Oracle® Electronic Kanban

User's Guide

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Primary Author: S Krithika Raj

Contributing Author: Anil Modwel, Charanjeet Singh, Shivam Puri, Sivaram Sankar, Mariyappan Arumugham, Sujata Patnaik, Laurel Dale, Gopichand Machineni, Gowri Arur, Susan Saperstein

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Oracle Electronic Kanban User's Guide, Release 12.2

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Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Electronic Kanban User's Guide.*

See Related Information Sources on page xii for more Oracle E-Business Suite product information.

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Structure

Related Information Sources

- *Oracle Advanced Planning Implementation and User's Guide*

  This guide describes how to use Oracle's supply chain planning performance for forecasting and managing both supply and demand for your items. You plan your requirements, and execute and release the plan for discrete jobs, repetitive schedules, and flow schedules.

- *Oracle Bills of Material User's Guide*

  This guide describes how to create various bills of materials to maximize efficiency, improve quality and lower cost for the most sophisticated manufacturing environments. By detailing integrated product structures and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple manufacturing sites.

- Oracle E-Business Suite Documentation Set

  This documentation set provides planning and reference information for the Oracle E-Business Suite System Administrator. Oracle E-Business Suite Setup Guide contains information on system configuration steps, including defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help. Oracle E-Business Suite Maintenance Guide provides information for frequent tasks such as monitoring your system with Oracle Applications Manager, administering Oracle E-Business Suite Secure Enterprise Search, managing concurrent managers and reports, using diagnostic utilities including logging, managing profile options, and using alerts. Oracle E-Business Suite Security Guide describes User Management, data security, function security, auditing, and security configurations.

- *Oracle Flow Manufacturing User's Guide*

  This guide describes how to use Oracle's Flow Manufacturing functionality to support the processes of Flow manufacturing. It describes design features of demand management, line design and balancing, and kanban planning. It also describes production features of line scheduling, production, and kanban execution.

- *Oracle Cost Management User's Guide*

  This guide describes how to use Oracle Cost Management in either a standard costing or average costing organization. Cost Management can be used to cost inventory, receiving, order entry, and work in process transactions. It can also be used to collect transaction costs for transfer to Oracle Projects. Cost Management supports multiple cost elements and multiple sub elements. It also provides comprehensive valuation and variance reporting.

- *Oracle General Ledger User's Guide*

This guide explains how to plan and define your chart of accounts, accounting period types and accounting calendar, functional currency, and set of books. It also describes how to define journal entry sources and categories so you can create journal entries for your general ledger. If you use multiple currencies, use this manual when you define additional rate types, and enter daily rates. This manual also includes complete information on implementing Budgetary Control.

- *Oracle Inventory User's Guide*

  This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory. This guide describes the Electronic Kanban Dashboard functionalities.

- *Oracle iSupplier Portal User's Guide*

  Oracle iSupplier Portal enables secure, self-service business transactions between companies and their suppliers. It provides suppliers with the ability to use a standard Web browser to directly manage business transactions and access secure information. This guide describes the setup and integration with Oracle E-Business Suite products.

- *Oracle Mobile Supply Chain Applications User's Guide*

  This guide describes performing shop floor and warehouse transactions using a mobile client device interfaced with a networked computer system. The Mobile Server enables you to perform Oracle Work in Process shop floor transactions, enter Oracle Inventory and Oracle Warehouse Management transactions, and record Oracle Quality collection plan results.

- *Oracle Order Management User's Guide*

  This guide describes how to enter sales orders and returns, copy existing sales orders, schedule orders, release orders, create price lists and discounts for orders, run processes, and create reports.

- *Oracle Purchasing User's Guide*

  This guide describes how to create and approve purchasing documents, including requisitions, different types of purchase orders, quotations, RFQs, and receipts. This guide also describes how to manage your supply base through agreements, sourcing rules and approved supplier lists. In addition, this guide explains how you can automatically create purchasing documents based on business rules through integration with Oracle Workflow technology, which automates many of the key procurement processes.

- *Oracle Quality User's Guide*

  This guide describes how Oracle Quality can be used to meet your quality data collection and analysis needs. This guide also explains how Oracle Quality

interfaces with other Oracle Manufacturing applications to provide a closed loop quality control system.

- *Oracle Work in Process User's Guide*

  This guide describes how Oracle Work in Process provides a complete production management system. Specifically this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

1

Overview

This chapter covers the following topics:

- Overview of Electronic Kanban

Overview of Electronic Kanban

Oracle Electronic Kanban provides a complete solution for kanban management, a replenishment system supplying parts and inventory in continuous production. Kanban replenishment supports Lean Manufacturing, the elimination of waste or tasks that do not add value in the production process. This includes tasks that affect customer relations, product design, supplier networks, and production floor management.

The Electronic Kanban workbench provides kanban management in tabs on a single page for setup, summary information, execution and transactions, and planning. Electronic Kanban uses the existing Oracle Kanban infrastructure in Oracle Inventory, Oracle Flow Manufacturing, and Oracle Planning. The features of Oracle Electronic Kanban include the following:

- Extensive search capabilities, see: Searching for Kanban Cards, page 7-3
- Ability to scan and perform kanban cards transactions.
- Ability to simulate, plan and replan kanban cards, see: Overview of Kanban Planning, page 6-1
- Ability to create temporary kanban cards to handle demand fluctuation during replenishment spikes.
- Option to generate additional cards without cancelling existing cards.
- Support for both physical and logical kanban replenishment.
- Support for multiple suppliers for Source Type of Supplier, and the ability to define the appropriate percentage of sourcing.

- Replenishment order consolidation to generate a single document for replenishment of multiple cards in a pull sequence.
- Support for custom statuses for kanban cards according your business requirements.
- Ability to maintain the number of kanban cards automatically according to planning recommendations and pull sequence setup.
- Integration with Oracle iSupplier Portal where your supplier can view relevant data and be able to change the status for that supplier's kanban cards, see: Setting Up E-Business Functions, page 3-2
- Configurable notifications and alerts based on the specific business events, see: Seeded Business Events, page C-1
- Ability to create your own code to override default logic through client extensions, see: Custom Kanban Programming Logic, page D-1

2

Kanban Dashboard

This chapter covers the following topics:

- Kanban Dashboard

Kanban Dashboard

As a Kanban planner or an inventory control supervisor, use the **Kanban Dashboard** to:

- Review Kanban pull sequence metrics.
- Review Kanban card metrics.
- Track and monitor inventory health using the Inventory Health tab.
  - Review inventory health of Kanban items periodically at various points of use in the organization and identify the pull sequences with low, normal or excess stock.
- View and monitor the replenishment lead time using the Replenishment Lead Time tab.
  - Review replenishment lead time performance.
  - Handle supply exception due to longer replenishment lead time situations.
- Analyze demand requirements using the Kanban Demand tab.
  - Monitor demand for pull sequences at various points of use in the organization
  - Proactively identify potential future stockout situation due to changes in demand.
- Monitor unmoved cards using the Kanban Cards tab.

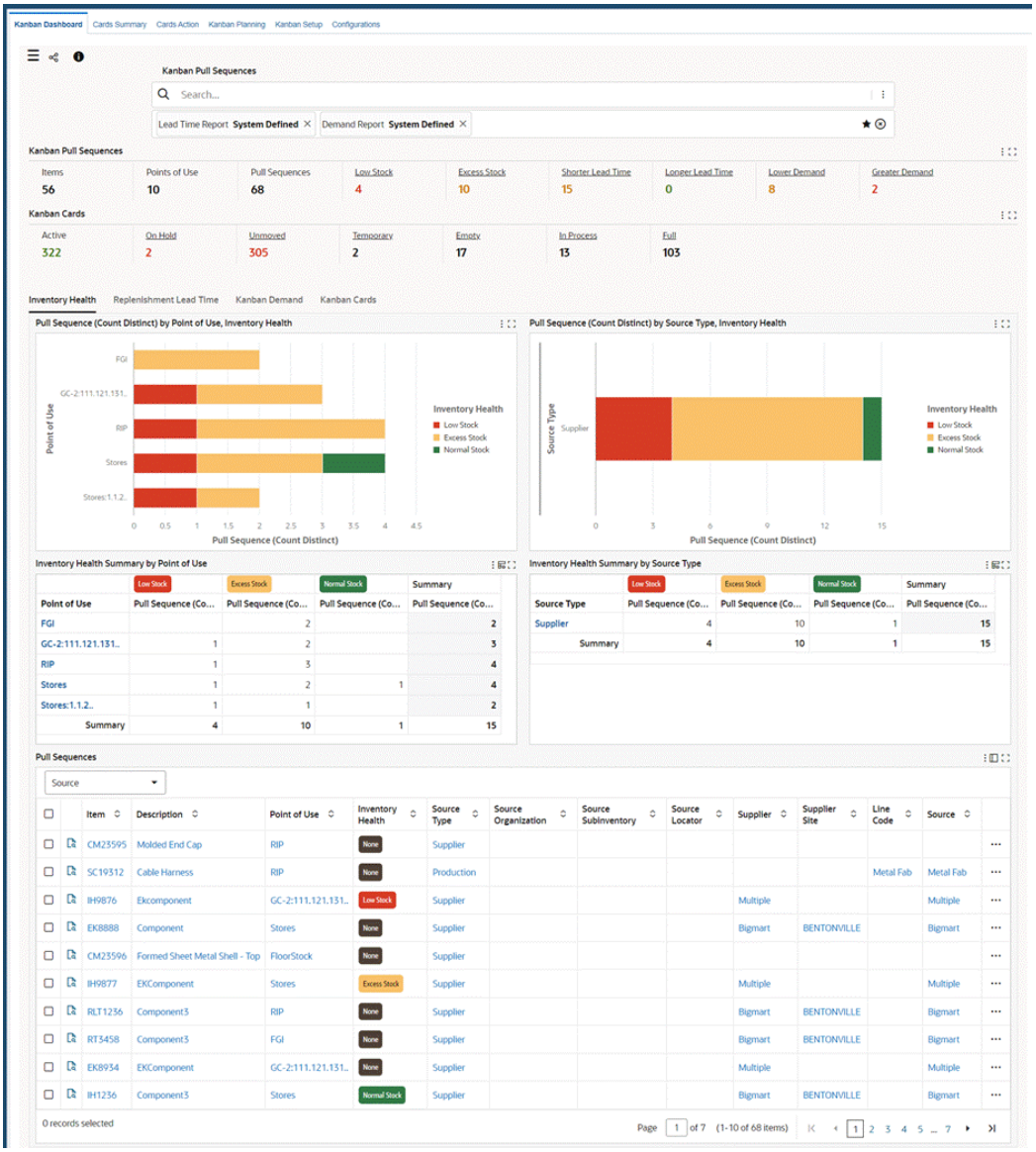
    - Find Kanban cards that have been in a particular supply status for an extended period of time.
    - Change the supply status of a single Kanban card or multiple Kanban cards.
    - Take action to follow-up with supply source to ensure timely replenishments.
- View the Replenishment Chain network diagram and use the information to take necessary action.
- Navigate to other Electronic Kanban Oracle application pages.

You can search using the available refinements for Kanban pull sequences, Kanban cards, Kanban lead time, and Kanban demand. For example, you can select to refine your search using item, point of use, inventory health, source type, lead time, card number, unmoved status, current activity, source, planning, demand report, and so on.

From the eKanban Super User responsibility, navigate to the Kanban Dashboard:

(N) **Home (OAF)>Kanban Dashboard** (tab)

Kanban Dashboard



The following table describes the **Kanban Dashboard** components:

Component	Description

Kanban Pull Sequences (summary bar)

The **Kanban Pull Sequences** summary bar displays the following metrics:

- **Items**

  This metric displays the number of unique items with pull sequence definitions.

- **Points of Use**

  This metric displays the number of points of use in the pull sequence definitions.

- **Pull Sequences**

  This metric displays the number of pull sequences.

- **Low Stock**

  This metric displays the number of pull sequences that have low stock. Click this metric to view information in the Inventory Health tab.

- **Excess Stock**

  This metric displays the number of pull sequences that have excess stock. Click this metric to view information in the Inventory Health, page 2-7 tab.

- **Shorter Lead Time**

  This metric displays the number of pull sequences with actual lead time lesser than the planned lead time. Click this metric to view information in the Replenishment Lead Time, page 2-14 tab.

- **Longer Lead Time**

  This metric displays the number of pull sequences with actual lead time greater than the planned lead time. Click this metric to view information in the Replenishment Lead Time, page 2-14 tab.

- **Lower Demand**

This metric displays the number of pull sequences with actual demand lower than the planned demand. Click this metric to view information in the Kanban Demand, page 2-22 tab.

- **Greater Demand**

  This metric displays the number of pull sequences with actual demand greater than the planned demand. Click this metric to view information in the Kanban Demand, page 2-22 tab.

Click a metric to refine the information in the dashboard.

Kanban Cards (summary bar)	The **Kanban Cards** summary bar displays the following metrics: • **Active** This metric displays the total number of cards that are active. • **On Hold** This metric displays the total number of cards that are on hold. • **Unmoved** This metric displays the total number of cards that are in a specific status for an extended period. • **Temporary** This metric displays the total number of cards that are temporary. • **Empty** This metric displays the total number of cards that have the supply status as Empty. • **In Process** This metric displays the total number of cards that have the supply status as In Process. • **Full** This metric displays the total number of cards that have the supply status as Full. Click any of the metrics to view card information in the Kanban Cards, page 2-29 tab.

Inventory Health (tab)	The **Inventory Health** tab provides charts and grids that give you insights into the inventory levels versus the safety stocks and enable you to identify the stock positions and take action to meet any demand. For details, see Inventory Health Tab, page 2-7.
Replenishment Lead Time (tab)	The **Replenishment Lead Time** tab provides charts and tables that give you insights into the calculation of the actual lead time of replenished cards for each pull sequence and compares it with the planning lead time. You can use the information in this tab to identify the items with longer lead time and plan the replenishments. For details, see Replenishment Lead Time Tab, page 2-14.
Kanban Demand (tab)	The **Kanban Demand** tab provides charts and tables that give you insights into the calculation of the actual demand for each item based on the number of card replenishments and then compares it with demand calculated from the planning logic. You can use this tab to identify the items with greater demand and plan the replenishments accordingly. For details, see Kanban Demand Tab, page 2-22.
Kanban Cards (tab)	The Kanban Cards tab provides charts and tables that give you insights into the cards that have been in a specific supply status for an extended length of time. You can use this tab to identify such cards and update the status. For details, see Kanban Cards Tab, page 2-29.

Inventory Health Tab

The Inventory Health tab displays the inventory levels as compared to the safety stocks. Based on the percentage of the actual inventory to safety stock, inventory health can be categorized into Low Stock, Normal Stock, or Excess Stock.

Inventory Health Metrics Calculations

The following parameters are used in the calculation:

- Inventory Health Threshold - Bad

  The percentage of safety stock inventory considered unacceptable for the Inventory Heath. A value below this threshold is considered at a Low Stock status (Red).

- Inventory Health Threshold - Good

  The percentage of safety stock inventory considered acceptable for the Inventory Heath. A value equal to or greater than this threshold is considered as Excess Stock (Yellow).

Values that are greater than or equal to the Inventory Health Threshold - Bad, or less than the Inventory Health Threshold - Good, are considered as Normal Stock (Green).

Inventory health is displayed as None (Gray) when the parameters are not set up and safety stock days, average daily demand are not defined in the pull sequence. You can define the Average Daily Demand with a specific average demand using the *Update Production* action in the Planning Workbench. See Viewing and Updating Pull Sequence Planning, page 6-5.

Example: Inventory Health Calculation

The following example explains the inventory health calculation.

In this example, Parameters are set as follows on the Configurations tab, Parameters page. See Configuring Kanban Parameters, page 5-6.

For inventory health threshold:

- Inventory Health Threshold - Bad: 75 % of safety stock
- Inventory Health Threshold - Good: 125 % of safety stock

For an item pull sequence:

- Card Size: 100
- Safety Stock Days: 2
- Average Daily Demand: 100
- Safety Stock: 200 (Average Daily Demand x Safety Stock Days)

Inventory Health calculations is based on the parameters and pull sequence setup:

- Low Stock (Red) is when inventory is below 75 % of 200 or 150
- Excess Stock (Yellow) is when inventory is greater than 125% of 200 or 250
- Normal Stock (Green) is when inventory is between 75% and 125 % of 200, which is between 150 and 250

The following table shows the Inventory Health, which is displayed based on the Cards in Supply Status set to Full.

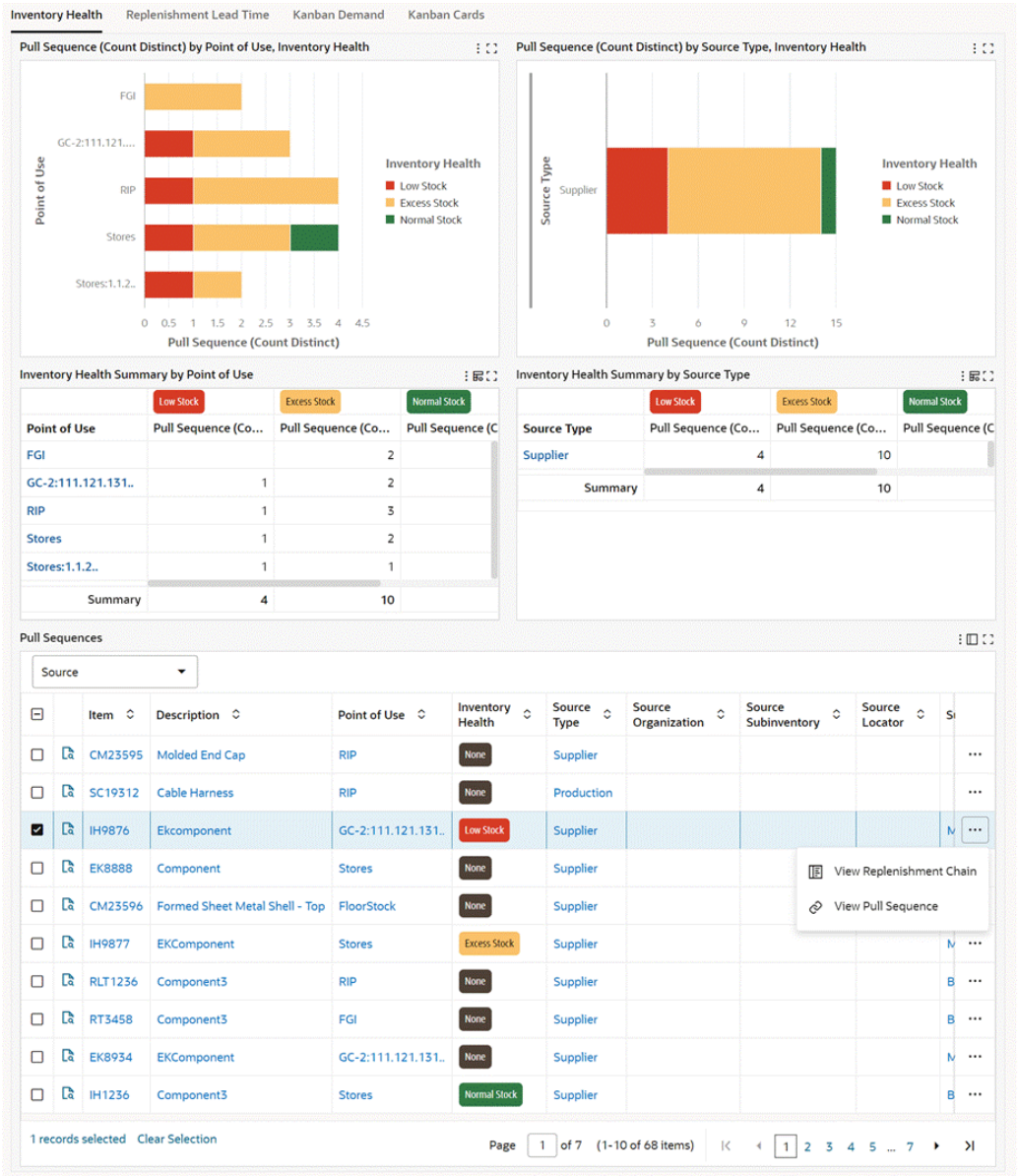
Inventory Health Indicators

Case	Cards in Supply Status Full	Quantity	Inventory Health
1	1	100	Low Stock (Red)
2	2	200	Normal Stock (Green)
3	3	300	Excess Stock (Yellow)

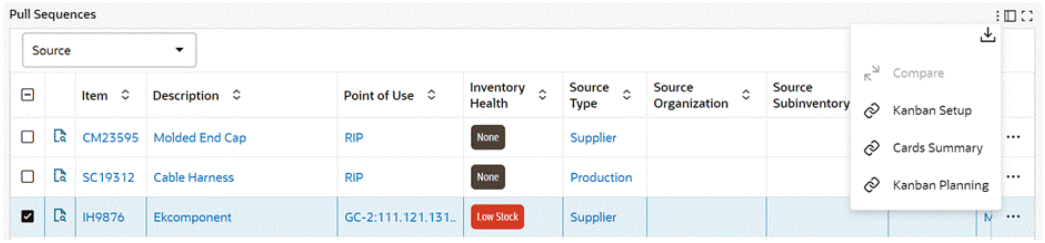
Also, Custom Extension is available to define specific values at the Pull Sequence level to override the parameters that are set at the Organization level. See Configure Inventory Health Analytic, page D-9.

Inventory Health Tab Components

Inventory Health Tab



Inventory Health Tab - Table-Level Actions



The following table describes the Inventory Health tab components:

Component	Description
Pull Sequence (Count Distinct) by Point of Use, Inventory Health (chart)	This chart displays the inventory health of pull sequences by point of use. Click the **Options** icon to select Inventory Health or Point of Use from the **Dimension** menu. Select Point of Use from the **Group Dimensions** menu.
Pull Sequence (Count Distinct) by Source Type, Inventory Health (chart)	This chart displays the inventory health of pull sequences by source type. Click the **Options** icon to select Inventory Health or Source from the **Dimension** menu. Select Source Type, Source, Supplier, Source Subinventory, or Source Organization from the **Group Dimensions** menu.
Inventory Health Summary by Point of Use (pivot table)	Use this table to analyze the inventory health of pull sequences by point of use.
Inventory Health Summary by Source Type (pivot table)	Use this table to analyze the inventory health of pull sequences by source type.

Pull Sequences Results Table (tab layout)	On the **Inventory Health** tab's Pull Sequences results table, you can select from the following attribute groups to display details by:
	• Source
	• Kanban
	• Planning
	• Card Supply Status
	Click the **Record Details** icon for a selected item to view the **Details** dialog box.
	You can perform the following row-level actions. Select a row, click the **Actions** icon and select from the following:
	• **View Replenishment Chain**: Click this action link to view the Replenishment Chain network diagram. The Replenishment Chain network diagram helps you to visualize the replenishment information and act when required. The diagram contains the following entity nodes:
	  • Supplier
	  • Organization
	  • Production
	  You can view the data set name, site, location, sublocation, and the item name for each of the nodes. The nodes support all the source types.
	  Right-click a node to select the following options available for the node:
	  • **Make Anchor Node**: Select this option to make a node the main node.
	  • **Show Adjacent Nodes**: Select this option to expand a node to see its

related nodes.

- **Highlight Path**: Select this option to highlight the specific path of a node. You can right-click and select Unhighlight Path to remove highlighting a path.

- **Explore Node**: Select this option to explore the node further.

- **Compare**: Select multiple nodes and click Compare for a side-by-side comparison of the records of each selected node.

- **Show Details**: Select this for a node to open the Details window to view all attribute details such as site, location, sublocation, item, description, organization, subinventory, locator, number of cards, size, and UOM.

  On the Details window, select multiple filters and then click:

  - **Find Similar** to apply these filters to the diagram.

  - **Search Within** to search for your selected filter within the diagram.

- **View Pull Sequence**: Click this action link to view details in the **Pull Sequence Details** tab.

To perform a table-level action, select one or more rows and choose from the following actions available from the **Options** icon in the Inventory Health tab's results table:

- **Compare**: Select multiple rows to compare information.

- **Export**: Click the Export icon to export the

selected search results in a comma-separated values (CSV) file format.

- **Kanban Setup**: Click this link to open the **Kanban Pull Sequences** page on the **Kanban Setup** tab.
- **Cards Summary**: Click this link to open the **Kanban Pull Sequences** page on the **Cards Summary** tab.
- **Kanban Planning**: Click this link to open the **Pull Sequence Planning** page on the **Kanban Planning** tab.

See:

- Kanban Pull Sequences Metrics, page 2-4
- Kanban Cards Metrics, page 2-6
- Kanban Dashboard, page 2-1

Replenishment Lead Time Tab

The Replenishment Lead Time tab shows the actual lead time of replenished cards for each pull sequence, and compares it with lead time setup in the Planning tabbed region for the pull sequence. See Planning Workbench, page 6-2.

