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# JD Edwards EnterpriseOne Kanban Management 9.0 Implementation Guide

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**September 2008**

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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.

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**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.

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## 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.

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## 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.

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## 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.

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**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.

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### See Also

Oracle's PeopleSoft Customer Connection, [http://www.oracle.com/support/support\\_peoplesoft.html](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>

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## 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

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## 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
<b>Bold</b>	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.
<i>Italics</i>	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 <i>O</i> .
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.

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**Note.** Example of a note.

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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.

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**Important!** Example of an important note.

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## Warnings

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

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**Warning!** Example of a warning.

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## 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.

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## 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](mailto:appsdoc@us.oracle.com).

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

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## Common Fields Used in Implementation Guides

<b>Address Book Number</b>	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.
<b>As If Currency Code</b>	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.
<b>Batch Number</b>	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).
<b>Batch Date</b>	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.
<b>Batch Status</b>	<p>Displays a code from user-defined code (UDC) table 98/IC that indicates the posting status of a batch. Values are:</p> <p><i>Blank:</i> Batch is unposted and pending approval.</p> <p><i>A:</i> The batch is approved for posting, has no errors and is in balance, but has not yet been posted.</p> <p><i>D:</i> The batch posted successfully.</p> <p><i>E:</i> The batch is in error. You must correct the batch before it can post.</p>

*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.

<b>Branch/Plant</b>	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.
<b>Business Unit</b>	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.
<b>Category Code</b>	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.
<b>Company</b>	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.
<b>Currency Code</b>	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.
<b>Document Company</b>	<p>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.</p> <p>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.</p> <p>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.</p>
<b>Document Number</b>	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.
<b>Document Type</b>	<p>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> <p><i>P</i>: Accounts payable documents.</p> <p><i>R</i>: Accounts receivable documents.</p> <p><i>T</i>: Time and pay documents.</p> <p><i>I</i>: Inventory documents.</p> <p><i>O</i>: Purchase order documents.</p> <p><i>S</i>: Sales order documents.</p>

**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 Kanban Management Preface

This preface discusses:

- JD Edwards EnterpriseOne products.
- JD Edwards EnterpriseOne application fundamentals.

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## JD Edwards EnterpriseOne Products

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

- JD Edwards EnterpriseOne Inventory Management
- JD Edwards EnterpriseOne Manufacturing - PDM
- JD Edwards EnterpriseOne Management - Shop Floor
- JD Edwards EnterpriseOne Demand Flow® Manufacturing
- JD Edwards EnterpriseOne Requirements Planning
- JD Edwards EnterpriseOne Sales Order Management
- JD Edwards EnterpriseOne Procurement Management
- JD Edwards EnterpriseOne Warehouse Management

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## JD Edwards EnterpriseOne Application Fundamentals

Additional, essential information describing the setup and design of the system appears 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".



# CHAPTER 1

## Getting Started with JD Edwards EnterpriseOne Kanban Management

This chapter discusses:

- JD Edwards EnterpriseOne Kanban Management overview.
- JD Edwards EnterpriseOne Kanban Management integrations.
- JD Edwards EnterpriseOne Kanban Management implementation.

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### JD Edwards EnterpriseOne Kanban Management Overview

JD Edwards EnterpriseOne Kanban Management from Oracle enables you to streamline the day-to-day functions of the shop floor and associated departments. Kanbans are execution tools that you use when the production and inventory control systems are based on a pull system rather than a push system.

With the JD Edwards EnterpriseOne Kanban Management system, you can:

- Define a kanban master for a kanban-controlled item.
- Define kanban sizing calculation methods.
- Define specific parameter values for kanban-specific and calculation-specific parameters.
- Run the Kanban Size Calculation program (R30450) to establish the size of the kanban.
- Work with kanban-controlled items in the planning systems.
- Identify when insufficient inventory exists.
- Perform kanban card check-ins and check-outs.
- Define ad hoc kanban cards to support a spike in demand.

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### JD Edwards EnterpriseOne Kanban Management Integrations

JD Edwards EnterpriseOne Kanban Management system integrates with these JD Edwards EnterpriseOne systems from Oracle:

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

- JD Edwards EnterpriseOne Demand Flow® Manufacturing
- JD Edwards EnterpriseOne Product Costing and Manufacturing Accounting
- JD Edwards EnterpriseOne Requirements Planning
- JD Edwards EnterpriseOne Sales Order Management
- JD Edwards EnterpriseOne Procurement
- JD Edwards EnterpriseOne Warehouse Management

JD Edwards EnterpriseOne Kanban Management is one of many systems that you use for supply chain management. Supply chain management enables you to coordinate the inventory, raw material, and labor resources to deliver products according to a managed schedule. The systems within Oracle's JD Edwards EnterpriseOne Supply Chain Management suite are fully integrated to ensure that information is current and accurate throughout all of the business operations. It is a manufacturing system that formalizes the activities of company and operations planning, as well as the execution of those plans. We discuss integration considerations in the implementation chapters in this implementation guide.

## **JD Edwards EnterpriseOne Inventory Management**

JD Edwards EnterpriseOne Inventory Management from Oracle supplies the basic information about each item, such as part number, description, unit of measure, stocking type, location, and lot control information. It enables you to track materials between inventory or storage locations and the shop floor. You can manage inventory issues and commitments, complete orders, and track order quantities throughout the production process.

## **JD Edwards EnterpriseOne Product Data Management**

JD Edwards EnterpriseOne Product Data Management from Oracle provides information about bills of material, work centers, routing instructions, and product costs.

## **JD Edwards EnterpriseOne Shop Floor Management**

JD Edwards EnterpriseOne Shop Floor Management from Oracle uses bills of material and routing instructions to process work orders and schedule work activity within the plant.

The system also records material issue transactions to determine the actual quantities of materials that are used in the production process, versus the materials that are indicated on the parts list for the work order or rate schedule.

## **JD Edwards EnterpriseOne Product Costing and Manufacturing Accounting**

JD Edwards EnterpriseOne Product Costing and Manufacturing Accounting from Oracle uses bills of material, routing instructions, and work center information to calculate total material, labor, machining, and overhead costs for each primary unit of the parent item.

## **JD Edwards EnterpriseOne Requirements Planning**

JD Edwards EnterpriseOne Requirements Planning from Oracle uses JD Edwards EnterpriseOne Product Data Management and JD Edwards EnterpriseOne Shop Floor Management information to plan finished goods, raw material, and purchased parts that are required to manufacture an item.

It uses sales orders and forecasts to pass down demand for items through the bills of material to the components.

## **JD Edwards EnterpriseOne Sales Order Management**

JD Edwards EnterpriseOne Sales Order Management from Oracle enables you to generate sales orders for outside assembly work and transfer orders between branch/plants.

## JD Edwards EnterpriseOne Procurement

JD Edwards EnterpriseOne Procurement from Oracle enables you to automatically generate purchase orders for outside operations on the routing instructions and to transfer orders between branch/plants.

## JD Edwards EnterpriseOne Warehouse Management

JD Edwards EnterpriseOne Warehouse Management from Oracle enables you to originate picking requests through manufacturing systems, which further enhances the automated method of tracking inventory movement within a warehouse.

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# JD Edwards EnterpriseOne Kanban Management Implementation

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

In the planning phase of the implementation, take advantage of all 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 Kanban Management, 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 Kanban Management system:

Step	Reference
1. Set up global user-defined code tables.	<i>JD Edwards EnterpriseOne Tools 8.98 System Administration Guide, "Working with User Defined Codes"</i>
2. Set up fiscal date patterns.	<i>JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide, "Setting Up Organizations," Setting Up Fiscal Date Patterns</i>
3. Set up companies.	<i>JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide, "Setting Up Organizations," Setting Up Companies</i>
4. Set up business units.	<i>JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide, "Setting Up Organizations," Setting Up Business Units</i>
5. Set up next numbers.	<i>JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide, "Setting Up Next Numbers"</i>

Step	Reference
6. Set up accounts, and the chart of accounts.	<i>JD Edwards EnterpriseOne Financial Management Application Fundamentals 9.0 Implementation Guide</i> , "Creating the Chart of Accounts," Setting Up Accounts
7. Set up the General Accounting constants.	<i>JD Edwards EnterpriseOne General Accounting 9.0 Implementation Guide</i> , "Setting Up the General Accounting System," Setting Up Constants for General Accounting
8. Set up multicurrency processing, including currency codes and exchange rates.	<i>JD Edwards EnterpriseOne Multicurrency Processing 9.0 Implementation Guide</i>
9. Set up ledger type rules.	<i>JD Edwards EnterpriseOne General Accounting 9.0 Implementation Guide</i> , "Setting Up the General Accounting System," Setting Up Ledger Type Rules for General Accounting
10. Set up address book records.	<i>JD Edwards EnterpriseOne Address Book 9.0 Implementation Guide</i> , "Entering Address Book Records"
11. Set up default location and printers.	<i>JD Edwards EnterpriseOne Tools 8.98 Development Tools: Report Printing Administration Technologies Guide</i> , "Working with Report Printing Administration"
12. Set up branch/plant constants.	<i>JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide</i> , "Setting Up the Inventory Management System," Defining Branch/Plant Constants
13. Set up Manufacturing/Distribution automatic accounting instructions.	<i>JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide</i> , "Setting Up the Inventory Management System," Setting Up AAls in Distribution Systems
14. Set up document types.	<i>JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide</i> , "Setting Up the Inventory Management System," Setting Up Document Type Information
15. Set up shop floor calendars.	<i>JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide</i> , "Setting Up Shop Floor Management," Setting Up Shop Floor Calendars
16. Set up manufacturing constants.	<i>JD Edwards EnterpriseOne Product Data Management 9.0 Implementation Guide</i> , "Setting Up Product Data Management," Setting Up Manufacturing Constants

## JD Edwards EnterpriseOne Kanban Management Implementation Steps

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

Step	Reference
1. Set up kanban item records.	<a href="#">Chapter 3, "Setting Up Kanban Management," Setting Up Kanban Master Records, page 15</a>
2. Set up kanban master records.	<a href="#">Chapter 3, "Setting Up Kanban Management," Setting Up Kanban Master Records, page 15</a>
3. Set up a kanban size calculation definition.	<a href="#">Chapter 3, "Setting Up Kanban Management," Setting Up a Kanban Size Calculation Definition, page 25</a>
4. Define values for kanban calculation parameters.	<a href="#">Chapter 3, "Setting Up Kanban Management," Defining Values for Kanban Calculation Parameters, page 33</a>
5. Generate kanbans.	<a href="#">Chapter 3, "Setting Up Kanban Management," Generating Kanbans, page 36</a>
6. Define a kanban reorder point.	<a href="#">Chapter 6, "Setting Up Multi-tier Kanban Transactions," Defining a Kanban Reorder Point, page 70</a>





## CHAPTER 2

# Understanding Kanban Management

This chapter discusses:

- Kanban Management and kanbans.
- Kanban Management terms and concepts.
- Kanban Management tables.

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## Kanban Management and Kanbans

JD Edwards EnterpriseOne Kanban Management enables you to streamline the day-to-day functions of the shop floor and associated departments. Kanbans are execution tools that you use when the production and inventory control systems are based on a pull system, rather than a push system.

Kanbans represent predetermined quantities of components at specified locations on the production line. They are designed to minimize work-in-process inventories.

Kanbans are visual cues that authorize the replenishment of inventory at a specified consuming location in a pull environment. When kanban inventory is consumed, a replenishment action is triggered when the holding bin is emptied.

A kanban can include, but is not limited to, bins used to physically transport material from work center to work center on the production floor. Kanbans can also represent pallets of raw material.

You can replenish inventory by manufacturing activity, procurement, or simply the movement of the required goods. The size attribute of a kanban determines the replenishment quantity. The size of the kanban affects the effectiveness of the kanban system significantly; when the kanban size is too high, the system contains more inventory than necessary, which is unacceptable. When the kanban size is too low, the system eventually runs out of inventory.

Kanbans support just-in-time manufacturing, but are not used exclusively with repetitive or lean manufacturing. You can also use them effectively in a discrete manufacturing environment.

Kanbans enable you to pull material from five sources:

- Work center

When a work center kanban is checked out, the system finds an open work order or rate schedule. When no work order or rate schedule exists, the system creates a work order or rate schedule to fulfill the kanban demand. When the kanban is checked in to indicate replenishment, an inventory transfer from the supplying location to the consuming location occurs as defined in the kanban master.

- Inventory

When an inventory kanban is checked out and checked in at its consuming location, the system creates an inventory transfer to move the material from its supplying location to the consuming location. For example, you can move required materials from raw materials inventory to a work center location on the shop floor.

- **Supplier**

When you check out a supplier kanban, the system creates a purchase order or initiates a blanket purchase order release, depending on how you set up the system. Additionally, depending upon setup criteria, you can also enable the check in of the kanban to perform the purchase order receipt for goods received. When the kanban is checked in to indicate replenishment, an inventory transfer from the supplying location to the consuming location occurs as defined in the kanban master.

- **Branch/plant**

When you check out this kanban, the system creates a sales order and purchase order for the kanban item. When the last card is checked in, the system receives the purchase order that was created at check out. This kanban type is particularly useful for companies that prefer to utilize the formal sales and procurement transactions (transfer orders) between facilities instead of managing inventory replenishment using inventory transfers.

- **Outside assembly**

When you check out an outside assembly kanban, the system creates a sales order for a list of components that is required to make a product. When you check in the kanban, the system creates a purchase order for the finished product. When the kanban is checked in to indicate replenishment, an inventory transfer from the supplying location to the consuming location occurs as defined in the kanban master. This kanban is particularly useful for companies that use outsourcing to provide additional value to their products and want a more robust record of inventory balances. Special setup is required to use this kanban type.

Kanbans provide automated background transactions that eliminate much of the required paperwork and data entry.

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## Kanban Management Terms and Concepts

This section discusses terms that apply to JD Edwards EnterpriseOne Kanban Management:

<b>Kanban</b>	Method of just-in-time production that uses standard containers or lot sizes. It is a pull system in which work center or locations signal that they need to withdraw parts from feeding work centers, inventory locations, or suppliers. This signal alerts manufacturing to build, suppliers to furnish, or other branch/plants to provide the required part in the standard lot size that is defined in the Kanban Master table (F3016).
<b>Kanban card</b>	Can be represented by a card, bin, or shelf location. Kanban cards can be system-generated.
<b>Kanban ID</b>	Unique identifier for a kanban master record, which can represent one or more physical containers. The Kanban ID is generated from next numbering.
<b>Pull system</b>	Manufacturing environment in which material is pulled through the system by actual system requirements, usually by the use of kanbans.
<b>Push system</b>	Manufacturing environment in which parts are pushed through the system, generally by the use of work orders that the materials planning systems generate.

<b>Ad hoc kanban card</b>	A kanban card that is inserted into a single cycle to cover an abnormal spike in demand.
<b>Calculation method</b>	A business function and defined set of parameters that determines kanban size, the number of kanban cards, and the quantity per card.
<b>Supplying location</b>	The location (defined at the item-branch level) that supplies the kanban item to the consuming location. Kanban processing sends completions of work orders and receipts of purchase orders to this location.
<b>Consuming location</b>	The location (defined at the item branch level) that uses the kanban item. Kanban processing moves replenishment materials from the supplying location to the consuming location.
<b>Source</b>	The type of process that supplies the kanban item, such as a work order or a purchase order.
<b>Phase</b>	A condition that enables you to state that the completion and transfer to the consuming location will be completed at the same time or that another step is involved prior to the transfer.
<b>Check out</b>	A condition that indicates that, when the kanban quantity is depleted at the consuming location, a replenishment action might be required. The actual replenishment transaction, such as the creation of a work order, does not take place until the last card has been checked out.
<b>Check in</b>	A condition that indicates that, when the replenishment action has been completed, the kanban item is available for use by the consuming location.
<b>Kanban flag</b>	<p>An option, called Kanban Item, that indicates that an item is a kanban-controlled item. This option appears on the Additional System Information form of the Item Master (P4101) or the Item Branch program (P41026) program. The system updates these tables for kanban-controlled items:</p> <ul style="list-style-type: none"> <li>• Item Master SRM Tag File (F4101SRM)</li> <li>• Item Branch SRM Tag File (F4102SRM)</li> </ul> <p>The Kanban Item option is used by the JD Edwards EnterpriseOne Requirements Planning system to indicate that generated action messages cannot be processed.</p>

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## Kanban Management Tables

These tables are used throughout JD Edwards EnterpriseOne Kanban Management:

Table	Description
Bill of Material Master (F3002)	Stores information at the branch/plant level about bills of materials, such as quantities of components, features, options, and levels of detail for each bill.

Table	Description
Routing Master (F3003)	Stores information about routing instructions, including operation sequences; work centers; and run, setup, and machine time. The system uses this information to calculate labor, machine, and overhead costs.
Job Shop Manufacturing Constants (F3009)	Stores general branch/plant information, such as bill of material and routing instruction validation, commitment control, work hours per day, and cost calculation methods.
Kanban Master (F3016)	Stores the set of kanban cards that are associated with an item. Each kanban defines the supplying location, consuming location, quantity, and unit of measure. The system uses next numbers to control the kanban identification number. If the system obtains the item from an external source, the supplier's address book number is included.
Kanban Master Tag (F3016T)	Stores information about the calculation method that is used by the kanban and the related kanban in the case of tiered kanbans.
Kanban Size Calculation Definition (F3017)	Stores information that relates to the calculation method, such as calculation identifier, business function, and whether a parameter is kanban-specific, calculation-specific, or not used.
Kanban Size Calculation Parameters (F3018)	Stores the specific value of kanban-specific and calculation-specific parameters.
Kanban Replenishment Capacity (F3019)	Stores kanban capacity and demand over a user- specified period of time.
Kanban Card Detail (F30161)	Stores information that relates to the kanban, such as status, transaction quantity, and date updated.
Line/Item Relationship Master (F3109)	Stores the relationships between items and production lines. The default production line for an item is the line on which production is scheduled at rate schedule creation for that item.
Work Order Parts List (F3111)	Stores the components that are required by a work order.
Work Order Routing (F3112)	Stores the routing steps that are attached to a work order or rate schedule. It contains one record for each operation sequence number and work center.
Item Master (F4101)	Stores basic information about each defined inventory item, such as item number, description, category codes, and units of measure.

Table	Description
Item Branch (F4102)	Stores the warehouse or plant-level information for an item, such as costs, quantities, category codes, and physical locations.
Item Location (F41021)	Stores all inventory locations for an item.

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**Note.** JD Edwards EnterpriseOne Kanban Management has no table conversions.

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## CHAPTER 3

# Setting Up Kanban Management

This chapter provides an overview of Kanban Management setup and discusses how to:

- Set up kanban master records.
- Set up a kanban size calculation definition.
- Define values for kanban calculation parameters.
- Generate kanbans.

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## Understanding Kanban Management Setup

JD Edwards EnterpriseOne Kanban Management integrates with several other systems, and it is critical that you set up each system appropriately to support the business processes.

