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PeopleSoft Product Configurator 9.1 PeopleBook

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PeopleSoft Product Configurator 9.1 PeopleBook
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PeopleSoft Product Configurator Preface

This preface discusses:

- PeopleSoft application fundamentals.
- Common elements used in this PeopleBook.
- Pages with deferred processing.

Note. This PeopleBook documents only page elements that require additional explanation. If a page element is not documented with the process or task in which it is used, then it either requires no additional explanation or is documented with the common elements for the section, chapter, or PeopleBook.

PeopleSoft Application Fundamentals

The *PeopleSoft Product Configurator PeopleBook* provides you with implementation and processing information for Oracle's Product Configurator system. However, additional, essential information describing the setup and design of your system resides in companion documentation. The companion documentation consists of important topics that apply to many or all PeopleSoft applications across the Financials, Enterprise Service Automation, and Supply Chain Management product lines. You should be familiar with the contents of these PeopleBooks.

The following companion PeopleBooks contain information that applies specifically to PeopleSoft Product Configurator.

- *PeopleSoft Application Fundamentals PeopleBook*
- *PeopleSoft Global Options and Reports PeopleBook*
- *PeopleSoft Order to Cash Common Information PeopleBook*
- *PeopleSoft Managing Items PeopleBook*
- *PeopleSoft Supply Chain Management Integration PeopleBook*

Pages With Deferred Processing

Several pages in PeopleSoft Product Configurator operate in deferred processing mode. Most fields on these pages are not updated or validated until you save the page or refresh it by clicking a button, link, or tab. This delayed processing has various implications for the field values on the page—for example, if a field contains a default value, any value you enter before the system updates the page overrides the default. Another implication is that the system updates quantity balances or totals only when you save or otherwise refresh the page.

See Also

PeopleTools PeopleBook: PeopleSoft Application Designer Developer's Guide

PeopleTools PeopleBook: PeopleSoft Application Designer Lifecycle Management Guide

PeopleBooks and the PeopleSoft Online Library

A companion PeopleBook called *PeopleBooks and the PeopleSoft Online Library* contains general information, including:

- Understanding the PeopleSoft online library and related documentation.
- How to send PeopleSoft documentation comments and suggestions to Oracle.
- How to access hosted PeopleBooks, downloadable HTML PeopleBooks, and downloadable PDF PeopleBooks as well as documentation updates.
- Understanding PeopleBook structure.
- Typographical conventions and visual cues used in PeopleBooks.
- ISO country codes and currency codes.
- PeopleBooks that are common across multiple applications.
- Common elements used in PeopleBooks.
- Navigating the PeopleBooks interface and searching the PeopleSoft online library.
- Displaying and printing screen shots and graphics in PeopleBooks.
- How to manage the locally installed PeopleSoft online library, including web site folders.
- Understanding documentation integration and how to integrate customized documentation into the library.
- Application abbreviations found in application fields.

You can find *PeopleBooks and the PeopleSoft Online Library* in the online PeopleBooks Library for your PeopleTools release.

Common Elements Used in This PeopleBook

Business Unit	An identification code that represents a high-level organization of business information. You can use a business unit to define regional or departmental units within a larger organization.

Effective Date	Date on which a table row becomes effective; the date that an action begins. For example, if you want to close out a ledger on June 30, the effective date for the ledger closing would be July 1. This date also determines when you can view and change the information. Pages or panels and batch processes that use the information use the current row.
Language or **Language Code**	The language in which you want the field labels and report headings of your reports to print. The field values appear as you enter them.
Process Frequency (group box)	Designates the appropriate frequency in the Process Frequency group box: *Once* executes the request the next time the batch process runs. After the batch process runs, the process frequency is automatically set to Don't Run. *Always* executes the request every time the batch process runs. *Don't Run* ignores the request when the batch process runs.
Process Monitor	This link takes you to the Process List page, where you can view the status of submitted process requests.
Report Manager	This link takes you to the Report List page, where you can view report content, check the status of a report, and see content detail messages (which show you a description of the report and the distribution list).
Request ID	A request identification that represents a set of selection criteria for a report or process.
Run	This button takes you to the Process Scheduler request page, where you can specify the location where a process or job runs and the process output format.
SetID	An identification code that represents a set of control table information or TableSets. A TableSet is a group of tables (records) necessary to define your organization's structure and processing options.
Status	*Active* or *Inactive.* By linking status and effective date, you can retain historical information and plan future implementation. For auditing purposes, PeopleSoft encourages inactivating data that is no longer in use instead of deleting it.

See Also

PeopleTools PeopleBook: PeopleSoft Process Scheduler

Chapter 1

Getting Started With PeopleSoft Product Configurator

This chapter provides an overview of PeopleSoft Product Configurator business processes and discusses:

- PeopleSoft Product Configurator integrations.
- PeopleSoft Product Configurator implementation.

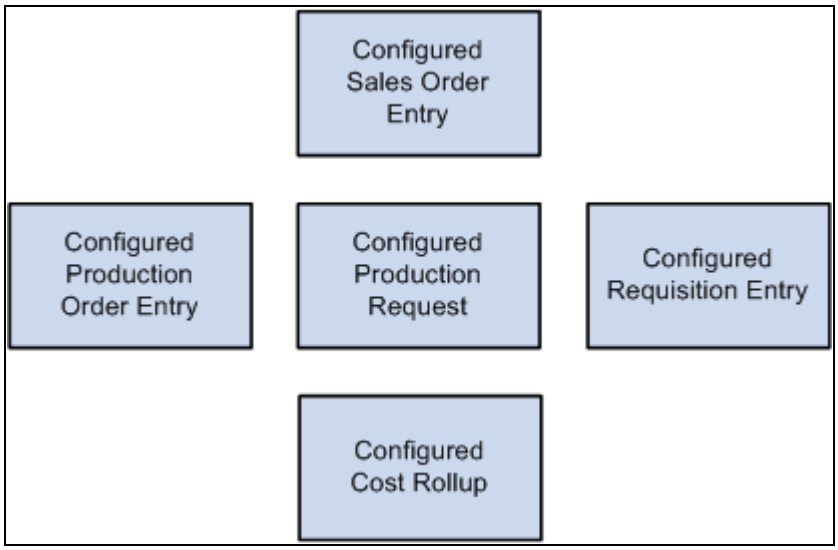
PeopleSoft Product Configurator Business Processes

PeopleSoft Product Configurator is a rules-based system that enables you to sell, order, and manufacture complex items and products. You can:

- Define custom order-entry pages for entering and validating configuration information for products in PeopleSoft Order Management.
- Create direct production and direct requisition orders in PeopleSoft Manufacturing and Purchasing.
- Manually establish configured item production costs.
- Create new or changed production requests.

Note. You must set up business units, setIDs, items, and products before using PeopleSoft Product Configurator.

The following graphic illustrates the PeopleSoft Product Configurator business processes that includes sales and production order entry, production request, requisition entry and cost rollup.



PeopleSoft Product Configurator business processes

We discuss these business processes in the business process chapters of this PeopleBook.

PeopleSoft Product Configurator Integrations

PeopleSoft Product Configurator is tightly integrated with the following PeopleSoft applications:

- PeopleSoft Order Management.
- PeopleSoft Cost Management.
- PeopleSoft Manufacturing.
- PeopleSoft Inventory.
- PeopleSoft Purchasing.
- PeopleSoft Planning.
- PeopleSoft Customer Relationship Management (CRM).

We cover integration considerations in the implementation chapter of this PeopleBook.

Supplemental information about third-party application integration is on the My Oracle Support website.

PeopleSoft Order Management

PeopleSoft Order Management directly invokes PeopleSoft Product Configurator to take advantage of order management functions. Entering configured orders is not much different from entering normal orders. When a customer places an order for a configured item, the distribution configuration process begins when you click the Configure button on the order entry page. At that time, the system processes the distribution configuration rules and displays and validates all of the corresponding pages.

PeopleSoft Cost Management

PeopleSoft Product Configurator automatically generates standard configuration costs within PeopleSoft Cost Management once configured production orders are created in the system. In addition, the PeopleSoft Product Configurator is integrated into the standard PeopleSoft Cost Management procedures—cost roll-up and updating production cost by cost type and cost version.

PeopleSoft Manufacturing

The production configuration process takes the detailed configuration information captured during order entry in PeopleSoft Order Management and sends requirements to PeopleSoft Manufacturing. The production configuration rules enable you to dynamically specify the components and operation elements without having to create standard bills of materials or routings for each specific configuration. The production configuration process generates configured production IDs, component lists, operation lists, and configured costs. You can use the PeopleSoft Product Configurator's Production Comparison inquiry to manage changes to the configured sales orders once production is already in process.

In addition, you can generate production orders in PeopleSoft Manufacturing directly without entering a sales order. This is a useful feature if you are not in a completely make-to-order environment, and you produce configured items for stock.

Finally, the PeopleSoft Product Configurator can access master routings and bills of materials from PeopleSoft Manufacturing. The PeopleSoft Product Configurator enables the use of any existing routings and or bills of material defined in PeopleSoft Manufacturing. As previously mentioned, you can also create dynamic bills of material in the PeopleSoft Product Configurator leveraging any existing bills of material. After running the configuration process, you can use the Configured Cost Exploded Bill Of Material inquiry to view fully exploded and costed bills of material for configured items as well as their configured subassemblies.

PeopleSoft Inventory

PeopleSoft Product Configurator identifies unique configurations in inventory for reservation, picking, and costing with configuration codes. These configuration codes tie to lot numbers within PeopleSoft Inventory. You generally enter configured inventory by receiving a configured production ID. You can also enter it into the system through an inventory adjustment. You can then track configured inventory through the system by using the lot control features in PeopleSoft Inventory.

PeopleSoft Purchasing

The PeopleSoft Product Configurator can automatically generate purchase requisitions in PeopleSoft Purchasing. It also can dynamically create product kits based on configuration rule definitions for fulfillment in PeopleSoft Inventory and or PeopleSoft Purchasing.

PeopleSoft Planning

PeopleSoft Demand Planning converts configured items along with their dynamic bills of material into dependent demand within the forecasting process. PeopleSoft Supply Planning has full visibility to the configuration code and dynamic bills of material and routing for configured items and subassemblies.

PeopleSoft CRM

The PeopleSoft Product Configurator is integrated into both the PeopleSoft Financials and Supply Chain Management (FSCM) and PeopleSoft Customer Relationship Management (CRM) databases. Within the CRM database, the PeopleSoft Product Configurator integrates with the PeopleSoft Order Capture and PeopleSoft Order Capture Self-Service product offerings. Configured orders within PeopleSoft Order Capture and PeopleSoft Order Capture Self-Service within CRM can be integrated with PeopleSoft Order Management within FSCM with a single configuration rule set. In addition, PeopleSoft Product Configurator provides a full publish and subscribe mechanism in order to facilitate the synchronization of all configuration setup records between PeopleSoft Financials and Supply Chain Management (FSCM) databases and PeopleSoft Customer Relationship Management (CRM) databases. The following application messages can be used to synchronize configuration data between FSCM and CRM databases:

- CP_CONSTRAINT_FULLSYNC
- CP_EXPRESSION_FULLSYNC
- CP_GLOBAL_FULLSYNC
- CP_INTRN_VAR_FULLSYNC
- CP_MATRIX_FULLSYNC
- CP_MESSAGE_FULLSYNC
- CP_MULTOP_FULLSYNC
- CP_OPTION_FULLSYNC
- CP_PRINTCD_FULLSYNC
- CP_RULE_FULLSYNC
- CP_SECONDARY_FULLSYNC
- CP_TEMPLATE_FULLSYNC
- CP_CONSTANT_FULLSYNC
- CP_TREE_FULLSYNC
- CP_VALUE_LIST_FULLSYNC

See Chapter 2, "Synchronizing PeopleSoft Product Configuration Data," page 7.

PeopleSoft Product Configurator Implementation

PeopleSoft Setup Manager enables you to review a list of setup tasks for the organization for the products that you are implementing. The setup tasks include the components that you must set up, listed in the order in which you must enter data into the component tables, and links to the corresponding PeopleBook documentation.

Other Sources of Information

In the planning phase of the implementation, take advantage of all PeopleSoft sources of information, including the installation guides, table-loading sequences, data models, and business process maps. A complete list of these resources appears in the preface in the PeopleSoft Application Fundamentals for Financials, Enterprise Service Automation, and Supply Chain Management PeopleBook, with information about where to find the most current version of each.

See Also

PeopleSoft Application Fundamentals 9.1 PeopleBook, "PeopleSoft Application Fundamentals PeopleBook Preface"

Chapter 2

Synchronizing PeopleSoft Product Configuration Data

This chapter provides an overview of Product Configuration data synchronization and discusses how to:

- Migrate data using Data Mover.
- Migrate data using PeopleSoft Integration Broker.

Understanding PeopleSoft Product Configuration Data Synchronization

During a Product Configurator implementation the question of how to migrate data between different databases often arises. There are a couple of different approaches that can be used to synchronize Product Configuration data such as, configuration rules, and matrices between different databases. You can use PeopleSoft's Data Mover or the predefined service operations that Product Configuration provides. Product Configuration data can be replicated between different Financials and Supply Chain Management (FSCM) databases and a Customer Relationship Management databases.

Migrating Data Using PeopleSoft Data Mover

Product Configuration data can be replicated across databases using Data Mover. Complete Product Configuration data export and import scripts are provided on the PeopleSoft CD under the <PS_HOME>\scripts folder. Namely, the script that exports all of the Product Configuration data is *cpdmsexport_all.dms* and the script that loads the output from the export script into a database is *cpdmsimport_all.dms*.

See Also

PeopleTools PeopleBook: Data Management

Migrating Data Using PeopleSoft Integration Broker

Product Configuration data can also be replicated across databases using PeopleSoft Integration Broker. The following table provides a detailed list of all of the service operations that are provided for Product Configuration data synchronization:

Action	*Description*	*Service Operation (Inbound/Outbound)*	*Messages*
Batch, Full table synchronization of Product Configurator Constraint data.	This service operation handles the publish and subscription of Product Configurator Constraint data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_CONSTRAINT_FULLSYNC	CP_CONSTRT_HDR CP_CONSTRT_COND CP_CONSTRT_DETL
Batch, Full table synchronization of Product Configurator Expression data.	This service operation handles the publish and subscription of Product Configurator Expression data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_EXPRESSION_FULLSYNC	CP_EXPR CP_EXPR_FORMAT
Batch, Full table synchronization of Product Configurator Global Variable data.	This service operation handles the publish and subscription of Product Configurator Global Variable data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_GLOBAL_FULLSYNC	CP_GBL_VAR

Action	*Description*	*Service Operation (Inbound/Outbound)*	*Messages*
Batch, Full table synchronization of Product Configurator Internal Variable data.	This service operation handles the publish and subscription of Product Configurator Internal Variable data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_INTRN_VAR_FULLSYNC	CP_INTRN_VAR CP_INTRN_KEY
Batch, Full table synchronization of Product Configurator Matrix data.	This service operation handles the publish and subscription of Product Configurator Matrix data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_MATRIX_FULLSYNC	CP_MATRIX_HDR CP_MATRIX_DETL
Batch, Full table synchronization of Product Configurator data.	This service operation handles the publish and subscription of Product Configurator data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_MESSAGE_FULLSYNC	CP_MESSAGE CP_MESSAGE_LANG
Batch, Full table synchronization of Product Configurator Multiple Option data.	This service operation handles the publish and subscription of Product Configurator Multiple Option data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_MULTOP_FULLSYNC	CP_MULTOP_HDR CP_MULTOP_DETL

Action	*Description*	*Service Operation (Inbound/Outbound)*	*Messages*
Batch, Full table synchronization of Product Configurator Option Variable data.	This service operation handles the publish and subscription of Product Configurator Option Variable data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_OPTION_FULLSYNC	CP_OPT_VAR
Batch, Full table synchronization of Product Configurator Print Code data.	This service operation handles the publish and subscription of Product Configurator Print Code data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_PRINTCD_FULLSYNC	CP_PRINTCD
Batch, Full table synchronization of Product Configurator Rule data.	This service operation handles the publish and subscription of Product Configurator Rule data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_RULE_FULLSYNC	CP_RULE_HDR CP_RULE_COMMENT CP_RULE_DETL CP_RULE_D_LANG CP_RULE_DETL_AD CP_RULE_DETL_CL CP_RULE_DETL_OS CP_RULE_HTML CP_RULE_HT_LANG CP_RULE_H_LANG
Batch, Full table synchronization of Product Configurator Secondary Variable data.	This service operation handles the publish and subscription of Product Configurator Secondary Variable data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_SECONDARY_FULLSYNC	CP_SEC_VAR

Action	*Description*	*Service Operation (Inbound/Outbound)*	*Messages*
Batch, Full table synchronization of Product Configurator Template data.	This service operation handles the publish and subscription of Product Configurator Template data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_TEMPLATE_FULLSYNC	CP_TEMP_HDR CP_TEMP_DETL
Batch, Full table synchronization of Product Configurator Constant data.	This service operation handles the publish and subscription of Product Configurator Constant data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_CONSTANT_FULLSYNC	CP_CONSTANT
Batch, Full table synchronization of Product Configurator Model data.	This service operation handles the publish and subscription of Product Configurator Model data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_TREE_FULLSYNC	CP_TREE_HDR CP_TREE_DETL
Batch, Full table synchronization of Product Configurator Value List data.	This service operation handles the publish and subscription of Product Configurator Value List data. This service operation is designed to be used with the Enterprise Integration Full Batch Publish design pattern.	CP_VALUE_LIST_FULLSYNC	CP_USERCD_HDR CP_USERCD_DETL CP_USERCD_LANG

Setting Up the Service Operations for Product Configurator

You must activate the service operations in order to migrate data across databases.