Replenishment Lead Time Metrics Calculations

The dashboard displays the number of pull sequences, taking into account the tolerance value, for:

- Shorter Lead Time (Yellow) - Actual Lead Time is less than Planned Lead Time
- Longer Lead Time (Red) - Actual Lead Time is greater than Planned Lead Time
- Normal Lead Time (Green) - Actual Lead Time is equal to Planned Lead Time

> **Note:** Lead Time will be displayed as None (Gray) when the parameters are not set up and lead time is not defined in the pull sequence or if there are no replenishment cycles completed within the defined range of days.

You can define the default time period and set the value for tolerance using the

Electronic Kanban parameters for lead time calculations:

- Actual vs Planned Lead Time - Default Number of Days

  The number of days used to calculate the lead time between actual lead time and planning days for replenished cards and pull sequences.

- Actual vs Planned Lead Time - Equality Tolerance

  The tolerance or margin percentage in the calculation between actual and planned demand lead time.

The following parameter values are used in the "System Defined" report:

- Actual vs Planned Lead Time - Default Number of Days: Defaults the report range start date based on the number of days from the end date and range end date is defaulted with the current date.

- Actual vs Planned Lead Time - Equality Tolerance: Defaults the equality tolerance for lead time calculations.

> **Note:** You can also define custom reports with different range start date, range end date and equality tolerance for replenishment lead time calculations.

Example: Replenishment Lead Time Calculation

The following example explains the replenishment lead time calculation.

In this example, Parameters are set as follows on the Configurations tab, Parameters page. See Configuring Kanban Parameters, page 5-6.

For lead time:

- Actual vs Planned Lead Time - Default Number of Days: 10

- Actual vs Planned Lead Time - Equality Tolerance: 5

For an item pull sequence:

- Number of cards: 2

- Planned Lead Time: 2

The Lead Time calculations is based on the parameters and pull sequence setup.

- Longer Lead Time (Red) is when replenishment lead time is greater than +5 % of 2 days or 2.1

- Shorter Lead Time (Yellow) is when replenishment lead time is lesser than -5 % of 2 days or 1.9

- Normal Lead Time (Green) is when replenishment lead time is between -5% and 5% of 2 days which is between 1.9 and 2.1

Actual Lead Time Calculations

Assume that the number of replenishments in the last 10 days (based on the parameter setting) is 5.

The following table shows the calculation of replenishment lead time and days.

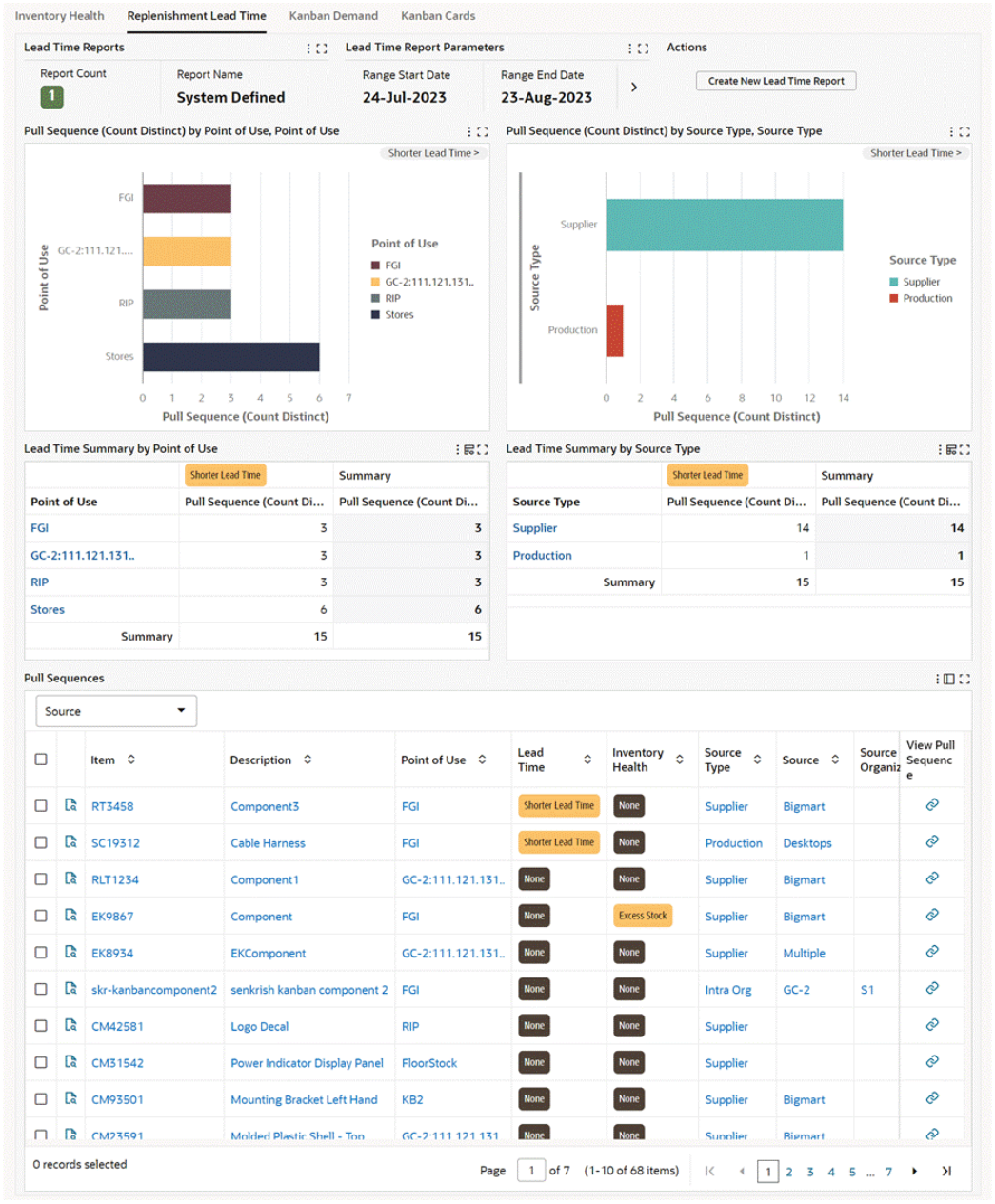
Replenishment Lead Time Calculation

Replenishment Lead Time	Days
Card 1, cycle 1	2.5
Card 2, cycle 1	2.5
Card 1, cycle 2	2.5
Card 2, cycle 2	1.8
Card 1, cycle 3	2.7
Average Lead Time	**(2.5+2.5+2.5+1.8+2.7)/5 = 2.4 days**

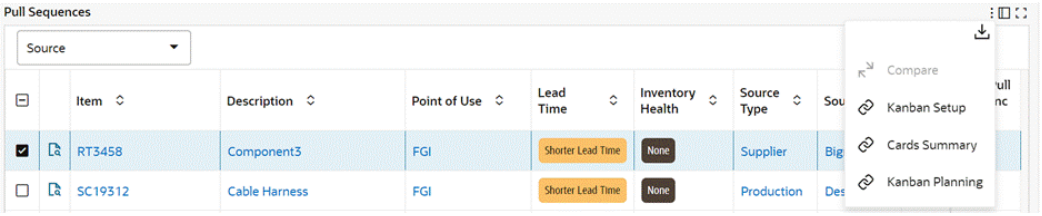
In this example, the "System Defined" report shows the pull sequence with Longer Lead Time (Red).

Replenishment Lead Time Tab Components

Replenishment Lead Time Tab



Replenishment Lead Time Tab - Table-Level Actions



The following table describes the Replenishment Lead Time tab components:

Component	Description
Report Count (link)	Click **Report Count** to view and select from multiple reports. Note that the Replenishment Lead Time tab defaults the System Defined report based on the parameters set on the Configurations tab, Parameters page. You can only create lead time reports. **Note:** If your system administrator runs the *Electronic Kanban ECC Data Load* with the Full Load option, then after the completion of the full load, user defined reports are removed, and the dashboard displays only the system defined report.

Create New Lead Time Report (button)	To define a lead time report: 1. Click **Create New Lead Time Report** and provide information in the following fields: • **Report Name**: Enter a name for the report. • **Range Start Date**: The date that defaults to this field is based on the "Actual vs Planned Lead Time - Default Number of Days" parameter set on the Configurations tab, Parameters page. You can update the default value. • **Range End Date**: The current system date defaults to this field. You can update the default value. • **Lead Time Tolerance**: The value that defaults to this field is based on the "Actual vs Planned Lead Time - Equality Tolerance" parameter set on the Configurations tab, Parameters page. You can update the default value. 2. Click **Create**. When you create a report, the Kanban Dashboard refreshes to display information based on the new report.
Pull Sequence (Count Distinct) by Point of Use, Lead Time (chart)	This chart enables you to identify the number of pull sequences by point of use based on the Replenishment Lead Time classification. You can drill down on the pull sequence values. Click the **Options** icon to select Lead Time or Point of Use from the **Dimension** menu. Select Point of Use from the **Group Dimensions** menu.

Pull Sequence (Count Distinct) by Source Type, Lead Time (chart)	This chart enables you to identify the number of pull sequences by source type based on the Replenishment Lead Time classification. You can drill down on the pull sequence values. Click the **Options** icon to select Lead Time, Source Type, or Source from the **Dimension** menu. Select Source Subinventory, Source, Supplier, Source Organization, and Source Inventory from the **Group Dimensions** menu.
Lead Time Summary by Point of Use (pivot table)	Use this table to analyze lead time classification of pull sequences by point of use.
Lead Time Summary by Source Type (pivot table)	Use this table to analyze lead time classification of pull sequences by source type.

Pull Sequences Results Table (tab layout)	On the **Replenishment Lead Time** tab's Pull Sequences results table, you can select from the following attribute groups to display details by: • Source • Kanban • Planning • Report Click the **Record Details** icon for a selected item to view the **Details** dialog box. To perform a row-level action, select a row and click the **View Pull Sequence** icon to view details in the **Pull Sequence Details** tab. Click the links in the table columns to refine the information available in the **Kanban Dashboard**. To perform a table-level action, select one or more rows and choose from the following actions available from the **Options** icon in the Replenishment Lead Time tab's results table: • **Compare**: Select multiple rows to compare information. • **Export**: Click the Export icon to export the selected search results in a comma-separated values (CSV) file format. • **Kanban Setup**: Click this link to open the **Kanban Pull Sequences** page on the **Kanban Setup** tab. • **Cards Summary**: Click this link to open the **Kanban Pull Sequences** page on the **Cards Summary** tab. • **Kanban Planning**: Click this link to open the **Pull Sequence Planning** page on the **Kanban Planning** tab.

See:

- Kanban Pull Sequences Metrics, page 2-4
- Kanban Cards Metrics, page 2-6
- Kanban Dashboard, page 2-1

Kanban Demand Tab

In the Actual Demand versus Planned Demand calculation, the actual demand is calculated for each pull sequence, and compared with average daily demand as calculated from the planning logic. The dashboard displays the number of pull sequences where actual demand is greater than planned, less than planned, and equal to planned, taking into account the tolerance value.

Demand Metrics Calculations

You can define the default time period and set the value for tolerance using the Electronic Kanban parameters for demand calculations:

- Actual vs Planned Demand - Default Number of Days

  The time period for calculating demand between actual lead time and planning days for replenished cards

- Actual vs Planned Demand - Equality Tolerance

  Tolerance in the calculation between actual and planned demand for replenished cards.

Demand is displayed as None (Gray) when the parameters are not set up or average daily demand is not defined in the pull sequence or if there are no replenishments performed within the defined range of days. You can define the Average Daily Demand with a specific average demand using the *Update Production* action in the Planning Workbench. See Viewing and Updating Pull Sequence Planning, page 6-5.

The following parameter values are used in the "System Defined" report.

- Actual vs Planned Demand - Default Number of Days: Defaults the report range start date based on the number of days from the end date and range end date is defaulted with current date.
- Actual vs Planned Demand - Equality Tolerance: Defaults the equality tolerance for demand calculations.

> **Note:** You can also define custom reports with different range start date, range end date and equality tolerance for demand calculations.

Example: Demand Calculation

The following example explains the Demand calculation.

In this example, Parameters are set as follows on the Configurations tab, Parameters page. See Configuring Kanban Parameters, page 5-6.

For demand:

- Actual vs Planned Demand - Default Number of Days: 50
- Actual vs Planned Demand - Equality Tolerance: 10

For an item pull sequence:

- Average Daily Demand: 10
- Card Size: 100

Demand calculations is based on the parameters and pull sequence setup.

- Greater Demand (Red) is when demand is greater than +10 % of 10 or 11
- Lower Demand (Yellow) is when demand is lesser than -10 % of 10 or 9
- Normal Demand (Green) is when demand is between -10 % and 10 % of 10 which is between 9 and 11

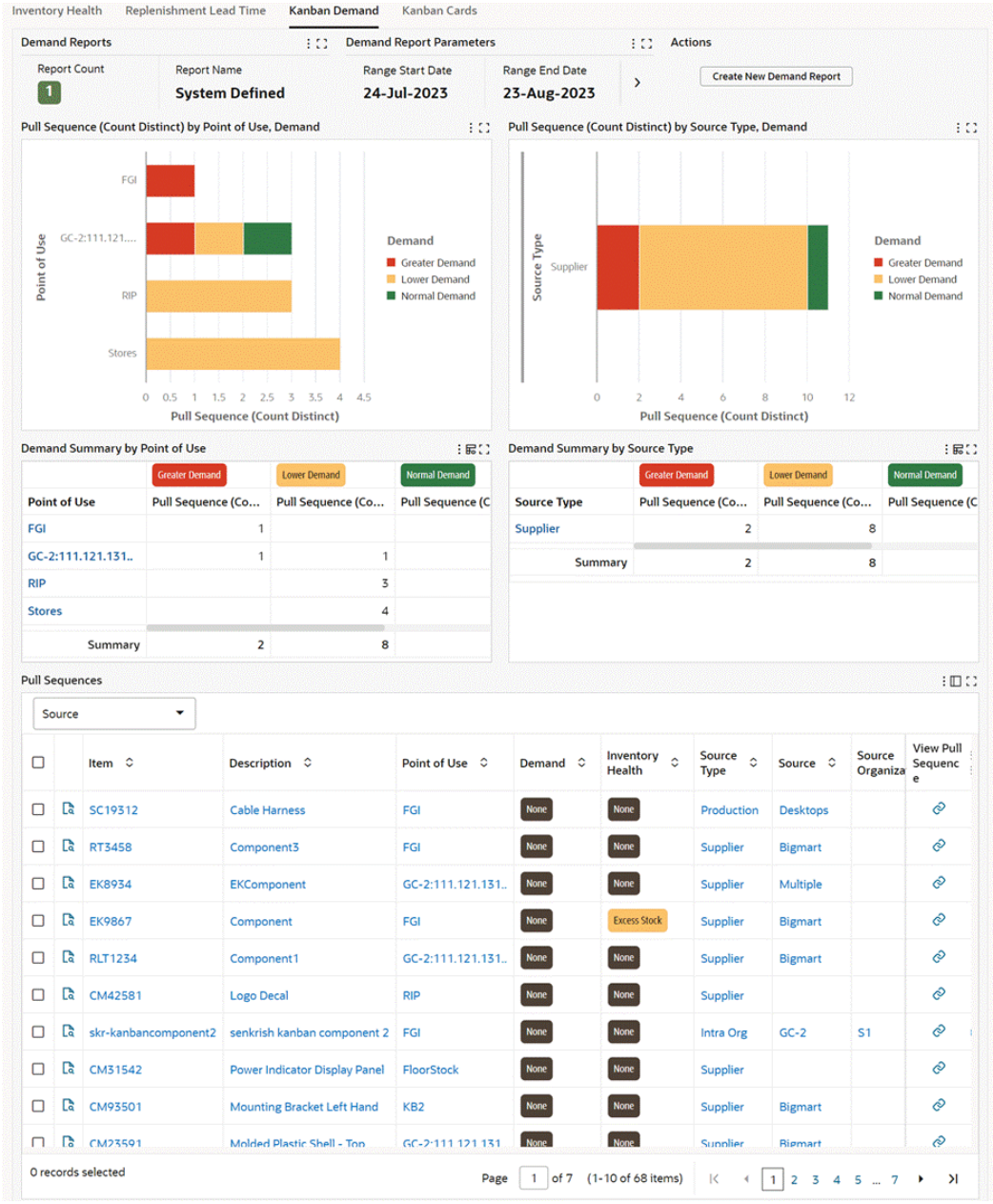
Actual Demand Calculations:

- Number of replenishments in 50 days: 6
- Actual Demand = 100 * 6 / 50 = 12 per day

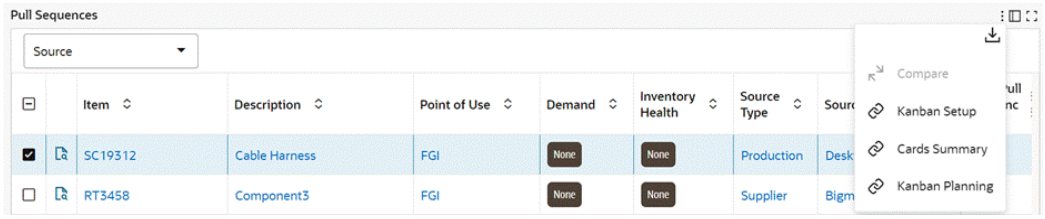
In this example, the "System Defined" report shows the pull sequence with Greater Demand (Red).

Kanban Demand Tab Components

Kanban Demand Tab



Kanban Demand Tab - Table-Level Actions



The following table describes the Kanban Demand tab components:

Component	Description
Report Count (link)	Click **Report Count** to view and select from multiple demand reports. Note that the Kanban Demand tab defaults the System Defined report based on the parameters set on the Configurations tab, Parameters page. You can only create reports. **Note:** If your system administrator runs the *Electronic Kanban ECC Data Load* with the Full Load option, then after the completion of the full load, user defined reports are removed, and the dashboard displays only the system defined report.

Create New Demand Report (button)	To define a demand report: 1. Click **Create New Demand Report** and provide information in the following fields: • **Report Name**: Enter a name for the report. • **Range Start Date**: The date that defaults to this field is based on the "Actual vs Planned Demand - Default Number of Days" parameter set on the Parameters page of the Configurations tab. You can update the default value. • **Range End Date**: The current system date defaults to this field. You can update the default value. • **Demand Tolerance**: The value that defaults to this field is based on the "Actual vs Planned Demand - Equality Tolerance" parameter set on the Parameters page of the Configurations tab. You can update the default value. 2. Click **Create**. When you create a report, the Kanban Dashboard refreshes to display information based on the new report.
Pull Sequence (Count Distinct) by Point of Use, Demand (chart)	This chart displays the number of pull sequences by point of use based on the Demand classification. You can drill down on the pull sequence values. Click the **Options** icon to select Demand or Point of Use from the **Dimension** menu. Select Point of Use from the **Group Dimensions** menu.

Pull Sequence (Count Distinct) by Source Type, Demand (chart)	This chart displays the number of pull sequences by source type based on the Demand classification. You can drill down on the pull sequence values. Click the **Options** icon to select Demand, Source Type, or Source from the **Dimension** menu. Select Source Type, Source, Supplier, Source Organization, or Source Subinventory from the **Group Dimensions** menu.
Demand Summary by Point of Use (pivot table)	Use this table to analyze demand classification of pull sequences by point of use.
Demand Summary by Source Type (pivot table)	Use this table to analyze demand classification of pull sequences by source type.

Pull Sequences Results Table (tab layout)	On the **Kanban Cards** tab's Pull Sequences results table, you can select from the following attribute groups to display details by: • Source • Kanban • Planning • Report Click the **Record Details** icon for a selected item to view the **Details** dialog box. Click the links in the table columns to refine the information available in the **Kanban Dashboard**. To perform a row-level action, select a row and click the **View Pull Sequence** icon to view details in the **Pull Sequence Details** tab. To perform a table-level action, select one or more rows and choose from the following actions available from the **Options** icon in the Kanban Demand tab's results table: • **Compare**: Select multiple rows to compare information. • **Export**: Click the Export icon to export the selected search results in a comma-separated values (CSV) file format. • **Kanban Setup**: Click this link to open the **Kanban Pull Sequences** page on the **Kanban Setup** tab. • **Cards Summary**: Click this link to open the **Kanban Pull Sequences** page on the **Cards Summary** tab. • **Kanban Planning**: Click this link to open the **Pull Sequence Planning** page on the **Kanban Planning** tab.

See:

- Kanban Pull Sequences Metrics, page 2-4
- Kanban Cards Metrics, page 2-6
- Kanban Dashboard, page 2-1

Kanban Cards Tab

The Kanban Cards tab displays cards that have been in a particular supply status for an extended period of time.

Unmoved Cards Metric Calculations

The length of time each supply status a card is considered unmoved is set in the **Card Supply Statuses** Electronic Kanban parameter. For this parameter, enter the percentage of lead time to show the length of time each supply status a card is considered unmoved. See Configuring Kanban Parameters, page 5-6.

The Unmoved Cards Calculation program calculates the number of cards that are in each supply status for a period of time configured by you. The program:

1. Selects all pull sequences for an organization. For every pull sequence, all Kanban cards are selected.
2. Finds the percentage of lead time for the valid statuses.
3. Gets the planned lead time for the pull sequence.
4. For every card, gets the Last Activity Date, Status, and Creation Date.

Example: Unmoved Cards Calculation

The following example explains the unmoved cards calculation.

In this example, Parameters are set as follows on the Configurations tab, Parameters page. See Configuring Kanban Parameters, page 5-6.

- Card Supply Statuses

  In Process: 10

- For an item pull sequence

  Lead Time: 2 days

Unmoved cards calculation is based on the parameters setup.

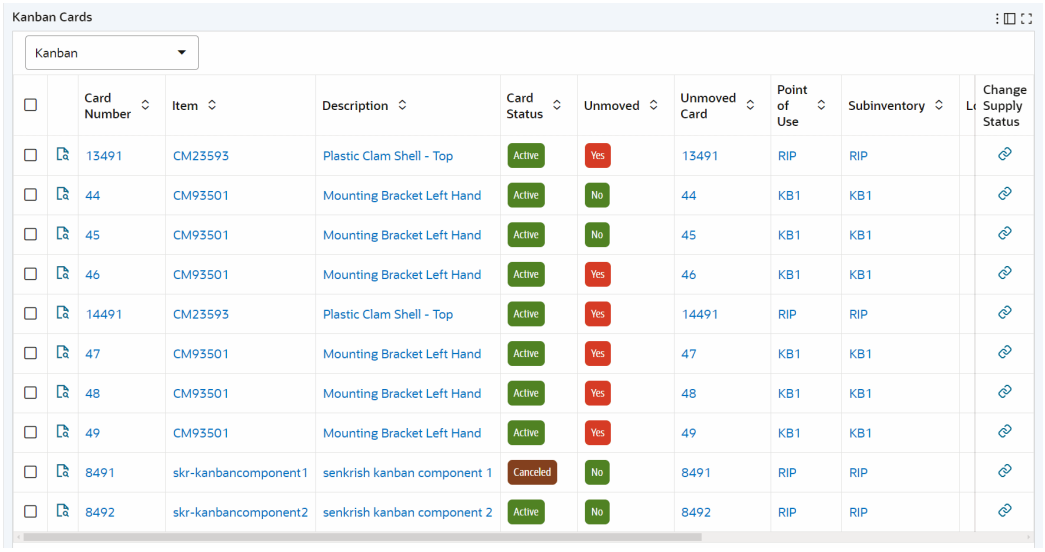
Card is Unmoved when lead time in **In Process** supply status is greater than +10 % of 2 or 0.2 days.

Assume the card supply status is In Process for 1 day. then, this card will be displayed as Unmoved card.

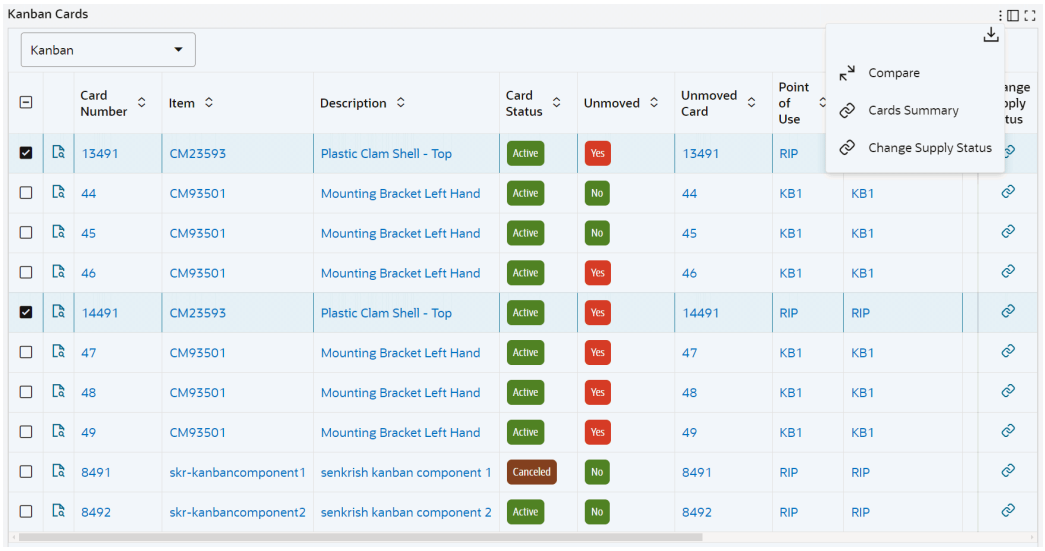
Also, Custom Extension is available to define specific values at the Pull Sequence or Kanban Card level to override the parameters that are set at the Organization level. See Determine Unmoved Kanban Cards Program, page D-1.