In the JD Edwards EnterpriseOne Inventory Management system, branch/plant constants enable you to customize how you process daily transactions for each branch/plant in the distribution and manufacturing systems. You use the Branch/Plant Constants program (P41001) to set location control and warehouse control. By predefining locations to which material can be moved or completed through work order completions transactions, location and warehouse control can support backflush as an inventory-level improvement technique.

You must set up the bills of material and routings that support the work order and rate schedule for kanban-controlled items in the JD Edwards EnterpriseOne Product Data Management system. The bill of material associates each component item to a routing step which, in turn, identifies the consuming location of the item. If you are using work center locations for backflushing transactions, you should make sure that the business processes are accurately defined to do so.

In the JD Edwards EnterpriseOne Shop Floor Management system, you set up manufacturing constants to define branch-specific information that affects processing throughout the manufacturing systems. You use the Manufacturing Constants program (P3009) to specify the value for backflush options on the Manufacturing Constants tab. On the Commitment Control tab, you specify when inventory is committed and backflushed.

When you finish producing items on the shop floor, you need to record the completions to inventory. The completion transactions that you enter in the JD Edwards EnterpriseOne Shop Floor Management system update the item quantity records in the JD Edwards EnterpriseOne Inventory Management system. You can record completions for discrete and process work orders, as well as rate schedules.

You use the Super Backflush (P31123) and Work Order Completions (P31114) programs to enter completions for work orders, and the Completions Workbench program (P3119) to enter completions to rate schedules.

The Super Backflush program, which is called by the check-In transaction (one-phase) or completion transaction (two-phase), completes the kanban-generated work orders and rate schedules. To use Super Backflush to complete manufacturing orders, you should:

- Set up the bills of material and routings with the correct issue codes and pay point codes, respectively.
- Define consuming locations in the item's routing that agree with the related kanbans.

When you create a manufacturing order using a kanban transaction, the system automatically updates the work order completion form with the finished goods location identifier. This location is the supplying location identifier of the related kanban.

Inventory kanbans are always only one-phase, even though you can technically define them as two-phase. When you check out an inventory (source type 1) kanban, the kanban is marked in the software as requiring replenishment, but no software transactions occur. When you check in the kanban, you initiate an inventory transfer to move the material from the supplying location to the consuming location.

Kanban-controlled items that are supplied by an outside source (supplier) can use blanket orders in the JD Edwards EnterpriseOne Procurement system to facilitate order and replenishment of those items.

You can enter a blanket order when you have an agreement with a supplier to purchase a certain quantity or amount of goods over a period of time. Blanket purchase orders enable you to negotiate and control supplier prices over longer periods of time. When you create a blanket purchase order, you enter the total quantity for which you have negotiated with the supplier.

When you are ready to receive a portion of the goods or services on a blanket order, you must release the quantity or amount for which you want to create a purchase order. For example, if you have a blanket order for 1200 widgets, and you want to receive 100, you must locate the blanket order detail line and release 100 widgets. When you have a valid blanket order and the kanban is set up to release from blanket purchase orders, the system automatically debits the blanket order for the kanban quantity. When multiple blanket orders for the kanban item exist, a blanket release form appears so that you can select the blanket order from which you want to release materials.

The system creates transfer orders for kanbans that move from one branch/plant to another. You use sales orders and purchase orders during the check-out and check-in processes.

Integration with Oracle's JD Edwards EnterpriseOne Demand Flow® Manufacturing (DFM) provides support for DFM kanbans in base manufacturing. DFM kanbans include raw in-process (RIP) (source type 0) and dual card (source type 6) replenishment sources.

For JD Edwards EnterpriseOne Kanban Management, you must identify the items as kanban-controlled, create the kanban master, define the calculation method, define the parameter values, and then generate and print the kanban cards.

## Kanban Items

As with all items, you must set up an item record in both the F4101 and F4102 tables for kanban-controlled items.

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**Note.** All items that are part of a source type 4 kanban must have a stocking type of 9, including the parent item. Additionally, you must verify that stocking type 9 in the system is defined with *O* in the special handling code and either an *M* or *P* code in the Description 02 column. The stocking type user-defined code (UDC) table is 41/I.

The parent item for the source type 4 kanban must have a corresponding bill of material structure. You use this bill of material to perform cost roll-ups and generate sales orders.

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On the Additional System Information form (Plant Manufacturing tab) of the item branch record, you must select the associated option to identify the item as kanban-specific to that branch. Within a branch/plant, an item that is kanban-controlled must be a kanban-controlled item throughout the entire branch/plant. This helps the planning system identify kanban-specific items.

Along with the item branch record that you create for a kanban item in the F4102 table, you must define a consuming location (the location to which the item is transferred for consumption) and a supplying location (the originating location, which could be a completion or receiving location, depending on whether the item is manufactured or purchased). The source, or supply, for a kanban can be an inventory location (common parts), a work center (a manufactured subassembly), or a receiving location (a purchased or transferred part).

The system validates that the consuming and supplying locations are set up, regardless of how the location control switch is set on branch/plant constants.

### See Also

*JD Edwards EnterpriseOne Inventory Management 9.0 Implementation Guide*, "Setting Up the Inventory Management System," Defining Branch/Plant Constants

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

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

*JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide*, "Setting Up Shop Floor Management," Setting Up Manufacturing Constants

*JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide*, "Working with Completions"

*JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide*, "Processing Special Orders," Working with Blanket Orders

*JD Edwards EnterpriseOne Sales Order Management 9.0 Implementation Guide*, "Entering Additional Orders"

*JD Edwards EnterpriseOne Demand Flow® Manufacturing 9.0 Implementation Guide*, "Managing Kanban in a Demand Flow® Environment"

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## Setting Up Kanban Master Records

This section provides overviews of kanban master records, kanban processing, and kanban processing logic, lists a prerequisite, and discusses how to:

- Set processing options for Kanban Master Revisions (P3016).
- Set up kanban master records.

## Understanding Kanban Master Records

Before you can initiate any kanban transactions, you must set up a kanban master record for the item. You set up kanban master records in the Kanban Master Revisions program (P3016). When you set up the kanban master record, you define the information that the system uses to generate the transaction when you initiate a kanban trigger.

Each record in the F3016 table has a unique kanban ID. Each of these kanban records can have multiple containers or cards. The records also appear in the F30161. When you define an item as kanban-controlled, you essentially define the relationship between a supplying location and consuming location. You define a kanban-controlled item by item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location. The system generates a unique kanban identifier for this specific relationship.

When you have multiple kanban records (kanban IDs) with the same item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location, the kanban size for each of these records should be the same.

When you set up the item as a kanban item, you define the source type in the kanban master record to indicate how the item is supplied. For example, if the source, or supply, is a manufacturing activity (the item is a subassembly part), the system can generate a work order when the last kanban card is checked out. You select the source type from the 31/RS Replenishment Source UDC table:

- DFM Raw In-Process (RIP) - Source Type 0  
Supports material movement in the RIP area. Valid locations are not required.
- Work center - Source Type 1
- Inventory - Source Type 2
- Supplier - Source Type 3
- Outside assembly - Source Type 4
- Transfer Order - Source Type 5
- DFM Dual Card - Source Type 6

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**Note.** For JD Edwards EnterpriseOne Demand Flow® Manufacturing, the check-in and check-out of kanban cards triggers item completions.

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You also define whether the system transfers a kanban item in a one-phase or two-phase process. When the transfer occurs in one phase, the completed work order or received purchase order quantity is directly transferred to the consuming location. When the kanban is set up as a two-phase kanban, the materials that are being facilitated through the processing of the kanban cards require an additional Complete transaction to make the materials ready for transfer to the consuming location, from the supplying location. For example, this option, enables you to test the materials before they move on to be consumed during subsequent manufacturing operations.

When you set up a kanban master record, you can enter the kanban size manually or define a calculation method. If you manually enter the kanban size on the Kanban Master Revisions form, ensure that the quantity that you enter is large enough to supply the material consumed, according to the replenishment lead time that is defined for the item. If you decide that the system should not override the user-specified kanban size, then you must set the override option in the kanban master record to *1*.

If you decide to use a calculation method, you must first define the calculation method in the Kanban Size Calculation Definition program (P3017). You enter the calculation method identifier in the Calculation Method field of the kanban master record.

You then define parameter values in the Kanban Size Calculation Parameter Definition program (P3018) and run the Kanban Size Calculation program (R30450). The system updates the kanban master record with the kanban size, and either the number of cards or quantity per card that the batch program calculated. If more than one kanban master record has the same supplying branch, supplying location, consuming branch, consuming location, and item number, the system uses the calculation value of the first record to calculate the kanban size of the subsequent record.

It is recommended that the first kanban master record have the highest calculation values set up in the Kanban Size Calculation Parameter Definition program (P3018) so that the requirements of the consuming location are met correctly.

When you leave the Calculation Method Identifier field blank, the system supplies the default value of Manual Entry.

When the kanban is a source type 1 (work center), and the item being produced when the kanban is checked out is a rate-scheduled item, you can indicate that you want the rate schedule to be assigned to a particular repetitive line. The line that you specify must be a valid work center in the F30006 table and have a valid line and item relationship.

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**Note.** When a source type 2 kanban is slated to generate multi-tier kanban requests from the supplying location, the system maintains information about the secondary kanban and links to it using the Related Kanban ID.

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Given the relationship that you specify between the kanban size and the container size, the system calculates the number of containers. You define each kanban ID with the number of containers, and you can specify as many containers as needed.

For kanbans that are associated with JD Edwards EnterpriseOne Demand Flow® Manufacturing, the kanban sizes that are calculated in JD Edwards EnterpriseOne Demand Flow® Manufacturing populate the kanban size field in base manufacturing. The override flag in the F3016 table is set to 1 for kanban records that are imported from JD Edwards EnterpriseOne Demand Flow® Manufacturing. This prevents the Kanban Size Calculation program (R30450) in Oracle's JD Edwards EnterpriseOne from recalculating the kanban size and overriding the kanban sizes that were calculated in JD Edwards EnterpriseOne Demand Flow® Manufacturing.

See *JD Edwards EnterpriseOne Demand Flow® Manufacturing 9.0 Implementation Guide*, "Managing Kanban in a Demand Flow® Environment," Understanding DFM Kanban Management.

DFM kanbans in RIP (source type 0) function within a raw in-process area and require no check-in or check-out. Type 0 kanbans are optional since they perform no transactions. Inventory (source type 2) and Supplier (source type 3) kanbans are checked in to the first-in-RIP location. Once transactions are successfully completed, inventory balances are reflected in the first-in-RIP location. RIP kanbans pull inventory physically from the first-in-RIP location and item completions is performed which reduces the inventory balances in the first-in-RIP location.

Dual card kanbans (source type 6), specify the number of cards that require check-in before replenishment is performed. The transactions are supported by item completions.

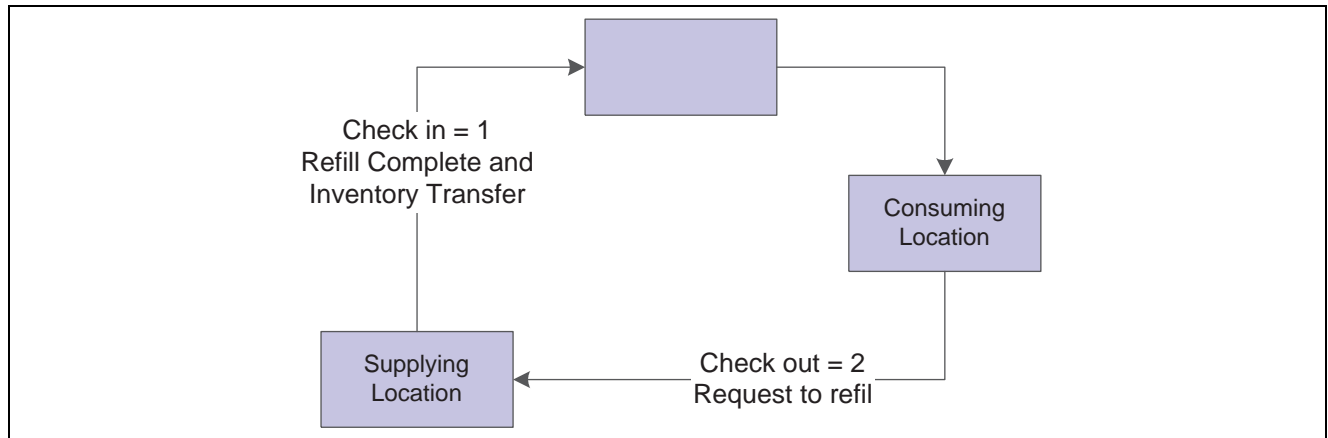
Only internal users can maintain kanban records. When you change to the kanban quantity, number of cards, or lead time, you can set up the system to initiate workflow to advise the supplier. All users can review kanban records. Each supplier can review only the procurement kanban master records for that supplier.

## Understanding Kanban Processing

Kanbans can be used as part of a one-phase or two-phase process. The one-phase process assumes that the completion or receipt of quantity to the supplying location and transfer to the consuming location are performed in one step. With a one-phase kanban, the status of the kanban progresses as follows:

- Check In to Check Out.
- Check Out to Check In.

This diagram illustrates the one-phase kanban process:



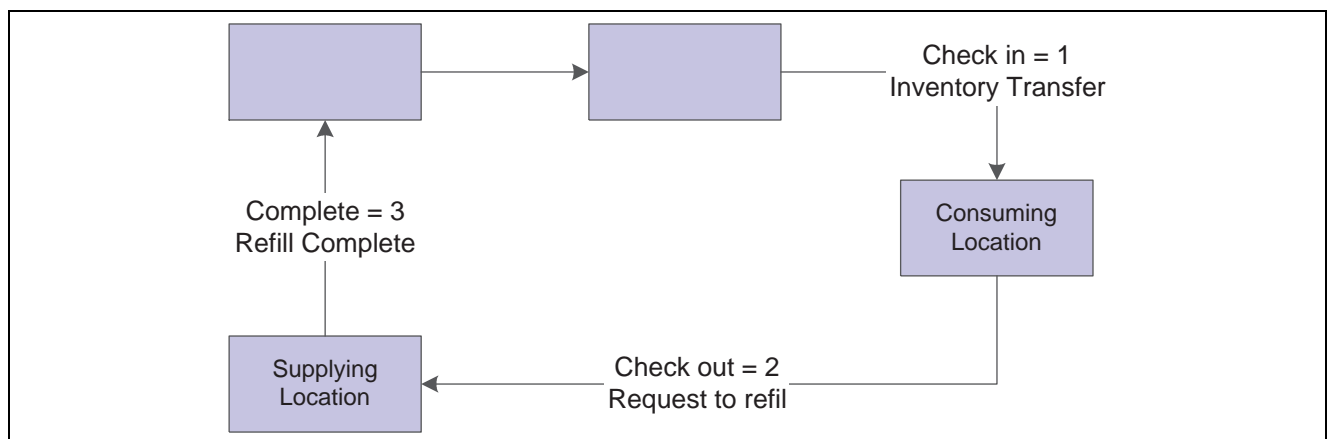
One-phase kanban

The two-phase approach assumes that the completion and transfer to the consuming location are reported separately. You complete or receive the quantity to the supplying location by using the Complete status, which is status 3. After the quantity has been physically received at the supplying location, you initiate an inventory transfer from the supplying location to the consuming location by checking in the kanban. The kanban status changes to Checked In (1). Using this method is helpful when you are working with items that require inspections or tests before they are moved to the consuming location. With a multiphase kanban, the status of the kanban progresses as follows:

- Check In to Check Out.
- Check Out to Complete.
- Complete to Check In.

When you check in a kanban quantity from the supplier, the system can initiate a receipt transaction if you select the Receipts option in the kanban master.

This diagram illustrates the two-phase kanban process:



Two-phase kanban

You can process kanbans for:

- Inventoried items
- Manufactured items (subassemblies)
- Externally supplied items (supplier)
- Interbranch items

When you check out an inventory kanban (source type 2), the system changes the kanban status. The supplying location replenishes the kanban quantity. You then check in the kanban, which results in an inventory transfer. Inventory kanbans only perform software transactions during the check-in process. All other statuses for this kanban type are informational only.

When you check out a work center kanban (source type 1), the program:

- For discrete manufactured items, the software creates a new work order.
- For rate scheduled items, which have an order policy code of 5 in the item branch record, the software looks for an existing open rate.

If no rate exists for the item and line combination that is specified in the kanban master record, then the software creates a new rate for the kanban quantity.

You should be aware that the software assumes that rate quantities that are generated from kanbans are due the same day that they are initiated. Therefore, no standard spreading of the subsequent rate quantity occurs in the Line Scheduling Workbench. You can set a processing option for the Enter/Change Rate Schedule program (P3109) so that the system automatically attaches the parts list and routing instructions when a new rate is created or changed.

When you check in a work center kanban, you complete the work order or rate, issue materials, enter hours and quantities, and transfer the parent item to the consuming location.

When you check out a kanban that a work center or production line supplies, and the item is a phantom, no transactions other than inventory transfers occur. When you have no work orders or rates to process; the producing line replenishes the item, and the system completes the kanban and checks it in. This results in a transaction for inventory transfer, from the supplying location to the consuming location.

An externally supplied kanban creates an open purchase order for the kanban item. This purchase order can be an existing one, or, optionally, one that is created during the check-out process. In addition, when you check out the kanban, the system might also initiate an electronic data interchange (EDI) transaction. When you check in kanbans from an external supplier, the system optionally creates a receipt for the purchase order. You can also use kanbans to release quantities from open blanket purchase orders.

A kanban that is supplied from a branch/plant requires you to create a transfer sales order when you check out the kanban. When you check in the kanban that is supplied by another branch/plant, the system creates a transfer purchase order and receipt.

For JD Edwards EnterpriseOne Demand Flow® Manufacturing, a raw in-process (RIP) (source type 0) kanban supports material movement within the RIP without requiring valid locations. The DFM dual card kanban (source type 6) triggers kanban replenishment from a machine cell. For a dual card kanban, the number of cards must be checked out from the consuming location for the replenishment to be triggered. A one-phase DFM kanban check-in triggers lean completions and an inventory transfer. A two-phase DFM kanban complete status triggers lean completions and check-in triggers an inventory transfer.

## Understanding Kanban Processing Logic

This table outlines the kanban processing logic:

Source	Source Type	Phase	Status Sequence	Check-in (1) Transactions	Check-out (2) Transactions	Complete (3) Transactions
DFM raw in-process (RIP)	0	1	1 to 2 2 to 1	No transactions within the RIP.	No transactions within the RIP.	Not applicable in a one-phase kanban.
Work center	1	1	1 to 2 2 to 1	Complete to the supplying location using super backflush transactions.  <i>and</i> Generate an inventory transfer from supplying location to consuming location.	Create a work order (WO) or rate (SC) if none already exists.	Not applicable in a one-phase kanban.
Work center	1	2	1 to 2 2 to 3 3 to 1	Generate an inventory transfer from the supplying location to the consuming location.	Create work order (WO) or rate (SC) if none already exists.	Complete to the supplying location using super backflush transactions.
Inventory	2	1	1 to 2 2 to 1	Generate an inventory transfer from the supplying location to the consuming location.	No transaction.	Not applicable in a one-phase kanban.
Inventory	2	2	1 to 2 2 to 3 3 to 1	Generate inventory transfer from the supplying location to the consuming location.	No transaction.	No transaction.