See *PeopleSoft Supply Chain Management Integration 9.1 PeopleBook*, "Implementing Integrations."

Publication Run Control Definitions

You use the Full Data Publish page (Enterprise Components menu) to create the run control parameters and initiate the Table Replication Push (EOP_PUBLISHT) application engine process.

Instead of creating a separate run control definition for each service operation, you can add multiple request IDs—a row for each service operation name—to a single-run control ID to publish all data at once.

Performing a Full Data Publish of Current Effective Data

To perform a full data publish, please refer to the PeopleSoft Supply Chain Management Integration PeopleBook.

See Also

PeopleTools PeopleBook: PeopleSoft Integration Testing Utilities and Tools

Chapter 3

Understanding Configuration Models

This chapter provides an overview of configuration processes and models and discusses:

- Configuration models.
- Configuration rules.
- Syntax expressions.
- Configuration binds.
- Language sensitivity in Product Configurator.

Configuration Models

Product Configurator is a rules-based system that enables you to order and manufacture complex items and products. You can define custom order-entry pages for entering and validating configuration information. The configuration information that you enter determines the specific options, components, and operations that are used to create the end product.

Configuration rules contain elements such as processing filters and rule actions, which are tied in with conditional expressions, validation methods, and variables to enable complex, yet flexible, product configurations. These rules are organized into configuration models to determine when and how the system processes them.

Configuration rules work in a logical tree structure that determines the order in which the system processes them. While each rule is a grammatical statement that performs an action, the configuration model dictates the context of the statement. You can use a rule more than once within a model, and you can nest submodels with a model in order to streamline the overall configuration solution.

Configuration rules are executed based on the tree hierarchy that you define in the configuration model. If the condition of a rule is met (that is, if the condition syntax for the rule is evaluated as true), then the action of the rule is performed. The system processes all of the rules in the order of their configuration model placement unless a *true* child or a *false* child exists that satisfies a condition within the model. In that case, the system branches to the designated child and processes the rules that are in that level. The system follows the configuration model down through the hierarchy, from the parents down through the children, before returning to the top logical level.

See Also

Chapter 6, "Creating Configuration Models," page 87

Configuration Rules

The combination of setID, functional area (distribution or production), and rule number uniquely identify each configuration rule. Some of the rule actions in Product Configurator are specific to distribution functions, such as creating a sales order, calculating prices, assigning costs, or to production functions, such as manufacturing processes. The rules that apply to both distribution and production functions are called common rules.

Because the configuration models for the distribution and production areas are independent of each other, an individual rule works in only one of the two functional areas. In addition, many rule actions, by their nature, apply to only one functional area.

Rule Filters

You can use effective dating and rule processing modes to filter rule processing.

Effective Dating

In addition to a rule number, each rule must have an effective date and an obsolete date. For each model, the system processes only the rules that are in effect, based on these dates.

Effective dates enable different sets of rules for the same model to be maintained simultaneously. As features and options change, the configuration can also change (without losing the original configuration rules). By changing the effective dates on the rules, you can process different sets of rules. Effective dates are not part of the key, but you can use them as a selection filter for retrieving rules.

For order entry, the default effective date is the order date. For direct production and direct requisition, the default effective date is today's date. For production rules, the default effective date is the production start date estimate—that is, the scheduled ship date minus the estimated lead time.

For example, if the effective date is August 6, 2000, and the obsolete date is August 10, 2000, based on a sales order date, the following occurs:

Date	***Status***
08/03/00	Skipped
08/06/00	Processed
08/10/00	Processed
08/11/00	Skipped

Rule Processing Modes

Rule processing modes are designated as you create rules. They are filters for rule selection during processing. They specify whether a rule processes in order entry, direct production, or requisition generation.

See Also

Chapter 5, "Using Configuration Rule Actions," Creating and Maintaining Basic Rule Characteristics, page 49

Rule Actions

Product Configurator provides predefined rule *actions.* Actions are applied to rule definitions to determine the processing that the rule invokes. Each rule has only one rule action, although many different rules within a model might perform the same action.

Product Configurator includes the following rule actions:

Common

These rules are used in both distribution and production models:

- Condition.
- Secondary Variable.
- Global Variable.
- Option Variable.
- Internal Variable Override.
- Create Parameter.
- Configuration Detail.
- Start Trace.
- End Trace.

Distribution

These rules are used in distribution models:

- Page Generation.
- Page Validation.
- Configured Component.
- Purchase Item.
- Finalized Price.

- Finalized Cost.
- Finalized Date.
- Finalized Volume.
- Finalized Weight.
- Availability Date.
- Workflow.
- Kit Component.
- Kit Generation.
- Product Selector.

Production

These rules are used in production models:

- Component List.
- Operation Sequence.

See Also

Chapter 4, "Setting Up Configuration Model Elements," page 29

Chapter 5, "Using Configuration Rule Actions," page 49

Rule Conditions

A rule condition is a fundamental part of the grammar of every rule. Don't confuse the rule condition with the condition *rule,* which is used in logical sequence with other complete rules. The rule condition is a syntax expression.

- When the rule condition is *true,* the rule is executed, and control passes to any existing true child.
- When the rule condition is *false,* control passes directly to any existing false child. If a child does not exist for the result of the condition *(true* or *false),* there is no further action with the rule after the rule is processed.

See Also

Chapter 5, "Using Configuration Rule Actions," page 49

Syntax Expressions

Each rule that you define features syntactic components that make up a syntax expression. Product Configurator processing interprets these syntax expressions to produce a result. Depending on the expression, this result can be a numeric, or a character value.

Syntax Expression Composition

Syntax expressions consist of one or more independent, simple expressions that are logically connected. A simple syntax expression consists of two variables and an operand that links them.

The system interprets syntax expressions based on their grouping within parentheses. The parentheses make complicated expressions possible, but even simple expressions require them. You can negate an expression by using a negation character prefacing the expression.

Syntax Expression Format

This is the general syntax expression format:

1. (optional) Negation character ("N")
2. Opening parenthesis
3. First variable
4. Operand
5. Second variable
6. Closing parenthesis

Note. Variables 1 and 2 are abbreviated as V1 and V2 in the examples that follow.

Variable Names Syntax

The syntax for variable names consists of three parts:

1. A letter to indicate the type of variable. For example, *O-FRAME* is an option variable, *M-COLORS* is a multiple option variable, and so forth.
2. A hyphen as a separator ("-").
3. The user-defined name (cannot include a hyphen).

For example, to create an expression that means *the Frame option is equal to Y for this field*, write:

```
(O-FRAME,=,"Y")
```

The expression returns "1" (true) when the option variable FRAME is equal to the literal character "*Y*" and "0" (false) when the option variable FRAME is not equal to the literal character "*Y*". For the opposite—the expression can be negated to validate when O-FRAME is *not* equal to *Y*—write:

```
N(O-FRAME,=,"Y")
```

You can combine syntax expressions to make a more complex statement by ordering the parts of the expressions within parentheses. Either or both of the variables in a syntax statement can be defined by syntax statements within the larger one. It is valid to construct a statement in this format:

```
((V1,operand1,V2),operand2,V3)
```

The system always processes an entire simple expression within parentheses before applying its value to the next level. And it processes expressions in the order that they occur.

For example, the expression:

```
((V1,operand1,V2), operand3,(V3,operand2,V4))
```

processes as:

```
(V1,operand1,V2) = A
(V3,operand2,V4) = B

(A,operand3,B)
```

Note. Option, Secondary, and Global variables are populated by the configuration engine during syntax evaluation with default values—a zero value (0) for numerics and a zero-length string value ("") for characters—if the variable does not contain a value.

Operands

Product Configurator delivers predefined operands for use in composing syntax expressions.

The system interprets operands within expressions to produce resulting values—either a numerical value or a character string. Each operand requires a specific type of value in the rule syntax.

Resulting Value Types

The following are value types:

Character (C)	An alphanumeric string that is enclosed in quotation marks with a maximum length of 18 characters. A Boolean (B) is represented by a "1" (true) or "0" (false) character value.
Date (D)	A Date (D) is represented by an internationally date formatted (YYYYMMDD) numeric value.
Numeric (N)	A number with a maximum length of 15 digits that is used for mathematical manipulation and calculations. (The maximum number of digits is 11, and the maximum number of decimal places is 7. Therefore, the range for the decimal format is 11,4 to 8,7).

Operand Types

The following table lists the operand types:

Operand (Default)	*Description*	*Operand Code*	*Value Type (V1,V2)*	*Result Value Type*
Equal	Tests whether V1 and V2 are the same value. Both variables must be the same value type.	=	(N,N) (C,C)	B
Not Equal To	Tests whether V1 and V2 are not the same value. Both variables must be the same value type.	<>	(N,N) (C,C)	B
Less Than	Tests whether V1 is less than V2. Use it only for numeric variables.	<	(N,N)	B
Less than or Equal	Tests whether V1 is less than or equal to V2. Use it only for numeric variables.	<=	(N,N)	B
Greater Than	Tests whether V1 is operands – description, code, and value types for: than V2. Use it only for numeric variables.	>	(N,N)	B
Greater Than or Equal	Tests whether V1 is greater than or equal to V2. Use it only for numeric variables.	>=	(N,N)	B
If	Specifies V1 as a value when V2 is true. V2 must be an expression that yields a Boolean (true/false) value. The result of the *If* operation is the same type of value as V1 (either numeric or character). If V2 is true, the result value is V1. If V2 is false, the result is 0 or blank. For example, the expression `(100,IF,(O-COLOR,=,"RED"))` yields the result of 100 if COLOR = RED. If COLOR does not = RED, the result is 0.	IF	(N,B) (C,B)	N C
Or	Tests whether either V1 or V2 is true. Both V1 and V2 must be expressions that yield Boolean values.	OR	(B,B)	B
And	Tests whether both V1 and V2 are true. Both V1 and V2 must be expressions that yield Boolean values. The result is true unless both V1 and V2 are false; likewise, the result is false unless both V1 and V2 are true.	&	(B,B)	B

Operand (Default)	*Description*	*Operand Code*	*Value Type (V1,V2)*	*Result Value Type*
Concatenate	Links two character strings to form one string. When concatenating numeric values, the system treats them as alphanumeric character strings. You can include any combination of characters and numbers in the result (a character value of up to 18 characters). For example: • ("WH",CT,"COLOR") yields "WHCOLOR" • ("RD",CT," COLOR") yields "RDCOLOR" • ("WH",CT,"T ") yields "WHT"	CT	All combinations	C

Substring After	Selects the last portion of a character string. You determine the initial character value in V1. V2 is the number of the position where the substring starts. Because the total character string is limited to 18 characters, V2 must be a whole number between 1 and 18. For instance, the expression
	`("CLEMENTINE",SA,7)`
	yields the result
	`"TINE"`
	Note. The substring includes the position that it specifies.
		SA	(C,N)
			(N,N)
				C
				C

Substring Before	Selects the first portion of a character string. You determine the initial character value in V1. V2 is the number of the position where the substring ends. Because the total character string is limited to 18 characters, V2 must be a whole number between 1 and 18. For example, the expression
	`("CLEMENTINE",SB,7)`
	yields the result
	`"CLEMENT"`
	Note. The substring includes the position that it specifies.
		SB	(C,N)
			(N,N)
				C
				C

Operand (Default)	*Description*	*Operand Code*	*Value Type (V1,V2)*	*Result Value Type*

Exist on Multiple Option	Tests whether V1 is a value for one of the options in a Multiple Option table. V2 specifies which Multiple Options table to check. Depending on what kinds of values the Multiple Option table that is specified by V2 contains, V1 can be either a number or a character value:
	`("YELLOW",EM,M-COLORS)`
	This example checks a paint color against the Multiple Options table ("COLORS") containing options for all of the parts that need painting on the bike that you're configuring:
	`FRAMECOLOR`
	`WHEELSCOLOR`
	A user selection on a sales order page or a rule that modifies an option in the configuration process determines the value of each option. If any of these options is associated with the value YELLOW, the result of the Exist on Multiple Option operation is true. If not, the result is false.
	The operation yields a result only when V1 is the same type of value (character or numeric) as each option that exists on the table that is specified by V2.
		EM	(C,M)
			(N,M)
				B

Exist on Value List	Tests whether V1 is a value on the Value List table that is specified by V2.	EU	(C,U) (N,U)	B
Add	Adds the value of V1 to the value of V2. Both variables must be numbers.	+	(N,N)	N
Subtract	Subtracts the value of V2 from the value of V1. Both variables must be numbers.	–	(N,N)	N
Multiply	Multiplies the value of V1 by the value of V2. Both variables must be numbers.	*	(N,N)	N
Divide	Divides the value of V1 by the value of V2. Both variables must be numbers.	/	(N,N)	N
Round Down	Divides V1 by V2 and returns the closest integer value that is less than or equal to the result. V2 cannot equal 0.	RD	(N,N)	N

Operand (Default)	*Description*	*Operand Code*	*Value Type (V1,V2)*	*Result Value Type*
Round Up	Divides V1 by V2 and gives the closest integer value that is greater than or equal to the result. V2 cannot equal 0.	RU	(N,N)	N
Calculate Date	Uses the calendar to determine a new date. V1 is a date value representing the start date in *YYYYMMDD* format. V2 is the number of days to add to the date. The result of a calculate-date operation is a date value in a *YYYYMMDD* format.	CD	(D,N)	D
Sine, Arc sine	Returns the sine or arc sine of V1 in radians (assuming V1 is numeric in radians): • If V2 is "", the sine is returned. • If V2 is "A", the arc sine is returned.	SN	(N, C)	N
Cosine, Arc cosine	Returns the cosine or arc cosine of V1 in radians (assumes V1 is numeric in radians): • If V2 is "", the cosine is returned. • If V2 is "A", the arc cosine is returned.	CS	(N,C)	N
Tangent	Returns the tangent of V1 in radians (assumes V1 is numeric in radians): • If V2 is "", the tangent is returned. • If V2 is "A", the arc tangent is returned.	TN	(N,C)	N
Power	Returns the result of V1 to the V2 power (assumes V1 and V2 are numeric).	**	(N,N)	N
Modulus	Returns the result of V1 to modulo V2 (assumes V1 and V2 are numeric).	\	(N,N)	N

Operand (Default)	*Description*	*Operand Code*	*Value Type (V1,V2)*	*Result Value Type*
Exists as a Component	Returns the quantity for a component on the Configuration Component array during a configuration: • Returns 1 if V1 (assumes V1 is an item ID) is found on the component array and V2 is "". • Returns the kit component's quantity if V1 is found on the component array and V2 is "K". • Returns the purchased component's quantity if V1 is found on the component array and V2 is "P".	EC	C, C	N
Calculate Price	Returns the price for V1 (assumes V1 is a product ID). • If V2 is "", the full discounted price from the Order Management Pricing function is returned using all available pricing keys for the configuration session. • If V2 is "R", the recurring price for V1 is returned. *(available in PeopleSoft Customer Relationship Management (CRM) applications only)* • If V2 is "L", the list price from the product pricing table for V1 is returned. • If V1 is not a valid product, zero is returned. **Note.** This operand is intended for use in determining *component* item prices, not final configured end-item pricing. Use the Finalize Price rule to determine pricing for a configured item.	CP	C, C	N

Note. You cannot enter *true* or *false* as a value for use in syntax expressions when using the following operands: If, Or, And. Instead, use "1" (True) and "0" (False).

