. For the item number and segment that you specify, you can review rule logic and segment values.

Printing Cross-Segment Editing Rules

Select Print Rules from the Form menu on the Work with Cross Segment Editing Rules form.

This report provides a hard copy of cross-segment editing rules. Use the hard copy to verify the accuracy of cross-segment editing rule setup.

Setting Up Assembly Inclusion Rules

This section provides overviews of assembly inclusion rules, assembly inclusion rule logic, advanced assembly inclusion rules, derived calculations, external program references, configured tables, smart parts, and hot spot assembly inclusion rules and discusses how to:

• Define codes for hot spots.

• Set processing options for Assembly Inclusion Rules (P3293).

• Define assembly inclusion rule logic.

• Define advanced assembly inclusion rules.

• Copy assembly inclusion rules.

• Test derived calculations.

• Print assembly inclusion rules.

Understanding Assembly Inclusion Rules

Assembly inclusion rules translate the requested values from order entry into the specific components, routing operations, user display information, and calculated values that are necessary to build, cost, and price the configured item. Assembly inclusion rules also offer advanced logic, such as algebraic expressions, smart parts, and external program references.

The six types of assembly inclusion rules include:

Rule	Description
Component Part (P) Rules	Define the component parts to include on the sales order and work order parts list.
	Define the transaction type and supplier number to support the generation of various order types for configured items and components of configured items.
	You also define multilevel configured items with P type rules.
	For example, if segment 10 equals 6000 and segment 30 is greater than or equal to 10, then use part F170 or else use part F175.
	Important! You must have at least one P assembly inclusion rule for the JD Edwards EnterpriseOne Configurator system to function.

Rule	Description
Work Order Component Part (Q) Rules	Define the components to include on the work order parts list. The Order Processing program (R31410) attaches the parts list. For example, if segment 10 equals standard, then include part R100 and part R105.
Calculation (C) Rules	Define the mathematical calculation for the calculated segments for a configured item. You must first define the segment as calculated on Configured Item Segments. You can use a calculated segment value in derived calculations for other rules.
Hot Spot (H) Rules	Define information and messages about a configured item that are processed for display purposes only. This information appears on the order entry form in a Hot Spot field. H rules are calculated similar to C rules. However, the results do not affect the configuration identifier.

Rule	Description
Pricing (X) Rules	Define the price and cost adjustments. The system processes X rules independently, based on the kit/configurator pricing method that you selected. Typically, you should not set up cost adjustments when you use work-order-generated line types. X rule cost adjustments affect only the sales order. Order Processing (R31410) recalculates the cost without the X rule.
	For example, if segment 40 equals CUS, then adjust the price by 650.00 USD.
	The Line Type for X rules should be one that has the Inventory Interface set to *N*. You must also be certain that the Edit Item Master for the Non-Stock Item option does not have a check mark on the Line Type Constants Revisions. This situation prevents the Item Number Invalid error at order entry.
	Based on whether the Price Rollup field is activated, adjustments are either reflected in the price of the parent item or entered in a new extended sales order detail line.
	Based-on effectivity dates defined on the Configured Item Information form are used in conjunction with the effective from and through dates of X rules to determine which rules are valid at order entry. All X rules that are effective are applied to the order to calculate price and cost.
	See Chapter 4, "Setting Up Configurator," Understanding Configured Item Pricing and Costing Using Based-on Effectivity Dates, page 27.
	See Chapter 4, "Setting Up Configurator," Defining Configured Item Information, page 41.
Routing (R) Rules	Define the work order routing and routing operations. The Order Processing program (R31410) attaches work order routings. You must first define the routings on Work With Routing Master (P3003) before you define routing rules.
	For example, if segment 40 equals STD, then use the routing for standard paint or else use the routing for custom paint.

Important! You must have at least one P assembly inclusion rule for the JD Edwards EnterpriseOne Configurator system to function.

You review assembly inclusion rule information to help you maintain these rules. Rules and tables can be very complex. Using inquiry programs can help you identify segments and components within the many rules and tables that you might set up. You can determine the effect of component changes, such as shortages and substitutions, and determine the effect of changes on valid segment values. For example, if a vendor discontinues a paint color, you can determine how many configurations are affected.

Business Case: Assembly Inclusion Rules

When sales orders are created, all of the detail information appears on the sales order. In most cases, the customer does not need all of the information, and it crowds the sales order. Also, some detailed information is not appropriate for the customer to see. Only pertinent lines should be printed on the customer sales order.

Use the Assembly Inclusion Rule application in the JD Edwards EnterpriseOne Configurator system to adapt the sales order. Use P assembly inclusion rules to add parts to the sales order and work order parts list, and use Q assembly inclusion rules to add parts to the work order parts list only. These assembly inclusion rules enable you to adapt the sales order and work order parts list to communicate the appropriate information.

Understanding Assembly Inclusion Rule Logic

For each assembly inclusion rule, you can define a logic statement for many conditions. This statement can determine which parts to include or how to price an item. The logic is similar to that used in cross-segment editing rules. The main difference is that assembly inclusion rules logic statements can be either conditional or unconditional.

An unconditional statement is identified by an asterisk (a *then* condition) in the And/Or Selection field. Use unconditional rules when you want to apply the same rule, regardless of the segment answers. You must define unconditional rules before you define conditional rules. All unconditional rules must be grouped together in the first rule (rule number one). Unconditional rules are used, for example, when a part is always included as a component or when a price adjustment is always performed.

Conditional rules use Boolean logic to control or condition an action, based on segment answers. You can also use and/or operators to create conditional rules that are compound statements of logic. This P assembly inclusion rule is an example of a compound logic statement: If Segment 10 equals 6000, and segment 30 is greater than 10, then include part F170, else include part F175.

Each phrase of the conditional logic statement is a separate record (written on a separate line).

The system automatically separates rules by highlighting them with different colors.

The system automatically assigns a rule number, based on the order in which each rule is entered into the system. The rule number is the order in which the rules will be processed at order entry. You can change the rule number when setting up assembly inclusion rules by using the Insert Before and Insert After options on the Row menu on the Work with Assembly Inclusion Rules form.

The system automatically assigns a sequence number to each line within a rule, based on the order in which each line of each rule is entered into the system. The sequence number is the order in which each line within a rule will be processed during rules processing. You can change the sequence number by using the Insert Before and Insert After options on the Row menu on the Assembly Inclusion Edit Group Revisions form.

The system enables you to perform multi-level referencing. You can perform upward and downward referencing to access values from segments on various levels of the configured item. The system also enables you to perform segment to segment comparisons. For example, if segment 10 is greater than segment 20, then include item F125. You can perform comparison across levels as well. For example, if segment 10 (of item 6000 in branch/plant M30) is greater than segment 20 (of item 6100 in branch/plant M30), then include item F250.

You use the Segment Item Left, Segment Branch Left, Configured Item Alias Left, Segment Item Right, Segment Branch Right, and Configured Item Alias Right fields in assembly inclusion rules.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left and Configured Item Alias Right fields in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Note. No limit exists on the nesting of assembly inclusion rules. However, nesting does have an impact on system performance. The deeper the rules are nested, the slower the processing time.

Rules Processing

You enter an order for a configured item once the Configured Item form is rendered and the grid is loaded. As you enter an order, the system verifies JD Edwards EnterpriseOne Configurator processes level by level in this order:

1. Change segment values or click the Add to Order button to accept all default values.

2. Validate segment agreement.

    System processing includes UDC validation, range checking, alpha versus numeric checking, length checking, and required versus optional checking.

3. Process assembly inclusion rules that are related to segments that have been changed.

    a. Process C assembly inclusion rules and update C segments.

        The system processes C rules first because the calculated segment answer might be required to validate the configuration. The calculated segment answer might also be needed to perform additional calculations for the configured item.

    b. Process P assembly inclusion rules.

    c. Process Q assembly inclusion rules.

        The system processes Q assembly inclusion rules and stores the components in the Configurator Component table (F3215). The components are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the parts list and establish cost.

    d. Process R assembly inclusion rules.

        The system processes R assembly inclusion rules and stores the routings in the Configurator Routings table (F3212). The routings are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the routing and establish cost.

    e. Process X assembly inclusion rules.

    f. Process H assembly inclusion rules.

4. Process cross-segment editing rules that are related to segments that have been changed.

    If dynamic configuration entry is disabled, the system displays any error messages.

    If dynamic configuration entry is enabled, the system:

    • Updates all allowed values for other segments to include only valid values.

    • Sets the valid value if there is only one allowed valid value for a segment.

    • Removes the segment from the configuration if there are no valid values left for a segment.

5. Enable the Add to Order button if no cross-segment editing errors occurred.

6. Click the Add to Order button.

The following diagram illustrates rules processing:

Rules processing

Note. The JD Edwards EnterpriseOne Configurator system supports upward and downward referencing within cross-segment editing and assembly inclusion rules. There is no limitation on upward or downward referencing.

Required Fields for Assembly Inclusion Rules

This table lists the information that you have to supply in addition to common fields for each rule in the Assembly Inclusion Rules program:

Rule	Fields
P rule	• Item number • Component branch • Print part • Quantity • Unit of measure • Operation sequence number • Issue type • Line type • Write attached detail line • Transaction type • Supplier number The supplier number is required for transaction types *1* (direct ship) and *4* (purchase order). **Note.** For a P rule, you must enter either an item number, smart part, or table name.
Q rule	• Item number • Component branch • Quantity • Unit of measure • Operation sequence number • Issue type • Line type **Note.** For a Q rule, you must enter either an item number, smart part, or table name.
R rule	• Item number • Component branch • Operation sequence number **Note.** Leave this field blank if all operations are to be used.

Rule	Fields
X rule	• Unit price • Unit cost • Price rollup • Line type
C rule	• Segment number • Relationship **Note.** For a C rule, you must enter either a derived calculation or table name.
H rule	• Segment number (hot spot number) • Relationship **Note.** For an H rule, you must enter either a derived calculation or table name.

Understanding Advanced Assembly Inclusion Rules

In addition to the logic statements, you can set up optional advanced assembly-inclusion-rule functionality. You set up advanced assembly inclusion rules on either the Assembly Inclusion Edit Group Revisions form or the Advanced Rule Functions form.

Advanced assembly-inclusion-rule features vary, according to the type of assembly inclusion rule that you set up, as illustrated in the table:

Description	P Rules	Q Rules	C Rules	H Rules	X Rules	R Rules
Derived Calculations	X	X	X	X	X	X
External Program References	X	X	X	X	X	X
Configured Tables	X	X	X	X	X	Not Applicable
Smart Parts	X	X	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Understanding Derived Calculations

For each rule type, you can define calculations that refer to the values of one or more segments. You can define a derived calculation on either the Assembly Inclusion Edit Group Revisions form or the Advanced Rule Functions form.

Segment References

You can reference any segment within a formula. To reference a segment within the same configured item, enter *S* and the segment number.

For example, `S3` indicates segment three.

To reference a segment from a different configured item, enter *S*, the segment number, and the configured item name. Enclose the item name within equal signs.

For example, `S3=Piston=` indicates segment three of item Piston.

Algebraic Formulas

Use algebraic formulas to combine different mathematical operations with these operators: `+`, `-`, `×`, and `÷`. You can embed calculations by enclosing them in parentheses. You might want to embed segment numbers in the formula to include segment values as part of the calculation.

For example, this formula calculates the counterweight that is necessary to keep the forklift from tipping over when its boom is fully extended with a full load:

```
Derived Calculation: S10 ÷ (4 × COS(2 × S30 × 3.1416 ÷ 360 × 2 × 3.1416))
```

Trigonometric and Logarithmic Functions

You can use trigonometric and logarithmic functions independently or as part of a complex formula.

These trigonometric functions are available (values expressed in radians):

Function	Description
SIN(1.5)	Indicates the sine of 1.5.
COS(S3)	Indicates the cosine of segment three.
TAN(S3)	Indicates the tangent of segment three.
ARC(S3)	Indicates the arctangent of segment three.

These logarithmic functions are available:

Function	Description
LOG	Indicates log to base 10.
LN	Indicates natural log.
**	Indicates an exponent. 2**5 represents 2 to the fifth power.

This function is available:

Function	Description
SQR	Indicates square root.

Substrings

You can use the SUBSTR (substring) function to include a portion of a larger string of characters in a formula.

To calculate a substring, you must provide these references:

• The segment from which you want to take the substring.

• The starting position within the string where you want to begin referencing values.

• The length of the string that you want to reference.

For example, if segment 10 is 400012, then these expressions are true:

Function	Description
SUBSTR(S10,1,4)	Indicates that the substring from segment 10 starts at the first position of the string and includes the next four positions. The substring value is 4000.
SUBSTR(S10,5,2)	Indicates that the substring from segment 10 starts at the fifth position of the string and includes the next two positions. The substring value is 12.

Concatenations

You can use the CONCAT (concatenate) function to combine the values of two different segments. For example:

Function	Description
CONCAT(S3,S4)	Combines the values of segments 3 and 4. If the segment value of segment 3 is 1001 and the value of segment 4 is WH (white), the concatenated value is 1001WH.

External Field References

You can reference fields that are external to the JD Edwards EnterpriseOne Configurator system to use in derived calculations.

Using the External Files Reference program, you select a field from these tables:

Table	Description
F0101	Address Book Master
F03012	Customer Master by Line of Business
F41002	Item Units of Measure Conversion Factors
F4101	Item Master
F4102	Item Branch
F41021	Item Location
F4105	Item Cost

Table	Description
F4106	Item Base Price
F41092	Item Supplemental Data Base User Defined Codes

After you reference a field value, the information appears in the Derived Calculation field, preceded by an ampersand (&). The ampersand is then followed by the table identifier and then the field alias. You can use the field independently or within a complex expression.

You can also include field values through External Files Reference. For example, a pricing assembly inclusion rule for item 6000 (forklift) uses a field reference to retrieve a base price from the F4106 table. The formula *& BPUPRC* appears in the Derived Calculation field, where *BP* is the table identifier for the F4106 table and *UPRC* is the alias for price.

The system uses the component item number and branch from the rule to retrieve the appropriate tables. It also uses the Address Book number to retrieve data from the address book or billing instructions tables.

To reference a supplemental database field, you must also specify the data type. Enter the data type after the field, in this way:

Data Type	Description
&T2AMTU(WD)	Indicates an amount field on the Item Supplemental Database table and the WD data type.

When you reference the unit of measure in table F41002, you must specify the unit of measure in the same manner.

Literal Text

You can use literal text to provide a user-defined value that is a constant. Literals may be used to add text that might otherwise be substituted by configurator functionality. When you are using literal text , the literal must be placed in single quotes. For example, ʼS10ʼ produces the value S10 instead of getting the value of segment 10 and replacing it.

To create smart parts, you combine a literal (constant) with a segment value (variable) to create a formula. In this example, the smart part consists of the literal P and the value of segment 4. Thus, the formula would beʼPʼS4. If the value of Segment 4 is 2000, then the smart part is P2000.

See .

Understanding External Program References

You can use a program that is external to the software to define a calculation. You refer to an external custom business function for special calculations that are particularly complex or involved.

For R, P, and Q rules, the external business function refers to the component number, component branch, and sold-to number. For H, C, or X rules, the external business function refers to the configured item number, branch/plant, and sold-to number.

Several setups must be completed before an external business function can be called. A business function object must be created for the external program. This business function object must then be added to the Object Librarian.

The Function Use processing option value for the Assembly Inclusion Rules program (P3293) must be equal to the Object Use value on the Object Librarian for the function being called.

You must enter *EXTVAR* in the Derived Calculation field on the Assembly Inclusion Edit Group Revisions form. Enter the name of the external business function to be called in the External Program field.

After the system runs the external function, it places the results in EXTVAR, a 30-character variable in the inclusion rule.

The external business function can also access and use the values of previously entered segments that are sorted in cache. The system passes the B3200000 data structure to the external business function.

Understanding Configured Tables

You can set up configured tables to simplify assembly inclusion rules. Although they take time to set up, tables reduce the number of rules and reduce processing time. Each table uses an assembly inclusion rule to reference return calculated segment values, prices, parts, and display information to the sales or work order.

See .

Understanding Smart Parts

Depending on the item numbering scheme and the need for reducing assembly inclusion rules, you can set up smart parts, or special item numbers, to derive defined variable segments. Using smart parts is a simplified version of using assembly inclusion rules.

For example, a manufacturer might have 100 different paint options for a configured item. Rather than set up 100 different assembly inclusion rules to account for variations in paint color, the manufacturer might want to set up special item numbers, or smart parts, to keep track of the different paint values. These smart parts combine the segment item and the paint color into one item number, as defined in the smart part field on the Advanced Rule Functions form.

Smart parts work with P and Q rules. You can build smart part numbers by using the segment values from order entry. The system calculates smart parts in a similar manner to derived calculations. However, the resulting smart part is an alphanumeric string. You must define item numbers that are the result of smart part calculations in the Item Master (F4101) and Item Branch File (F4102) tables.

Smart part formulas can define short, second, or third item numbers. Smart parts use the part numbering symbol conventions that are defined in the branch/plant constants. For example, if the smart part formula uses the symbol to identify the third part number, the system places the third part number on the sales order and work order detail line.

You can build a smart part number by using these functions:

Function	Description
Segment referencing	To reference segments that have already been entered on a different level specify the item number of that level with the segment number. For example, the notation for Segment 4 of Piston is Derived Calculation `S4=Piston=.`

Function	Description
Substring	To remove a particular string within a larger string, use the substring function. It removes a string when you define the segment, beginning position, and length. For example, if Segment 4 equals 1234, the last three positions (234) can be used with the notation SUBSTR(S4,2,3), where 2 is the beginning position and 3 is the length of the substring.
Concatenation	To combine two fields, use the concatenation function. For example, CONCAT(S3,S1) combines the values of Segment 3 and 1 into one field.
Literal text	To combine a literal (constant) with a segment value (variable) to create a formula. When you are using literal text in a smart part calculation, the literal must be placed in single quotes. In this example, the smart part consists of the literal P and the value of segment 4. Thus, the formula would be 'P'S4. If the value of Segment 4 is 2000, then the smart part is P2000.

Business Case: Advanced Assembly Inclusion Rules

A business has special calculations to run when a new order is created.

Use the Advanced Assembly Inclusion Rule features in the JD Edwards EnterpriseOne Configurator system to enable order entry to take advantage of segment referencing, algebraic formulas, trigonometric and logarithmic functions, substrings, concatenations, external field references, external business function references, configured tables, and smart parts. This feature enables you to perform calculations when you validate product configuration. Thus, calculated values are available to order entry personnel and the customer.

Understanding Hot Spot Assembly Inclusion Rules

Hot spots are used to provide visual information during order entry. Allowing certain kinds of information to appear during the order entry process can improve the overall effectiveness for the user. Hot spot information enables you to view either predefined (hard-coded) values or user-defined calculated values. Hot spots are for display purposes only.

The hot spot information is available after the successful (no errors) calculation process has been run. The initial hot spot selection values are displayed, based on the processing option settings for the Configured Item Revisions program (P3210). You then can dynamically change the hot spot display. Click a hot spot button and select a different hot spot to display from the UDC 32/HS table.

The UDC contains a list of all valid hot spot entries. It also contains a numeric reference to the hot spot, a description, and an indication of whether the hot spot is hard-coded. Hard-coded entries are not changeable and are numbered descending from 999. Examples of hard-coded hot spot entries include price (as defined by the order entry mode), cost (as defined by the order entry mode), and weight.

Hard-Coded Hot Spots

Hard-coded hot spots are predefined and cannot be changed. These hot spots are numbered descending from 999.

Hot Spot Value	Description
999	Displays the weight, which is calculated by adding up the weight of all the components that are included in the configuration. The weight of the component is calculated by converting the quantity or unit of measure to the weight unit of measure of the parent item. Any components that are included for a sales quote (Q rule results) are not included in the weight rollup.
998	Displays Cost (Foreign), which is calculated by adding up the foreign cost of all the nonconfigured components in the configuration, which includes component for a sales quote (Q rule results). Any cost that is included by X rules and User-Added cost with Price Roll Up equal to *Y* is also accumulated.
997	Displays Cost (Domestic), which is accumulated in the same way that Foreign 998 is done, except that the domestic amount is accumulated. Both amounts are accumulated separately and are not converted one from the other.
996	Cost (Order Currency) displays Foreign 998 or Domestic 997, based on the mode that you entered in the sales order. This process enables you to enter both modes of sales order and not have to change the hot spot selection.
995	Displays Price (Foreign), which is calculated based on the Kit/Configurator Pricing Method on the Item Master record. This method determines which items have their prices accumulated.
994	Displays Price (Domestic), which is accumulated in the same way Foreign 995 is done, except that the domestic amount is accumulated. Both amounts are accumulated separately and not converted one from the other.
993	Price (Order Currency) displays Foreign 995 or Domestic 994, based on the mode that you entered in the sales order. This process enables you to enter both modes of sales order and not have to change the hot spot selection.
992	Displays Price Not Rolled (Foreign), which is accumulating the foreign price that is being extended as independent sales order lines. This process includes all of the prices that are included by X rules and User-Added prices with Price Roll Up equal to *N*.
991	Displays Price Not Rolled (Domestic), which is accumulated in the same way as Foreign 992, except that the domestic amount is accumulated. Both amounts are accumulated separately and not converted one from the other.

Hot Spot Value	Description
990	Price Not Rolled (Order Currency) displays Foreign 992 or Domestic 991, based on the mode that you entered in the sales order. This process enables you to enter both modes of sales order and not have to change the hot spot selection.
989	Displays Volume, which is calculated by adding up the volume of all the components that are included in the configuration if the items that are set up in the configurator include a volume.

Note. Prices do not include blanket discounting from Oracle's JD Edwards EnterpriseOne Advanced Pricing.

Hot Spot Assembly Inclusion Rule Definitions

Before you can define H (Hot Spot) assembly inclusion rules, you must define the hot spot UDC value in UDC table 32/HS.

User-defined hot spots are determined by using the H assembly inclusion rule. The hot spot rules function similarly to a calculation (C) assembly inclusion rule. This process means that the power of the derived calculation, external program interfaces, and more can be leveraged. Configured tables are also supported for the H rule type.

Hot spots (H rules) are processed in the same way as calculated values (C rules). This means that if the configuration validation fails, the displayed value is the customer-defined error character as defined in the Configurator Constants. The H rule differs from a C rule in that processing is done last for the parent item. In addition, anything from any level can be referenced.

The values from UDC 32/HS are used by the F3293 Evaluate AIR business function (B3200460) to process the hot spot (H Rule) as numeric or nonnumeric. If the result of the rule matches the Numeric Y/N definition, then it is rounded, based on the UDC definition. The second description for UDC 32/HS enables you to enter an edit code that is used to scrub the result before it appears on the form. The edit codes are standard programming edit codes.

Note. If a hot spot is defined in UDC 32/HS but a corresponding H assembly inclusion rule has not been defined, the hot spot displays a value of zero on the Configured Item Revisions form at order entry.

Forms Used to Set Up Assembly Inclusion Rules

Form Name	FormID	Navigation	Usage
User Defined Codes	W0004AI	Configurator Setup (G3241), Hot Spot Description Click the Add button on the Work With User Defined Codes form.	Define codes for hot spots.
Work With Assembly Inclusion Rules	W3293N	Configurator Setup (G3241), Assembly Inclusion Rules	Locate and review configured items by branch/plant and rule type. To review the values or ranges for a rule, select a record and select Values or Range from the Row menu.

Page Name	Definition Name	Navigation	Usage
Assembly Inclusion Edit Group Revisions	W3293A	To add the first rule, select Revisions from the Form menu on the Work With Assembly Inclusion Rules form. To add additional rules, select a record and then select Insert Edit Group and then select Insert Before or Insert After from the Row menu. To revise an existing rule, select the rule and click Select or select Edit Group from the Row menu.	Define assembly inclusion rule logic. Copy assembly inclusion rules. Use one grid row for each phrase of the conditional logic statement.
Values Revision	W32921B	Enter *Values* in the Values field on the Assembly Inclusion Edit Group Revisions form, and press Tab to move to the next field.	Review existing values and define new values. See Chapter 4, "Setting Up Configurator," Defining Values for Cross-Segment Logic Statements, page 56.
Range Revision	W32921E	Enter *Range* in the Values field on the Assembly Inclusion Edit Group Revisions form, and press Tab to move to the next field.	Review existing ranges and define new ranges. See Chapter 4, "Setting Up Configurator," Defining Ranges for Cross-Segment Logic Statements, page 57.
Advanced Rule Functions	W3293B	Select a record on the Assembly Inclusion Edit Group Revisions form, and select Advanced Rules from the Row menu.	Define advanced assembly inclusion rules. **Note.** You can also define advanced rule information on the Assembly Inclusion Edit Group Revisions form.
Rules Copy Window - Assembly Inclusion Rules	W3297B	Select Copy from the Row menu on the Assembly Inclusion Edit Group Revisions form.	Copy assembly inclusion rules.
Derived Calculations	W329303B	Select a record on the Assembly Inclusion Edit Group Revisions form, and select Derived Calc from the Row menu.	Test derived calculations. Test for accuracy without having to run sales quotes to verify the calculated values. The tester performs the derived calculation based on segment values that you enter.

Page Name	Definition Name	Navigation	Usage
Work With Component/Supplier Where Used	W32930A	Configurator Setup (G3241), Component/Supplier Where Used	Locate a component item by assembly inclusion rule type to review where the component item is used. Locate a supplier by P-type assembly inclusion rule to review the component items supplied by the vendor.
Work With AIR Segment Where Used Inquiry	W329301A	Configurator Setup (G3241), AIR Segment Where Used Inquiry	Locate and review assembly inclusion rule information.
Work With AIR Used for Tables	W329302A	Configurator Setup (G3241), Tables in AIRs Where Used Inquiry	Locate a table by rule type to review where the table is used.

Defining Codes for Hot Spots

Access the User Defined Codes form.

You must define UDCs for hot spots in UDC table 32/HS. After you define the hot spot, you can define an assembly inclusion rule with a corresponding calculation.

If the column named Description 02 does not appear in the UDC table, change the setup of UDC 32/HS:

1. Select Code Types from the Form menu on the Work With User Defined Codes form.

2. Type *HS* in the Code Types QBE (query by example) line and click Find.

3. Click Select to get to the User Defined Code Types form.

4. Type *Y* in the 2nd Line (Y/N) (second line) field.

    This step displays the second description field in the initial UDC table.

5. Verify that the Numeric (Y/N) field is set to *Y.*

6. Click OK and then Close.

7. Click Add when the Description 02 column appears in the table on the Work With User Defined Codes form.

Codes   Enter the number of the hot spot that is being defined.

Description 01   Enter the description of the hot spot.

Description 02   Enter whether a given code (hot spot) is to be processed as a numeric or nonnumeric statement.

                              The default value for hot spots is nonnumeric. If the Description 02 column is blank or the value is *N,* then the hot spot formula is treated as a string (it displays the formula rather than a calculated value).

                              (Blank) is the equivalent of a default value from data dictionary item CNUM, usually defined as N (nonnumeric).

If the expected answer is numeric and the hot spot is not hard-coded, then the Description 02 column should contain YX, where Y indicates that the result is numeric and X is the number of decimal places to be rounded to.

Hard-coded hot spots are predefined as numeric; therefore, the first digit is not significant for them. You have to enter only the second digit for rounding purposes.

For example, imagine a user-defined hot spot with a calculated value of 1.2345.

If *N,* then the formula appears, not the calculated value.

If *Y2,* then 1.23.

If *Y9,* then 1.2345 (no rounding because decimals do not exceed 9).

Special Handling   Specify a language preference. It has no impact on hot spot calculations.

Hard Coded   Specify whether a particular hot spot is defined as hard-or soft-coded. System-defined hot spots are hard-coded, and this field is *Y.* If you set up a code for hot spots, this field should be *N.*

Setting Processing Options for Assembly Inclusion Rules (P3293)

These processing options control default processing for the Assembly Inclusion Rules program.

Defaults

These processing options control default rule types.

Rule Type   Specify whether the resulting value of the assembly inclusion rule is a part number, price, routing operation, or calculated value. Values are:

P: Part List

Q: Work Order Component

C: Calculation

H: Hot Spot

X: Price/Cost Adjustment

R: Route Sheet

Line Type for X Rules   Specify how the system processes lines on a transaction. This code controls the systems with which the transaction interacts, such as JD Edwards EnterpriseOne General Ledger, JD Edwards EnterpriseOne Job Cost, JD Edwards EnterpriseOne Accounts Payable, JD Edwards EnterpriseOne Accounts Receivable, and JD Edwards EnterpriseOne Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include:

S: Stock item

J: Job cost

N: Nonstock item

F: Freight

T: Text information

M: Miscellaneous charges and credits

W: Work order

Edits

This processing option controls validation against external programs.

Function Use	Enter the function use for validating external programs. If you leave this processing option blank, the system does not perform any validations against the function use code for the business function and UBE objects that are selected as external programs.

Defining Assembly Inclusion Rule Logic

Access the Assembly Inclusion Edit Group Revisions form.

Assembly Inclusion Edit Group Revisions form

For each assembly inclusion rule, you define unconditional and conditional rules using Boolean logic. Before you define conditional rules, define unconditional rules to include parts, price adjustments, cost adjustments, calculated values, display values, or routing steps—regardless of the segment values.

Note. All unconditional rules must be grouped together in the first rule (rule number one).

To reference a segment from another level in the configured item:

1. Complete the Op field.

2. Complete the Segment Item Left, Segment Branch Left, Configured Item Alias Left, Segment Item Right, Segment Branch Right, and Configured Item Alias Right fields.

3. Continue to enter the remaining rule information.

Note. If the rule is not written in this order when referencing a segment from another level in the configured item, you will either get the incorrect segment reference or an error message.

Rule Type	Enter a value that identifies whether the resulting value of the assembly inclusion rule is a part number, price, routing operation, or calculated value. Values are:
	P: Part List
	Q: Work Order Component

	C: Calculation
	H: Hot Spot
	X: Price/Cost Adjustment
	R: Route Sheet
Parent Sgmt (parent segment)	Enter a number that the system uses to reference the answer to the question. Segment numbers are user-defined.
	Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.
	Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.
	If this segment number is used in assembly inclusion rules or cross-segment editing rules, then this is the segment used for the left side of the condition.
Child Sgmt (child segment)	Enter a number that the system uses to reference the answer to the question. Segment numbers are user-defined.
	Cross-segment editing rules reference the segment numbers to ensure that the set of values defines a valid configuration.
	Assembly inclusion rules reference segment numbers and their associated values to define prices, component parts, routing, and calculated values for configured items.
	If this segment number is used in assembly inclusion rules or cross-segment editing rules, then this is the segment used for the right side of the condition.
Item Number	Enter a number that the system assigns to an item. It can be in short, long, or third-item number format.
Component Branch	Enter a secondary or lower-level business unit. The system uses the value that you enter to indicate that a branch or plant contains several subordinate departments or jobs. For example, assume that the component branch is named MMCU.
	The structure of MMCU might be:
	Branch/Plant - (MMCU)
	Dept A - (MCU)
	Dept B - (MCU)
	Job 123 - (MCU)
Cfg Item Alias (configured item alias)	Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the rule.
	The Cfg Item Alias field on the assembly inclusion rule form provides the ability to reference a specific occurrence of an included item. This is not a required field. The Cfg Item Alias field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.

> **Important!** You should use the Cfg Item Alias field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left and Configured Item Alias Right fields in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Print Part

Enter a UDC (32/PF) that indicates whether the system prints the Configurator part on the sales order and work order. The system uses the value that you enter in this field to affect programs such as Print Pick Slips (R42520), Print Invoices (R42565), Bill of Lading (R42530), and parts list on Work Order Print (R31415). Values are:

0: Do not print the Configurator part on the sales order or the work order.

1: Both the sales order and the work order.

2: Sales order only.

3: Work order only.

Quantity

Enter the number of units that the system applies to the transaction.

U/M (unit of measure)

Enter a UDC (00/UM) that identifies the unit of measure for an amount or quantity. For example, it can represent a barrel, box, cubic meter, liter, hour, and so on.

Operation Seq No.
(operation sequence number)

Enter a number that is used to indicate an order of succession.

In routing instructions, this is a number that sequences the fabrication or assembly steps in the manufacture of an item. You can track costs and charge time by operation.

In bills of material, this is a number that designates the routing step in the fabrication or assembly process that requires a specified component part. You define the operation sequence after you create the routing instructions for the item. The JD Edwards EnterpriseOne Shop Floor Management system uses this number in the backflush/preflush by operation process.

In engineering change orders, this is a number that sequences the assembly steps for the engineering change.

For repetitive manufacturing, this is a number that identifies the sequence in which an item is scheduled to be produced.

Skip To fields enable you to enter an operation sequence that you want to begin the display of information.

You can use decimals to add steps between existing steps. For example, use 12.5 to add a step between steps 12 and 13.