Source	Source Type	Phase	Status Sequence	Check-in (1) Transactions	Check-out (2) Transactions	Complete (3) Transactions
Supplier	3	1	1 to 2 2 to 1	Receive purchase order if Receipts flag is on (Kanban Master) otherwise, no transactions occur.  Generate an inventory transfer from the supplying location to the consuming location.	Create a purchase order (PO) if none already exists.	Not applicable in a one-phase kanban.
Supplier	3	2	1 to 2 2 to 3 3 to 1	Generate an inventory transfer from the supplying location to the consuming location.	Create a purchase order (PO) if none already exists.	Receive a purchase order when the Receipts option is turned on in F3016 table; otherwise, no transactions occur.
Outside assembly (subcontract)	4	1	1 to 2 2 to 1	Create a sales order for the related bill of material component items.  Create a purchase order for the related bill of material parent item.	Process a shipment confirmation for the shipped component items.  Receive a purchase order for the value-add parent item.  Generate an inventory transfer for the parent item from the supplying location to the consuming location.	Not applicable in a one-phase kanban.

Source	Source Type	Phase	Status Sequence	Check-in (1) Transactions	Check-out (2) Transactions	Complete (3) Transactions
Outside assembly (subcontract)	4	2	1 to 2 2 to 3 3 to 1	Create a sales order for the related bill of material component items.  Create a purchase order for the related bill of material parent item.	Process a shipment confirmation for shipped component items  Receive a purchase order for the value-add parent item.	Generate an inventory transfer for the parent item from the supplying location to the consuming location.
Branch/plant	5	1	1 to 2 2 to 1	Receive a transfer purchase order at the receiving location in the supplying branch.  Generate an inventory transfer from the receiving location to the consuming location.	Generate a transfer sales order from the supplying branch to the consuming branch.  Generate a transfer purchase order to the supplying branch.	No transaction.
Branch/plant	5	2	1 to 2 2 to 3 3 to 1	Generate an inventory transfer from the receiving location to the consuming location.	Generate a transfer sales order from the supplying branch to the consuming branch.  Generate a transfer purchase order to the supplying branch.	Receive a transfer purchase order at the receiving location in the supplying branch.
DFM dual card	6	2	1 to 6 6 to 2 2 to 3 3 to 1	Generate an inventory transfer, and if one-phase, generate an item completion transaction.	Wait for the number of cards to be checked out before the kanban is checked out.	Generate an item completion transaction.



## Prerequisite

Verify that kanban item records have been set up.

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

## Forms Used to Set Up Kanban Master Records

Form Name	FormID	Navigation	Usage
Work With Kanban Master	W3016A	Kanban Management Setup (G30411), Kanban Master Revisions	Select a kanban record or complete header information to add a new kanban record.
Kanban Master Revisions	W3016B	On the Work With Kanban Master form, enter item number, consuming branch, and supplying branch information and then click the Add button.	Edit a kanban master record.

## Setting Processing Options for Kanban Master Revisions (P3016)

These processing options control default processing for the Kanban Master Revisions program.

### Versions

This processing option controls which version the system uses when you call a program from the Kanban Master Revisions program.

- 1. Kanban Size Calculation (R40450)** Specify the version of the Kanban Size Calculation program. If you leave this processing option blank, the system uses the default version XJDE0001.

### Process

This processing option controls the creation of ad hoc kanban cards.

- 1. Create an Ad Hoc Card** Enter *1* to enable the creation of ad hoc kanbans through the Kanban Master Revisions program. If you leave this processing option blank, you cannot create ad hoc kanbans.

## Setting Up Kanban Master Records

Access the Kanban Master Revisions form.

**Kanban Master Revisions - Kanban Master Revisions**

Item Number: 2001  
Supplying Location: S1  
Branch/Plant: M30  
Consuming Location: C1

Kanban ID	Supplying Location B/P	Kanban Size	Kanban UOM	Source Type	Phase	Supplier	Line/Cell Identifier	Container Size
	3408	M30	30	EA	1	2		

Kanban Master Revisions form

**Kanban Size**

Enter the total size of the kanban. You can leave this field blank if the size is calculated using the Kanban Size Calculation program (R30450).

**Source Type**

Enter a code from user-defined code 31/RS that indicates the type of supplying location for a kanban. Values are:

- 0: DFM Raw and In Process (RIP)
- 1: Work center
- 2: Inventory
- 3: Supplier
- 4: Outside assembly
- 5: Transfer Order
- 6: DFM Dual Card

**Container Size**

Displays the capacity of a container in a kanban-controlled environment. The value that appears in this field is set up in the Kanban Size Calculation Parameter Definition program (P3018).

**Supplier**

(Optional) Complete the supplier field if you use source type 3 (Supplier).

**Line/Cell Identifier**

(Optional) Defines a production line or cell. You can define detailed work center operations inside the line or cell. If the item is a rate schedule item, this field identifies the line where the item is manufactured. For DFM items, the Line Design ID populates this field.

**Override**

(Optional) Locks the kanban size and quantity to prevent changes by the kanban calculation program. Values are:

- 0: The system recalculates the size of the kanban.
- 1: The system does not recalculate the size of the kanban.

If you enable the override option, the system does not update the record when you run the Kanban Size Calculation program (R30450).

**Receipts**

(Optional) Indicates whether the system runs the receipts process at kanban check-in time. Values are:

- 0: The system does not run the receipt process.
- 1: The system runs the receipt process.

	If you are setting up a supplier kanban (source type 3) and you want the purchase order receipt process to be initiated by a check-in transaction, you must activate this option.
<b>Number of Cards</b>	Define the number of cards for a kanban. Each card represents a container. This number is determined by dividing the kanban size by the container size. For example, a kanban of 100 might be made up of four containers that each hold 25 components. Therefore, the kanban has four cards (1 of 4, 2 of 4, 3 of 4, and 4 of 4).
<b>Calculation Method</b>	Specify the calculation method that you want the system to use for kanban calculations. The system provides four standard calculation methods to perform Kanban calculations.
<b>Related Kanban ID</b>	(Optional) Identifies the second kanban that is assigned to an item in a specified branch/plant, consuming location, or supplying location. This field is used with multi-tier and reorder point.
<b>Ad Hoc Card Exists</b>	Indicates the presence of an ad hoc kanban card. The card may be active or inactive. If you insert an ad hoc kanban card when an inactive ad hoc card exists, the inactive card is activated.
<b>Dual Cards</b>	Enter the number of cards that are required to trigger the kanban check out transaction for a dual card kanban. For example, there might be five kanbans in use between the supplying and consuming locations, and the number of dual cards is three. Thus, three kanbans must be checked out to trigger replenishment.

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## Setting Up a Kanban Size Calculation Definition

This section provides an overview of kanban size calculations and standard kanban equations, and discusses how to set up a kanban size calculation definition.

### Understanding Kanban Size Calculations

The Kanban Size Calculation Definition program (P3017) defines a kanban size calculation, also called a calculation method. You can enter a kanban size manually, or you can define a calculation method to be used by the Kanban Size Calculation program (R30450).

The calculation method that determines kanban size, the number of kanban cards, and the quantity per card depends upon these attributes:

- The methodologies that the inventory manager wants to adopt in reducing the work-in-process inventory levels (such as discrete versus rate-based, safety stock, multi-tier).
- The physical dimensions of the product and the holding bin.
- The demand profile of the product.
- The lead time and shipment pattern of the product.
- The cost of the product.

The goal of sizing an ideal kanban is to ensure that the system never runs out of inventory while the inventory level remains as low as possible.

Generally, you perform kanban calculations during periodic item planning cycles when the time periods are long. You should run the Kanban Size Calculation program after you run material requirements planning (MRP), which is generally once per month. When demand fluctuations are high, kanban calculations, particularly the number of kanban cards in process, should be calculated more frequently (for instance, on a weekly basis). You might also need to insert an ad hoc card to cover a short-term spike.

The Kanban Size Calculation Definition program enables you to use one of the default calculation methods that are provided by the system or to define a calculation method. A calculation identifier uniquely identifies each calculation method.

A calculation method consists of a description, business function, and defined set of parameters. The system provides four standard business functions. Each business function contains an equation that calculates the kanban size, and either the number of kanban cards or the quantity per card. The standard calculations that are provided by the system can be found in source module B3003960.

The system enables you to use custom programming to create custom equations, as well as the business functions that are required to implement the calculations. Some restrictions apply.

After you identify the business function for a specific calculation method, you must define which parameters to use. You can define 16 parameters; 13 are standard and three are custom. When you use a parameter in a calculation, you designate the parameter as either kanban-specific (specific to a kanban ID) or calculation-specific. The Kanban Parameter Usage UDC (30/KP) is hard-coded and designates how the system uses a parameter in the kanban size calculation:

- 0 - Parameter not used
- 1 - Kanban-specific parameter
- 2 - Calculation-specific parameter

If you want a kanban to use a specific calculation method, you must link that kanban master record to the calculation method using the Calculation Method field in Kanban Master Revisions program (P3016). It is recommended that you use the same calculation method to set up each kanban ID for the same kanban-controlled item, which eliminates any variance in kanban size.

## Kanban Size Calculation Parameters

The Kanban Size Calculation Definition program (P3017) provides 16 parameters to define for a given calculation method. The program has 13 standard parameters and three custom parameters. When you use a parameter, you designate it as either kanban-specific (specific to a kanban ID) or calculation-specific. The Kanban Parameter Usage UDC (30/KP) is hard-coded and specifies how the system uses a parameter in the kanban size calculation.

## Understanding Standard Kanban Equations

Software calculation methods that you use to determine the kanban size have associated business functions. The standard business functions contain one of the four standard size-calculation equations that the system provides.

You can customize the existing kanban sizing calculations or create different calculations using custom programming. You can also manually enter a kanban size instead of using a calculation method.

### Kanban Equation 1: Fixed Container Size and High Demand

This equation calculates the number of cards when the kanban quantity is fixed to the container size. Use this equation when item demand fluctuates significantly:

$$(\text{Kanban size}) = (\text{high daily demand}) \times [(\text{lead time delivery (days)}) + (\text{scan delta days})] + (\text{safety stock})$$

(High daily demand) = ( (Highest period demand in the Periods in MRP Window) x (vendor split percent) x (demand split percent for the consuming location)) ÷ (days built per period)

The system then calculates the number of kanban cards by dividing the kanban size by the container size.

### **Kanban Equation 2: Fixed Container Size and Average Demand**

This equation calculates the number of cards when the kanban quantity is fixed to the container size and demand is based on the average daily demand.

(Kanban size) = (average daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Average daily demand) = ( (average period demand in the Periods in MRP Window) × (vendor split percent) x (demand split percent for the consuming location)) ÷ (days built per period)

The system calculates the number of kanban cards by dividing the kanban size by the container size.

### **Kanban Equation 3: Fixed Number of Cards and High Demand**

This equation calculates the kanban quantity for a fixed number of containers when an item has high demand.

(Kanban size) = (high daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

The quantity per container or container size is calculated by dividing the kanban size by the number of cards.

### **Kanban Equation 4: Fixed Number of Cards and Average Demand**

This equation calculates the kanban quantity for a fixed number of containers with demand based on the average daily demand.

(Kanban size) = (average daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

The system calculates the quantity per container or container size by dividing the kanban size by the number of cards.

### **Manual Entry of Kanban Sizes**

The system enables you to manually enter the kanban quantity and number of containers. You enter this kanban information when you set up a kanban master record.

If you manually enter the kanban size on the Kanban Master Revisions form, ensure that the quantity that you enter is sufficiently large enough to supply the material that is consumed, according to the replenishment lead time that is defined for the item.

To prevent the system from overriding the user-specified kanban size, enter *1* in the Override field on the Kanban Master Revisions form.

When you use the manual entry method, the system performs no calculations.

## Form Used to Set Up a Kanban Size Calculation Definition

Form Name	FormID	Navigation	Usage
Work With Kanban Calculation Methods	W3017A	Kanban Management Setup (G30411), Kanban Size Calculation Definition	Add a Kanban size calculation definition.
Kanban Size Calculation Revisions	W3017B	Kanban Management Setup (G30411), Kanban Size Calculation Definition  Click the Add button on the Work With Kanban Calculation Methods form.	Set up a Kanban size calculation definition.

## Setting Up a Kanban Size Calculation Definition

Access the Kanban Size Calculation Revisions form.

**Kanban Size Calculation Definition - Kanban Size Calculation Revisions**

OK Cancel Tools

Calculation Method:  0 - Parameter Not Used  
 Description:  1 - Kanban Specific Parameter  
 Function Name:  2 - Calculation Specific Parameter

Periods in MRP Window	<input type="text" value="2"/>	Container Size	<input type="text" value="2"/>
Days Built Per Period	<input type="text" value="2"/>	Minimum Quantity Boundary	<input type="text" value="2"/>
Scan Delta Days	<input type="text" value="2"/>	Maximum Quantity Boundary	<input type="text" value="2"/>
Leadtime Delivery (Days)	<input type="text" value="2"/>	Minimum Number of Cards	<input type="text" value="2"/>
Vendor Split Percent	<input type="text" value="2"/>	Maximum Number of Cards	<input type="text" value="2"/>
Standard Pack Size	<input type="text" value="2"/>	Custom Parameter 1	<input type="text" value="0"/>
Safety Stock	<input type="text" value="2"/>	Custom Parameter 2	<input type="text" value="0"/>
Demand Split Percent	<input type="text" value="2"/>	Custom Parameter 3	<input type="text" value="0"/>

Kanban Size Calculation Revisions form

### Function Name

Identify the actual name of the function. It must follow standard ANSI C naming conventions (for example, no space between words). Select the business function for this calculation method. The system verifies that the business function exists.

### Periods in MRP Window

Specify the usage level of the Periods in MRP Window parameter in the Kanban Size Calculation program (R30450). Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban using a particular size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

This parameter defines the number of time buckets that the system uses to calculate the demand for kanban size.

The system counts the number of time buckets from a defined start date to arrive at the end of a time horizon. You enter the start date in a processing option for the Kanban Size Calculation program (R30450). If you do not specify a date, the system uses the material requirements planning (MRP) generation date as the start date.

It is recommended that you set the MRP Planning Horizon periods in the MRP/MPS Requirements Planning program (R3482) to the same settings as the Periods in MRP Window in the Kanban Size Calculation Parameter Definition program (P3018).

### **Days Built Per Period**

Use this parameter field to define the days built per week or month in the Kanban Size Calculation Parameter Definition program.

The days built per week or month are, on average, the number of working days in a week or month. The Kanban Size Calculation program divides the demand in a weekly bucket by the value in the days built per week parameter to determine an average daily demand. Similarly, the program divides the demand in a monthly bucket by the value in the days built per month parameter to determine an average daily demand.

### **Scan Delta Days**

Specify the usage level of the Scan Delta Days parameter in the Kanban Size Calculation program (R30450). This parameter defines the number of days between a kanban card checkout action and the day on which the supplier receives the notification of the checkout. For example, if a kanban card is scanned at 9:00 am one day, and the supplier receives an EDI 862 transaction the next day through a nightly batch program, the scan delta days parameter would be 1.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

### **Leadtime Delivery (Days)**

Specify the usage level of the Leadtime Delivery (Days) parameter in the Kanban Size Calculation program (R30450). This parameter is the time duration between when the goods leave the supplier and when they arrive at the work center. Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Vendor Split Percent**

Specify the usage level of the Vendor Split Percent parameter in the Kanban Size Calculation program (R30450).

You specify the vendor in the kanban master record. When a feeder work center is the source of the kanban, then this number indicates the fraction of demand that the particular work center satisfies. The Kanban Size Calculation program multiplies this value by the calculated demand to determine the demand per supplier.

For a kanban master record with the same supplying branch, consuming branch, supplying location, consuming location, and item number, the vendor split percentage is the same for all of the records. The first record's vendor split percentage is applied to all of the records. You can have different vendors for different kanban IDs with the same supplying branch, consuming branch, supplying location, consuming location, and item number combinations. The first record's vendor split percentage should be the highest possible, as set up in the Kanban Size Calculation Parameter Definition program. Thus, subsequent records are covered even if you have set up lower vendor split percentages in the Kanban Size Calculation Parameter Definition program.

Calculation-specific parameters have values that apply to all kanbans that uses a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban using a particular size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

This parameter is the percent of demand to which a particular vendor caters.

**Standard Pack Size**

Specify the usage level of the Standard Pack Size parameter in the Kanban Size Calculation program (R30450). This parameter is the standard shipment size for an item coming from a supplier. When you specify this value, the Kanban Size Calculation program rounds up the calculated kanban size to the closest multiple of this number.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Safety Stock**

Specify the usage level of the Safety Stock parameter in the Kanban Size Calculation program (R30450). This parameter is the quantity kept on hand to cover fluctuations in demand. The Kanban Size Calculation program adds this value to the calculated demand.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.



1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

### **Demand Split Percent**

Specify the usage level of the Demand Split Percent parameter in the Kanban Size Calculation program (R30450).

This parameter defines the demand for a kanban item at its consuming location, expressed as a percentage of the total demand for the same item at all locations in the branch/plant over a period of time.

When the consuming location on the kanban is the only location in which the item is used, then the demand split percent is 100 percent.

When multiple consuming locations exist, this parameter identifies the percent of demand from one location. For instance, 40 percent of the demand is planned by this kanban, and 60 percent of the demand is planned by another kanban.

The Kanban Size Calculation program multiplies this value by the demand for the item to determine the demand at the consuming location. For a kanban master record with the same supplying branch, consuming branch, supplying location, consuming location, and item number, the demand split percentage is the same for all the records. The first record's demand split percentage is applied to all of the records.

You can have different demand split percentages for different kanban IDs for the same supplying branch, consuming branch, supplying location, consuming location, and item number. The first record's demand split percentage should be the highest possible, as set up in the Kanban Size Calculation Parameter Definition program. Thus, subsequent records with the same supplying branch, consuming branch, supplying location, consuming location, and item number are covered, even if you have set up lower demand split percentages in the Kanban Size Calculation Parameter Definition program.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

### **Container Size**

Specify the usage level of the Container Size parameter in the Kanban Size Calculation program (R30450). This parameter defines the kanban movement quantity. For example, if the kanban is a physical container, the container size identifies how much the container can hold.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Minimum Number of Cards**

Specify the usage level of the Minimum Number of Cards parameter in the Kanban Size Calculation program (R30450). This parameter defines the minimum number of kanban cards in the cycle. Each kanban card represents a container. Each kanban should have at least one card. For fixed container size calculations, the Kanban Size Calculation program calculates the number of cards, and, if the calculated value is less than the specified minimum number of cards, the system uses the minimum number of cards.