Kanban Cards Tab Components

Kanban Cards Tab – Row-Level Actions



Kanban Cards Tab – Table-Level Actions



The following table describes the Kanban Cards tab components:

Component	Description
Unmoved Card (Count Distinct) by Unmoved Duration, Supply Status (chart)	This chart shows the number of unmoved Kanban cards in each supply status and unmoved duration. The chart uses the following predefined unmoved duration days: • 0-1 Days • 1-3 Days • 3-6 Days • 6-10 Days • 10+ Days Click the **Options** icon to select Supply Status, Source Type, or Source from the **Dimension** menu. Select Unmoved Duration from the **Group Dimensions** menu.
Unmoved Card (Count Distinct) by Source Type, Supply Status (chart)	This chart shows the number of unmoved Kanban cards by source type and supply status. Click the **Options** icon to select Supply Status or Source from the **Dimension** menu. Select Source Type, Source, or Point of Use from the **Group Dimensions** menu.
Unmoved Cards Summary by Point of Use (pivot table)	Use this table to analyze unmoved cards by point of use.
Unmoved Cards Summary by Source Type (pivot table)	Use this table to analyze unmoved cards by source type.

Kanban Cards Results Table (tab layout)	On the **Kanban Cards** results table, you can select from the following attribute groups to display details by: • Kanban • Current Activity • Replenishment Click the **Record Details** icon for a selected item to view the **Details** dialog box. Click the links in the table columns to refine the information available in the **Kanban Dashboard**. To perform a row-level action, select a row and click the **Change Supply Status** icon to navigate to the **Change Card Supply Status** page on the Cards Action tab. On this page, select the target status and click **Change Status** to update the status of the Kanban card. To return to the dashboard, click the **Kanban Dashboard** breadcrumb. To perform the following table-level actions, select one or more rows and click the **Options** icon in the results table: • **Compare**: Select multiple rows to compare information. • **Export**: Click the Export icon to export the selected search results in a comma-separated values (CSV) file format. • **Cards Summary**: Click this link to open the Kanban Pull Sequences page on the Cards Summary tab. • **Change Supply Status**: To change the supply status of multiple Kanban cards, click this link to navigate to the **Change Card Supply Status** page on the Cards Action tab. On this page, select the target status and click **Change Status** to update the status of the Kanban cards. To return to the dashboard, click the **Kanban**

Dashboard breadcrumb.

Important: The administrator must run the *Electronic Kanban ECC Data Load* program, to view the latest status of the Kanban cards.

After the program runs successfully, you can view the following changed information about the Kanban cards:

- In the Kanban Cards summary bar, the Unmoved metric shows the recalculated count of the Kanban cards.
- In the Kanban Cards results table:
  - The Unmoved column shows the value No.
  - The Supply Status column shows the latest status.

See:

- Kanban Pull Sequences Metrics, page 2-4
- Kanban Cards Metrics, page 2-6
- Kanban Dashboard, page 2-1

3

Setting Up Electronic Kanban

This chapter covers the following topics:

- Overview of Setting Up Electronic Kanban
- Creating New Responsibilities
- Related Product Setup Steps
- Setting Profile Options and Parameters
- Enabling Electronic Kanban at the Organization Level

Overview of Setting Up Electronic Kanban

The Electronic Kanban Automated Deployment script is required to install Electronic Kanban before completing the other setup steps. This script configures the AppsDataSource, data security, underlying Oracle Applications Technology, and profile options. This script also needs to be executed for each subsequent patch of the application. See: *12.2 Electronic Kanban Deployment Guide* on My Oracle Support (support.oracle.com), note number 1517173.1.

Perform the following tasks to set up Oracle Electronic Kanban:

Task Number	Task	Description
1	Create Electronic Kanban responsibilities	The Electronic Kanban application is installed with the seeded Electrinic Kanban Super User responsibility, but you can create custom responsibilities,too. See: Creating New Responsibilities , page 3-2

Task Number	Task	Description
2	Configure Electronic Kanban parameters.	Parameters govern behavior according to your organization's requirements for calculations and transactions. See: Configuring Kanban Parameters, page 5-6
3	Define pull sequences and Kanban cards	Kanban cards are the visual replenishment signal corresponding to items needed in production. The pull sequence defines the kanban location, source information, and planning parameters. See: Overview of Kanban Pull Sequence Setup and Configurations, page 5-1

Creating New Responsibilities

The Electronic Kanban application is installed with the seeded Electronic Kanban Super User responsibility. This responsibility provides access to the Electronic Kanban workbench.

If you need to restrict access to certain Electronic Kanban functions, create a new responsibility and provide access to a subset of the functions available by default from the Electronic Kanban Super User responsibility:

Functions

Menu	Workbench Tab
Ekanban Summary Page Menu	Cards Summary
Ekanban Actions Page Menu	Cards Action
Ekanban Actions Receive Page Menu	Cards Action tab, Receive subtab
Ekanban Actions Replenish Page Menu	Cards Action tab, Replenish subtab

Menu	Workbench Tab
Ekanban Actions Status Change Page Menu	Cards Action tab, Change Status subtab
Ekanban Actions Transfer Page Menu	Cards Action tab, Transfer subtab
Ekanban Planning Page Menu	Kanban Planning
Ekanban Planning Workbench Page Menu	Kanban Planning tab, Planning Workbench subtab
Ekanban Planning Definition Page Menu	Kanban Planning tab, Plan Definition subtab
Ekanban Setup Page Menu	Kanban Setup
Ekanban Parameters Page Menu	Configurations

For example, to create a new responsibility named eKanban Operator that only provides access to the Cards Summary tab and Cards Action tab—with the Change Status subtab—only include the following seeded functions:

- eKanban Cards Summary
- eKanban Cards Action
- eKanban Generic Status Change

See: Responsibilities Window, *Oracle E-Business Suite Security Guide.*

Using Forms or the Oracle Application Framework

Electronic Kanban includes the following roles that provide complete access to the application's features:

- Electronic Kanban ADF Access Role: provides access to the forms-based, Application Developer Framework Electronic Kanban workbench. Assigned to the eKanban Super User responsibility by default.
- Electronic Kanban OAF Access Role: provides access to the Oracle Application Framework (OAF) Electronic Kanban workbench. Assign this role to the eKanban Super User responsibility or to certain users. The Oracle Electronic Kanban User's Guide assumes you are using the OAF Electronic Kanban workbench.
- Electronic Kanban ECC Dashboard User Role: provides access to the OAF Electronic Kanban ECC Dashboard. Assign this role to the eKanban Super User

responsibility or to certain users. Use this dashboard along with the OAF Electronic Kanban workbench.

To assign a role to a responsibility, see Defining Role Inheritance Hierarchies, *Oracle E-Business Suite Security Guide.*

To assign a role to a user, see Registering User Accounts, *Oracle E-Business Suite Security Guide.*

Integration with iSupplier Portal

If your organization has installed both a Kanban tab and an iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tab in iSupplier Portal. The Kanban tab in iSupplier Portal displays the Cards Summary and Change Status tabs of the Electronic Kanban workbench.

You need to add the Electronic Kanban tab to iSupplier Portal manually in order for the tab to appear. In the Menus window, for the iSP HOMEPAGE Menu record, enter:

- Prompt: Kanban
- Submenu: iSupplier OAF Kanban Tab

See: Menus Window, *Oracle E-Business Suite User's Guide*

Related Product Setup Steps

You may need to perform some or all the following steps to set up Electronic Kanban. These steps are discussed in detail in the Setting Up sections of the related Oracle product guides.

Oracle Inventory Setup Steps

Set up Inventory as described in the Setup Steps, *Oracle Inventory User's Guide*,. Complete the following steps:

Step	Reference
Create your organizations	Common Manufacturing
Define your organization parameters	Common Manufacturing
Define your items and item costs	Common Manufacturing
Launch your transaction managers	Common Manufacturing

Step	Reference
Define your account aliases (optional)	Common Manufacturing
Define your transaction reason codes (optional)	Common Manufacturing
Define your units of measure	Common Manufacturing
Define your subinventories	Common Manufacturing
Define your stock locators	Common Manufacturing

Oracle Bills of Material

Set up Bills of Material as described in Setup Steps, *Oracle Bills of Material User's Guide*. Complete the following steps:

Step	Reference
Create your bills of material	Common Manufacturing
Define your resources	Common Manufacturing
Define your departments, department classes, resource shifts, and department resources	Common Manufacturing
Define your standard operations	Common Manufacturing
Create your routings (optional)	Common Manufacturing
Define simulation sets	Common Manufacturing
Calculate your manufacturing lead times (optional)	Common Manufacturing
Create your workday calendar	Common Manufacturing

Oracle Cost Management (Optional)

Set up Cost Management as described in Setup Steps, *Oracle Cost Management User's*

Guide.

Step	Reference
Define your cost types	Common Manufacturing
Define your resource activities and activity costs	Common Manufacturing
Define your default WIP accounting classes for categories (optional)	Common Manufacturing
Define resources, material sub-elements, overheads, and overhead defaults.	Common Manufacturing

Oracle iSupplier Portal (Optional)

Set up iSupplier Portal as described in Setup Steps, *Oracle iSupplier Portal Implementation Guide*.

Oracle Planning Products

Set up Oracle planning products.

Oracle Work in Process

Set up Work in Process as described in, see: Setup Steps, *Oracle Work in Process User's Guide*.

Step	Reference
Define work in process parameters	Common Manufacturing
Define work in process accounting classes	Common Manufacturing
Set work in process profile options	Common Manufacturing
Define resources, material sub-elements, overheads, and overhead defaults.	Common Manufacturing
Define Schedule Groups (optional)	Common Manufacturing

Step	Reference
Define Employees (optional if using resources)	Common Manufacturing
Define Labor Rates (optional if using resources)	Common Manufacturing
Define shop floor statuses (optional if using resources)	Common Manufacturing

Oracle Workflow

To initiate workflows that send notifications, or to customize workflows to include your own notification recipients, install and setup Oracle Workflow. See: Setting Up Oracle Workflow, *Oracle Workflow Administrator's Guide*

Setting Profile Options and Parameters

Use the profile options shown in the following table to specify how the application Electronic Kanban controls access and processes. The table indicates whether you (the User) can view or update the profile option and at which System Administrator levels the profile options can be updated: at the user, responsibility, application, or site levels.

The following table values indicate how you or a System Administrator can update the profile option at each level:

- Yes—you can update the profile option.
- View Only—you can view, but not change, the profile option value in the Profiles window.
- No—you cannot view or change the profile option value.

Electronic Kanban Profile Options

Profile Option	User	System Admin User	System Admin Resp	System Admin App	System Admin Site	Required ?	Default Value
FLM: Enable E-Kanban	Yes	Yes	Yes	Yes	Yes	Yes	No

Profile Option	User	System Admin User	System Admin Resp	System Admin App	System Admin Site	Required ?	Default Value
FLM: Consider Non Matching Subinv Demand	Yes	Yes	Yes	Yes	Yes	Optional	No
FLM: Include Buy Items in Kanban Plan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FLM: Include ECOs in Kanban Planning	Yes	Yes	Yes	Yes	Yes	Optional	No

- **FLM: Enable E-Kanban**

  Set this profile option to Yes to enable E-Kanban in your system.

- **FLM: Consider Non Matching Subinv Demand**

  Set the profile option to Yes to calculate and distribute demand for pull sequences that do not have matching BOM subinventories and that have allocation percentage that is not equal to 100 percent.

- **FLM: Include Buy Items in Kanban Plan**

  Set the profile option to Yes to include the top-level assemblies in the E-Kanban planning process when the inventory item attribute Make or Buy is set to Buy.

- **FLM: Include ECOs in Kanban Planning**

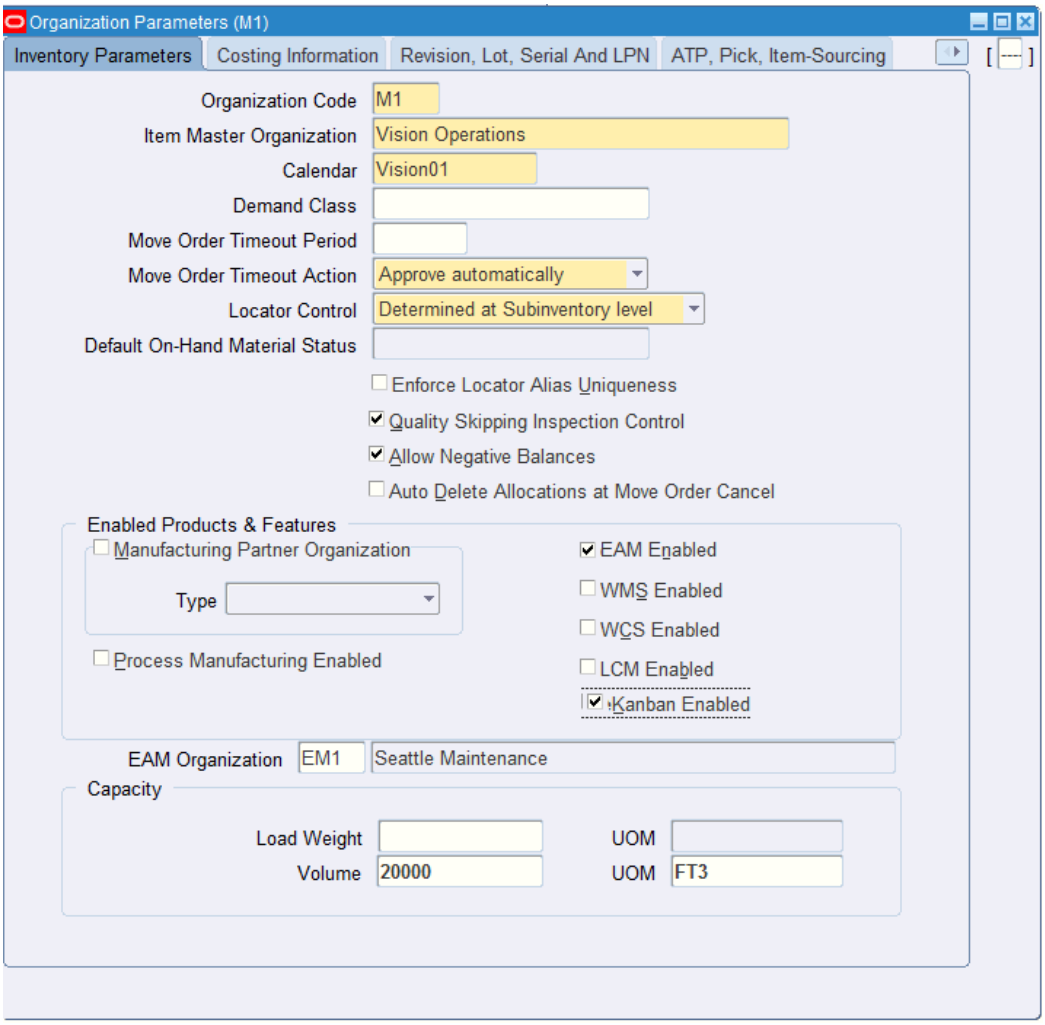
  Set the profile option to Yes to include Engineering Change Orders (ECOs) in Kanban Planning explosions.

Enabling Electronic Kanban at the Organization Level

You can enable Electronic Kanban at the organization level instead of enabling it at the

site level by selecting the **Kanban Enabled** check box in the **Organization Parameters** window. See: Organization Parameters Window, *Oracle Inventory User's Guide*.

> **Note:** This checkbox is only visible if the Electronic Kanban application is enabled at the site level using the FLM: Enable E-Kanban profile option.



4

Setting Up the Kanban Dashboard

This chapter covers the following topics:

- Setup and Configuration Steps for the Kanban Dashboard
- Setting Profile Options for the Kanban Dashboard
- Enabling Electronic Kanban ECC Access Roles
- Loading Electronic Kanban ECC Data

Setup and Configuration Steps for the Kanban Dashboard

To complete setup of the Kanban Dashboard, page 2-1:

1. Set profile options, page 4-1.
2. Enable Electronic Kanban ECC access roles, page 4-2.
3. Load Electronic Kanban data, page 4-2.

Setting Profile Options for the Kanban Dashboard

See Setup and Configuration Steps for the Kanban Dashboard, page 4-1.

Set a value for the following profile options to use the Kanban Dashboard:

Profile Option Name	Description	Default Value
FLM: Enable E-Kanban	Set this site-level profile value to Yes to enable E-Kanban **Warning:** If Oracle Electronic Kanban is enabled for your organization, then the regular Kanban windows in Oracle Inventory will not be available. However, the existing Oracle Inventory Kanban data will be visible in Oracle Electronic Kanban.	Null

Enabling Electronic Kanban ECC Access Roles

See Setup and Configuration Steps for the Kanban Dashboard, page 4-1.

Ensure that you set up and assign the following roles to use the Kanban Dashboard:

1. Set up the eKanban Super User responsibility.
2. Assign the Electronic Kanban ECC Dashboard user role.

Loading Electronic Kanban ECC Data

See Setup and Configuration Steps for the Kanban Dashboard, page 4-1.

To load Oracle E-Business Suite data into the Kanban Dashboard, page 2-1, run the concurrent program **Electronic Kanban ECC Data Load**. You can find this concurrent program using the eKanban Super User responsibility.

The data load program loads data to the following data sets:

Data Sets for the Electronic Kanban ECC Data Load Program

Data Set Key	Data Set
flm-kanban-cards-dtls	Kanban Cards

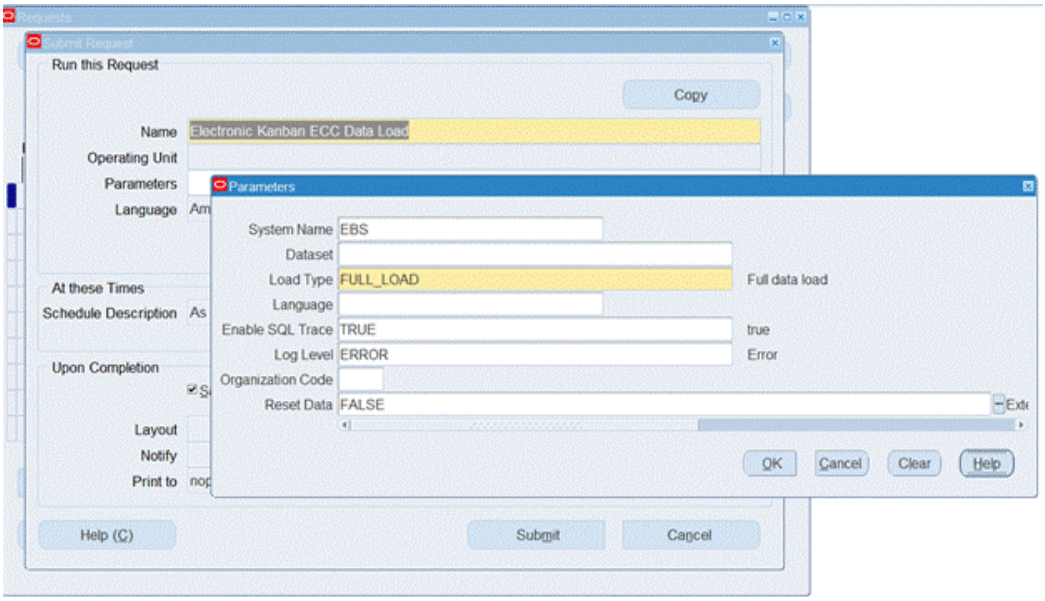
Data Set Key	Data Set
flm-pullseq-details	Kanban Pull Sequences
flm_kb_demand_metric	Kanban Demand
flm_kb_lt_metric	Kanban Lead Time

Note: To set up profile options before running data loads, see Setting Profile Options for the Kanban Dashboard, page 4-1.

Run the concurrent program from the **Submit Request** window.

(N) **eKanban Super User >View >Requests >Find Requests**

Electronic Kanban ECC Data Load



To load Electronic Kanban ECC data:

1. On the **Find Requests** window, click **Submit a New Request**.
2. On the **Submit Request** window, select **Electronic Kanban ECC Data Load** from the list of values in the **Name** field.
3. Use the **Parameters** window to enter the parameters information.

4. The **System Name** field defaults to EBS.

5. In the **Dataset** field, select the specific data set for which you would like to load data from the list of values. Leave this field blank to run a data load for all the data sets.

6. In the **Load Type** field, select the appropriate load type:

    - **Full data load**: This process loads all the item pull sequences and cards data for Electronic Kanban data and is required to be run for the first data load. The full data load process also includes metadata load. If you select and run full load for subsequent requests, then this program clears the previous Electronic Kanban data from the dashboard and loads fresh data.

        Note: Running a full load removes all user defined reports and shows only the system defined report after the full load completes.

    - **Incremental data load**: This process loads the new and updated item pull sequences and card that are modified and updated from the previous load. Incremental load should be scheduled to run as often as required to keep the ECC dashboard current. Ensure that you run the incremental load after running a full load to avoid any data loading errors.

    - **Metadata load**: This process ensures the application waits for other tasks such as consolidation, data entry, or other load processes to finish before it loads the files. Note that the full data load process includes metadata load.

7. In the **Language** field, enter one or more language codes for the output. For multiple language codes, use the format AA,BB,NN. For example, enter US,AR,KO. If the field is blank, then the data will be loaded for the base language only (usually US).

8. In the **Enable SQL Trace** field, select TRUE to enable the SQL trace. Otherwise, select FALSE.

9. In the **Log Level** field, select the program you want to report.

10. In the **Organization Code**, you can select and enter the organization code for which you want to run the concurrent program.

11. In the **Reset Data** field, select from the following values:

    - TRUE - when you want to reset the data set completely.

    - FALSE - when you want to extend the existing data set.

The default value is FALSE. You can only use the Reset Data option when you run a full data load.

12. Click **OK** on the **Parameters** window.

13. Click **Submit** on the **Submit Requests** window to submit the concurrent request.

14. Review your request using the **Requests** page.

15. Monitor data loading using the **Data Load Tracking** page of the ECC Developer responsibility.

To review request details:

1. From the menu, click **Requests**. The **Find Requests** window appears.

2. Select the **All My Requests** radio button and click **Find**. The **Requests** window appears and displays all of your requests.

3. In the **Requests** window, select the row that contains your request and then click **View Details**. The **Request Detail** window appears and displays the ECC- Run Data Load information.

4. Click **OK** to exit and close the window.

5

Kanban Pull Sequence Setup and Configurations

This chapter covers the following topics:

- Overview of Kanban Pull Sequence Setup and Configurations
- Configuring Kanban Parameters
- Searching and Creating Pull Sequences
- Viewing and Editing Pull Sequences
- Viewing the Replenishment Chain
- Viewing and Updating Kanban Cards

Overview of Kanban Pull Sequence Setup and Configurations

Use the Configurations and Kanban Setup tabs of the Electronic Kanban workbench for configuring behavior, calculating data, and setting up pull sequences and kanban cards per the selected organization.

Use the Configurations tab to configure parameters at either the site or the organization level. You can set values for demand and lead time calculations, tolerance for dashboard calculations, inventory health thresholds, and a number of other default values for kanban transactions. See: Configuring Kanban Parameters, page 5-6

The Kanban Setup tab enables you to query, view, update, create, and delete pull sequences and kanban cards. The Kanban Setup tab includes the following:

- Create Button

  Click Create and enter the necessary details in the Item, Subinventory, Source Type, and Number of Cards and click Apply to create a pull sequence. See: Searching and Creating Pull Sequences, page 5-11

- Kanban Pull Sequences

Under the Kanban Setup tab, you can view details about Kanban pull sequences, including a summary of all the Kanban pull sequence types. This tab also includes a list of pull sequence details. The data appears in columns for Item, Description, Subinventory, Locator, Source Type, Number of Cards, Kanban Size, View and Delete. You can:

- View the list of pull sequences in the Kanban Setup page.
- Search for item pull sequence setup details from the filters.
- View or delete any selected item from the list.