Issue Type	Enter a code that indicates how the system issues each component in the bill of material from stock. In JD Edwards EnterpriseOne Shop Floor Management, it indicates how the system issues a part to a work order. Values are:
	I: Manual issue
	F: Floor stock (there is no issue)
	B: Backflush (when the part is reported as complete)
	P: Preflush (when the parts list is generated)
	U: Super backflush (at the pay-point operation)
	S: Subcontract item (send to supplier)
	Blank: Shippable end item
	You can issue a component in more than one way within a specific branch/plant by using different codes on the bill of material and the work order parts list. The bill of material code overrides the branch/plant value.
Line Type	Enter a code that controls how the system processes lines on a transaction. It controls the systems with which the transaction interfaces, such as JD Edwards EnterpriseOne General Ledger, JD Edwards EnterpriseOne Job Cost, JD Edwards EnterpriseOne Accounts Payable, JD Edwards EnterpriseOne Accounts Receivable, and JD Edwards EnterpriseOne Inventory Management. It also specifies the conditions under which a line prints on reports, and it is included in calculations. Codes include:
	S: Stock item
	J: Job cost
	N: Nonstock item
	F: Freight
	T: Text information
	M: Miscellaneous charges and credits
	W: Work order
Write Attached Detail Line	Enter a value from UDC 32/WA that specifies whether the component line generates a detail line to indicate that the component is going to be shipped. Values are:
	0: Do not create.
	1: Create.
	This field works only with a P type rule. If it is set appropriately, details are written to the sales order and cost is also rolled up to the sales order. This field does not work with purchase orders as components of a purchase order do not generate detail lines.
	Turn the detail lines off whenever possible so that the lines are not processed.
Trans Type (transaction type)	Enter a value from UDC 32/DE that specifies the type of transaction that the component of a configured item should generate. If the conditions for the transaction, processing options, and branch/plant are not correct for the transaction type, then the system does not generate the transaction. You use

the Trans Type field in combination with the Write Attached Detail Line field on the Assembly Inclusion Edit Group Revisions form. Values are:

0: Sales Order

1: Direct Ship

2: Transfer

3: Inter Branch/Company

4: Purchase Order

Note. If you select the direct ship or purchase order transaction type, you must enter a supplier number in the Supplier Number field for the component item.

This field works only with a P type rule.

When the value of the Trans Type field is *4* (purchase order), the system validates both the stocking type and line type of the component item. Items with a stocking type of phantom or a line type set to generate a purchase order or work order are not supported.

Supplier Number

Enter a number that identifies an entry in the JD Edwards EnterpriseOne Address Book system for a supplier.

If you select a value of *1* (direct ship) or *4* (purchase order) in the Trans Type field, you must enter a supplier number for the component item.

If no value is entered in the Supplier Number field on the Assembly Inclusion Edit Group Revisions form, the system retrieves the supplier number from the Item/Branch Plant Info form and populates it as the default value.

This field works only with a P type rule. It is display only for Q rules.

Segment Item Left

Enter a number that represents the item number of the parent configured item for the segment referenced in the left side of the condition. Use this field to reference a previously chosen segment from a different configuration level.

Segment Branch Left

Enter the branch/plant associated with the configured item that contains the segment number referenced in the left side of the condition. Use this value to reference a previously selected segment from a different configuration level, and to reference the branch/plant of the item in the Segment Item Left field.

Configured Item Alias Left

Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the left side of the condition.

The Configured Item Alias Left field on the cross-segment editing and assembly inclusion rule forms provides the ability to reference a specific occurrence of an included item. This is not a required field. The Configured Item Alias Left field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.

Important! It is recommended that you use the Configured Item Alias Left field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been

assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Left field in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Segment Item Right   Enter a number that represents the item number of the parent configured item for the segment referenced in the right side of the condition. Use this field to reference a previously chosen segment from a different configuration level.

Segment Branch Right   Enter the branch/plant associated with the configured item that contains the segment number referenced in the right side of the condition. Use this value to reference a previously selected segment from a different configuration level, and to reference the branch/plant of the item in the Segment Item Right field.

Configured Item Alias Right   Enter a value from UDC 32/CI that specifies a particular instance of a configured item that is referenced in the right side of the condition.

The Configured Item Alias Right field on the cross-segment editing and assembly inclusion rule forms provides the ability to reference a specific occurrence of an included item. This is not a required field. The Configured Item Alias Right field is for use with duplicate components. If you do not use this field with duplicate components then the system processes duplicate components based on the first duplicate item value that is stored in cache.

Important! You should use the Configured Item Alias Right field to ensure that the correct duplicate item is used in a configuration.

A configured item alias may be assigned to an item using an assembly inclusion rule. The system verifies that the configured item alias has not been assigned to another item in the assembly inclusion rules. This prevents two components on any rule from being assigned the same configured item alias.

Once the configured item alias is assigned in an assembly inclusion rule, then the Configured Item Alias Right field in the cross-segment editing and assembly inclusion rules can be set to reference a configured item alias. The system verifies that the configured item alias is assigned to the item in the rule.

Unit Price   Enter the price that is charged for the unit of measure in the adjoining field. Use these fields, for example, if the primary unit of measure is EA (each), but you typically use a list price per box.

Unit Cost   Enter a user-defined cost that the system uses based on information that you supply, which includes the name of the costing method and the method of calculation.

Price Rollup   Enter a UDC (32/PP) that indicates whether the price or cost of an add-on is included in the price or cost of the parent configured item. Values are:

0: Separate the price or cost of the add-on.

1: Include the price or cost of the add-on in the price or cost of the parent item. When you select this value, the extended price or cost is zero.

Rule Number   Displays the number that indicates the order in which rules were entered in the
                                     system for a particular configured item. It also indicates the order in which
                                     rules are processed by the system.

Seq No. (sequence number)   Displays the sequence number for lines in an edit group of cross-segment
                                     editing rules or assembly inclusion rules. It is assigned to lines within a rule
                                     based on the order in which that line of the rule was entered for a configured
                                     item. You can insert a line within a rule to assign a new sequence number.

                                     The sequence number also indicates the order in which each line within
                                     a rule will be processed.

Defining Advanced Assembly Inclusion Rules

Access the Advanced Rule Functions form.

Advanced Rule Functions form

Copying Assembly Inclusion Rules

Access the Assembly Inclusion Edit Group Revisions form.

To copy an assembly inclusion rule:

1. Select a blank line.

2. Select Copy from the Row menu.

3. Locate the configured item from which you want to copy a rule on the Rules Copy Window - Assembly
   Inclusion Rules form.

4. Select one or more lines, and click Select.

5. Modify the Assembly Inclusion Edit Group Revisions form as required.

Testing Derived Calculations

Access the Derived Calculations form.

Derived Calculations form

Note. The Assembly Inclusion Rule Tester tests the derived calculation for any of the six assembly inclusion rules. The derived calculation to be tested appears at the top of the form. The segments that relate to the derived calculation appear in the middle of the form.

Answer	Enter a value in the Answer field for each segment that appears, and click the Calc button.
Calculated Value	Review the value that appears in the Calculated Value field for accuracy.

Printing Assembly Inclusion Rules

Select Print Rules from the Form menu on the Work with Assembly Inclusion Rules form.

You run the Assembly Inclusion Rules Print program (R32493) to print a hard copy of assembly inclusion rules to verify assembly inclusion rule setup.

Setting Up Configured Tables

This section provides an overview of configured table setup and discusses how to:

• Define table name for a configured table.

• Set processing options for Configured Table Definition (P3281).

• Define table definitions with dimensions for configured tables.

• Set processing options for Table/Item Cross Reference (P3282).

• Define the configured table/configured item cross reference.

• Define table return segment values for a C table.

• Set processing options for Configured Table Values (P3283).

• Define values for configured tables.

• Link assembly inclusion rules and configured tables.

• Copy a configured table.

• Review a configured table.

• Print configured rule table values.

Understanding Configured Table Setup

A configured rules table is a collection of data that you define for a configured item. During order processing, assembly inclusion rules can refer to tables to retrieve component parts, calculated segment values, price adjustments, or display information.

You can use tables to reduce the number of assembly inclusion rules that are required when segment answers vary greatly. The table type should be the same as the assembly inclusion rule type that refers to it.

Setting up tables adds time to the setup process. However, tables can dramatically reduce the number of assembly inclusion rules and their complexity, thus improving processing time and simplifying setup.

When you enter an order for a configured item, you select answers for the segments that are defined for the item. For example, for a forklift, you might select a value of 4000 for segment 10 (Lift Rating) and a value of PROPANE for segment 20 (Power type).

Depending on the values that you define for each segment, you can specify the information that returns to the order. You must define the values for each segment as a key to the table.

You can define tables that correspond to the matching assembly inclusion rule types:

Table	Description
P Table (Quantity/Parts)	Defines part tables that can return multiple part numbers. To produce the configured item, P tables return part numbers to the sales order and, eventually, to the work order parts list.
Q Table (Quantity/Parts)	Defines part tables that can return multiple part numbers. Conceptually similar to P tables, Q tables return part numbers only to the work order parts list. They do not return values to the sales order.
C Table (Calculated values)	Defines a calculated segment table that can return multiple numeric or alphanumeric values as defined on Configured Item Segments. C tables return calculated values to segments. Other rule types can then use these values to control or affect actions.
H Table (Hot Spots)	Defines numeric information about a configured item to be returned to the Hot Spot field on the order entry form for display purposes only. H tables are limited to one return value. H tables are conceptually similar to C tables. Examples of hot spot information include price, foreign price, domestic price, cost, foreign cost, domestic cost, and weight.
X Table (Pricing)	Defines a price table that returns one numeric value. X tables return prices to the sales order, based on one or more segment answers. Unless otherwise specified, the line type is an M by default. Whatever the line type is in the assembly inclusion rules, the rules for the price rollup flag prevail—that is, either break out separately or roll into the parent. X tables are limited to one return value.

Note. No table corresponds to the assembly inclusion rule for routing.

Because only one value can be returned for H and X tables, the system limits setup options when you specify the return dimensions for these table types.

Because a table might contain many segments (keys) and values, you must decide how the table information appears before you can review table information.

Note. The tables that are used for rules processing within the JD Edwards EnterpriseOne Configurator system are not UDCs.

As you work with table information, you can speed data entry by setting a processing option for copying rows of data.

You also can define effectivity dates for the table.

When creating C tables that return multiple values, you must define destination segment numbers during the Table/Item Cross Reference step. The Table Return Segment Values form automatically appears when you are entering a C table.

Table Definitions with Dimensions for Configured Tables

To create a configured table, you must define the table type and dimensions. The dimensions refer to the number of segments that are used as keys to the table and the number of values that the table returns to the configured item. The maximum number of keys to the table is 20. The maximum number of return values is 99,999.

Tables can have these dimensions:

• One segment and one return.

• One segment and multiple returns.

• Multiple segments and one return.

• Multiple segments and multiple returns.

You should have an idea of what you want the table to do prior to defining its dimensions. A one-segment, one-return table is particularly helpful when you want to define price, cost, hot spot values, or other specific information.

You might create a one-segment, multiple return table when one segment can return multiple information consistently. Many component item numbers might be related to a specific segment answer. For example, a paper manufacturer might configure a certain size of letterhead to return a correspondingly sized envelope and response card.

You might create a multiple-segment, multiple return table when using P or Q tables. P and Q tables are based on P and Q assembly inclusion rules, which return parts to the sales or work order.

Note. When working with tables with multiple segments and multiple returns, remember that the form displays segment information in columns and values in rows.

Understanding How to Link Assembly Inclusion Rules and Configured Tables

After you define table values, you must provide access to the table so that the part number, calculated value, price adjustment, or display information is retrieved to the order. The table is linked to the corresponding assembly inclusion rule. The table can be accessed through either unconditional or conditional rules. During order processing, the assembly inclusion rule causes the table to be read and the values are brought back to the order.

Forms Used to Set Up Configured Tables

Form Name	FormID	Navigation	Usage
User Defined Codes	W0004AI	Enter *UDC* in the Fastpath field. On the Work With User Defined Codes form, locate table 32/TN and click Add.	Add the table name.
Work with Configured Table Definitions	W3281B	Configurator Setup (G3241), Configured Table Definition	Locate and review configured table definitions.
Rule Table Definition Revisions	W3281A	Click the Add button on the Work with Configured Table Definitions form.	Define configured table definitions.
Work with Configured Item Cross-Reference	W3282A	Configurator Setup (G3241), Table/Item Cross Reference	Locate and review table types and names for configured items.
Configured Item Cross Reference Revision	W3282B	Click the Add button on the Work with Configured Item Cross-Reference form.	Define the configured table/configured item cross reference. You must specify the configured item that references the table and define the specific segments that access it. To create a cross-reference, the number of segments that you specify must equal the number of segments that you defined for the table. You can also specify a segment that accesses a different configuration level.
Configured Item/Rules Table Return Segment Values	W3282C	Select Return Segments from the Row menu on the Work with Configured Item Cross-Reference form.	Define a destination segment number for C tables that return multiple values. **Note.** The Configured Item/Rules Table Return Segment Values form automatically appears when you define a C table.
Work with Configured Table Values	W3283A	Configurator Setup (G3241), Configured Table Values	Locate and review configured table values.

Page Name	Definition Name	Navigation	Usage
Configured Table Value Revision	W3283C	Click the Add button on the Work with Configured Table Values form.	Define values for the configured tables after you define dimensions and create the table/item cross-reference. For each segment, define the specific value that is a key to the table. Then, specify the part number, calculated value, price adjustment, or display information that is returned to the order when a particular value is chosen for the segment.
Work With Assembly Inclusion Rules	W3293N	Configurator Setup (G3241), Assembly Inclusion Rules	Select an assembly inclusion rule by branch/plant, configured item, and rule type.
Assembly Inclusion Edit Group Revisions	W3293A	Select a row on the Work With Assembly Inclusion Rules form, and select Insert Edit Group and then Insert Before or Insert After from the Row menu.	Create the assembly inclusion rule that you want to link to a configured table.
Advanced Rule Functions	W3293B	Select a row on the Assembly Inclusion Edit Group Revisions form, and then select Advanced Rules from the Row menu.	Link a configured table to an assembly inclusion rule.
Copy Table	W3289B	Click the Copy button on the Work with Configured Table Definitions form.	Copy a configured item table.
Work with Rules Table Detail	W32830B	Configurator Setup (G3241), Component/Value Table Where Used Inquiry	Review returned values or specific components that are used within configured tables. The system identifies where the values and components exist within the configured tables.

Defining Table Name for a Configured Table

Access the User Defined Codes form.

Setting Processing Options for Configured Table Definition (P3281)

These processing options control default processing for the Configured Table Definition program.

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Data Defaults

These processing options control default values that the system uses when you run this program.

1. Rule Table Type (Optional)	Specify a value that identifies the type of rule table. Values are:
	P: Part list (on sales order and work order)
	Q: Work order component (on work order only)
	C: Calculated values
	H: Hot Spot
	X: Price/Cost adjustment

Defining Table Definitions with Dimensions for Configured Tables

Access the Rule Table Definition Revisions form.

Rule Table Definition Revisions form

Rules Table Name	Enter the name of a collection of data that you set up to minimize the number of assembly inclusion rules that you need for a configured item. You must define rule table names in UDC table 32/TN. A rule table can be accessed by 1 to 20 keys and can return up to 99 values. When you reference a rule table in an assembly inclusion rule, the system uses the rule keys to retrieve the values that are associated with the rule table. For example, if you defined segment 10 to be the color of an item, you could set the table to retrieve item Red Component when the customer enters Red for segment 10. In this example, the table would be:
	Item Color: Value
	Red: Red Component
	The table would include the following instruction:
	If the color segment value is red, then use item number Red Component on the configured item sales order and work order parts list.

C Table - Calculated Values, P Table - SO Parts List, Q Table - WO Parts List, X Table - Price Adjustments, and **H Table - Hot Spots**	Enter a value that identifies the type of rule table. Values are: *P:* Part list (on sales order and work order) *Q:* Work order component (on work order only) *C:* Calculated values *H:* Hot Spot *X:* Price/Cost adjustment
Number of Segments	Enter how many keys (segments) are used to access the table. Key values must be on the current level or a previous level of the configured item. The maximum is 20 keys.
Number of Table Values	Enter how many values the system returns from the rules table when a match is found on the table keys. If you enter more than one return value for a C (calculated) rule, you must indicate the segment numbers to return the values to. With H and X tables, the Number of Table Values field is automatically populated with 1.

Setting Processing Options for Table/Item Cross Reference (P3282)

This processing option controls default processing for the Table/Item Cross Reference program.

Defaults

This processing option controls default values that the system uses when you run the Table/Item Cross Reference program.

Default Rule Table Type	Specify a value that identifies the type of rule table. Values are: *P:* Part list (on sales order and work order) *Q:* Work order component (on work order only) *C:* Calculated values *H:* Hot Spot *X:* Price/Cost adjustment

Defining the Configured Table/Configured Item Cross Reference

Access the Configured Item Cross Reference Revision form.

Configured Item Cross Reference Revision form

Note. Multiple configured items can refer to a single table, and a single configured item can refer to multiple tables.

You can enter an item *ALL to define a generic cross-reference for all configured items. If you use *ALL, you must use the same segment numbers for all configured items.

Seg (segment number)	Enter the segment number to be used as a key to retrieve information from the table. The number of segments is the same as you defined in the Configured Table Definition program (P3281).
Segment Item	Enter the configured item that contains the segment. This field enables you to reference segments from a higher-level configured item.
Segment Branch	Enter the branch/plant that is associated with the segment. If a higher-level configured item is referenced, it can also be in another branch/plant.

Defining Table Return Segment Values for a C Table

Access the Configured Item/Rules Table Return Segment Values form.

Return Segment	Specify the destination segment number for the table return value.

Setting Processing Options for Configured Table Values (P3283)

These processing options control default processing for the Configured Table Values program.

Defaults

This processing option controls the default value that the system uses when you run the Configured Table Values program.

1. Rule Table Type (Optional)	Specify a value that identifies the type of rule table. Values are:
	P: Part list (on sales order and work order)
	Q: Work order component (on work order only)
	C: Calculated values
	H: Hot Spot
	X: Price/Cost adjustment

Processing

This processing option controls whether you can copy from a row.

Row Copying   Enter *1* to enable row copying.

Defining Values for Configured Tables

Access the Configured Table Value Revision form.

Configured Table Value Revision form

Segment Value 1 and Segment Value 2	Complete as many segment value fields as you defined on the Rule Table Definition Revisions form when you defined dimensions for the table. The names of the segment value fields are defined when you create the table/item cross-reference.
	Each time that you enter a value for a segment and the associated item number, a new blank row appears.

Note. As you work with table information, you can speed data entry by setting a processing option for copying rows of data. You can use one of two methods to copy rows. The first method is to select a row, and then select Copy row from the Row menu. You can then change the row data as necessary for the table. The second method is to enter *1* in the C field of the row that you want to copy. After you complete the fields in a row and press the ENTER key, that row is copied into the next row. When you no longer want to automatically copy a row or if you need to make changes, clear the C field.

Linking Assembly Inclusion Rules and Configured Tables

Access the Advanced Rule Functions form.

Table Name   Enter the name of the table to link to the assembly inclusion rule.

Copying a Configured Table

Access the Copy Table form.

Copy Table form

Table Definition   Select to copy the table definition that is the basic data describing a table. The
                              Copy button is selected from the Table Definition form, so the table definition
                              is always copied. The other pieces of table data are selectable, allowing you to
                              copy only the table definition if need be.

Reviewing a Configured Table

Access the Work with Rules Table Detail form.

Work with Rules Table Detail form

Select a component item by branch/plant to retrieve rules table detail. Select whether you want to view the
data by value or by component.

Printing Configured Rule Table Values

Select Configurator Setup (G3241), Configured Rules Table Values.

Print a hard copy of configured table information to verify the accuracy of the configured table keys and return values. Review the table segments and values for the table name and table type that you specify.

CHAPTER 5

Working with Configured Item Revisions

This chapter provides overviews of the Configured Item Revisions program, rules processing, and configured item price and cost adjustments using based-on effectivity dates, lists prerequisites, and discusses how to:

• Enter orders for configured items.

• Assign common attributes to configured items.

• Enter nonstandard components and price adjustments.

• Correct error messages for configured items.

• Review configured item inventory.

• Review configured item history.

• Review configured text.

Understanding the Configured Item Revisions Program

After you set up the segments, cross-segment editing rules, assembly inclusion rules, configured tables, and media object attachments for a configured item, you can enter orders for the configured item.

Use the Configured Item Revisions program (P3210) to designate the features and options of a configured item on an order. You use Sales Order Entry (P4210), Purchase Orders (P4310), and Manufacturing Work Order Processing (P48013) to enter an order for a configured item. As with any order, you enter information in the order header and order detail areas. After you enter the item number and press TAB, or move off that order line, the system automatically calls and displays the Configure Item form. This process occurs because the item number of the configured item is coded as a *C* stocking type in the Item Master. Thus, the system is programmed to automatically call the Configured Item Revisions program so that the configured item can be defined for the order.

The processing options for the Configured Item Revisions program control the display of information on the Configure Item form. Within the order entry process, you use dynamic configuration entry or the validate configuration feature.

The Message Center displays configuration specific information such as the configuration state, hot spot values, weight, and error messages. The configuration state indicates if the configuration is valid, invalid, or if validation is required. You can display up to ten different hot spot values on the Configure Item form. The hot spots that appear after successful rules calculation are set by the processing options. To review detailed error messages, you click the error link.

The JD Edwards EnterpriseOne Configurator system also calculates the weight of a configured item based on the multilevel items that make up the parent item. You can select to designate a base weight for the configured item. The weight is calculated as the item is entered within order entry. You must enter the same weight units of measure for each segment that makes up the configured parent item. Weight is calculated by using P rule components only.

The Item Filter field gives you access to the configured items and associated segments at various levels in the parent configured item when you click the item number that is in the Item Filter field.

The segments that represent the features and options of the configured item that is highlighted appear. Several fields appear to further define the segments. You enter a value for each segment in the Select Answer or Enter Answer field. The Select Answer field gives you access to any user-defined codes (UDCs) that might be defined for the segment. You enter a value in the Enter Answer field if no UDC is attached to the segment. The system edits each segment value using UDC tables, ranges, and numeric specifications.

Many line items on configured orders can share a common attribute. A common attribute that is used in a configured item can be set at the start of an order. The chosen value can be applied as the default to each subsequent line item that is entered. This feature is useful in a high attribute selection and high line item order environment. The feature can save time and labor during the order entry process. It also prevents unnecessary errors during order entry. The common attribute can then be revised in the middle of order entry to accommodate changes in customer specifications.

Processing options control the prompting for common attributes. The common attribute can be set to automatically appear at the beginning of order entry (between the order form and the Configure Item form). You can also access the Configurator Common Attributes form from the Configure Item form during configuration definition.

For example, the furniture industry can use common attributes to configure a sofa. In a configuration for a sofa, a common attribute might be Color. The Color common attribute is associated with the segments for the sofa frame, bottom sofa cushions, sofa arm covers, and decorative pillows. After the customer picks a color, you can enter that value in the Attribute field on the Configurator Common Attributes form. The color is then applied as the answer to all of the segments that are associated with that particular common attribute.

Media object attachments display in the lower region of the Configure Item form if the processing options are set and there is a media object attached to the configured item. You can enter nonstandard components and price adjustments to the configured item. You can also access configured item inventory and history information from the Configure Item form.

The Configured String History program (P3296) locates previously ordered configurations at any level of a configured item. The history includes information about customers, orders, order types, and branch/plant.

The Configured Item Inventory Search program (P3220) locates inventory that can be used to fulfill the order for the configured item.

Understanding Rules Processing

When a user enters an order for a configured item, the Sales Order Entry (P4210), Purchase Order Entry (P4310), and Manufacturing Work Order Processing (P48013) programs call the Configured Item Revisions program (P3210). You use the Configure Item form (W3210B) of the Configured Item Revisions program to configure an item and perform rules processing.

During order entry, rules for configured items can be processed dynamically or you can select to use the validate configuration feature. Dynamic configuration entry is enabled or disabled at the item level on the Configured Item Information form (W3291A). Child-configured items inherit the dynamic configuration entry setting of the parent-configured item.

Regardless of whether dynamic configuration is enabled or disabled, the system processes only the rules associated with a changed segment. Each time a segment answer is changed and is valid; all of the configuration rules that reference the segment are marked for processing. The rules are then processed based on the dynamic configuration entry setting.

When dynamic configuration entry is enabled, the system dynamically validates the item configuration as the order is entered. Any time that a segment answer is changed, the entire configuration reflects the impact of the new value. When a segment answer is changed, all allowed values for other segments are updated to include only valid values based on the processed cross-segment editing rules. If there are no valid values left for a segment after the cross-segment editing rules are processed, then the system removes the segment from the configuration.

The processed assembly inclusion rules update components, price adjustments, cost adjustments, and hot spots.

Dynamic configuration entry provides immediate feedback as the product is configured and lessens the possibility of selecting invalid segment values. The configuration is in a state that can immediately be committed to an order.

When dynamic configuration entry is disabled, the Validate Configuration button appears on the Configure Item form. To enter an order for a configured item, you enter values for segments and click the Validate Configuration button. The system validates the item configuration by processing the rules associated with the changed segments.

This method of order entry and rules processing provides visibility to cross-segment editing rule error messages. Viewing the error messages gives you the opportunity to learn the configuration of the configured item. You can also provide an explanation to the consumer as to why their segment selections do not generate a valid configuration.

Click the Add to Order button to accept the configuration if no cross-segment editing rule errors exist.

You enter an order for a configured item once the Configured Item form is rendered and the grid is loaded. As you enter an order, the system verifies JD Edwards EnterpriseOne Configurator processes level by level in this order:

1. Change segment values or click the Add to Order button to accept all default values.

2. Validate segment agreement.

   System processing includes UDC validation, range checking, alpha versus numeric checking, length checking, and required versus optional checking.

3. Process assembly inclusion rules that are related to segments that have changed.

   a. Process C assembly inclusion rules and update C segments.

      The system processes C rules first because the calculated segment answer might be required to validate the configuration. The calculated segment answer might also be needed to perform additional calculations for the configured item.

   b. Process X assembly inclusion rules.

   c. Process H assembly inclusion rules.

   d. Process P assembly inclusion rules.

   e. Process Q assembly inclusion rules.

The system processes Q assembly inclusion rules and stores the components in the Configurator Component table (F3215). The components are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the parts list and establish cost.

f. Process R assembly inclusion rules.

The system processes R assembly inclusion rules and stores the routings in the Configurator Routings table (F3212). The routings are used by Sales Quotes (P4210) to establish cost and Order Processing (R31410) to create the routing and establish costs.

4. Process cross-segment editing rules that are related to segments that have changed.

If dynamic configuration entry is disabled, the system displays any error messages.

If dynamic configuration entry is enabled, the system:

- Updates all allowed values for other segments to include only valid values.

- Sets the valid value if there is only one allowed valid value for a segment.

- Removes the segment from the configuration if there are no valid values left for a segment.

5. Enable the Add to Order button if no cross-segment editing errors exist.

6.   Click the Add to Order button.

Note. The JD Edwards EnterpriseOne Configurator system supports upward and downward referencing within cross-segment editing and assembly inclusion rules. Upward or downward referencing has no limitations.

Work Order Processing

All components from both P and Q assembly inclusion rules are stored in the F3215 table. The routings, output of the R assembly inclusion rules, are stored in the F3212 table. When the Order Processing program (R31410) runs, the parts list and routing are retrieved from the F3215 and F3212 tables and passed back to the Parts List master business function (MBF) and the Routings MBF. Thus, the R31410 does not process configured item rules.

Error States

When entering orders for configured items, there are a few circumstances that can cause the Configured Item Revisions program (P3210) to display errors.

First, when a segment is not attached to a UDC table, it is possible to free-form type into the segment answer field. If there is a range of values assigned to that segment, then a violation creates an error.

Second, again assuming that a segment is not attached to a UDC, a cross-segment editing rule can be created that generates an error when violated.

Finally, although perhaps the first to be encountered, multiple errors can be present when first entering the Configured Item Revisions program if the default segment values create an error state.

To minimize error states, attach UDCs to segments when possible. Also, review the default segment answers for a configured item to ensure that the default values represent a valid configuration.

When setting up a configured item, you can design the segment questions in such a way as to avoid errors. For instance, ask the most important questions first. Thus the consumer will not have visibility to choices that make the configuration invalid. For example, the first question should be whether the consumer wants a car or truck and not the color of the vehicle.

You can also use warning messages. Warning messages provide information regarding a choice that may or may not work in the configuration. The system does not remove the selected value but the warning gives the user the opportunity to make a different selection.

Understanding Configured Item Price and Cost Adjustments Using Based-on Effectivity Dates

When you enter an order for a configured item and trigger validation of the configuration, the system calculates price and cost adjustments. During configuration validation, the JD Edwards EnterpriseOne Configurator system reads the based-on date code from the Configured Item Information (F3290) table.

The JD Edwards EnterpriseOne Configurator system then retrieves the date corresponding to the based-on date code of the parent configured item from the JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Work Order Processing, or JD Edwards EnterpriseOne Procurement systems for the order type of the original order. The value is retrieved and stored in the configurator data cache for use in processing. This date is the X rule based-on date.

The JD Edwards EnterpriseOne Configurator system retrieves the X rule based-on date from the configurator data cache and validates each X rule setup in the Assembly Inclusion Rules (F3293) table. The system compares the X rule based-on date to the effective from and through dates of the X assembly inclusion rules.

If valid X assembly inclusion rules are found, the system applies the rules to calculate the price and cost of the configured item order. Once the validated X rules are processed, the system inserts a new record or updates an existing record in the Sales Order Detail File (F4211), Work Order Master (F4801), or Purchase Order Detail (F4311) table.

For example, a configured item is setup to use the order date as the sales order based-on date and requested date as the work order based-on date. If a sales order is entered for the item on August 15th, with a requested date of October 15th, the system searches for X assembly inclusion rules that are effective on August 15th. Valid X rules apply price adjustments to the sales order. If a work order is entered for the configured item, October 15th is used to validate X rules and apply cost adjustments to the work order.

If the X rule based-on date cannot be retrieved or a blank date is returned, the system uses the requested date to process the X assembly inclusion rules. The based-on date setting of the parent configured item is inherited by the child configured items.

The based-on effectivity date functionality in the JD Edwards EnterpriseOne Configurator system is similar to the functionality in JD Edwards EnterpriseOne Advanced Pricing. JD Edwards EnterpriseOne Advanced Pricing enables the user to specify one or many dates, such as order and required, to use to include price adjustments. The based-on date code of *Price Effective Date* is used to sync with JD Edwards EnterpriseOne Advanced Pricing so that the system uses the same date as JD Edwards EnterpriseOne Advanced Pricing when validating X rules. This applies to both sales and purchase orders.

During sales order entry, the Price Effective Date field may display a price but you can override the value. For purchase orders, only cost adjustments from X rules are applied to the order.

Prerequisites

Before you complete the tasks in this section:

- Set the Sales Order Entry (P4210) processing option for the work order line type to create work orders, or define the W line type in the branch/plant record for each configured item.

  If you leave the processing option blank, the system supplies the line type from the branch/plant.

- Set the processing options for the versions of the Sales Order Entry program (P4210) that you will use for sales quotes, transfer order entry, and direct ship order entry for configured items.

- Set the processing options for the version of the Purchase Orders program (P4310) version that you will use for configured items.

- Set the processing options for the version of the Work Order Entry program (P48013) that you will use for configured items.

See *JD Edwards EnterpriseOne Sales Order Management 9.0 Implementation Guide*, "Entering Sales Orders," Setting Processing Options for Sales Order Entry (P4210).

See *JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide*, "Entering Purchase Orders," Setting Processing Options for Purchase Orders (P4310).

See *JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide*, "Working with Work Orders and Rate Schedules," Setting Processing Options for the Enter/Change Order Program (P48013).

Entering Orders for Configured Items

This section provides an overview of order revisions for configured items and discusses how to:

- Set processing options for Configured Item Revisions (P3210).

- Enter orders for configured items.

- Enter an order based on a previously ordered configured item.

Understanding Order Revisions for Configured Items

If a customer calls and needs to add or change information on an order, you can revise the order for a configured item. The JD Edwards EnterpriseOne Configurator system also enables you to revise the work order for a configured item.

This table describes types of revisions that could occur:

Revision	Description
Changing quantity	The system changes the order quantity and, if you set a processing option, also changes the quantity on the work order.
Changing segment value	The system changes the segment values on the order and, if you set a processing option, also changes the segment values on the work order. Changing a segment value might produce new configured components or prices. You might need to run work order processing again.

Revision	Description
Changing pick date	The system recalculates work order start dates, based on lead times. When you change the pick date for an order, the system supports multilevel back-scheduling for the associated work orders.
Changing order dates	The system recalculates the X assembly inclusion rule price and cost adjustments when the dates on an existing order are changed.
Changing an order that generated a purchase order	The system changes or cancels the purchase order for the component of a configured item when the configuration is changed.
Purging order lines	The system purges order lines for components that are no longer required after the change.
Calculating new order line numbers	The system uses the base line number for the configured item and increments by .001 for each configured component.
Canceling an order	When you cancel an order for a configured item, the system cancels the subassemblies and lower-level segments for the item.
Reassigning work order numbers	The system retains work orders that are still valid after a revision. The system might cancel work orders that are no longer required after the change by changing the status code of the work order.
Changing the work order cutoff status code	When you work with the Work Order Entry program (P48013), the system changes the work order if the work order status is less than the cutoff status. If the begin status code is not blank, the system updates the status to what is defined in the processing option.

If the work order status is greater than or equal to the cutoff status, the system does not change the work order. If the change status code is not blank, the work order status is updated to what you defined in the processing option. |
| Placing the order on hold (hold status code) | If the work order status in the Work Order Entry program is less than the cutoff status and the hold status code is not blank, the system updates the work order status to the hold status code that is defined in the processing option.