For calculations that use a fixed number of cards, the minimum number of cards should equal the maximum number of cards.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Maximum Number of Cards**

Specify the usage level of the Maximum Number of Cards parameter in the Kanban Size Calculation program (R30450). This parameter defines the maximum number of cards in the cycle. Each kanban card represents a container. Each kanban should have at least one card. For fixed container size calculations, the Kanban Size Calculation program calculates the number of cards, and, if the number of cards that the program calculates exceeds the maximum number of cards, then the system uses the value that represents the maximum number of cards. For calculations that use a fixed number of cards, the minimum number of cards should equal the maximum number of cards.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Minimum Quantity Boundary**

Specify the usage level of the Minimum Quantity Boundary parameter in the Kanban Size Calculation program (R30450). This parameter defines the minimum quantity that can be ordered by a single kanban trigger. When the Kanban Size Calculation program calculates the kanban size, and the calculated size is less than the minimum quantity, then the system uses the minimum quantity as the size of the kanban.

The system assumes the kanban is fixed-size, when the minimum quantity for an item is same as the maximum quantity defined for the item. The Kanban Size Calculation program (R30450) calculates the number of kanbans required based on the fixed-size.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban using a particular size calculation method. Values are:

**Maximum Quantity Boundary**

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

Indicate the level of usage of the Maximum Quantity Boundary parameter in the Kanban Size Calculation program. This parameter defines the maximum quantity that a single kanban trigger can order. When the Kanban Size Calculation program calculates the kanban size, and the calculated size is greater than the maximum quantity, then the software uses the maximum quantity as the size of the kanban.

The system assumes the kanban is fixed-size, when the maximum quantity for an item is same as the minimum quantity defined for the item. The Kanban Size Calculation program (R30450) calculates the number of kanbans required based on the fixed-size.

they

Calculation specific parameters have values that apply to all kanbans using a particular size calculation method. Kanban-specific parameters have values that apply to a specific kanban using a particular size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

**Custom Parameter 1, 2 and 3**

(Optional) Specify the usage level of Custom Parameter 1 in the Kanban Size Calculation program (R30450). This custom parameter is user-defined. To use this parameter, you must modify or create the supporting business function.

Calculation-specific parameters have values that apply to all kanbans that use a specific size calculation method. Kanban-specific parameters have values that apply to a specific kanban that uses a specific size calculation method. Values are:

0: Parameter is not used.

1: Parameter is kanban-specific.

2: Parameter is calculation-specific.

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## Defining Values for Kanban Calculation Parameters

This section provides an overview of kanban calculation parameters and discusses how to:

- Define kanban-specific parameters.
- Define calculation-specific parameters.
- Define fixed-size kanban calculation parameters.

## Understanding Kanban Calculation Parameters

Parameters are defined as kanban-specific or calculation-specific for each calculation method in the Kanban Size Calculation Definition program (P3017). After you define a calculation method, you use the Kanban Size Calculation Parameter Definition program (P3018) to define the specific value used by each parameter.

### Kanban-Specific Parameters

Parameters are defined as kanban-specific or calculation-specific for each calculation method in the Kanban Size Calculation Definition program (P3017). After you define a calculation method, you use the Kanban Size Calculation Parameter Definition program (P3018) to define the specific value used by each parameter.

The system stores values for calculation method parameters that you defined as kanban-specific parameters (those that are specific to the kanban ID). When you use the Kanban Size Calculation Parameter Definition program (P3018) to enter default values, the system displays:

- Calculation method.
- Kanban ID.
- Parameters that are identified as kanban-specific parameters for the calculation method.

The system enables you to enter or revise values for parameters designated as kanban-specific parameters for a calculation method.

The Kanban Size Calculation program (R30450) uses the value of each parameter from the kanban-specific record.

### Calculation-Specific Parameters

The system stores values for calculation method parameters that are defined as calculation-specific parameters. When you use the Kanban Size Calculation Parameter Definition program (P3018) to enter default values, the system displays:

- Calculation method.
- Parameters that are identified as calculation-specific parameters for the calculation method.

The system enables you to enter or revise values for parameters that are designated as calculation-specific parameters for a calculation method.

The Kanban Size Calculation program (R30450) uses the value of each parameter from the calculation-specific record.

### Fixed-size Kanban Calculation Parameters

In calculation, the system determines the number of kanbans depending on the size of the kanban. If you want to use fixed-size kanbans, you define a calculation parameter where the maximum and minimum quantities are the same. If you enter the same value for the maximum and minimum quantities, the system assumes that the size of kanban is fixed. The system calculates the number of required kanbans based on the size of the kanban.

In a bicycle manufacturing unit, for example, the production assistant might manage the painting station using kanbans. The painted frames are stacked in a rack which is moved to the shop floor for the next stage of production. Each rack is designed to hold a fixed number of frames. Here the rack serves as a kanban with fixed quantity or size. Based on the quantity of components required and the size of the kanban, the system calculates the required number of racks with painted frames.

## Forms Used to Define Values for Kanban Calculation Parameters

Form Name	FormID	Navigation	Usage
Work With Kanban Size Calculation	W3018A	Kanban Management Setup (G30411), Kanban Size Calculation Parameter Definition	Select a kanban size calculation method.
Kanban Parameter Revisions	W3018B	Select the calculation method and kanban ID combination on the Work With Kanban Size Calculation form, and click the Select button.	Define kanban-specific and calculation-specific parameters.

## Defining Kanban-Specific Parameters

Access the Kanban Parameter Revisions form.

Kanban Parameter Revisions form

Complete the value field for each parameter that is identified as a kanban-specific parameter. The value fields for parameters that were not defined as calculation-specific are disabled, so you cannot enter values in them.

## Defining Calculation-Specific Parameters

Access the Kanban Parameter Revisions form.

Complete the value field for each parameter that is identified as a kanban-specific parameter. The value fields for parameters that were not defined as calculation-specific are disabled, so you cannot enter values in them. On the Kanban Parameter Revisions form, complete the value field for each parameter that is identified as a calculation-specific parameter.

## Generating Kanbans

This section provides an overview of the kanban generation process and discusses how to:

- Set processing options for Kanban Size Calculation (R30450).
- Calculate kanban size using standard equations.
- Calculate kanban size using processing options.

## Understanding the Kanban Generation Process

After you set up the item in the Kanban Master Revisions program (P3016), define the calculation method in the Kanban Size Calculation Definition program (P3017) and define parameter values in the Kanban Size Calculation Parameter Definition program (P3018), you can use the Kanban Size Calculation program (R30450) to calculate the size of a kanban. If you already manually entered a kanban size, you can prevent the system from updating the information that you entered by entering *1* in the Override field on the Kanban Master Revisions form.

For kanbans that are associated with JD Edwards EnterpriseOne Demand Flow® Manufacturing, the kanban sizes that are calculated in JD Edwards EnterpriseOne Demand Flow® Manufacturing populate the kanban size field in base manufacturing. The override flag in the F3016 table is set to *1* for DFM imported kanban records. This prevents the Kanban Size Calculation program (R30450) in JD Edwards EnterpriseOne from recalculating the kanban size and overriding the DFM calculated kanban sizes.

See *JD Edwards EnterpriseOne Demand Flow® Manufacturing 9.0 Implementation Guide*, "Managing Kanban in a Demand Flow® Environment," Understanding DFM Kanban Management.

When you generate kanbans, you define these processing options:

- Specify whether the Kanban Size Calculation program runs in proof or final mode.
- Print kanban cards.
- Print an exception report for customization purposes.
- Update the F3016 table if you are running the program in final mode.
- Specify a range, expressed as a percentage, within which the system does not adjust the size of the kanban.
- Specify the source of the demand (such as forecasts, sales orders, planned orders, firm orders, and rate schedules).
- Specify the aggregation of demand.
- Specify the start date to use for the demand calculation.

When you run the Kanban Size Calculation batch program, you use data selection criteria to select records from the Kanban Master table. When you have kanban records (kanban IDs) that have the same item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location, divide the demand by the number of similar kanban records so that the demand is distributed evenly among the records.

Kanban size is calculated using this formula:

$$(\text{Kanban size}) = [(\text{demand}) \times ((\text{scan delta days}) + (\text{lead time delivery days}))] + (\text{safety stock})$$

After you run the Kanban Size Calculation program, the system updates the F30161 table with the new kanban size, container size, and number of cards, based on the calculation method that you specified.

The system calculates kanban size for the first record for which you defined kanban-specific values. For kanban-specific records, use the first record's calculation values for the kanban size calculation when subsequent records have the same item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location. Subsequent records that are similar have the same calculation values and kanban sizes. The kanban size is based on the calculation method that is specified in the Kanban Size Definition program.

After you run the Kanban Size Calculation program, a report displays the new calculated kanban size, container size, number of cards, and previous kanban size.

You can run the Kanban Size Calculation program in either proof mode or final mode. When you run the program in proof mode, it displays the calculated size and does not update the Kanban Card Detail table (F30161).

When you run the program in final mode, it displays the calculated size and updates the .

The system assumes that the kanban size is fixed when the maximum and minimum quantities are set to be same for a kanban in the Kanban Size Calculation Parameter Definition program (P3018). The Kanban Size Calculation program (R30450) calculates the number of kanbans required based on the specific size of a kanban.

For calculating the required number of fixed-size kanbans, the system uses following formula:

Number of kanbans = (demand) × (lead time delivery days + scan delta days) / (kanban size – safety stock)

The Kanban Size Calculation program (R30450) compares the number of required kanbans with the current number of kanbans. If the current number is less than the necessary number, the system automatically generates more kanbans. If the current number is larger than the necessary number, the system removes the excessive kanbans from the .

The system will not perform any calculation if the kanban is defined with an override flag in Kanban master record.

You can run the Kanban Size Calculation program (R30450) either in proof or final modes. For fixed-size kanbans, the report displays the details of the newly added kanban. In the proof mode, the report lists the new kanbans with sequence numbers and displays a warning message indicating that kanbans will be generated. In final mode the report assigns kanban Ids and displays a message that kanbans have been generated. In case of excess kanbans, the system in proof mode prints a warning message indicating the kanbans to be removed. In the final mode, the system removes the kanbans from the database and prints a message indicating the removal of kanbans.

There should be at least two kanbans for an item with a combination of consuming branch/plant, consuming location, supplying branch/plant, and supplying location. If there is only one kanban, then the Kanban Size Calculation program creates a second kanban with the same attributes as the first kanban. While deleting the excess kanbans, the system leaves two kanbans for an item.

## Setting Processing Options for Kanban Size Calculation (R30450)

These processing options control default processing for the Kanban Size Calculation program.

### Process

These processing options specify how the system performs processes and calculations when running the Kanban Size Calculation program.

1. **Kanban Size** Specify whether to calculate kanban sizes. Values are:  
Blank: Do not calculate kanban sizes.

- I*: Calculate kanban sizes.
- 2. Mode** Specify proof or final mode. Values are:  
Blank: Proof mode  
*I*: Final mode
- 3. Print Kanban Cards** Specify whether to print kanban cards. Values are:  
Blank: Do not print kanban cards.  
*I*: Print kanban cards.
- 4. Print Kanban Exception Report** Specify whether to print the kanban exception report. Values are:  
Blank: Do not print the kanban exception report.  
*I*: Print Kanban Exception Report.
- 5. Filter Control** Enter the range, expressed as a percentage, above or below which the kanban should not be changed. For example, a value of 15 means plus or minus 15 percent.

## Demand

These processing options specify what demand to include in calculations when running the Kanban Size Calculation program.

- 6. Kanban Demand** Specify what value to use to calculate kanban demand. Values are:  
Blank: Use planning time fence.  
*I*: Use the sum of the included demands.  
2: Use the highest value among the included demands.
- a. Forecasts** Specify whether to include forecasts. Values are:  
Blank: Do not include  
*I*: Include
- b. Sales Orders** Specify whether to include sales orders. Values are:  
Blank: Do not include  
*I*: Include
- c. Firm Work Orders** Specify whether to include firm work orders. Values are:  
Blank: Do not include  
*I*: Include
- d. Planned Orders** Specify whether to include planned orders. Values are:  
Blank: Do not include  
*I*: Include
- e. Rate Schedules** Specify whether to include rate schedules. Values are:  
Blank: Do not include  
*I*: Include



**7. Start date for demand calculation**

Specify a start date for demand calculation. If you leave this field blank, the system uses the MRP generation date.

## Calculating Kanban Size Using Standard Equations

Select Kanban Management Setup (G30411), Kanban Size Calculation.

This example illustrates the calculation of each of the four standard kanban equations.

### Prerequisite Setup

The demand profile for the item is:

Date	Source	Quantity
October 6	FC	100
October 8	FWO	300
October 15	SO	200
October 17	SO	350
November 6	FC	150

The MPS Regeneration program (R3482) ran for five days, four weeks, and three months. The resulting time series is:

Date	Demand Type	Demand As Of Date	Comment
October 6	FC	100	
October 7			
October 8	FWO	300	
October 9			
October 10			
October 17	SO	550	
October 24			
October 31			8 periods in MRP Window
November 7	FC	150	
November 28			
December 31			
January 30			

The calculation method has been set up using the Kanban Size Calculation Definition program (P3017). The calculation method has calculation-specific parameter values, as defined in the Kanban Size Calculation Parameter Definition program (P3018).

Parameter	Parameter Value
Periods in MRP Window	8
Days built per week	5
Days built per month	20
Scan delta days	1
lead time delivery (days)	2
Vendor split percent	100
Safety stock	50
Demand split percent	100
Container size	25

## Demand Calculation

Forecasts and sales orders are the demand types that are included in the demand calculation. The demand aggregation is the sum of individual demands.

So, because this item has a sales order, a forecast, and a planned order for a particular period, the demand at the end of that period is the sum of the sales order and forecast quantities.

## High Daily Demand

Maximum demand occurs in the weekly period ending October 19.

Maximum demand is 550 units.

Adjusted maximum demand =  $550 \text{ units} \div 5 \text{ days built per week} = 110 \text{ units per day}$

## Average Daily Demand

Number of months in the chosen time horizon is 0.

Sum of all monthly demands is 0.

Number of weeks in the chosen time horizon is 3.

Sum of all weekly demands is 550 units.

Number of days in the chosen time horizon is 5.

Sum of all daily demands is 100 units.

(Total demand) = (number of months  $\times$  sum of all monthly demands) + (number of weeks  $\times$  sum of all weekly demands) + (number of days  $\times$  sum of all daily demands)

(Total demand) =  $(0 \times 0) + (3 \times 550) + (5 \times 100) = 2150$

(Total number of days) = (number of months × days build per month) + (number of weeks × days build per week) + (number of days)

(Total number of days) =  $(0 \times 20) + (3 \times 5) + (5) = 20$

(Average daily demand) = (total demand) ÷ (total number of days) =  $2150 \div 20 = 107.5$  units per day

### **Kanban Equation 1: Fixed Container Size and High Demand**

This equation calculates the number of cards when the kanban quantity is fixed to the container size. Use this equation when item demand fluctuates significantly.

(Kanban size) = (high daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Kanban size) =  $110 \times (2 + 1) + 50 = 380$  units

(Number of cards) = (kanban size) ÷ (container size) =  $380 \div 25 = 15.2 = 16$  cards

(Quantity per container) = (container size) = 25 units

---

**Note.** To create a fewer number of cards, increase the container size in the Kanban Size Calculation Parameter Definition program.

---

### **Kanban Equation 2: Fixed Container Size and Average Demand**

This equation calculates the number of cards when the kanban quantity is fixed to the container size and demand is based on the average daily demand.

(Kanban size) = (average daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Number of cards) = (kanban size) ÷ (container size) =  $373 \div 25 = 14.92 = 15$  cards

(Quantity per container) = (container size) = 25 units

---

**Note.** To create a fewer number of cards, increase the container size in the Kanban Size Calculation Parameter Definition program.

---

### **Kanban Equation 3: Fixed Number of Cards and High Demand**

This equation calculates the kanban quantity for a fixed number of containers when an item has high demand.

The number of cards is fixed at 10 in the Kanban Size Calculation Parameter Definition program.

The maximum and minimum number of cards are the same in the Kanban Size Calculation Parameter Definition program for the fixed number of cards.

(Kanban size) = (high daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Kanban size) =  $110 \times (2 + 1) + 50 = 380$  units

(Container size) = (kanban size) ÷ (number of cards) =  $380 \div 10 = 38$  (quantity per card or container size)

---

**Note.** To create a larger container size, decrease the number of cards in the Kanban Size Calculation Parameter Definition program.

---

### **Kanban Equation 4: Fixed Number of Cards and Average Demand**

This equation calculates the kanban quantity for a fixed number of containers with demand based on the average daily demand.

The number of cards is fixed at 10 in the Kanban Size Calculation Parameter Definition program.

(Kanban size) = (average daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Kanban size) =  $107.5 \div (2 + 1) + 50 = 372.5 = 373$  units

(Container size) = (kanban size) ÷ (number of containers) =  $373 \div 10 = 37.3 = 38$  units

---

**Note.** To create a larger container size, decrease the number of cards in the kanban Size Calculation parameter Definition program.

---

## Calculating Kanban Size Using Processing Options

Select Kanban Management Setup (G30411), Kanban Size Calculation.

This example illustrates the calculation of kanban size using the processing option on the Demand tab of the Kanban Size Calculation program (R30450).

### Sum of Included Demands

The processing option on the Demand tab in the Kanban Size Calculation program is set to 1 - Sum of Included Demands.

Use kanban standard equation 2, fixed container size and average demand to calculate the kanban size and number of kanban cards.

### Prerequisite Setup

Forecasts and sales orders were entered for nine time periods. Verify that the MRP Time Periods processing option in the MPS Regeneration program (R3482) is set to 9 periods and the Periods in MRP Window field in the Kanban Size Calculation Parameter Definition program (P3018) is set to 9.

The MRP Regeneration program ran for five days, three weeks, and one month. The resulting time series is:

Date	FSCU Quantity	SOU Quantity	Sum of Included Demands
February 2	100	30	130
February 3	200	40	240
February 4	300	50	350
February 5	300	50	350
February 6	200	100	300
February 13	200	100	300
February 20	300	200	500
February 27	250	200	450
March 31	100	200	300

**Note.** FSCU Quantity is the unadjusted forecast quantity (gross) for a specific item from the detail forecast table. SOU Quantity is the actual sales orders from the sales order detail table.

The calculation method has been set up using the Kanban Size Calculation Definition program (P3017). The calculation method has calculation-specific parameter values, as defined in the Kanban Size Calculation Parameter Definition program:

Parameter	Parameter Value
Periods in MRP window	9
Days built per week	5
Days built per month	20
Scan delta days	1
Lead time delivery (days)	2
Vendor split percent	0
Safety stock	50
Demand split percent	100
Container size	50
Minimum kanban size	20
Maximum kanban size	60

### Average Daily Demand

Number of months in the selected time horizon is 1.