For each pull sequence record selected, you can view and update information regarding Source, Kanban, Planning and Additional Attributes. See: Viewing and Editing Pull Sequences, page 5-13

- Replenishment Chain

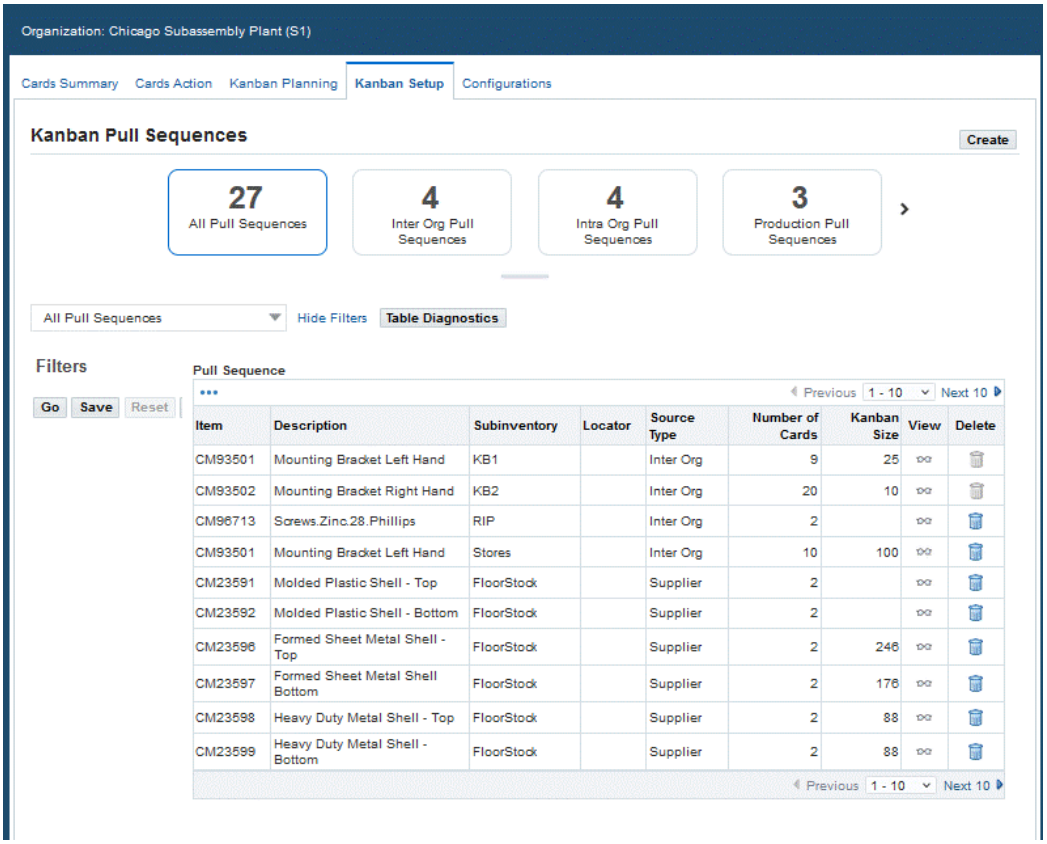
  Kanbans represent replenishment signals that are visible, such as a color-coded card or an empty bin, to trigger replenishment. This Replenishment Chain network diagram graphically displays the replenishment flow of the item for the selected pull sequence. The Replenishment Chain is visible only when Enterprise Command Center (ECC) is enabled. You must also enable Role-Based Access Control (RBAC) after enabling ECC. See: Viewing the Replenishment Chain, page 5-17

- Kanban Card Details

  This Kanban Cards tab displays the fields in the kanban cards. You can view the details of specific cards, create new cards, print, update and, delete cards. See: Viewing and Updating Kanban Cards, page 5-17

  Note: The Kanban Cards and the Replenishment Chain tabs appear after the Pull Sequence is created.

Kanban Setup page



Note: In a multi-user environment, you should have only a single active E-Kanban session. If you have more than one active E-Kanban session with the same user credentials, the application will not work as expected.

Kanban Card and Supply Statuses

Electronic Kanban seeded supply statuses include the following values:

- New: The Kanban has just been created and is not yet part of the replenishment chain.
- Empty: The Kanban is empty and a replenishment signal has been generated.
- Full: The Kanban has been replenished.
- Wait: The Kanban is waiting until the minimum order quantity has been met by the aggregation of cards.

- In-Process: Kanban cards are changed to this status when the following activities occur for the source types:
  - Supplier: The purchase order has been approved.
  - Inter-Org: The internal requisition has been approved.
  - Production: The job or schedule is created and an approved document is created for replenishment.
  - Intra-Org: An approved move order and an approved document is created for replenishment.
- In transit
- Exception
- Waiting for Consolidation: This supply status supports replenishment order consolidation for cards. This status is automatically created when you replenish Kanban cards and consolidation is enabled for the pull sequence. This status cannot be created manually for a Kanban card.

See: Overview of Kanban Replenishment, *Oracle Inventory User's Guide*.

> **Note:** The seeded status values should not be deleted from the lookup. Deletion of seeded status values can have undesirable impacts.

Electronic Kanban provides additional statuses:

- Planned

  This card status supports the creation of new cards if the planning logic recommends extra new cards effective for a future date.

  > **Note:** The Generate Kanban Cards program enables you to update cards from Planned status to Active status through a field in the Parameters window. When you enter Yes in the Update Planned Cards field, cards in the Planned status are changed to Active status when the effectivity date suggested by planning has expired.

Custom Statuses

You can also create custom status values for Electronic Kanban for supply types. Create custom statuses by using the following MTL_KANBAN_SUPPLY_STATUS lookup type in the Inventory Manufacturing Lookups window:

- It is advisable to associate custom statuses with existing seeded statuses. For example, you can associate the Demand Accepted status to the seeded supply status

In Process with a lookup code 5 by using lookup code 5.1 for Demand Accepted.

- Custom statuses can be disabled at the organization level in the Card Supply Statuses parameter.

Application Utilities Lookups and Application Object Library Lookups, *Oracle E-Business Suite Developer's Guide*

Temporary Kanban Cards

You can create a temporary Kanban card to handle demand fluctuation during replenishment spikes. A check box is available on the Kanban card record to create a temporary card. If you enter a disable date or a maximum replenishment value then the temporary cards will be disabled.

- Disable date: This value is a future date when the card is no longer active.
- Maximum Replenishments: This value is the maximum number of times a card can be replenished.

When the Kanban card reaches the disable date or maximum replenishments, the card is canceled on the next replenishment cycle. If the card is in the replenishment process, it will not be canceled until after it is replenished.

Non replenishable Kanban cards are not used in Oracle Electronic Kanban. Temporary cards replace this functionality.

> **Note:** Temporary cards are not considered by Kanban Planning for the card generation program.

Logical Kanban Replenishment

Oracle Electronic Kanban provides logical kanban replenishment. This type of replenishment occurs automatically in the background, but the material is received and physically matched to a kanban card or associated document.

Replenishment is triggered by the Logical Kanban Replenishment Calculation program (eKanban Logical Card Replenishment). The concurrent program checks for logical type pull sequences, which are marked on the Source details of the Kanban Setup tabbed region. When logical pull sequences are identified like, Active cards in the status of New, Full, or Replenishable, replenishable custom statuses are considered. The program looks at the number of Kanban cards on hand or full and calculates inventory based on the size of the cards. See: Logical Kanban Replenishment Calculation, page B-2

Descriptive Flexfields

Descriptive flexfields enable you to customize your application to store information

specific to your business needs. The two descriptive flexfields available are Pull Sequences Flexfield and Kanban Cards Flexfield. Use the Descriptive Flexfield Segments window, in the System Administrator responsibility, to define flexfield structures which can contain up to 15 segments. Customize descriptive flexfields by entering values and value sets for each segment. If you setup descriptive flexfields for Electronic Kanban, then the flexfield information appears on the pull sequence and Kanban card detail pages. See:

- Setting Up Descriptive Flexfields, *Oracle Work in Process User's Guide*
- Descriptive Flexfield Segments Window, *Oracle E-Business Suite Flexfields Guide*
- Viewing and Editing Pull Sequences and Kanban Cards, page 5-13
- Viewing and Updating Kanban Cards, page 5-17

Configuring Kanban Parameters

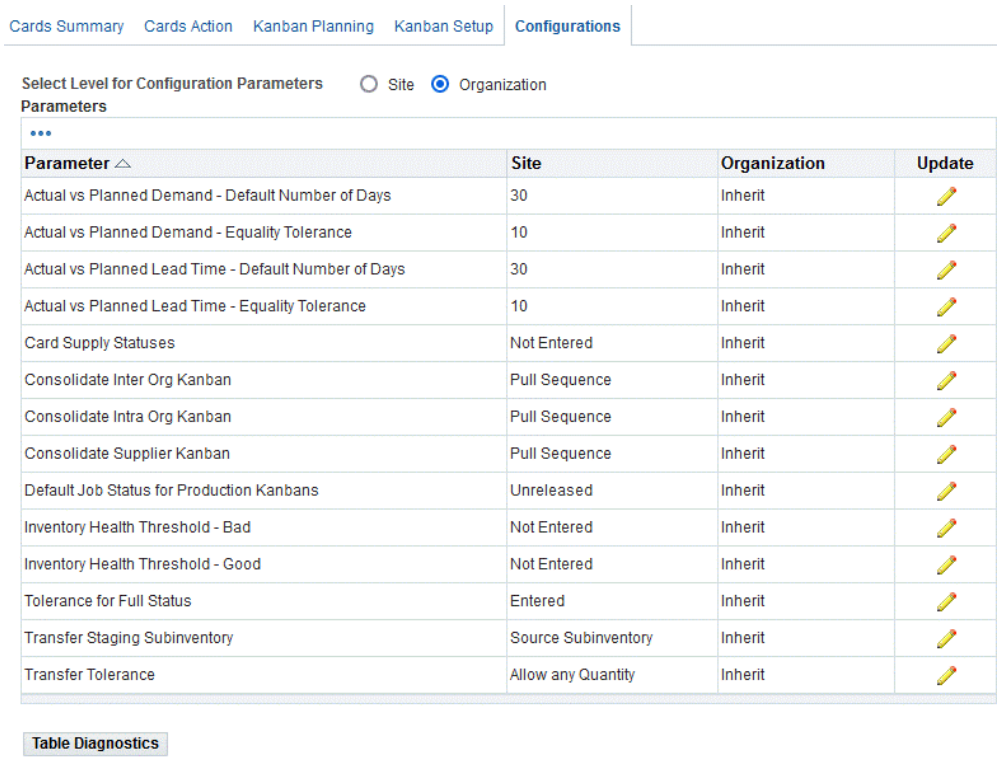
Use the Configurations tab to set the Electronic Kanban parameters governing behavior according to your organization's requirements for calculations and transactions. It provides parameters for demand and lead time calculations, tolerance for dashboard calculations, inventory health thresholds, and a number of other default values for Kanban transactions. Parameters are configured at both specific site and the entire organization levels. Parameters at the Organization level can be inherited from the Site level. You can perform the following actions in the Configurations tab:

- View or Enter or Edit the site level configuration parameters.
- View or Inherit or Enter or Edit the organization level configuration parameters.

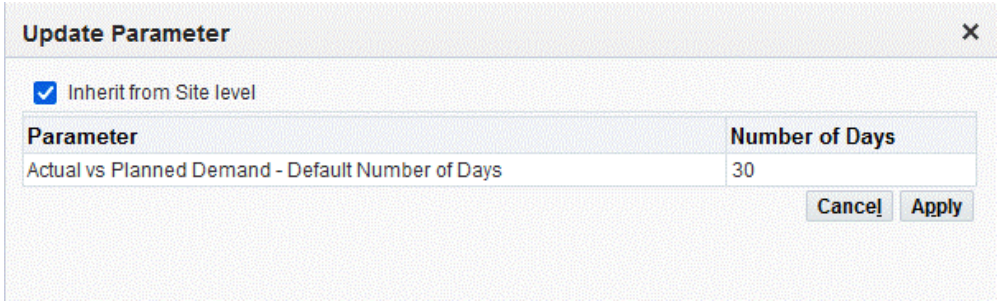
To set or change a parameter value:

1. Navigate to the Configurations tab.
2. Select the parameter level as Site or Organization.
3. Select the parameter you want to edit, and then select Update icon from the Update column.

   A dialog box appears with the current value.



4. The Inherit from Site level check box is the default setting, and the value at the site level is inherited at the organization level. Clear this check box to update the parameter at the organization level.



5. If you are not inheriting a value, enter a value in the Parameter Value field.

6. Click Apply to save your work or Cancel to go back.

Parameter Descriptions and Values

The list of parameters is described in the following table:

Parameter	Description	Values
Actual vs Planned Demand - Default Number of Days	The time period for calculating demand between actual lead time and planning days for replenished cards and pull sequences displayed on the Kanban Dashboard. Data is considered beyond the value in this parameter. For example, if this value is 30 days, then data is considered in the calculation over 30 days.	Number of days (Default: 30 days)
Actual vs Planned Demand - Equality Tolerance	Tolerance or margin in the calculation between actual and planned demand for replenished cards and pull sequences on the Kanban Dashboard.	Percentage (Default: 10 %)
Actual vs Planned Lead Time - Default Number of Days	The time period for calculating lead time between actual lead time and planning days for replenished cards and pull sequences displayed on the Kanban Dashboard.	Number of days (Default: 30)
Actual vs Planned Lead Time - Equality Tolerance	Tolerance or margin in the calculation between actual and planned demand lead time for the Kanban Dashboard.	Percentage (Default: 10 %)
Card Supply Statuses	The length of time each supply status a card is considered unmoved, and displays on the Unmoved Kanban Card Dashboard. You can also use this parameter to enable or disable custom statuses. The Enable check box at the organization level is used to set status availability.	% of Lead Time

Parameter	Description	Values
Consolidate Inter Org Kanban	You can use this parameter to control the level at which internal requisitions are consolidated. For example, when set to Item, you can consolidate internal inter-organization orders for the same item across all kanban cards.	• Pull Sequence • Item • Source Organization • Source Subinventory • Source Locator • Purchasing Parameters
Consolidate Intra Org Kanban	You can use this parameter to control the level at which move orders are consolidated. For example, when set to Item, you can consolidate intra-org orders for the same item across all the kanban cards.	• Pull Sequence • Item • Source Subinventory • Source Locator
Consolidate Supplier Kanban	You can use this parameter to control the level at which purchase requisitions are consolidated. For example, when set to Item, you can consolidate orders from from external suppliers for the same item across all the kanban cards.	• Pull Sequence • Item • Supplier • Supplier Site • Purchasing Parameters
Default Job Status for Production Kanbans	Sets default status for new jobs (discrete jobs or a lot based jobs) created during replenishment.	• Unreleased • Released (Default) • On Hold

Parameter	Description	Values
Inventory Health Threshold - Bad	The ratio between on hand inventory and safety stock considered unacceptable for the Inventory Heath to be at the status of Bad. If on hand inventory is less than this percentage of the safety stock, inventory health is considered to be at Low Stock.	Percentage
Inventory Health Threshold - Good	The ratio between on hand inventory and safety stock considered acceptable for the Inventory Heath to be at the status of Good. If on hand inventory is equal to or greater than this percentage of the safety stock, inventory health is considered to be at Excess Stock. If on hand inventory is equal to or greater than the Bad Threshold, or less than the Good Threshold, it is considered to be in Normal Stock.	Percentage
Tolerance for Full Status	The minimum quantity to change a kanban to Full status depending on the replenishment source type.	For each source type - Inter-Org , Supplier, Intra-Org , Production - enter the percentage of Card Size.
Transfer Staging Subinventory	The staging subinventory for transfers and shipping.	• Source Subinventory • Value defined in the Shipping Parameters (Default)

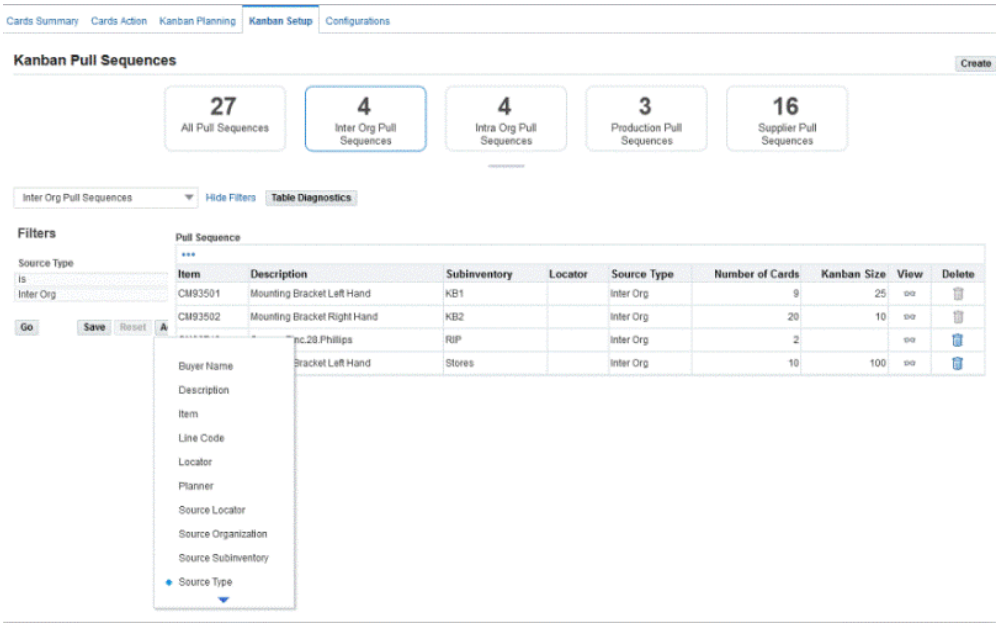
Parameter	Description	Values
Transfer Tolerance	Transfer quantity margin or tolerance for the sales order line quantity when shipping Inter-Org kanbans.	• Allow Any Quantity • Allow exact Kanban Card Quantity only • As defined in Order Management (Default)

Searching and Creating Pull Sequences

The Pull Sequence table displays a summary list of all the pull sequences data available. The data appears in columns for Item, Description, Subinventory, Locator, Source Type, Number of Cards, and Kanban Size. You can also view and delete pull sequences.

To Search for pull sequences:

1. Navigate to the Kanban Setup tab and click on Show Filters.
2. You can search for an Item Pull Sequence setup by selecting an option from the available filters. You can search for specific tiles and can also add tiles.



3. The results of your search appear in the Pull Sequence Details region.

   From the list of pull sequences you can click on the View icon to see the pull sequence definition details and Kanban cards. You can click on the Delete icon to delete the pull sequence definition. Note that if there are active cards in the pull sequence, the Delete icon is disabled.

To create a pull sequence:

1. Navigate to the Kanban Setup tab of the Electronic Kanban workbench and click Create.

2. Enter the necessary values in Item, Subinventory, Locator, Source Type, Kanban Size, Number of Cards, Minimum Order Quantity, Lead Time, Allocation, Lot Multipler, and Safety Stock Days. You must enter Source, Kanban Size and Number of Cards details to create a pull sequence.

3. Click Apply. The pull sequence for the item displays. You can also view the item pull sequence in the Kanban Cards and the Replenishment Chain network diagram.

4. You can use the following buttons on the Kanban Setup tab to generate, print or update Kanban card details:

   - Generate Cards
   - Update
   - Generate and Print

Viewing and Editing Pull Sequences

You can view and edit pull sequence details in the Pull Sequence Details tab using the Source, Kanban, Planning, and Additional Attributes regions. You can edit the details depending on the pull sequence source type. You can click the Kanban Setup link to return to the Kanban Setup page to view all the available pull sequences.

To view and edit pull sequence setup information:

1. Navigate to the Kanban Setup tab of the Electronic Kanban workbench, and click the View icon for an existing pull sequence.

2. Click Update to edit a pull sequence.

3. Enter Source, Kanban, Planning, Additional Attributes details and click Apply.

4. You can use the following buttons on the Pull Sequences page and the Pull Sequence Details tab to generate, print, or update Kanban card details for pull sequences:
   - Generate Cards
   - Update
   - Generate and Print

5. In the Source region, select a source type from the following:
   - Supplier
   - Intra-Org
   - Inter-Org
   - Production

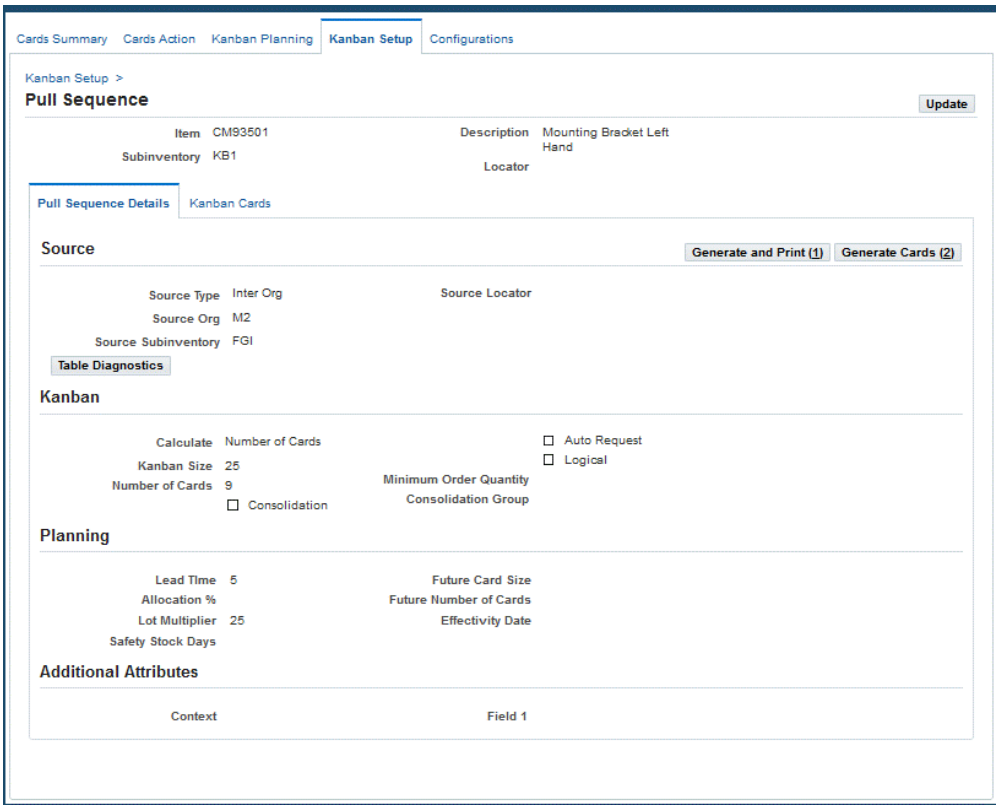
6. **Supplier:** If the Source Type for the pull sequence is Supplier, supplier information appears.

7. Click the Add Supplier icon and enter information for the following fields:
   - Supplier - Select a supplier.
   - Site - Select a site.
   - Percentage - You can change the percentage value for the existing suppliers, or delete the suppliers you are no longer using. The Percentage values for all your

suppliers must be equal to 100.

- Number of Cards - This field is system calculated for the pull sequence for the supplier.

Pull Sequence



8. Click Apply to save your work.

9. **Intra-Org:** If the Source Type is Intra-Org, you can edit information in the Auto Allocate, Source Subinventory, and Source Locator fields.

   You can optionally select the Auto Allocate check box to automatically allocate the move order.

10. **Inter-Org:** If the Source Type is Inter-Org , you can edit information in the Source Organization, Source Subinventory, and Source Locator fields.

11. **Production:** If the Source Type is Production , you can edit the applicable Line field value.

12. Click Apply to save your work.

13. In the Kanban Cards region, you can edit information in the following fields:

    - Calculate - Use this field to indicate the method to calculate either size or number of cards. This is used in the Planner Workbench. You can select from Kanban Size, Number of Kanban Cards, or Do Not Calculate.

    - Auto Request - This check box is available in Intra-Org Kanbans. It enables auto requests of the move order from transfer material to the point of use subinventory.

    - Kanban Size - Enter a Kanban size

    - Logical - Select this check box to indicate whether replenishment is done physically or through the logical kanban replenishment program.

    - Number of Cards - You must enter the number of cards

    - Minimum Order Quantity - Enter the minimum order quantity.

    - Consolidation - Select this check box to indicate if document generation is consolidated, or a separate document is created for each replenishment order.

      Note: Consolidation is available only for Supplier, Inter-Org, or Intra-Org Kanbans.

14. Click Apply to save your work.

15. Navigate to the Planning region from the pull sequnce.

16. You can edit some of the fields, others are populated by the planning program:

    - Lead Time: The time it takes to supply this item to the pull sequence, expressed in a unit of number of days.

    - Allocation %: The percent of independent demand for the kanban item that is to be supplied from this pull sequence.

      Note: The allocation percent is the percentage of the item demand allocated for this pull sequence. The kanban card calculation logic is not impacted when multiple suppliers exist. However, the lead time value is used by planning. Therefore, one pull sequence has only one lead time, even if there are multiple suppliers. You need to enter an average lead time for planning purposes if multiple suppliers exist for a pull sequence.

- Lot Multiplier: When kanban planning sizes the containers at the location, it will size in multiples of this quantity.
- Safety Stock Days: The number of days of demand that will be added to the kanban for safety stock.
- Future Card Size: This field is updated by planning calculations for the size of the kanban card.
- Future Number of Cards: This field is updated by planning calculations for the future number of the kanban.
- Effectivity Date: Indicates the date the new kanban size and numbers are active, updated by planning calculations.
- Attribute fields: Descriptive flexfields can be setup to store information specific to your business needs. You can view the information on the Planning tab, the Kanban Card Details table in the pop-up window, and the Kanban Card Details region for a specific card. See:
  - Setting Up Descriptive Flexfields, *Oracle Work in Process User's Guide*
  - Descriptive Flexfield Segments Window, *Oracle E-Business Suite Flexfields Guide*
  - Viewing and Updating Kanban Cards, page 5-17

17. Click Apply to save your work.

To generate and print Kanban cards from the Kanban Setup tab:

1. Navigate to the Kanban Setup tab of the Electronic Kanban workbench and select a record in the Pull Sequence Details region.
2. Click Generate Cards.