If the work order status is greater than or equal to the cutoff status, the system does not update the work order. |

Revision	Description
Canceling the order (cancel status code)	If the work order status is less than the cutoff status and the cancel status code is not blank, the Work Order Entry program updates the work order status to the cancel status code that is defined in the processing option. If the work order status is greater than or equal to the cutoff status, the system does not update the work order.
Creating new work orders	The program creates a new work order, if required, after the change.

Forms Used to Enter Orders for Configured Items

Form Name	FormID	Navigation	Usage
Sales Order Detail Revisions	W4210A	Daily Processing (G32), Sales Order Entry Click the Add button on the Customer Service Inquiry form.	Add information about the customer and the configured item.
Configure Item,	W3210B	• Enter new sales order information and tab out of the current row. • Find a configured item order and select a row on the Customer Service Inquiry form and click Select. Select a row on the Sales Order Detail Revisions form and select Kits/Configurator from the Row menu. Revise the answers and click the Add to Order button on the Configure Item form.	Enter orders for a configured item or revise an order for an existing configured item.

Page Name	Definition Name	Navigation	Usage
Edit Item/Price/Cost	W3210A	Select Edit Item / Price / Cost in the Actions drop-down list and click the Go To button on the Configure Item form.	Review the multilevel structure of the configured item on the order in a navigation tree structure. Items in the tree were added by either a P assembly inclusion rule or by using the Add Item option. Prices in the tree were added by an X assembly inclusion rule or by using the Add Price/Cost option. The button next to each line in the tree designates whether the line was system-generated from an assembly inclusion rule or user-added.
Configurator Common Attributes	W32994A	Select Common Attributes from the Actions drop-down list and click the Go To button on the Configure Item form.	Review and change common attribute values.
Configured Item Inventory Search	W3220B	Select Configured Item Inventory from the Actions drop-down list and click the Go To button on the Configure Item form.	Review the inventory for a configured item.
Configured Item History	W3210G	Select Configured Item History from the Actions drop-down list and click the Go To button on the Configure Item form.	Review the history of a configured item.

Setting Processing Options for Configured Item Revisions (P3210)

Processing options enable you to specify the default processing for programs and reports.

Defaults

These processing options control the default information that the system uses when you run the Configured Item Revisions program.

1. Default Action   Specify the default action that is preselected in the Actions drop-down list on the Configure Item form. Values are:

1: Edit Item/Cost

2: Common Attributes

3: Configured Item Inventory

4: Configured Item History

2. Configurator Print Flag Specify whether configured parts print on sales orders and work orders. This processing option is used in the Pick Slip, Invoice Print, Bill of Lading, and Print Parts List programs. Values are:

Y: Print on the sales and work order. You can also use 1.

N: Do not print on the sales and work order. You can also use 0.

2: Sales order only.

3: Work order only.

3. Line Type Specify how the system processes lines on a transaction. The line type controls the systems with which the transaction interacts (JD Edwards EnterpriseOne General Ledger from Oracle, JD Edwards EnterpriseOne Job Cost from Oracle , JD Edwards EnterpriseOne Accounts Payable from Oracle , JD Edwards EnterpriseOne Accounts Receivable from Oracle, and JD Edwards EnterpriseOne Inventory Management). It also specifies the conditions under which a line prints on reports and is included in calculations.

This processing option uses line type to group X rule prices. Values are:

S: Stock item

J: Job cost

N: Non-stock item

F: Freight

T: Text information

M: Miscellaneous charges and credits

W: Work order

Hot Spots

These processing options specify the hot spots that display in the Message Center on the Configure Item form.

1. Hot Spot Selection through 10. Hot Spot Selection Specify a user-defined code from UDC 32/HS that indicates the type of information that appears for a hot spot, for example, the domestic price, foreign price, or weight.

Edits

This processing option specifies how the system processes orders with allowed lot status.

1. Enter Allowed Lot Status Group to validate Specify the lot status group that you want the system to use when determining whether to process an item with a non-blank lot status. If the non-blank lot status codes exist in the Allowed Lot Status table (F41081), then the system treats the lot status codes as blank and the on hold item can continue through the sales order process.

Processing

These processing options control how the system processes and displays values.

1. Media Object Display	Specify whether to display media objects on the Configure Item form. This option controls context-sensitive display of media objects that are related to items, segments, and user-defined code values. Values are:
	1: Display.
	Blank: Do not display.
2. Media Object Display Order	Specify the order in which media objects appear on the Configured Item Revisions form if more than one media object type is attached to a configured item or segment. If more than one media object of the same type exists, the first attached object in the selected type will be displayed. Values are:
	1: Text
	2: Image
	3: OLE
	Blank: Image
3. Common Attribute Display	Specify whether the system displays common attributes among configured items. Values are:
	1: Without automatic prompt.
	2: With automatic prompt.
	Blank: Do not display common attributes.
4. Common Attribute Display Scope	Specify whether to display common attributes that are specific to the configured item. Values are:
	1: Display all common attributes.
	Blank: Display only common attributes that are used in the configuration.
5. 'C' Rules Calculation	Specify whether to perform calculations using C rules for configured items upon entry. Values are:
	Blank: Perform
	1: Omit
6. Substitute Configured Item Text	Specify whether to substitute configured item text (which exists as a media object) or to append it. Values are:
	Blank: Append
	1: Substitute

Note. Store and Forward mode disregards this option (always replaces text)

Versions

These processing options specify the version that the Configured Item Revisions program uses when calling other programs.

1. Transfer Order Version	Specify the version of the Transfer Orders program (P4210) that the system uses if any related transfer orders are created during configured-item order entry. Based on the needs of the customers, you can create multiple versions of this program.

2. Purchase Order Version   Specify the version of the Purchase Order Entry program (P4310) that the system uses if any related purchase orders are created during configured-item order entry.

When you save an order for a parent configured item, the system uses this version to generate or update the purchase order for the component of a configured item whose transaction type is *4* (purchase order).

Entering Orders for Configured Items Using Validate Configuration

Access the Configure Item form.

Configure Item form

Important! The Dynamic Configuration Entry check box on the Configured Item Information form must be cleared to disable dynamic configuration.

Note. You cannot complete the order until all hard errors are corrected.

Message Center

Displays configuration specific information such as the configuration state, hot spot values, and error messages.

Additional Order Entry Elements

Item Filter   Select the item to display for a specific configured item in the assembly. If a specific configured item is not selected, all items will appear.

Select Answer   Select a value from the list of values if a user-defined code was set up for the segment.

Enter Answer	Enter a value for each segment when the segment does not have a user-defined code attached.
Validate Configuration	Click to process the configured answers you enter. The validation uses the cross-segment editing rules to validate feature and option compatibility.
Restore Defaults	Click to restore all segment values to the default value entered during system setup.
Add to Order	Click to create an order for the configured items. This button is enabled if no errors occurred during the validation and the configuration is valid.

Actions

Select an option in the Actions drop-down list and click the Go To button.

Edit Item / Price / Cost	Select to access the Edit Item/Price Cost form. You can review the multilevel structure of the configured item on the order in a navigation tree structure.
	Items in the tree were added by either a P assembly inclusion rule or by using the Add Item option. Prices in the tree were added by an X assembly inclusion rule or by using the Add Price/Cost option. The button next to each line in the tree designates whether the line was system-generated from an assembly inclusion rule or user-added.
Common Attributes	Select to access the Configurator Common Attributes form.
	This option is hidden if no common attributes are associated with the configured item.
Configured Item Inventory	Select to access the Configured Item Inventory Search form.
Configured Item History	Select to access the Configured Item History form.

Entering Orders for Configured Items Using Dynamic Configuration

Access the Configure Item form.

Important! The Dynamic Configuration Entry check box on the Configured Item Information form must be set to enable dynamic configuration.

Note. The Validate Configuration button is not used during dynamic configuration entry.

Entering an Order Based on a Previously Ordered Configured Item

Access the Configure Item form.

To enter an order based on a previously ordered configured item:

1. Select Configured Item History in the Actions drop-down list and click the Go To button.

2. Complete the search fields and click Find on the Configured Item History form.

3. Select a sales order and click Select.

   The configuration information is brought back to the new order. The values in the Select Answer field change to those of the order that you selected on the Configured Item History form. You can revise the order or use it as it is.

4. Make any necessary changes on the Configure Item form.

   Note. If Dynamic Configuration Entry is disabled, click the Validate Configuration button.

5. Click the Add to Order button if you do not receive any errors.

Assigning Common Attributes to Configured Items

This section provides an overview of common attributes of configured items, lists a prerequisite, and discusses how to assign common attribute values.

Understanding Common Attributes of Configured Items

To better organize the configured items and simplify configurations that are entered during order entry, you can assign common attributes to configured item segments. Common attributes are initially linked to a segment in the Configured Item Segments program (P3291). You assign common attribute values on the Configurator Common Attributes form.

Common attribute values operate as default answers for each configuration level. For example, a common attribute code that is defined as *Color* might have a value of *Red*. With common attributes activated, each configured level with the common attribute code of Color automatically returns the Red value.

You set a processing option to either view common attributes for all configured items or view them as they apply within the current configuration. Additionally, you can change common attribute values during order entry.

Even if you automatically display common attributes, you can access the Configurator Common Attributes form during order entry to change the value for all associated segments. On the Configurator Common Attributes form, when you click OK, the Configured Item Revisions form appears, and you can continue to enter the order.

You also can change a single segment value using the Select Answer field.

Prerequisite

Set the Common Attribute Display and Common Attribute Display Scope processing options on the Configured Item Revisions program (P3210) to define the appearance of the Configurator Common Attributes form.

Form Used to Assign Common Attributes to Configured Items

Form Name	FormID	Navigation	Usage
Configurator Common Attributes	W32944A	Daily Processing (G32), Sales Order Entry Click the Add button on the Customer Service Inquiry form. Enter the required customer and configured item information on the Sales Order Detail Revisions form, and click OK.	Assign common attributes to configured items. **Note.** Set the Common Attribute Display and Common Attribute Display Scope processing options on the Processing tab of the Configured Item Revisions program (P3210). Also, set the Configured Items (P3210) processing option on the Versions tab of the Sales Order Entry program (P4210) to specify the version of P3210 that P4210 uses for a configured item order.

Assigning Common Attribute Values

Access the Configurator Common Attributes form.

Common Attribute   Enter a code that specifies a common attribute. A common attribute is a trait or characteristic that is shared by several segments in a configured item. When you enter an attribute value for a common attribute during order entry, the system updates the Answer field for all segments that are associated with that common attribute.

Attribute Value   Enter a value for the selected common attribute.

Entering Nonstandard Components and Price Adjustments

This section provides an overview of nonstandard components and price adjustments and discusses how to add nonstandard components and price adjustments.

Understanding Nonstandard Components and Price Adjustments

When you need to add special parts or prices to further configure a configured item, you can enter nonstandard components and price adjustments. Entering nonstandard components and price adjustments enables you to configure the configured item without creating new assembly inclusion rules, tables, or smart parts.

Nonstandard components are priced according to the Kit/Configurator Pricing Method for the configured parent item. Price or cost adjustments are similar to the X assembly inclusion rules that are set up for the configured item. They affect only the sales order, not the work order.

Nonstandard components and price adjustments are added on the Edit Item/Price/Cost form. This form enables you to review all of the order components and prices before the line item is confirmed. Once an item or price/cost is entered, the tree display is refreshed by the system.

You can delete nonstandard components or price adjustments for the configured parent item. You cannot delete standard components and price adjustments. A nonstandard component or price adjustment can be distinguished from a standard component or price by the button that precedes it in the navigation tree on the Edit Item/Price/Cost form.

Note. On the Edit Item/Price/Cost form, items in the tree are added by the P assembly inclusion rule. Prices in the tree are added by an X assembly inclusion rule. The button next to each line in the tree designates whether the line was system-generated from an assembly inclusion rule or user-added.

Form Used to Enter Nonstandard Components and Price Adjustments

Form Name	FormID	Navigation	Usage
Edit Item/Price/Cost	W3210A	Daily Processing menu (G32), Sales Order Entry Click the Add button on the Customer Service Inquiry form. Enter the required customer and configured item information on the Sales Order Detail Revisions form and click OK. Select Edit Item / Price / Cost in the Actions drop-down list and click the Go To button on the Configure Item form.	Add nonstandard components and price adjustments.

Adding Nonstandard Components and Price Adjustments

Access the Edit Item/Price/Cost form.

Edit Item/Price/Cost form (1 of 3)

Add Item

Select the Add Item tab.

Edit Item/Price/Cost form: Add Item tab (2 of 3)

Print Flag	Enter a value from UDC 32/PF that indicates whether the system prints the configurator part on the sales order and work order. The system uses the value that you enter in this field to affect programs such as Print Pick Slips (R42520), Print Invoices (R42565), Bill of Lading (R42530), and parts list on Work Order Print (R31415). Values are:

0: Do not print the configurator part on the sales order or the work order.

1: Both the sales order and the work order.

2: Sales order only.

3: Work order only.

Add Item   Enter values in the fields on this tab and click the Add Item button to add
                                the component.

Add Price/Cost

Select the Add Price/Cost tab.

Edit Item/Price/Cost form: Add Price/Cost tab (3 of 3)

Unit Price   Enter the list or base price to be charged for one unit of this item. In sales
                                order entry, all prices must be set up in the Item Base Price File table (F4106).

Unit Cost   Enter the amount per unit, derived by dividing the total cost by the unit
                                quantity.

Price Roll Up Flag   Enter a UDC (32/PP) that indicates whether the price or cost of an add-on is
                                included in the price or cost of the parent configured item. Values are:

                                0: Separate the price or cost of the add-on.

                                1: Include the price or cost of the add-on in the price or cost of the parent item.
                                When you select this value, the extended price or cost is zero.

Add Price/Cost   Enter values in the fields on this tab and click the Add Price/Cost button to
                                add the price or cost.

Note. After you finish adding nonstandard components and price adjustments, click the Close button. If you
do not receive any errors, click Add to Order on the Configure Item form. You cannot complete the order
until you correct all hard errors.

Correcting Error Messages for Configured Items

This section provides an overview of error messages for configured items and discusses how to correct error messages for configured items.

Understanding Error Messages for Configured Items

During the configuration process within order entry, the system verifies the segment values that you enter with the cross-segment editing rules and configured item segments. The system verifies that you have not entered any values that violate the editing rules. If a segment value violates an editing rule, either a hard or a soft error message appears.

Hard error messages indicate significant errors from cross-segment error checking. When you receive a hard error message, you cannot proceed with the order until you correct the error.

Soft error messages do not prevent you from completing the order, but they do provide error information. You can either correct the error or leave it as it is, and the order processes either way.

If the system finds errors in cross-segment editing rules, you receive notification that error messages exist during the dynamic configuration process or after the system performs validate configuration.

Form Used to Correct Error Messages for Configured Items

Form Name	FormID	Navigation	Usage
Configure Item	W3210B	Daily Processing menu (G32), Sales Order Entry Click the Add button on the Customer Service Inquiry form. Enter the required customer and configured item information on the Sales Order Detail Revisions form, and click OK.	Correct error messages for configured items.

Correcting Error Messages for Configured Items

Access the Configure Item form.

1. View the cross-segment editing error in the Message Center.

2. Select a value from the drop-down list in the Select Answer column, or enter a value in the Enter Answer column to change values for the segments.

3. Click the Validate Configuration button if dynamic configuration entry is disabled to verify that the error was corrected.

4. Click the Add to Order button.

   You cannot complete the order until you correct all hard errors.

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Reviewing Configured Item Inventory

This section provides an overview of configured item inventory and discusses how to review configured item inventory.

Understanding Configured Item Inventory

The Advanced Configured Item Inventory Search program (P3220) locates inventory that can be used to fulfill the order for the configured item. When you initially enter the Configured Item Inventory Search form (W3220B), the default configuration is the configuration from the Configure Item form. Use an * (asterisk) in the Answer field to perform an open search for a segment. When you select a configured item from inventory, the system hard commits it to the sales order.

See Chapter 7, "Working with Configured Items," Configured Item Inventory, page 171.

See Chapter 7, "Working with Configured Items," Configured Item Availability, page 171.

Form Used to Review Configured Item Inventory

Form Name	FormID	Navigation	Usage
Configured Item Inventory Search	W3220B	On the Configure Item form, select Configured Item Inventory in the Actions drop-down list and click the Go To button.	Review configured item inventory. Select a configured item in inventory to add to the order.

Reviewing Configured Item Inventory

Access the Configured Item Inventory Search form.

Find   Click to search the JD Edwards EnterpriseOne database for configured item inventory that matches the search criteria.

View Configuration   Click to access the View Configuration form (W32983B). Review the configuration tree, attributes, and segment answers for the configured item.

Select   Click to add the selected record for the configured item in inventory to the order.

Reviewing Configured Item History

This section provides an overview of configured item history and discusses how to review configured item history.

Understanding Configured Item History

The Configured String History program (P3296) locates previously ordered configurations at any level of a configured item. The history includes information about customers, orders, order types, and branch/plant.

If you select a configuration on the Configured Item History form, the system pushes the configuration values back to the configuration on the Configure Item form.

See .

Form Used to Review Configured Item History

Form Name	FormID	Navigation	Usage
Configured Item History	W3210G	On the Configure Item form, select Configured Item History in the Actions drop-down list and click the Go To button.	Review configured item history.

Reviewing Configured Item History

Access the Configured Item History form.

View Configuration   Click to access the View Configuration form (W32983B). Review the configuration tree, attributes, and segment answers for the configured item.

Reviewing Configured Text

This section provides an overview of configured text and discusses how to review configured text.

Understanding Configured Text

Configured or generic text for a configured item is displayed in a media object. The generic text that is generated for a configured item is based on the setup that is defined on Configured Item Segments (P3291).

Configured text can include:

• Part number of the configured parent.

• Segment number.

• Segment description.

• Segment value.

• Description of the associated UDC table value.

During order entry, the JD Edwards EnterpriseOne Configurator system generates one copy of text for each configured item and attaches it to the Configurator Master Table (F3201). The generic text can be accessed from a Row menu on an inquiry form in an order entry program such as Sales Order Entry (P4210), Purchase Order Entry (P4310), or Manufacturing Work Order Processing (P48013).

Attaching the generic text to the F3201 table, rather than directly to an order, enables both greater control of the text and use of the text for each order.

The Substitute Configured Item Text processing option on the Processing tab of the Configured Item Revisions program (P3210) controls how the generic text is generated. The processing option enables you either to replace all of the text every time a change is made or to append the new text to the bottom of the existing text.

If the system generates purchase orders for components of configured items during order entry, the configuration specific information is sent to the supplier in the form of media objects.

Form Used to Review Configured Text

Form Name	FormID	Navigation	Usage
Customer Service Inquiry	W4210E	Daily Processing menu (G32), Sales Order Entry Select an order on the Customer Service Inquiry form, and select Order and then Confg Generic Text from the Row menu.	Review the text for a configured item. The information that appears in the media object is defined in the Configured Item Segments program.

Reviewing Configured Text

Access the Customer Service Inquiry form.

Review the generic text for the configured item.

CHAPTER 6

Entering Orders for Configured Items

This chapter provides overviews of configured item order entry, configured item sales orders, configured item direct ship orders, configured item transfer orders, configured item interbranch orders, configured item combination orders, configured item purchase orders, purchase orders for components of a configured item, configured item work orders, and configured item orders in Engineer to Order, lists prerequisites, and discusses how to:

- Enter and convert sales quotes for configured items.

- Enter credit orders for configured items.

- Use sales order store-and-forward processing for configured items.

Understanding Configured Item Order Entry

After you set up the segments, cross-segment editing rules, assembly inclusion rules, configured tables, media object attachments, and Configured Item Revisions program (P3210), the JD Edwards EnterpriseOne Configurator system is ready to process orders for the configured item. Orders for configured items can be created in Sales Order Entry (P4210), Purchase Orders (P4310), Manufacturing Work Order Processing (P48013), and in the JD Edwards EnterpriseOne Engineer to Order system.

The JD Edwards EnterpriseOne Sales Order Management system supports these types of order processing for configured items:

- Sales orders

- Sales quotes

- Credit orders

- Direct ship orders

- Transfer orders

- Interbranch orders

- Purchase orders

- Combination orders

- Store & Forward orders

You can also create sales proposals within the Sales Order Entry program. Sales proposals contain information such as sales configuration, quotation, company's financial highlights, product information, pricing and discount information, and product availability. You can use an automated document-generation system to gather the various pieces of information—such as sales, accounting, marketing, and inventory—from different departments.

Note. The JD Edwards EnterpriseOne Configurator system supports most preference profiles. However, it does not support preference profiles for multibranch commitments.

The JD Edwards EnterpriseOne Procurement system supports regular purchase orders for configured items. It supports purchase orders for configured items that are created at the time of sale-order entry for direct ship and transfer orders. It also supports purchase orders for components of configured items.

The JD Edwards EnterpriseOne Work Order Management system supports entering work orders for configured items directly through the work order entry process.

The JD Edwards EnterpriseOne Engineer to Order system supports purchase orders and work orders for configured items. The Project Workbench (P31P001) provides access to the Manufacturing Work Order Processing (P48013) and Purchase Orders (P4310) programs.

Note. To support the successful creation and completion of the various order types, you must ensure that the configured item is set up appropriately in each branch/plant.

This diagram illustrates the entry points for configured item orders:
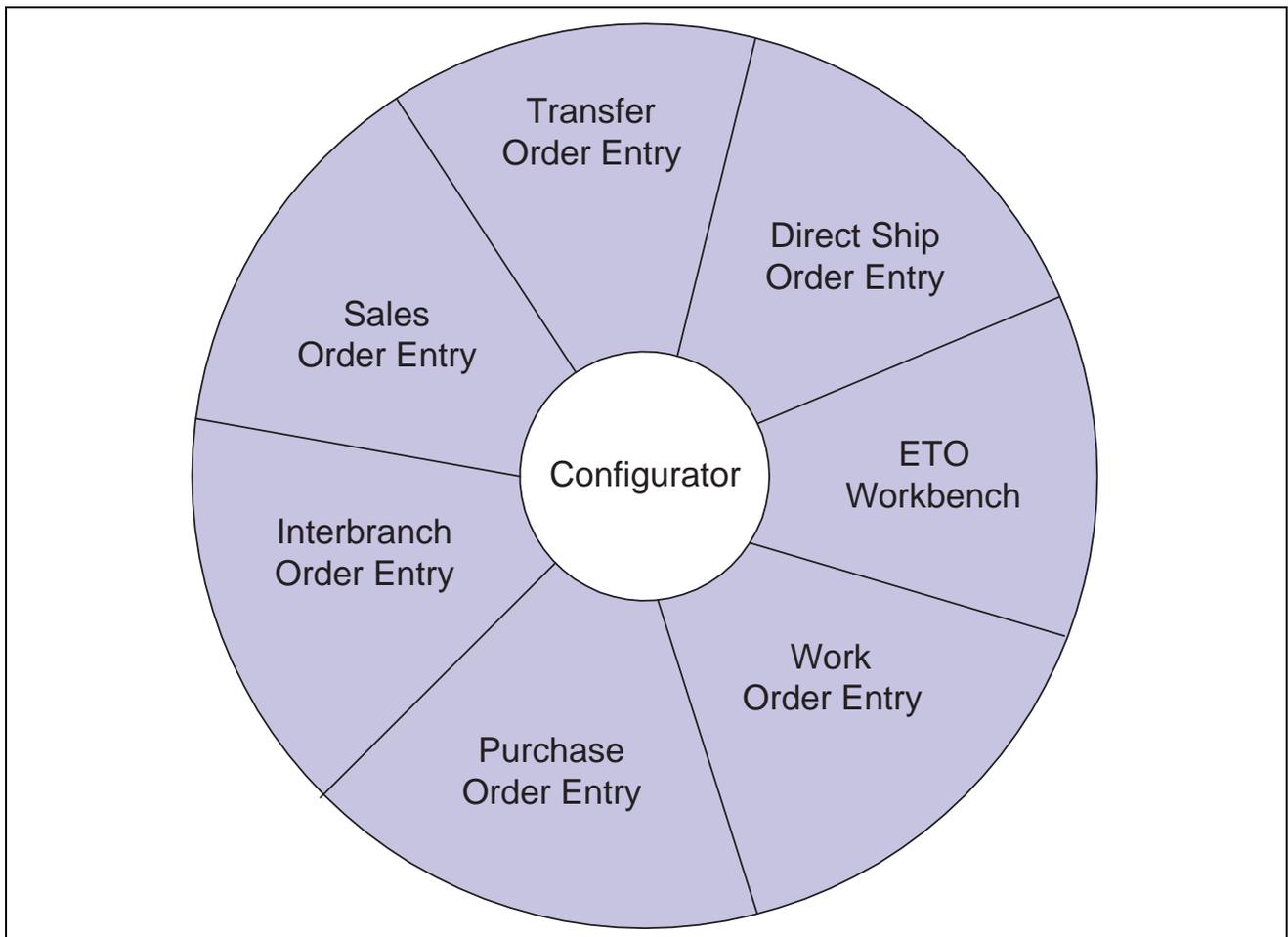
Entry points for configured item orders

Order Modification for Configured Items

The extensive functionality and flexibility in the software makes change management an important consideration during system setup and the definition of business processes. The system supports linking multiple order types for configured items, and although system controls do exist in some areas (such as status codes), you need to know that the majority of order change management must be managed through business processes and, possibly, manual intervention.

Important! It is strongly recommended that all changes to configured item orders be done through the JD Edwards EnterpriseOne Configurator system to ensure accurate changes to related orders. The system does not limit the ability to perform manual adjustments to orders through other systems such as JD Edwards EnterpriseOne Sales Order Management, JD Edwards EnterpriseOne Procurement, and JD Edwards EnterpriseOne Work Order Management. However, manual changes performed outside the JD Edwards EnterpriseOne Configurator system will not synchronize with the configuration and other related orders in the JD Edwards EnterpriseOne system.

Understanding Configured Item Sales Orders

You enter a sales order when the customer calls and requests a configured item. You enter the sales order and configure the item according to customer specifications.

This diagram illustrates the sales order process:
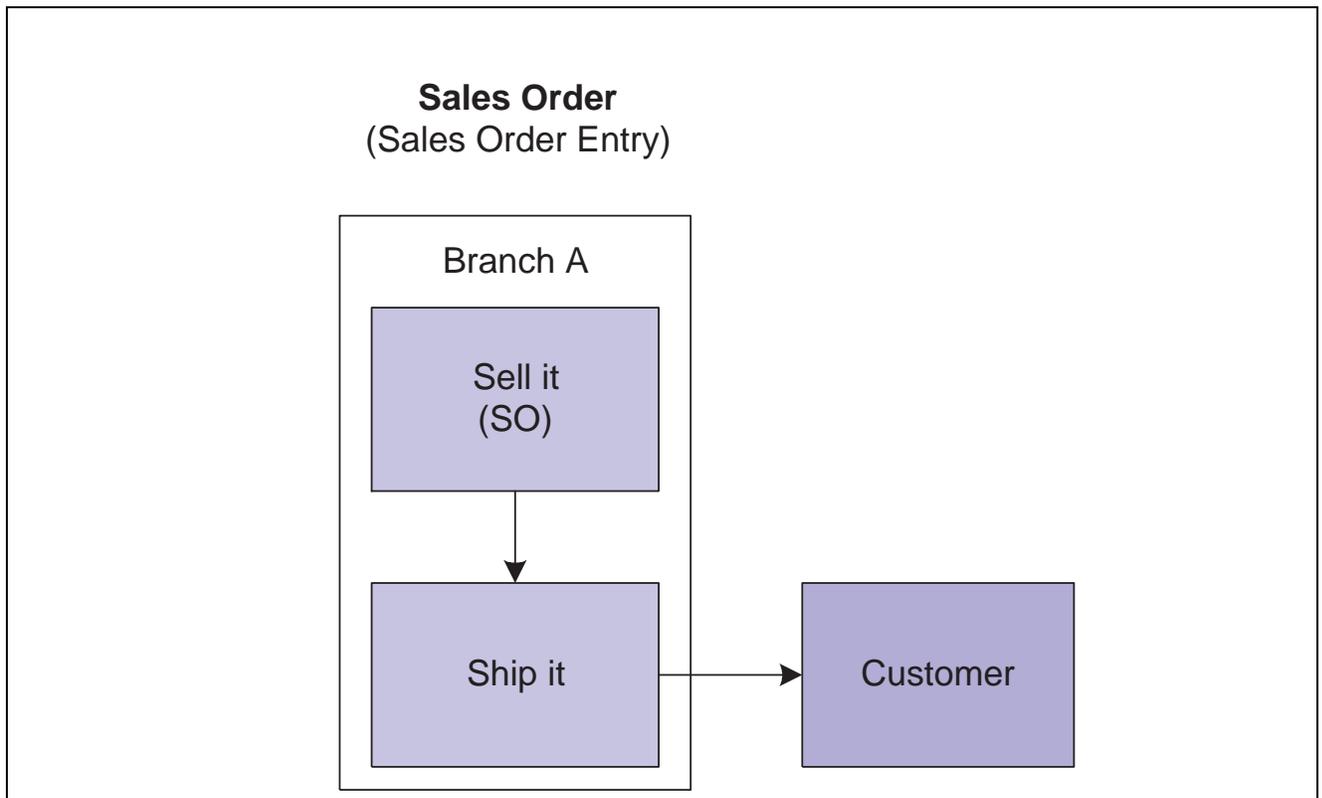
Configured sales order

For a configured item with a work order line type, the system creates the corresponding work orders. Then you build and ship the item to the customer.

This diagram illustrates the sales order with work order process:

Sales Order with Work Order
(Sales Order Entry)

Branch A

Sell it
(SO)

Build it
(WO)

Ship it

Customer
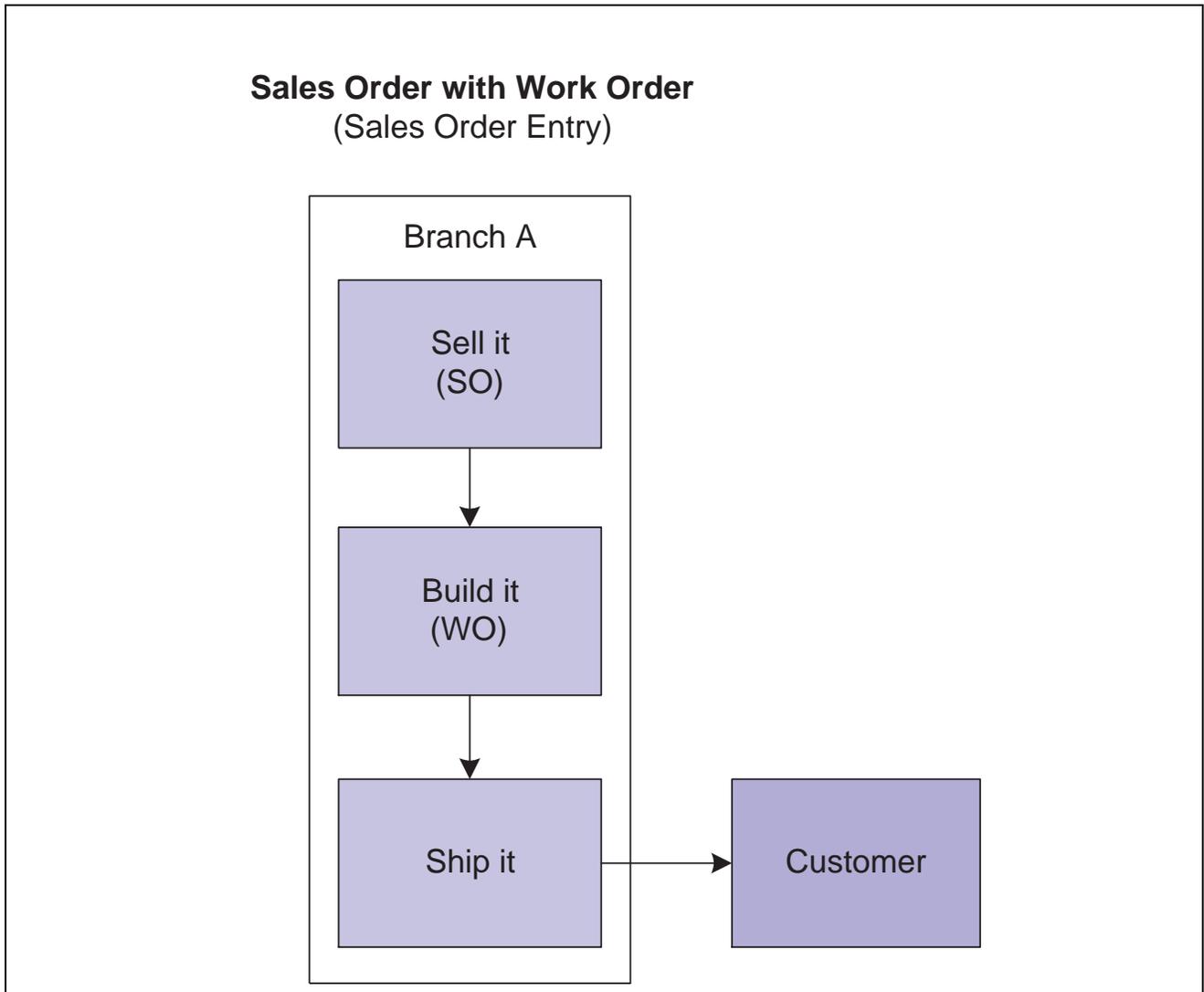
Configured sales order with work order

This table lists technical considerations for configured item sales orders:

Function	Consideration
Multicurrency	The system applies pricing (X) rules to foreign-currency sales orders. The system processes price adjustments as a base currency amount and converts the amount to a different currency amount, if necessary.