Sum of all monthly demands is 300 units.

Number of weeks in the chosen time horizon is 3.

Sum of all weekly demands =  $300 + 500 + 450 = 1250$  units

Number of days in the chosen time horizon is 5.

Sum of all daily demands =  $130 + 240 + 350 + 350 + 300 = 1370$  units

(Total demand) = (number of months  $\times$  sum of all monthly demands) + (number of weeks  $\times$  sum of all weekly demands) + (number of days  $\times$  sum of all daily demands)

(Total demand) =  $(1 \times 300) + (3 \times 1250) + (5 \times 1370) = 10900$

(Total number of days) = (number of months  $\times$  days built per month) + (number of weeks  $\times$  days build per week) + (number of days)

(Total number of days) =  $(1 \times 20) + (3 \times 5) + (5) = 40$

(Average daily demand) = (total demand)  $\div$  (total number of days) =  $10900 \div 40 = 272.5$  units per day

## Kanban Equation 2: Fixed Container Size and Average Demand

Because the demand split percentage is 100 percent, the average daily demand remains the same.

The F3016 table includes three kanban records for the same supplying branch, supplying location, consuming branch, consuming location, and item number. The demand has to be distributed evenly among the records.

(Average daily demand) = (average daily demand) ÷ (number of similar kanban records)

(Average daily demand) =  $272.5 \div 3 = 91$

(Kanban size) = (average daily demand) × [(lead time delivery (days)) + (scan delta days)] + (safety stock)

(Kanban size) =  $91 \times (2 + 1) + 50 = 323$  units

The maximum kanban size is defined as 60 in the Kanban Size Calculation Parameter Definition program. Therefore, the kanban size is 60, because 323 is greater than 60.

(Number of cards) = (kanban size) ÷ (container size) =  $60 \div 50 = 1.2 = 2$  cards

## Highest Value of Included Demands

The processing option on the Demand tab in the Kanban Size Calculation program is set to 2 - Highest Value of Included Demands.

Use kanban standard equation 2, fixed container size and average demand, to calculate the kanban size and number of kanban cards.

## Prerequisite Setup

Forecasts and sales orders were entered for nine time periods. Verify that the MRP Time Periods processing option in the MPS Regeneration program (R3482) is set to 9 periods and that the Periods in MRP Window field in the Kanban Size Calculation Parameter Definition program (P3018) is set to 9.

The MRP Regeneration program ran for five days, three weeks, and one month. The resulting time series is:

Date	FSCU Quantity	SOU Quantity	Highest Value
February 2	100	30	100
February 3	200	40	200
February 4	300	50	300
February 5	300	50	300
February 6	200	100	200
February 13	200	100	200
February 20	300	200	300
February 27	250	200	250
March 31	100	200	200

The calculation method has been set up using the Kanban Size Calculation Definition program. The calculation method has calculation-specific parameter values, as defined in the Kanban Size Calculation Parameter Definition program:

Parameter	Parameter Value
Periods in MRP window	9
Days built per week	5
Days built per month	20
Scan delta days	1
Lead time delivery (days)	2
Vendor split percent	0
Safety stock	50
Demand split percent	100
Container size	50
Minimum kanban size	20
Maximum kanban size	60

### Average Daily Demand

Number of months in the selected time horizon is 1.

Sum of all monthly demands is 200 units.

Number of weeks in the chosen time horizon is 3.

Sum of all weekly demands =  $200 + 300 + 250 = 750$  units

Number of days in the selected time horizon is 5.

Sum of all daily demands =  $100 + 200 + 300 + 300 + 200 = 1100$  units

(Total demand) = (number of months  $\times$  sum of all monthly demands) + (number of weeks  $\times$  sum of all weekly demands) + (number of days  $\times$  sum of all daily demands)

(Total demand) =  $(1 \times 200) + (3 \times 750) + (5 \times 1100) = 7950$

(Total number of days) = (number of months  $\times$  days built per month) + (number of weeks  $\times$  days built per week) + (number of days)

(Total number of days) =  $(1 \times 20) + (3 \times 5) + (5) = 40$

(Average daily demand) = (total demand)  $\div$  (total number of days) =  $7950 \div 40 = 198.75$  units per day

### Kanban Equation 2: Fixed Container Size and Average Demand

Because the demand split percentage is 100 percent, the average daily demand remains the same.

The Kanban Master table contains three kanban records for the same supplying branch, supplying location, consuming branch, consuming location, and item number. The demand must be distributed evenly among the records.

$$(\text{Average daily demand}) = (\text{average daily demand}) \div (\text{number of similar kanban records})$$

$$(\text{Average daily demand}) = 198.75 \div 3 = 67$$

$$(\text{Kanban size}) = (\text{average daily demand}) \times [(\text{lead time delivery (days)}) + (\text{scan delta days})] + (\text{safety stock})$$

$$(\text{Kanban size}) = 67 \times (2 + 1) + 50 = 251 \text{ units}$$

The maximum kanban size is defined as 60 in the Kanban Size Calculation Parameter Definition program. Therefore, the kanban size is 60, because 251 is greater than 60.

$$(\text{Number of cards}) = (\text{kanban size}) \div (\text{container size}) = 60 \div 50 = 1.2 = 2 \text{ cards}$$



## CHAPTER 4

# Processing Kanban Transactions by Item

This chapter provides overviews of kanban processing and kanban transactions and discusses how to:

- Process kanban consumption and supply by item.
- Add ad hoc kanban cards.
- Release quantity from a blanket order using kanban processing.

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## Understanding Kanban Processing

A single program, Kanban Processing (P3157) , manages the electronically-implemented kanbans by using two modes. One mode processes kanban consumption by item, while the other mode processes kanban supply by item. Use the consumption mode to access kanbans at a consuming location, and the supply mode to access kanbans at a supplying location by specifying one or a combination of criteria:

- Item
- Location
- Supplier
- Kanban identification

The Kanban Processing program has a processing option that specifies whether the program uses kanban consumption mode or kanban supply mode. User-defined code (UDC) table 31/KS specifies the kanban status:

- 1 - Check-in
- 2 - Check-out
- 3 - Complete
- 4 - Destroyed

Kanban consumption mode enables you to access all kanbans at a specified consuming location. After you locate items, depending on the status of each item, you can assign one of the statuses at a consuming location:

- 1 - Check-in
- 2 - Check-out

Kanban supply mode enables you to access all kanbans that need replenishment for items that are stored or produced at a specified supplying location. After you locate items, depending on the status of each item, you can assign one of the statuses at a supplying location:

- 1 - Check-in

- 3 - Complete

Kanban check-out occurs when the kanban container is empty and requires replenishment. You use the kanban check-out function to initiate the replenishment transaction. For example, if the system is set up to do so, you might scan the kanban card to check it out.

After you check out the kanban, the software initiates a replenishment action that depends on the source type of the kanban. The system uses both the supplying and consuming locations in the kanban definition to electronically process subsequent material movements, which can include inventory issues to orders and inventory transfers.

You check in a kanban to designate that the materials are available for use. Depending on the individual business practices, you can check in the kanban when the materials become available at the supplying location, or you can wait until the kanban materials have arrived at the consuming location to process the check-in transaction in the software.

In a two-phase kanban, a third kanban status, Complete, indicates that the refill is complete at the supplying location and the kanban can be checked in. Because only inventory transfer transactions occur for source type 2 kanbans, two-phase kanbans do not have a Complete status.

### Source Type 1: Work Order and Rate Schedule Kanbans

Use a source type 1 kanban when the replenishment that must occur requires manufacturing activity. This activity can be either a work order to a work center or a rate schedule quantity to a dedicated production line.

The determination of whether you will produce these items with work orders or rate schedules is a fundamental business process decision, and the software determines which document type to create (and identifies the program to call to create the order) by the order policy code value that you set in the additional system information of the related branch/plant record. If you want the kanban to generate rate schedule orders for the item, you must use an order policy code value of 5.

All kanban containers can be reused once they have been checked in, so the records do not have to be managed unless business process or demand information dictates that you do so.

When you perform a check-out transaction for a source type 1 kanban, the system creates a manufacturing order and updates the Order Number and Order Type fields in the detail area. For multi-container kanbans, the system generates orders only when the last card is checked out.

To simplify the process of managing orders and their paperwork, you can set a processing option for the Kanban Processing program (P3157) to specify to automatically run the Order Processing batch program (R31410) when you check out Source type 1 kanbans. Provided that the required manufacturing information has been set up correctly, the software processes the kanban-generated order to attach parts list and routing information to the order header. The work order start date is forward scheduled. For the start date to calculate correctly, you must set up the scan delta days and lead time delivery (days) for the kanban ID in the Kanban Size Calculation Parameter Definition program (P3018). You can also generate pick lists for required components if you are using the JD Edwards EnterpriseOne Warehouse Management functionality.

If the item is a rate-schedule item, the system searches for an existing open rate that meets the kanban requirement and then creates a new rate if one does not exist. For the system to use an existing rate, certain conditions must be met at the time that the kanban is checked out:

- The start date for the existing rate is occurs before or on the date on which you have checked out the kanban.
- The requested date for the existing rate occurs on or after the date on which you have checked out the kanban.
- The exiting rate does not meet or exceed the closed rate status.

This is the rate that you entered in the processing options of the version of the Kanban Processing program that processes the check-out transaction.

If all of these conditions are met, the software then determines whether the line and cell identifier in the kanban master is the same as the line and cell for the existing rate.

After the software validates this information and finds a rate to match all criteria, it adds the kanban quantity to the open rate schedule and aggregates it on the same day that the kanban is checked out.

---

**Note.** The system does not use the default period information in the line and item relationships to spread the kanban order quantity. With kanban check-outs for rate scheduled items, the system assumes that the kanban demand is due on the same day that it is checked out. However, you can further manage rate quantities, using the Line Scheduling Workbench (P3153) and Line Sequencing Workbench (P3156) programs.

---

Typically, you use the supply mode of the Kanban Processing program to initiate movement of replenished materials from the supplying location to the consuming location. For the manufacturing order that was created by the kanban check-out action, the check-in action initiates a super backflush completion transaction. This activity assumes a one-phase kanban. If this kanban is a two-phase kanban, you must perform the Complete transaction to initiate the work order or rate schedule super backflush transactions.

During the check-in transaction, you complete all of the order completion process steps and transfer the resulting subassembly inventory from the supplying location to the consuming location, each of which would typically be an inventory location at a specific work center or strategic location on a production line. The Work Order Completion Detail form contains information about the location where the material is completed, and the system retrieves this information from the kanban master record. The supplying location in the kanban master record is always the default location where the work order completions occur. From this location, the system automatically transfers the materials by using an inventory transfer function.

For any kanban-generated manufacturing order, the software can interactively or blindly process the related work order issues, hours, quantities, and work order completions. In blind mode, the Super Backflush program (P31123) initiates all of these transactions, and no forms appear to review or revise any of the related order data. You specify whether to use interactive or blind mode processing in the processing options of the Kanban Processing program.

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**Note.** Because the two versions of the Kanban Processing program work independently, you must set the processing options of each to process transactions according to the business process decisions.

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The Work Order Inventory Issues program (P31113) can automatically suggest the proper issue quantity for the kanban-generated work order if information is set up in the software:

- The issue code for all components that you want to issue automatically is set to *U* in the bill of material or work order parts list, which is derived from the bill of material.

The *U* issue code is required for super backflush work order completions. Even if you set up the Work Order Inventory Issues program so that it does not validate the issue code type, the software does not suggest the issue quantity for the work order transaction. If you are processing all of these transactions blindly during kanban check-in, invalid issues are recorded.

- The last operation in the item's routing has a pay code of *M* or *B*.

You use the *M* pay code to record only material during super backflush. You use the *B* pay point code to record material and labor. If you do not set up the routing correctly, the software does not issue materials when the work order or rate schedule is completed.

- The processing of the Work Order Inventory Issues program (P31113) is set to suggest issue quantities that are based upon the work order or rate schedule quantity that is completed.

The system retrieves this information from the bill of material, which subsequently becomes the work order parts list. The Work Order Inventory Issues program can be set to both validate the issue code type (manual issue, backflush, and so on) and suggest the issue quantity, based upon the order quantity. You can also apply order yield and shrink, if required.

---

**Note.** If you do not use the *U* issue code type in the bill of material (or parts list), the software does not suggest issue quantities, regardless of the processing option setting in the Work Order Inventory Issues program. If you are executing material issues blindly, the system records incorrect issues in the F4111 table.

---

The Work Order Time Entry program (P311221) provides order hours and order quantity information for manufacturing accounting. When you generate a manufacturing order by using a kanban check-out transaction, the system uses the standard hours in the routing and the kanban order quantity to calculate the required order hours. The system uses the calculated hours for the order to update the hours and quantities information for the kanban order. As a separate process, you then update hours and quantities information for manufacturing accounting batch programs.

On the Work Order Completion Detail form, you can create or review lot and location identifiers for kanban-generated work order completions when location control in the branch/plant constants is inactive. Lot and serial numbers are subsidiary location identifiers in the F41021 table. If you activate the Location Control option in the branch constants, you cannot create new location records during transaction processing. When you use location and lot information during work order or rate schedule completions, all location information carries through to the inventory transfer.

When manufacturing orders are completed, whether by a kanban transaction or manual shop floor management processing activities, the related transactions for work order inventory issues and work order completions are recorded in the F4111 table. Hours and quantities transactions are recorded in the F31122 table. The inventory transfer for the kanban materials movement is also recorded in the F4111 table.

The table lists the default document types for these transactions:

Transaction	Default Document Type
Work order inventory issue	IM
Hours and quantities entries	IH
Work order completions	IC
Inventory transfer	IT

---

**Note.** You can change these document types during system setup. These document types are shipped with the software.

---

## Source Type 2: Inventory Transfer Kanbans

When a Source type 2 (inventory) kanban container is emptied of all items, the consuming location checks it out to return it to a raw materials inventory location, which could be a storeroom or a materials staging area from which production inventory requirements enter into the system. This staging area, or *supermarket* location, is used to manage raw in-process inventory (RIP). For example, when the empty container is replenished, a stock person checks it in. The check-in indicates that the kanban has been filled and an inventory transfer transaction is triggered to denote movement of the inventory from the raw material location to the shop floor. In practice, the material moves to its physical consuming location at the work center.

The transactions that occur are inventory transfers, which are noted by an *IT* document type in the F4111 table. When inventory is transferred from one location to another, the item ledger records it as a debit to the *from location* and a credit to the *to location*. Subtraction and addition records appear for all inventory transfers so that inventory records remain balanced.

You can set up a source type 1 kanban as a two-phase kanban, but no additional transactions occur during a Complete transaction for a kanban of this type.

### Source Type 3: Supplier Kanbans

You use a source type 3 kanban when you must buy materials from a supplier and have them moved directly to the location at which they will be consumed. The kanban consumption mode of the Kanban Processing program has a processing option that you can set so that the system creates a purchase order and calls a version of Purchase Orders program (P4310). Depending on how you set the processing options, the kanban check-out transaction can trigger one of these software actions:

- A search for an existing open purchase order that the system can use to refill this kanban
- A search for an open blanket purchase order from which a purchase order release can refill the kanban
- The creation a new purchase order for the kanban requirement

When the kanban is checked in, the kanban status changes to 1 to indicate that the supplier has filled the order and the purchase order receipt can be processed. An *OV* transaction (purchase order receipt) is recorded in the F4111 table when a purchase order is received. The *OV* document type indicates that an open purchase order voucher has not been matched and closed for accounting. The system creates a *PV* transaction when the open voucher has been matched.

---

**Note.** If you want the system to automatically initiate the purchase order receipts process when you perform a check-in or complete transaction for a source type 3 kanban, you must activate the Receipts option in the related Kanban Master record.

---

When you check out a supplier kanban, the system uses the unit of measure that you have defined in the kanban master for the purchase order detail line, regardless of the way in which the Unit of Measure processing option is set in the Purchase Orders program (P4310). The kanban unit of measure is the unit of measure that the system uses for the purchasing transaction. When the inventory transfer occurs, it also appears in the kanban unit of measure.

When you enter a lot number on the detail line of a kanban purchase order prior to the check-in transaction, the system does *not* carry the lot number through to:

- The detail transaction line of the Kanban ID, when you check it in to process the purchase order receipt
- The F4111 table, when the *OV* record is created
- The inventory transfer that moves the materials from the supplying location to the consuming location

These actions occur regardless of whether the kanban is one-phase or two-phase. The results are the same in both situations.

You can also use source type 3 kanbans to release quantity from blanket purchase orders that are open and valid for the kanban check-out requirements. You cannot create blanket purchase orders with a kanban check-out transaction. You must set up specific information in the software before you can release from blanket purchase orders with kanban check-out transactions.

## Source Type 4: Outside Assembly Kanbans

You can use a source type 4 kanban when you have a value-added manufacturing process that you outsource. As part of the outsourcing process, you provide the outside assembly supplier with the required materials (raw materials or subassembly parts). This situation might occur because the company can provide the raw materials or subassembly parts at a lower overall cost than can the outsourcing supplier. In either situation, you use the outside assembly kanban to create a sales order to sell all of the outside process items to the outsourced supplier; and, as part of the same kanban process, you use a purchase order to buy back the value-added subassembly or finished product. This process, while similar to an outside operation purchase order in shop floor transactions, offers more direct control and visibility of inventory than the outside operation purchase order. The sales order transaction relieves inventory balances for all components of the outsourced assembly while the purchase order transaction increments inventory for the outsourced parent item.

To control which items are shipped (using a sales order) and acquired (using a purchase order) when you check out a source type 4 kanban, you create a bill of material for the parent item. This bill of material lists:

- The required outsourced component items, which appear as individual detail lines within a sales order document
- The parent item of the bill of material, which is the value-added item that you are buying back from the supplier

When you check in a one-phase kanban of source type 4, the system performs a shipment confirmation transaction, a purchase order receipt transaction, and an inventory transfer transaction that moves the material from the supplying location to the consuming location that is specified in the kanban master record. If the kanban is a two-phase kanban, you must move the kanban to a Complete status before checking it in. The Complete status transaction ship confirms the sales order for the component items and performs the purchase order receipt for the parent item.

---

**Note.** When you set up kanban items for outside processing, you must use a stocking type of 9 and a special handling code of *O* for all of the items that are involved in these transactions. Such a transaction includes the parent item of the related bill of material.

---

You should not include kanbans of source type 4 when you run the Kanban Size Calculation program (R30450). Because the Description 2 column of the stocking type definition in the UDC table 41/I is intentionally blank for stocking type 9, the system does not consider these items purchased or manufactured. Material requirements planning (MRP) does not plan these items. You will not see a time series for these items in the F3413 table.

---

## Source Type 5: Interbranch Transfer Kanbans

For a kanban of source type 5, the system generates sales transfer orders. When you check out a kanban that is supplied by a branch/plant, the system creates a sales order to the branch/plant for the end-item and a transfer order for the end-item during check-in.