   New cards are generated for this pull sequence using the planning logic by initiating the Generate Cards concurrent request. Kanban card records appear in the Kanban Cards tab.
3. Click Generate and Print.

   New cards are generated and printed for this pull sequence using the planning logic by initiating the Generate Cards concurrent request. Kanban card records appear in the Kanban Cards tab.

Viewing the Replenishment Chain

Kanbans represent replenishment signals in manufacturing such as a color-coded card (kanban), a light that goes on when material is required, or anything to trigger replenishment. The Replenishment Chain network diagram provides a graphic display of the replenishment chain for the pull sequence selected in the Kanban Setup tabbed region, or the Cards Summary tabbed region.

The network diagram shows the Item Number, Organization, and Destination of the material needed in the manufacturing process. You can adjust the display by zooming in and out and changing the graphic layout.

> **Note:** The Kanban Setup tab displays Replenishment Chain only when the ECC is enabled for Electronic Kanban.

Viewing and Updating Kanban Cards

The Kanban Cards tab displays a list of the Kanban cards created for the selected pull sequence in a table view. You can edit fields and print cards from this region. The following functions can be performed:

- You can click on the '+' icon to create a Kanban card.
- You can click on the Add New Card button to create additional Kanban cards.
- You can click on the List View button to go back to table or list view.
- You can click Delete to delete a Kanban card.

To view and update Kanban card details:

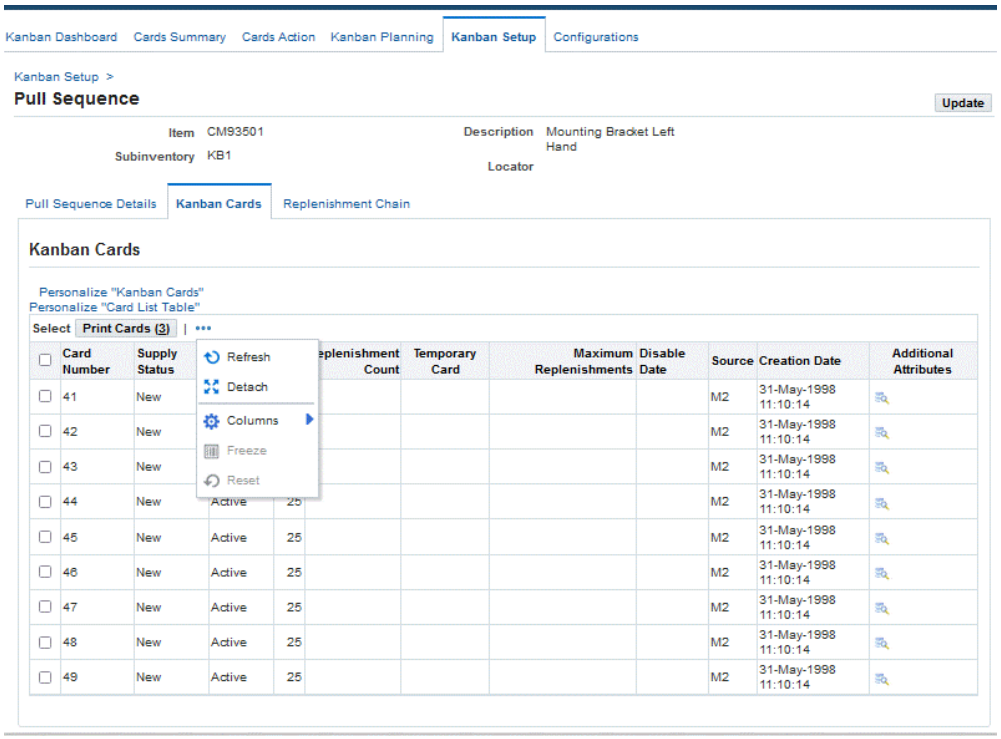
1. In the Kanban Setup tab navigate to the Kanban Cards tab. Search or select a record

from the Pull Sequence Details.

The selected pull sequence appears in the Kanban Cards table and displays the following information:

- Card Number
- Supply Status
- Card Status
- Size
- Replenishment Count indicates the number of times the card has been replenished.
- Temporary Card indicates if the Kanban card is temporary or not.
- Maximum Replenishments
- Disable Date
- Source
- Creation Date
- Additional Attributes displays descriptive flexfield values.

2. If descriptive flexfield data has been created, click on the icon in the Additional Attributes column to display the data in a pop-up window.



3. Click on the Actions: Card List table icon to change the summary view display. The drop-down menu provides the following choices:

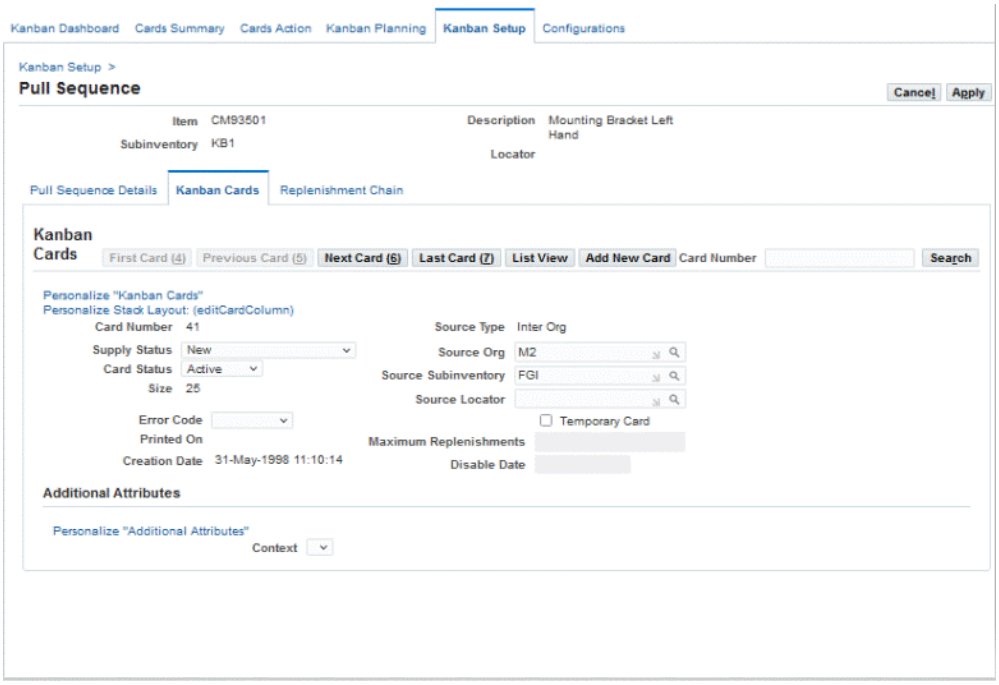
   - Columns: Enables you to select specific columns to display.
   - Detach: You can separate or reattach the region from the page, enabling you to view more of the search result information in the table at one time.
   - Refresh Columns appearing in the table.

4. Choose a specific card and select Update Card to change details on the Kanban card record. Depending on the card setup, the following fields can appear:

   - Supply Status
   - Card Status
   - Error Code
   - Temporary Card
   - Source Subinventory
   - Source Locator

- Line Code
- Supplier
- Supplier Site
- Additional attribute values (descriptive flexfield) names

You can view the list of kanban cards in this pull sequence by using the First, Previous, Next, and Last navigation buttons.



5. Click Apply to save your work.

6

Kanban Planning

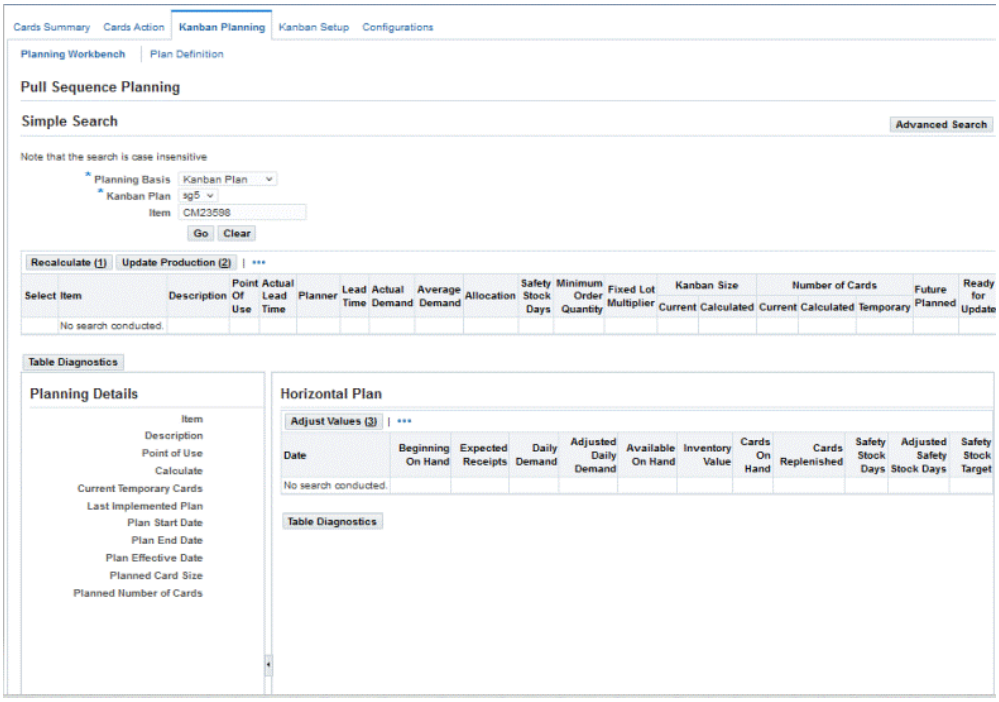
This chapter covers the following topics:

- Overview of Kanban Planning
- Searching for Pull Sequence Planning Data
- Viewing and Updating Pull Sequence Planning
- Viewing and Updating Kanban Plan Definitions

Overview of Kanban Planning

Kanban is a pull replenishment system whose aims are zero stockouts, shorter lead times, and reduced inventory with minimal manual supervision. The tasks of Kanban Planning are determining the optimal number of Kanban cards and calculating the Kanban size. Kanban planning is performed and updated in the Kanban Planning tab of the Electronic Kanban workbench. The Kanban Planning tab consists of two sub-tabs:

- Planning Workbench, page 6-2:Used to view the launched plan results, edit, recalculate, and replan. You can also view and edit the horizontal plans.
- Plan Definition, page 6-2:Used to setup and to launch the kanban.



Planning Workbench

The Planning Workbench subtab is divided into several regions: Search, Pull Sequence Planning, Planning Details, and Horizontal Plan.

- Use the Search region to search for pull sequences for items using either kanban plans or item numbers. See: Searching for Pull Sequence Planning Data, page 6-3

- Use the Pull Sequence Planning region to view the results of your pull sequences search.

  All the fields available in the pull sequence definition are displayed here and you can configure the table results format. You can also update the field values and recalculate the number of cards or size for the selected pull sequences. See: Viewing and Updating Pull Sequence Planning, page 6-5

- In the Planning Details region, you can view the details of the plan for the selected pull sequence in the table.

- In the Horizontal Plan region, you can view the horizontal plan for the selected pull sequence for a period of time.

Plan Definition

Use the Plan Definition tab to view, edit, create, and update kanban planning. You can use Forecast, Master Demand Schedule, Master Production Schedule, or Actual

Production for planning definitions. See: Viewing and Updating Kanban Planning Definitions, page 6-11

Kanban Planning Recommendations

When planning recommends a decrease in the number of cards, production is updated with the new value. Replenishment calculations consider the number of cards to reduce and cancel cards in succeeding replenishment cycles until the number of cards to eliminate is reached.

If planning recommends an increase in the number of cards, and production is updated with the new value, additional cards are immediately generated, and the number of cards is added.

- Only additional required cards are generated.
- Existing cards are not canceled.
- For requirements at a future date, additional cards are created in the Planned status.

  The Generate Kanban Cards program enables you to update cards from Planned status to Active status through a field in the Parameters window. When you enter Yes in the Update Planned Cards field, cards in the Planned status are changed to Active status when the effectivity date suggested by planning has expired.

  Note: When set to Yes (the default value), top level assemblies are included in the Kanban planning process when the inventory item attribute Make or Buy is set to Buy.

Searching for Pull Sequence Planning Data

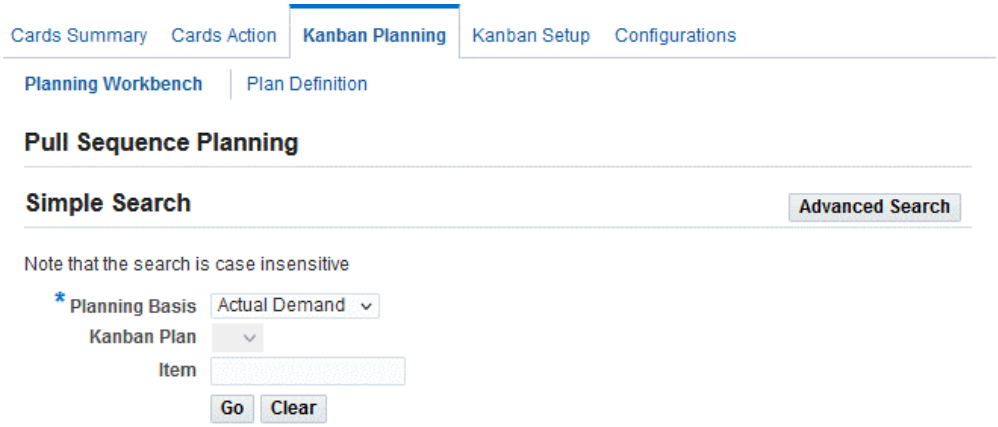
There are two search regions in the Kanban Planning tab of the Electronic Kanban workbench: one in the Planning Workbench subtab and one in the Plan Definition subatab. Both regions enable you to search for Kanban Planning records using either a Simple or an Advanced Search. If you select the Advanced Search, you can add extra search criteria fields.

To perform a Simple Search for pull sequence planning information:

1. Navigate to the Planning Workbench subtab of the Kanban Planning tab.
2. Select a value in the Planning Basis field indicating a planning measurement. You can select either Kanban Plan or Actual Demand.
3. If the Planning Basis is Kanban Plan, select a value in the Kanban Plan field and a full or partial value in the Item field.

4. If the Planning Basis is Actual Demand, select a full or partial value in the Item field.

   To view all kanban plan records, leave the item field null.



5. Click Go.

   The results of your search appear in the Pull Sequence Planning region. Click Clear to begin another search.

   See: To Save Search Criteria, page 7-4

To perform an Advanced Search for pull sequence planning information:

1. Navigate to the Planning Workbench subtab of the Kanban Planning tab and click Advanced Search.

2. In the Planning Basis criteria field, select either Kanban Plan or Actual Demand.

3. If you selected a Planning Basis of Actual Demand, select a full or partial item value in the Item field.

4. If you selected a Planning Basis of Kanban Plan, you also have the option to select a full or partial item value in the Item field.

5. From the Add Another drop-down box, you can select additional search criteria including the following values:

   - Description
   - Item
   - Kanban Plan
   - Locator

- Planner
- Basis
- Subinventory

6. Click Go.

   The results of your search appear in the Pull Sequence Planning region. Click Clear to reset the search fields and begin another search.

   See: To Save Search Criteria, page 7-4

Viewing and Updating Pull Sequence Planning

The Pull Sequence Planning region displays the results of your search for kanban plans. You can view information on Item, Description, Point of Use, Actual Lead Time, Planner, Lead Time, Actual Demand, Average Demand, Allocation, Safety Stock Days, Minimum Order Quantity, Fixed Lot Multiplier, Kanban Size, Number of Cards, Future Planned and Ready for Update. You can also recalculate and update production from this region.

When you select a record in the table from your search, you can view the Planning Details of the plan for the selected pull sequence in the table, and Horizontal Plan for the selected pull sequence for a period of time.

You can change the Pull Sequence Planning summary table display format by selecting specific columns to display, reordering how the columns appear in the table, and detaching or reattaching the table from the page to view more result information by clicking on the Actions: Pull Sequence Planning icon to the right of Update Production button.

Creating Demand for Pull Sequences with Different BOM Subinventories

The distribution of demand for the pull sequences is based on the total allocation percentage and for pull sequences that have matching BOM subinventories. If the sum of allocation percentage of all the pull sequences with matching subinventories is 100 percent, then the application distributes the allocation percentage to each pull sequence accordingly. You can also calculate and distribute demand for pull sequences that do not have matching BOM subinventories and with allocation percentage that is not equal to 100 percent. Use the profile option FLM: Consider Non Matching Subinv Demand to ensure that the Kanban Planner concurrent program calculates and distributes the demand for multiple pull sequences for an item component with different BOM subinventories and with allocation percentage that is not equal to 100 percent.

Note that if you enable the profile option FLM: Consider Non Matching Subinv Demand, all other functionality remains the same. However, if the sum of the allocation percentage for pull sequences with different subinventories is not equal to 100 percent, then the application distributes the demand equally to all the available pull sequences.

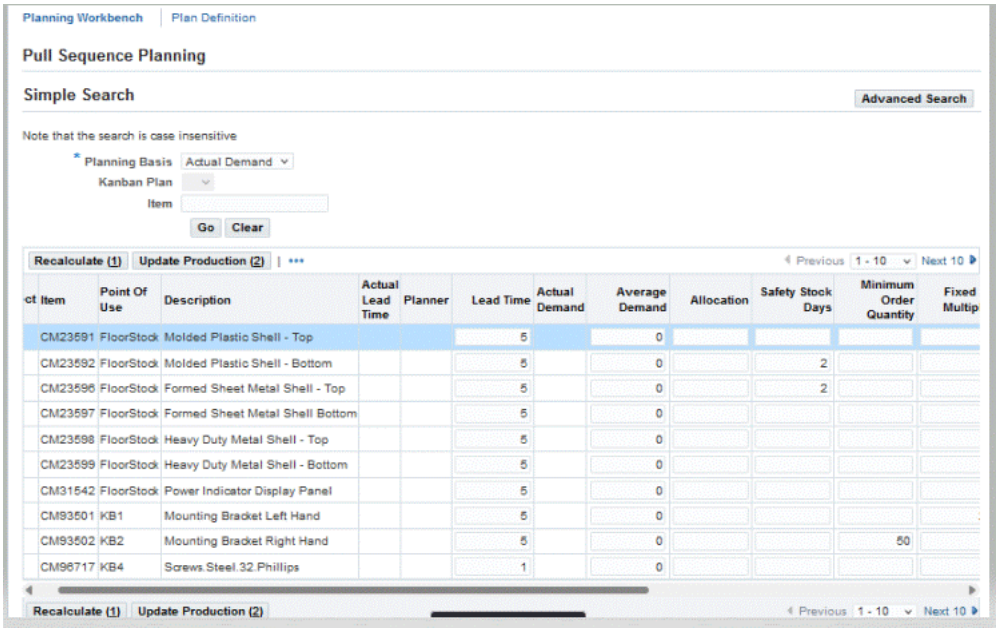
If the sum of allocation percentage of all the pull sequences with different subinventories is 100 percent, then the application distributes the demand to each pull sequence according to the allocation percentage.

To view and update pull sequence planning information:

1. From the Electronic Kanban workbench, click the Kanban Planning tab, then the Planning Workbench subtab. Search for records.

   See: Searching for Pull Sequence Planning Data, page 6-3

   The results of your search appear in the Pull Sequence Planning region.



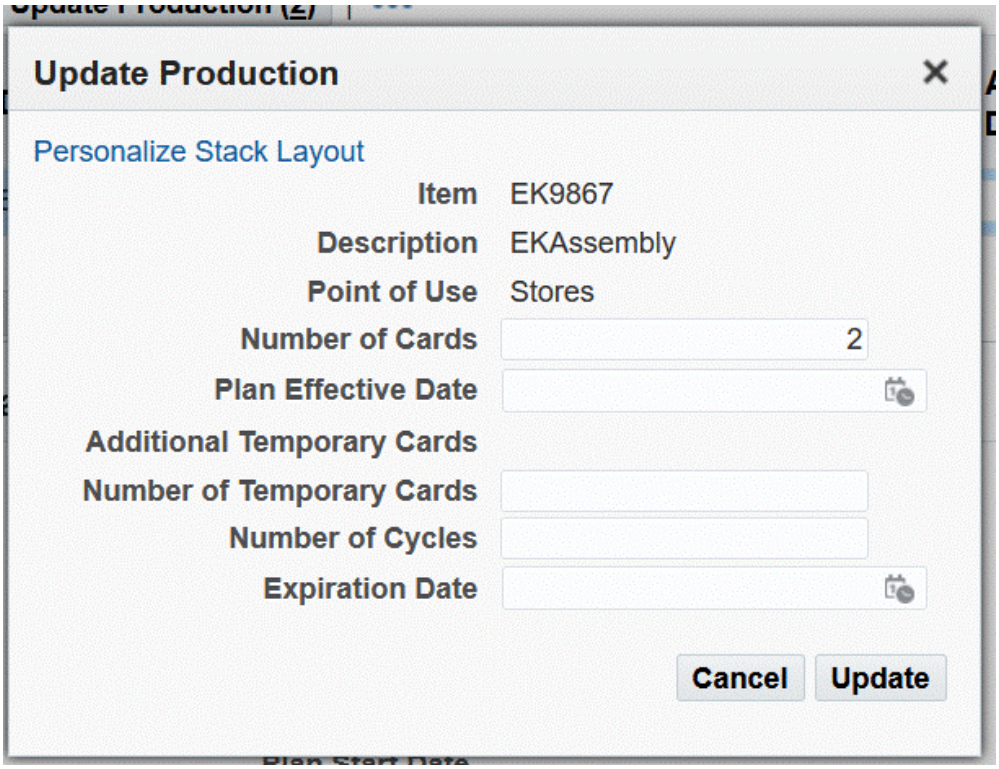
2. You can edit some of the fields and update the data. Planning data for the pull sequences display in the following columns.

   - Item
   - Point of Use: Location of the pull sequence material.
   - Description
   - Actual Lead Time: The true lead time to replenish cards for this pull sequence.
   - Planner: This field displays the code associated to the planner.
   - Lead Time: Period of time needed to replenish cards for this pull sequence. This field can be updated.

- Allocation: Division of this item used to replenish cards for this pull sequence. This field can be updated.
- Actual Demand: Requirement for the pull sequence material, from a number of sources such as customer orders.
- Average Demand: This field can be updated.
- Safety Stock Days: This field can be updated.
- Minimum Order Quantity: This field can be updated.
- Fixed Lot Multiplier: This field can be updated.
- Kanban Size: The values in the Current and Calculated fields are populated by kanban planning calculations.
- Number of Cards: The values in the Current, Calculated, and Temporary fields are populated by kanban planning calculations.
- Future Planned: This field is populated by planning.
- Ready for Update: Select this check box to include this record when you click Update Production in the following steps.

3. After updating a row, click Select, then click Recalculate to see the effects of your changes to the kanban size in the Horizontal Plan region.
4. To save the results of your recalculation, click the Update Production. The Update Production dialog box appears.

   The Update Production dialog box appears.



5. You can modify the value in the Number of Cards field.

6. You can choose to enter the details in all the fields and click Update or you can leave the fields blank and then click Update.

7. To save the results of your recalculation work for multiple records or all records appearing in the table, select the Ready for Update check box for each record, then click Update Production.

   The updates from your changes appear for the records selected in the table.

To view planning details and the horizontal plan for a pull sequence:

1. From the Electronic Kanban workbench, click the Kanban Planning tab, then the Planning Workbench subtab. Search for records.

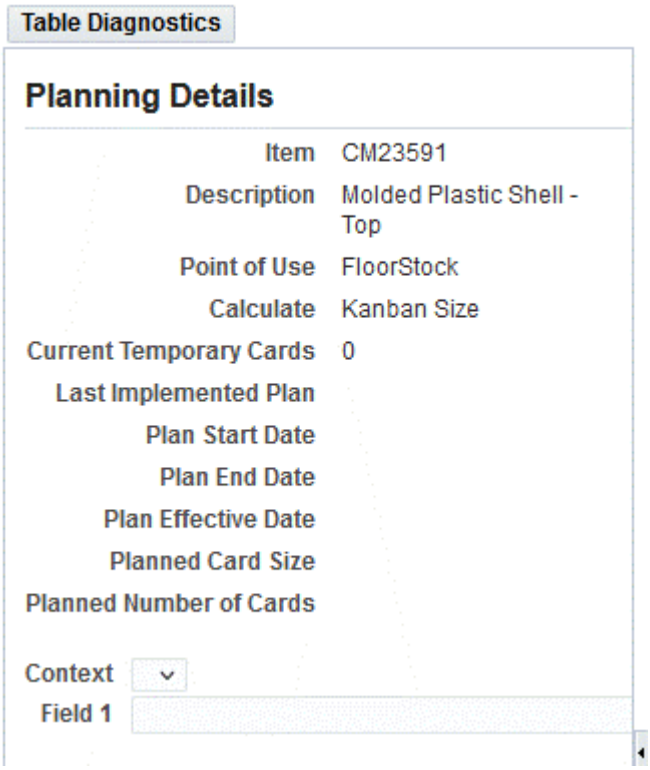
   The results of your search appear in the Pull Sequence Planning region.