Configuration Variable Types

Product Configurator is designed to make syntax expressions as uncomplicated as possible by providing a variety of variable types. Configuration variable types can be used to:

- Retrieve information about a product that already exists in any PeopleSoft application without any special rule logic by using internal variables.
- Validate a value against a value list, or check for the occurrence of a single value in any of a number of option variables.
- Use a matrix to predefine result values for up to five variables. Using a matrix saves labor and potential for error in defining combinations through calculating them in each rule model. When you want to change the result values, you just change the matrix—not the many rules that reference it.

Product Configurator delivers the following variable types.

Option Variable

Variable code for syntax = O.

An option variable stores attribute information about a configuration and contains a value that is either:

- Entered on a page generation rule.
- Created by an option variable rule.

Option variables apply to only one configured level of processing (the same as secondary variables), but they can be referenced across functional areas. Use the Option Variable page to view or create a new option variable.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Configuration Variables, page 29.

Secondary Variable

Variable code for syntax = S.

A temporary working storage variable within a model that applies locally within the model. Create a secondary variable when you want the variable to apply locally—that is, only to the single configured component.

You create secondary variables by using the Secondary Variable page containing a value from secondary variable, internal variable override, or availability date rules.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Configuration Variables, page 29.

Global Variable

Variable code for syntax = G.

A temporary working storage field within a model that applies globally within the entire model to all configured levels of processing and can be referenced across functional areas. You can share variable information between:

- A parent item and its configured components.
- A child item and any other child items that follow it in rule processing.
- A distribution model and a production model.

You create global variables by using the Global Variable page containing values from global variable rules.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Configuration Variables, page 29.

Matrix Variable

Variable code for syntax = X.

Invokes result values from a predefined matrix of up to five user-defined variable value keys.

See Chapter 4, "Setting Up Configuration Model Elements," Using Matrices, page 38.

Internal Variable

Variable code for syntax = I.

Retrieves static or dynamically derived values from PeopleSoft application tables and views. This enables you to use existing business information, such as customer IDs, order numbers, business unit definitions, or pricing, without defining it within rules or in separate configurator tables.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Internal Variables, page 31.

Multiple Option Variable

Variable code for syntax = M.

Groups option variables together to examine them as a whole, and determine whether a particular value exists in that grouping.

See Chapter 4, "Setting Up Configuration Model Elements," Maintaining Multiple Option Variables, page 32.

Value List

Variable code for syntax = U.

Validates option selection (such as sizes or colors of an item) during configuration.

See Chapter 4, "Setting Up Configuration Model Elements," Using Value Lists and Constraints, page 33.

Constraints

Variable code for syntax = R.

One or more conditions that limit the valid options within a static value list (dynamically generated value lists cannot use constraints).

External Program Variable

Variable code for syntax = P.

Used with the create parameter rule, external program variables enable the system to call a custom-developed PeopleCode program to perform specific user-defined logic and return a value to use in configuration processing. After the external program runs, the parameters that are created by the create parameter rule are cleared.

External program variables are only used in syntax expression. P-EXAMPLE calls an external program called EXAMPLE.

You can create custom PeopleCode programs in the following self-documented PeopleCode Function Library:

FUNCLIB_CPINFR.CP_EXT_PGM.FieldFormula

See Chapter 5, "Using Configuration Rule Actions," Defining Create External Parameter Rules, page 56.

Literal

Variable code for syntax = L.

Inserts a character string of static information into configuration logic. You can enter literals on internal variables or use them to insert a string of characters into a configuration code template definition. For example, a literal is used when adding a hyphen as a separator between other variables in a configuration code.

Note. Quotation marks are not needed around literals on internal variables.

Constant

Variable code for syntax = C.

The constant references static system information during the configuration process. A constant value does not change during processing.

PeopleSoft delivers the following constants for the current configuration unless noted otherwise:

- BILL_TO_CUST (bill to customer ID) *
- BUSINESS_UNIT_IN (Inventory business unit)
- BUSINESS_UNIT_OM (Order Management business unit) *
- CAPTURE_ID [Customer Relationship Management (CRM) Order Capture ID] **
- CP_MODE (configurator processing mode)
    - S = order management sales order
    - M = direct production order
    - R = direct requisition order
    - W = CRM external order
    - A = CRM internal order
- CURRENT_DATE (current system date in YYYYMMDD date format)

- DYNAMIC_PRICE (value of the dynamic pricing field from the last page generation rule with dynamic pricing syntax)
- ITEM_ID (item ID)
- LINE_NBR (CRM order capture line number) **
- OM_MODE (sales order mode) *
  - S = configuration within order management sales order / quote
  - E = configuration within order management express order / self service
  - "" = configuration within all other components.
- ORDER_LINE (sales order line number) *
- ORDER_NUMBER (sales order number) *
- PRODUCT_ID (product ID)
- QTY_ORDERED (quantity ordered) *
- SETID (product setID)
- SETID_CFG (configurator rule setID)
- SHIP_TO_CUST (ship to customer ID) *
- SOLD_TO_CUST (sold to customer ID) *

Use the Constant page to view existing constant definitions or add new constants.

* These constants are not used by Customer Relationship Management (CRM) applications.

** These constants are used exclusively by CRM applications.

Configuration Binds

You can use configuration binds in a configuration model to personalize configuration messages and enable configuration variable substitution in custom value lists and internal variables.

The case-sensitive syntax looks like this:

```
%BIND({configuration variable}).
```

For example:

```
%BIND(O-COLOR)
```

Product Configurator supports configuration binds in the following areas:

- Dynamic internal variables.
- Dynamic value lists.

- Custom messages.
- Custom HTML and option description on page generation rules.
- Page titles for page generation and kit generation rules.

Language Sensitivity in PeopleSoft Product Configurator

You can use nonbase language data on Product Configurator's order entry pages by using PeopleTools globalization functionality.

To use a nonbase language, set up a language-specific user logon. A user in France might have a logon of FR1 to use the system in French, and a user in Brazil might have a logon of BR1 to use Brazilian Portuguese.

When these users log on, the system uses related language tables to display the configured order entry page's fields, messages, and value lists in the specified language.

PeopleSoft delivers the following related language tables for this purpose:

CP_MESSAGE_LANG	Messages
CP_RULE_D_LANG	Rule details
CP_USERCD_LANG	Value list values
CP_RULE_HT_LANG	Custom HTML fields

See Also

PeopleTools PeopleBook: Global Technology

Chapter 4

Setting Up Configuration Model Elements

This chapter provides an overview of configuration model elements and discusses how to:

- Set up configuration variables.
- Use value lists and constraints.
- Use matrices.
- Create syntax expressions.
- Maintain configuration messages.
- Set up print codes.

Common Elements Used in This Chapter

Click the Add/Update button to access the Search page associated with the adjacent field, where you can add or modify values using the field's source component. If the field is blank, the source component is accessed in add mode. If the field is populated, the source component is displayed in update mode.

Setting Up Configuration Variables

To define internal variables, use the Internal component (INTRN_VAR_MAINT). To define option variables, use the Option component (CP_OPT_VAR_PNLG). To define global variables, use the Global component (CP_GBL_VAR_PNLG). To define secondary variables, use the Secondary component (CP_SEC_VAR_PNLG). To define multiple option variables use the Multiple Option component (MULTOP_MAINT). To define constant variables, use the Constant component (CP_CONSTANT). This section discusses how to:

- Search for variable types.
- View variable type search results.
- Set up internal variables.
- Maintain multiple option variables.

Pages Used to Set Up Configuration Variables

Page Name	*Definition Name*	*Navigation*	*Usage*
Review Variables - Search	CP_VAR_INQ	Configuration Modeler, Define Variables, Review Variables, Review Variables - Search	Search for the variable types that exist in the configuration models.
Review Variables - Results	CP_VAR_IN2	Enter the search criteria on the Review Variables - Search page, and click the Search button.	View the location of, and detailed information about, the selected variable type.
Internal Variable	CP_INTRN_VAR_PNL	Configuration Modeler, Define Variables, Internal, Internal Variable	Set up queries to retrieve existing data from PeopleSoft tables and views for use in an internal variable.
Internal Variable Tester	CP_INTRN_QRY_WIZ	 Click the Internal Variable Test link on the Internal Variable page.	Test the setup of internal variables within the product configuration.
Option Variable	CP_OPT_VAR_PNL	Configuration Modeler, Define Variables, Option, Option Variable	View or create an option variable.
Global Variable	CP_GBL_VAR_PNL	Configuration Modeler, Define Variables, Global, Global Variable	View or create a global variable.
Secondary Variable	CP_SEC_VAR_PNL	Configuration Modeler, Define Variables, Secondary, Secondary Variable	View or create a secondary variable.
Multiple Option	CP_MULT_OP_PNL	Configuration Modeler, Define Variables, Multiple Option	View or create a multiple option variable.
Constant	CP_CONSTANT	Configuration Modeler, Define Variables, Constant	View the name and description of a constant, a reserved system value within a configuration. For example, current date or order mode. See Chapter 3, "Understanding Configuration Models," Configuration Variable Types, page 23.

Searching For Variable Types

Access the Review Variables - Search page (Configuration Modeler, Define Variables, Review Variables, Review Variables - Search).

The variable type search function searches for the specified variable type in the following areas: templates, internal variables, expressions, constraints, multiple option variables, messages, matrices, rules, and value lists.

Important! Due to database limitations, you cannot search for messages, expressions, custom internal variables, or custom value lists if you are using an Oracle or Informix database.

Viewing Variable Type Search Results

Access the Review Variables - Results page (click the Search button on the Review Variables - Search page).

The system displays detailed information about the selected variable type. In particular:

Area	Identifies where in the configuration model the variable value is located.
Variable Value	Click the value to navigate to the corresponding component, where you can access details about this variable.
Detail	Displays the detail or syntax expression that contains the search variable.

Setting Up Internal Variables

Internal variables retrieve static or dynamically derived values from PeopleSoft application tables and views. This enables you to use existing business information, such as customer IDs, order numbers, business unit definitions, or pricing, without defining it within rules or in separate configurator tables.

Instead, there are two methods of performing Structured Query Language (SQL) queries in Product Configurator when defining internal variables and value lists:

- *Standard* types (static meta-SQL equal-to values) enable you to enter the parameters of a simple AND statement/WHERE clause, and the system creates the query to retrieve the values from one table or view.
- *Custom* types (dynamic) enable you to directly write SQL queries, as complex as necessary to retrieve the required information. You can also use configuration binds in the SQL.

To define or modify static internal variables:

1. Access the Internal Variable page.

2. Select *Standard* in the Type field.
   a. Select a table or view to query.
   b. Select a corresponding field.
   c. Enter the parameters of the where clause.

      The system initiates the query during configuration processing.
3. Click the Internal Variable Test link to view and test how the internal variable is retrieved during the configuration process.
4. Set up values for each field on the Internal Variable Tester page, and click the Execute Query button.

To define or modify dynamic internal variables:

1. Access the Internal Variable page.
2. Select *Custom* in the Type field.

   The SQL field appears, where you can write custom SQL statements to dynamically generate values from existing database records. In addition, configuration binds can be used within the custom SQL statement.

   For example, the configuration bind "*O-COLOR*" would resolve to the value of the option variable COLOR at run-time in the following SQL:

```
Select FIELD_1, FIELD_2, FIELD_3, FIELD_4

From PS_TABLE

Where FIELD_1 = %BIND(O-COLOR)
```

   If COLOR = RED, then during rule processing the SQL changes to:

```
Select FIELD_1, FIELD_2, FIELD_3, FIELD_4

From PS_TABLE

Where FIELD_1 = 'RED'
```

   If the result is a number, the system replaces the bind variable with the actual variable. If it is a string, it places single quotes around the actual variable.

Note. Configuration binds are replaced differently for messages; they are simply replaced with the bind value (for example, %BIND(O-COLOR) = RED).

See Also

Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27

Maintaining Multiple Option Variables

Access the Multiple Option page (Configuration Modeler, Define Variables, Multiple Option).

Enter an option name in the Option Variable field in order to associate option variables with a multiple option variable.

Multiple Option Variables check for a value within a set of option variables. Multiple Option Variables group option variables together to examine them as a group, and determine whether a particular value exists in that group.

For example, a model might use two option variables within it for the coloring of a configured bike:

- Frame Color (FRAME_COLOR)
- Seat Color (SEAT_COLOR)

For component purposes, you might not care what color any particular part of the bike is, but you do want to know whether you need red paint. By using the multiple option variable that contains these two option variables, you can create a single rule (leveraging the Exists on Multiple Option operator) that verifies whether either of the option variables has a value of RED.

Using Value Lists and Constraints

To create value lists, use the Value List component (USERCD_MAINT_GBL). To set up constraints, use the Constraint component (CP_CONSTRT_GBL). This section provides an overview of values lists, an overview of constraints, and discusses how to:

1. Create a value list.
2. Set up constraints.

See Also

Chapter 3, "Understanding Configuration Models," Configuration Variable Types, page 23

Understanding Value Lists

You can define two kinds of value lists:

- A standard (static) list of values that is based on existing values that are stored in a table or view within a given setID and that provide a prompt list of valid field values during configuration.

  You can define as many value lists as you need and use them in any model within the setID. You can also set up constraints to validate complex interrelationships and compatibility between product options.

- A custom (dynamically generated) list of values by writing a SQL query to access existing values anywhere in the database.

  You can use binds in the expressions to avoid hardcoding the SQL values, but you *cannot* use constraints with dynamically generated value lists. To change a standard list to a custom list, you must first remove any existing constraint references. Functions must not be used in the SQL for custom type value lists. An alternative to using functions is to create a view for the complex or calculation queries.

Note. The long description field is language sensitive and can use related language tables to display in a nonbase language.

Requirements

When you define or modify a custom value list value, you must include the following fields in the select statement. They do not all need to return data, blanks are allowed, but they should be in the following order:

1. Value list
2. Description
3. Image URL
4. Link URL

For example:

```
Select Value_List, Description, Image_URL, Link_URL
From PS_TABLE
Where FIELD = %BIND(O-COLOR)
```

Or:

```
Select Value_List, Description, Image_URL, ''
From PS_TABLE
Where FIELD = %BIND(O-COLOR)
```

Or:

```
Select Value_List, Description, '', ''
From PS_TABLE
Where FIELD = %BIND(O-COLOR)
```

Note. Constraints, Matrix variables, and configuration templates can use only standard value list values.

See Also

Chapter 3, "Understanding Configuration Models," Configuration Variable Types, page 23

Chapter 3, "Understanding Configuration Models," Language Sensitivity in PeopleSoft Product Configurator, page 28

Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27

Understanding Constraints

Constraints enable dynamic value list prompting by creating a new value list that is a subset of the original *master* value list. Constraints evaluate a series of syntax expressions or conditions in order to determine the correct set of values to apply.