The sales side of the transfer order has one detail line with these fields:

- The Item Number field contains the kanban item.
- The Branch/Plant field represents the kanban that supplies the branch.
- The Quantity Ordered field represents the kanban size.
- The Location field displays the kanban supplying location.

The purchase side of the transfer order has one detail line with these fields:

- The Item Number field contains the kanban item.
- The Branch/Plant field represents the kanban consuming branch.

- The Quantity Ordered field represents the kanban size.
- The Location field displays the kanban consuming location.

After the last card is checked in using the kanban supply mode of the Kanban processing program, the system receives the purchase order that was created at check-out and completes the inventory transfer.

The purchase order is received to the location that is specified in the Transfer Order Receipt Location field in the processing options of the Kanban Processing program (P3157) .

---

**Note.** If the system finds errors while receiving the purchase order, the order will be processed.

---

Ad hoc kanban cards work in the same way as regular kanban cards for all source types. However, an additional status is required for ad hoc cards. When you check in an ad hoc card, the system changes the status to 4 (destroyed) for a one-phase kanban. When the ad hoc card is completed, the system changes the kanban status to 4 (destroyed) for a two-phase kanban.

The Kanban Processing program contains a Row menu option to initiate an ad hoc card when it has a destroyed status (the kanban status is 4). This situation enables you to reuse the ad hoc card for the same supplying branch, consuming branch, supplying location, consuming location, and item number. When you initiate the ad hoc card, the system changes the status from 4 (destroyed) to 1 (check-in). This change indicates that the ad hoc card is ready for use. The Initiate Ad hoc Row menu is enabled only when the kanban status is set to 4 and you highlight that particular record in the detail area.

When using lot or serial numbers, the lot number on any kanban that was entered at the time of check-in must be a valid lot number that exists in the lot master record, and that lot must have a defined expiration date. The lot number that is entered here updates both the Lot To and Lot From fields on the resulting inventory transfer.

The kanban master record does not have fields that are associated with lot or serial numbers. You can indicate only inventory locations that are valid in the F41021 table.

---

## Understanding Kanban Transactions

This section discusses:

- Kanban and replenishment transactions.
- Work order completions and super backflush for kanban.
- Purchase order receipts for kanban.

### Kanban and Replenishment Transactions

To support tight integration between kanban and replenishment transactions, the software must retain a relationship between the physical status of the kanban and any resulting transactions in the software. The relationship exists between the kanban and replenishment transaction so that, when the status of the kanban changes, the system is updated accordingly.

For example, when a kanban of source type 1 is checked out, the system generates the associated work order to replenish the kanban. To increase the integration between kanbans and the orders that they generate, you can process the completion transaction for the kanban from the related order completion or receipt program. For example, you can perform a completion transaction for a work order kanban by using the Work Order Completions program (P31114) .

This functionality only applies to two-phase kanbans.

## Work Order Completions and Super Backflush for Kanban

For any source type 1 kanban, regardless of whether it is one-phase or two-phase, you can perform completions for a kanban-generated work order either interactively or blindly at the time that you check in the kanban or mark it as complete. The method that you use to process completions depends on the way in which the processing options are set in the version of the Kanban Processing program (P3157) that you are using. Typically, you use the Kanban Supply version of the Kanban Processing program to check in kanbans for which work orders or rate schedules exist, but you can also use the Kanban Consumption version to perform kanban check-in transactions. However, you must use the Kanban Supply version to perform completion transactions for kanban orders.

---

**Note.** You should verify that the processing options of the Kanban Processing program that you are using for check-in and completion transactions are set according to the business process. These versions work independently, and the software processes are dictated by the processing option settings of each version.

---

You can also use the Super Backflush program (P31123) or the Work Order Completions program (P31114) to process the completion of a kanban-generated work order. This situation will move the status of the Kanban ID from checked out (2) to complete (3). For check-in, you must always use the Kanban Processing program (P3157).

The system enables you to complete a kanban card from work order completions and super backflush, provided that it has these characteristics:

- The kanban is a source type 1 one-phase or two-phase kanban.
- The kanban is checked out; hence, a work order is associated with the kanban.
- The manufacture of the kanban subassembly is completed by the production cell.

When you attempt to complete a work order through work order completions or super backflush, the system determines whether the work order was generated by a kanban transaction. The system performs a backflush (if it is set up to do so), updates inventory for the completed item, updates inventory for the components, initiates the kanban complete transaction, and updates the kanban status to Checked In.

You must set up the bill of material or generated parts list for the kanban work order (or rate schedule) to backflush order inventory. To do this activity, you must use either the *B* or *U* issue code type. If you are backflushing work order inventory when the order is complete (using the Completion with Backflush version of the Work Order Completions program), then:

- The parts list items must have an issue code type of *B*.
- The work order routing must have at least the last operation step with a pay point code of *B* or *M*.

If you are using the Super Backflush program to backflush materials, then:

- The parts list items must have an issue code type of *U*.
- The work order routing must have at least the last operation step set up with a pay point code of *M* or *B*.

---

**Important!** The setup of the system becomes especially critical when you process work order completion activities blindly during kanban complete transactions. If you do not have the proper setup, the system might not account for materials correctly when kanban transactions are processed.

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## Purchase Order Receipts for Kanban

The system enables you to check in a kanban card from purchase order receipts. The kanban must be a source type 3, two-phase kanban that is checked out.

When you attempt to receive a purchase order through the Purchase Order Receipts program (P4312), the system determines whether the purchase order is generated from a kanban. A check-out process at a specific location within the enterprise initiates kanban records. Thus, the kanban receipt must identify the consuming location to facilitate subsequent movement of the kanban. You enter the purchase order receipt for the kanban and confirm the quantity that was received.

When you approve the receipt, the system updates inventory, creates a receipt record, creates general ledger entries, initiates the check-in transaction, and updates the kanban status to Completed.

When the order quantity is not met, such as when the supplier over ships or under ships, the system updates the purchase order and kanban record, and cancels any remainder.

### See Also

*JD Edwards EnterpriseOne Shop Floor Management 9.0 Implementation Guide*, "Working with Completions"

*JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide*, "Using Receipt Processing"

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## Processing Kanban Consumption and Supply by Item

This section discusses how to:

- Set processing options for Kanban Processing (P3157).
- Process kanban consumption by item.
- Process kanban supply by item.

## Forms Used to Process Kanban Consumption and Supply by Item

Form Name	FormID	Navigation	Usage
Work With Kanban Masters	W3157A	Daily Processing - Repetitive (G3115), Kanban Consumption	Process kanban consumption by item.
Work With Kanban Masters	W3157A	Daily Processing - Repetitive (G3115), Kanban Supply	Process kanban supply by item.

## Setting Processing Options for Kanban Processing (P3157)

These processing options control default settings for the Kanban Processing program.

### Mode

These processing options specify the processing mode that the system uses when running the Kanban Processing program.

- |  |  |
|--|--|
| <b>1. Check-out and Check-in Mode</b>  | Specify whether the version of the program is used for check-out (consumption) or for check-in (supply). Values are:<br><i>I</i> : Set mode to kanban supply.<br>Blank: Use kanban consumption mode. |
| <b>2. Display Confirmation Message</b> | Specify whether the system displays a confirmation message when it performs the transaction. Values are:<br><i>I</i> : Display confirmation message.<br>Blank: Do not display confirmation message.  |
| <b>3. Kanban Status</b>                | Enter a kanban status to restrict the kanbans that you review to a specified status.   |

## Defaults

These processing options specify the default information the system uses during kanban processing.

- |   |  |
|---|--|
| <b>1. Item Number (Optional)</b>          | Enter the item number to review information for an individual item. The number can be in short, long, or third item number format.   |
| <b>2. Location (Optional)</b>             | Enter a location number to review information for an individual location from which goods will be moved.   |
| <b>3. Hours Equivalent to One Day</b>     | Specify the number of working hours in a day. The default value is 8.  |
| <b>4. Closed Status</b>                   | Enter a Closed Status code (UDC 00/SS) for a rate schedule or work order. The default value is 99.   |
| <b>5. Bill of Material Type</b>           | Specify a value from UDC 40/TB that designates the type of bill of material. You can define different types of bills of material for different uses. For example:<br><i>M</i> : Standard manufacturing bill<br><i>RWK</i> : Rework bill<br><i>SPR</i> : Spare parts bill<br><br>The system enters bill type M in the work order header when you create a work order, unless you specify another bill type. The system uses the bill type code on the work order header to identify the bill of material to use during the creation of the work order parts list. MRP uses the bill type code to identify the bill of material to use when it attaches MRP messages. Batch bills of material must be type M for shop floor management, product costing, and MRP processing. |
| <b>6. Employee Number (Optional)</b>      | (Optional) Indicate the default employee number to use for the detail completion lines and hours and quantities information. Use this employee number when using the Super Backflush program (P31123) to perform completion and check-in transactions that record work order and rate schedule completions.  |
| <b>7. Transfer Order Receipt Location</b> | Specify the default location to which order transfers will be received for type 5 kanbans.   |

## Process

These processing options specify how the system processes and displays values in the Kanban Processing program.

- 1. Work Order Processing** Specify whether the Work Order Processing program (R31410) runs when a work order is created at the checkout of the last card or container in the kanban.

*I*: Run Work Order Processing automatically.

Blank: Run Work Order Processing manually.
- 2. Hours and Quantities** Specify whether you want the Hours and Quantities program to execute in the background, or if you want it to appear. The Hours and Quantities value overrides the processing options for the version of the Super Backflush program (P31123) that you are using. Values are:

*I*: Execute Hours and Quantities in the background.

Blank: Hours and Quantities appears and requires the interactive involvement for processing.
- 3. Material Issues** Specify whether you want the Material Issues program to run in the background. The Material Issues value overrides the processing options for the version of the Super Backflush program (P31123) that you are using. Values are:

*I*: Run Material Issues in the background.

Blank: Material Issues appears and requires the interactive involvement for processing.
- 4. Work Order Completions** Specify whether you want the Work Order Completions program to run in the background. The Work Order Completions value overrides the processing options for the version of the Super Backflush program (P31123) that you are using. Values are:

*I*: Run Work Order Completions in the background.

Blank: Work Order Completions appears and requires the interactive involvement for processing.
- 5. Shipment Confirmation** Specify whether you want the Ship Confirm Batch Application program (R42500) to execute in the background. Values are:

*I*: Run Ship Confirm Batch Application program in the background.

Blank: Ship Confirm Batch Application program appears and requires the interactive involvement for processing.
- 6. Inventory Transfers** Specify whether you want the Inventory Transfers program to execute in the background. Values are:

*I*: Run Inventory Transfers in the background.

Blank: Inventory Transfers appears and requires the interactive involvement for processing.

## Purchasing

These processing options specify the information the system uses to create purchase orders during kanban processing.

- 1. Create Purchase Order** Specify a value that the system uses to create a purchase order for kanban-controlled items. When you enter 1 in the Create a Purchase Order field, the system creates a purchase order when you check out the last card or container in the kanban. When you enter 2 in the processing option, the system checks for an open purchase order that meets the checkout requirements before it creates a new purchase order.
- You can enter 1 or 2 in the processing option to automatically release a kanban quantity from an open blanket order. Values are:
- Blank: Use purchase order already created.
- 1: Create a new purchase order.
- 2: Find existing purchase order. If none exists, create a new purchase order.
- 3: Find existing purchase order using Transaction Date Range. If none exists create a new purchase order.
- 2. Transaction Date Range** Search for an existing purchase order created between the Date - From and Date - Thru.
- Date - From** Enter a date. If you leave the field blank, the system uses the current date.
- Date - Thru** (date - through) Enter a date. If you leave the field blank, the system uses the current date.
- 3. EDI 862 Transaction** Specify whether to automatically trigger an EDI 862 transaction. Values are:
- Blank: Do not trigger an EDI 862 transaction.
- 1: Trigger an EDI 862 transaction.

## Versions

These processing options control which version the system uses when you call other programs from the Kanban Processing program. This table lists the programs in the order that they appear on the Versions tab, along with the default version. If you leave the processing options blank, the system uses this default version. You can define different versions in accordance with business processes.

<b>1. Rate Header Maintenance (P3109)</b>	ZJDE0001
<b>2. Part Availability (P30205)</b>	ZJDE0001
<b>3. Work Order Entry (P48013)</b>	ZJDE0001
<b>4. Work Order Processing (R31410)</b>	ZJDE0001
<b>5. Open Orders Inquiry (P3160W)</b>	ZJDE0001
<b>6. Purchase Orders Entry (P4310)</b>	ZJDE0001
<b>7. Purchase Order Print (R43500)</b>	XJDE0011

- 8. Purchase Order Receipts (P4312)**      ZJDE0008
- 9. Super Backflush (P31123)**      ZJDE0001
- 10. Hours & Quantities (P311221)**      ZJDE0001
- 11. Material Issues (P31113)**      ZJDE0001
- 12. Work Order Completions (P31114)**      ZJDE0001
- 13. Inventory Transfers (P4113)**      ZJDE0001
- 14. Sales Order Entry (P4210)**      ZJDE0001
- 15. Shipment Confirmation (P4205)**      ZJDE0001
- 16. DFM Item Completion (RF31011B)**      XJDE0001

## Processing Kanban Consumption by Item

Access the Work With Kanban Masters form.

**Kanban Consumption - Work With Kanban Masters**

OK Find Cancel Row Tools

**Selection Criteria** Defaults

Item Number: 2040 Front Drop Out, Light Consuming Branch: \*

Consuming Location: \* Kanban ID: \*

Supplier: \* Kanban Status: \*

**Records 1 - 2**

Kanban ID	Card Number	Kanban Status	Status Description	2nd Item Number	Transaction Quantity	UM	Container Size
560	1	2	Out	2040	100.0000	EA	100
599	1	1	In	2040	100.0000	EA	100

Work With Kanban Masters form

To process kanban consumption by item:

1. To check out a kanban, select the detail line that represents the kanban container that you want to process, and then select Check Out from the Row menu.

If you have the processing option set up to do so, the system prompts you to confirm the transaction. When the check-out transaction has been processed, the kanban status is 2 (checked out).

2. To check in a kanban that was supplied by the production line (and for which a rate or work order was created), select the Defaults tab and complete the fields:
  - Shift
  - Employee Number
3. Select the appropriate Kanban ID record, and then select Check In from the Row menu.

---

**Note.** If the kanban card is an ad hoc card, the system updates the kanban transaction status to Destroyed and indicates that you should physically destroy the ad hoc kanban card.

---

4. To check out a kanban, select the appropriate Kanban ID record, and then select Check out from the Row menu.

The system displays a confirmation form that permits you to confirm or cancel the kanban transaction.

## Processing Kanban Supply by Item

Access the Work With Kanban Masters form.

To process kanban supply by item:

1. Select the Defaults tab and then complete the fields to check in a kanban that was supplied by the production line (and for which a rate schedule or work order was created):
  - Shift
  - Employee Number
2. Select the appropriate kanban record and then select Check In from the Row menu.
3. Click OK.

---

## Adding Ad Hoc Kanban Cards

This section provides an overview of ad hoc kanban cards and discusses how to add ad hoc kanban cards.

### Understanding Ad Hoc Kanban Cards

When an abnormal spike in demand occurs, you can insert an ad hoc kanban card for a single cycle to ensure that the in-process inventory will cover the demand.

You use the Kanban Master Revisions program (P3016) to add an ad hoc card. For a unique combination of supplying branch, consuming branch, supplying location, and consuming location, you can have one ad hoc kanban ID. You must have at least one non-ad hoc kanban ID that exists for the combination of supplying branch, supplying location, consuming location, consuming branch, and item number. An ad hoc kanban ID cannot be the first (or only) kanban ID that you have for an item.

You can set the quantity of the ad hoc kanban to be any number. The quantity definition of the ad hoc kanban is not dictated by the detail information for the parent kanban. Ad hoc kanban information is excluded from the Kanban Size Calculation (R30450) and the Kanban Replenishment Capacity (P3019) programs because the demand is uncertain and not planned.

**Note.** You can have only one ad hoc kanban for each unique combination of supplying branch, consuming branch, consuming location, supplying location, and item number. If two cards exist for an ad hoc kanban in the kanban master, the system represents it as two containers during kanban processing.

When an ad hoc kanban record exists, the system denotes its existence with a *Y* value in the Ad Hoc Card Exists field of both the kanban master and the Kanban Processing program (P3157). The number of cards for the ad hoc kanban dictates the number of records in the F30161 table. As with other multi-container kanbans, each container is represented as a separate record in the detail table.

Upon check in, the kanban transaction status is set to *4* (destroyed).

You can initiate the ad hoc kanban after it is destroyed. You do this initiation by selecting the ad hoc kanban record and then selecting Initiate Ad Hoc from the Row menu. The Initiate Ad Hoc option is available for selection only when the kanban that you select is an ad hoc kanban. When you select the Initiate Ad Hoc option, the system changes the status of the ad hoc kanban to *1* (checked in).

The kanban master maintains the information that identifies any kanban as an ad hoc card. The system maintains ad hoc card information in the Kanban Master table (F3016), even when the card has a status of Destroyed (kanban status 4).

## Forms Used to Add Ad Hoc Kanban Cards

Form Name	FormID	Navigation	Usage
Work With Kanban Master	W3016A	Kanban Management Setup (G30411), Kanban Master Revisions	Select a kanban record or complete header information to add a ad hoc kanban record.
Kanban Master Revisions	W3016B	Kanban Management Setup (G30411), Kanban Master Revisions  Select a kanban master record on the Work With Kanban Master form.	Add an ad hoc kanban record.

## Adding Ad Hoc Kanban Cards

Access the Kanban Master Revisions form.

**Kanban Master Revisions - Kanban Master Revisions**

OK Find Delete Cancel Form Row Tools

Item Number: 2001  
Supplying Location: S1  
Branch/Plant: M30  
Consuming Location: C1

**Records 1 - 2**

Ad Hoc Card Exists	Kanban ID	Supplying Location B/P	Kanban Size	Kanban UOM	Source Type	Phase	Supplier	Line/Cell Identifier
Y	3408	M30	30	EA	1	2		
Y	3903	M30	30	EA	1	2		

Kanban Master Revisions form

Select the Insert Ad Hoc option from the Form menu. The system generates a new ad hoc kanban card that includes the same detail information as the first kanban record. To customize the ad hoc kanban record to the demand needs, you can override its information.

---

**Note.** You must set the related processing option of the Kanban Master Revisions program (P3016) to enable ad hoc card creation.

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## Releasing Quantity from a Blanket Order Using Kanban Processing

This section provides an overview of blanket orders, lists prerequisites, and discusses how to:

- Set processing options for Purchase Order Inquiry (P3160W).
- Release quantity from a blanket order.

### Understanding Blanket Orders

You can enter a blanket order when you have an agreement with a supplier to purchase a certain quantity or amount of goods over a period of time. You must enter the entire quantity or amount on the blanket order and the negotiated price for those items.