2. Select a pull sequence record in the search results table to display the Planning Details and Horizontal Plan for the selected pull sequence.

   In the Planning Details region, you can see values in the following fields:

   - Item

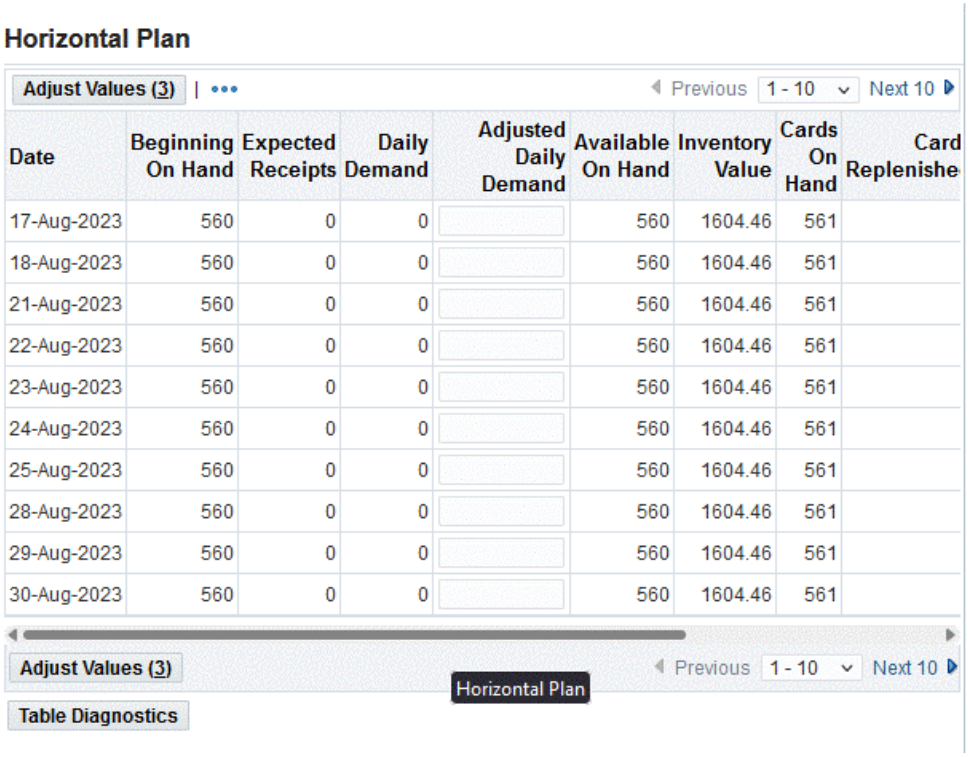
- Description
- Point of Use
- Calculate: Indicates the method to calculate either size or number of cards.
- Current Temporary Cards
- Last Implemented Plan
- Plan Start Date
- Plan End Date
- Plan Effective Date
- Planned Card Size
- Planned Number of Cards



3. The Horizontal Plan displays the kanban plan for the pull sequence item selected in the Pull Sequence Planning region for a selected period of time. Information is displayed in the following fields:

- Date
- Beginning On Hand
- Expected Receipts
- Daily Demand
- Adjusted Daily Demand
- Available On Hand
- Inventory Value
- Cards On Hand
- Cards Replenished
- Safety Stock Days
- Adjusted Safety Stock Days
- Safety Stock Target

4. You can change the Adjusted Daily Demand and Adjusted Safety Stock Days by entering values in these fields.



5. Select Adjust Values to calculate the new data and save your work.

   Values in the Available On Hand column change incrementally for each date listed.

6. From the Horizontal Plan, you can export pull sequence planning data and Horizontal Plan data to Excel or PDF.

   Note: In the Planning Workbench, all the quantity attributes in Pull Sequence Planning and Horizontal Plan must be greater than or equal to 0.

Viewing and Updating Kanban Plan Definitions

Use the Plan Definition subtab within the Kanban Planning tab is to view and update kanban planning. There are two areas in this page: a Filters region and a table of the Kanban Plan records.

Click Actions: Kanban Plans to select one of the following options:

- Refresh
- Export: You can export the Kanban plan table data into an Excel spreadsheet or a PDF file.

- Detach: You can detach or reattach the table to view more of the results or columns.
- Columns: You can select specific columns to display or reorder columns.

By default, all Kanban plans already defined are displayed. If no plans are defined, the table displayed is empty. Use the Filters region to view only the kanban plans that match your filter criteria. One filter, Kanban Plan, is provided by default. You can add additional fields as filters.

To filter kanban plans in the Plan Definition region:

1. Navigate to the Plan Definition tab of the Kanban Planning tab.
2. Enter a search value in the Kanban Plan field. Click on Add Plan to add a row and then enter the values in the Kanban Plan field.
3. Click Search.

   The results of your search appear in the Kanban Plan region of this page.
4. Click Add to include other filters to use in your search. A list of available filters appears.
5. Depending on the field value selected, enter a full or partial search value in the field box.
6. Click Search.
7. The results of your search appear in the Kanban Plan region of this page.

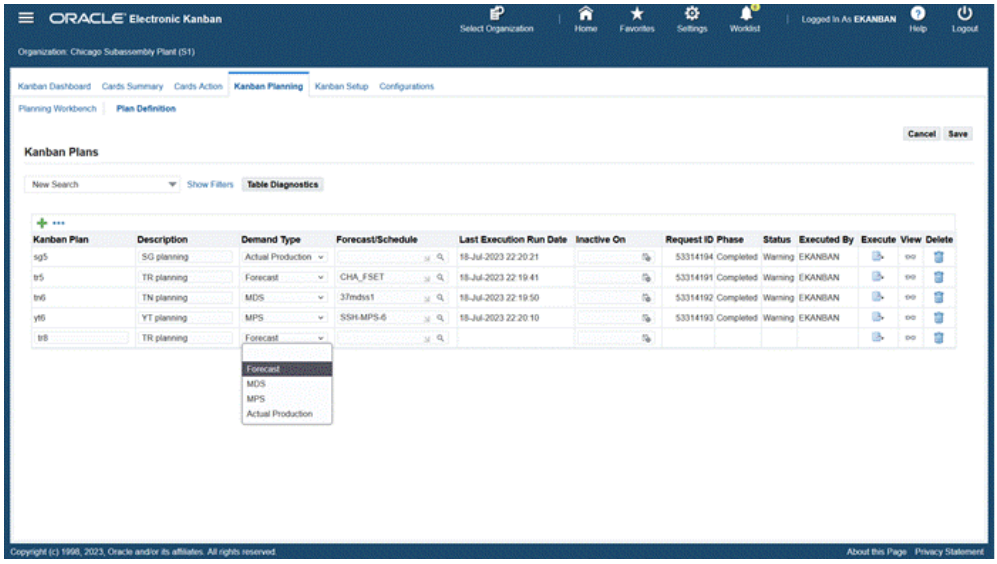
To view and update Kanban plans:

1. In the Plan Definition subtab use the Filters region to find the Kanban plan you want to view or update.

   Your filtered Kanban plan results appear in the Kanban Plan table with the following columns:

   - Kanban Plan
   - Description
   - Demand Type
   - Forecast/Schedule
   - Last Run Execution Date
   - Inactive On

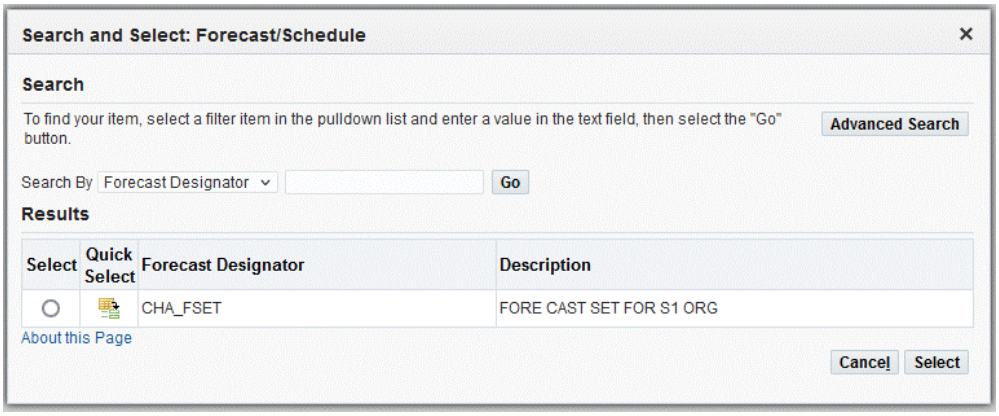
- Request ID
- Phase
- Status
- Executed By
- Execute
- View
- Delete



2. In the Demand Type field, you can change the way demand is calculated by selecting one of the choices:
   - Forecast
   - MDS: Master Demand Schedule
   - MPS: Master Production Schedule
   - Actual Production

3. In the Forecast/Schedule field, search for and select the name of the Forecast, MDS, or MPS value.

   This field is not used for Actual Production demand.



4. Perform a Simple Search for a schedule or forecast by selecting values in the following fields:

   - Forecast Designator
   - Description

   You can also choose Advanced Search to search using additional other fields in the search criteria.

5. Click Go.

   The results meeting your criteria appear in the dialog box.

6. Choose a record, and click Select to change the value in the Forecast/Schedule field.

7. In the Inactive On field, select a date if you want this record to have a time limited definition.

8. You can click on the Add Plan to add a record in the table and enter the Plan details.

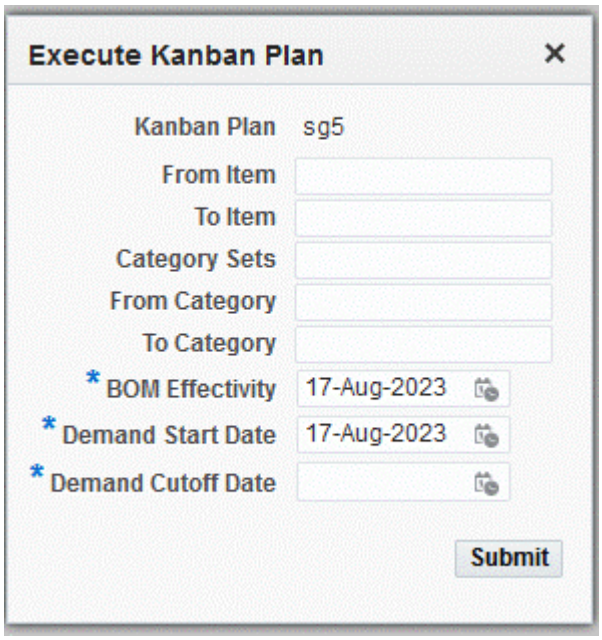
9. Click Save to save your work.

10. Click Execute to open the Execute Kanban Plan dialog window.

11. Enter parameters in the following fields:

    - From Item
    - To Item
    - Category Sets
    - From Category

- To Category
- BOM Effectivity
- Demand Start Date
- Demand Cutoff Date



12. Click Submit to execute the plan.

13. Click View to navigate the Planning Workbench subtab to view the planning details of the plan. You can also export Plan definitions to Excel or PDF.

7

Cards Summary Information

This chapter covers the following topics:

- Overview of Cards Summary Information
- Searching for Kanban Cards
- Viewing Cards Summary Information
- Viewing and Updating Kanban Card Details

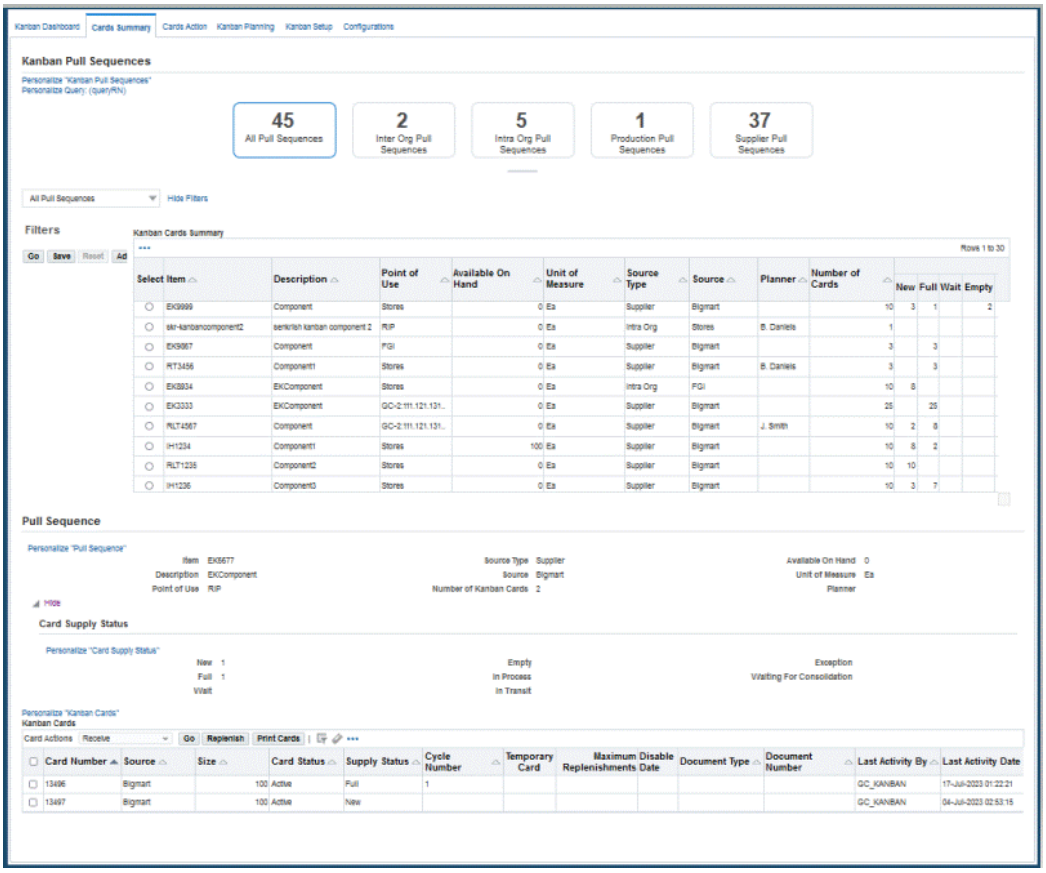
Overview of Cards Summary Information

Use the Cards Summary tab of the Electronic Kanban workbench to search and view Kanban cards for specific items and perform transactions. The tab contains the following regions:

- Kanban Pull Sequence tiles display information based on source types. Click a tile to filter information in the Kanban Cards Summary table.
- Search region with enhanced filters, see: Searching for Kanban Cards, page 7-3
- Kanban Cards Summary table that lists the pull sequence data and number of cards in each status for the specific record. The table contains configurable columns and can be detached from the workbench. You can also export the date to a spreadsheet. See: Viewing Cards Summary Information, page 7-5
- Pull Sequence region that displays the item and pull sequence attribute details.
- Card Supply Status region that displays the number of cards distributed by each card supply status for the Kanban item. This region is collapsed by default. You can click Show to view this region.
- Kanban Cards table that provides details of each Kanban card for the selected pull sequence along with the ability to perform transactions. The table columns are configurable. You can also export the data to a spreadsheet and print kanban cards.

See: Viewing Cards Summary Information, page 7-5, and Viewing and Updating Kanban Card Details, page 7-7

Note: Only Kanban cards with pull sequences display in the Cards Summary tab. Non replenishable Kanban cards, which are not supported in Oracle Electronic Kanban, are not shown because they do not have associated replenishment chains or inventory health data.



Note: Canceled kanban cards do not display in the Cards Summary tab. Use the Kanban Setup tab to view and perform transactions for canceled cards.

Integration with iSupplier Portal

If your organization has installed both Electronic Kanban and iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tabbed region in iSupplier Portal. The tabbed region in iSupplier Portal displays the Cards Summary and Cards Action tabs of the Electronic Kanban workbench.

In the Cards Summary tab, a supplier can only view Kanban card summary and detail data relevant only to that supplier. Your supplier can update the Kanban card supply status to any custom In Process status.

See: Integration with iSupplier Portal, page 3-4

Searching for Kanban Cards

Use the enhanced Filter Search in the Cards Summary tab to search for cards using various attributes like Item, Kanban Card, Destination Locator, Destination Subinventory, Planner, Supplier, Supplier Site, and so on.

To perform a Search for Kanban cards:

1. Navigate to the Cards Summary tab of the Electronic Kanban workbench.
2. Click Show Filters.
3. In the Filters region, you can select the attributes from the drop-down box to include other search criteria including the following values:
    - Available on Hand
    - Buyer Name
    - Description
    - Document Number
    - Include Source Organization
    - Item
    - Kanban Card
    - Locator
    - Planner
    - Point of Use
    - Source Locator
    - Include Source Organization
    - Source Subinventory
    - Source Type

- Subinventory
- Supplier
- Supplier Site
- Unit of Measure

4. Depending on the additional values, select a value or partial value in the criteria field.

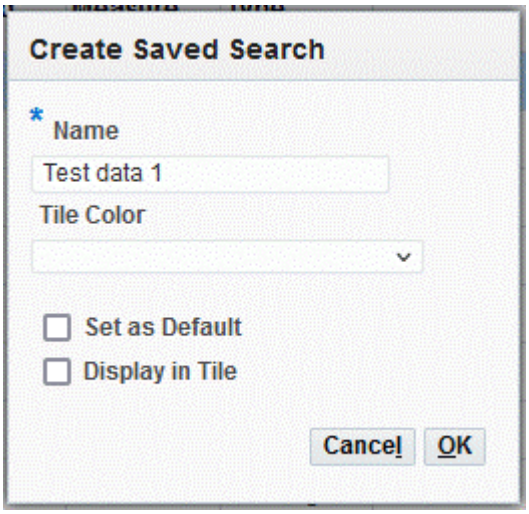
5. Click Go.

   The search results appear in the Kanban Cards Summary. Click Reset to clear the search fields and begin another search. You can also save your search criteria.

To save search criteria:

1. After selecting criteria to perform the Search, click Save.

   The Create Saved Search dialog box appears to save this set of criteria.



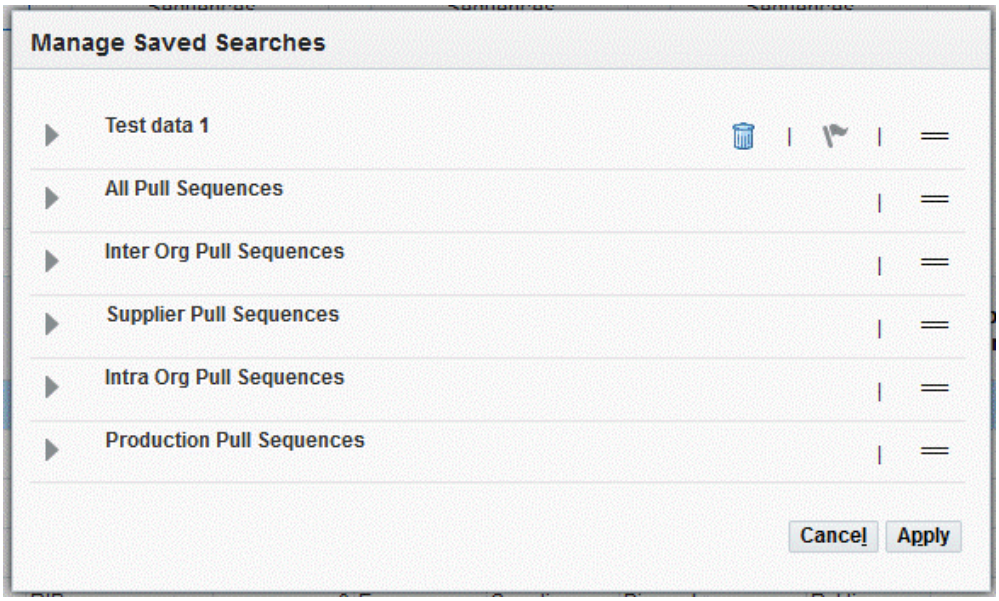
2. Enter a value in the Name field. You can set other values for this record by enabling the check boxes for:
   - Set as Default
   - Display in Tile

3. Click OK to save your work.

   After a search record has been saved, you can select it from the list for future

inquiries.

4. Select Manage Saved Searches from the Search drop-down box update or manage the search records.



5. Click Apply to save your work. Click Cancel to close the dialog box.

Viewing Cards Summary Information

The Kanban Cards Summary table displays the results of your item and Kanban card search and shows the pull sequence details. You can export data to Excel or PDF and detach the table from the page. Select a specific record in the Summary table to view the pull sequence details, card supply status and card details of the item.

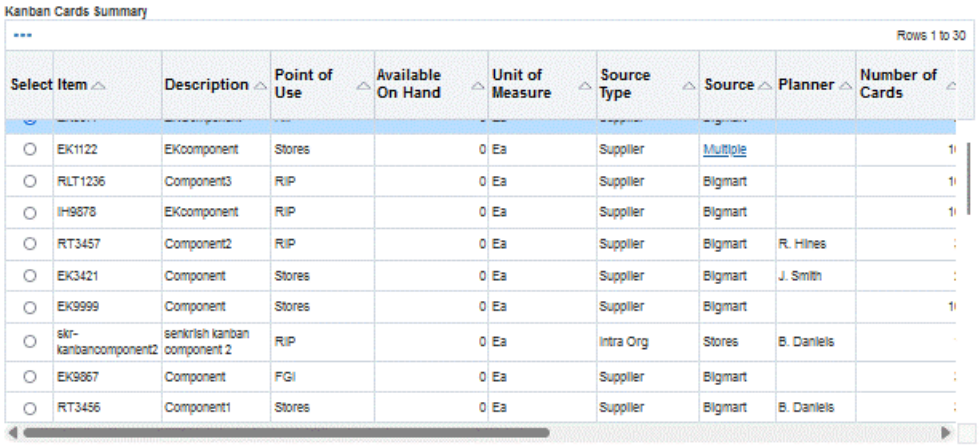
To view a summary of Kanban cards for a specific set of search criteria:

1. Navigate to the Cards Summary tab and perform a search. See: Searching for Kanban Cards, page 7-3

   Information for the Kanban cards appears in the following fields:

   - Item
   - Description
   - Point of Use
   - Available on Hand

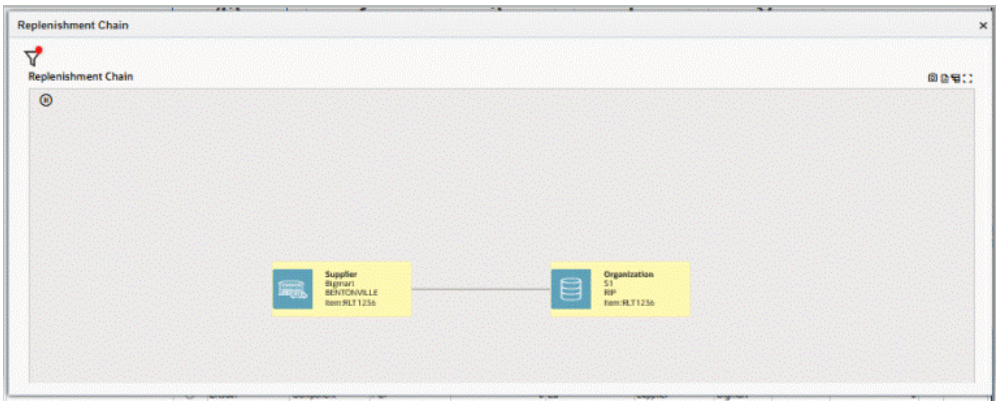
- Unit of Measure
- Planner
- Source Type: Replenishment source. The replenishment source type includes the following values:
  - Inter-Org
  - Intra-Org
  - Production
  - Supplier
- Source: This value depends on the Source Type and is either a stockroom or supplier site.
- Number of Cards
- Card Supply Status: New, Full, Empty, In Process, In Transit, Exception, Wait, Waiting for Consolidation.
- Replenishment Chain: Graphical display of the pull sequence.