For example, you might have a value list, COLORS, that contains a list of all of the colors for the bikes that you sell (red, blue, black, silver, gray, and white). However, you have two sequential constraint conditions:

1. You can paint titanium bikes using only silver, gray, and black paint.
2. You can paint aluminum bikes using only red, blue, gray, white, and black paint.

You could set up a single constraint with two conditions to handle this configuration modeling situation:

1. The first condition of the constraint checks to see if the bike is titanium. If yes, then the constraint would limit the values to only silver, gray, and white from the original COLORS *master* value list.
2. The second condition of the constraint checks to see if the bike is aluminum. If yes, then the constraint would limit the values to only red, blue, gray, white, and black.

If the bike is neither titanium nor aluminum, then the entire *master* value list of COLORS is available, because there is no constraint in effect.

Constraint Levels

You can create and apply a value list constraint at two different levels:

- Option-level constraints apply to individual option variables. Option-level constraints create dynamic value list based on the *master* value list that is associated with the individual option variable.
- Page-level constraints apply to all of the option variables that are associated with a particular Page Generation or Kit Generation rule and provide a way to validate an entire configuration page without creating multiple page validation rules. A page-level constraint will validate all of the condition within a constraint and return the validation messages associated with all of the *true* conditions to the corresponding configuration page.

Note. You can only apply constraints to standard (static) value list variables. Dynamic value lists cannot have constraints build on top of them.

See Chapter 5, "Using Configuration Rule Actions," Defining Page Generation and Validation Rules, page 59.

See Chapter 5, "Using Configuration Rule Actions," Defining Kit Generation Rules, page 77.

Constraint Types (Option-Level Constraints Only)

The system processes constraint conditions according to a constraint type:

- *Sequential*

  The system returns a dynamic value list based on the *first* true condition statement that it encounters in the constraint sequence. If all of the conditions in the constraint resolve to *false,* then no constraints are placed on the value list, and the entire value list is used for validation.

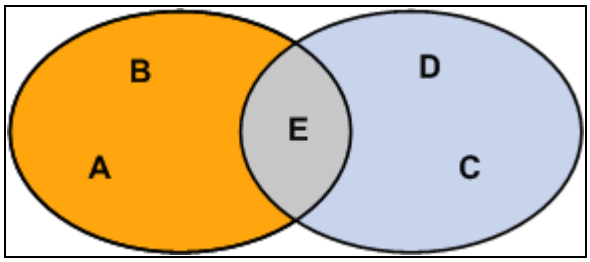
- *Union*

  The system processes through all constraint sequences and returns a dynamic value list based on the *full* list of all true conditions that are matched. If all of the conditions in the constraint resolve to *false,* then an empty value list is returned for validation.

- *Intersection*

  The system processes through all constraint sequences and returns a dynamic value list based on the *common* list of values for all true conditions that are matched. If all of the conditions in the constraint resolve to *false*, then an empty value list is returned for validation.

In the following diagram, A, B, C, D, and E result from union constraints with true conditions, while E is also the result of an intersection constraint.



Constraint types; Union and Intersection

Pages Used to Set Up Value Lists and Constraints

Page Name	*Definition Name*	*Navigation*	*Usage*
Value List	CP_USERCD_PNL	Configuration Modeler, Value Lists and Constraints, Value List	View an existing value list or create a new one.
Value List - Preview Image/Link	CP_USERCD_IMG_SEC	Click the Preview Image/Link button on the Value List page, Links tab.	View the image that is associated with a value.
Constraint	CP_CONSTRT_PNL	• Configuration Modeler, Value Lists and Constraints, Constraint • Click the Page Constraint Add/Update button on the Page Generation rule page.	Validate option selections during option entry.
Select Value List Value(s)	CP_CONSTRT_SEL_VAL	Select a value list on the Constraint page, and click the Select Value List Value(s) link.	View or change the values that are associated with the constraint.

Creating a Value List

Access the Value List page (Configuration Modeler, Value Lists and Constraints, Value List).

Standard Value Lists

To define or modify standard value lists:

1. Access the Value List page.
2. Select *Standard* in the Type field.

   The Value List group box appears, where you can enter user-defined values and link to image files.
3. On the Description tab, enter the values.

   The description of the value is generally informational, but you can use it instead of the actual value in configuration codes.
4. On the Links tab, associate image files and links with values.

   The images and external links [uniform resource locators (URLs)] appear on configured pages for options with a Page Generation rule control type of radio button and the available options list boxes only. An image file can be any browser-supported image.

   a. Enter the image URL to display an image that is associated with the value list value.

   Note. You can set the image URL for images from the database with the following syntax: %IMAGE(<database image name>). See the sample data value list BCOLORS (setID SHARE) for an example.

   ---

   b. Enter a link URL to display a URL to an external site that is associated with the value list value.

   c. (Optional) Click the Preview Image/Link button to display the Value List - Preview Image/Link page.

Custom Value Lists

To define or modify custom value lists:

1. Select *Custom* in the Type field.

   The SQL field appears, where you can write custom SQL statements to dynamically generate values from existing database records.
2. Enter or modify the SQL statement.

Setting Up Constraints

Access the Constraint page (Configuration Modeler, Value Lists and Constraints, Constraint).

Option-level Constraints

Access the Constraint page.

To establish option-level constraints:

1. Select *Option* in the constraint Level field.

2. Select, modify, or add a value list with which to associate this constraint.
3. Select the constraint type
4. Select, modify, or add an expression ID in the Condition (Syntax) field to be evaluated to determine which value list subset to use.

   The sequence determines the order in which the system evaluates the condition.
5. Select, modify, or add an error message that is to appear when page validation fails for this constraint.

   See Chapter 4, "Setting Up Configuration Model Elements," Maintaining Configuration Messages, page 44.
6. Click the Select Value List Value(s) link to associate some or all of the values that are contained in the value list with the constraint.

Page-level Constraints

To establish page-level constraints:

1. Select *Page* in the constraint Level field.
2. Follow steps four through six in the previous procedure.

Using Matrices

To create a matrix header, use the Matrix Header component (CP_MATRIX_MAINT_GBL). To create matrix details, use the Matrix Detail component (CP_MATRIX_DETL_GBL). This section provides an overview of matrices, lists common elements and discusses how to:

- Create a matrix.
- Import or export a matrix.

Understanding Matrices

A Product Configurator matrix is a table that associates a combination of key fields with a unique result value. In effect, the matrix takes the place of a series of rules for different combinations of variable values. Matrix variables enable you to invoke result values from a predefined matrix of up to five variable values. You can, for example, define the value of combinations of prices, quantities, or options, and then call that value in syntax, without listing every possible combination in the configuration rules.

You can define an unlimited number of matrices to configure products in either the distribution or production processes. Within a matrix, you can define unlimited numbers of values for specific options, variations, or variables.

Matrix detail records are uniquely identified by an effective date, and you can access or test the matrix detail information based on this effective date. You can preset multiple detail sets that are activated automatically, based on an effective date.

Matrix Wildcards

In establishing the matrix variable details, you can specify wildcards (*) to aid in the maintenance when the system fails to find specific valid key field value combinations. The order of the key fields that are on the matrix controls the way that the system searches for a return value.

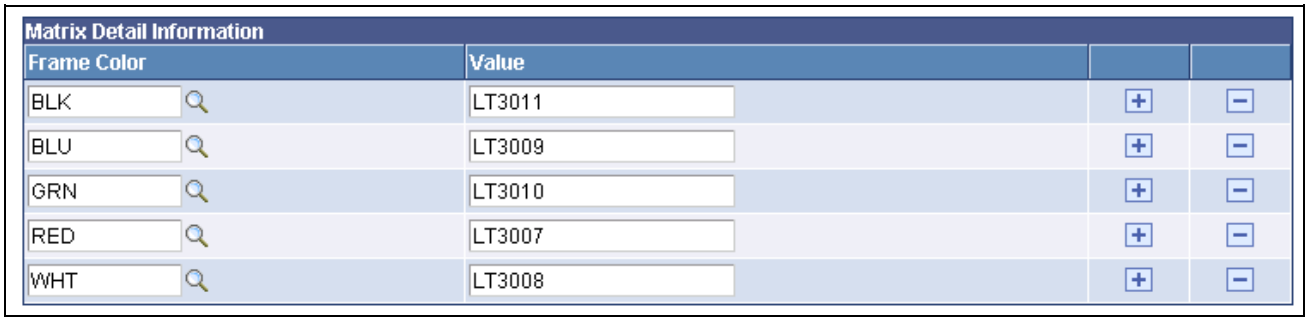
Note. You can use wildcards (*) anywhere in the matrix detail definition.

The system processes matrix details in the following order:

1. First, it looks for a matrix detail result that matches the values for all of the key fields.
2. If that fails, it tries again, but starts replacing values with a wildcard value (*) for the last key field on the matrix and moves forward.

   This search is based on a boolean algorithm where 00000 represents all key fields matched and 11111 represents all wildcard values matched. The first search uses 00000 (no wildcards), then 00001 (1 wildcard in the last key), then 00010 (1 wildcard in the second to last key), then 00011 (2 wildcards—1 in the last key and in the second to last key), and so on.
3. If a result value is not defined for all wildcard key fields, and a result value is not found, the configuration engine generates a runtime error.

   The following figure shows a sample matrix page with the key fields entered.



Example of Matrix Detail page

Here's how the return values appear for some key field values:

Frame Color	*Frame Material*	*Frame Size*	*Value*
BLK	CFB	30	200
BLK	STL	25	150
RED	CFB	40	300
WHT	STL	30	100

Common Elements Used in This Section

Type Specifies whether the matrix result field type is *Character* or *Numeric.*

Length Defines the number of characters that are allowed for each variable that is associated with the key field. The maximum length of a character type is 15 characters.

Decimals Specifies the decimal precision for numeric types. The range of decimal precision values is *11,4* through *8,7.*

 Key Detail button.

 Add/Update button.

See Also

Chapter 4, "Setting Up Configuration Model Elements," Common Elements Used in This Chapter, page 29

Pages Used to Set up Matrices

Page Name	*Definition Name*	*Navigation*	*Usage*
Matrix Header	CP_MTX_HDR_PNL	• Configuration Modeler, Define Matrices, Matrix Header •  Click the Go to Matrix Header link on the Matrix Detail page.	Create a matrix and control the way that the system applies it.
Matrix Header - Key Detail	CP_MTX_HDR_SEC	 Click the Key Detail button on the Matrix Header page.	View the details for the specific matrix key field.
Matrix Detail	CP_MTX_DETL_PNL	• Configuration Modeler, Define Matrices, Matrix Detail •  Click the Go to Matrix Detail link on the Matrix Header page.	Identify valid key combinations and their associated result field values.
Matrix Tester	CP_MTX_DETL_WIZ	 Click the Test Matrix link on the Matrix Header page.	Test a matrix definition.

Page Name	*Definition Name*	*Navigation*	*Usage*
Upload Download Matrix	RUN_CPS4000	Configuration Modeler, Define Matrices, Upload/Download Matrix, Upload Download Matrix	Use this page to initiate the Upload/Download Matrix SQR process (CPS4000.SQR). This process will import a matrix from a spreadsheet or flat file or export a matrix to a flat file using the information that you enter on this page.

Creating a Matrix

To create a matrix:

1. Access the Matrix Header page and enter the information for identifying a matrix and controlling how the system applies it.

   The header fields on this page determine the matrix result format.

2. Specify up to five matrix key fields and their characteristics, ordering the keys from the most important (in determining the result) to the least important to correctly prioritize the return values when the variable values do not match matrix combinations exactly.

   a. Select a variable type: *Global, Option, Internal,* or *Secondary.*

   b. Select, add, or modify a matrix key variable by using the Look up Variable or Add/Update buttons.

      The Add/Update button is only present when no matrix detail exists for the matrix key field variable (for example, when you are creating a new header).

   c. Enter a matrix key description.

      This description is displayed as the column heading on the Matrix Detail page once you click the Go to Matrix Detail link.

   d. Enter the operator: = (equal to), <= (less than or equal to), or >= (greater than or equal to).

      The operator eliminates the need to enter every possible combination of values in the matrix detail. Instead, you can create levels of data within which the individual key field combinations might fall. The operator functions as follows:

      ```
      [Matrix Detail Value] {Operator} [Key Variable Value]
      ```

   e. Click the Add Key button to add another key to the matrix.

      You cannot delete the first key information line; only those that are subsequent to the first (required) line.

3. After you create the key fields, click the Key Detail button to access the Matrix Header - Key Detail page to view or update the variable attributes for each key field.

   Attributes appear by default based on the variable definition, but you may override them for increased or decreased decimal precision or accuracy.

4. When you are satisfied with the matrix key header definition, click the Go to Matrix Detail link to access the Matrix Detail page, where you define the matrix detail key values and result parameters.

   Note. Once you click the Go to Matrix Detail link and save the matrix header information that you define, the resulting matrix details are tied to the matrix header key fields, which are then frozen; only the operator can be edited. To change a matrix header key at this point, you must create a new matrix variable.

   The page is populated with editable variable fields for the matrix variable key fields.

   a. Enter data in the key fields and define a matrix return value for each detail row.

   b. To copy an entire matrix detail that is set to a new effective date, click the Add button.

      The system copies the previous set of effective-dated data.

      Note. You can use blank values within the matrix detail keys and return values.

   c. Save the page and return to the Matrix Header page.

5. The Test Matrix link is now visible; click to access the Matrix Test page.

   Enter test values for up to five matrix key fields, and click the Calculate Result button to get a return value or an error message.

Importing or Exporting a Matrix

Access the Upload Download Matrix page (Configuration Modeler, Define Matrices, Upload/Download Matrix).

Action Select the type of action you want to perform. Values are:

- *Download to file*
- *Upload from file*

Matrix Select the matrix. When uploading from a file, select the existing matrix that the data on the file to be uploaded applies to. When downloading to a file, select the matrix you want to download.

Effective Date Select the effective date for the matrix. When uploading data from a file specify the effective date for the matrix detail that you desire. When downloading data to a file specify the effective date for the matrix detail you want to download from the existing set of matrix details.

Note. When uploading data, if you select an effective date for a matrix detail that already exists the existing matrix detail data will be replaced if the upload is successful.

Delimiter Select the delimiter that is associated with the import file or select the delimiter you want to use for the export file. Valid delimiters are: comma, slash, colon, semicolon, backslash, and bar.

File Name

Enter the file name in one of the formats shown on the page. File path standards are based on the Process Scheduler Server:

- For NT: \\[servername]\[sharename]\[filename]
- For UNIX: //[servername]/[sharename]/[filename]

Note. It is recommended that you first perform a download of a matrix so that you can review the flat file format that is required. Then you can reference this downloaded flat file when creating a upload flat file because you will then know the correct data format that is required by the system.

Creating Syntax Expressions

To create syntax expressions, use the Expression component (CP_EXPR_PNLG_GBL). This section describes how to create syntax expressions.

Pages Used to Create Syntax Expressions

Page Name	*Definition Name*	*Navigation*	*Usage*
Expression	CP_EXPR_PNL	Configuration Modeler, Expressions and Messages, Expression	Create and maintain the syntax expressions for use in Product Configurator rules.
Syntax Builder	CP_SYNX_SEC_PNL	 Click the Syntax Builder link on the Expression page.	Use the syntax builder feature to create simple or complex syntax expressions.

Creating Syntax Expressions

To create syntax expressions:

1. Access the Expression page and enter a description for the expression ID.
2. If you know the entire expression that you want to create, enter it in the Syntax field.
3. (Optional) To select established variables and operators with which to build the statement, click the Syntax Builder link to access the Syntax Builder page.

4. (Optional) Build the syntax expression in the Syntax Builder group box on the Syntax Builder page.

   a. To negate the operator, add *not* to the syntax statement by selecting the Not check box.

   b. A simple expression contains a variable, Variable 1, an operand, and a second variable, Variable 2 and is entered in the form: (Variable 1, operand, Variable 2).