Each time that you are ready to use a portion of the goods on the blanket order, you can create a purchase order to release that quantity from the blanket order.

### Prerequisites

To release quantity from an open blanket order using kanban processing, you must:

- Set the Create Purchase Order processing option on the Kanban Consumption program (P3157) to create a new purchase order upon kanban check-out.

You can do this with a processing option value of 1 or 2.

- Set the Blanket Releases processing option on the Processing tab of the Purchase Order Entry program (P4310) to release from blanket orders.

You can do this with a processing option value of 1 or 2.

- Indicate the Purchase Order Entry version that you have set up to perform blanket order releases in the processing options of the Kanban Consumption program.
- Set up the version of the Purchase Order Inquiry program (P3160W) with the document type that you use for the blanket orders from which you release quantity during kanban processing.

If you do not indicate the document type for blanket orders in the processing options of this program, you cannot perform blanket order releases using kanban processing.

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**Note.** The Purchase Order Inquiry program is not a JD Edwards EnterpriseOne Procurement system program. You use this program only in association with kanban processing. By using this program, you can set up the software to process blanket orders that are separate from other purchasing orders in the system. For example, you can use a different blanket order document type for kanban-specific blanket orders that you negotiate for a six-month period instead of a one-year period.

---



If you do not set up all of these criteria to release the quantity from an open blanket order, the system creates a new purchase order for the kanban quantity every time that you check out the related kanban.

If you have more than one valid blanket order from which the kanban quantity can be released, the system displays the Work With Open Blanket Orders form so that you can select the open blanket order from which you want to release the kanban transaction quantity. When you release a quantity from a blanket purchase order to create a purchase order, the original blanket order number (and related document type) is referenced in the detail line of the purchase order that you create.

## Form Used to Release Quantity from a Blanket Order Using Kanban Processing

Form Name	FormID	Navigation	Usage
Work With Open Blanket Orders	W3160WC	<p>Daily Processing - Repetitive (G3115), Kanban Consumption</p> <p>Select the supplier (source type 3) kanban master record on the Work With Kanban Masters form, and select Check Out from the Row menu.</p>	<p>Release quantity from a blanket order using kanban processing.</p> <p><b>Note.</b> The kanban that you select on the Work With Kanban Masters form must be a kanban (and related item number) for which you have at least one open blanket order.</p>

## Setting Processing Options for Purchase Order Inquiry (P3160W)

These processing options control default processing for the Purchase Order Inquiry program.

### Default

These processing options control default values that the system uses during Purchase Order Inquiry (P3160W).

<b>Order Type</b>	Specify the document type (UDC 00/DT) that you associate with the blanket purchase orders from which you will release quantity using kanban processing. If you create a new document type to represent blanket orders, whether for kanban processing or otherwise, you must set up that document type in the Document Type Maintenance program (P40040).
<b>From Status</b>	Specify the valid statuses (UDC 40/AT) of the blanket orders that you use in blanket order releases. The statuses that you indicate must also be set up in the order activity rules for the document type that you specified in the first processing option.
<b>Thru Status</b>	Specify the valid statuses (UDC 40/AT) of the blanket orders that you use in blanket order releases. The statuses that you indicate must also be set up in the order activity rules for the document type that you specified in the first processing option.
<b>Currency Code</b>	Specify a currency code for the transaction, if it is different from the base system currency.

### Processing

These processing options specify how the system processes and displays values within Purchase Order Inquiry.

**1. Status Code**

Specify whether you want the status codes on the Default tab to be the next status or the last status of the blanket order. The system uses these statuses to find only those blanket orders that are within the status limits that you indicate. The system does not use these statuses for purchase orders that are created by kanban processing. Values are:

*1*: The status codes on the Defaults tab are based on Last Status.

Blank: Use the Next Status of the blanket order.

**2. Date Checked Against the Date Range**

Specify the order date to use when searching for open blanket orders. You should set this processing option to match the business process for blanket orders because it prevents valid blanket orders from appearing during kanban processing when you search using the wrong date. Values are:

Blank: Requested date

*1*: Transaction date

*2*: Promised delivery date

*3*: Original promised delivery date

*4*: Receipt date

*5*: Cancel date

*6*: General ledger date

**3. Display Costs**

Specify whether you want the system to display or hide cost information in the orders that the system displays for blanket release. Values are:

*1*: Hide cost information.

Blank: Display costs.

**Versions**

This processing option controls which version the system uses when the Purchase Order Inquiry program calls other programs.

**PO Receipt Routing**  
(purchase order receipt routing)

Specify the version of the Receipt Routing Movement and Disposition program (P43250) to use if it is different from the pristine version (ZDJE0001). To use receipts routing for purchased items, you must:

- Set up the item branch record of the kanban item so that it invokes receipts routing during purchasing receipts.
- Set up the receipts routing definition and associate it to the item record of the kanban.

**See Also**

*JD Edwards EnterpriseOne Procurement Management 9.0 Implementation Guide*, "Processing Special Orders," Working with Blanket Orders

**Releasing Quantity from a Blanket Order Using Kanban Processing**

Access the Work With Open Blanket Orders form.

To release quantity from a blanket order using kanban processing:

1. Select the blanket order from which you want to release the kanban transaction quantity.
2. Click the Select button.
3. If you have the option to confirm kanban transactions were activated, select OK on the Confirmation selection form.
4. Review the purchase order document number and related order document type that the system generated on the Work With Kanban Masters form.

The system displays only the purchase order document type for blanket order releases in the kanban transaction record. Neither the blanket order document number nor the blanket order document type appears in the kanban transaction record.

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**Note.** When you are ready to check in the kanban to designate container fulfillment, the process becomes the same as the check-in process for any other supplier (source type 3) kanban. If you have a one-phase kanban, the system performs the purchase order receipt and the inventory transfer when you check in the kanban. If you have a two-phase kanban, you must perform a completion transaction to process the purchase order receipt of the kanban-generated purchase order, and then check in the kanban to initiate the inventory transfer that disposes the material from the supplying location to the consuming location.

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## CHAPTER 5

# Identifying Insufficient Inventory

This chapter provides an overview of kanban replenishment capacity and discusses how to set processing options for Kanban Replenishment Capacity (R30470).

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## Understanding Kanban Replenishment Capacity

The Kanban Replenishment Capacity program (R30470) enables you to track the production capacity of a kanban and compare it to the demand pattern of the item on the kanban for a period of time that you specify. The demand is taken as the raw demand from the material requirements planning (MRP) time series. The system calculates the production capacity of a kanban, based on a kanban ID, assuming that the check-out is completed on the start date that is specified. It then calculates the demand for the specified period of time. The system writes all kanbans that cannot meet the demand to a new table and displays an alert. The system clears the Kanban Replenishment Capacity table (F3019) every time that you run the Kanban Replenishment Capacity program.

The system calculates the inventory shortfall or excess:

(Kanban capacity) = (kanban size) × (number of cycles) × (number of kanban records that are similar)

(Number of cycles) = [(number of months) × (number of weeks) × (number of days)] ÷ [(scan delta days) + (lead time delivery (days))]

If the item number, consuming branch/plant, consuming location, supplying branch/plant, and supplying location are the same, then the kanban capacity and demand are the same for those records.

The number of units by which the inventory exceeds or falls short of the demand is then associated with each kanban master. The system provides a report of the total kanban capacity compared to the total kanban demand.

When the demand exceeds the production capacity, it leads to an inventory shortfall. A shortfall of inventory indicates that the demand taken into account during the kanban size calculation is different from the demand taken into account during the shortfall measurement. The inventory manager can react to the shortfall based on the quantity by which the system falls short of inventory and the nature of the increase in demand. When the inventory falls short by a small quantity, the inventory manager might decide not to react at all. When the shortfall is too high, then the inventory manager might react to it based on the nature of the increase in demand. When the increase in demand is a temporary spike, then the inventory manager can add an ad hoc card to the system. When the demand is permanent, then the inventory manager might run the Kanban Size Calculation program (R30450) to update the sizes.

---

**Note.** When the system identifies an inventory starvation situation, the kanban size is too low. Also, when a lot of ad hoc cards appear in the system, the size calculation is a poor representation of the demand. In these instances, the inventory manager should run the Kanban Size Calculation program to adjust the kanban size.

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## Setting Processing Options for Kanban Replenishment Capacity (R30470)

These processing options control default processing for the Kanban Replenishment Capacity program.

### Defaults

These processing options control the default information that the system uses when running the Kanban Replenishment Capacity program (R30470).

- |                      |   |
|----------------------|---|
| <b>1. Start Date</b> | Manually enter the start date for the order or have the system calculate it using a back-scheduling routine. The routine starts with the required date and offsets the total lead time to calculate the appropriate start date. |
| <b>2. End Date</b>   | Enter the date that an item is scheduled to arrive or that an action is scheduled for completion.   |

### Versions

This processing option specifies which version the system uses when the Kanban Replenishment Capacity program calls other programs.

- |  |  |
|--|--|
| <b>3. Kanban Size Calculation (R30450)</b> | Specify the version of the Kanban Size Calculation program (R30450) called by the Kanban Replenishment Capacity program. If you leave the processing option blank, the system uses the default version XJDE0001. |
|--|--|

## CHAPTER 6

# Setting Up Multi-tier Kanban Transactions

This chapter provides an overview of multi-tier kanban transactions and discusses how to define a kanban reorder point.

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### Understanding Multi-tier Kanban Transactions

Many manufacturing facilities operate several manufacturing lines (or cells) that consume the same part, where the part operates as a kanban. The assembly line kanbans trigger replenishment through a central store, which, in turn, triggers a consolidated replenishment from a supplier. A kanban reorder point for the source location triggers these multi-tier kanban transactions.

An inventory kanban (primary kanban) can be tiered with another (secondary) kanban. You set up tiered kanbans to form a kanban chain. All links of the chain, other than the one farthest from the point of consumption, have to be inventory-replenished (source type 2) kanbans.

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**Note.** The system requires that the primary kanban be source type 2 to associate it with the secondary kanban. The last kanban in the multi-tier chain can be any source type.

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When a source type 2 kanban is slated to generate multi-tier kanban requests from the supplying location, the system maintains the information about the secondary kanban in the Related Kanban ID field in the kanban master record.

When you check in a primary kanban of source type 2 and you set up a related kanban, these events occur:

- The line or cell operator checks in the source type 2 kanban.
- The system updates inventory to indicate that it is being transferred to the line.
- The system decrements inventory at the source location.
- The system performs a reorder point assessment on the source location.

When the quantity at the sourcing location is equal to or less than the defined reorder point, the system creates a replenishment kanban trigger that is based on the item and consuming location. The system checks out the secondary kanban to fill the reorder point trigger. The system checks out a secondary tier kanban only when a primary tier kanban of source type 2 is checked in and the reorder point is triggered at the consuming location of the secondary kanban.

---

**Note.** You should enter 1 in the Create Purchase Order processing option on the Purchasing tab of the processing options for the Kanban Processing (P3157) program. The system cannot process this program for multi-tier kanbans when a value of Blank or 2 appears in this processing option.

---

When the quantity at the sourcing location is greater than the defined reorder point, the system does not create a replenishment trigger.

You are required to set up replenishment reorder points for the secondary kanban. The Fixed Putaway Locations program (P46012) manages kanban replenishment points for fixed locations. When you select the Kanban option, location and normal replenishment point information appears in the detail area.

**Note.** For kanban-controlled items, enter 4 in the processing option on the Display tab. This value causes the system to display the Normal Replenishment Point field that is used with kanban.

See *JD Edwards EnterpriseOne Warehouse Management 9.0 Implementation Guide*, "Setting Up Warehouse Management," Setting Up Fixed Putaway Locations.

The system ensures that the reorder point that you entered is in the primary unit of measure for the kanban item. If you try to enter a different unit of measure, the system displays an error message.

**Note.** Although this discussion centers on a two-tier kanban, a kanban with more than two tiers follows the same pattern.

## Defining a Kanban Reorder Point

This section discusses how to define a kanban reorder point.

### Form Used to Define a Kanban Reorder Point

Form Name	FormID	Navigation	Usage
Fixed Location Revisions	W46012B	Kanban Management Setup (G30411), Fixed Locations  Click the Kanban option on the Work With Fixed Locations form, and click the Add button.	Define a kanban reorder point.

### Defining a Kanban Reorder Point

Access the Fixed Location Revisions form.

**Fixed Locations - Fixed Location Revisions**

OK Delete Cancel Form Tools

Branch/Plant 27

Item Number 2112 Custom Seat (FBB)

U/M EA Each

**Records 1 - 2** Customize Grid

Location	Normal Replenishment Point
11.AAA.11	50.0000

Fixed Location Revisions form



Specify the item, branch/plant and location for which you want to define the reorder point.

**Normal Replenishment Point**

Enter the quantity that represents the normal level of inventory at a fixed picking location. The system uses this value during batch replenishments to generate replenishment requests.

You can have the system perform replenishment when the quantity in a fixed picking location reaches either the normal replenishment point or the minimum replenishment point. During automatic, or online, replenishment, the system uses the minimum replenishment point. For batch replenishment, you specify in the processing options of the Batch Replenishment program (P461601) which replenishment point you want the system to use.



## CHAPTER 7

# Planning for Kanban Management

This chapter discusses planning for kanban management.

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## Understanding Planning for Kanban Management

In the current business environment, you might want to present the supplier of procured kanban items with the demand schedule for the item. To support the generation of a demand schedule, Material Requirements Planning (MRP) must first generate the component demand for kanban-controlled items. Non-procured, kanban-controlled items also use this demand to calculate size.

### MRP Schedule Generation for Kanban Management

When you run a material requirements planning (MRP) generation, the system explodes the component demand and stores them in time series buckets. When the component item is kanban-controlled, the system generates the planning schedule and associated planning messages. However, you cannot view or process these messages. You run the MRP generation for kanban-controlled items only to generate the demand. All replenishment action for kanban-controlled items should originate from the Kanban Processing program (P3157).

A kanban that is sourced by a work center creates a work order or a rate schedule that generates component demand requirements in MRP. MRP creates planning messages for a kanban-controlled item and its components. You cannot use messages that are generated for a kanban-controlled item to initiate replenishment.

A kanban that is sourced by an outside supplier initiates replenishment through a purchase order. MRP generates order messages for such items, but they cannot be processed.

When the MRP generation is complete, MRP messages for kanban items do not appear in the MRP Detail Message Review program (P3411) . The system does not allow the processing of messages for kanban items in the MRP Detail Message Review program (P3411) or the MRP/MPS Detail Message Processing program (R3411) .

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**Note.** The system does not differentiate the messages for kanban items from messages for regular items in any way other than disallowing processing.

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All other MRP processing, such as pegging, time series, multiplant, minimum, and maximum, works the same way for kanban-controlled items as it does for regular items.

When MRP generation is complete, you can generate the demand schedule and send information to the supplier.

### Demand Schedule Generation for Kanban Management

When material requirements planning (MRP) generation is complete, the planner runs the demand schedule extraction to generate the supplier item demand schedule. The system processes the MRP messages that it generates for both kanban-controlled and non-kanban items.

Before you can successfully use supplier release scheduling (SRS) for kanban-controlled items, you must define the demand by running the MPS Regeneration program (R3482) or inputting a manual (ad hoc) release schedule.

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**Note.** You do not need to create a blanket order for kanban-controlled items. You do not need to set up the supplier release master record in the Supplier Schedule Master Revisions program (P4321) because the kanban master identifies the supplier for the kanban-controlled item.

---

When SRS is set up, the system generates the demand schedule in the Vendor Schedule Quantity table (F3430).

Each time you generate the demand schedule, the system verifies whether an item is kanban-controlled, but it does not generate releases or purchase orders (neither blanket nor non-blanket, for kanban-controlled items), even when a supplier is commitment for the item.

The purchase order is released at the time of kanban check-out. If you set up an outbound transaction (EDI 862), the system publishes it.

The Supplier Release Schedule Generation program (R34410) ignores release generation for kanban-controlled items.

You can set a processing option that enables you to publish the demand schedule in the form of an outbound transaction (EDI 830).

## CHAPTER 8

# Using Kanban Capacity Self-Service for Planners

This chapter provides an overview of kanban capacity self-service for planners and discusses how to adjust kanban size.

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## Understanding Kanban Capacity Self-Service for Planners

To accurately account for kanban-controlled items, planners must first run material requirements planning (MRP) generation and then run the kanban size calculations. Then, the planner can use the self-service portal to access information about kanban capacity.

The kanban self-service portal is restricted to internal users only, particularly item planners who use the tool for easier viewing of kanban requirements. The portal also restricts the planner to changing only the capacity of a kanban.

When in the self-service portal, the planner can review information about kanbans. For instance, the portal alerts the planner about the number of kanbans in which capacity does not meet demand or in which capacity is greater than demand.

The planner's goal is to manage the kanban size in relation to the demand for the item. The capacity of the Kanban to meet the demand is governed by the size, number of cards, and the cycle time for replenishment. The planner should manage the kanban so that the capacity exceeds the demand.

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## Adjusting Kanban Size

This section discusses how to adjust kanban size using self-service.

### Forms Used to Adjust Kanban Size

Form Name	FormID	Navigation	Usage
View Kanban Capacity	W3019B	Kanban Management Setup (G30411), Kanban Replenishment Capacity	Review the capacity versus demand information.
Edit Kanban Size	W3017B	Kanban Management Setup (G30411), Kanban Replenishment Capacity  Select a record on the View Kanban Capacity form, and click Edit in the Action field.	Adjust kanban size.

## Adjusting Kanban Size Using Self-Service

Access the View Kanban Capacity form.

To adjust kanban size using self-service:

1. Review the capacity versus demand information.
2. Select a record that you want to work with and then click Edit in the Action field.
3. On the Edit Kanban Size form, either enter a kanban size manually or click the Calculate Size button.

Use the Calculate Size button to have the system calculate the size based on the defined equation and parameter values.

4. Click OK.

The View Kanban Capacity form appears and displays the changes. On the View Kanban Capacity form, an asterisk appears in the Capacity column heading. The record for which the kanban size was edited displays the capacity in red. A note indicates that the capacity has changed and that you should run the Kanban Replenishment Capacity program (R30470) again before the changes take effect.

5. Click the Cancel button on the Edit Kanban Size form to return to the View Kanban Capacity form without saving the changes.

# Glossary of JD Edwards EnterpriseOne Terms

<b>Accessor Methods/Assessors</b>	Java methods to “get” and “set” the elements of a value object or other source file.
<b>activity rule</b>	The criteria by which an object progresses from one given point to the next in a flow.
<b>add mode</b>	A condition of a form that enables users to input data.
<b>Advanced Planning Agent (APAg)</b>	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 relational databases, flat file format, and other data or message encoding, such as XML.
<b>alternate currency</b>	<p>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.</p> <p>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.</p>
<b>Application Server</b>	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).
<b>as if processing</b>	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.
<b>as of processing</b>	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.
<b>Auto Commit Transaction</b>	A database connection through which all database operations are immediately written to the database.
<b>back-to-back process</b>	A process in JD Edwards EnterpriseOne Supply Management that contains the same keys that are used in another process.
<b>batch processing</b>	<p>A process of transferring records from a third-party system to JD Edwards EnterpriseOne.</p> <p>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.</p>
<b>batch server</b>	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.
<b>batch-of-one immediate</b>	<p>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.</p> <p>See also direct connect and store-and-forward.</p>
<b>best practices</b>	Non-mandatory guidelines that help the developer make better design decisions.