During setup, you must define the pricing (X) rule in domestic currency. During sales order entry, the system converts the domestic price to the foreign currency. |
| Line item discounting | The system supports line item discounting for configured items at sales order entry. |

Function	Consideration
Availability checking	The system does not support availability checking of configured components.
Commitments	The system supports sales order commitments for work-order line types for all items.
	The Sales Order Entry program (P4210) commits component parts to the sales order at order entry time. The commitments move to the parts list when Order Processing (R31410) is run. Thus, work order generation does not need to run immediately upon order entry to get the commitments.
	The Order Processing program commits component parts that are related to the configured parent.
Substitutes/cross reference	Substitutes are not set up for configured items because no standard bill of material exists.
	The cross-reference functionality can be set up and used. You use it when you enter sales orders.
Additional order processing	For configured items, the JD Edwards EnterpriseOne Sales Order Management system does not support back orders.

Setup Considerations for Configured Item Sales Orders

To correctly process the sales order for the configured item, you must set the Work Order Line Type processing option in the Sales Order Entry program (P4210) in order to create work orders. Alternatively, you can define the W line type in the branch/plant record for each configured item. If you leave the processing option blank, the system supplies the line type from the branch/plant.

Setting the line type to *W* enables you to generate the corresponding work order headers for the configured item after acceptance of the sales order. Thus, the configured item can be properly manufactured and shipped to the customer.

Understanding Configured Item Direct Ship Orders

A direct ship order is the sale of an item that you purchase from a supplier, who then sends the item directly to the customer.

When you enter a direct ship order, the system simultaneously creates a sales order for the customer and a purchase order for the supplier. The purchase order specifies that you want the supplier to ship the item directly to the customer.

During order entry, the system verifies the item number, but it does not update quantities or check availability.

For configured items, direct ship orders work for the parent configured item, as well as a component of the parent configured item.

In a direct ship order for a parent configured item, the sales order is used to configure the item and, later, to invoice the customer. The purchase order is sent to the supplier, who builds the parent configured item and ships it to the customer.

In a direct ship order for the sale of a configured item and direct shipment of a component, the sales order is used to configure the item, build it, and ship it to the customer. The purchase order is sent to the supplier who builds the component of the configured item and ships it to the customer.

The component of the parent configured item could be a standard manufactured component, subassembly, or a configured subassembly.

You set the Supplier Number field for the P type rule on the Assembly Inclusion Edit Group Revisions form with the appropriate information for the component item. You can also use the table conversion program for the Assembly Inclusions Rules table (F3293) to load the supplier number from the Item/Branch Plant Info form to existing P rule records for the direct ship transaction type.

This diagram illustrates the direct ship process:
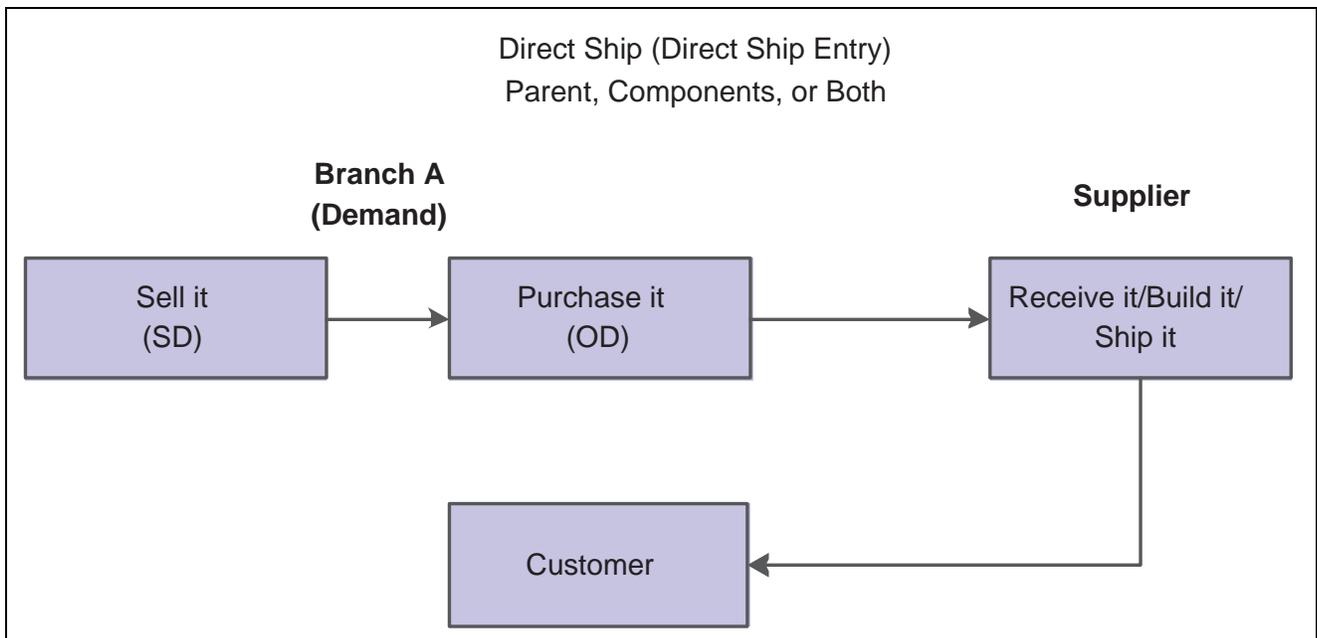
Configured direct ship order

Setup Considerations for Configured Item Direct Ship Orders

To successfully process a direct ship order for a parent configured item or a component of the parent configured item, you must set up the items appropriately.

For any components of the configured item that will generate a direct ship order type, you set the Trans Type field in the Assembly Inclusion Rules program (P3293).

You must also set the Supplier Number field for the P type rule with the appropriate information for the component item. If the supplier number is not indicated in the P rule, then the system pulls the supplier from the Supplier Number field in the Item Branch/Plant record .

Create a version of the Sales Order Entry program (P4210) for direct ship order entry and set the processing options appropriately. Set the processing options for the version of the Purchase Orders program (P4310) that will be used with sales order entry to generate the direct ship orders.

Understanding Configured Item Transfer Orders

A transfer order ships inventory between branch/plants within the company. When you enter a transfer order, the system creates supporting purchase orders and sales orders that are used to maintain accurate inventory.

You can transfer configured items between branches. You use the Transfer Order Entry version of Sales Order Entry (P4210) to create transfer orders for configured items.

When you enter an order for a configured item directly through Transfer Order Entry, everything on the order is transferred. Thus, the complete parent configured item is transferred.

In the transfer order scenario, Branch A has requirements for a configured item that is in Branch B. This configured item consists of the parent and all components. Transfer order entry is used to configure the item on a purchase order. A corresponding sales order for the configured item is sent to Branch B. The configured item is shipped from Branch B to Branch A, where it is received and stocked in inventory.

This diagram illustrates the transfer order process:
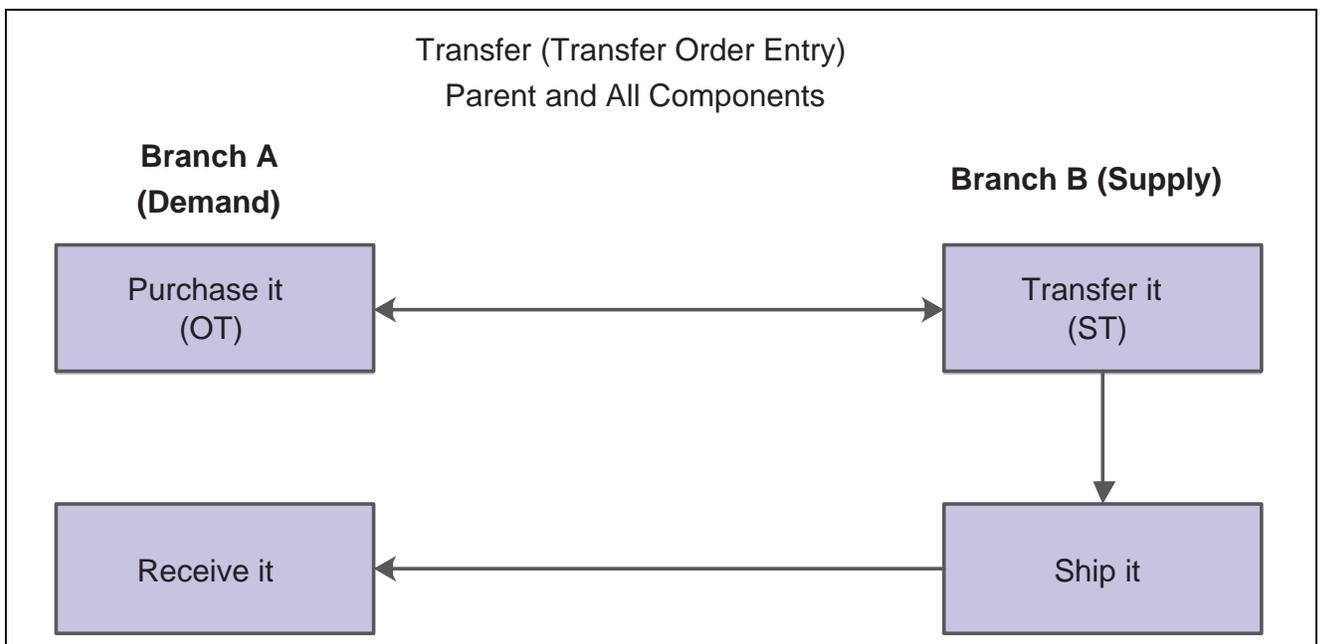
Configured transfer order

In some instances, Branch B might have to build the configured item before it can be shipped to Branch A.

This diagram illustrates the step of generating work orders to manufacture the configured item before it is shipped to Branch A:

Transfer with Work Order (Transfer Order Entry)
Parent and All Components

**Branch A
(Demand)**

Branch B (Supply)

| Purchase it (OT) | Sell it (ST) | Build it (WO) |

| Receive it | | Ship it |
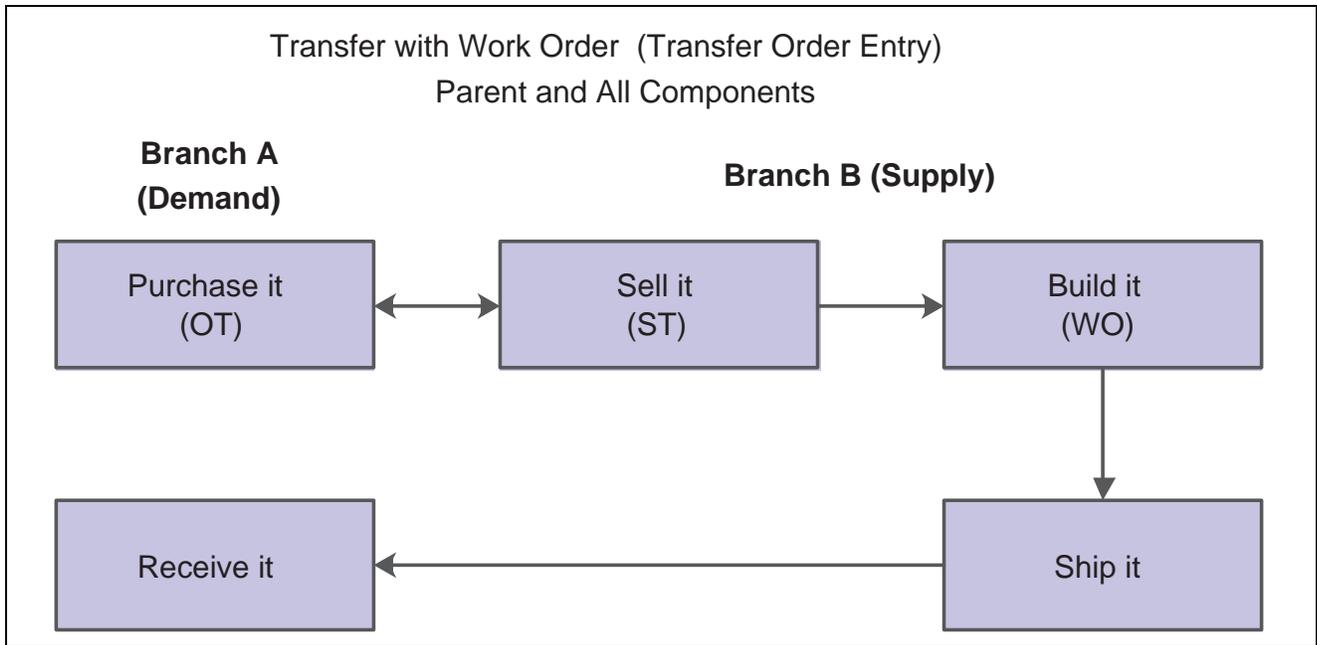
Configured transfer order with work order

The system also supports transfer orders for components of the parent configured item. The component of the parent configured item could be a standard manufactured component, subassembly, or configured subassembly. Although the setup requirements vary, the functionality is the same.

Note. Transfer orders are processed in the same way as a normal sales order, including the processing of P and X assembly inclusion rules.

Setup Considerations for Configured Item Transfer Orders

To successfully process transfer orders for a parent configured item, you must set up the items appropriately and verify the branch/plant setting.

Create a version of the Sales Order Entry program (P4210) for transfer order entry and set the processing options appropriately. Set the processing options for the version of Purchase Orders (P4310) that will be used with sales order entry to generate the transfer orders.

Note. The Cost or Base Price Markup processing option on the Process tab is supported for configured items.

To create transfer orders for a component of the parent configured item, use the stock line type, usually S, on the order for the parent configured item. This action drives transfers for the components of the configured item.

For any components of the configured item that generate a transfer order, you set the Trans Type field in the Assembly Inclusion Rules program (P3293). Also, verify that the component branch is set up for the components.

When setting the processing options for the Configured Item Revisions program (P3210), identify a version of Sales Order Entry (P4210) to use to create orders for the components that require transfer orders.

Understanding Configured Item Interbranch Orders

Interbranch orders enable you to ship an item directly to the customer from another branch of the company. You can do interbranch orders for configured items.

The sale and interbranch that takes place between Branches A and B could be for the parent configured item or a component of the parent configured item. The component of the parent configured item could be a standard manufactured component, subassembly, or configured subassembly.

In the case of a sale and interbranch of a parent configured item, Branch A uses Sales Order Entry (P4210) to order and configure the item, based on customer request. However, Branch B supplies the parent configured item. Thus, when the order for the configured item is entered, the detail Branch becomes Branch B by default. Branch B then ships the item to the customer.

In the case of a sale involving an interbranch of a component of a parent configured item, Branch A uses Sales Order Entry to configure and order the parent configured item. The parent configured item is built in Branch A; however, a component is supplied by Branch B. The component item is shipped separately from the parent item. Thus, Branch A ships the parent item to the customer, and Branch B ships the component item to the customer.

This diagram illustrates the interbranch order process:
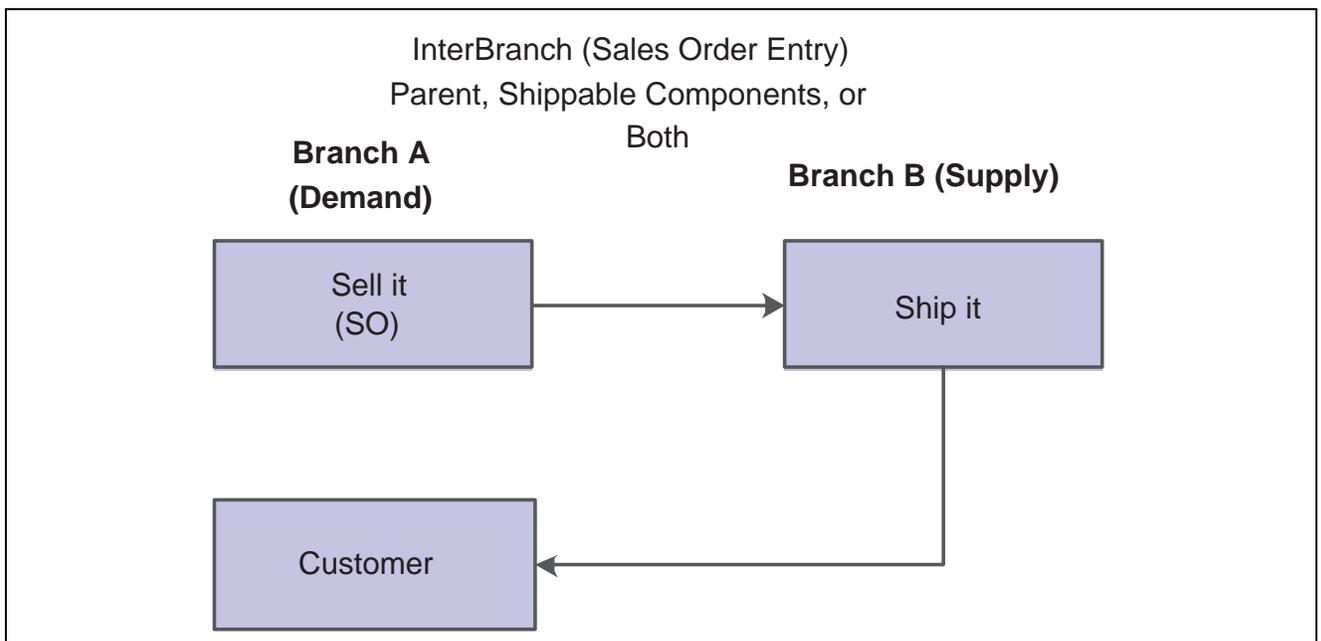
Configured interbranch order

In some instances, Branch B might have to build the parent configured item or component of the configured item before it can be shipped to the customer.

This graphic illustrates the step of generating work orders to manufacture the item before it is shipped to the customer:

Interbranch with Work Order (Sales Order Entry)
Parent, Shippable Components, or Both
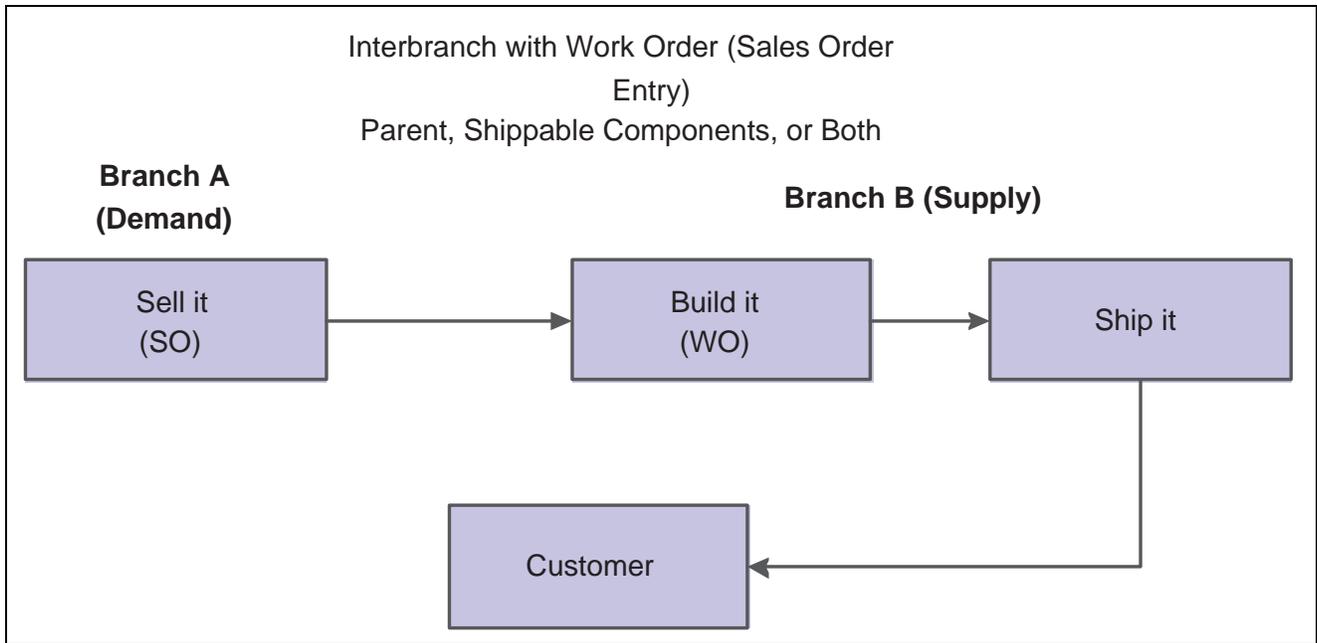
Configured interbranch order with work order

Setup Considerations for Configured Item Interbranch Orders

You can create interbranch orders for configured items. To successfully process interbranch orders for a parent configured item or a component of the parent configured item, you must set up the items appropriately.

Verify the branch/plant setting of the configured item in the Configured Item Segments program (P3291).

For any components of the configured item that will generate an interbranch order, you set the Trans Type field in Assembly Inclusion Rules (P3293). Also, verify that the component branch is set up for the components.

Set the processing options for Sales Order Entry (P4210) and the Transfer Order Entry version of Sales Order Entry.

Note. The Cost or Base Price Markup processing option on the Process tab is supported for configured items.

For configured-item interbranch orders, no additional orders are created at order entry time. The JD Edwards EnterpriseOne Configurator follows the processing option for the running version of Sales Order Entry for the cost or base price markup.

Understanding Configured Item Combination Orders

The system enables you to use various order types with one another to create a combination of orders for configured items. You set the component transaction type in assembly inclusion rules for components of the parent configured item. Although many combinations of orders can exist, examples of sales and transfer orders are outlined in the diagrams in this section.

The sale and transfer that takes place between branches A and B could be for the parent configured item or a component of the parent configured item. The component of the parent configured item could be a standard manufactured component, subassembly, or a configured subassembly.

In the case of the sale and transfer of a component of a parent configured item, Branch A uses Sales Order Entry to configure and order the parent configured item. The parent configured item is built in Branch A; however, a component is supplied by Branch B. The purchase order is sent to Branch B. Branch B uses the accompanying sales order to pick the configured item and ship it to Branch A. Branch A receives the item, issues the item, and completes the build of the parent configured item. Branch A then ships the complete parent configured item to the customer, using the original sales order that was created in Sales Order Entry.

Note. The version of Sales Order Entry that you use must reference the correct version of the Configured Item Revisions program (P3210) in order to call the correct Transfer Order Entry version of Sales Order Entry (P4210).

This diagram illustrates the combination order process:
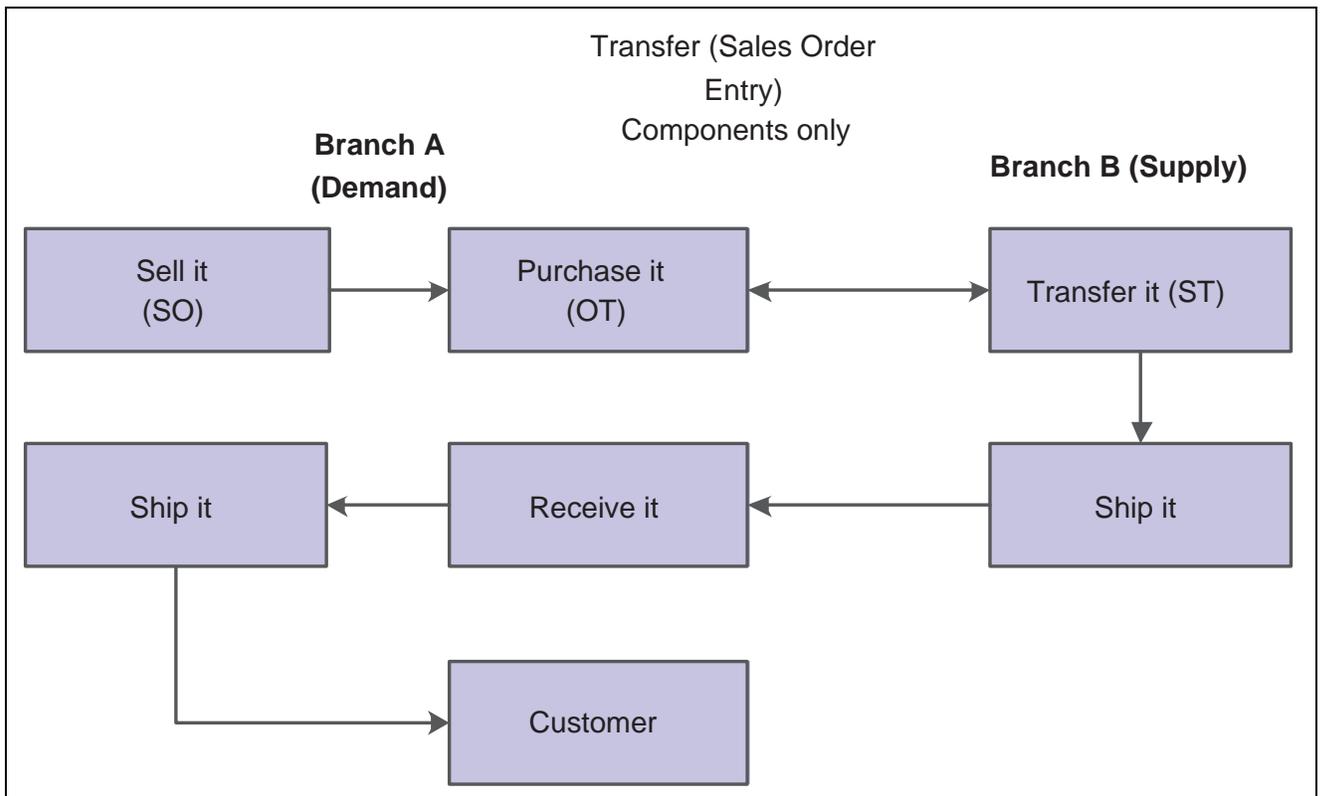
Configured combination order

In some instances, Branch B might have to build the item before it can be shipped to Branch A.

This diagram illustrates the step of generating work orders to manufacture the item before it is shipped to Branch A:
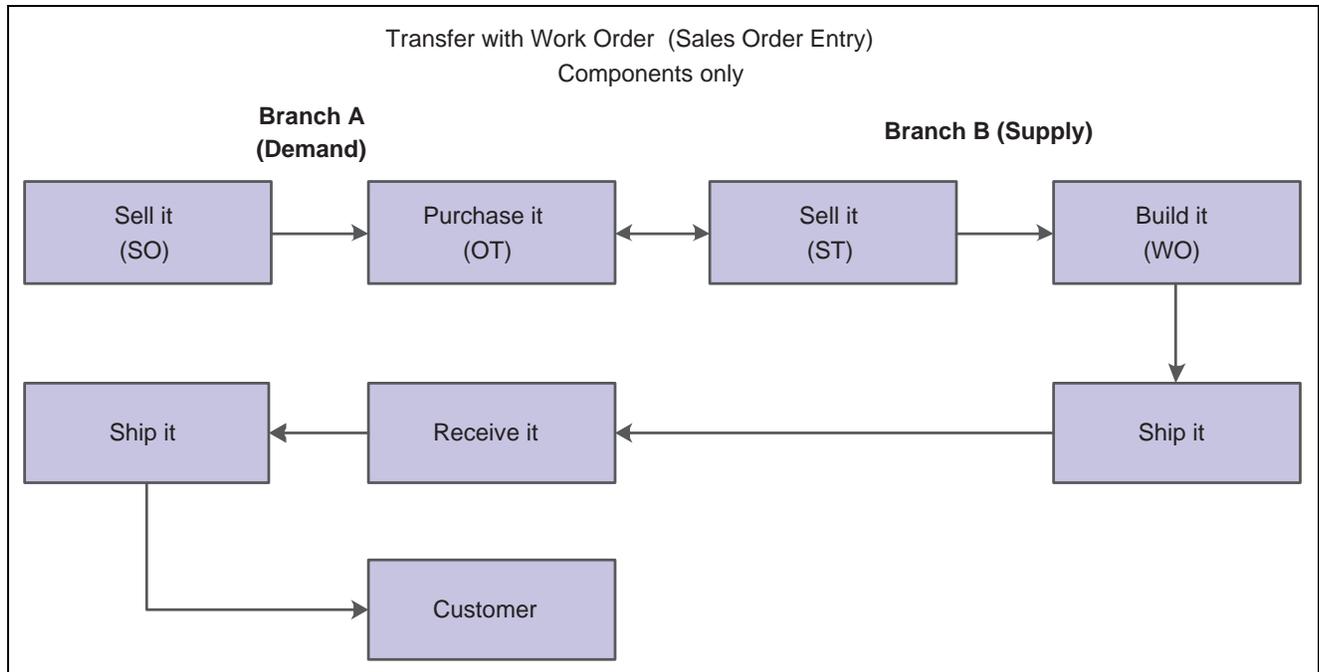
Configured combination order with work order

Setup Considerations for Configured Item Combination Orders

To successfully process combination orders for a parent configured item or components of the parent configured item, you must set up the items appropriately and also verify the branch/plant setting.

For any components of the configured item that will generate an order, you set the Trans Type field in the Assembly Inclusion Rules program (P3293). Also, verify that the component branch is set up for the components.

Create the required versions of Sales Order Entry (P4210) and Purchase Order Entry (P4310). Set the processing options appropriately.

When setting the processing options for the Configured Item Revisions program (P3210), identify a Transfer Order Entry version of Sales Order Entry that can be used to create orders for the components that require transfer orders.

Understanding Configured Item Purchase Orders

You enter a purchase order for a configured item when you must send configured item specifications to suppliers.

You can access the Purchase Orders program (P4310) from a menu or the Project Workbench (P31P001) in the JD Edwards EnterpriseOne ETO system. The input of a purchase order for a configured item is similar to the input of a sales order.

Purchase orders can be set to display the Order Header or Order Detail form. After the header information is entered, the configured item is entered in the detail section. When the configured segments are answered and validated through the Configured Item Revisions program (P3210), the Purchase Order Entry form is returned.

A stock line type, usually S, is used on the purchase order.

Purchase orders for configured items differ from sales orders in that purchase orders do not have components in the configuration that generate purchase order detail lines. The purchase order has a single line containing the parent configured item only. The purchase order could be for a configured subassembly of the parent configured item.

X assembly inclusion rules are processed for a configured purchase order, but all costs are rolled into the cost of the parent configured item.

No automatic inventory search is performed even if the Configurator constants are set to perform the search.

For configured purchase orders, the Add Item and Add Price/Cost tabs on the Edit Item/Price/Cost form are not accessible.

A media object is attached to the line of the purchase order. The media object contains the generic configured text as set up in the Configured Item Segments program (P3291). This attachment is used to communicate the configuration to the supplier.

See Chapter 4, "Setting Up Configurator," Understanding Media Object Attachments for Configured Items, page 35.

The Configurator Costing Method field in the Item Master is used by the purchase order to cost the configured item on the order. Additionally, JD Edwards EnterpriseOne Advanced Pricing can be used to price the configured item. However, no general ledger entries are created.

As an example, suppose that Branch A needs to stock a configured item. Purchase Order Entry is used to order and configure the item. The purchase order is sent to the supplier, who then ships the configured item to Branch A. Branch A receives the configured item into inventory.

This diagram illustrates the purchase order process:

Purchase Order
(Purchase Order Entry)

Branch A — Purchase it (PO) → Supplier — Build it → Ship it → Receive it
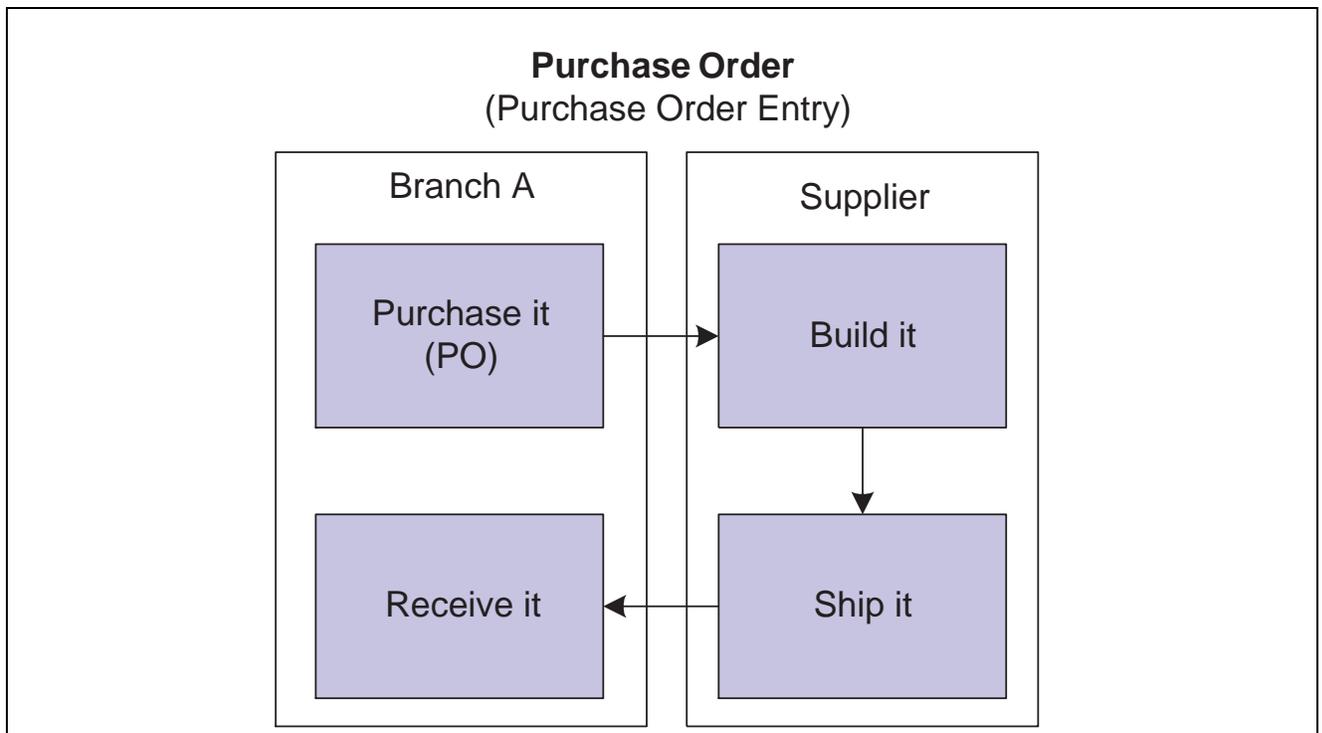
Configured purchase order

Purchase orders are also created at the time of sales order entry for transfer, direct ship, and combination orders for configured items.