      Click the Build Variable 1 or 2 button. When you click this button the Variable Builder group box in the lower portion of the page expands. Using the fields in the Variable Builder group box, select a variable type and an associated variable, and click the Add to Variable 1 or 2 button.

   c. You can create nested expressions, as well.

      A simple nested expression: [(Variable 1,operand,Variable 2),operand,(Variable 1,operand,Variable 2)]. To create a nested expression, add another operand after the second variable, and click the Add a New Row button to create a new row and continue the statement.

      Note. The next time that you access the Syntax Builder page for this expression, the entire nested expression is contained in a single row.

5. Click the Build Syntax Expression button to assemble the variables and operands into an expression.

   The system populates the Syntax Expression long character field on this page.

6. Click the OK button to return to the Expression page, which displays the syntax statement in the Syntax field.

Maintaining Configuration Messages

To define messages, use the Message component (CP_MESSAGE_GBL). This section provides an overview of configuration messages and discusses how to maintain configuration messages.

Understanding Configuration Messages

Two levels of messages are used in Product Configurator:

- PeopleTools-generated messages.

  These are used to display static text and field names and are defined on the Message Catalog page in PeopleTools Utilities. Product Configurator messages are stored in message set numbers in the following range: 15,600 to 15,699.

- Configuration messages.

  You can use Product Configurator's Message component to create a custom configuration error message to use in Page Validation rules, value list constraints, and workflow rules.

  Note. You can use PeopleSoft's globalization features to display custom messages in nonbase languages.

See Also

Chapter 3, "Understanding Configuration Models," Language Sensitivity in PeopleSoft Product Configurator, page 28

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Page Used to Maintain Configuration Messages

Page Name	*Definition Name*	*Navigation*	*Usage*
Message	CP_MESSAGE_PNL	Configuration Modeler, Expressions and Messages, Message	Create and maintain custom error messages.

Maintaining Configuration Messages

Access the Message page (Configuration Modeler, Expressions and Messages, Message).

Enter the following:

Message ID Enter up to 18 characters.

Description Enter up to 30 characters.

Message Enter the message. This long character field uses database default length.

Note. You can use configuration binds to avoid hardcoding values in configuration messages. Configuration binds are replaced differently for messages; they are simply replaced with the bind value (for example, %BIND(O-COLOR) = RED).

See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.

Setting Up Print Codes

To set up print codes, use the Print Code component (CP_PRINTCD_PNL_GBL). This section provides an overview of print codes.

Understanding Print Codes

This section provides an overview of print codes.

Print codes enable you to print user-defined configuration information on various PeopleSoft reports and view this information online.

1. When you add a new print code, associate it with the appropriate reports.
2. Then you can use it in the following configuration rules:
    - Page Generation, as an option attribute.
    - Configuration Detail, as a rule attribute.

(The option Variable rule is not provided with a print code; it acts like a Page Generation rule with a blank print code).

Output

The Configuration Detail table stores the output from Page Generation and Configuration Detail rules that are associated with a print code.

An option can be printed more than once on a report:

- If you associate a print code with an option on a Page Generation rule.
- If you associate the same option with a Configuration Detail rule.

The following reports use print codes:

Report	***Application***
Sales Order report	Order Management
Invoice report.	Billing.
Pick Plan report	Inventory
Packing Slip report	Inventory
Production Documents report	Manufacturing
Purchase Order report	Purchasing

See Also

PeopleSoft Order Management 9.1 PeopleBook, "Appendix A: PeopleSoft Order Management Reports"

PeopleSoft Billing 9.1 PeopleBook, "PeopleSoft Billing Reports"

PeopleSoft Inventory 9.1 PeopleBook, "PeopleSoft Inventory Reports"

PeopleSoft Purchasing 9.1 PeopleBook, "PeopleSoft Purchasing Reports"

Pages Used to Maintain Print Codes

Page Name	*Definition Name*	*Navigation*	*Usage*
Print Code	CP_PRINTCD_PNL	• Configuration Modeler, Print Codes and Templates, Print Code • Click the linked print code value on the All Print Codes page.	Create and maintain print codes to control what configuration information is included on reports.
All Print Codes	CP_PRINTALL_PNL	• Configuration Modeler, Print Codes and Templates, Review Print Codes, All Print Codes •  Click the View All Print Codes link on the Print Code page, and select a setID.	View all print codes for the setID, and the reports with which they are associated.

Chapter 5

Using Configuration Rule Actions

This chapter provides a list of common elements and discusses how to:

- Create and maintain basic rule characteristics.
- Define common rules.
- Define page generation and validation rules.
- Define distribution rules.
- Define production rules.

Common Elements Used in This Chapter

Action Defines the type of processing that the configuration rule invokes.

Condition (Syntax) A syntax expression that is tested to determine whether or not to process the rule. The condition must evaluate to a Boolean value. A blank condition field in a configuration rule evaluates to true.

 Click the Add/Update button to access the Search page that is associated with the adjacent field, where you can add or modify values by using the field's source component. If the field is blank, the source component is accessed in Add mode. If the field is populated, the source component is displayed in update mode.

Note. The phrase "select, modify, or add" in the documentation indicates the presence of the Add/Update button.

Creating and Maintaining Basic Rule Characteristics

To maintain basic rule characteristics, use the Rule component (RULE_MAINT_GBL). This section discusses how to:

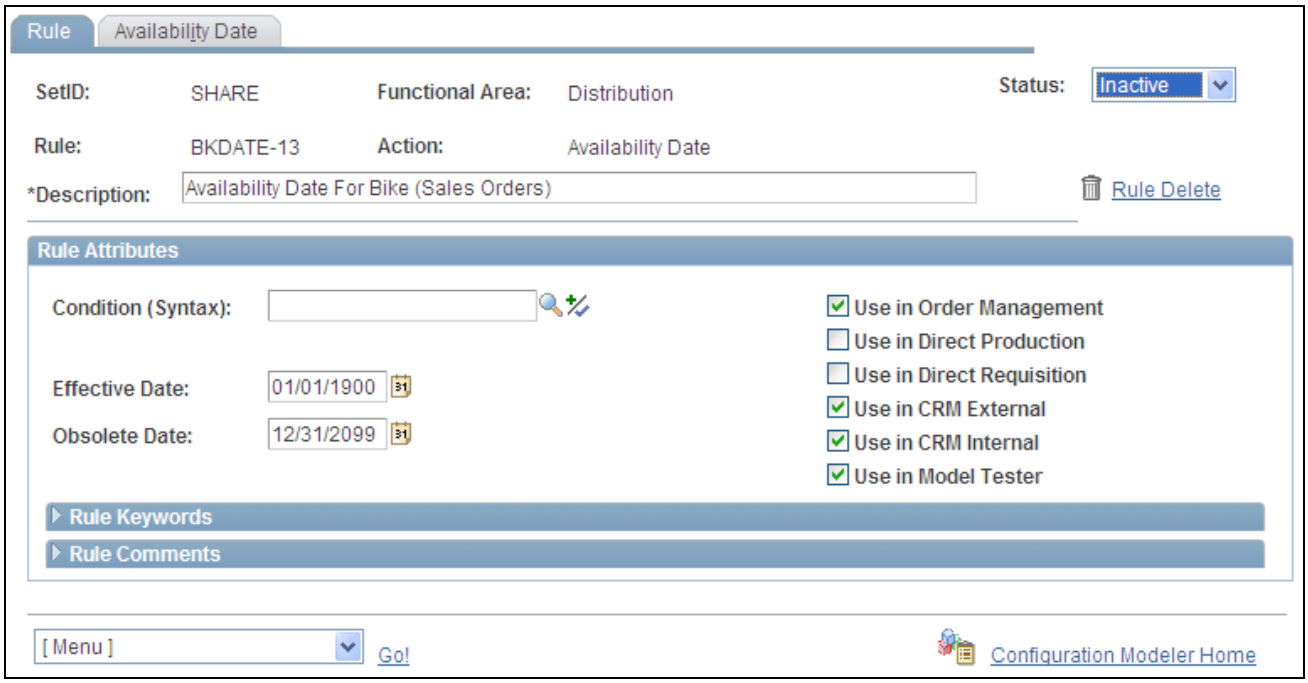
- Define basic rule information.
- Copy rules.
- Delete rules.

Pages Used to Define Basic Rule Characteristics

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule	CP_RULE_HEADER_PNL	• Configuration Modeler, Maintain Rules, Rule • Click the Add/Update button that is next to any editable Rule field on Product Configurator pages.	Define basic rule characteristics, including processing action and modes, effective dates, comments, and search keywords.
Rule - Rule Copy Selection	CP_RULCPY_SECPNL	 Click the Rule Copy link on the Rule page when in Add mode.	Copy an existing rule definition to the one that you are creating.
Review Rules - Search	CP_RULE_SELECT_INQ	Configuration Modeler, Maintain Rules, Review Rules, Review Rules - Search	Search for specific rules by functional area, action, effective date, model, or the search keywords that you define.
Review Rules - Results	CP_RULE_SELECT_IN2	Click the Search button on the Review Rules - Search page.	The system returns rules based on selection criteria on the Review Rules - Search page. Select a linked rule ID to view or modify its definition.

Defining Basic Rule Information

Access the Rule page (Configuration Modeler, Maintain Rules, Rule).



Rule page

Set the status and enter a rule description that appears on reports and in rule inquiries.

Status Set the status for the rule.

Action A rule action type is required for each rule that you create, and determines the visibility of its associated action detail pages.

Description Enter a rule description that appears on reports and in rule inquiries.

Rule Attributes

Condition (Syntax) Select, modify, or add an expression ID in this field. This expression is tested to determine whether to process the rule. The condition must evaluate to a Boolean value ("0" for *false* or "1" for *true).*

Effective Date The rule is not processed until the specified date.

Obsolete Date The rule is not processed after the specified date.

Rule Processing Modes

Select the modes in which to use this rule:

Use in Order Management Rule is active during sales order and quote entry in Order Management.

Use in Direct Production	Rule is active when generating configuration direct production orders in Product Configurator.
Use in Direct Requisition	Rule is active when generating configuration direct requisition orders in Product Configurator.
Use in CRM External (use in customer relationship management external)	Only used in Customer Relationship Management (CRM).
Use in CRM Internal (use in customer relationship management external)	Only used in CRM.
Use in Model Tester	Rule is active for the model tester.

Rule Keywords

Enter up to five search keywords to identify rules or their properties. For example, you might use the name of the rule's author, the date that the rule is created, or the table that the rule references for a variable value.

Rule Comments

Enter descriptive text for the rule.

Copying Rules

Access the Rule page in Add mode (click the Add button on the Rule page).

To copy rules:

1. Click the Rule Copy link.
2. Select a rule to copy from the available options list.

   Note. Only rules with the same functional area and action type are available.

3. Click the OK button to copy the rule details and return to the Rule page.

After you copy the rule, you can modify it to create a new rule.

Deleting Rules

Access the Rule page in Update/Display mode (click the Update/Display button on the Rule page).

Note. To be eligible for deletion, the rule must not exist in any model.

To delete rules:

1. Change the status of the rule to *Inactive.*

2. Save the page.
3. Click the Rule Delete link.

Defining Common Rules

To define common rules, use the Rule component (RULE_MAINT_GBL). This section discusses how to:

- Define condition rules.
- Define configuration detail rules.
- Define create external parameter rules.
- Define internal variable override rules.
- Define secondary, global, and option variable rules.
- Define start and end trace rules.

Pages Used to Define Common Rules

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule	CP_RULE_HEADER_PNL	Configuration Modeler, Maintain Rules, Rule	Define basic rule characteristics, including processing action and modes, effective dates, comments, and search keywords. See Chapter 5, "Using Configuration Rule Actions," Creating and Maintaining Basic Rule Characteristics, page 49.
Configuration Detail	CP_RULE_DTL_CD	When accessing the Rules component, select *Configuration Detail* as the action type.	Produces and stores one line of detail information on the Configuration Detail table, from which you can pull information to include on printed reports.
Create Parameter	CP_RULE_DTL_CP	When accessing the Rules component, select *Create External Parameter* as the action type.	Create parameters to pass to external applications during configuration rules processing.
Global Variable	CP_RULE_DTL_GV	When accessing the Rules component, select *Global Variable* as the action type.	Populate variables that apply to all component levels with a configuration.

Page Name	Definition Name	Navigation	Usage
Internal Variable	CP_RULE_DTL_IV	When accessing the Rules component, select *Internal Variable Override* as the action type.	Point to different product or item keys than those associated with original internal variables.
Option Variable	CP_RULE_DTL_OV	When accessing the Rules component, select *Option Variable* as the action type.	Create a new value for an existing option variable or to populate a new option variable.
Secondary Variable	CP_RULE_DTL_SV	When accessing the Rules component, select *Secondary Variable* as the action type.	Populate temporary storage variables that are used in configuration processing.
Production Trace (inquiry)	CP_RULE_TRACE_INQ	Product Configurations, Review Configuration Info, Production Trace	View rules that are traced for a configuration during the production configuration process. When the trace is active, the Production Trace page displays all of the configuration rules that are used, and the corresponding results.
Rule Trace (inquiry)	CP_TRACE_SEC	A distribution trace appears when the configuration is complete.	View rules that are used during the distribution configuration process. You can view trace rules for configured products that are entered on sales orders, configured direct production orders, and configured direct configuration orders.

Defining Condition Rules

Each rule has a condition statement to determine whether or not the rule processes. The condition rule does not contain any action other than this condition statement; its main purpose is to provide branching logic in a configuration model. This branching removes the need to test the same condition over and over again; instead of using the same condition statement on multiple rules in a configuration model, you can create a parent condition rule and leave the Condition (Syntax) field blank for subsequent rules. Inactivating this parent condition rule means that all of its children rules are not executed in the configuration.

For example, in a custom bike production scenario (LT5010_PRDN_TREE in the provided sample data), condition rules are used to branch the processing logic in the model to initiate the component list rules that accumulate the bike's required parts, and trigger the operation sequence rules that govern its assembly.

To create a condition rule:

1. Select *Condition* as the action type and access the Rule page in Add mode.

2. Complete the information on the Rule page.

   a. Complete the status and rule description information.

   b. In the Condition (Syntax) field, select, modify, or add a syntax statement that expresses the condition for processing the subsequent rules.

Defining Configuration Detail Rules

The advantages of make-to-order manufacturing depend partly on both you and the customer seeing what goes into the final order. Configuration Detail rules enable you to save the results to the Configuration Detail table, from which you can pull information to include on printed reports. Each rule produces one line of detail information.

To create a configuration detail rule:

1. Select *Configuration Detail* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the detail line is created.
3. Access the Configuration Detail page and complete the required fields.

Sequence Determines the order in which configuration details are written.

Note. Configuration details that are created on a page generation rule are given a sequence value of zero so that they are written before other kinds of detail lines.

Use Literal for Description Select to create a literal description on the configuration detail instead of an option variable description and value.

Use Option for Description Select to create configuration detail with an option variable description and value.

Print Code Determines the documents on which the configuration details print, according to the flags on the Print Code table.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Print Codes, page 45.

Config Detail Value (Syntax) (configuration detail value syntax) Select, modify, or add a syntax expression to calculate the value, and print the specified configuration detail information.

Defining Create External Parameter Rules

This rule passes configuration information out to external programs to perform specific user-defined functions during configuration processing. Each of these rules sends one parameter to the external program. The create external parameter rules must process before invoking an external program variable (any "P-" variable within configuration syntax), which calls the external program and calculates a result.

See Chapter 3, "Understanding Configuration Models," Configuration Variable Types, page 23.

To a create an external parameter rule:

1. Select *Create External Parameter* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the parameter is created.
3. Access the Create Parameter page.
   a. Select the field type for the parameter value *(Character* or *Numeric).*
   b. In the Value of Parameter (Syntax) field, select, modify, or add a syntax expression to calculate the parameter.