<b>BPEL</b>	Abbreviation for <i>Business Process Execution Language</i> , a standard web services orchestration language, which enables you to assemble discrete services into an end-to-end process flow.
<b>BPEL PM</b>	Abbreviation for <i>Business Process Execution Language Process Manager</i> , a comprehensive infrastructure for creating, deploying, and managing BPEL business processes.
<b>Build Configuration File</b>	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.
<b>build engineer</b>	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.
<b>Build Program</b>	A WIN32 executable that reads build configuration files and generates an ANT script for building published business services.
<b>business analyst</b>	An actor that determines if and why an EnterpriseOne business service needs to be developed.
<b>business function</b>	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.
<b>business function event rule</b>	See named event rule (NER).
<b>business service</b>	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.
<b>business service artifacts</b>	Source files, descriptors, and so on that are managed for business service development and are needed for the business service build process.
<b>business service class method</b>	A method that accesses resources provided by the business service framework.
<b>business service configuration files</b>	Configuration files include, but are not limited to, <code>interop.ini</code> , <code>JDBj.ini</code> , and <code>jdelog.properties</code> .
<b>business service cross reference</b>	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.
<b>business service cross-reference utilities</b>	Utility services installed in a BPEL/ESB environment that are used to access JD Edwards EnterpriseOne orchestration cross-reference data.
<b>business service development environment</b>	A framework needed by an integration developer to develop and manage business services.
<b>business services development tool</b>	Otherwise known as JDeveloper.
<b>business service EnterpriseOne object</b>	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.



<b>business service framework</b>	Parts of the business service foundation that are specifically for supporting business service development.
<b>business service payload</b>	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.
<b>business service property</b>	Key value data pairs used to control the behavior or functionality of business services.
<b>Business Service Property Admin Tool</b>	An EnterpriseOne application for developers and administrators to manage business service property records.
<b>business service property business service group</b>	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.
<b>business service property categorization</b>	A way to categorize business service properties. These properties are categorized by business service.
<b>business service property key</b>	A unique name that identifies the business service property globally in the system.
<b>business service property utilities</b>	A utility API used in business service development to access EnterpriseOne business service property data.
<b>business service property value</b>	A value for a business service property.
<b>business service repository</b>	A source management system, for example ClearCase, where business service artifacts and build files are stored. Or, a physical directory in network.
<b>business services server</b>	The physical machine where the business services are located. Business services are run on an application server instance.
<b>business services source file or business service class</b>	One type of business service artifact. A text file with the .java file type written to be compiled by a Java compiler.
<b>business service value object template</b>	The structural representation of a business service value object used in a C-business function.
<b>Business Service Value Object Template Utility</b>	A utility used to create a business service value object template from a business service value object.
<b>business services server artifact</b>	The object to be deployed to the business services server.
<b>business view</b>	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.
<b>central objects merge</b>	A process that blends a customer's modifications to the objects in a current release with objects in a new release.
<b>central server</b>	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.

<b>charts</b>	Tables of information in JD Edwards EnterpriseOne that appear on forms in the software.
<b>check-in repository</b>	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).
<b>connector</b>	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.
<b>contra/clearing account</b>	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.
<b>Control Table Workbench</b>	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.
<b>control tables merge</b>	A process that blends a customer's modifications to the control tables with the data that accompanies a new release.
<b>correlation data</b>	The data used to tie HTTP responses with requests that consist of business service name and method.
<b>cost assignment</b>	The process in JD Edwards EnterpriseOne Advanced Cost Accounting of tracing or allocating resources to activities or cost objects.
<b>cost component</b>	In JD Edwards EnterpriseOne Manufacturing, an element of an item's cost (for example, material, labor, or overhead).
<b>credentials</b>	A valid set of JD Edwards EnterpriseOne username/password/environment/role, EnterpriseOne session, or EnterpriseOne token.
<b>cross-reference utility services</b>	Utility services installed in a BPEL/ESB environment that access EnterpriseOne cross-reference data.
<b>cross segment edit</b>	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.
<b>currency restatement</b>	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.
<b>cXML</b>	A protocol used to facilitate communication between business documents and procurement applications, and between e-commerce hubs and suppliers.
<b>database credentials</b>	A valid database username/password.
<b>database server</b>	A server in a local area network that maintains a database and performs searches for client computers.
<b>Data Source Workbench</b>	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.
<b>date pattern</b>	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.

<b>denominated-in currency</b>	The company currency in which financial reports are based.
<b>deployment artifacts</b>	Artifacts that are needed for the deployment process, such as servers, ports, and such.
<b>deployment server</b>	A server that is used to install, maintain, and distribute software to one or more enterprise servers and client workstations.
<b>detail information</b>	Information that relates to individual lines in JD Edwards EnterpriseOne transactions (for example, voucher pay items and sales order detail lines).
<b>direct connect</b>	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.
<b>Do Not Translate (DNT)</b>	A type of data source that must exist on the iSeries because of BLOB restrictions.
<b>dual pricing</b>	The process of providing prices for goods and services in two currencies.
<b>duplicate published business services authorization records</b>	Two published business services authorization records with the same user identification information and published business services identification information.
<b>embedded application server instance</b>	An OC4J instance started by and running wholly within JDeveloper.
<b>edit code</b>	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.
<b>edit mode</b>	A condition of a form that enables users to change data.
<b>edit rule</b>	A method used for formatting and validating user entries against a predefined rule or set of rules.
<b>Electronic Data Interchange (EDI)</b>	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.
<b>embedded event rule</b>	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.
<b>Employee Work Center</b>	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.
<b>enterprise server</b>	A server that contains the database and the logic for JD Edwards EnterpriseOne.
<b>Enterprise Service Bus (ESB)</b>	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).
<b>EnterpriseOne administrator</b>	An actor responsible for the EnterpriseOne administration system.
<b>EnterpriseOne credentials</b>	A user ID, password, environment, and role used to validate a user of EnterpriseOne.
<b>EnterpriseOne object</b>	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.

<b>EnterpriseOne development client</b>	Historically called “fat client,” a collection of installed EnterpriseOne components required to develop EnterpriseOne artifacts, including the Microsoft Windows client and design tools.
<b>EnterpriseOne extension</b>	A JDeveloper component (plug-in) specific to EnterpriseOne. A JDeveloper wizard is a specific example of an extension.
<b>EnterpriseOne process</b>	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.
<b>EnterpriseOne resource</b>	Any EnterpriseOne table, metadata, business function, dictionary information, or other information restricted to authorized users.
<b>Environment Workbench</b>	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.
<b>escalation monitor</b>	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.
<b>event rule</b>	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.
<b>explicit transaction</b>	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.
<b>exposed method or value object</b>	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.
<b>facility</b>	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.”
<b>fast path</b>	A command prompt that enables the user to move quickly among menus and applications by using specific commands.
<b>file server</b>	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.
<b>final mode</b>	The report processing mode of a processing mode of a program that updates or creates data records.
<b>foundation</b>	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.
<b>FTP server</b>	A server that responds to requests for files via file transfer protocol.
<b>header information</b>	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.
<b>HTTP Adapter</b>	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.

<b>instantiate</b>	A Java term meaning “to create.” When a class is instantiated, a new instance is created.
<b>integration developer</b>	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.
<b>integration point (IP)</b>	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.
<b>integration server</b>	A server that facilitates interaction between diverse operating systems and applications across internal and external networked computer systems.
<b>integrity test</b>	A process used to supplement a company’s internal balancing procedures by locating and reporting balancing problems and data inconsistencies.
<b>interface table</b>	See Z table.
<b>internal method or value object</b>	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.
<b>interoperability model</b>	A method for third-party systems to connect to or access JD Edwards EnterpriseOne.
<b>in-your-face-error</b>	In JD Edwards EnterpriseOne, a form-level property which, when enabled, causes the text of application errors to appear on the form.
<b>IServer service</b>	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.
<b>jargon</b>	An alternative data dictionary item description that JD Edwards EnterpriseOne appears based on the product code of the current object.
<b>Java application server</b>	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.
<b>JDBNET</b>	A database driver that enables heterogeneous servers to access each other’s data.
<b>JDEBASE Database Middleware</b>	A JD Edwards EnterpriseOne proprietary database middleware package that provides platform-independent APIs, along with client-to-server access.
<b>JDECallObject</b>	An API used by business functions to invoke other business functions.
<b>jde.ini</b>	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.
<b>JDEIPC</b>	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.
<b>jde.log</b>	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.
<b>JDENET</b>	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.
<b>JDeveloper Project</b>	An artifact that JDeveloper uses to categorize and compile source files.

<b>JDeveloper Workspace</b>	An artifact that JDeveloper uses to organize project files. It contains one or more project files.
<b>JMS Queue</b>	A Java Messaging service queue used for point-to-point messaging.
<b>listener service</b>	A listener that listens for XML messages over HTTP.
<b>local repository</b>	A developer's local development environment that is used to store business service artifacts.
<b>local standalone BPEL/ESB server</b>	A standalone BPEL/ESB server that is not installed within an application server.
<b>Location Workbench</b>	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.
<b>logic server</b>	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.
<b>MailMerge Workbench</b>	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.
<b>Manual Commit transaction</b>	A database connection where all database operations delay writing to the database until a call to commit is made.
<b>master business function (MBF)</b>	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.
<b>master table</b>	See published table.
<b>matching document</b>	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.
<b>media storage object</b>	Files that use one of the following naming conventions that are not organized into table format: Gxxx, xxxGT, or GTxxx.
<b>message center</b>	A central location for sending and receiving all JD Edwards EnterpriseOne messages (system and user generated), regardless of the originating application or user.
<b>messaging adapter</b>	An interoperability model that enables third-party systems to connect to JD Edwards EnterpriseOne to exchange information through the use of messaging queues.
<b>messaging server</b>	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.
<b>Middle-Tier BPEL/ESB Server</b>	A BPEL/ESB server that is installed within an application server.
<b>Monitoring Application</b>	An EnterpriseOne tool provided for an administrator to get statistical information for various EnterpriseOne servers, reset statistics, and set notifications.

<b>named event rule (NER)</b>	Encapsulated, reusable business logic created using event rules, rather than 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.
<b><i>nota fiscal</i></b>	In Brazil, a legal document that must accompany all commercial transactions for tax purposes and that must contain information required by tax regulations.
<b><i>nota fiscal factura</i></b>	In Brazil, a <i>nota fiscal</i> with invoice information. See also <i>nota fiscal</i> .
<b>Object Configuration Manager (OCM)</b>	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.
<b>Object Librarian</b>	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.
<b>Object Librarian merge</b>	A process that blends any modifications to the Object Librarian in a previous release into the Object Librarian in a new release.
<b>Open Data Access (ODA)</b>	An interoperability model that enables you to use SQL statements to extract JD Edwards EnterpriseOne data for summarization and report generation.
<b>Output Stream Access (OSA)</b>	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.
<b>package</b>	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.
<b>package build</b>	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.”
<b>package location</b>	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.
<b>Package Workbench</b>	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.
<b>Pathcode Directory</b>	The specific portion of the file system on the EnterpriseOne development client where EnterpriseOne development artifacts are stored.

<b>patterns</b>	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).
<b>planning family</b>	A means of grouping end items whose similarity of design and manufacture facilitates being planned in aggregate.
<b>preference profile</b>	The ability to define default values for specified fields for a user-defined hierarchy of items, item groups, customers, and customer groups.
<b>print server</b>	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.
<b>pristine environment</b>	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.
<b>processing option</b>	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.
<b>production environment</b>	A JD Edwards EnterpriseOne environment in which users operate EnterpriseOne software.
<b>production-grade file server</b>	A file server that has been quality assurance tested and commercialized and that is usually provided in conjunction with user support services.
<b>Production Published Business Services Web Service</b>	Published business services web service deployed to a production application server.
<b>program temporary fix (PTF)</b>	A representation of changes to JD Edwards EnterpriseOne software that your organization receives on magnetic tapes or disks.
<b>project</b>	In JD Edwards EnterpriseOne, a virtual container for objects being developed in Object Management Workbench.
<b>promotion path</b>	<p>The designated path for advancing objects or projects in a workflow. The following is the normal promotion cycle (path):</p> <p>11&gt;21&gt;26&gt;28&gt;38&gt;01</p> <p>In this path, <i>11</i> equals new project pending review, <i>21</i> equals programming, <i>26</i> equals QA test/review, <i>28</i> equals QA test/review complete, <i>38</i> equals in production, <i>01</i> 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.</p>
<b>proxy server</b>	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.
<b>published business service</b>	EnterpriseOne service level logic and interface. A classification of a published business service indicating the intention to be exposed to external (non-EnterpriseOne) systems.
<b>published business service identification information</b>	Information about a published business service used to determine relevant authorization records. Published business services + method name, published business services, or *ALL.



<b>published business service web service</b>	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).
<b>published table</b>	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.
<b>publisher</b>	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.
<b>pull replication</b>	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.
<b>QBE</b>	An abbreviation for <i>query by example</i> . In JD Edwards EnterpriseOne, the QBE line is the top line on a detail area that is used for filtering data.
<b>real-time event</b>	A message triggered from EnterpriseOne application logic that is intended for external systems to consume.
<b>refresh</b>	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.
<b>replication server</b>	A server that is responsible for replicating central objects to client machines.
<b>Rt-Addressing</b>	Unique data identifying a browser session that initiates the business services call request host/port user session.
<b>rules</b>	Mandatory guidelines that are not enforced by tooling, but must be followed in order to accomplish the desired results and to meet specified standards.
<b>quote order</b>	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.
<b>secure by default</b>	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.
<b>Secure Socket Layer (SSL)</b>	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.
<b>SEI implementation</b>	A Java class that implements the methods that declare in a Service Endpoint Interface (SEI).
<b>selection</b>	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.
<b>serialize</b>	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.
<b>Server Workbench</b>	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.
<b>Service Endpoint Interface (SEI)</b>	A Java interface that declares the methods that a client can invoke on the service.
<b>SOA</b>	Abbreviation for <i>Service Oriented Architecture</i> .
<b>softcoding</b>	A coding technique that enables an administrator to manipulate site-specific variables that affect the execution of a given process.
<b>source repository</b>	A repository for HTTP adapter and listener service development environment artifacts.
<b>spot rate</b>	An exchange rate entered at the transaction level. This rate overrides the exchange rate that is set up between two currencies.
<b>Specification merge</b>	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.
<b>specification</b>	A complete description of a JD Edwards EnterpriseOne object. Each object has its own specification, or name, which is used to build applications.
<b>Specification Table Merge Workbench</b>	An application that, during the Installation Workbench process, runs the batch applications that update the specification tables.
<b>SSL Certificate</b>	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.
<b>store-and-forward</b>	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.
<b>subscriber table</b>	Table F98DRSUB, which is stored on the publisher server with the F98DRPUB table and identifies all of the subscriber machines for each published table.
<b>superclass</b>	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.
<b>supplemental data</b>	<p>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.</p> <p>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.</p>
<b>table access management (TAM)</b>	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.
<b>Table Conversion Workbench</b>	An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables.

<b>table conversion</b>	An interoperability model that enables the exchange of information between JD Edwards EnterpriseOne and third-party systems using non-JD Edwards EnterpriseOne tables.
<b>table event rules</b>	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.
<b>terminal server</b>	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.
<b>three-tier processing</b>	The task of entering, reviewing and approving, and posting batches of transactions in JD Edwards EnterpriseOne.
<b>three-way voucher match</b>	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.
<b>transaction processing (TP) monitor</b>	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.
<b>transaction processing method</b>	A method related to the management of a manual commit transaction boundary (for example, start, commit, rollback, and cancel).
<b>transaction set</b>	An electronic business transaction (electronic data interchange standard document) made up of segments.
<b>trigger</b>	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.
<b>triggering event</b>	A specific workflow event that requires special action or has defined consequences or resulting actions.
<b>two-way authentication</b>	An authentication mechanism in which both client and server authenticate themselves by providing the SSL certificates to each other.
<b>two-way voucher match</b>	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.
<b>user identification information</b>	User ID, role, or *public.
<b>User Overrides merge</b>	Adds new user override records into a customer's user override table.
<b>value object</b>	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.
<b>variance</b>	<p>In JD Edwards Capital Asset Management, the difference between revenue generated by a piece of equipment and costs incurred by the equipment.</p> <p>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.</p>

<b>versioning a published business service</b>	Adding additional functionality/interfaces to the published business services without modifying the existing functionality/interfaces.
<b>Version List merge</b>	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.
<b>visual assist</b>	Forms that can be invoked from a control via a trigger to assist the user in determining what data belongs in the control.
<b>vocabulary override</b>	An alternate description for a data dictionary item that appears on a specific JD Edwards EnterpriseOne form or report.
<b>wchar_t</b>	An internal type of a wide character. It is used for writing portable programs for international markets.
<b>web application server</b>	A web server that enables web applications to exchange data with the back-end systems and databases used in eBusiness transactions.
<b>web server</b>	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.
<b>Web Service Description Language (WSDL)</b>	An XML format for describing network services.
<b>Web Service Inspection Language (WSIL)</b>	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.
<b>web service proxy foundation</b>	Foundation classes for web service proxy that must be included in a business service server artifact for web service consumption on WAS.
<b>web service softcoding record</b>	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.
<b>web service softcoding template</b>	An XML document that provides the structure for a soft coded record.
<b>Where clause</b>	The portion of a database operation that specifies which records the database operation will affect.
<b>Windows terminal server</b>	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.
<b>wizard</b>	A type of JDeveloper extension used to walk the user through a series of steps.
<b>workbench</b>	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.
<b>work day calendar</b>	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.
<b>workflow</b>	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.
<b>workgroup server</b>	A server that usually contains subsets of data replicated from a master network server. A workgroup server does not perform application or batch processing.
<b>XAPI events</b>	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.
<b>XML CallObject</b>	An interoperability capability that enables you to call business functions.
<b>XML Dispatch</b>	An interoperability capability that provides a single point of entry for all XML documents coming into JD Edwards EnterpriseOne for responses.
<b>XML List</b>	An interoperability capability that enables you to request and receive JD Edwards EnterpriseOne database information in chunks.
<b>XML Service</b>	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.
<b>XML Transaction</b>	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.
<b>XML Transaction Service (XTS)</b>	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.
<b>Z event</b>	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.
<b>Z table</b>	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.
<b>Z transaction</b>	Third-party data that is properly formatted in interface tables for updating to the JD Edwards EnterpriseOne database.



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