When you enter purchase receipts, the configuration ID and lot number are linked to the purchase order. You can receive the configured item to stock or to a sales order.

Setup Considerations for Configured Item Purchase Orders

To correctly process the purchase order for the configured item, you must set the Line Type processing option for a stock line type in the Purchase Orders program (P4310). Alternatively, you can define the *S* line type in the branch/plant record for each configured item. If you leave the processing option blank, the system supplies the line type from the branch/plant.

You must also set the processing option to call the correct version of the Configured Item Revisions program (P3210).

In the Item Master, you can set the Configurator Costing Method field to facilitate costing the configured item on a purchase order. Additionally, you can use JD Edwards EnterpriseOne Advanced Pricing to price the configured item. However, no general ledger entries are created.

Understanding Purchase Orders for Components of a Configured Item

You can generate a purchase order for a component when an order is entered for the parent configured item. The purchased components are used in work orders to build the configured item or shipped with the configured item on a sales order. The system supports creating, editing, and canceling purchase orders for components of configured items.

You set the Trans Type and Supplier Number fields for the P type rule on the Assembly Inclusion Edit Group Revisions form with the appropriate information for the component item. You set the Trans Type field to a value of *4* to generate a purchase order for a component of a configured item.

You can use the following order types to generate a purchase order for a component of a configured item:

• Sales order.

• Work order.

• Transfer order.

• Transfer order via a work order.

• Interbranch order.

• Blanket order.

  For this order type, you enter a configured item order using blanket order entry. When you release the blanket order, generating a sales order, a component of that configuration generates a purchase order.

  Note. Components of a configured item do not generate a blanket purchase order.

• Quote release.

  For this order type, you enter a configured item quote using sales quote entry. When you release the quote, generating a sales order, a component of that configuration generates a purchase order.

• Purchase order for a non-stock item.

Note. The JD Edwards EnterpriseOne Configurator system does not support generating a purchase order for a component of a configured item that has a stocking type of *0* (phantom). The system also does not support generating a purchase order for any component with a line type that is set to generate a purchase order or work order. The system generates a purchase order for a component for line types with an inventory interface of *Y* only.

During order entry, the system generates a purchase order for a component with a transaction type of *4* (purchase order). You specify the version of Purchase Order Entry (P4310) the system uses to generate the purchase order for the component.

The JD Edwards EnterpriseOne Configurator system creates a new purchase order for the component and inserts the item number in the Purchase Order Header (F4301) and Purchase Order Detail File (F4311) tables. The purchase order document numbers are stored in the Configurator Master table (F3201) as related orders. The F4311 and Purchase Order Generator File (F4311Z) tables store a value in the Created By Configurator Flag field to indicate that the purchase order has a related configured order.

When you accept an order, a media object is attached to the line of the purchase order. The media object contains the generic configured text as set up in the Configured Item Segments program (P3291). This attachment is sent to the supplier to communicate the configuration specific information.

See .

You use the PO Receipts program (P4312) to receive the component into inventory, update the commitments on the related order to indicate the location of the inventory receipt, or commit and auto-issue to the parts list line of a configured work order. The JD Edwards EnterpriseOne Sales Order Management system then updates the inventory location commitment and validates order status information.

As an example, suppose that Branch A sells a configured item to a customer. Sales order entry is used to order and configure the item. The purchase order is sent to the supplier, who then ships the component of the configured item to Branch A. Branch A receives the component item and then ships the parent configured item and component to the customer.

This diagram illustrates the purchased component order process:

Purchased Component
(Sales Order Entry)
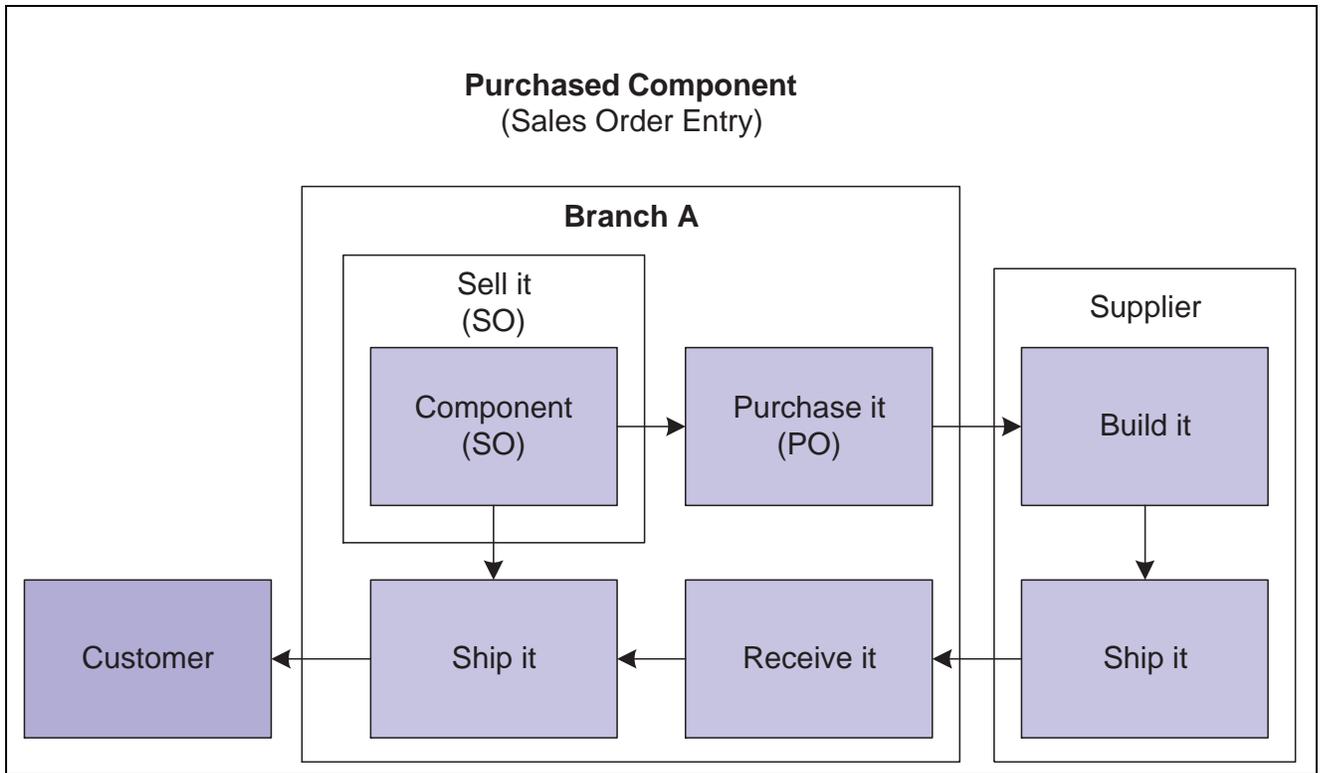
Purchased component order

In some instances, Branch A might have to use the purchased component to build the configured item before it can be shipped to the customer.

This diagram illustrates the purchased component with work order process:

Purchased Component with Work Order
(Sales Order Entry)

Branch A

Sell it
(SO)

| Component (SO) | Purchase it (PO) | | Supplier / Build it |

Build it
(WO)

| Component (Parts List) | Receive it | Ship it |

| Customer | Ship it |
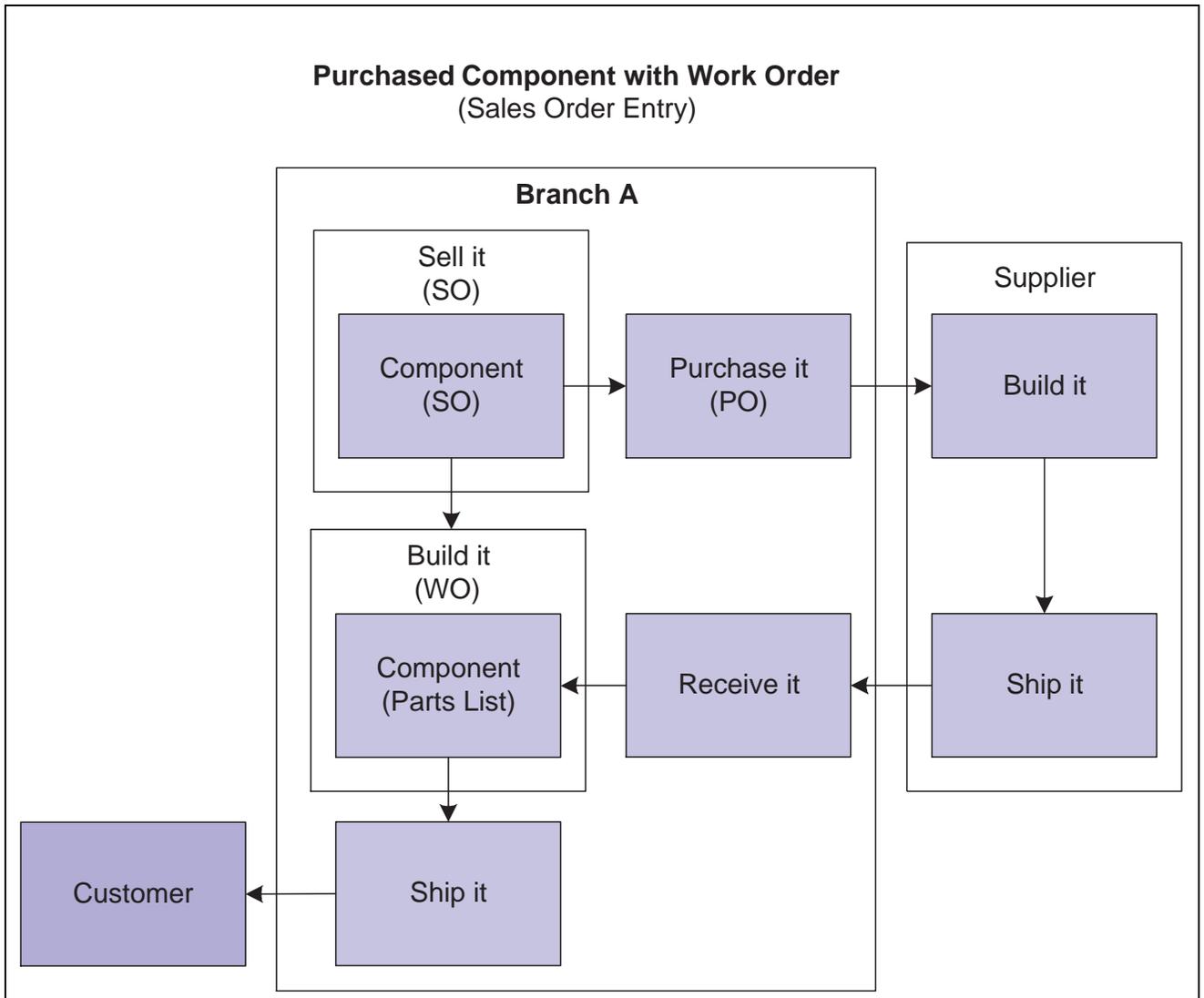
Purchased component order with work order

Order Revisions

You can revise the order for a configured item if a customer calls and needs to change information on an order. The JD Edwards EnterpriseOne Configurator system enables you to revise the purchase order for the component of the configured item if the configuration of the parent configured item is changed.

This table describes types of revisions that could occur:

Revision	Description
Changing quantity	The system changes the order quantity on the purchase orders for the component items.
Changing units of measure	The system changes the units of measure on the purchase orders for the component items.
Changing requested date	The system changes the dates of the purchase orders for the component items.

Revision	Description
Changing the configuration	The system changes the purchase order to reflect the configuration change. If the associated purchase order is past the cutoff status, then you must manually update the related orders (for example, work orders).
Excluding a component item	The system cancels the purchase order that has been generated. The system does not cancel the purchase order if the order has been fully received or its status has advanced past the cutoff status. A warning message is issued if the purchase order cannot be canceled.
Canceling the order	When you cancel an order for a configured item, the system cancels the purchase order for the component of the configured item.

Setup Considerations for Purchase Orders for Components of a Configured Item

To correctly process the purchase order for the component of a parent configured item, you must set the Trans Type and Supplier Number fields for the P type rule on the Assembly Inclusion Edit Group Revisions form with the appropriate information for the component item. You set the Trans Type field to a value of *4* to generate a purchase order for a component of a configured item.

You must also set the Purchase Order Version processing option on the Versions tab of the P3210 program. The system uses the specified version of the Purchase Order Entry program (P4310) to generate the purchase order for the component.

Understanding Configured Item Work Orders

You enter a work order for a configured item when you want to build a configured item. The configured item could be intended to fill an order, or it can be put into inventory for future use.

During sales order entry, work order headers are created for associated configured items based on system setup and processing option settings. After they are created, the work order headers are used in the shop floor management process to manufacture the configured item. Work orders for configured items can also be created directly in Manufacturing Work Order Processing (P48013), which can be accessed from a menu or from the Project Workbench program in the JD Edwards EnterpriseOne Engineer to Order system.

The input of a work order for a configured item is similar to the input of a regular work order. Creation of a work order for a configured item is initiated from the Manufacturing Work Order Processing program. The parent configured item is entered on the work order, and the Configured Item Revisions program (P3210) is called to answer and validate the configured segments. After the configuration is accepted, the Work Order Entry form is returned. Work orders are created for child configured items, if necessary.

A media object is attached to the line of the work order. The media object contains the generic configured text as set up in Configured Item Segments (P3291).

The work order entry process for configured items rolls up cost but not price.

Setup Considerations for Configured Item Work Orders

To process the work order for the configured item, you must set the Document Type processing option in the Manufacturing Work Order Processing program (P48013). You define the document type to use for work orders.

You must also set the processing option to call the correct version of the Configured Item Revisions program (P3210).

In the Item Branch/Plant, verify that the line type of each configured item is the work order line type.

Understanding Configured Item Orders in Engineer to Order

JD Edwards EnterpriseOne Engineer to Order (ETO) supports the move from mass production to a product-of-one production methodology. In this engineer-to-order environment, project management becomes of prime importance, given the amount of unknown information involved. JD Edwards EnterpriseOne ETO supports the full life cycle of typical project-oriented operations, which includes the Initiation, Planning, Execution and Control, and Close phases of a project.

In JD Edwards EnterpriseOne ETO, you can enter a work order or purchase order for a configured item. The Project Workbench (P31P001) provides access to Manufacturing Work Order Processing (P48013). You can also attach existing work orders for a configured item to a project.

The Purchase Orders program (P4310) is accessed from the Project Workbench. During the configuration of a purchase order in JD Edwards EnterpriseOne ETO, P and X assembly inclusion rules are evaluated.

You can enter an order for the parent configured item, also called root or top-level configured item, or a configured subassembly of the parent.

Note. On the Configure Item form, the Configured Item Inventory option is disabled for JD Edwards EnterpriseOne ETO. In JD Edwards EnterpriseOne ETO, all inventory is project-specific, and must be manufactured or purchased specifically for the project.

Setup Considerations for Configured Item Orders In ETO

Orders for configured items can be used in JD Edwards EnterpriseOne ETO once the JD Edwards EnterpriseOne Configurator system is set up.

Adding New Work Orders for a Configured Item to a Project

You can add a new work order for a root configured item using the Project Workbench program (P31P001). After the work order is entered, you enter specifications for the configured item. This option calls the Configured Item Revisions program (P3210) where the item configuration is defined.

JD Edwards EnterpriseOne Configurator creates work orders for the child configured items, if necessary. JD Edwards EnterpriseOne Configurator also associates the generated child configured work orders with the ETO project.

The result is work orders that are created for the configured item and its configured components, as well as parts lists and routings.

Note. The system does not allow the addition of any other order types, such as Summary or Manufacturing, as children to the configured parent work order or any of its children.

Attaching Existing Work Orders for a Configured Item to a Project

You can attach a preexisting set of configured work orders to an ETO project through the Project Workbench program (P31P001). The configured work orders must have been created using Manufacturing Work Order Processing (P48013). Additional criteria must also be met:

• If the work order is a configured work order, it must be the root or top-level order.

• The configured work order cannot already be associated with a project.

• The work order can have no material issued to its parts list.

• The work order can have no activity reported against it.

You cannot attach a preexisting set of configured work orders to an ETO project if the orders were created using Sales Order Entry (P4210). If the configured work orders that are created from a sales order are attached to an ETO project, two sets of sales orders could possibly exist against the work order. The first would be the original sales order, and the second would be the sales order against which the configured item can be shipped from the Project Workbench. To avoid any issues, configured work orders that are created from sales order cannot be attached to an ETO project.

Viewing a Configuration Entry for a Project

After committing the work order records from the Project Workbench (P31P001) and the Configured Item Revisions program (P3210), you can view the specifications for the configured parent work order and all its children by using the Work with Segment Values program (P32983).

Prerequisites

In order to enter orders for configured items, you must:

• Set up configured items in the JD Edwards EnterpriseOne Configurator system.

• Set the processing options for the Configured Item Revisions program (P3210) in the JD Edwards EnterpriseOne Configurator system.

Entering and Converting Sales Quotes for Configured Items

This section provides overviews of configured item sales quotes and conversion of a sales quote to a sales order for a configured item, lists prerequisites, and discusses how to convert a sales quote to a sales order for a configured item.

Understanding Configured Item Sales Quotes

You enter a sales quote when the customer requires a formal price quote prior to actually placing an order. You enter a sales quote in the same way that you enter a sales order. However, specific JD Edwards EnterpriseOne Configurator constants and processing option settings must be set up to support the configured item sales quote. You enter quote orders to:

• Provide information about price and availability of items.

• Record the quantity and price quotes for future reference.

• Hold the quote until the customer authorizes the order.

• Honor an obligation for a quoted price for a period of time.

When the customer confirms the order, you convert the quote order into an actual sales order.

Note. When a sales quote is entered, the cost for the transfer of a parent configured item or a component does not accumulate.

Understanding Conversion of a Sales Quote to a Sales Order for a Configured Item

If you created a sales quote and the customer authorizes the purchase of the quoted items, you can use the sales quote to create a sales order.

In sales order processing, three methods are available for converting a sales quote to a sales order:

• Creating a sales order from a quote order (automatic creation by using blanket order functionality).

• Releasing a quote order.

• Copying a sales quote to a sales order.

Because configured items have unique setup and processing requirements, the same holds true for converting a configured item sales quote to a configured item sales order. Not all sales order processing methods for converting a sales quote to a sales order are available when using configurator.

The automatic creation of a sales order from a quote order is not supported for configured items. Specifying the quote (blanket order) to use before the Configure Item form appears is impossible.

Releasing sales quote to sales order functionality is not supported for configured items. The configurator link is not taken along from the quote to the order during the release process.

Copying sales quote to sales order is the preferred process for configured quote processing and is the only method supported for configured items. The copying sales quote method has the logic to keep the configuration link intact. Thus, when the sales quote is copied to a sales order, the new sales order includes the link, insuring that you can get back into the configuration after sales order creation.

To support the creation of the sales order from the sales quote for the configured item, specific processing options must be set prior to the copy process.

Prerequisites

To successfully process a sales quote for a configured item, you must:

• Set the Configurator constants.

- Specify the document type for sales quotes in the Document Type List field in the Configurator Constants program (P3209).

  This user-defined code (UDC) is used to define valid document types for sales quotes in the company. The Document Type List field is generally set to *QT*.

- Set the Cost Sales Quotes option in the Configurator constants to specify how the sales quote cost will be accumulated.

  Costing of configured sales quotes differs from costing of configured sales orders. Typically, the cost of a configured item accumulates only when the Order Processing program (R31410) is run to create the configured item work orders that are related to a sales order. However, special functionality exists that accumulates the costs for a configured item sales quote. Configurator constants can be set to accumulate costs when a configured-item sales quote is entered. This method of costing a configured item is an exception to the normal costing process and works only for configured sales quotes.

  If you select the Cost Sales Quotes option, all costs accumulate from P, Q, R, and X (cost) assembly inclusion rules at the time of sales quote entry. If you clear the Cost Sales Quotes option, only the costs of the P and X (cost) assembly inclusion rules accumulate at the time of sales quote entry.

  Order Processing calculates the cost of the configured item based on the P, Q, R, and X (cost) assembly inclusion rules.

• Verify that the order type for sales quotes has been set up in UDC 40/BT (Blanket Order Types). The order type is generally *SQ*.

• Set the processing options for sales quotes, which is a version of Sales Order Entry (P4210).

  - Set the Order Type field on the Defaults tab to the sales quote type, which is typically *SQ*.

  - Review the Activate Availability Checking field on the Commitment tab, to verify that you have specified how sales quotes affect inventory availability.

  - Set the Commit to Quantity 1 or Quantity 2 field on the Commitment tab to a value of *1* or *2* to prevent work order headers from being created for the sales quote. It is usually set to *1* for quote orders. This field must not be blank for quote orders.

To successfully convert a sales quote into a sales order for a configured item, you must set the Sales Order Entry processing options for the version appropriately. Use the regular version of Sales Order Entry (P4210) to copy the quote to an order.

• Set the Order Type processing option on the Defaults tab to the sales order type, which is typically *SO*.

• Set the Line Type field to *W* to generate work order headers for the configured item.

• Set the Order Type field on the Duplication tab to a non-quote document type. Typically, it is set to *SO*.

• Set the Commit to Quantity 1 or Quantity 2 field to blank on the Commitment tab.

  This field must be blank for sales orders to ensure that the appropriate work order headers are created at sales order entry. During sales quote entry, this processing option was set to a value of *1* or *2* to prevent work order headers from being created for the sales quote.

Form Used to Convert a Sales Quote to a Sales Order for a Configured Item

Form Name	FormID	Navigation	Usage
Customer Service Inquiry	W4210E	Daily Processing (G32), Sales Quote	Convert a sales quote to a sales order for a configured item.

Converting a Sales Quote to a Sales Order for a Configured Item

Access the Customer Service Inquiry form.

To convert a sales quote to a sales order for a configured item:

1. Locate the sales quote.

2. Select one line of the sales quote and click Copy.

3. Click OK on Sales Order Detail Revisions.

   The order type displayed is *SO* (sales order).

4. Process the sales order.

Entering Credit Orders for Configured Items

This section provides overviews of credit orders for configured items and the alternative credit order process for configured items, lists prerequisites, and discusses how to:

• Enter credit orders for configured items.

• Adjust inventory for configured items.

Understanding Credit Orders for Configured Items

You use credit orders when a customer returns goods that you might return to inventory or when you receive back damaged goods that you cannot return to inventory. In both cases, you need to issue the necessary credits and make adjustments for the returned merchandise.

If you previously created a sales order and the customer now wants to return the goods, you can use a credit order to manage the return process. You enter credit orders in the same way that you enter sales orders.

In sales order processing, two methods are available for entering credit orders:

• Entering credit orders manually.

• Entering system-generated credit orders (create a credit order from history).

Because configured items have unique setup and processing requirements, the same holds true for creating credit orders. Not all sales order processing methods for creating credit orders are available when you are using JD Edwards EnterpriseOne Configurator.

The manual entry process for credit orders is not supported for configured items. Ensuring that the original sales information for the parent configured item is brought into the associated credit order is impossible.

Creating a credit order from history (a system-generated credit order) is the preferred method for configured credit order processing. When you create a credit order from history, you retrieve the original sales order information. This information is especially important for configured items because of the relationship of the parent configured item, configuration identifier, location, lot number, and price. This method ensures that you get the correct order information for the parent configured item that is being returned.

Regarding item price, the system issues the customer credit for the amount, based on the unit price that the customer actually paid. This price might be different from the current price. The system retrieves the order information from the S.O. Detail Ledger table (F42199).

To support the creation of a credit order for a configured item, specific system setups and processing option settings need to be set. This setup includes not only the setup of the credit order, but also the setup of the sales order so that needed sales order history information is stored by the system.

A specific process must be followed during the initial input of a configured item sales order to ensure the successful input of a credit order later. In addition, a specific process must be followed to correctly process credit orders for configured items.

Credit Orders for Configured Items

To ensure the successful input of a credit order, complete this procedure:

1. Enter a sales order for the configured item using Sales Order Entry (P4210).
2. Process the associated configured item work orders by running Order Processing (R31410).
3. Complete the configured item work orders, including the parent configured item.

   This action includes issuing inventory, reporting hours and quantities, and performing a completion.

4. Ship confirm the configured item in Shipment Confirmation (P4205).
5. Run Print Invoices (R42565).
6. Update customer sales in Sales Update (R42800).

   Verify that the processing options are set to purge details to history for the header and detail. On the Update tab, both the Purge to Sales Detail History and Purge to Sales Header History fields should be blank.

7. Enter a credit order from history.
8. Create a shipment confirmation for the credit order.

   At this point, the material should be added back to inventory in the same location and lot number as the original sales order.

Understanding the Alternative Credit Order Process for Configured Items

If you do not want to create a credit order for a configured item, an alternative exists. The alternative consists of performing an inventory adjustment and entering a credit memo for the customer.

Note. Before performing these steps, you might need to create automatic accounting instructions (AAIs) to support the financial transactions. You might also need to create a new document type to keep track of the transactions.

An inventory adjustment is performed on the parent configured item to adjust it back into stock. The stocked configured item can then be resold.

After the parent configured item has been adjusted into inventory, you create a credit memo for the customer. The memo gives the customer credit for the return of the configured item.

See *JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Working With Inventory Transactions," Adjusting Inventory and *JD Edwards EnterpriseOne Accounts Receivable 9.0 Implementation Guide*, "Processing Invoices," Working with Standard Invoices.

Prerequisites

To successfully create a credit order for a configured item, you must:

• Verify that the Order Activity Rules (P40204) for the document type and line type combination for a sales order are set to record the appropriate information to history. In the order activity rules, ensure that for the sales order type and work order line type the status for ship confirmation is set to update the sales ledger. This process writes a record to the history table, which includes important information, such as the lot number and location of the parent configured item.

• Set up a document type for credit orders in the Document Type Maintenance program (P40040). The document type is usually *CO*.

• Set up a line type for credit orders. The line type is usually *C*.

• Ensure that the line type that is used for the credit order in the Line Type Constants program (P40205) is set to an Inventory Interface of *Y.* Also, ensure that the Reverse sign check box is selected, which puts the item back into inventory.

• Set up the order activity rules for the document type and line type combination for the credit order. In Order Activity Rules, for the credit order, order type, and credit line type, ensure that the appropriate order activity rules have been set up.

• Create a version of the Sales Order Entry program (P4210) for credit orders, and set the processing options appropriately.

Forms Used to Enter Credit Orders for Configured Items

Form Name	FormID	Navigation	Usage
Customer Service Inquiry	W4210E	Additional Order Processes (G4212), Credit Orders From History	Enter credit orders for configured items.
Work With Inventory Adjustments	W4114B	Inventory Master/Transactions (G4111), Adjustments	Adjust inventory for configured items.

Entering Credit Orders for Configured Items

Access the Customer Service Inquiry form.

To enter a credit order for a configured item:

1. Click the Add button.

2. Select Credit Memo from the Form menu on the Sales Order Detail Revisions form.

3. Enter the sales order number from which to create the credit order and click Find on the Work With Sales Ledger Inquiry form.

4. Highlight the line containing the parent configured item.

> **Note.** This line must be created at the point of ship confirm. It has the proper lot number, which will ensure the proper configuration identifier and price.

5. Select Credit Memo and then Select Line from the Row menu.

> **Important!** Select this option only once. You do not access any other form; the screen blinks but no other change occurs.

6. Click Close on the Work With Sales Ledger Inquiry form.

7. Click OK on the Sales Order Detail Revisions form to create the credit order.

Adjusting Inventory for Configured Items

Access the Work With Inventory Adjustments form.

To enter an inventory adjustment for a configured item:

1. Click the Add button.

2. Complete these fields in the header on the Inventory Adjustments form:

   - Branch/Plant

   - Transaction Date

   - Document Number

   - Document Type

   - G/L Date

   - Explanation

3. Complete these fields in the detail area:

   - Item Number

   - Quantity

   - UM (unit of measure)

   - Branch/Plant

4. Highlight the row and select Configured Items and then Select from histor from the Row menu to display the order history for the item.

5. Highlight the appropriate order for use in the inventory adjustment and click Select on the Work with Configured String History form.

6. Complete these fields and click OK on the Inventory Adjustments form:

   - Location

   - Lot/Serial

   The system processes the transaction and displays a document number, document type, and batch number for the transaction.

Using Sales Order Store-and-Forward Processing for Configured Items

This section provides an overview of sales order store-and-forward processing for configured items, lists prerequisites, and discusses how to:

• Create sales orders for configured items that use store-and-forward processing.

• Upload sales orders for configured items to the server.

• Set processing options for Sales Order Batch Trans. Editor (R4210Z).

Understanding Sales Order Store-And-Forward Processing for Configured Items

Store-and-forward sales order processing provides an efficient way to integrate a field sales force into the sales order management process. Store-and-forward sales orders ensure accuracy and timeliness. With store and forward, the field sales force can create sales orders on a PC and upload them to the server. If you are at a remote site and do not have a dedicated line with which to access the server, a more productive and cost-effective process might be to create sales orders on the PC during normal business hours. Then you can upload them to the server for processing during off-peak hours.

Note. The store-and-forward process works only for a standard sales order.

When you create sales orders that you store and forward, the system edits and validates each sales order, based on the information that you downloaded from the tables. It also creates a transaction control record for each sales order, assigns it a status of *1* (ready to process), and stores it in the Transaction Control table (F0041Z1).

For configured items, the system:

• Stores segments in the Configurator Segment Detail table (F3211).

• Prices, costs, and discounts the configured item.

• Processes cross-segment editing rules and assembly inclusion rules.

• Attaches configured text.

• Stores configured item information in the Sales Order Header (F4201) and the Sales Order Detail table (F4211).

• Stores configuration ID history information on the PC.

• Stores Configurator information in a variety of system 32 tables, such as F3201, F3211, F3215, and F3216.

• Supports adding nonstandard components and price adjustments.

• Supports base pricing and discounting.

Store-and-forward processing for sales orders does not support some functionality for configured items:

• Order changes after you have updated transactions on the server.

• Availability checking of stocked configured items from remote clients.

• Line splitting for configured item availability.

After you enter a store-and-forward sales order, the system transfers the header information to the F4201 table and the detail information to the F4211 table. Configuration information is stored in the F3211 table. The information remains in those tables until you are ready to process the orders.

When you are ready to forward the sales orders, you must run the Upload Store And Forward program (R421011Z). The system edits the store-and-forward order information, and transfers it to a standard sales order.

You must run the Batch Edit and Creation program (R4210Z) to generate the sales orders. After the system creates orders, you can either process the sales order as it is or change any detail information by using Sales Order Entry (P4210).

All setup files for the JD Edwards EnterpriseOne Configurator system are stored on the local PC. You should download setup files to the local PC whenever significant changes have been made.