Defining Internal Variable Override Rules

This rule retrieves data for configuration processing by allowing you to override specific information on an existing internal variable. Unlike internal variables themselves, the internal variable override rule allows you to change the key values on the internal variable without creating an entirely new variable. Internal variable override rules use the internal variable definitional structure, but enable you to override the business unit and item or product ID keys in order to retrieve data.

Values that are retrieved by this rule are stored for processing as secondary variables. Like all secondary variables, these values apply only to the rules that are for a single configured product.

See Chapter 5, "Using Configuration Rule Actions," Defining Secondary, Global, and Option Variable Rules, page 57.

To create an internal variable override rule:

1. Select *Internal Variable Override* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Internal Variable page.

    a. Select, modify, or add an expression in the Variable field to store the resultant value. You can use this new secondary variable (the internal variable override) in the syntax of subsequent rules.

    b. Select, modify, or add a name in the Internal Variable field to point the configuration engine to the correct data.

    c. The business unit that you select overrides any BUSINESS_UNIT field that is on the associated internal variable.

    d. Select, modify, or add an expression in the Product ID/Item Name (Syntax) field to override any PRODUCT_ID or INV_ITEM_ID fields on the associated internal variable.

Defining Secondary, Global, and Option Variable Rules

Secondary, global and option variable rules are defined as:

- Secondary variable rules populate variables for a single level of configuration for the values that are used in configuration processing. For example, if you want to accumulate a running total for the price, you can define that total as a secondary variable and use it in rule syntax. Secondary variables are available only within the configuration processing for the current component (a single level of the configuration).
- Global variable rules apply to all component levels within a configuration. Using global variables enables you to share variable information between a parent product and its configured components, or between a child node and other child nodes that follow in configuration processing. Global variables in a distribution configuration are also passed to the production configuration process.
- Option variable rules substitute a new value for an option variable. The system then uses this new value in the configuration processing exactly as it uses an option variable that is entered on a page generation rule.

Note. Option, secondary, and global variables are populated by the configuration engine during syntax evaluation with default values—a zero value (0) for numerics and a zero-length string value ("") for characters—if the variable does not contain a value.

To create a secondary variable, global variable, or option variable rule:

1. Select *Secondary Variable, Global Variable,* or *Option Variable* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

    In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the variable is created.

3. Access the associated action detail page.

    a. Select, modify, or add an expression in the Variable field.

    b. Select, modify, or add a value expression in the Value (Syntax) field.

Defining Start and End Trace Rules

You can trace distribution and production model processing by using the start trace and end trace rules within a configuration model. These rules trace the configuration models as the process runs so that you can see:

- The rules that are processed.
- The order in which the rules are processed.
- The rule interpretation (true or false).
- The value of the result fields.
- The effective date that is used to select the rule.

To trace the entire process, put a start trace rule at the beginning of the model and an end trace rule at the end of the model. To trace a specific section of the model, put the start trace and end trace rules before and after the part of the model to test.

Viewing Results

The system displays distribution configuration trace results online on the Rule Trace page when you finish configuring a product using a sales order, a direct production order, or a direct requisition order.

Results of a Production model trace are stored in the database. Use the Production Trace inquiry page to view the results of the production process.

After you test the configuration model processing and everything is running correctly, be sure to inactivate the start trace and end trace rules by changing the status or the effective date on the Rule page. This helps in maximizing performance.

Start or End Trace Rule

To create a start or end trace rule:

1. Select *Start Trace* or *End Trace* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the trace starts or ends as specified.

Distribution Trace

To view a distribution trace:

1. Make sure that the appropriate start trace rule is active.
2. Enter an order for a configured product in one of the following:
   - The Order Management order entry pages.
   - The Product Configurator direct configuration orders page.

3. Configure the product and click the OK button. The system displays the Rule Trace inquiry page.

Production Trace

To view a production trace:

1. Access the Production Trace inquiry page.
2. View the production trace.

   When the trace is active, this page shows all of the rules on the model, which are used, and the corresponding results.

Area	The functional area values are: *Distribution* or *Production.*
Condition	The evaluation of the rule syntax. Values are: *True* or *False.*

Defining Page Generation and Validation Rules

To define page generation and validation rules, use the Rule component (RULE_MAINT_GBL). The page generation rule controls when an order entry page appears for a configured product, and how the product information appears and is validated on the page. You can also validate product information by using page validation rules.

Note. You can use the PeopleSoft globalization features to display configured order-entry page information in nonbase languages.

This section discusses how to:

1. Define page generation rule characteristics.
2. Establish page layouts.
3. Define page validation rules.

See Also

Chapter 5, "Using Configuration Rule Actions," Defining Kit Generation Rules, page 77

Chapter 3, "Understanding Configuration Models," Language Sensitivity in PeopleSoft Product Configurator, page 28

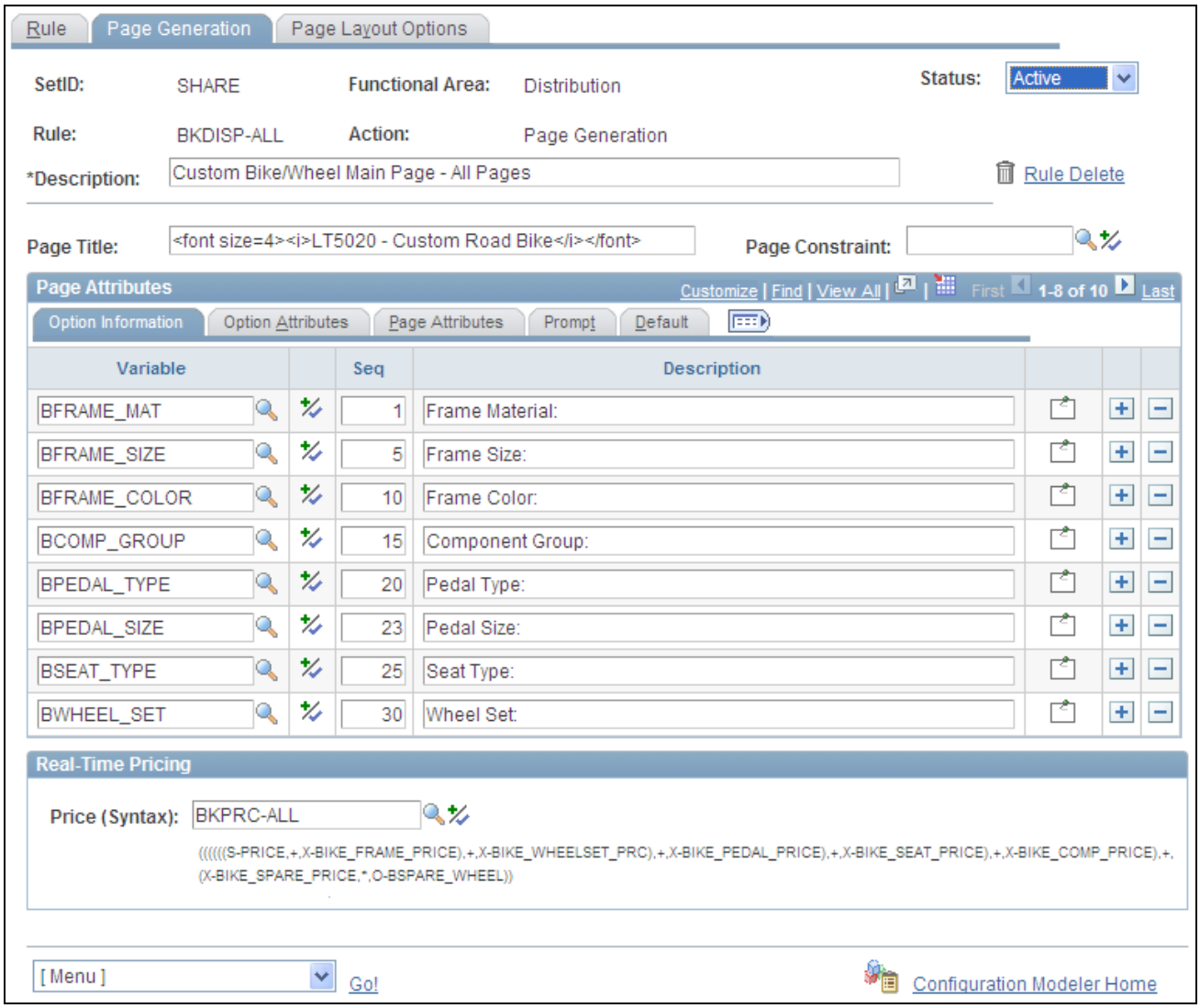
Pages Used to Define Page Generation and Validation Rules

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule	CP_RULE_HEADER_PNL	Configuration Modeler, Maintain Rules, Rule	Define the basic characteristics of the rule, including the specific action and the condition for processing. See Chapter 5, "Using Configuration Rule Actions," Creating and Maintaining Basic Rule Characteristics, page 49.
Page Generation	CP_RULE_DTL_PG	When accessing the Rules component, select *Page Generation* as the action type.	Associates user input for each page with option variables to use in configuration processing. You can set up the option value lists and constraints for validation, and specify defaults.
Page Layout Options	CP_RULE_DTL_PG2	When accessing the Rules component, select *Page Generation* as the action type. The Page Layout Options page also appears.	Determines how the product options appear on order entry pages.
Page Generation - More Option Information	CP_RULE_INFO_SEC	 Click the Option Description button on the Page Generation page.	Includes additional information for configuration options. When the customer selects an option, a secondary window appears containing the information that you define on this page.
Page Generation - Dynamic Value List (Syntax)	CP_USER_CD_SX_SEC	 Click the Dynamic Value List button on the Page Generation page: Prompt tab.	Creates the syntax for the Dynamic Value List field that determines which value list to use for this option. If the syntax does not evaluate to a value list, then the value list that is defined in the Value List field is used. If the Value List field is blank, and the syntax does not evaluate to a value list, then an error results.

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule - Test	CP_DYNAMIC_PANEL	 Click the Test Page link on the Page Layout Options page.	Displays a working version of the page that is to be created by the Page Generation rule.
Page Validation	CP_RULE_DTL_PV	When accessing the Rules component, select *Page Validation* as the action type.	Detects a condition that should yield an error, a warning, or an informational message.

Defining Page Generation Rule Characteristics

Access the Page Generation page (select *Page Generation* as the action type in the Rule page).



Page Generation page: Option Information tab

To define a page generation rule's general characteristics:

1. Select *Page Generation* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, add, or enter a syntax statement to specify the condition for processing the page generation rule.

3. Access the Page Generation page.

   Enter the general page characteristics; in particular:

Page Title Enter a title for the order entry Configuration page.

Note. HTML tags and configuration binds are supported on this field. In addition, the %Image(<<Database Image Name>>) meta-HTML tag is also supported. This meta-HTML tag allows you to use database images within HTML.

See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.

Page Constraint Select, modify, or add a page-level constraint that the system uses to validate this page.

See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Constraints, page 37.

Price (Syntax) This syntax field appears only when the page processing mode is set to *Real-Time Mode* or *On Display Mode.*

In Real-Time mode, the price is recalculated when you change an option value during order entry. The system stores the Real Time Pricing value in the *DYNAMIC_PRICE* constant. Define default values for all of the options if you intend to use the real-time dynamic pricing feature.

4. Set up option validation on the Option Information tab.

   Enter the required values; in particular:

   Variable

   Select, modify, or add the option variables you want to have appear on the order entry page that this rule generates. The Variable field appears under each tab—Option Attributes, Page Attributes, Prompt, and Default—for this page.

   In addition, during the configuration process numeric option variables will automatically be converted from fractions to decimals. For example, if 5 1/2 (five and a half) is entered then 5.5 will be stored.

   Seq (sequence)

   The order that the option appears on the page.

   Click the Option Description button to access the Page Generation - More Option Information page. When you enter an option description, the page label appears as a link on the Order Entry page. Clicking the link displays the additional option information.

   You might add detailed product specifications, or HTML for graphics or other media-rich content.

   Note. HTML tags and configuration binds are supported on this field. In addition, the %Image(<<Database Image Name>>) meta-HTML tag is also supported. This meta-HTML tag allows you to use database images within HTML.

   See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.

   Description

   The visible option description that appears on the page.

   Note. HTML tags and configuration binds are supported on this field. In addition, the %Image(<<Database Image Name>>) meta-HTML tag is also supported. This meta-HTML tag allows you to use database images within HTML.

   See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.

5. Access the Option Attributes tab.

   View the attributes for the Option variables.

   Date

   Select this check box to indicate that this option variable is a date. When you select this check box the system will perform date validations on this option when processing the model configuration. This option variable must be entered as an eight digit number with no decimals in YYYYMMDD format. For example, 20030623 would be a valid date, but 20033131 would not.

6. Access the Page Attributes tab.

   Enter the required values, in particular:

Control Type	Select *Edit Box* or one of the other variable display options: *Check Box:* Only options that have a length of *1* and a type of *Character* are valid. *Dropdown List:* You must associate a value list for all options of this type. *Radio Button:* You must associate a value list for all options of this type. *Text Box: A multi-line version of an edit box.* See Chapter 4, "Setting Up Configuration Model Elements," Creating a Value List, page 36.
Status	Select to control whether the variable option's appearance on the order entry page is: *Required:* The option must contain a value in order to continue the configuration process. *Optional:* The option may contain a value, but can be left empty (a value of *None* appears for radio button and the available options list controls). *Included:* The option is visible, but unavailable for selection since the option's value is already included in the configuration. *Conditional:* The option functions with a status of optional, and the option's display is controlled by the expression that you add in the Condition (Syntax) field that appears.
Condition (Syntax)	Select, add, or update a syntax expression to determine the conditional control type option's appearance on the order entry page.
Print Code	Select, add, or update to designate which reports include the option information. See Chapter 4, "Setting Up Configuration Model Elements," Setting Up Print Codes, page 45.

7. Access the Prompt tab to view the attributes for the Option variables.

Value List	Enables validation of options as they are entered and prompting values.
Hide Values	If selected, the available options lists and radio buttons display only the long description of each value on the value lists. If deselected, the available options lists and radio buttons display both the value code and the long description of each value on the value lists.
	Click the Dynamic Value List button to access the Page Generation - Dynamic Value List (Syntax) page where you can select, add, or modify a syntax expression to determine the value list that is editable for this option.
Constraint	Enables complex cross-validation and compatibility between option values. See Chapter 4, "Setting Up Configuration Model Elements," Using Value Lists and Constraints, page 33.

8. Access the Default tab.

Default Value (Syntax)	If no syntax or value is entered, or if the syntax is not valid, then the default for a radio button or the available options list is the last value in the value list. For a check box, the default is *deselected.*

9. Save the settings in preparation for establishing page layout options.

Establishing Page Layouts

Once you define general Page Generation rule characteristics, access the Page Layout Options page (select *Page Generation* as the action type in the Rule page).

You can select one of the three standard page layouts, or create a new unique layout. If you create your own page layout, the system generates an HTML template that you can modify to meet your requirements. The HTML that the system generates contains all of the option information and attributes that you enter for the page generation details.

See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.

In addition, the following fields accept HTML tags, enabling modifications to each of the standard layout styles:

- Page Title
- Option Description
- Additional Information

Note. In addition to standard HTML tags, you can use the %IMAGE(<<Database Image Name>>) meta-HTML tag within the standard HTML image tag to leverage images within the database in HTML (for example: <img src='%IMAGE(<<Database Image Name>>)'>).

To establish the page layout:

1. Complete the steps in the previous section to define page generation rule characteristics.

   Define all of the options and the associated option information.

2. Access the Page Layout Options page and select a page processing option:

   - *Deferred Mode:* The page is validated only when the continue action is selected during order entry.

     This is the default mode.

   - *On Display Mode:* The page is validated upon initial page display and when the continue action is selected during order entry.

     Additionally, you can click the Refresh button during order entry to update price or option validation.