Kanban Cards Summary

Rows 1 to 30

Select	Item	Description	Point of Use	Available On Hand	Unit of Measure	Source Type	Source	Planner	Number of Cards
○	EK1122	EKcomponent	Stores	0	Ea	Supplier	Multiple		1
○	RLT1236	Component3	RIP	0	Ea	Supplier	Bigmart		1
○	IH9878	EKcomponent	RIP	0	Ea	Supplier	Bigmart		1
○	RT3457	Component2	RIP	0	Ea	Supplier	Bigmart	R. Hines	
○	EK3421	Component	Stores	0	Ea	Supplier	Bigmart	J. Smith	
○	EK9999	Component	Stores	0	Ea	Supplier	Bigmart		1
○	skr-kanbancomponent2	senkrish kanban component 2	RIP	0	Ea	intra Org	Stores	B. Daniels	
○	EK9867	Component	FGI	0	Ea	Supplier	Bigmart		
○	RT3456	Component1	Stores	0	Ea	Supplier	Bigmart	B. Daniels	

2. Select Replenishment Chain to view a graphical representation of the replenishment signals for a particular item. This graphic represents the pull sequence between the point of use and a supply source. See: Viewing the Replenishment Chain, page 5-17



Note: Enable ECC to view the Replenishment Chain network diagram.

3. From the Actions icon, you can select the following actions:
   - Export: You can export the data to Excel or PDF.
   - Detach: You can separate or reattach the region from the page, enabling you to view more of the search result information in the table at one time.
   - Row expander: You can view the information in rows.

Viewing and Updating Kanban Card Details

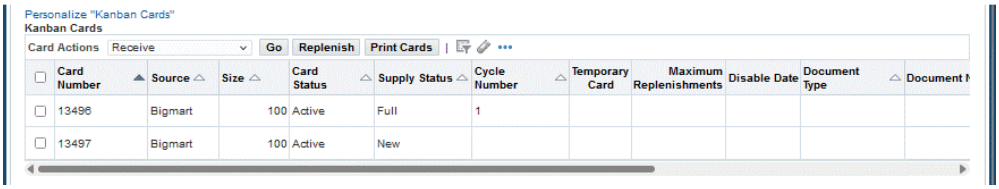
Use the Kanban Cards table in the Cards Summary tab to view details of specific kanban cards, create transactions, and print cards. When you select a record in the Kanban Cards Summary, the Kanban card details appear in the Kanban Cards table. You can:

- Filter the rows in the table view.
- Hide or display columns.
- Export data to a spreadsheet.
- Detach the table from the page.

To view Kanban card details:

1. Select a record in the Kanban Cards Summary table to view the associated Kanban card details in the Kanban Cards table.

2. Kanban card information displays in the following fields:



- Card number
- Source
- Size
- Card Status: Active, On Hold, or Canceled
- Supply Status, the following statuses are used:
  - New: The kanban has just been created and is not yet part of the replenishment chain.
  - Full: The kanban has been replenished.
  - Empty: A replenishment signal has been generated. This status is used only for Inter-Org and Supplier source types.
  - Wait: The kanban is waiting until the minimum order quantity has been met by the aggregation of cards.
  - In Process, if the Source Type is:
    - Supplier, the purchase order has been approved.
    - Inter-Org, the internal requisition has been approved.
    - Production, the job has been created and an approved document has been created for replenishment.
    - Intra-Org, the move has been performed and an approved document has been created for replenishment.
- Cycle Number

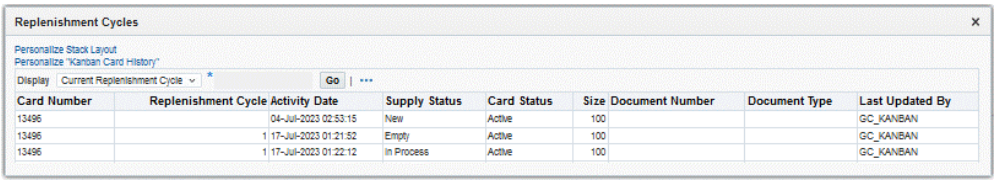
- Maximum Replenishments: The number of times a card has been replenished.
- Temporary Card: Cards created to handle demand fluctuation during replenishment spikes.
- Document Type: The document type for inbound material such as purchase order or internal order.
- Document Number: Number for the inbound document such as purchase order number.
- Disable Date
- Last Activity By
- Last Activity Date
- Replenishment Cycles

3. Click the icon on the Replenishment Cycles column to display the Replenishment Cycles dialog box, see: View Replenishment Cycles, page 7-9
4. Select a Kanban record and click the Replenish button to replenish the selected kanban cards.
5. Select a Kanban record and any one of the following card actions from the Card Actions list to perform transactions for selected records:
   - Receive
   - Transfer
   - Change Supply Status
   - Change Card Status

To view Kanban history:

1. On the Kanban Cards table, select a specific record and click the Replenishment Cycles icon.
2. In the Display field, select from the cycle option to view the history. Choices include:
   - All Replenishment Cycles
   - Current Replenishment Cycle

- Last 2 Replenishment Cycles
- Last 3 Replenishment Cycles
- Last 4 Replenishment Cycles
- Last N Replenishment Cycles



3. If you select the Display of Last N Replenishment Cycles, enter a numeric value in the N = field. For example, enter the number 10 for ten cycles.

4. Click Go to view the results.

   Information displays for the kanban card in the following fields:

   - Card Number
   - Replenishment Cycle
   - Activity Date
   - Supply Status
   - Card Status
   - Size
   - Document Number
   - Document Type
   - Last Updated By

To perform Kanban card transaction actions in the Cards Summary tab:

1. Select a Kanban card record in the Kanban Cards table.

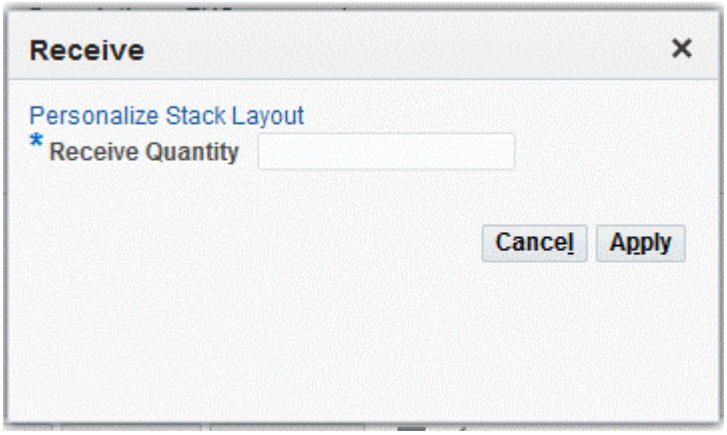
2. You can select multiple records to perform transactions.

3. Select from the following actions:

- Receive
- Transfer
- Change Supply Status
- Change Card Status

4. **Receive:** To receive material for a Kanban card, select Receive and then click Go.

   The Receive dialog box appears.



5. Enter a value in the Receive Quantity field.

   If a single record is selected, you can see the Receiving Location field in the dialog box. This field does not appear when multiple records are selected.

6. Click Apply.

   Kanban material is received in the background if the:

   - Source Type for the kanban card is either Supplier or Inter-Org.
   - Card Status is In Process, In Transit, or Full.
   - Item is not lot or serial controlled.

7. **Transfer:** To transfer material across subinventories, select Transfer and then click Go.

   The Transfer dialog box between shipping networks appears.

8. Enter a value in the Transfer Quantity field and click Apply.

   If the transaction is successful, a confirmation message appears. A new value appears in the Supply Status field depending on the quantity transferred.

Note: Inter-Org kanbans with a transfer type of Intransit must be first transferred to a staging subinventory and then received.

9. **Change Supply Status:** To change the supply status of a Kanban card, select Change Supply Status, and then click Go.

   The Change Supply Status dialog box appears.

10. Select a new status from the following values:

    - New
    - Full
    - Wait
    - Empty
    - In Process
    - In Transit
    - Exception

    If the transaction is successful, a confirmation message appears and the new value displays in the Supply Status field.

11. Click Apply.

12. **Change Card Status:** To change the status of a Kanban card, select Change Card Status and then click Go.

    The Change Status dialog box appears. Select a new status from the following values:

    - Active
    - Canceled
    - Hold

13. Click Apply.

    If the transaction is successful, a confirmation message appears and the new value displays in the Card Status field.

14. **Replenish:**To perform the Replenish action, select a record and click Replenish.

    Only cards in New and Full statuses can be replenished. If the transaction is

successful, a confirmation message appears and the new value displays in the Card Status field.

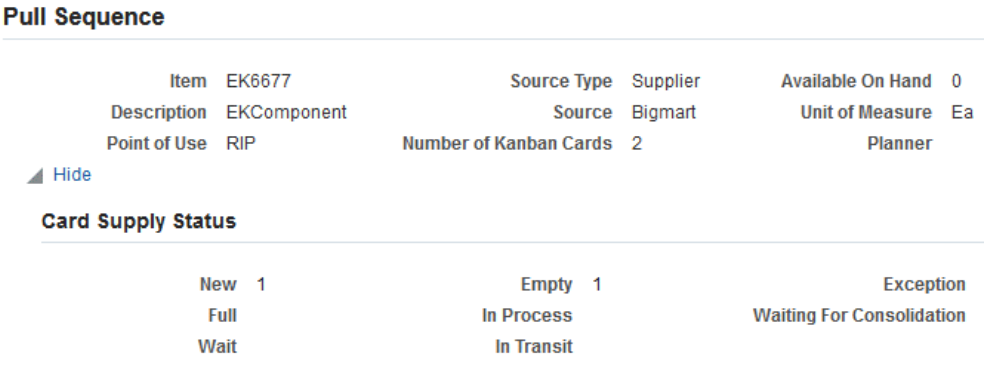
To print cards from the Cards Summary:

1. In the Kanban Cards region, select a kanban card record.
2. Click Print Cards.

   If the transaction is successful, a confirmation message states that the request has been submitted and lists the Request ID number.

To view specific Kanban card details and distribution:

1. Select a record in the Kanban Cards Summary table to display it in the Kanban Cards region.
2. Click Show in the Pull Sequence region to display the Card Supply Status. The Card Supply Status region displays the number of cards distributed by each card supply status for the Kanban item. This region is collapsed by default.
   - You can view the following card details in the Pull Sequence region: Item, Description, Point of Use, Source Type, Source, Number of Kanban Cards, Available On Hand, Unit of Measure, and Planner.
   - You can view the following card supply status information in the Card Supply Status region: New, Full, Wait, Empty, In Process, In Transit, Exception, Waiting For Consolidation.



8

Cards Action

This chapter covers the following topics:

- Overview of Cards Action
- Searching for Kanban Cards for Card Actions
- Replenishing Action for Kanban Cards
- Receiving Action for Kanban Cards
- Transfer Action for Kanban Cards
- Changing Status Action for Kanban Cards

Overview of Cards Action

Use the Cards Action tab of the Electronic Kanban workbench to perform replenishment, receiving, transferring, and change the transaction status for your Kanban cards. While you can perform Kanban transaction in the Cards Summary tab, the Cards Action tab enables you to scan Kanban card records using a mobile device. You can scan or manually enter cards in this tab. Cards are scanned or manually entered, and listed in the Scanned Kanban Cards region. The Cards Action tab offers a streamlined and simplified user interface for creating transactions.

The Cards Action tab includes the following tabs:

- **Replenish**

  You can replenish your Kanban card supply. This includes Kanban card numbers for Active cards in statuses of New, Full and Replenishable custom statuses. See: Replenishing Action for Kanban Cards, page 8-3

- **Receive**

  You can receive material associated with Kanban cards. Supplier and Intra-Org (in transit shipments) Kanban cards can be received into a common subinventory instead of the Kanban point of use defined in the pull sequence without affecting

any supply change in statuses. See: Receiving Action for Kanban Cards, page 8-5

- **Transfer**

  You can create move orders for material for Intra-Org kanbans. You can also ship Inter-Org kanbans from the source to destination organization. See: Receiving Action for Kanban Cards, page 8-5

- **Change Status**

  You can change kanban card status from a current status to a target status. See: Changing Status Action for Kanban Cards, page 8-9

Integration with iSupplier Portal

If your organization has installed both Electronic Kanban and iSupplier Portal, you can integrate the two products by displaying an Electronic Kanban tabbed region in iSupplier Portal. The tabbed region in iSupplier Portal displays the Cards Summary and Cards Action tabs of the Electronic Kanban workbench.

In the Cards Action tab, your supplier can only view and create actions for Kanban cards relevant to that supplier. You cannot change seeded supply statuses. The supplier can change the status to In Process, or a custom status that is attached to the seeded status of In Process. See: Integration with iSupplier Portal, page 3-4

Searching for Kanban Cards for Card Actions

The Cards Action tab of the Electronic Kanban workbench includes four tabs that you can use to create Kanban card transactions. Each tab contains a Kanban card search region.

You can use the following table options:

- Refresh: Refresh the data that appears on the table.
- Detach: Separate or reattach the region from the page to view more of the search result information in the table at one time.

To search for cards for Kanban Actions:

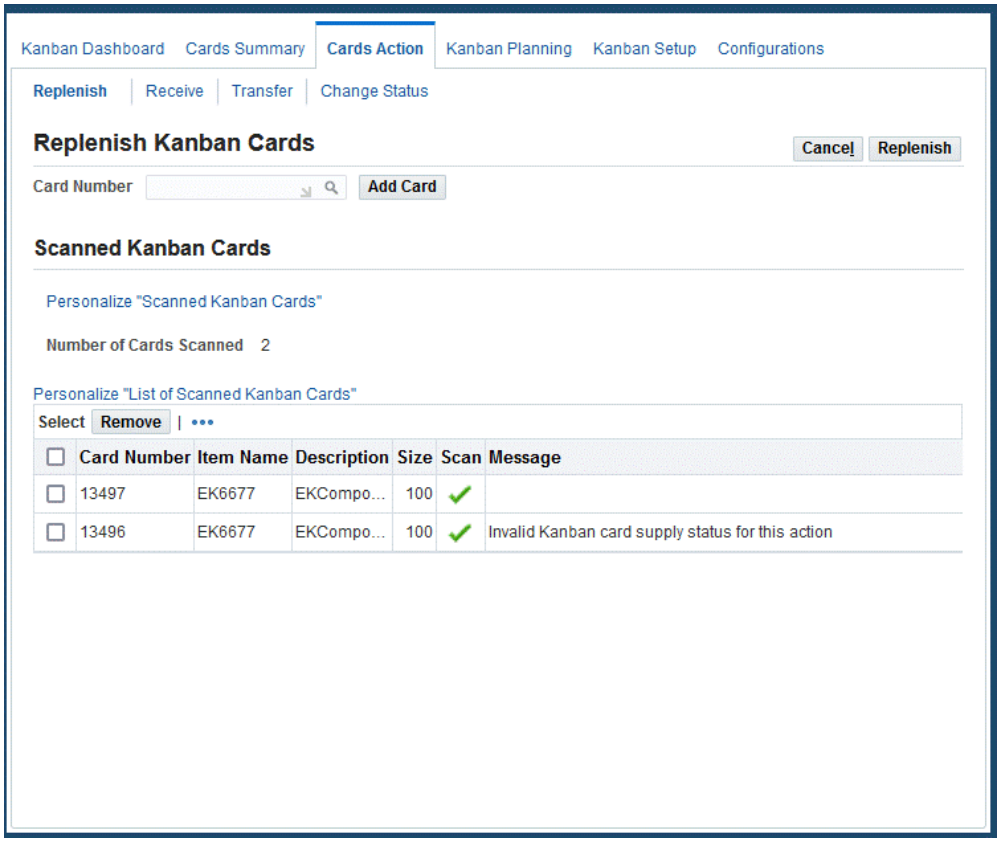
1. Navigate to the Cards Action tab and select from the following tabs:
   - Replenish
   - Receive
   - Transfer
   - Change Status

2. Add cards using one of the following methods to display card details in the Scanned Kanban Cards region:

   - Scan a card: You can scan a card using a mobile device.

   - Manually add a card: You can select a card number in the Card Number field, and then click Add Card. You can select and add multiple cards.

3. The Number of Cards Scanned displays the card count that you have added to the List of Scanned Cards table.



4. You can enter a card number and click the Add Card Search icon to personalize and add a new card to the List of Scanned Cards table.

5. You can select one or more card records and click Remove to remove the cards from the table.

Replenishing Action for Kanban Cards

Use the Replenish tab of the Cards Action tab to search for or scan kanban cards to create a supply for material. Cards are listed in the Scanned Kanban Cards region. Only

active kanban cards in the New, Full and other replenishable custom statuses can be replenished. Relevant messages display in the Message column to alert you about the actions that you can take.

To replenish Kanban cards:

1. Navigate to the Replenish tab of the Cards Action tab of the Electronic Kanban workbench.

2. Scan or enter kanban card numbers, see: To search for cards for Kanban actions, page 8-2

   The Scanned Kanban Cards region displays the following information for scanned or entered cards in the table:

   - Card Number
   - Item Name
   - Description
   - Size
   - Scan
   - Message

   The Scan column displays icons to indicate whether the card can be replenished or if any error conditions exist. The Message column states the following associated error conditions:

   - *Card will be cancelled since no. of cards for the pull sequence exceeds it's definition.*- Indicates that the number of cards generated exceeds the total number of cards value in Pull Sequence definition and the replenishment process is terminated.
   - *Invalid Kanban card supply status for this action.*- Indicates that the Kanban card status is not applicable for replenishment. The statuses of the cards must be New, Full, or replenishable custom statuses.
   - *Card will be cancelled since it is already disabled.*- Indicates that the Kanban card has reached the end date and are canceled upon replenishment.
   - *Card will be cancelled since it is already replenished to it's maximum limit.*- Indicates that the Kanban card is beyond the maximum allows replenishment and is not applicable for replenishment.
   - *Card will be replaced with a new card &NUMBER since it's source attributes are different compared to the pull sequence.*- Indicates that the source attributes of the

card is different than what is specified in the the pull sequence definition. The cards is cancelled and a new cards is created.

3. Select one or more card records and click Remove to remove the records from the replenishment list in the Scanned Kanban Cards region.

4. Select a card or cards that qualify for replenishment and then click Replenish to replenish the kanban cards.

   The replenished kanban card number records are removed from the Scanned Kanban region.

Receiving Action for Kanban Cards

Use the Receive tab of the Cards Action tab to scan or enter kanban cards to receive material associated with the cards. Cards are listed in the Scanned Kanban Cards region. Messages applicable to the cards display in the Message column. Supplier and Intra-Org (in transit shipments) kanban cards can be received into a common subinventory instead of the Kanban point of use defined in the pull sequence without affecting any supply status changes.

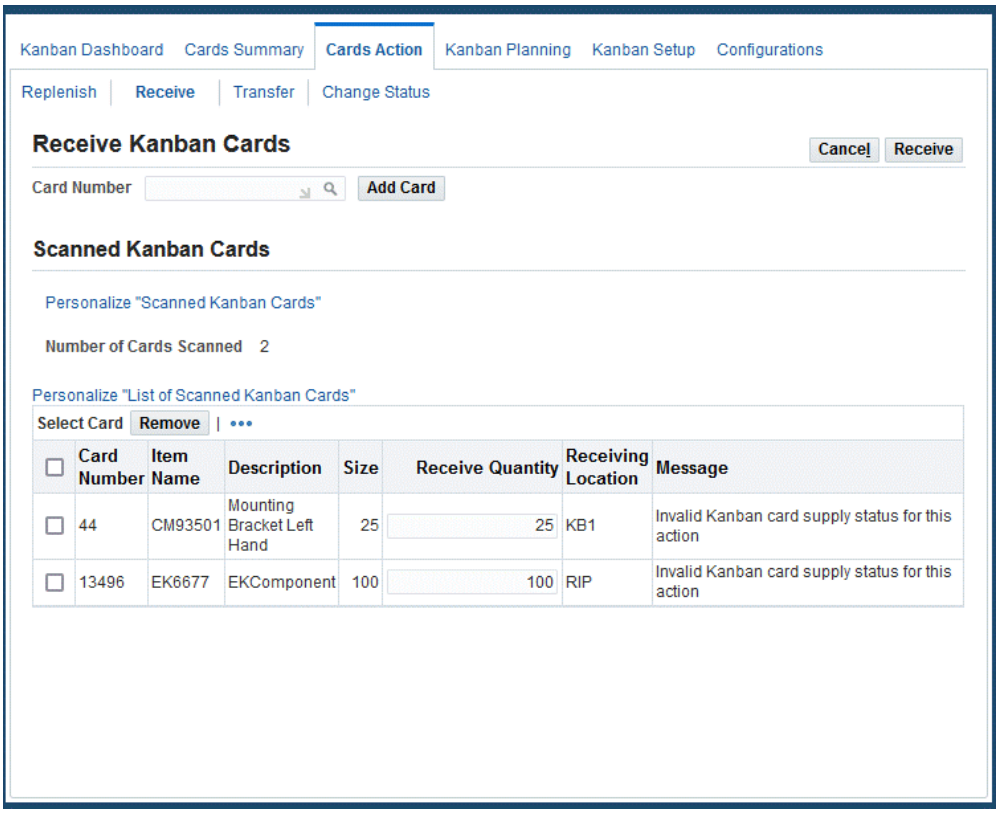
You can receive material associated with kanban cards if they meet the following criteria:

- Card is Active and in statuses of In Process, In Transit, or in any custom status that can be moved to Full.
- Source Type is Supplier or Inter-Org:
  - Supplier kanban cards are associated with an approved purchase order or internal sales order.
  - Inter-Org kanban cards need to have a booked internal shipping order and the shipment documents need to be generated. The shipping network between the two organizations has a transfer type of Intransit.
- The shipment line is open for receiving.
- The item is not lot or serial controlled.

To receive Kanban cards:

1. Navigate to the Receive tab of the Cards Action tab of the Electronic Kanban workbench.

2. Scan or enter kanban card numbers, see: Searching for Kanban Cards for Actions, page 8-2



The Scanned Kanban Cards region displays the following information for scanned or entered cards in the table:

- Card Number
- Item Name
- Description
- Size
- Receive Quantity
- Receiving Location
- Message

The Message column states the following associated error conditions:

- *Invalid card status is provided for this card.*- Indicates that the card status is invalid. Only active cards can be received.
- *Receiving can be done only against kanban cards of source type Inter-Org or Supplier.*

- *Invalid Kanban card supply status for this action.*- Indicates that the card status is invalid. Only cards in 'In Process' and 'In Transit' supply statuses can be received.

- *Receive can be done only against kanban cards with an approved PO.*

- *The PO/ISO for this kanban card is closed for receiving.* This indicates that the quantity for receiving against the distribution line or the internal sales order line does not have an open value. Any positive quantity open for receiving is listed.

3. You have the option to change the value in the Receive Quantity field.

   Note: The Quantity Received must meet the settings in the Tolerance for Full Status parameter to change a kanban to Full status on receipt.

4. Select one or more card records and click Remove to remove the records from the table in the Scanned Kanban Cards region.

5. Select one or more card records that qualify for receiving and click Receive to receive the kanban cards.

   The received kanban card number records are removed from the Scanned Kanban Cards region. The kanban status is updated to Full if the Quantity Received value is equal to the settings in the Tolerance for Full Status parameter.

Transfer Action for Kanban Cards

Use the Transfer tab of the Cards Action tab to scan or enter kanban cards to create move orders associated with Intra-Org kanban cards. You can also ship Inter-Org kanbans either from the source to destination organization, or from the destination to source organization. Card numbers are listed in the Scanned Kanban Cards region. Messages applicable to the cards display in the Message column. You can transfer material associated with kanban cards if they meet the following criteria:

- Card is Active and in statuses of In Process, Full, or in any custom status that can be moved to Full.

- Source type is Intra-Org or Inter-Org.

- Intra-Org kanban cards are associated to an approved move order line with open quantity.

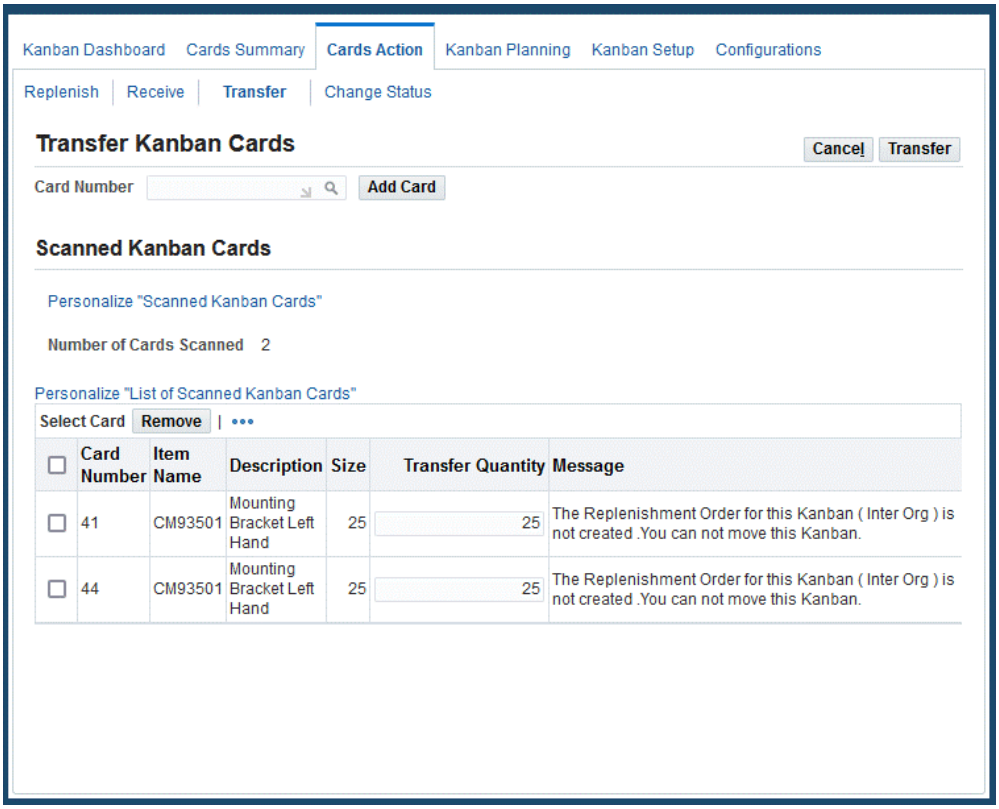
- Inter-Org kanban are associated with a booked internal sales order quantity open

for shipping.