The diagram illustrates the store-and-forward process for configured items:
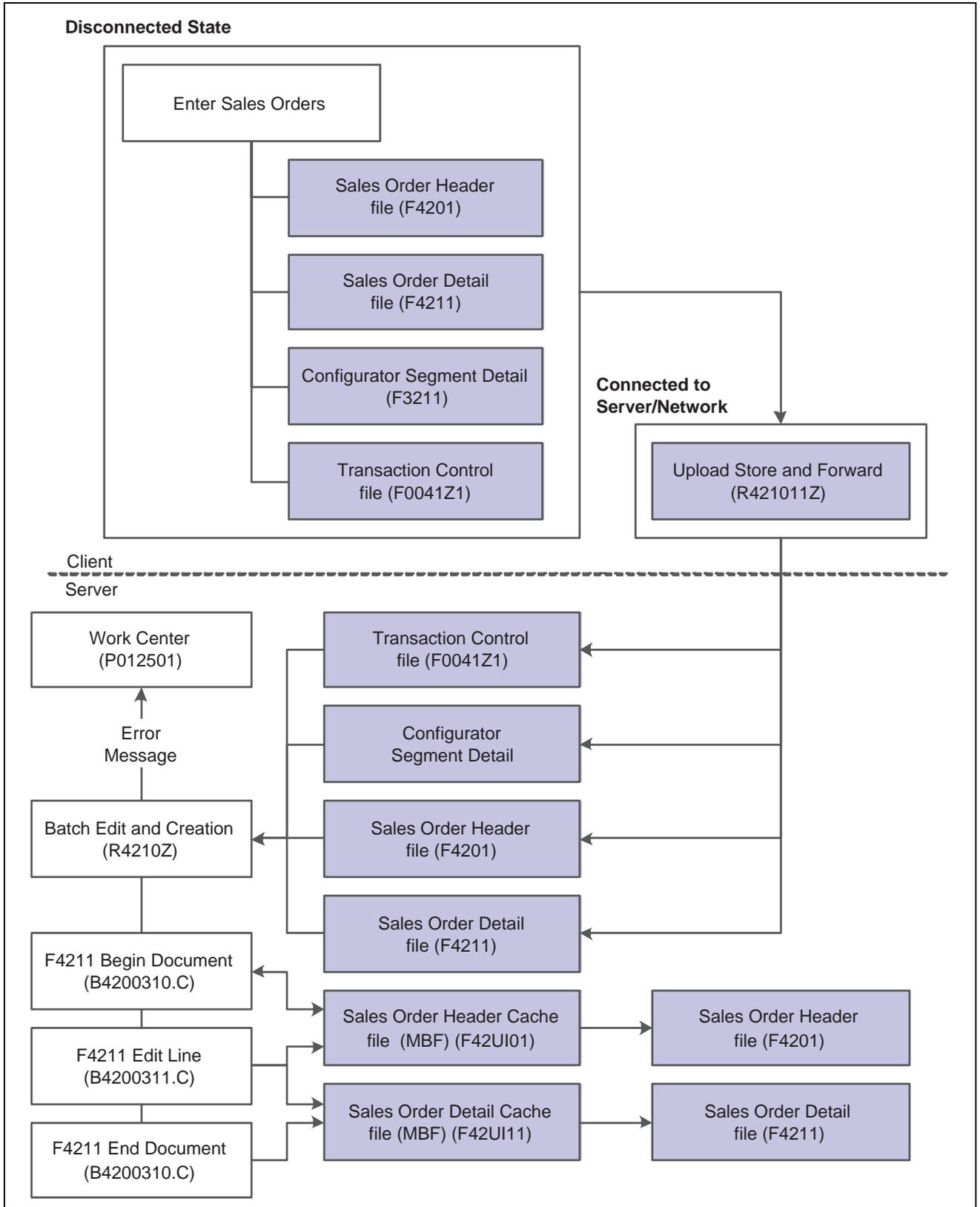
Store-and-forward process for configured items

Creating Orders That Use Store-and-Forward Processing

After you download the master tables to the PC, you can create standard sales orders by using the store and forward environment. You store the sales orders on the PC until you are ready to upload, or forward, them to the server for processing.

When you create sales orders that you store and forward, the system:

- Edits and validates each sales order, based on the information that you downloaded from the tables.

- Creates a transaction control record for each sales order, assigns it a status of *1* (ready to process), and stores it in the Transaction Control File table (F0041Z1).

- Creates a version of sales order entry and sets processing options.

When you run the Upload Store and Forward program (R421011Z), the system checks the history fields for duplicate sales order numbers. If the batch order number is a duplicate, the system assigns a new number to the sales order and references the duplicate order number in the Original Order Number field in the Sales Order Header File (F4201) and Sales Order Detail File (F4211) tables.

Configured Item Sales Order Server Upload

After creating sales orders, you must upload them to the server for processing. To do so, you must connect to the server, sign on to the normal production environment, and submit the job locally.

Note. To maximize system performance, upload the sales orders during off-peak hours.

When you upload sales orders, the system performs these tasks:

1. Creates records in the F4201 and the F4211 table on the server.

2. Updates the transaction control status of each sales order to *5* (uploaded) on the PC.

   After a sales order is updated to this status, you cannot modify it on the PC; you can modify it only on the server.

3. If a sales order on the PC has a status of *1* (ready to process) or *2* (errors), you can make changes to it on the PC.

4. Creates a transaction control record for each sales order on the server and assigns it a status of *1* (ready to process).

5. For configured items, uploads the configured segment tables (F3201, F3211, F3215, and F3216).

After you upload the sales orders and process them, the system edits the transaction control status of the sales orders on the PC to match the status of the sales orders on the server.

Note. The Configurator Segment Detail table (F3211) is used on both the client and the server. When the server version of the configuration is created, a new number is used to avoid problems with the client.

Sales Order Batch Processing for Configured Items

After the system creates orders, you can either process the sales orders as they exist or reprocess the configured item using rules that are defined on the server. To process the sales orders, you must run the Batch Order Edit and Creation program (R4210Z). The system edits the information that you enter and creates all of the orders at one time. To ensure the integrity of the data, the system creates sales orders for batch orders only after the editing process is complete.

Any of the orders that contain errors remain in the batch receiver tables as unprocessed. You must correct this information, and then rerun the Batch Order Edit and Creation program.

When processing the sales orders that you uploaded, use the same program that you use to process batch-input sales orders.

For configured items, the system performs these tasks:

1. Accepts the configured item as entered or re-validates the configured item by retrieving segment values.

2. Retrieves segment order values from the Configured Item Segments table (F3291).

3. Processes cross-segment editing rules and assembly inclusion rules.

4. Stores information in the appropriate sales order and Configurator tables.

5. Supports availability checking for stocked configured items.

6. Reports errors, including:

   • Segment UDC values

   • Segment range

   • Required segments

   • Alphanumeric segment requirements

   • Cross-segment editing rules

   • Assembly inclusion rules

7. Creates a configured sales order for transactions with no errors.

You can upload prices from the PC or recalculate them with the Sales Order Batch Transaction Editor version of the Batch Order Edit and Creation program. If you upload prices, existing prices are overridden.

When you connect to the server, you can review errors and batch status codes for each transaction. These batch status codes identify where orders are in the process:

• 1 - The transaction is available for processing.

• 2 - The transaction contains errors.

• 3 - The system is processing the transactions.

• 4 - The upload transmission is active.

• 5 - The transaction is unavailable and waiting for server response.

• 6 - Complete. The transactions are updated to the sales order header and detail files on the server.

You should correct errors with the server version of the store-and-forward version of the Sales Order Entry program, and then rerun the Batch Order Edit and Creation program.

See *JD Edwards EnterpriseOne Sales Order Management 9.0 Implementation Guide*, "Processing Sales Orders".

Prerequisites

To create store-and-forward sales orders for configured items, you must:

• Verify that the system administrator downloads the necessary technical master tables before you complete the steps to store and forward sales orders.

• Have a server connection and sign on to the normal production environment, to download the master tables to the workstation.

• Select the appropriate environment when you sign in to the system.

- Set the processing options for the Configured Item Revisions program (P3210).

- Set the processing options for the store-and-forward version of the Sales Order Entry program (P4210) that will be used for configured items.

See *JD Edwards EnterpriseOne Sales Order Management 9.0 Implementation Guide*, "Entering Sales Orders," Processing Recurring Sales Orders.

Form Used to Create Sales Orders for Configured Items that Use Store-and-Forward Processing

Form Name	FormID	Navigation	Usage
Store And Forward Detail Revisions	W4210A	Daily Processing (G32), Store & Forward Orders Click the Add button on the Store And Forward Order Inquiry form.	Create sales orders for configured items that use store-and-forward processing.

Creating Sales Orders for Configured Items that Use Store-and-Forward Processing

Access the Store And Forward Detail Revisions form.

To create orders for configured items that you store and forward:

1. Complete these required fields with information about the customer:

   - Branch/Plant

   - Sold To

   - Ship To

   - Order Date

2. Complete these required fields with information about the configured item, and click OK:

   - Quantity Ordered

   - UoM (unit of measure)

   - Item Number

   Note. The Configurator Common Attribute form might appear before the Configure Item form, depending on the processing option setting.

3. Click the Validate Configuration button on the Configure Item form to accept the default values.

   Note. The Validate Configuration button will not be available if dynamic configuration entry is enabled.

4. Click Add to Order if you do not receive any errors.

   Note. You cannot complete the order until you correct all hard errors.

5. Perform either of these steps to finish creating the sales order:

- Submit the order for processing if the processing options are not set to automatically submit the order.
- Process the sales orders later by running the Batch Edit and Creation program (R4210Z).

> **Note.** Regardless of when you process the orders, the Batch Edit and Creation program edits the information and creates the sales orders. If no errors exist, the system adds information to the Sales Order Header (F4201) and the Sales Order Detail table (F4211).

Uploading Sales Orders for Configured Items to the Server

Select Daily Processing (G32), Upload Store and Forward Tran.

Use the Upload Store and Forward program (R421011Z) to upload the sales orders for configured items that you have created in batch to a specified target environment. The system creates a transmission upload report for all of the sales orders that you upload. Use this report to verify that the sales orders have been uploaded correctly.

Setting Processing Options for Sales Order Batch Trans. Editor (R4210Z)

Processing options enable you to specify the default processing for programs and reports.

Process

1. Enter '1' to perform Availability Check and Kit Balancing

Specify if the system should perform availability checking and kit balancing. Values are:

Blank: Do not perform availability checking and kit balancing.

1: Perform availability checking and kit balancing.

2. Enter '1' to override prices. Blank = use the Unit Price in F4106

Specify if the system should override prices. Values are:

Blank: Use the Unit Prices in the F4106 table.

1: Override prices.

Versions

1. Enter the Version ID of the Sales Order Entry

Specify the version of the Sales Order Entry program (P4210) that the system uses.

Configurator

Configured Item Inventory Split. Future use.

Reserved for future use.

Enter '1' to recreate configurator order, or blank to accept configurator order as is.

Specify how to process the order for a configured item. Values are:

Blank: Accept the configurator order as is.

1: Recreate the configurator order.

CHAPTER 7

Working with Configured Items

After you enter an order for a configured item, you can work on configured items in the business cycle along with other JD Edwards EnterpriseOne Manufacturing and JD Edwards EnterpriseOne Distribution systems from Oracle.

This chapter provides overviews of configuration IDs, configured items and manufacturing, configured items and distribution, and configured items and procurement, and discusses how to:

- Review configured item history.
- Review related orders for configured items.
- Perform an inventory search for configured items.

Understanding Configuration IDs

The configuration ID is an identifier that represents a unique configuration. It is generated from an encryption algorithm. Regardless of the number of segments or levels in the configured item, the system always converts the information into a 32-character digest. The digest is always a full 32 characters in length, consists of numbers and characters, and does not contain any blanks. You cannot determine the initial value from the digest; it has no significant meaning.

Configurator maintains its configuration and identifies it by using the configuration ID. The configuration ID, along with the system order number and the line number, create a unique identity in the JD Edwards EnterpriseOne Configurator system. A configuration ID is created for both parent and component configured items. The configuration ID is created and stored in JD Edwards EnterpriseOne Configurator tables, which are used by the JD Edwards EnterpriseOne Configurator system. Thus, you do not see or use the configuration ID.

Note. The line number is not used in the JD Edwards EnterpriseOne Engineer to Order (ETO) process because each configured item task in the JD Edwards EnterpriseOne ETO system has its own work order number, and only one configuration per work order can exist.

Understanding Configured Items and Manufacturing

This section discusses:

- Configured item planning.
- Work order processing for configured items.
- Costing and accounting for configured items.
- Work order modification for configured items.
- Configured item work order modification in ETO.

- Work-in-process revaluation for configured items.

- Hours and quantities on configured item work orders.

- Work order completions for configured items.

Configured Item Planning

Configured items present a unique challenge for planning since the final configuration is unknown until an order is entered and accepted.

A configured end item cannot be planned in a branch/plant or across multiple facilities because the end item product is not yet defined. Planning bills are used to plan and acquire parts for the features and options of configured items before orders are entered in the system.

Once an order is entered and the final configuration is known, the system can plan the nonconfigured components of the configured items.

Note. The configured item must be set up in each of the branch/plants where the configured item is to be planned and built. If the configured item is only set up in one branch/plant, then it must be manufactured in that branch/plant.

Once configured item setup is complete, all setup data can be copied to each branch/plant. However, the management of changes to the configured item setup must be addressed in the business processes because the data in each branch/plant must be maintained and synchronized.

A configured item itself cannot be planned across branch/plants, but the components to complete the configured item can be planned as supply from various branches.

During sales order entry, only some of the components can be written to the Sales Order Detail table (F4211). Thus, all components are written to the Configurator Component table (F3215). When a component does not generate a detail line for the sales order, the item is soft committed. Table F3215 records the soft commitment in the Commitment field (COMM). Before Order Processing (R31410) is run, the components that are not in the F4211 table are invisible to material requirements planning (MRP). Thus, another business function reads selected records from table F3215 and accumulates requirements that represent the demand of a configuration.

Once Order Processing is run, the configured item has a bill of material and routing. Items in the F3215 table are written to the Work Order Parts List table (F3111).

The quantity type, *CFD* in the Quantity Type UDC (user-defined code) table (34/QT), designates component demand from the F3215 table. Processing option settings in the planning programs determine Configurator component inclusion in the planning process.

Setup Considerations for Configured Item Planning

To successfully plan components of a configured item, you must set the processing options appropriately.

A Configurator processing option on the Mfg Mode tab in the MRP/MPS Requirements Planning (R3482) and the Master Planning Schedule - Multiple Plant program (R3483) enables you to determine whether the components of a configured item will be planned. To plan the components of a configured item, the processing option is set to *1* to include configuration components from the Configurator Component Table (F3215) and the Work Order Parts List (F3111) table as demand items. If you are not concerned with planning components of a configured item, set the processing option to blank, which saves processing time.

The MRP/MPS Requirements Planning and the Master Planning Schedule - Multiple Plant program use both the quantity type and the processing option to determine if components for a configured item should be included in planning.

Work Order Processing for Configured Items

After you create configured item work order headers through an order entry program such as Sales Order Entry (P4210) or Manufacturing Work Order Processing (P48013), you must run Order Processing (R31410) to:

- Generate the work order parts list by retrieving the parts in the F3215 table that were generated from the P and Q assembly inclusion rules during order entry.

  Note. The system retrieves the part numbers from the F3215 table and passes them back to the Parts List master business function (MBF). The R31410 does not process the P and Q assembly inclusion rules to generate the parts list.

- Generate the work order routing instructions by retrieving the routing steps from the F3212 table that were generated from the R assembly inclusion rules during order entry.

  Note. The system retrieves the routing steps from the F3212 table and passes them back to the Routings MBF. The R31410 does not process the R assembly inclusion rules to generate the routing instructions.

- Commit inventory.
- Back schedule configured routings.

  Note. Components are committed at sales order entry instead of only during order processing. The components will be committed to the sales order at order entry time and then will move to the parts list when you run the Order Processing program (R31410). Thus, you do not need to run Order Processing immediately to get commitments for components.

ETO Configured Item Work Order Processing

The creation of work orders for configured items in an ETO project is handled differently from the standard process.

The Process Project version of the Order Processing program (R31410) can be run from the Project Workbench over the entire project structure. This action processes all of the configured work orders residing in the structure from the lowest level to the root level.

You can also run order processing at a singular task level. A warning is issued to verify that all lower level configured work orders have been processed prior to processing the current level. Child tasks for the selected configured work order task must be processed before processing the current task.

Setup Considerations for Configured Item Work Order Processing

To correctly process work orders for the configured item, you must set the processing options for Order Processing (R31410) accordingly. You might want to create a separate version of Order Processing that is specifically for configured items.

On the Process tab, set the Generate Parts List and Routing Instructions field to create both the parts list and routing. This option must be used for configurator processing.

Set the Update Parts List and Routing Instructions field to update the existing parts list and routing instructions when changes are made to an order and order processing is run again.

On the Parts List tab, leave the Substitutions field blank. Substitutions are defined in the bill of material. Since configured items do not have a standard bill of material, no substitutions can exist.

When a configured item is entered on a sales order, the original line type of the components has an inventory interface and drives commitments. The commitments remain against the sales order until Order Processing is run.

The only commitment that remains on the sales order is for the parent configured item. This commitment remains to drive demand and fulfill the sales order.

On the Sales/Config tab, identify a status in the Next Status field. This value identifies the next status of component lines on a sales order for a configured item. It can be any valid status for the line type that was entered in the Line Type processing option field.

On the Sales/Config tab, set the Standard Cost Calculation field to calculate the standard cost for the configured item.

Typically, the standard cost for an item is calculated based on the manufacturing bill of material and manufacturing routing. However, configured items do not have a manufacturing bill of material or manufacturing routing. The bill of material and routing for a configured item can be defined once the final configuration is known, which is after order entry.

Order processing determines the standard cost of a configured item from the configured parts list and routing. The cost of the configured item includes the labor on the configured routing, material and components on the configured parts list, and outside operation information. The cost is stored in the Production Cost table (F3102), which is also called the Work Order Variance table. The program also updates standard costs on the associated sales order detail line.

The option to calculate the standard cost only if it was not already calculated provides flexibility when processing sales quotes or changing a sales order. This processing option setting enables you to keep the original cost or recalculate it.

The Printing 1 Tab processing options define how the work order parts list prints.

The Printing 2 Tab processing options define how the routing instructions print on the work order.

On the Printing 2 tab, identify a value in the Sales Order Text Lines field. If you set the processing option to print work orders, the Sales Order Text Lines processing option setting specifies whether the system prints sales order text lines on the work order. The text lines print in the remarks area of the work order.

Configured items always print the sales order generic text on the work order, regardless of how this option is set.

The Configurator Generic Text processing option enables you to print the generic text from the order onto the work order.

Data Sequencing

Data sequencing is important when generating the work orders for configured items. Data sequencing must be set in descending order, which creates the configured work orders in the proper order: from the bottom up. This process ensures that the generated work orders have accurate standard costs and accurate back-scheduled dates.

During order entry, the system generates the associated work order headers for configured items with a work order line type. The actual work order number is assigned from the top level down, as illustrated by this table:

Order Number	Item Number	Item Description	Work Order Number
3726	6000	Forklift	67890

Order Number	Item Number	Item Description	Work Order Number
3726	6100	Boom	67891
3726	6200	Fork	67892

During order entry, a requested date is entered for the configured item. The system uses the requested date on the order and lead-time information from the Leadtime Level field on the Additional System Information form in the Item Master (P4101) to back-schedule the work order headers that are generated during order entry.

When you run the Order Processing program, the work order headers are used to generate the work orders; no update to the work order header exists. Order processing back-schedules the start and end dates of each routing operation on the work orders, based on the dates in the work order headers. Thus, Order Processing calculates lead times for multilevel configured items. However, Leadtime Rollup does not support configured items.

You can generate work orders without setting the data sequencing to descending order, and the work orders are then created correctly with the associated parts lists and routing. However, standard costing and back scheduling of the routing operations are not generated correctly.

Costing and Accounting for Configured Items

Costing for configured items is different from costing for non-configured items. After you enter an order for a configured item, you use programs in the JD Edwards EnterpriseOne Shop Floor Management system to work with product costing and manufacturing accounting for configured items.

Note. You must also be aware of how configured item orders entered in the JD Edwards EnterpriseOne Sales Order Management and JD Edwards EnterpriseOne Procurement systems are costed.

See *JD Edwards EnterpriseOne Product Costing and Manufacturing Accounting 9.0 Implementation Guide*, "Working with Product Costing".

Configured Item Product Costing

Costing for configured items is different from costing for non-configured items because configured items do not have a standard bill of material or routing. Because no standard configuration exists, costing cannot be established before you enter an order. The discrete standard cost roll-up concept does not apply to a configured item, so the Cost Simulation – Build Temp program (R30812) is never executed and no frozen standard costs exist in the Item Cost Component Add-Ons table (F30026).

However, standard costs for purchased parts and manufactured parts that are used by configured items must be established and frozen (07 Cost Method) in the Item Cost File table (F4105) to be factored into the calculated costs for configured item work orders.

The Order Processing (R31410) program performs a cost rollup when it attaches a parts list and routing to a work order for a configured item. A processing option instructs the program to calculate the costs. The costs are stored in the Column 1 - Frozen Standard field in the Production Cost table (F3102), not table F30026.

The costs are the accumulation of the standard costs for the components, the labor and overhead values that are defined in manufacturing constants, the attached routing and work center information, and work order values.

For a configured item, the A1 material cost is calculated from the total cost of its direct components. The components are defined by the P and Q assembly inclusion rules.

B1 direct labor cost is calculated from the item's routing, which is defined by the R assembly inclusion rule.

Cost defined by the X assembly inclusion rules affects only the sales order and not the work order. Thus, associated X assembly inclusion rule costs are not shown in table F3102.

Note. If you use cost method 02 (Weighted Average) or cost method 09 (Actual, Manufacturing), processes and configured items are not supported. The content in this topic does not apply.

After Order Processing establishes the standard costs for the configured items, journal entries for configured items are created in the same way as for nonconfigured items.

Sales quotes for configured items are an exception to the standard costing rule for configured items. The standard cost for a configured item on a sales quote is calculated without running Order Processing if the Cost Sales Quote functionality is selected in Configurator Constants (P3209).

This table indicates the source of cost generation in table F3102 for configured items:

Costing Method	Standard	Current	Planned	Actual	Completed	Scrapped	Unaccounted Completed	Unaccounted Scrapped
Standard Costing	R31410	Not used	R31802A	R31802A	R31802A	R31802A	Not used	Not used

Configured Item Manufacturing Accounting

Manufacturing accounting for configured items occurs when you complete a work order using the Work Order Completions program (P31114).

The work orders for configured items must be completed from the lowest level configured item to the top level configured item. This order is the same as completing the highest work order number down to the lowest. For example, the work orders for the forklift are completed in this order:

• Item 6200, fork

• Item 6100, boom

• Item 6000, forklift

Completing the work order consists of issuing material, reporting labor, and then reporting the completion of the item that the work order represents. The cost of the work order is created, and the item can be issued to the next level. Thus, completing the configured item work orders in the correct order ensures that the associated costs are created and carried over to the next level work order.

At completions, the configured item is completed to a unique location and lot number. The configuration ID is associated with the item and work order number by the system. When the configured item is completed, the system updates the Item Cost table (F4105) at the item, branch/plant, location, and lot level. The system uses the configuration-specific standard costs in the Production Cost table (F3102) for related manufacturing accounting transactions.

The Item Ledger table (F4111) is then created with the correct cost from the F4105 table.

Note. As you manufacture configured items, no engineering variance exists because the configured item has no standard bill of material or routing.

ETO Configured Item Costing

JD Edwards EnterpriseOne ETO requires the best estimate of cost for a configured item. When you have defined the item configuration in the Configured Item Revisions program (P3210) and all child configured work orders have been created, Estimated Cost is updated in the Project Workbench program (P31P001) for the root configured work order and all its child configured work orders. The estimated cost update is applicable both during the generation of child configured work orders via definition of the configuration or during changes to an existing configuration.

To obtain the best estimate of cost, the Q and R assembly inclusion rules are processed for ETO. This process is the same as the process for costing Sales Quotes.

The Configured Item Revisions program also returns a cost value. This value is placed in the Total Estimated Cost field for the task.

Since cost records are not written to the Production Cost table (F3102) at the time of creation of ETO configured work orders, the Estimated Cost fields in the work order header records and Project Workbench are blank. Therefore, the costs of the configured item and its children are not included in project costs until the Order Processing (R31410) program is run.

When you run the Order Processing program either for a single configured work order or over an entire ETO project, the Planned Production Costs should be rolled back into the Project Workbench for the configured work orders.

When shop floor activities are performed against the configured work orders and actual production costs are recorded, the Rollup of Actual Costs to Workbench program (R31P301) should accurately update the actual costs on the project workbench.

You are able to roll up estimated, planned, and actual Costs from the F3102 table and update the project workbench information.

Important! Whenever a new root configured work order is added to the Project Workbench structure, Estimated Costs are not updated.

When the quote is accepted, the estimated costs for all configured work orders are locked down, and the total estimated costs are copied to the total budgeted costs.

This table indicates the source of cost generation in the F3102 table for configured items in ETO:

Costing Method	Standard	Current	Total Planned	Total Actual	Quantity Completed	Scrapped	Unaccounted Completed	Unaccounted Scrapped
Standard Costing	P48013	P48013	Not used	R31410/ R31802A	R31802A	R31802A	R31802A	Not used

Configured Item Sales Order Costing

The P assembly inclusion rules define components that appear as sales order detail lines on the order. The cost of each component that appears as a sales order detail line is displayed as retrieved from the Item Cost table (F4105).

The JD Edwards EnterpriseOne Configurator system retrieves the cost of all components and the X assembly inclusion rules, and rolls them up to arrive at the sales order cost of the parent configured item. Once these costs have been established, the system updates the unit cost and extended cost on the sales order for the top-level configured item only.

When you run the Order Processing (R31410) program, the F3102 records for P, Q, and R assembly inclusion rules are calculated and written back to the sales order. These rules, in combination with X rules that have been defined to roll up to the parent, make up the cost of the parent configured item.

Cost that is defined by the X assembly inclusion rules affects only the sales order, not the work order. Thus, associated X assembly inclusion rule costs are not shown in table F3102.

Configured Item Purchase Order Costing

Purchase Orders (P4310) uses the Supplier Price/Catalog table (F41061) and the Item Cost table (F4105) to determine purchase order cost. The Purchase Orders program searches the F41061 table first and then searches the F4105 table to find a cost for the item. The Purchase Order Cost Method (PCSM) in the Cost Revisions program (P4105) is used to retrieve the cost from the F4105 table.

The Configurator Costing Method field in the Item Master program (P4101) is used to cost configured items on purchase orders.

When creating a purchase order for a configured item using Configurator costing methods 1, 2, or 4, the system searches the F41061 and the F4105 table to find the component costs or the cost of the parent if using method 2.

Next, for Configurator costing methods 1 and 2, any necessary X assembly inclusion rules are added.

Finally, any purchase order advanced price adjustment that exists is calculated, according to the Configurator costing method, to arrive at the final purchase order cost.

For Configurator costing method 4, as in the sales order Kit/Configurator Pricing Method 4, advanced pricing adjustments are applied to the components before the X assembly inclusion rules are added.

For the purchase order for the component of a configured item, the purchase cost is calculated when R31410 is run; then, that cost is added to the F3102 table. During purchase order receipts, the system creates the cost when the item is committed to the work order. This functionality is based on the actual cost associated with the purchase order at the time of receipt.

Differences in Costing of Orders

Given the differences in cost calculation between sales orders and purchase orders, these costs are probably different. The cost on a purchase order is different from the cost displayed on the sales order detail line. This situation is especially true in a standard cost (Cost Method 07) manufacturing environment where standard cost is calculated and frozen with a number of variables accounted for beyond the cost of the item from the supplier.

Note. The Configurator Costing Method field in the Item Master (P4101) is used by the purchase order system only, and not by the sales order system for detail line cost calculation.

Complications in costing can arise from other variables, such as currency and unit of measure conversions, edits, overrides, or other system variables that can affect sales order and purchase order costs.

Configured Item Direct Ship Order Costing

For direct ship orders of configured items or configured components, the cost is driven by the purchase order and written back to the sales order detail line. In this case, a combination of both the Configurator costing method in the Item Master program (P4101) and the cost method in the Cost Revisions program (P4105) are used as the basis for calculating the cost. The Configurator costing method determines how to roll up the cost, after which the cost is either the standard or non-standard cost.

The only exception to this situation occurs when you use standard costing (cost method 07) for sales order entry, which is common in a manufacturing accounting environment. In this case, the purchase order detail line does not write to the sales order. The sales order rolls up costs as it would in a non-direct ship order.

Configured Item Transfer Order Costing

Transfer orders derive the sales order detail cost from the shipping branch/plant. The transfer purchase order cost is equal to the unit price (not cost) of the related sales order.

For the parent of a configured item transfer order, the sales order cost is equal to the rolled-up cost of the components from the shipping branch/plant; and the related purchase order cost is equal to the unit price of the transfer sales order detail line.

For both configured and non-configured transferred components, the sales order cost on the original sales order is driven by the unit price of the related transfer order. The Cost or Base Price Markup processing option for the Sales Order Entry program (P4210) determines how this is calculated. A value of Blank in this field means that the sales order cost is equal to the rolled-up cost of the shipping branch/plant.

A value of *1* calculates the rolled-up cost of the shipping branch/plant, multiplies that by the mark-up percentage found in the Branch Relationships Master table (F3403), and writes the resulting cost to the sales order detail line.

A value of *2* calculates the base price from the shipping branch/plant, using the price roll-up method, and returns that value to the sales order detail cost.

Again, in all cases, the cost on the transfer purchase order is equal to the unit price of the transfer sales order.

Configured Item Interbranch Order Costing

Interbranch sales order detail lines derive costs from the Cost or Base Price Markup processing option for the Sales Order Entry program (P4210). This situation is similar to the costing process for transfer orders.

The cost is equal to either the cost from the shipping branch/plant, the cost from the shipping branch/plant multiplied by a markup percentage, or the price from the shipping branch/plant.

When the interbranch purchase order is created, the cost is equal to the cost that was calculated for the original sales order.

Work Order Modification for Configured Items

A configured work order can be modified only by the program that created the work order. When changing a configured work order, you have the option of launching the Configured Item Revisions program (P3210) to modify its configuration and the configuration of all its child work orders.

You can modify the configuration of an existing configured work order by launching the Configured Item Revisions program only when the work order is at the top level in the configuration.

Any changes to a configured work order or its configuration affects all of its child work orders. Thus, order quantity, dates, and parent work order number of the child work orders change. Changing the configuration can also result in the creation of additional work orders or existing work orders being excluded from the configuration.

Note. This functionality relates to work orders that are created in the Sales Order Entry (P4210) and the Manufacturing Work Order Processing program (P48013). This functionality does not apply to work orders that are created for a project in the JD Edwards EnterpriseOne ETO system.

After you modify an existing configured work order, you can run the Order Processing program again to reattach the parts list and routing to a configured item.

The status fields on the Sales/Configured tab of the processing options for the Manufacturing Work Order Processing program are used to define the work order cutoff status. The values in these fields are used to modify the status of work orders that are generated from sales orders and configured work orders that are created from the Manufacturing Work Order Processing program.

For work orders that are generated from sales orders, the cutoff status determines when the changes to the sales order do not affect the work order. That is, if the work order is already at that status or higher and you change the sales order, then the work order status changes but the parts list and routing are not affected.

Net Change Logic for Configured Work Orders

When a configured work order or its configuration is changed, net change logic should not be executed for any work order in the configuration. Changes in the configuration can result in work orders being removed and new ones being added to the configuration. This situation might make the parts list and routings that are attached to existing work orders invalid. Therefore, automatically changing quantities on existing parts lists and hours in existing routings is invalid. They need to be reattached by running the Order Processing program against all of the work orders in the configuration.

Configured Item Work Order Modification Without Excluding or Adding a Work Order

The two ways to change the configuration of an existing configured work order without excluding any work order or adding new work orders are:

• Change the order quantity, dates, or unit of measure on any of the work orders in the configuration; and launch the Configured Item Revisions program (P3210).

  Validate the configuration without making any changes, and then click OK.

• Set up the assembly inclusion rules for a configured item to change the order quantity and dates of lower-level work orders when a segment answer is changed.

  You can launch the Configured Item Revisions program for any existing work order in the configuration and change the segment answers to satisfy the assembly inclusion rule.

In both of these cases, order quantities and dates of all of the lower-level work orders should be recalculated correctly if the work orders are less than the cutoff status. All work orders that were less than the cutoff status are moved to the Changed status (before cutoff).

If the status of a work order being changed is greater than or equal to the cutoff status, the status is moved to the Changed status (after cutoff). Order quantity, dates, and unit of measure of such work orders should not be changed.

Parts list quantities and routing hours for items that do not have a work order must be recalculated when the Order Processing program (R31410) is run against all of the work orders in the configuration.

Configured Item Work Order Modification to Remove a Work Order

You can review the configuration of an existing configured work order in the Configured Item Revisions program and change the configuration to remove an item from the configuration.

If the item has a work order that is associated with it, then the work order and all its children work orders (if any) should be moved to the Canceled status if the existing status of the work order is less than the cutoff status. If the existing status of the work order is greater than or equal to the cutoff status, then the work order should not be moved to a Canceled status.

The status of work orders that were retained in the configuration should be moved to the Changed status (before cutoff) if the existing status is less than the cutoff status. If the status of the work orders being retained is greater than or equal to the cutoff status, then the status should be moved to the Changed status (after cutoff).

If the status of a lower level configured work order is greater than the Cutoff Status, then it is not canceled when it is removed from the configuration. However, its parent work order could have been moved to a Canceled status. If the Work Order Completions program (P31114) is run against the lower-level work order, then the corresponding parts list line in its parent work order's parts list is split, updated, or both, with completions quantity, lot, and location. The parts list quantity in the updated line is hard-committed to the completions lot and location. You are responsible for relieving these commitments.

If a configured work order is moved to the Canceled Status because it is removed from the configuration, the parent work order field should not be blanked out to prevent inaccurate processing.

If the item does not have a work order that is associated with it, then it should be excluded from the configuration and the parts list of its parent work order when the Order Processing program (R31410) is run against all of the work orders in the configuration.

Configured Item Work Order Modification to Add a Work Order

You can review the configuration of an existing configured work order in the Configured Item Revisions program and change the configuration to add an item into the configuration. If you add an item to the configuration, then certain functionality must happen, depending on the stocking type of the item.

If the item is a configured item, then it should be added to the configuration tree. If the configured item has a work order line type, then work orders must be created for it and any of its children that have a work order line type in the assembly inclusion rules.