   - *Real-Time Mode:* The page is validated upon initial page display, when the continue action is selected during order entry, or when an option value is changed during order entry.

3. Select a layout option:

   - *Standard:* To use one of the three standard page layout templates that appear in the Page Layout group box. Options are:

     A short page, single column style.

     A short page, double-column style layout.

     A long page, single-column style layout for lengthy labels.

   - *Custom:* To create a unique page layout. This option is available only when page processing is in Deferred mode.

     Important! You must save the page before selecting this option, which uses what is stored in the database to generate the HTML. If changes are made and the *Custom* layout option is selected without first saving the page, the HTML will not contain the changed information. After you select the *Custom* layout option, all fields on the Page Generation page are unavailable for entry. Changing an option or attribute after generating the HTML template corrupts the accuracy of the option and attribute information contained within the template.

     The system generates and displays a custom layout HTML template based upon the defined layout option.

4. Using an HTML or text editor, cut and paste the Custom Layout HTML template into the body of an HTML document.

   The following is an example of an acceptable HTML structure:

   ```
   <html><head><title>Page Generation Rule Custom Layout Template</title></head><body>
   <!-- Start of Cut & Paste HTML --><!-- Insert HTML from Product Configurator's
   Page Generation Rule Here --><!-- End of Cut & Paste HTML --></body></html>
   ```

   a. Modify the HTML to fit the business needs.

      Adhere to the following guidelines when modifying the HTML:

      SELECT and INPUT tags cannot be deleted.

      Additionally, the NAME property on SELECT and INPUT tags cannot be modified and must match the option variable names that are defined on the page generation rule.

      The VALUE property that is on OPTION tags cannot be modified and must match the value list definition for the corresponding option variable on the page generation rule.

      The system captures as option variables only those options that you define on the page generation rule.

      The system does not capture any additional options with SELECT or INPUT tags unless you add these option variables to the page generation rule and regenerate the HTML.

   b. Paste the modified HTML back into the Custom Layout HTML text box.

5. Optionally, select the Display Summary Tab check box.

   This controls the appearance of the configured order entry Summary page, which displays configuration details for the product during a configuration. Configuration Detail rules and any print code that is associated with the page generation rules determine which options are displayed on this page.

6. Select the page layout.

7. Click the Test Page link to view a working model of the page that you just created.

Defining Page Validation Rules

Page validation rules check for invalid conditions, and display appropriate error, warning, or informational messages. If the combination of options that is selected on an order entry page is not valid, the system stops the order entry configuration and prompts the user to correct any mistakes.

To ensure that the correct page appears for modification when an error does occur, a page validation rule must be a child of a page generation rule in the model if the message type is an error or a warning.

To define a page validation rule:

1. Select *Page Validation* as the action type and access the Rule page in Add mode.

2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, add, or enter a syntax statement to specify the condition for processing the page validation rule.

3. Access the Page Validation page.

   Enter the general page characteristics; in particular:

Message Type	Select one of the following, and then select, add, or enter a message ID. *Error:* Returns you to the corresponding page generation rule to correct the condition before configuration continues. *Message:* Continues the configuration process after the system displays the message. *Warning:* Continues the configuration after you click OK, or Cancel to return to the previous page generation rule.

See Also

Chapter 4, "Setting Up Configuration Model Elements," Maintaining Configuration Messages, page 44

Defining Distribution Rules

To define distribution rules, use the Rule component (RULE_MAINT_GBL). This section discusses how to:

- Define availability date rules.
- Define configured component rules.
- Define finalized cost rules.
- Define finalized date rules.
- Define finalized price rules.
- Define finalized volume and weight rules.
- Define kit component rules.
- Define kit generation rules.
- Define product selector rules.
- Set up product selector as product advisor.
- Define purchase item rules.
- Define workflow rules.

See Also

Chapter 5, "Using Configuration Rule Actions," Defining Page Generation and Validation Rules, page 59

Pages Used to Define Distribution Rules

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule	CP_RULE_HEADER_PNL	Configuration Modeler, Maintain Rules, Rule	Identifies basic information for a rule before going to the rule details page. See Chapter 5, "Using Configuration Rule Actions," Creating and Maintaining Basic Rule Characteristics, page 49.
Availability Date	CP_RULE_DTL_AD	When accessing the Rules component, select *Availability Date* as the action type.	Checks the availability of the components during a configuration.
Configured Component	CP_RULE_DTL_CC	When accessing the Rules component, select *Configured Component* as the action type.	Creates configured components that launch nested configuration models.
Finalized Cost	CP_RULE_DTL_FIN	When accessing the Rules component, select *Finalized Cost* as the action type.	The Finalized Cost rule action returns the estimated cost for the configured product.
Finalized Date	CP_RULE_DTL_FIN	When accessing the Rules component, select *Finalized Date* as the action type.	The Finalized Date rule action returns the scheduled shipment date for the configured product.
Finalized Volume	CP_RULE_DTL_FIN	When accessing the Rules component, select *Finalized Volume* as the action type.	The Finalized Volume rule action returns the total volume for the configured product.
Finalized Weight	CP_RULE_DTL_FIN	When accessing the Rules component, select *Finalized Weight* as the action type.	The Finalized Weight rule action returns the total weight for the configured product.
Finalized Price	CP_RULE_DTL_FP	When accessing the Rules component, select *Finalized Price* as the action type.	Returns the price for the configured product.
Kit Component	CP_RULE_DTL_KC	When accessing the Rules component, select *Kit Component* as the action type.	Creates a kit component for a configured kit.

Page Name	*Definition Name*	*Navigation*	*Usage*
Kit Generation	CP_RULE_DTL_KG	When accessing the Rules component, select *Kit Generation* as the action type.	Combines the functionality of the page generation rule with the kit component rule for a configured kit.
Product Selector	CP_RULE_DTL_PS	When accessing the Rules component, select *Product Selector* as the action type.	Returns a standard product ID as output from the configuration.
Purchase Item	CP_RULE_DTL_PI	When accessing the Rules component, select *Purchase Item* as the action type.	Create a purchase requisition for components that you purchase (instead of producing) for the configured product.
Work Flow	CP_RULE_DTL_WF	When accessing the Rules component, select *Workflow* as the action type.	Creates a Workflow based on the business process, the activity, and the event to trigger.

Defining Availability Date Rules

This rule calculates the scheduled availability date during a configuration. The availability date rule uses a business unit, an item, and a quantity to calculate an availability date. This result can then be used in the configuration model to calculate a schedule shipment date (using the finalized date rule) or in other configuration modeling scenarios.

The system uses time-phased availability (ATP) information in order to determine the available date. This ATP information is retrieved using Inventory and takes into account supply and demand in order to calculate the date that an item is available. This functionality mimics the availability inquiry within the Maintain Sales Order menu of Order Management.

Checking the availability of components can be time-consuming. Therefore, use this rule only with components that have a high impact on the configurations.

To define an availability date rule:

1. Select *Availability Date* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the availability is checked.

3. Access the Availability Date page.

    a. Select, modify, or add a secondary variable in the Variable field to store the resultant value. You can use this new secondary variable in the syntax of subsequent rules.

    b. The system displays *ATP Check* (available to promise check) in the Availability Check Type field.

    c. Enter the Inventory business unit in which to check item availability.

    d. Select, modify, or add an expression in the Component ID (Syntax) field to determine the item for which you are checking availability.

    e. Select, modify, or add an expression in the Quantity (Syntax) field to determine the number of items or components (in the standard unit of measure) for which you are checking availability. The syntax must evaluate to a numeric value.

See Also

PeopleSoft Managing Items 9.1 PeopleBook, "Defining Items by SetID," Defining General Item Information

Defining Configured Component Rules

This rule initiates multilevel configuration processing (models). Each configured component within a configured product uses its own model.

To define a configured component rule:

1. Select *Configured Component* as the action type and access the Rule page in Add mode.

2. Complete the information on the Rule page. In particular:

    In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Configured Component page.

   Complete the required fields. In particular:

Sequence	Defines the configured component's occurrence sequence number (the occurrence number for a configured component that occurs more than once within the same parent product).
Component Type	Select *Item* or *Product* and select, modify, or add a syntax expression to return the product or item ID in the Product ID/Item ID (Syntax) field based on the component type that you selected. If the product or item ID is always the same, enter the product or item ID itself in quotation marks within the configuration syntax. **Note.** For configured components within configured kits, this flag must be set to *Product*.
Business Unit	Enter the manufacturing business unit that produces the component item; otherwise, enter the inventory business unit for the component.
Production Area (Syntax)	Select, modify, or add a syntax expression to retrieve the production area ID where the component is manufactured. Each item is associated with a specific production area when you define the inventory entry for the item. After an item is defined, be sure that the production area is set up and that you associate the item with the production area. When a configured order is released to production, the system generates component and operation lists specifying the production area. If the configured component is not manufactured, leave this field blank.

See Also

PeopleSoft Manufacturing 9.1 PeopleBook, "Setting Up Production Areas"

Defining Finalized Cost Rules

This rule is used to return the *estimated* cost of the configured product. You must be able to track the cost for the products based on the options that are included. Use finalized cost rules only for the main product, not for the separate configured components.

The system uses the cost that returns during order entry to perform gross margin calculations in Order Management. It is not applied to item costing in Inventory. A configured item cost generation calculates the exact costs of the configured item based on the production orders that the system produces offline in production configuration.

To define a finalized cost rule:

1. Select *Finalized Cost* as the action type and access the Rule page in Add mode.

2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Finalized Cost page.

   Complete the required fields.

Value of Cost (Syntax)	Select, modify, or add a syntax expression to calculate the cost value of the configured product. The result must be a numeric value with a maximum precision 10.4.

Defining Finalized Date Rules

This rule is used to return the scheduled shipment date for the configured product. You can use internal variables and availability date information to assist in calculating the date.

To define a finalized date rule:

1. Select *Finalized Date* as the action type and access the Rule page in Add mode.

2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Finalized Date page.

   Complete the required fields.

Date in 'YMD' Format (Syntax)[date in YYYYMMDD (year/month/date) format]	Select, modify, or add a syntax expression to calculate the date in YYYYMMDD (year/month/date) format to return as the schedule shipment date for the configured product.

Defining Finalized Price Rules

This rule returns the sales price of a configured product. After the configured price is finalized, it overrides any other pricing method that is applied to the product, including contract pricing. If the system encounters multiple finalized price rules for the main product during the configuration, the value that is calculated by the *last* one is returned.

Finalized price rules are valid only for the main product, not for configured components. You can generate price details by using configuration detail rules. If a finalized price rule is found on a component, the resulting price is ignored, but the condition is checked to see whether it releases any child rules.

If no finalized price rule is found during a configuration, the system prices the configured product according to standard pricing rules for non-configured products.

See Chapter 5, "Using Configuration Rule Actions," Defining Configuration Detail Rules, page 55.

To define a finalized price rule:

1. Select *Finalized Price* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.
3. Access the Finalized Price page.

   Complete the required fields.

Price Setting	Options are: *Return List Price:* Uses the finalized price value as the list price for the product that is being configured. All of the standard Order Management pricing logic is applied to this list price. *Return Net Unit Price:* Uses the finalized price value as the net unit price for the product that is being configured. None of standard Order Management pricing logic is applied to this price, and price protection is in effect.
Value of Price (Syntax)	Select, modify, or add a syntax expression to calculate the final price. The result must be a numeric value with a maximum precision 10.4.

Defining Finalized Volume and Weight Rules

These rules return the finalized volume and weight for the configured product. You must be able to track the weight or volume for the configured main product based on the options that are included. Use finalized weight and volume rules only for the main product, not for the separate configured components on a configuration.

The system can use the weight or volume that is returned during order entry to perform weight and volume freight calculations in Order Management.

Finalized Volume Rule

To define a finalized volume rule:

1. Select *Finalized Volume* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Finalized Volume page.

   Complete the required fields.

   Value of Volume (Syntax) Select, modify, or add a syntax expression to calculate the value of volume for the configured product. The result must be a numeric value with a maximum precision 11.4.

Finalized Weight Rule

To define a finalized weight rule:

1. Select *Finalized Weight* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Finalized Weight page.

   Complete the required fields.

   Value of Weight (Syntax) Select, modify, or add a syntax expression to calculate the value of weight for the configured product. The result must be a numeric value with a maximum precision 11.4.

Defining Kit Component Rules

Using Order Management product kit concepts, the configured kit dynamically groups or bundles products with complex interproduct compatibility and validation. The kit component rule implements this concept by dynamically adding components to a configured kit.

Multilevel Kit Configuration

You can include configuration components within configured kits; however, configured components within a configured kit can only be single-level configurations. In other words, a configured product that is a component within a configured kit cannot contain an additional configured component within it.

In addition:

- Only one production-configured component is allowed as a component within a configured kit.
- Standard configured products do not have a limit to the number of production-configured components that they can have.

Note. You cannot use configured *kits* within a configured kit.

You must have a configured component rule and a kit component rule (in that order) for each configured product that is a component within a configured kit.

- The configured component rule processes the component's model as a nested configuration.
- The kit component rule provides the information (quantity per, quantity code, unit of measure) that is needed to add the product as a kit component.

When a kit component rule is encountered for a configured product during the configuration, the system looks for a configured component rule for that product and identifies the corresponding configuration code. The configured component must have its own configuration model.

To define a kit component rule:

1. Select *Kit Component* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.
3. Access the Kit Component page.

   Complete the required fields.

Component Product ID (Syntax)	Select, modify, or add the product that you want to add to the kit when the rule is triggered.
Quantity (Syntax)	Select, modify, or add the quantity, or the syntax expression ID to use in calculating the quantity.
Per	Identifies whether the number of units selected in the Quantity field is per *Assembly* or per *Order*.
OK to Ship Without	Select if the product kit can ship without this component.

See Also

Chapter 5, "Using Configuration Rule Actions," Defining Configured Component Rules, page 72

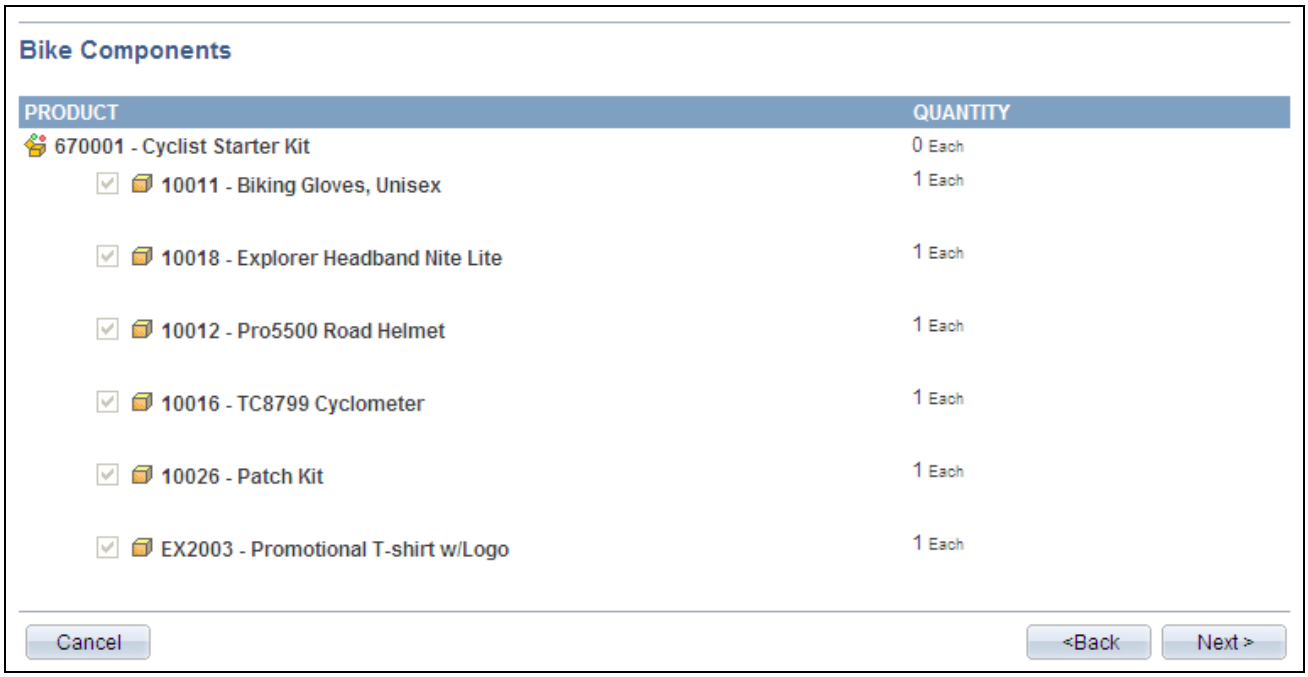
Defining Kit Generation Rules

Configured kits enable you to dynamically bundle products or packages with complex interproduct compatibility and validation. The kit generation rule provides a way to leverage existing product definitional hierarchies within configured kits. The functionality in this rule action combines the functionality of the page generation rule with the kit component rule for a configured kit.