To create move orders for Kanban cards:

1. Navigate to the Transfer tab in the Cards Action tab of the Electronic Kanban workbench.

2. Scan or enter kanban card numbers, see: Searching for Kanban Cards for Actions, page 8-2



The Scanned Kanban Cards region displays the following information for scanned or entered cards in the table:

- Card Number
- Item Name
- Description
- Size
- Transfer Quantity

- Message

The Message column states the following associated error conditions:

- *This Kanban card is neither Intra-Org nor Inter-Org Kanban.*: Indicates that the kanban card is not the correct source type and cannot be transferred.
- *Kanban cards in Status* [status type] *cannot be transferred.*: Indicates that the kanban card status is not applicable for transfer. The kanban card must be in a status that can be moved to Full status.
- *Inventory item cannot be lot controlled nor serial number controlled.*: Indicates that the kanban card for items that are lot controlled or serial controlled cannot be moved using the Electronic Kanban workbench.
- *The kanban card is not associated with a approved move order line hence cannot be transacted.*: Indicates that the Intra-Org kanban cards must be associated to an approved move order line. For Inter-Org kanbans it is a shipping quantity.
- *This kanban card is closed for transfer.*: Indicates that the Intra-Org kanban cards must have the move order line status as Approved and not Closed. If there is positive quantity open for transfer, the quantity is noted.

3. You have the option to change the Transfer Quantity value.
4. Select one or more card records and click Remove to remove the records from the table in the Scanned Kanban Cards region.
5. Select one or more card records that qualify for move orders and click Transfer to transfer the kanban cards appearing in the region that qualify for move orders.

   The transferred Kanban card number records are removed from the Scanned Kanban Cards region.

Changing Status Action for Kanban Cards

Use the Change Status tab in the Cards Action tab to scan or enter kanban cards to change the card status. Cards are listed in the Scanned Kanban Cards region. Messages applicable to the cards display in the Message column. You can change the status of kanban cards if they meet the following criteria:

- Cards are Active.
- The current status of the card is valid to move to the new status.

  For example, cards in the In Process status cannot be moved to the Empty status.

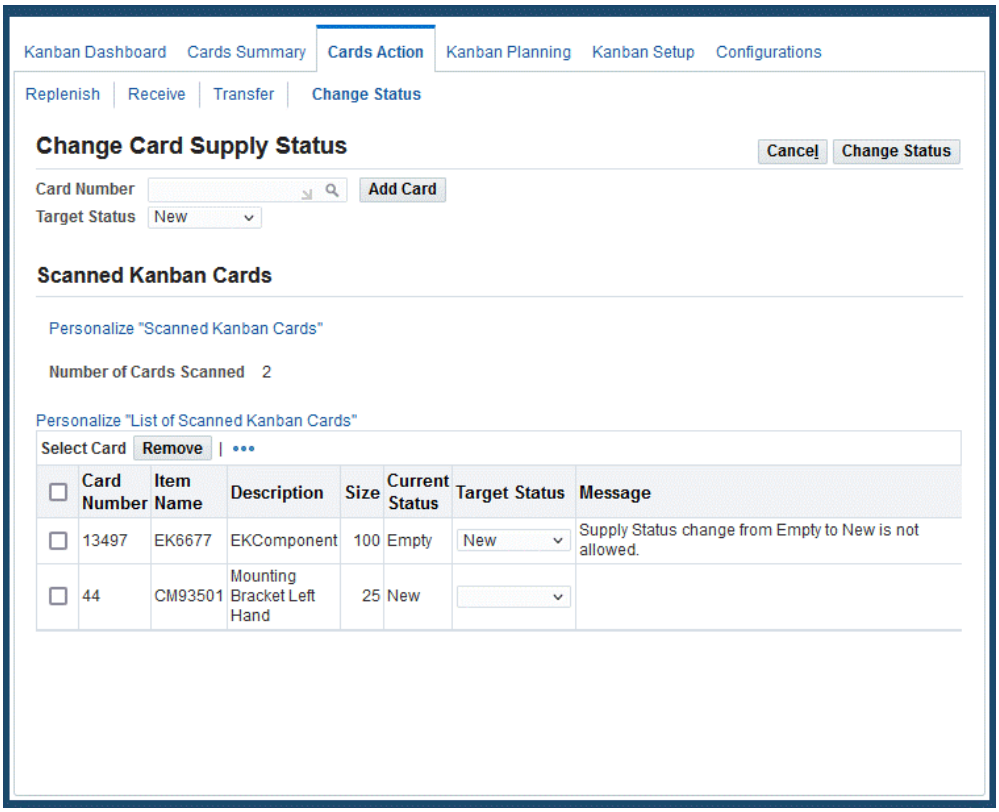
To change the status of Kanban cards:

1. Navigate to the Change Status tab in the Cards Action tab of the Electronic Kanban workbench.

2. Scan or enter kanban card numbers, see: Searching for Kanban Cards for Actions, page 8-2

3. Optionally, select a value in the Target Status field.

   This field enables you to select a default value status to automatically populate the individual records in the Scanned Kanban Cards region. You can also select individual status values for each record.



   The Scanned Kanban Cards region displays the following information for scanned or entered cards in the table:

   - Card Number
   - Item Name
   - Description
   - Size

- Current Status
- Target Status
- Message

The Message column states the associated error conditions.

4. Select one or more card records and click Remove to remove the records from the table in the Scanned Kanban Cards region.

5. Select one or more records that qualify for change and click Change Status to change the status of the kanban cards.

   The updated kanban card number records are removed from the Scanned Kanban Cards region.

A

Navigation

Navigation Paths

Legend

EK	Electronic Kanban
INV	Inventory
SYSADMIN	System Administrator
UM	User Management

Navigation Paths

Page or Window Name	Navigation Path
Create Saved Search	EK > Cards Summary tab > [enter criteria and perform Search] > [Save] EK > Setup tab > enter criteria and [perform Search] > [Save]
Horizontal Plan	EK > Kanban Planning tab > Planning Workbench > [search for records] > [select a record]

Page or Window Name	Navigation Path
Kanban Cards	EK > Cards Summary tab > [enter criteria and perform search] > [select record]
Kanban Card Details	EK > Setup tab > [select pull sequence record] EK > Cards Summary tab > [enter criteria and perform search] > [select record]
Kanban Cards Summary	EK > Cards Summary tab > [enter criteria and perform search]
Launch Kanban Planner	EK > Kanban Planning tab > Plan Definition > [search for records] > [select record] > Launch
Organization Parameters	INV > Setup > Organizations > Parameters > Inventory Parameters tab
Parameters	EK > Configuration tab
Personalize Saved Searches	EK > Cards Summary tab > Saved Search box > [select Personalize] EK > Setup tab > Saved Search box > [select Personalize]
Plan Definition	EK > Kanban Planning tab > Plan Definition
Planning Details	EK > Kanban Planning tab > Planning Workbench > [search for records] > [select a record]
Planning Workbench	EK > Kanban Planning tab > Planning Workbench
Pull Sequence Details	EK > Setup tab
Pull Sequence Planning	EK > Kanban Planning tab > Planning Workbench > [search for records]

Page or Window Name	Navigation Path
Replenishment Chain	EK > Cards Summary tab > [enter criteria and perform search] > Kanban Cards Summary > [Replenishment Chain] EK > Setup tab > [select record]
Roles and Role Inheritance	UM > Roles and Role Inheritance
Search	EK > Cards Summary tab EK > Setup tab
Search and Select Forecast/Schedule	EK > Kanban Planning tab > Plan Definition > [search for records] > [select record] > select Forecast/Schedule field
Update User	UM > Users > [Update]
User Maintenance	UM > Users
Users	SYSADMIN > Security > User > Define
Replenishment Cycles	EK > Cards Summary tab > [enter criteria and perform search] > [select record] > Kanban Cards > [select record] > [Replenishment Cycles]

B

Electronic Kanban Concurrent Programs

Electronic Kanban Concurrent Programs

Concurrent requests update the display on the Home tabbed region dashboards, replenish Kanban cards, and generate new cards. The Electronic Kanban concurrent programs are:

Generate Kanban Cards Calculation

The Generate Kanban Cards program has been configured for Electronic Kanban to enable you to generate new kanban cards, support cards for multiple suppliers, and generate cards without cancelling existing cards. Electronic Kanban card generation features include:

- Multiple suppliers are supported for the Source Type of Supplier when the Generate Kanban Cards calculation is submitted for items through the Electronic Kanban workbench. If the pull sequence has multiple suppliers defined, and you generate cards from the Electronic Kanban workbench, cards are created for suppliers in the order and ratio of the setup.
- Existing cards are not canceled even if they have passed effective dates, or planning has recommended fewer kanban cards. Cancellation is handled at the time of replenishment.
- Temporary cards are not considered in the card generation, only permanent cards in Planned Card status are considered in the count.

- The program enables you to update cards from Planned status to Active status. When you generate cards from the Generate Kanban Cards request window, enter Yes in the Update Planned Cards field in the Parameters window.

  Cards in the Planned status are changed to Active status if you enter Yes in this field, and the effectivity date suggested by planning has expired.

See: Generating Kanban Cards, *Oracle Inventory User's Guide*, and Viewing and Editing Pull Sequences and Kanban Cards, page 5-13

Inventory Health Calculation

The Inventory Health region shows the calculation comparing actual inventory levels with safety stock. Inventory health can be categorized as Good, Bad, and Warning. The following parameters and programs are used in the calculation in the concurrent program eKanban Inventory Health Calculation (FLMKBADB):

- Calculations are set in the following Electronic Kanban parameters. See: Configuring Kanban Parameters, page 5-6
  - Inventory Health Threshold - Bad: The percentage of safety stock inventory considered unacceptable for the Inventory Heath to be at the status of Bad.
  - Inventory Health Threshold - Good: The percentage of safety stock inventory considered suitable for the Inventory Heath to be at the status of Good.
- PL/SQL Packages
  - FLMKBHSS.pls: Specification of health status
  - FLMKBHSB.pls: Body of health status

A custom program is provided to enable you to further define bad and good inventory health thresholds levels, see: Configure Inventory Health Analytic, page D-9

See: Inventory Health, *Oracle Electronic Kanban User's Guide*

Logical Kanban Replenishment Calculation

Logical kanban replenishment occurs automatically in the background, but the receipt of material is handled physically matched to a kanban card or associated document. The Logical Kanban Replenishment Calculation program (eKanban Logical Card Replenishment) checks for logical type pull sequences for replenishment. The program checks the number of kanban cards on-hand or full for the item in a specific subinventory, and considers the target amount and the received quantities in the following order:

- The required number of pull sequences with replenishment type Logical is identified.

  This includes Active cards ready to be replenished - and kanbans in Empty, Wait,

Consolidation, and In Process statuses.

- Target inventory is calculated for the item at the destination subinventory.
- On-hand quantity at the subinventory is identified.
- Partial receipts (In Process or custom statuses that can be moved to Full) are subtracted from the on hand quantity are identified.
- Quantity replenished is identified and calculated. This calculation equals:
  - Target inventory quantity
  - - On hand quantity
  - - Partial receipts at the destination subinventory
  - = Quantity replenished

If the pull sequence has multiple suppliers associated, then the required number of cards are divided into various suppliers as per the sourcing percentage. The cards identified for replenishment are in the status of New or Full or in a custom status that can be replenished:

- Cards in New status will have higher priority over other statuses and will be replenished first. Cards are picked in the order of statuses New and Full, and then in the order of card numbers.
- Successful replenishment of a card changes the card status to Empty, Wait, or Consolidation.

Replenishment Order Consolidation

Replenishment order consolidation is a feature creating a single replenishment document is for multiple cards attached to the same pull sequence. The option for consolidation is available in pull sequences for source type Supplier, Intra-Org, and Inter-Org. The Replenishment Order Consolidation concurrent program (eKanban Consolidate Replenishment Orders) uses one organization as a mandatory parameter. The actual consolidation occurs during requisition import or AutoCreate. Features of consolidation include the following:

- **Consolidation Check Box**

  The Consolidation check box on the Kanban tab of the Pull Sequences Details page is used to enable consolidated document generation. If Consolidation is not selected, then separate documents are created for replenishment. When this check box is enabled, the kanban card is put in the Wait for Consolidation status when the material is required.

- **Wait for Consolidation Status**

  The Wait for Consolidation is a seeded status in Electronic Kanban which is automatically created when you select Replenish in the Cards Summary and Cards Action tabs for kanban cards in the statuses of New or Full. This status cannot be created manually for a kanban card.

- You can use a Consolidation Group value to run the program for a group of cards. Otherwise, the program consolidates all kanban cards in the Wait for Consolidation status into a single document for the same pull sequence.

- Consolidation generates single purchase requisition with multiple shipment lines using the other parameters set up in Purchasing.

- There will be one line of receipt for each shipment line, which can be divided into distribution lines. There is a one-to-one relationship between the kanban numbers and the distribution lines. When partial receipts are made, you can receive against the appropriate kanbans.

C

Electronic Kanban Business Events

Seeded Business Events

You can automatically trigger actions based on the following seeded Electronic Kanban business events using Oracle Workflow. Examples of actions you can trigger include issuing notifications and launching a workflow.

You can write code to subscribe to the event to trigger a workflow customized to your organizational requirements.

Event Name	Parameter Name	Description
oracle.apps.flm.ekanban.pullSeqCreation	Pull Sequence Creation Event	Pull Sequence Creation Event is raised after pull sequence is created
oracle.apps.flm.ekanban.pullSeqUpdation	Pull Sequence Updation Event	Pull Sequence Updation Event is raised after pull sequence is updated
oracle.apps.flm.ekanban.kanbanCardCreation	Kanban Card Creation Event	Kanban Card Creation Event is raised after kanban card is created
oracle.apps.flm.ekanban.kanbanCardUpdation	Kanban Card Updation Event	Kanban Card Updation Event is raised after kanban card is updated

Related Topics

Defining a Workflow Process, *Oracle Workflow Developer's Guide*

Defining Workflow Process Component, *Oracle Workflow Developer's Guide*

Defining Procedures and Functions for Oracle Workflow, *Oracle Workflow Developer's Guide*

D

Electronic Kanban Client Extensions

Custom Kanban Programming Logic

The following client extensions are provided to create custom programs. These programs enable you to create your own logic and code to override the default logic provided in Oracle Electronic Kanban:

Determine Unmoved Kanban Cards Program

A custom program is provided for the Unmoved Cards Calculation program to create your own logic and code. This enables you to override the default logic to identify unmoved cards. This is accomplished by adding logic in FLM_KANBAN_CUSTOM_PKG.UNMOVED_CARDS_HOOK.

IN Parameters

Parameter	Data Type	Description
p_org_id	Number	Organization identifier passed as a parameter.
p_pull_sequence_id	Number	Pull sequence identifier passed as a parameter.

Out Parameters

Parameter	Data Type	Description
x_return_status	Varchar2	Return Status from the custom program. The Error Code is populated if it exists.
x_error_code	Varchar2	Error code if it occurs during processing the logic in the custom program.

In/Out Parameters

Parameter	Data Type	Description
x_uc_setup_from_custom	flm_custom_uc_table	A collection returning the lead time for a specific status. This calculates whether a card is marked as unmoved or moved.
x_uc_from_custom	flm_custom_uc_setup_table	A collection returning which kanban card identifier should be marked as unmoved. This logic is user determined.
x_pull_sequence_id	Number	Pull sequence identifier passed back from the custom program.

There are two collections in the IN/OUT parameters. You populate only one collection. If both collections are populated, only the data from collection x_uc_setup_from_custom is used.

Element Name	Description
kanban_card_id	Unique kanban card identifier for a pull sequence.
unmoved_flag	Kanban card values for move status are: • 1- unmoved • Null- moved.
last_activity_date	Date last activity in this status.

The x_uc_setup_from_custom collection contains the following elements:

Element Name	Description
status	Supply status of cards tracked for unmoved cards for a pull sequence.
leadtime_days	Number of lead time days in an unmoved status.

See: Unmoved Cards, *Oracle Electronic Kanban User's Guide*

Transferring Cards Program

Custom programs are provided to enable you to enter your own logic when transferring either an Intra-Org kanban card or an Inter-Org kanban card. For example, you can configure when a card is considered to be in Full status for a particular item, rather than just per card type. For Intra-Org kanban cards you enter your logic in the program FLM_KANBAN_CUSTOM_PKG.INTRAORG_TRANSFER_HOOK.

IN Parameters

Parameter	Data Type	Description
p_ kanban_card_id	Number	The unique kanban card Identifier.
p_intra_order_id	Number	Reference to the Header Id of the move order for Intra-Org transfer.
p_intra_line_id	Number	Reference to the Line identifier of the move order for Intra Org transfer.
p_transfer_quantity	Number	Quantity transferred in the current transaction.
p_kanban_size	Number	The quantity of items in the kanban.

Out Parameters

Parameter	Data Type	Description
x_retcode	Varchar2	Return status from the custom program.
x_errmsg	Varchar2	Error message if it occurs during processing of the custom program.

For Inter-Org kanban cards, you enter your logic in the FLM_KANBAN_CUSTOM_PKG.INTERORG_TRANSFER_HOOK program:

IN Parameters

Parameter	Data Type	Description
p_ kanbancard_id	Number	The unique kanban card Identifier.
p_inter_order_id	Number	Reference to the Header Id of the internal requisition for Inter-Org transfer.
p_inter_line_id	Number	Reference to the Line Id of the internal requisition for IInter-Org transfer.
p_transfer_quantity	Number	Quantity transferred in the current transaction.
p_kanban_size	Number	The quantity of items in the kanban.

Out Parameters

Parameter	Data Type	Description
x_retcode	Varchar2	Return status from the custom program.
x_errmsg	Varchar2	Error message if it occurs during processing of the custom program.

Receiving Cards Program

A custom program is provided to enable you to enter your own logic when receiving either an Inter-Org or Supplier kanban card. For example, you can customize the receiving cards functionality to accommodate canceling the backordered quantity during the shipping process.

For Inter-Org kanban cards, enter your logic in FLM_KANBAN_CUSTOM_PKG. RECEIVE_INTERORG_HOOK.

IN Parameters

Parameter	Data Type	Description
p_ kanban_card_id	Number	The unique kanban card Identifier.
p_shipment_header_id	Number	Reference to the Header Id of the Inter-Org shipment.
p_shipment_line_id	Number	Reference to the Line Id of the internal requisition for IInter-Org shipment.
p_receipt_quantity	Number	Quantity received in the shipment.

Out Parameters

Parameter	Data Type	Description
x_return_status	Varchar2	Return status from the custom program.
x_msg_data	Varchar2	Error message if it occurs during processing of the custom program.

For Supplier kanban cards, you enter your logic in FLM_KANBAN_CUSTOM_PKG. RECEIVE_SUPPLIER_HOOK.

IN Parameters

Parameter	Data Type	Description
p_ kanban_card_id	Number	The unique kanban card Identifier.

Parameter	Data Type	Description
p_po_header_id	Number	The Purchase Order Header Identifier the kanban is associated with.
p_po_distribution_id	Number	The Purchase Order distribution Line Identifier that the kanban is associated with.
p_receipt_quantity	Number	Quantity received on the purchase order.

Out Parameters

Parameter	Data Type	Description
x_return_status	Varchar2	Return status from the custom program.
x_msg_data	Varchar2	Error message if it occurs during processing of the custom program.

Kanban Card Naming

A custom program is provided to enable you to define kanban card names. For example, you can define an alphanumeric prefix for kanban card numbers. You enter your card naming logic in the hook FLM_KANBAN_CUSTOM_PKG. CUSTOM_KANBAN_NUMBER.

IN Parameter

Parameter	Data Type	Description
p_ pull_sequence_id	Number	The unique pull sequence identifier.

The function will return the following data type: Kanban card name or number,

Varchar2 .

Cancel Kanban Cards

A custom program is provided to enable you to define logic to for cancelling a kanban cards. For example, you can cancel associated documents while cancelling the kanban cards. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG. CANCEL_KANBAN_CARD_HOOK.

IN Parameter

Parameter	Data Type	Description
p_kanban_card_id	Number	The unique kanban card identifier.

Control Kanban Card Supplier Status Changes

A custom program is provided to enable you to define status transitions using custom logic. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG. STATUS_CHANGE_HOOK.

IN Parameter

Parameter	Data Type	Description
p_kanban_card_id	Number	The unique kanban card identifier.
from_supply_status	Number	Current kanban card supply status.
to_supply_status	Number	Supply status that the card is moving to.

The function will return the data type of Number

- 1 is valid
- All other values are invalid

Get Default Supplier Program

A custom program is provided to enable you to define logic for assigning suppliers to kanban cards for pull sequences with multiple suppliers. You enter your custom logic in the hook FLM_KANBAN_CUSTOM_PKG.GET_DEFAULT_SUPPLIER.

IN Parameters

Parameter	Data Type	Description
p_pull_sequence_id	Number	Pull sequence identifier.

Out Parameters

Parameter	Data Type	Description
x_supplier_id	Number	Assigned supplier for the kanban card.
x_supplier_site_id	Number	Supplier site identifier.
x_retcode	Varchar2	Return status from the custom program.
x_errmsg	Varchar2	Error message if it occurs during processing of the custom program.

Configure Inventory Health Analytic

A custom program is provided to enable you to further define bad and good inventory health thresholds levels at more precise levels than the organization. You enter your custom logic in FLM_KANBAN_CUSTOM_PKG.HEALTH_FOR_PS.

IN Parameters

Parameter	Data Type	Description
p_pull_sequence_id	Number	Pull sequence identifier.

Out Parameters

Parameter	Data Type	Description
x_return_status	Varchar2	Return status from the program.
x_error_code	Varchar2	Error message if it occurs during processing of the custom program.
x_good_health	Number	The number at or above that the inventory health is considered to be at a Warning status.
x_bad_health	Number	The number that the inventory health is considered at a Bad status.

Note: The inventory health is considered at a Good status if it is at or above the levels defined in the x_bad_health parameter , and and below the x_good_health parameter.

Calculating Kanban Number or Size

A Custom hook is provided to allow you to enter a custom formula for calculating the number of the size of kanban cards. You enter your custom logic in the hook MRP_PUB_KANBAN_QTY_CALC.Calculate_Kanban_Quantity.

IN Parameters

Parameter	Data Type	Description
p_version_number	Number	Version number of the program.
p_pull_sequence_id	Number	Pull sequence identifier.
p_average_demand	Number	Average demand for the pull sequence

Parameter	Data Type	Description
p_allocation_percent	Number	Allocated percent fulfilled by this pull sequence.
p_minimum_order_quantity	Number	Minimum order quantity.
p_fixed_lot_multiplier	Number	Fixed lot multiplier.
p_safety_stock_days	Number	The number of safety stock days.
p_replenishment_lead_time	Number	The lead time required for replenishment
p_kanban_flag	Number	Identifies which attribute is to be calculated: • 1- Kanban size • 2- Number of kanban cards

Out Parameter

Parameter	Data Type	Description
p_return_status	Varchar2	Return status from the custom planning program.

IN/Out Parameters

Parameter	Data Type	Description
p_kanban_size	Number	The size of the kanban card.
p_kanban_number	Number	The number of kanban cards.

Horizontal Plan : Beginning On-Hand Quantity Custom Hook

You can use this custom program to choose how you want item on-hand quantities available to display in the horizontal plan. Enter your custom logic in FLM_KANBAN_CUSTOM_PKG. get_hp_begin_onhand_level.

Enter one of the following return values for the parameter l_level:

- 1: the horizontal plan displays the item on-hand quantity available in the subinventory and locator selected in the pull sequence.
- 2: the horizontal plan displays the item on-hand quantity available in all locators within the subinventory selected in the pull sequence.
- 3: the horizontal plan displays the item on-hand quantity available in all subinventories of the organization.

If the parameter l_level equals anything other than a value of 1, 2, or 3, then the function returns the value of l_level as 1.

IN Parameters

Parameter	Data Type	Description
p_org_id	NUMBER	Organization Code
p_item_id	NUMBER	Item Name
p_subinv	VARCHAR2	Subinventory Name
p_locator_id	NUMBER	Locator Code

RETURN Parameter

Parameter	Data Type	Description
l_level	NUMBER	The level at which the item on-hand quantity available displays for a horizontal plan.

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