If the item is a non-configured item with a work order line type in the assembly inclusion rules then a work order must be created for the non-configured item.

The dates of all the newly added and existing work orders must be recalculated correctly.

All newly created work orders must be at the Beginning status. All existing work orders in the configuration that have a status which is less than the cutoff status must be moved to the Changed status (before cutoff). All existing work orders in the configuration that have a status greater than or equal to the cutoff status must be moved to the Changed status (after cutoff).

If the item does not have a work order line type, then it should be added to the parts list of its parent item's work order when Order Processing (R31410) is run against all of the work orders in the configuration.

Configured Item Work Order Modification to Costing

Modifying existing configured work orders should not automatically change any costs that are reported against any work order in the configuration. Columns for standard costs and units in the Production Cost table (F3102) are populated when Order Processing (R31410) is run. The columns for current costs and units in the F3102 table are not populated for configured work orders.

If the configuration is changed before the Order Processing program is run for any work order in the configuration, no changes in costs need to take place because no costs exist.

If a configured work order is changed after the Order Processing program was run against any or all work orders in its configuration, the Order Processing program needs to be run again to recalculate the parts list, routings, and F3102 costs that are associated with the new parts list and routings.

Note. This process eliminates the planned variance for the work order.

Configured Item Work Order Modification in ETO

You can add configured work orders as tasks on a project in the JD Edwards EnterpriseOne ETO system. After the orders are added, you can modify or delete the entire configuration from which the orders were originated.

Configured work orders in an ETO project are modified in the Project Workbench program (P31P001). Work orders can be changed for configured items that are created in an ETO project both before and after the work order records are committed.

Note. You cannot make any changes to an ETO project configured work order directly through the Manufacturing Work Order Processing program (P48013).

Before allowing any modifications, the Project Workbench program verifies that none of the configured work orders has any activity reported against it. In addition, if you want to delete an entire configuration, the program must verify that the configured tasks do not have any existing dependencies.

When you access the Configured Item Revisions program from the Project Workbench program to make any changes, you are issued a warning if task dependencies exist for either the root configured work order or any of its child work orders.

Note. If you override the warning and make changes to the configuration resulting in the removal of an existing configured work order from the structure, you are responsible to manually remove any task dependencies to avoid any problems with scheduling.

Any changes to dates, such as planned start and planned end dates, and to the unit of measure launch the Configured Item Revisions program. For the root configured work order, the Project Workbench program launches the Configured Item Revisions program in change mode, enabling you to modify the configuration.

Before the work order records are committed from the Project Workbench program or the Configured Item Revisions program, you have the ability to re-enter only the root configured work order in Project Workbench to access and revise configured items.

After the work order records are committed from the Project Workbench program or the Configured Item Revisions program, you can re-enter only the root configured work order in the Project Workbench program to access and revise item specifications. This action is only allowed if no shop floor activity has been reported against the root configured work order or any of its child orders. Thus, no material should have been issued to the configured work order's parts list; and no activity should have been reported against the configured work order.

When you change the configuration of an existing ETO configured work order, then the resulting changes to other items and work orders in the configuration are the same as when a configuration of a non-ETO configured work order is changed in a similar manner. Statuses that are used to change the statuses of work orders in the configuration are read from the processing options of Manufacturing Work Order Processing (P48013).

When the entire ETO project is back-scheduled, then the dates on all ETO configured work orders, if any, also change. The work orders are not moved to the Changed status as the work order project is not called to update the work orders with new dates. The Project Workbench program calls another process to update the project work order records with new dates.

If the status of a lower level non-ETO configured work order is greater than the cutoff status, then it is not canceled when it is removed from the configuration. However, its parent work order could have been moved to a Canceled status. If Work Order Completions (P31114) is run against the lower level work order, then the corresponding parts list line in its parent work order's parts list is split and updated with completions quantity, lot, and location. The parts list quantity in the updated line is hard-committed to the completions lot and location. You are responsible to relieve these commitments.

Net Change Logic for Configured Work Orders in ETO

When an ETO configured work order or its configuration is changed, Net Change logic should not be executed for any work order in the configuration. Changes in the configuration might result in work orders being removed and new ones being added to the configuration. This situation can make the parts list and routings that are attached to existing work orders invalid. Therefore, automatically changing quantities on existing parts lists and hours in existing routings is invalid. They need to be reattached by running the Order Processing program (R31410) against all of the work orders in the configuration.

However, when changes to dates are made to configured work orders in the Project Workbench program, Net Change processing is performed if the functionality is enabled.

Work Order Modification for Configured Items in ETO to Remove a Work Order

Either before or after committing the work order records to the database from the Project Workbench program (P31P001), you can delete only the root configured work order.

When you select an ETO configured work order in the Project Workbench grid and cancel it by selecting Cancel Task from the Row menu, then only that work order is moved to the Canceled status, regardless of its level in the configuration and its existing status. In this case, the Canceled status is read from the processing options of the Project Workbench program.

If a work order with financial commitments, project-specific inventory commitments, or any other activity reported against it is removed from the configuration, it is not canceled if its status is greater than the cutoff status. However, its parent work order could have been moved to a Canceled status. In such a scenario, the work order with activity reported against it is orphaned. You are responsible for relieving the financial and project-specific inventory commitments created for the orphaned work order.

Deleting the root configured work order deletes all of the child configured work orders and configurator data that exists in system 32 tables.

The existing configuration is not deleted from the JD Edwards EnterpriseOne system 32 tables but kept as reference material.

However, reference to the work orders is removed from the Configurator Master table (F3201), the Work Order Master table (F4801), and the Work Order Master Tag table (F4801T).

The corresponding project number in the canceled work order header records is not erased.

Costing Modified Work Orders for Configured Items in ETO

Once the configuration for a root configured item has been defined in the Configured Item Revisions program and all child configured work orders have been created, the estimated costs should be updated in the Project Workbench program (P31P001) for all root and child configured work orders. This update is applicable during the generation of child configured work orders via definition of the configuration and during the changing of an existing configuration.

Important! When a new root configured work order is added to the Workbench structure, Estimated Costs should not be updated.

Changes to the Configuration Once an ETO Project Quote is Accepted

If you decide to make changes to the configuration or to add a new set of configured work orders, you must consider the way that JD Edwards EnterpriseOne ETO works if it interacts with the JD Edwards EnterpriseOne Job Cost system from Oracle, and the implications of this interface.

Changes made to the configuration that result in the addition of a new configured work order in the same structure are not a problem since the new task does not have an original budget. The functionality works this way if any manufacturing work order is added after the quote is accepted.

If changes to the configuration result in the deletion of a configured work order from the existing structure, then the original budget amount might require modification. Budgets that are associated with the work order which was deleted might exist, and these budgets might already have been uploaded to JD Edwards EnterpriseOne Job Cost. Nothing happens automatically in the system because tight integration between JD Edwards EnterpriseOne ETO and JD Edwards EnterpriseOne Job Cost does not exist. No system checks are in place to verify whether you manually added cost code and cost type to the project structure in JD Edwards EnterpriseOne Job Cost and also manually added budgets.

Thus, you can unlock the project, and delete account and budget information that was manually added to ensure the accuracy of the budget amounts.

Work-In-Process Revaluation for Configured Items

Work-in-process (WIP) revaluation can be performed for configured items.

In the standard costing process, WIP revaluation includes both material and labor cost changes.

In the actual costing process, WIP revaluation includes only material cost changes.

Hours and Quantities on Configured Item Work Orders

As production continues on the work order for a configured item, you must record the hours spent on production and the number of items completed in that time. This procedure enables you to monitor progress and costs, and compare them to the standard hours and quantities that you estimated for the job.

After you enter hours and quantities, either manually through the Work Order Time Entry program (P311221) or through payroll time entry, you can review and revise them before you post them to the JD Edwards EnterpriseOne Manufacturing systems from Oracle for further tracking and cost accounting.

You can review the quantities that are entered against the operations scheduled for the work order for a configured item, including the actual quantity ordered, completed, and scrapped for each operation. You can also view the standard and variance values, along with the status code, which can be updated for the operation.

Work Order Completions for Configured Items

The Work Order Completions program (P31114) uses the information that is entered in the JD Edwards EnterpriseOne Shop Floor Management system to create general ledger journal entries. JD Edwards EnterpriseOne Shop Floor Management creates no interactive journal entries. Instead, it processes all journal entries in batch.

For configured items, the system updates new locations with standard costs from the Production Cost table (F3102) so that transactions in the JD Edwards EnterpriseOne Distribution system from Oracle use the correct costs. For configured items, a unique lot number and location must be entered at completions. The Work Order Completions program hard-commits the associated sales order, and updates the lot and location information for the sales order.

The parts list of a parent configured work order contains a split, update, or both, when a completion is entered for a lower-level configured work order. The child work order number is written to the parts line of the parent work order. This record is written in the Work Order Parts List table (F3111).

Setup Considerations for Configured Item Work Order Completions

To successfully complete a work order for a configured item, you must set the processing options for Work Order Completions (P31114) based on the business processes.

Since configured items must be lot-controlled, the Lot Process Type field on Item Master (P4101) is set appropriately to create a lot number that is based on the business process. Configured items must also be stocked in a specific location.

Processing options for the Work Order Completions program determine whether the lot number and location are entered either manually at completion or automatically by the system. On the Sales Orders tab of the processing options, set the Work Order Lot and Location Defaults field accordingly.

Note. You must clear the Location Control option on the Branch/Plant Constants.

Set the Sales Order Lot and Location field accordingly to update the sales order with the lot and location information when the work order is completed.

Understanding Configured Items and Distribution

After you have entered a sales order and completed work orders for a configured item, use programs in the JD Edwards EnterpriseOne Distribution system to complete the sales order processing cycle.

This section discusses:

- Configured item inventory.
- Configured item availability.
- Pick lists.
- Shipments.
- Invoices.

Configured Item Inventory

The JD Edwards EnterpriseOne Configurator system enables you to stock configured items. For stocked configured items, you can use programs within the JD Edwards EnterpriseOne Distribution system to:

• Review configuration-specific costing information.

• Determine availability of configured end-items.

  You can search for segments or an exact configuration match.

• Select a stocked configured item during Sales Order Entry (P4210).

  The system hard-commits the item, does not generate a work order, and uses costs in the Item Branch File table (F4102).

• Perform inventory transactions, such as:

  - Simple issues

  - Transfers

  - Adjustments

The JD Edwards EnterpriseOne Inventory Management system does not support reclassifications of configured items.

You can adjust quantities for configured items in a specific location. The JD Edwards EnterpriseOne Configurator system supports adjustments for locations with existing inventory and adjustments from zero quantity, as long as the configuration-specific history is defined in the system.

Configured Item Availability

Use the Summary Availability, Detailed Availability, and Customer Service Inquiry forms to review configured item information.

You can use the Summary Availability form in the Item Availability program (P41202) to review inventory locations that contain stock for a configured item. Review information, such as on-hand, committed, and available quantities for each location that is in the detail area.

You can use the Detailed Availability form in the Item Availability program to review the status of configured items in a specific location. Review information in the detail area, such as on-hand quantity of a configured item and related commitments for that quantity.

You can use the Customer Service Inquiry form in the Sales Order Entry program (P4210) to:

• Locate current sales order information in the Sales Order Detail table (F4211) and the Sales Order History table (F42119) tables.

• Provide information at the sales order, customer, and item levels.

• Change associated text for the sales order line.

Configured Item Availability During Sales Order Entry

To check availability during sales order entry, you must select the Check Availability option in the Configurator Constants program (P3209). If the system finds the exact item and configuration ID during sales order entry, all of the locations that contain the specific configuration appear. You can review segment values for all levels of the configured item and select an item to use on the sales order. Once an item is selected, sales order entry commits that configured item to the sales order with the Line Type that is defined in the Configurator constants. The system does not check the availability of components.

Note. The system does not perform automatic line splitting if the quantity ordered differs from the quantity selected.

Pick Lists

After you generate sales and work orders for configured items, use the Print Pick Slips program (R42520) to print pick lists. Pick lists include this information:

• Order quantities picked and moved to the staging or shipping area of the warehouse.

• Price by line item and for the order as a whole, which is useful for COD (cash on delivery) deliveries.

• Driver signature line.

• Customer signature line.

Shipments

The JD Edwards EnterpriseOne Configurator system supports shipments of configured items. However, you cannot backorder a configured item.

Use the Shipment Confirmation program (P4205) to:

• Locate existing order information.

• Add additional line items (non-inventory items only).

• Change the shipped, backordered, and canceled quantities.

• Specify a container ID, carrier code, and shipment date for each line item.

• Override the ship to address.

• Ship from other or multiple locations.

• Adjust inventory (on-hand or hard-commits).

• Confirm shipment.

• Record serial numbers for shipped items.

• Review the Freight/Additional Charges Revisions program.

Partial Shipments of Configured Items

The system enables you to ship part of an order quantity for configured items so that you can:

• Ship configured items as they are completed.

• Reduce inventory handling costs.

• Receive payments for shipped quantities of the order.

Sales orders for configured items can often have large order quantities, including parts and subassemblies. Typically, as configured items (and their components) are completed, they remain in inventory until the entire order is complete. However, by shipping partial quantities of configured items as they are completed, you can effectively manage inventory and reduce handling costs, and you can periodically bill for the quantity completed instead of waiting for the entire order to be completed.

Note. The back-order feature is not available when shipping partial quantities of a configured item.

Partial Order Quantity Shipment of a Configured Item

When a customer orders a quantity of configured items, you can ship less than the total order quantity as you manufacture the items. For example, a customer might order a large quantity of personal computers. As you complete the computers, you can make multiple shipments of the personal computers until you complete the original order.

This table illustrates a typical sequence of events that you can follow to ship a partial quantity of a configured item:

Program	Steps
Sales Order Entry (P4210)	You enter a sales order for a configured item. The system creates related work orders when the order line type is W (work order).
Order Processing (R31410)	You run the Order Processing program. The system attaches parts lists and routings for all related work orders.
Work Order Inventory Issues (P31113)	You issue parts for the work orders that are associated with a configured item, beginning at the lowest level work order. If the configured item consists of nested configured items, such as the forklift (item 6000) in the pristine data, the system uses this sequence: • Issue and then complete the work order for the fork (item 6200). • Issue and then complete the work order for the boom assembly (item 6100). • Issue and then complete the work order for the forklift (item 6000).
Work Order Completions (P31114)	The inventory is created in this step. For an order of configured items that is not shipped until the entire order quantity is completed, a scenario like the one illustrated with the forklift is typical. For a partial shipment, Work Order Completions is the first opportunity to split the sales order. When partially completing a work order for a configured item, the related sales order lines are also split through work order completions. For example, if the original quantity on the sales order for a configured item is ten, but only six are complete, the related sales order line is split into two lines with the partial quantity that is complete (ready for shipment) on one line and the rest of the quantity that is not yet complete on another line. For each order quantity of a configured item that you complete, you must assign a lot and location. When you ship partial quantities, you can assign each partial quantity of the original order to a different lot and location. Splitting the sales order from Work Order Completions does not prevent you from further splitting the sales order from Ship Confirm.

Program	Steps
Print Pick Slips (R42520)	You run the Print Pick Slips program for the appropriate work orders. The system prints a pick list for warehouse workers to use when they pull the order.
Shipment Confirmation (P4205)	Continuing the partial completion scenario (six of ten items are completed), you might select to ship all six of the completed items; or you might select to ship only some of them. If you ship all six, the sales order displays two sets of lines for the configured item. One line is for the six items that are completed. The completed items have the original line number and a new status (next status). The completed items are also hard-committed to the lot number that was assigned to them on Work Order Completions. The other line is for the four items that are not yet completed. These items remain at the same status but have a new line number. When the sales order line is split, the new line number is the highest whole line number for the sales order, in increments of 1.00. The items do not have a lot number assigned to them. If you select the first line and ship the entire quantity (six) of completed items on that line, then that line is finished. You have completed a partial shipment.

If you ship only some of the six completed items, you can use Shipment Confirmation to designate, by lot or location, which items you shipped. Just as you use Work Order Completions to designate which items are complete, you can use Shipment Confirmation to designate which of the completed items have been shipped to the customer. The sales order displays three sets of lines for the configured item:

• One line for the items that are completed and shipped

• One line for items that are completed but not shipped

• One line for the items that are not complete

You can continue to split the shipment as many times as necessary to meet business needs.

After the sales order detail line is split, the work order line in the Work Order Master File (F4801) table is updated with the new sales order line number. This action is taken so that the work order always points to the sales order with incomplete quantity.

When you ship a partial quantity of a configured item, the system maintains the relationships of the configured item's components to the parent. The components become text line types and are included in the parent configured item. These text lines do not appear on Shipment Confirmation. Miscellaneous line types, such as freight charges, also do not appear on Ship Confirm. |

Partial Order Quantity Shipment of Components

In addition to shipping a partial quantity of completed configured items, you can also ship partial quantities of components. You can ship partial quantities of only those components for which the parent does not generate a work order to complete (a stock line type).

For example, a customer might order a large number of personal computers that include a monitor, CPU with preloaded software, keyboard, mouse, and cabling. To begin the transition from the old to the new personal computers, the customer might request that you ship the CPUs and the software before you ship the rest of the components so that the customer can install the software and set up the CPUs before actually assembling the personal computer.

In this scenario, you can ship all or a part of the CPUs and software (components) separately from the personal computers (parent configured items). You can override the quantity to be shipped for the CPUs and software, and disassociate them from the parent configured item. The CPU becomes a new parent, and the software remains a child of the CPU; but both are disassociated from the personal computers. You must manage, track, and ship any remaining quantities of the CPUs and software separately from the personal computers until you have shipped the entire order quantity on the original sales order.

Invoices

Use the Print Invoices (R42565) program to print sales order invoices. You can print invoices in proof mode, review them, and then print the final invoices and update the files. You can also print invoices in draft mode to review the invoice before updating it. In addition, you can print an invoice from history.

Understanding Configured Items and Procurement

After you enter a purchase order for a configured item, you use programs in the JD Edwards EnterpriseOne Procurement system to complete the purchase order processing cycle.

Purchase Order Receipt Entry for Configured Items

When you receive goods, you verify that the details of the receipt correspond to the information on the purchase order. You use the PO Receipts program (P4312) to receive goods and enter information such as location, quantity, and cost into the system.

When a configured item is received, a unique configuration ID is associated with it. This ID must match the one on the Item Location table (F41021) when the item is put into inventory. If a new location is created, the configuration ID must be recorded on it.

You use the P4312 program to receive a purchase order generated for the parent configured item as well as for the component of a configured item. The purchase order receipt process enables you to perform receipts such as partial, split among different locations, reverse, and cancel. You can enter receipts either by item or by purchase order.

When you receive the purchase order for the component of a configured item, the system:

1. Retrieves related order information from the JD Edwards EnterpriseOne Configurator system.

2. Validates the order status information on the sales order or work order.

   The system fetches the sales order status from the F4211 table and the work order status from the F4801 table.

3. Processes the purchase order receipt related commitment in the JD Edwards EnterpriseOne Procurement system, processes the inventory receipt, checks inventory in the JD Edwards EnterpriseOne Inventory Management system, and updates commitments in the JD Edwards EnterpriseOne Inventory Management system.

   The system updates the F3201, F4311, F4211, F3111, and F43121 tables with the receipt information.

4. Updates the inventory location commitment on the work order parts list and related orders (either the work order or sales order).

   The related orders are updated when the material is available-on-hand if the Update Related Orders processing option on the Configurator tab of the P4312 program is set accordingly.

If the related configured order is a sales order, you have the option to commit the received inventory to the detail lines on the originating sales order. The system hard commits the detail lines to the inventory location of the purchase order receipt.

If a component on a work order parts list generates a purchase order, the system updates the transaction quantity, unit of measure, location, and lot serial number on the parts list. You can also issue the component to the work order during the purchase order receipt process. If the Process Work Order Inventory Issues processing option on the Configurator tab of the P4312 program is set to *1* the system auto issues the item to the parts list using the version of the Work Order Inventory Issues program (P31113) specified in the Version of Work Order Inventory Issues processing option on the P4312 program.

Note. When R31410 is run, the parts list attaches to the work order based on the commitment control processing setting in the Manufacturing Constants (P3009). Thus, material in inventory may be committed to the parts list. During purchase order receipt processing, the system overrides the commitment in the parts list and commits the item on the purchase order receipt to the parts list.

While attaching the parts list, the system also overrides the pay on consumption value by setting the Issue and Receipt field to *0* at the parts list level.

If the commitments cannot be updated, the system displays a warning message indicating that the originating order cannot be updated. However, the item receipt to inventory is processed normally.

You set the Work Order Cutoff Status and Sales Order Cutoff Status processing options on the Configurator tab of the P4312 program so that once the orders reach a set status, purchase order receipts do not update the work order or sales order.

If you receive a quantity of items that is in excess of the quantity on the purchase order, then all excess (over receipt) is sent to inventory.

The system supports the pegging of purchase orders for the components of a configured item to detail lines on the originating sales order or parts list line on the originating work order.

Note. Since all inventory for ETO projects is project-specific and must be manufactured or purchased specifically for the project, the purchase order receipts functionality for a purchase order for the component of a configured item does not apply to projects in the JD Edwards EnterpriseOne ETO system.

Important! The extensive functionality and flexibility in the software leads to complexity when designing solutions around transactions. Transaction processing management is an important consideration during system setup and the definition of business processes.

For purchase order receipts for components of a configured item, the system supports basic receipt transactions as well as other more complex scenarios. Performing transactions outside of these scenarios, although possible, may not synchronize with the business processes in the JD Edwards EnterpriseOne system and manual intervention is required.

It is strongly recommended that you work within the scenarios defined for this functionality.

The following diagrams illustrate the receipt transactions for components of a configured item:

**Full Quantity Receipt
to one location**

Purchase
Order
12345

Receive Full Qty to
location 1.A.1

Parts List *Update
Parts list line*

Find Parts List line by using WO #,
Related Order keyset

Update location on parts list line
to 1.A.1

If Auto Issue is turned on, issue
material from 1.A.1

**Full Quantity Receipt
to multiple locations**

Purchase
Order
12345

Receive 5 EA to location
1.A.1
Receive 10
EA to location 1.B.1

Parts List *Split
and Update
Parts list line*

Find Parts List line by using WO #,
Related Order keyset

Split parts list line into two lines
Qty Ordered 5 EA Location 1.A.1
Qty Ordered 10 EA Location 1.B.1
If Auto Issue is turned on,
issue both lines

**Partial Quantity Receipt
to Single location**

Purchase
Order
12345

Receive 5 EA to
location 1.A.1

Parts List *Split
and Update
Parts list line*

Find Parts List line by using WO #,
Related Order keyset

Split parts list line into two lines
Qty Ordered 5 EA Location 1.A.1
Qty Ordered 10 EA Location primary
If Auto Issue is turned on, issue
material from 1.A.1

**Partial Quantity Receipt
to Multiple locations**

Purchase
Order
12345

Receive 5 EA to location
1.A.1
Receive 7
EA to location 1.B.1

Parts List *Split
and Update
Parts list line*

Find Parts List line by using WO #,
Related Order keyset
Split parts list line into three lines
Qty Ordered 5 EA Location 1.A.1
Qty Ordered 7 EA Location 1.B.1
Qty Ordered 3 EA Location primary
If Auto Issue is turned on, issue
material from 1.A.1

**Over Receipt to
Single Location**

Purchase
Order
12345

Receive 20 EA to
location 1.A.1

Parts List *Update
Parts list line*

Find Parts List line by using WO #,
Related Order keyset
Update Parts List line
with Location 1.A.1
(Qty Ordered remains at 15 EA)

If Auto Issue is turned on, issue
material from 1.A.1

Receipt transactions for components of a configured item (1 of 2)

Receipt transactions for components of a configured item (2 of 2)

See .

See .

See *JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide*, "Using Receipt Processing," Entering Receipts.

Prerequisites

To enter purchase order receipts for a component of a configured item, you must:

• Verify that the Write Attached Detail Line field in the assembly inclusion rules for the component is set to *1* so that the system updates the related sales order line of the component.

• Set the processing options on the Configurator tab of the PO Receipts program (P4312).

***

Note. Verify that the work order and sales order statuses are at the correct level. You set the Work Order Cutoff Status and Sales Order Cutoff Status processing options on the Configurator tab of the P4312 program.

For work orders, verify that the Header Status Code processing option on the Defaults tab of the R31410 program is set appropriately to work in conjunction with the Work Order Cutoff Status processing option on the Configurator tab of the P4312 program.

***

• Set the processing options for the Work Order Inventory Issues program (P31113).

JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide, "Using Receipt Processing," Setting Processing Options for PO Receipts (P4312)

JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide, "Working with Issues, Material Movement, and Kanbans," Setting Processing Options for the Work Order Inventory Issues Program (P31113)

Reviewing Configured Item History

This section provides an overview of configured item history and discusses how to review configured item history.

Understanding Configured Item History

You can review the configured item history to locate previously ordered configurations at any level of a configured item. The history includes information about customers, orders, order types, and branch/plant.

You retrieve past orders according to values that you enter in the header of Configured String History program (P3296). The order information that appears is retrieved from the Configurator Master table (F3201) and the Configurator Component table (F3215). From the Configured String History program, you can access the Work with Segment Values program (P32983) to view configuration tree and segment answers for a particular order that are stored in the Configurator Segment Detail table (F3211).

You can review this history by customer and item to analyze sales and generate custom reports and inquiries.

You can also view the configuration history during order entry, where you can select what to enter on the current order from previously ordered configured items.

Forms Used to Review Configured Item History

Form Name	FormID	Navigation	Usage
Work with Configured String History	W3296D	Daily Processing (G32), Configured Item History Use the header fields to define the selection, and click the Find button.	Review orders for a specific item configuration.
View Configuration	W32983B	Select a row and then select Display Config from the Row menu.	Review the configuration tree and segment answers for a specific order.

Reviewing Configured Item History

Access the Work with Configured String History form.

Reviewing Related Orders for Configured Items

This section provides an overview of the Related Configured Orders program and discusses how to review related orders for configured items.

Understanding the Related Configured Orders Program

The Related Configured Orders program (P3201) displays all of the orders that are related to a particular configuration. Related configured orders can be accessed through the Configured Item Revisions program or the inquiry form in an order entry program, such as Sales Order Entry (P4210), Purchase Orders (P4310), or Manufacturing Work Order Processing (P48013).

Related Configured Orders enables you to display the configuration tree and segment values, and review attachments. You can also cancel or delete related work orders.

Form Used to Review Related Orders for Configured Items

Form Name	FormID	Navigation	Usage
Related Configured Orders	W3201A	Daily Processing (G32), Sales Order Entry Retrieve configured item orders on the Customer Service Inquiry form, select a row, and then select Order and Confg Related Order from the Row menu. Alternatively, retrieve configured item orders on the Customer Service Inquiry form, select a row, and then click Select. On Sales Order Detail Revisions, select a row, and then select Confg Related Order from the Row menu.	Review information for the orders that are related to the configuration.

Reviewing Related Orders for Configured Items

Access the Related Configured Orders form.

Related Configured Orders form

Performing an Inventory Search for Configured Items

This section provides an overview of inventory search for configured items and discusses how to perform an inventory search for configured items.

Understanding Inventory Search for Configured Items

The JD Edwards EnterpriseOne Configurator system enables you to search for configured item inventory. You can search by configured item to display the configuration, and review segment information, location, lot/serial numbers, branch/plant, and availability.

Note. In the JD Edwards EnterpriseOne ETO system, the inventory search functionality is disabled because it does not apply to ETO. All of the inventory for ETO is considered project-specific and must be acquired for the project.

Form Used to Perform an Inventory Search for Configured Items

Form Name	FormID	Navigation	Usage
Configured Item Segment Search	W32202C	Daily Processing (G32), Configured Item Inventory Search	Perform an inventory search for configured items.

Performing an Inventory Search for Configured Items

Access the Configured Item Segment Search form.

To perform an inventory search for configured items:

1. Enter a value in the Configured Item field and click Find.

2. Review segment information for the configured item:

   • Description

   • Answer

   • Seg (segment)

   • Item Number

   • Branch

3. Select a segment row and then select Segment Value from the Row menu.

4. Review the values for the selected segment. If applicable, select a different value and click Select on Work With Segment Value Selection.

5. Select Search All on the Configured Item Segment Search form.

6. Review these fields on the Select Configured Items - Sales Order Processing form:

   • Location

   • Lot/Serial

   • Brn/Plt

   • Available

   Note. On the Select Configured Items - Sales Order Processing form, use the Location Search option on the Form menu to search for configured items in specific branch/plants and locations. You can also select a row and use the Display Config option on the Row menu to review the configuration for the item.

   ---

7. Click Select or Close to return to the Configured Item Segment Search form.

8. Use the Clear All Values option on the Form menu to set the values in the Answer field to an asterisk (*).

9. Click OK or Cancel when you have completed searching inventory for the configured item.

APPENDIX A

Tables Used by JD Edwards EnterpriseOne Configurator

This appendix provides a list of the tables that are used by JD Edwards EnterpriseOne Configurator.

Tables Used by JD Edwards EnterpriseOne Configurator

This table lists the tables used by JD Edwards EnterpriseOne Configurator in alphanumeric order:

Table	Description
Configurator Master (F3201)	Stores the history for the configured items of all the configurations ordered. Information stored includes configuration ID number, order number, order type, line number, and component ID number. This includes the document numbers for the parent order and all related orders for the configuration.
Configurator Master History (F32019)	Stores the history for the F3201 table. **Note.** Currently, this purge table is not being populated.
Configurator Constants (F3209)	Stores constants that you define to control Configurator processing at the branch/plant level.
Configurator Segment Detail (F3211)	Stores segment information such as configuration ID number, component ID number, segment number, segment value, parent item number, and configuration string ID.
Configurator Segment Detail History (F32119)	Stores the history for the Configurator Segment Detail table (F3211) **Note.** This purge table is not currently being populated.
Configurator Routings (F3212)	Stores configured routing information.
Configurator Component (F3215)	Stores component information such as configuration ID number, component ID number, parent component ID number, item number, branch, location, and lot number.
Configurator Component History (F32159)	Stores history for the F3215 table. **Note.** This purge table is not currently being populated.

Table	Description
Configurator Price/Cost (F3216)	Stores price and cost information such as configuration ID number, component ID number, line type, price roll-up, price, and cost.
Configurator Price/Cost History (F32169)	Stores history for the F3216 table. **Note.** This purge table is not currently being populated.
Rules Table Definition (F3281)	Stores table information such as description, table type, number of segments, and return values.
Configured Item/Rules Table Cross Reference (F3282)	Defines which segment values will be used as keys to refer to tables for each configured item.
Rules Table Value Definition (F32821)	Defines calculated segments that will be populated with the returned values.
Rules Table Detail (F3283)	Stores the actual table values (parts, prices, and so on) for each combination of segment key values that you define for the table.
Configured Item Information (F3290)	Stores settings that you define to control the printing of configured item information on order paperwork. Also stores the X rule based-on date codes for sales orders, purchase orders, and work orders and dynamic configuration entry setting.
Configured Item Segments (F3291)	Contains the segments for the configured items that are defined in the Item Master and Item Branch table.
Cross Segment Editing Rules (F3292)	Defines the relationships between the segments of configured items.
Cross Segment Editing Rules - Values (F32921)	Stores the *VALUES definitions for cross-segment editing rules and assembly inclusion rules.
Cross Segment Editing Rules - Range (F32922)	Stores the *RANGE definitions for cross-segment editing rules and assembly inclusion rules.
Assembly Inclusions Rules (F3293)	Stores the components, routings, calculations, and price adjustments for configured items. Also stores the supplier number related to purchased components of a configured item.
Item Master (F4101)	Stores basic information about each item in inventory, such as item numbers, description, category codes, and units of measure.
Item Branch (F4102)	Stores branch/plant information, such as quantities, branch-level category codes, and cost information for an item.
Item Location (F41021)	Stores primary and secondary locations for an item.

Table	Description
Item Cost File (F4105)	Stores inventory cost records.
Item Base Price (F4106)	Stores base price information for an item.
Sales Order Header (F4201)	Maintains information for a customer order, such as the billing instruction, address, and delivery.
Purchase Order Header (F4301)	Maintains information for a purchase order, such as supplier, payment terms for the order, delivery address, and date when the order is due.
Purchase Order Detail (F4311)	Defines the configured item and quantity of the purchase order. The column GBCFG (Generated by Configurator) has a flag that indicates that the purchase order has a related configured order.
Work Order Master (F4801)	Contains one record for each work order. This table stores information about a work order, such as the description, estimated hours, responsibility, and costing information. It also stores planned start and end dates.

Glossary of JD Edwards EnterpriseOne Terms

Accessor Methods/Assessors	Java methods to "get" and "set" the elements of a value object or other source file.
activity rule	The criteria by which an object progresses from one given point to the next in a flow.
add mode	A condition of a form that enables users to input data.
Advanced Planning Agent (APAg)	A JD Edwards EnterpriseOne tool that can be used to extract, transform, and load enterprise data. APAg supports access to data sources in the form of rational databases, flat file format, and other data or message encoding, such as XML.
alternate currency	A currency that is different from the domestic currency (when dealing with a domestic-only transaction) or the domestic and foreign currency of a transaction. In JD Edwards EnterpriseOne Financial Management, alternate currency processing enables you to enter receipts and payments in a currency other than the one in which they were issued.
Application Server	Software that provides the business logic for an application program in a distributed environment. The servers can be Oracle Application Server (OAS) or WebSphere Application Server (WAS).
as if processing	A process that enables you to view currency amounts as if they were entered in a currency different from the domestic and foreign currency of the transaction.
as of processing	A process that is run as of a specific point in time to summarize transactions up to that date. For example, you can run various JD Edwards EnterpriseOne reports as of a specific date to determine balances and amounts of accounts, units, and so on as of that date.
Auto Commit Transaction	A database connection through which all database operations are immediately written to the database.
back-to-back process	A process in JD Edwards EnterpriseOne Supply Management that contains the same keys that are used in another process.
batch processing	A process of transferring records from a third-party system to JD Edwards EnterpriseOne. In JD Edwards EnterpriseOne Financial Management, batch processing enables you to transfer invoices and vouchers that are entered in a system other than JD Edwards EnterpriseOne to JD Edwards EnterpriseOne Accounts Receivable and JD Edwards EnterpriseOne Accounts Payable, respectively. In addition, you can transfer address book information, including customer and supplier records, to JD Edwards EnterpriseOne.
batch server	A server that is designated for running batch processing requests. A batch server typically does not contain a database nor does it run interactive applications.
batch-of-one immediate	A transaction method that enables a client application to perform work on a client workstation, then submit the work all at once to a server application for further processing. As a batch process is running on the server, the client application can continue performing other tasks. See also direct connect and store-and-forward.
best practices	Non-mandatory guidelines that help the developer make better design decisions.

BPEL	Abbreviation for *Business Process Execution Language*, a standard web services orchestration language, which enables you to assemble discrete services into an end-to-end process flow.
BPEL PM	Abbreviation for *Business Process Execution Language Process Manager*, a comprehensive infrastructure for creating, deploying, and managing BPEL business processes.
Build Configuration File	Configurable settings in a text file that are used by a build program to generate ANT scripts. ANT is a software tool used for automating build processes. These scripts build published business services.
build engineer	An actor that is responsible for building, mastering, and packaging artifacts. Some build engineers are responsible for building application artifacts, and some are responsible for building foundation artifacts.
Build Program	A WIN32 executable that reads build configuration files and generates an ANT script for building published business services.
business analyst	An actor that determines if and why an EnterpriseOne business service needs to be developed.
business function	A named set of user-created, reusable business rules and logs that can be called through event rules. Business functions can run a transaction or a subset of a transaction (check inventory, issue work orders, and so on). Business functions also contain the application programming interfaces (APIs) that enable them to be called from a form, a database trigger, or a non-JD Edwards EnterpriseOne application. Business functions can be combined with other business functions, forms, event rules, and other components to make up an application. Business functions can be created through event rules or third-generation languages, such as C. Examples of business functions include Credit Check and Item Availability.
business function event rule	See named event rule (NER).
business service	EnterpriseOne business logic written in Java. A business service is a collection of one or more artifacts. Unless specified otherwise, a business service implies both a published business service and business service.
business service artifacts	Source files, descriptors, and so on that are managed for business service development and are needed for the business service build process.
business service class method	A method that accesses resources provided by the business service framework.
business service configuration files	Configuration files include, but are not limited to, interop.ini, JDBj.ini, and jdelog.properties.
business service cross reference	A key and value data pair used during orchestration. Collectively refers to both the code and the key cross reference in the WSG/XPI based system.
business service cross-reference utilities	Utility services installed in a BPEL/ESB environment that are used to access JD Edwards EnterpriseOne orchestration cross-reference data.
business service development environment	A framework needed by an integration developer to develop and manage business services.
business services development tool	Otherwise known as JDeveloper.
business service EnterpriseOne object	A collection of artifacts managed by EnterpriseOne LCM tools. Named and represented within EnterpriseOne LCM similarly to other EnterpriseOne objects like tables, views, forms, and so on.

business service framework	Parts of the business service foundation that are specifically for supporting business service development.
business service payload	An object that is passed between an enterprise server and a business services server. The business service payload contains the input to the business service when passed to the business services server. The business service payload contains the results from the business service when passed to the Enterprise Server. In the case of notifications, the return business service payload contains the acknowledgement.
business service property	Key value data pairs used to control the behavior or functionality of business services.
Business Service Property Admin Tool	An EnterpriseOne application for developers and administrators to manage business service property records.
business service property business service group	A classification for business service property at the business service level. This is generally a business service name. A business service level contains one or more business service property groups. Each business service property group may contain zero or more business service property records.
business service property categorization	A way to categorize business service properties. These properties are categorized by business service.
business service property key	A unique name that identifies the business service property globally in the system.
business service property utilities	A utility API used in business service development to access EnterpriseOne business service property data.
business service property value	A value for a business service property.
business service repository	A source management system, for example ClearCase, where business service artifacts and build files are stored. Or, a physical directory in network.
business services server	The physical machine where the business services are located. Business services are run on an application server instance.
business services source file or business service class	One type of business service artifact. A text file with the .java file type written to be compiled by a Java compiler.
business service value object template	The structural representation of a business service value object used in a C-business function.
Business Service Value Object Template Utility	A utility used to create a business service value object template from a business service value object.
business services server artifact	The object to be deployed to the business services server.
business view	A means for selecting specific columns from one or more JD Edwards EnterpriseOne application tables whose data is used in an application or report. A business view does not select specific rows, nor does it contain any actual data. It is strictly a view through which you can manipulate data.
central objects merge	A process that blends a customer's modifications to the objects in a current release with objects in a new release.
central server	A server that has been designated to contain the originally installed version of the software (central objects) for deployment to client computers. In a typical JD Edwards EnterpriseOne installation, the software is loaded on to one machine—the central server. Then, copies of the software are pushed out or downloaded to various workstations attached to it. That way, if the software is altered or corrupted through its use on workstations, an original set of objects (central objects) is always available on the central server.

charts	Tables of information in JD Edwards EnterpriseOne that appear on forms in the software.
check-in repository	A repository for developers to check in and check out business service artifacts. There are multiple check-in repositories. Each can be used for a different purpose (for example, development, production, testing, and so on).
connector	Component-based interoperability model that enables third-party applications and JD Edwards EnterpriseOne to share logic and data. The JD Edwards EnterpriseOne connector architecture includes Java and COM connectors.
contra/clearing account	A general ledger account in JD Edwards EnterpriseOne Financial Management that is used by the system to offset (balance) journal entries. For example, you can use a contra/clearing account to balance the entries created by allocations in JD Edwards EnterpriseOne Financial Management.
Control Table Workbench	An application that, during the Installation Workbench processing, runs the batch applications for the planned merges that update the data dictionary, user-defined codes, menus, and user override tables.
control tables merge	A process that blends a customer's modifications to the control tables with the data that accompanies a new release.
correlation data	The data used to tie HTTP responses with requests that consist of business service name and method.
cost assignment	The process in JD Edwards EnterpriseOne Advanced Cost Accounting of tracing or allocating resources to activities or cost objects.
cost component	In JD Edwards EnterpriseOne Manufacturing, an element of an item's cost (for example, material, labor, or overhead).
credentials	A valid set of JD Edwards EnterpriseOne username/password/environment/role, EnterpriseOne session, or EnterpriseOne token.
cross-reference utility services	Utility services installed in a BPEL/ESB environment that access EnterpriseOne cross-reference data.
cross segment edit	A logic statement that establishes the relationship between configured item segments. Cross segment edits are used to prevent ordering of configurations that cannot be produced.
currency restatement	The process of converting amounts from one currency into another currency, generally for reporting purposes. You can use the currency restatement process, for example, when many currencies must be restated into a single currency for consolidated reporting.
cXML	A protocol used to facilitate communication between business documents and procurement applications, and between e-commerce hubs and suppliers.
database credentials	A valid database username/password.
database server	A server in a local area network that maintains a database and performs searches for client computers.
Data Source Workbench	An application that, during the Installation Workbench process, copies all data sources that are defined in the installation plan from the Data Source Master and Table and Data Source Sizing tables in the Planner data source to the system-release number data source. It also updates the Data Source Plan detail record to reflect completion.
date pattern	A calendar that represents the beginning date for the fiscal year and the ending date for each period in that year in standard and 52-period accounting.

denominated-in currency	The company currency in which financial reports are based.
deployment artifacts	Artifacts that are needed for the deployment process, such as servers, ports, and such.
deployment server	A server that is used to install, maintain, and distribute software to one or more enterprise servers and client workstations.
detail information	Information that relates to individual lines in JD Edwards EnterpriseOne transactions (for example, voucher pay items and sales order detail lines).
direct connect	A transaction method in which a client application communicates interactively and directly with a server application. See also batch-of-one immediate and store-and-forward.
Do Not Translate (DNT)	A type of data source that must exist on the iSeries because of BLOB restrictions.
dual pricing	The process of providing prices for goods and services in two currencies.
duplicate published business services authorization records	Two published business services authorization records with the same user identification information and published business services identification information.
embedded application server instance	An OC4J instance started by and running wholly within JDeveloper.
edit code	A code that indicates how a specific value for a report or a form should appear or be formatted. The default edit codes that pertain to reporting require particular attention because they account for a substantial amount of information.
edit mode	A condition of a form that enables users to change data.
edit rule	A method used for formatting and validating user entries against a predefined rule or set of rules.
Electronic Data Interchange (EDI)	An interoperability model that enables paperless computer-to-computer exchange of business transactions between JD Edwards EnterpriseOne and third-party systems. Companies that use EDI must have translator software to convert data from the EDI standard format to the formats of their computer systems.
embedded event rule	An event rule that is specific to a particular table or application. Examples include form-to-form calls, hiding a field based on a processing option value, and calling a business function. Contrast with the business function event rule.
Employee Work Center	A central location for sending and receiving all JD Edwards EnterpriseOne messages (system and user generated), regardless of the originating application or user. Each user has a mailbox that contains workflow and other messages, including Active Messages.
enterprise server	A server that contains the database and the logic for JD Edwards EnterpriseOne.
Enterprise Service Bus (ESB)	Middleware infrastructure products or technologies based on web services standards that enable a service-oriented architecture using an event-driven and XML-based messaging framework (the bus).
EnterpriseOne administrator	An actor responsible for the EnterpriseOne administration system.
EnterpriseOne credentials	A user ID, password, environment, and role used to validate a user of EnterpriseOne.
EnterpriseOne object	A reusable piece of code that is used to build applications. Object types include tables, forms, business functions, data dictionary items, batch processes, business views, event rules, versions, data structures, and media objects.

EnterpriseOne development client	Historically called "fat client," a collection of installed EnterpriseOne components required to develop EnterpriseOne artifacts, including the Microsoft Windows client and design tools.
EnterpriseOne extension	A JDeveloper component (plug-in) specific to EnterpriseOne. A JDeveloper wizard is a specific example of an extension.
EnterpriseOne process	A software process that enables JD Edwards EnterpriseOne clients and servers to handle processing requests and run transactions. A client runs one process, and servers can have multiple instances of a process. JD Edwards EnterpriseOne processes can also be dedicated to specific tasks (for example, workflow messages and data replication) to ensure that critical processes don't have to wait if the server is particularly busy.
EnterpriseOne resource	Any EnterpriseOne table, metadata, business function, dictionary information, or other information restricted to authorized users.
Environment Workbench	An application that, during the Installation Workbench process, copies the environment information and Object Configuration Manager tables for each environment from the Planner data source to the system-release number data source. It also updates the Environment Plan detail record to reflect completion.
escalation monitor	A batch process that monitors pending requests or activities and restarts or forwards them to the next step or user after they have been inactive for a specified amount of time.
event rule	A logic statement that instructs the system to perform one or more operations based on an activity that can occur in a specific application, such as entering a form or exiting a field.
explicit transaction	Transaction used by a business service developer to explicitly control the type (auto or manual) and the scope of transaction boundaries within a business service.
exposed method or value object	Published business service source files or parts of published business service source files that are part of the published interface. These are part of the contract with the customer.
facility	An entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. A facility is sometimes referred to as a "business unit."
fast path	A command prompt that enables the user to move quickly among menus and applications by using specific commands.
file server	A server that stores files to be accessed by other computers on the network. Unlike a disk server, which appears to the user as a remote disk drive, a file server is a sophisticated device that not only stores files, but also manages them and maintains order as network users request files and make changes to these files.
final mode	The report processing mode of a processing mode of a program that updates or creates data records.
foundation	A framework that must be accessible for execution of business services at runtime. This includes, but is not limited to, the Java Connector and JDBj.
FTP server	A server that responds to requests for files via file transfer protocol.
header information	Information at the beginning of a table or form. Header information is used to identify or provide control information for the group of records that follows.
HTTP Adapter	A generic set of services that are used to do the basic HTTP operations, such as GET, POST, PUT, DELETE, TRACE, HEAD, and OPTIONS with the provided URL.

instantiate	A Java term meaning "to create." When a class is instantiated, a new instance is created.
integration developer	The user of the system who develops, runs, and debugs the EnterpriseOne business services. The integration developer uses the EnterpriseOne business services to develop these components.
integration point (IP)	The business logic in previous implementations of EnterpriseOne that exposes a document level interface. This type of logic used to be called XBPs. In EnterpriseOne 8.11, IPs are implemented in Web Services Gateway powered by webMethods.
integration server	A server that facilitates interaction between diverse operating systems and applications across internal and external networked computer systems.
integrity test	A process used to supplement a company's internal balancing procedures by locating and reporting balancing problems and data inconsistencies.
interface table	See Z table.
internal method or value object	Business service source files or parts of business service source files that are not part of the published interface. These could be private or protected methods. These could be value objects not used in published methods.
interoperability model	A method for third-party systems to connect to or access JD Edwards EnterpriseOne.
in-your-face-error	In JD Edwards EnterpriseOne, a form-level property which, when enabled, causes the text of application errors to appear on the form.
IServer service	This internet server service resides on the web server and is used to speed up delivery of the Java class files from the database to the client.
jargon	An alternative data dictionary item description that JD Edwards EnterpriseOne appears based on the product code of the current object.
Java application server	A component-based server that resides in the middle-tier of a server-centric architecture. This server provides middleware services for security and state maintenance, along with data access and persistence.
JDBNET	A database driver that enables heterogeneous servers to access each other's data.
JDEBASE Database Middleware	A JD Edwards EnterpriseOne proprietary database middleware package that provides platform-independent APIs, along with client-to-server access.
JDECallObject	An API used by business functions to invoke other business functions.
jde.ini	A JD Edwards EnterpriseOne file (or member for iSeries) that provides the runtime settings required for JD Edwards EnterpriseOne initialization. Specific versions of the file or member must reside on every machine running JD Edwards EnterpriseOne. This includes workstations and servers.
JDEIPC	Communications programming tools used by server code to regulate access to the same data in multiprocess environments, communicate and coordinate between processes, and create new processes.
jde.log	The main diagnostic log file of JD Edwards EnterpriseOne. This file is always located in the root directory on the primary drive and contains status and error messages from the startup and operation of JD Edwards EnterpriseOne.
JDENET	A JD Edwards EnterpriseOne proprietary communications middleware package. This package is a peer-to-peer, message-based, socket-based, multiprocess communications middleware solution. It handles client-to-server and server-to-server communications for all JD Edwards EnterpriseOne supported platforms.
JDeveloper Project	An artifact that JDeveloper uses to categorize and compile source files.

JDeveloper Workspace	An artifact that JDeveloper uses to organize project files. It contains one or more project files.
JMS Queue	A Java Messaging service queue used for point-to-point messaging.
listener service	A listener that listens for XML messages over HTTP.
local repository	A developer's local development environment that is used to store business service artifacts.
local standalone BPEL/ESB server	A standalone BPEL/ESB server that is not installed within an application server.
Location Workbench	An application that, during the Installation Workbench process, copies all locations that are defined in the installation plan from the Location Master table in the Planner data source to the system data source.
logic server	A server in a distributed network that provides the business logic for an application program. In a typical configuration, pristine objects are replicated on to the logic server from the central server. The logic server, in conjunction with workstations, actually performs the processing required when JD Edwards EnterpriseOne software runs.
MailMerge Workbench	An application that merges Microsoft Word 6.0 (or higher) word-processing documents with JD Edwards EnterpriseOne records to automatically print business documents. You can use MailMerge Workbench to print documents, such as form letters about verification of employment.
Manual Commit transaction	A database connection where all database operations delay writing to the database until a call to commit is made.
master business function (MBF)	An interactive master file that serves as a central location for adding, changing, and updating information in a database. Master business functions pass information between data entry forms and the appropriate tables. These master functions provide a common set of functions that contain all of the necessary default and editing rules for related programs. MBFs contain logic that ensures the integrity of adding, updating, and deleting information from databases.
master table	See published table.
matching document	A document associated with an original document to complete or change a transaction. For example, in JD Edwards EnterpriseOne Financial Management, a receipt is the matching document of an invoice, and a payment is the matching document of a voucher.
media storage object	Files that use one of the following naming conventions that are not organized into table format: Gxxx, xxxGT, or GTxxx.
message center	A central location for sending and receiving all JD Edwards EnterpriseOne messages (system and user generated), regardless of the originating application or user.
messaging adapter	An interoperability model that enables third-party systems to connect to JD Edwards EnterpriseOne to exchange information through the use of messaging queues.
messaging server	A server that handles messages that are sent for use by other programs using a messaging API. Messaging servers typically employ a middleware program to perform their functions.
Middle-Tier BPEL/ESB Server	A BPEL/ESB server that is installed within an application server.
Monitoring Application	An EnterpriseOne tool provided for an administrator to get statistical information for various EnterpriseOne servers, reset statistics, and set notifications.

named event rule (NER)	Encapsulated, reusable business logic created using event rules, rather that C programming. NERs are also called business function event rules. NERs can be reused in multiple places by multiple programs. This modularity lends itself to streamlining, reusability of code, and less work.
nota fiscal	In Brazil, a legal document that must accompany all commercial transactions for tax purposes and that must contain information required by tax regulations.
nota fiscal factura	In Brazil, a nota fiscal with invoice information. See also *nota fiscal*.
Object Configuration Manager (OCM)	In JD Edwards EnterpriseOne, the object request broker and control center for the runtime environment. OCM keeps track of the runtime locations for business functions, data, and batch applications. When one of these objects is called, OCM directs access to it using defaults and overrides for a given environment and user.
Object Librarian	A repository of all versions, applications, and business functions reusable in building applications. Object Librarian provides check-out and check-in capabilities for developers, and it controls the creation, modification, and use of JD Edwards EnterpriseOne objects. Object Librarian supports multiple environments (such as production and development) and enables objects to be easily moved from one environment to another.
Object Librarian merge	A process that blends any modifications to the Object Librarian in a previous release into the Object Librarian in a new release.
Open Data Access (ODA)	An interoperability model that enables you to use SQL statements to extract JD Edwards EnterpriseOne data for summarization and report generation.
Output Stream Access (OSA)	An interoperability model that enables you to set up an interface for JD Edwards EnterpriseOne to pass data to another software package, such as Microsoft Excel, for processing.
package	JD Edwards EnterpriseOne objects are installed to workstations in packages from the deployment server. A package can be compared to a bill of material or kit that indicates the necessary objects for that workstation and where on the deployment server the installation program can find them. It is point-in-time snapshot of the central objects on the deployment server.
package build	A software application that facilitates the deployment of software changes and new applications to existing users. Additionally, in JD Edwards EnterpriseOne, a package build can be a compiled version of the software. When you upgrade your version of the ERP software, for example, you are said to take a package build. Consider the following context: "Also, do not transfer business functions into the production path code until you are ready to deploy, because a global build of business functions done during a package build will automatically include the new functions." The process of creating a package build is often referred to, as it is in this example, simply as "a package build."
package location	The directory structure location for the package and its set of replicated objects. This is usually \\deployment server\release\path_code\package\package name. The subdirectories under this path are where the replicated objects for the package are placed. This is also referred to as where the package is built or stored.
Package Workbench	An application that, during the Installation Workbench process, transfers the package information tables from the Planner data source to the system-release number data source. It also updates the Package Plan detail record to reflect completion.
Pathcode Directory	The specific portion of the file system on the EnterpriseOne development client where EnterpriseOne development artifacts are stored.

patterns	General repeatable solutions to a commonly occurring problem in software design. For business service development, the focus is on the object relationships and interactions. For orchestrations, the focus is on the integration patterns (for example, synchronous and asynchronous request/response, publish, notify, and receive/reply).
planning family	A means of grouping end items whose similarity of design and manufacture facilitates being planned in aggregate.
preference profile	The ability to define default values for specified fields for a user-defined hierarchy of items, item groups, customers, and customer groups.
print server	The interface between a printer and a network that enables network clients to connect to the printer and send their print jobs to it. A print server can be a computer, separate hardware device, or even hardware that resides inside of the printer itself.
pristine environment	A JD Edwards EnterpriseOne environment used to test unaltered objects with JD Edwards EnterpriseOne demonstration data or for training classes. You must have this environment so that you can compare pristine objects that you modify.
processing option	A data structure that enables users to supply parameters that regulate the running of a batch program or report. For example, you can use processing options to specify default values for certain fields, to determine how information appears or is printed, to specify date ranges, to supply runtime values that regulate program execution, and so on.
production environment	A JD Edwards EnterpriseOne environment in which users operate EnterpriseOne software.
production-grade file server	A file server that has been quality assurance tested and commercialized and that is usually provided in conjunction with user support services.
Production Published Business Services Web Service	Published business services web service deployed to a production application server.
program temporary fix (PTF)	A representation of changes to JD Edwards EnterpriseOne software that your organization receives on magnetic tapes or disks.
project	In JD Edwards EnterpriseOne, a virtual container for objects being developed in Object Management Workbench.
promotion path	The designated path for advancing objects or projects in a workflow. The following is the normal promotion cycle (path): 11>21>26>28>38>01 In this path, *11* equals new project pending review, *21* equals programming, *26* equals QA test/review, *28* equals QA test/review complete, *38* equals in production, *01* equals complete. During the normal project promotion cycle, developers check objects out of and into the development path code and then promote them to the prototype path code. The objects are then moved to the productions path code before declaring them complete.
proxy server	A server that acts as a barrier between a workstation and the internet so that the enterprise can ensure security, administrative control, and caching service.
published business service	EnterpriseOne service level logic and interface. A classification of a published business service indicating the intention to be exposed to external (non-EnterpriseOne) systems.
published business service identification information	Information about a published business service used to determine relevant authorization records. Published business services + method name, published business services, or *ALL.

published business service web service	Published business services components packaged as J2EE Web Service (namely, a J2EE EAR file that contains business service classes, business service foundation, configuration files, and web service artifacts).
published table	Also called a master table, this is the central copy to be replicated to other machines. Residing on the publisher machine, the F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.
publisher	The server that is responsible for the published table. The F98DRPUB table identifies all of the published tables and their associated publishers in the enterprise.
pull replication	One of the JD Edwards EnterpriseOne methods for replicating data to individual workstations. Such machines are set up as pull subscribers using JD Edwards EnterpriseOne data replication tools. The only time that pull subscribers are notified of changes, updates, and deletions is when they request such information. The request is in the form of a message that is sent, usually at startup, from the pull subscriber to the server machine that stores the F98DRPCN table.
QBE	An abbreviation for *query by example*. In JD Edwards EnterpriseOne, the QBE line is the top line on a detail area that is used for filtering data.
real-time event	A message triggered from EnterpriseOne application logic that is intended for external systems to consume.
refresh	A function used to modify JD Edwards EnterpriseOne software, or subset of it, such as a table or business data, so that it functions at a new release or cumulative update level, such as B73.2 or B73.2.1.
replication server	A server that is responsible for replicating central objects to client machines.
Rt-Addressing	Unique data identifying a browser session that initiates the business services call request host/port user session.
rules	Mandatory guidelines that are not enforced by tooling, but must be followed in order to accomplish the desired results and to meet specified standards.
quote order	In JD Edwards Procurement and Subcontract Management, a request from a supplier for item and price information from which you can create a purchase order.

In JD Edwards Sales Order Management, item and price information for a customer who has not yet committed to a sales order. |
secure by default	A security model that assumes that a user does not have permission to execute an object unless there is a specific record indicating such permissions.
Secure Socket Layer (SSL)	A security protocol that provides communication privacy. SSL enables client and server applications to communicate in a way that is designed to prevent eavesdropping, tampering, and message forgery.
SEI implementation	A Java class that implements the methods that declare in a Service Endpoint Interface (SEI).
selection	Found on JD Edwards EnterpriseOne menus, a selection represents functions that you can access from a menu. To make a selection, type the associated number in the Selection field and press Enter.
serialize	The process of converting an object or data into a format for storage or transmission across a network connection link with the ability to reconstruct the original data or objects when needed.
Server Workbench	An application that, during the Installation Workbench process, copies the server configuration files from the Planner data source to the system-release number

data source. The application also updates the Server Plan detail record to reflect completion.

Service Endpoint Interface (SEI)
A Java interface that declares the methods that a client can invoke on the service.

SOA
Abbreviation for *Service Oriented Architecture*.

softcoding
A coding technique that enables an administrator to manipulate site-specific variables that affect the execution of a given process.

source repository
A repository for HTTP adapter and listener service development environment artifacts.

spot rate
An exchange rate entered at the transaction level. This rate overrides the exchange rate that is set up between two currencies.

Specification merge
A merge that comprises three merges: Object Librarian merge, Versions List merge, and Central Objects merge. The merges blend customer modifications with data that accompanies a new release.

specification
A complete description of a JD Edwards EnterpriseOne object. Each object has its own specification, or name, which is used to build applications.

Specification Table Merge Workbench
An application that, during the Installation Workbench process, runs the batch applications that update the specification tables.

SSL Certificate
A special message signed by a certificate authority that contains the name of a user and that user's public key in such a way that anyone can "verify" that the message was signed by no one other than the certification authority and thereby develop trust in the user's public key.

store-and-forward
The mode of processing that enables users who are disconnected from a server to enter transactions and then later connect to the server to upload those transactions.

subscriber table
Table F98DRSUB, which is stored on the publisher server with the F98DRPUB table and identifies all of the subscriber machines for each published table.

superclass
An inheritance concept of the Java language where a class is an instance of something, but is also more specific. "Tree" might be the superclass of "Oak" and "Elm," for example.

supplemental data
Any type of information that is not maintained in a master file. Supplemental data is usually additional information about employees, applicants, requisitions, and jobs (such as an employee's job skills, degrees, or foreign languages spoken). You can track virtually any type of information that your organization needs.

For example, in addition to the data in the standard master tables (the Address Book Master, Customer Master, and Supplier Master tables), you can maintain other kinds of data in separate, generic databases. These generic databases enable a standard approach to entering and maintaining supplemental data across JD Edwards EnterpriseOne systems.

table access management (TAM)
The JD Edwards EnterpriseOne component that handles the storage and retrieval of use-defined data. TAM stores information, such as data dictionary definitions; application and report specifications; event rules; table definitions; business function input parameters and library information; and data structure definitions for running applications, reports, and business functions.

Table Conversion Workbench
An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables.

table conversion	An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables.
table event rules	Logic that is attached to database triggers that runs whenever the action specified by the trigger occurs against the table. Although JD Edwards EnterpriseOne enables event rules to be attached to application events, this functionality is application specific. Table event rules provide embedded logic at the table level.
terminal server	A server that enables terminals, microcomputers, and other devices to connect to a network or host computer or to devices attached to that particular computer.
three-tier processing	The task of entering, reviewing and approving, and posting batches of transactions in JD Edwards EnterpriseOne.
three-way voucher match	In JD Edwards Procurement and Subcontract Management, the process of comparing receipt information to supplier's invoices to create vouchers. In a three-way match, you use the receipt records to create vouchers.
transaction processing (TP) monitor	A monitor that controls data transfer between local and remote terminals and the applications that originated them. TP monitors also protect data integrity in the distributed environment and may include programs that validate data and format terminal screens.
transaction processing method	A method related to the management of a manual commit transaction boundary (for example, start, commit, rollback, and cancel).
transaction set	An electronic business transaction (electronic data interchange standard document) made up of segments.
trigger	One of several events specific to data dictionary items. You can attach logic to a data dictionary item that the system processes automatically when the event occurs.
triggering event	A specific workflow event that requires special action or has defined consequences or resulting actions.
two-way authentication	An authentication mechanism in which both client and server authenticate themselves by providing the SSL certificates to each other.
two-way voucher match	In JD Edwards Procurement and Subcontract Management, the process of comparing purchase order detail lines to the suppliers' invoices to create vouchers. You do not record receipt information.
user identification information	User ID, role, or *public.
User Overrides merge	Adds new user override records into a customer's user override table.
value object	A specific type of source file that holds input or output data, much like a data structure passes data. Value objects can be exposed (used in a published business service) or internal, and input or output. They are comprised of simple and complex elements and accessories to those elements.
variance	In JD Edwards Capital Asset Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.
	In JD Edwards EnterpriseOne Project Costing and JD Edwards EnterpriseOne Manufacturing, the difference between two methods of costing the same item (for example, the difference between the frozen standard cost and the current cost is an engineering variance). Frozen standard costs come from the Cost Components table, and the current costs are calculated using the current bill of material, routing, and overhead rates.

versioning a published business service	Adding additional functionality/interfaces to the published business services without modifying the existing functionality/interfaces.
Version List merge	The Versions List merge preserves any non-XJDE and non-ZJDE version specifications for objects that are valid in the new release, as well as their processing options data.
visual assist	Forms that can be invoked from a control via a trigger to assist the user in determining what data belongs in the control.
vocabulary override	An alternate description for a data dictionary item that appears on a specific JD Edwards EnterpriseOne form or report.
wchar_t	An internal type of a wide character. It is used for writing portable programs for international markets.
web application server	A web server that enables web applications to exchange data with the back-end systems and databases used in eBusiness transactions.
web server	A server that sends information as requested by a browser, using the TCP/IP set of protocols. A web server can do more than just coordination of requests from browsers; it can do anything a normal server can do, such as house applications or data. Any computer can be turned into a web server by installing server software and connecting the machine to the internet.
Web Service Description Language (WSDL)	An XML format for describing network services.
Web Service Inspection Language (WSIL)	An XML format for assisting in the inspection of a site for available services and a set of rules for how inspection-related information should be made.
web service proxy foundation	Foundation classes for web service proxy that must be included in a business service server artifact for web service consumption on WAS.
web service softcoding record	An XML document that contains values that are used to configure a web service proxy. This document identifies the endpoint and conditionally includes security information.
web service softcoding template	An XML document that provides the structure for a soft coded record.
Where clause	The portion of a database operation that specifies which records the database operation will affect.
Windows terminal server	A multiuser server that enables terminals and minimally configured computers to display Windows applications even if they are not capable of running Windows software themselves. All client processing is performed centrally at the Windows terminal server and only display, keystroke, and mouse commands are transmitted over the network to the client terminal device.
wizard	A type of JDeveloper extension used to walk the user through a series of steps.
workbench	A program that enables users to access a group of related programs from a single entry point. Typically, the programs that you access from a workbench are used to complete a large business process. For example, you use the JD Edwards EnterpriseOne Payroll Cycle Workbench (P07210) to access all of the programs that the system uses to process payroll, print payments, create payroll reports, create journal entries, and update payroll history. Examples of JD Edwards EnterpriseOne workbenches include Service Management Workbench (P90CD020), Line Scheduling Workbench (P3153), Planning Workbench (P13700), Auditor's Workbench (P09E115), and Payroll Cycle Workbench.
work day calendar	In JD Edwards EnterpriseOne Manufacturing, a calendar that is used in planning functions that consecutively lists only working days so that component and work order scheduling can be done based on the actual number of work days available. A work

day calendar is sometimes referred to as planning calendar, manufacturing calendar, or shop floor calendar.

workflow	The automation of a business process, in whole or in part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules.
workgroup server	A server that usually contains subsets of data replicated from a master network server. A workgroup server does not perform application or batch processing.
XAPI events	A service that uses system calls to capture JD Edwards EnterpriseOne transactions as they occur and then calls third-party software, end users, and other JD Edwards EnterpriseOne systems that have requested notification when the specified transactions occur to return a response.
XML CallObject	An interoperability capability that enables you to call business functions.
XML Dispatch	An interoperability capability that provides a single point of entry for all XML documents coming into JD Edwards EnterpriseOne for responses.
XML List	An interoperability capability that enables you to request and receive JD Edwards EnterpriseOne database information in chunks.
XML Service	An interoperability capability that enables you to request events from one JD Edwards EnterpriseOne system and receive a response from another JD Edwards EnterpriseOne system.
XML Transaction	An interoperability capability that enables you to use a predefined transaction type to send information to or request information from JD Edwards EnterpriseOne. XML transaction uses interface table functionality.
XML Transaction Service (XTS)	Transforms an XML document that is not in the JD Edwards EnterpriseOne format into an XML document that can be processed by JD Edwards EnterpriseOne. XTS then transforms the response back to the request originator XML format.
Z event	A service that uses interface table functionality to capture JD Edwards EnterpriseOne transactions and provide notification to third-party software, end users, and other JD Edwards EnterpriseOne systems that have requested to be notified when certain transactions occur.
Z table	A working table where non-JD Edwards EnterpriseOne information can be stored and then processed into JD Edwards EnterpriseOne. Z tables also can be used to retrieve JD Edwards EnterpriseOne data. Z tables are also known as interface tables.
Z transaction	Third-party data that is properly formatted in interface tables for updating to the JD Edwards EnterpriseOne database.

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