Use the kit generation rule to:

- Explode a product kit into a display of its components, including an editable quantity field, the default unit of measure, and discounted price of each component.
- Add the components of a product kit with dynamically entered quantities to a configured kit.

The following figure shows a sample configuration page where a kit generation rule is defined.



Order entry configuration page referencing a kit generation rule

To define a kit generation rule:

1. Select *Kit Generation* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Kit Generation page.

   a. Complete the required fields.

Page Title	The title that is displayed on the order entry configuration page that is generated with a kit generation rule. **Note.** HTML tags and configuration binds are supported on this field. In addition, the %Image(<<Database Image Name>>) meta-HTML tag is also supported. This meta-HTML tag allows you to use database images within HTML. See Chapter 3, "Understanding Configuration Models," Configuration Binds, page 27.
Product Kit ID (Syntax)	Select, modify, or add an expression ID for the product kit to explode. Must be a valid product kit ID.
Page Constraint	Optionally select, modify, or add a page-level constraint ID to control and validate what can be entered on the order entry configuration page that is generated with a kit generation rule. See Chapter 4, "Setting Up Configuration Model Elements," Using Value Lists and Constraints, page 33.

   b. The order entry configuration page automatically displays the component description, an editable quantity field, and unit of measure.

      Select additional page display options by using the Show Product ID(s), Show Product Price(s), and Show Product Image(s) check boxes.

   c. Click the Test Page link to view a working model of the page that you just created.

Defining Product Selector Rules

This rule returns a standard product ID as the result of a configuration. This rule can be used to return a standard product ID:

- That is equivalent to a complete configuration.
- As part of a product advisor assessment.

To define a product selector rule:

1. Select *Product Selector* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Product Selector page.

   Complete the required fields. In particular:

   Product ID (Syntax) Select, modify, or add a syntax expression to return a valid product ID.

Setting Up Product Selector as a Product Advisor

You can use Product Configurator's product selector feature to enable the customers or sales representatives to search for products based on specific (configured) attributes. For example, you can create a generic configured product that functions as a shopper's helper, or product advisor.

When the customer or sales representative selects a product advisor product, the system can display a list of scriptable questions for the customer or sales representative to answer. Unlike a regular configured product or kit, a product selector uses the product configuration engine to *select* a product instead of creating a custom-configured product or kit.

The following figure shows an example where a customer or sales representative selects the desired combination of product or recipient attributes (accessories for a female, costing no more than 100 USD) and initiates the product selection search. The system will process the combination and return all products; configured *and* standard, that match the criteria.

Example for product selector in Product Configurator page

Note. Product Configurator's product selector feature can be designed in many ways; this example presents only one possible scenario.

Defining Purchase Item Rules

This rule generates purchase requisitions for configured and nonconfigured components that are used in configured products, such as raw materials or subassemblies that are used as components in the configuration.

A single configured product can generate multiple components, configured or not configured, that can be purchased. Then, Product Configurator generates the requisitions to cover component requirements so that all of the components that are used in producing the configured product are associated with the configuration.

For example, a bicycle manufacturer might use this rule if the manufacturer makes the frame and assembles the bicycle but doesn't produce the other components that make up the bicycle. The manufacturer uses the Purchase Item rule to create a configured purchase requisition for the wheels and other parts of the bicycle.

If the system finds a purchase item rule after a configured component rule, the configured item is purchased, rather than produced.

Note. If you are using the purchase item rule and Purchasing is not installed, the rule is processed, but the corresponding requisition is not created.

To define a purchase item rule:

1. Select *Purchase Item* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.

3. Access the Purchase Item page.

   Complete the required fields. In particular:

Item ID (Syntax) Select, modify, or add a syntax expression to return the item ID.

Quantity (Syntax) Select, modify, or add a syntax expression to return the quantity. If the parent is not a manufactured configured item, Purchasing uses this value when creating the requisition.

If the parent is a manufactured configured item, this value is ignored. When the purchased item is being used as a component on the production order (that is, the component list rule references it), the quantity is overwritten with the value that is calculated in the Production Configuration engine. If it is not used as a component, then this value is used by the Purchase Requisition Loader to create the requisition.

Date Select a variable type, and enter a configuration variable value that returns a value in the valid date format of YYYYMMDD.

- If the purchased item is being used as a component on the production order (that is, the component list rule references it), this date is overwritten with the value that is calculated in the production configuration engine.
- If it is not used as a component, the value in this field is used by the Purchase Requisition Loader to create the requisition.

Price Select a variable type, and enter a configuration variable value that returns the price. If the purchased item is configured, the system uses this as the purchase price because Purchasing does not store configured prices.

Note. A cost for purchased configured items will automatically be inserted into the cost tables based on the configuration code, price, and default cost element for the item if a production cost does not already exist.

If the purchased item is a standard item, the system uses Purchasing pricing and this field value is ignored.

Defining Workflow Rules

This rule helps to integrate product configuration in business processes. You can dynamically trigger a Workflow business process, activity, or event from within a product configuration. The business process, activity, and event names are defined in the Application Designer.

Note. The sample database includes an email workflow and a worklist workflow as examples. See the *CP Workflow Mail* and *CP Workflow Worklist* activities for details.

To define a Workflow rule:

1. Select *Workflow* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page.

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the rule processes.
3. Access the Workflow page and complete the required fields.

See Also

PeopleTools PeopleBook: Workflow Technology

Defining Production Rules

To define production rules, use the Rule component (RULE_MAINT_GBL). Some Product Configurator rule action types are specific to production (manufacturing) functions. After you configure a product through the distribution configuration engine, the system is ready to begin the background process of production configuration if the item is set up as production configured. Production rules enable you to specify the routing operations and components that are required for manufacturing configured items. They also determine the production cost for items that have costs that are based on the configuration.

To set up a production model, use any of the rule action types that are discussed here, along with any common rule action types.

This section discusses how to:

- Define component list rules.
- Define operation sequence rules.

See Also

PeopleSoft Managing Items 9.1 PeopleBook, "Defining Items by SetID"

Pages Used to Define Production Rules

Page Name	*Definition Name*	*Navigation*	*Usage*
Rule	CP_RULE_HEADER_PNL	Configuration Modeler, Maintain Rules, Rule	Define the basic characteristics of the rule, including the specific rule action and the condition for it to process. See Chapter 5, "Using Configuration Rule Actions," Creating and Maintaining Basic Rule Characteristics, page 49.
Component List	CP_RULE_DTL_CL	When accessing the Rules component, select *Component List* as the action type.	Create or add to a dynamic component list for each item that you configure. You can include multiple components on a component list.
Operation Sequence	CP_RULE_DTL_OS	When accessing the Rules component, select *Operation Sequence* as the action type.	Specify an operation to use from the standard routing associated with the item. Also, custom times and resources can be entered to override the standard operation times and resources.

Defining Component List Rules

This rule dynamically generates a component list (a bill of material) for each configured item in a configuration.

To define a component list rule:

1. Select *Component List* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the system adds an item to the component list.

3. Access the Component List page.

   Complete the required fields. In particular:

Op Seq (operation sequence)	Determines where in the manufacturing process you need the component. Enter the number of the operation sequence from your routing that requires this component. To avoid having items assigned to the default operation sequence, be sure to structure the model so that you define valid operation sequences with each component list item.
Quantity (Syntax)	Calculates the required quantity for each item or each assembly in the base unit of measure for the manufacturing business unit. This syntax value must resolve to a numeric value.

See Also

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Bills of Material"

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Component Lists"

Defining Operation Sequence Rules

Using production configuration, it is no longer necessary to maintain individual routings for each possible configuration of an item; this rule creates or adds to operation sequences and takes the place of routings for individual items.

You can specify the necessary operations from a predefined routing that is associated with the configured item. This enables you to generate configured routings for each unique configuration of an item. Routing times and routing resources for the operation sequence are included in the operation details, which allow custom times and resources to be entered to override the standard operation times and resources.

The system arranges the operation sequence list in order of sequence number. If the operation sequence is not found on the corresponding routing, the process is stopped and marked as an error.

See *PeopleSoft Manufacturing 9.1 PeopleBook*, "Maintaining Operation Lists."

See *PeopleSoft Manufacturing 9.1 PeopleBook*, "Structuring Routings."

To define an operation sequence rule:

1. Select *Operation Sequence* as the action type and access the Rule page in Add mode.
2. Complete the information on the Rule page. In particular:

   In the Condition (Syntax) field, select, modify, or add a syntax expression to specify the conditions under which the system adds an operation sequence number to the operation list.

3. Access the Operation Sequence page.

   Complete the required fields.

Operation Sequence (Syntax)	The syntax expression returns the appropriate operation sequence number. This operation sequence number must exist on the routing that is associated with the item that is being configured.
Use Standard Operation Times	Select this option to use the standard operation times for the routing definition in Manufacturing, and to make the Operation Times Attributes group box fields unavailable for entry.
Use Rule Based Operation Times	Select this option to enable the definition of custom operation times for this operation sequence. If you define custom operation times, all of the standard operation times on your routing for this operation will be replaced by your defined custom times. When you select this option the Operation Times Attributes grid appears.
Time/Resource Type	Select the time or resource type for this operation.
Operation Time/Rate (Syntax)	A syntax field that takes into account the combination of selected times and rates that it takes to complete the operation.
Time Rate Unit	Select the unit for the operation time or the operation rate.
Include Setup	Select this check box to include setup in your operation lead time calculation.

   See *PeopleSoft Manufacturing 9.1 PeopleBook,* "Maintaining Tasks."

See Also

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Operation Lists," Maintaining Operation Times

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Operation Lists," Maintaining Operation Resources

PeopleSoft Manufacturing 9.1 PeopleBook, "Structuring Routings," Defining Routing Operation Times and Rates

Chapter 6

Creating Configuration Models

This chapter provides an overview of submodels, lists the common elements and discusses how to:

- Maintain configuration models.
- Test configuration models.

Note. Configuration models determine the order in which the system processes configuration rules. While each rule is a grammatical statement that performs an action or operation, the model's tree structure dictates the context of the statement, that is, what other operations it affects in the overall configuration.

See Also

Chapter 3, "Understanding Configuration Models," Configuration Models, page 13

Understanding Submodels

You can embed a model within a model, creating a *submodel.* Submodels can be used to create common configuration logic trees that can be shared between models or to create looping logic within a model. To create looping logic within a model, the submodel can be used by creating a self-reference. This functionality replaces the Jump Back feature that was provided in earlier releases. Here's an example of a looping logic model:

- Model A (The main model):
  - RULE: A1 - A rule that performs some action.
  - RULE: A2 - A rule that performs some action.

    SUBMODEL: B - Is subordinate to RULE: A2 and calls Model B.
- Model B (The looping logic submodel to Model A):
  - RULE: B1 - A rule that adds to a counter, say the global variable, G-COUNT = G-COUNT + 1.
  - RULE: B2 - A rule that performs some action with a condition that tests the global variable, G-COUNT, say G-COUNT <= 5.

    SUBMODEL: B - Is subordinate to RULE: B2 and calls itself, Model B.

The system produces the following sequence of results:

The main model A calls the submodel B, which loops by calling itself five times until the global variable, G-COUNT is greater than five.

Common Elements Used in This Chapter

Node Refers to a level in the model tree (root, child, grandchild, and so forth).

Sibling Node, Child Node Denotes node position. Sibling nodes are relative to each other in that they share the same level; child nodes are subordinate to the previous node. Both node types can be true or false (the condition is evaluated as true or false):

- If the selected node is true, clicking the Add Sibling link or button adds a true sibling.
- If the selected node is false, clicking Add Sibling adds a false sibling.

Branch Identifies a node that contains other subordinate (child) nodes; diverts rule processing to include its nodes before processing the remaining rules at the same node level.

Maintaining Configuration Models

To maintain configuration models, use the Model component (CP_TREE_MAIN_GBL). This section discusses how to maintain configuration models.

Pages Used to Maintain Configuration Models

Page Name	*Definition Name*	*Navigation*	*Usage*
Model Builder	CP_TREE_MAIN	• Configuration Modeler, Maintain Models, Model, Model Builder • Select a model from the Review Models - Results page after performing a model inquiry.	Create, maintain, or view the model structure for Product Configurator rules.
Model - Add True Child	CP_TREE_ADD_SEC	 Select a node, and click the Add True Child button or link on the Model Builder page.	Add a rule or submodel that executes if the current rule is evaluated to have a true condition, in a subordinate position to the selected node, to a configuration model definition.

Page Name	Definition Name	Navigation	Usage
Model - Add False Child	CP_TREE_ADD_SEC	 Select a node, and click the Add False Child button or link on the Model Builder page.	Add a rule or submodel that executes if the current rule is evaluated to have a false condition, in a subordinate position to the selected node, to a configuration model definition.
Model - Add Sibling	CP_TREE_ADD_SEC	 Select a node, and click the Add Sibling button or link on the Model Builder page.	Add a rule or submodel, at the same level as the selected node, to a configuration model definition.
Review Models - Search	CP_TREE_SELECT_INQ	Configuration Modeler, Maintain Models, Review Models, Review Models - Search	Access all of the models that a specific configuration rule is on.
Review Models - Results	CP_TREE_SELECT_IN2	Select a rule, and click the Search button on the Review Models - Search page.	View a list of models and key information that is based on the criteria that you enter on the Selective Model - Search page. Click a linked model ID to access the Model Builder page, where you can update the model definition.

Maintaining Configuration Models

Access the Model page (Configuration Modeler, Maintain Models, Model).

Model page

To create a configuration model:

1. Select the setID and functional area and enter the model name.

   The system uses the model name as the first entry in the model's tree structure.

2. Add configuration rules and submodels in their logical processing sequence for the configuration.

   a. When there is a branch in the processing logic, create a child node for the branch.

   b. Use the Add/Update button to view, modify, or add a configuration rule.

3. Select an existing node to display and enable the Menu links.

Note. The system displays only the links that represent valid model builder actions for the selected node. When you select a node and click a Menu link, the system places its associated image next to the node in the model to identify it in the model tree structure.

 **Add Sibling**	You can add a new sibling node on the same level as the selected node; it is inserted after the selected node. Click this link or button to access the Model - Add Sibling page, where you can select, modify, or add a rule or submodel.
 **Add True Child**	A *true* child node processes when the parent rule's condition is true. You can add a new true child node on the next level of the selected node; it is inserted as the first true child. Click this link or button to access the Model - Add True Child page, where you can select, modify, or add a rule or submodel.
 **Add False Child**	A *false* child processes when the parent's rule condition is false. You can add a new false child node on the next level of the selected node; it is inserted as the first false child. Click this link or button to access the Model - Add False Child page, where you can select, modify, or add a rule or submodel.
 **Delete**	Deletes a node. If the selected node is a branch, all the children under the branch are also deleted.
 **Move Up**	Moves the selected node (which cannot be the first node in its level) up relative to its true or false sibling nodes—in other words, you cannot move a false sibling node relative to a true sibling node.
 **Move Down**	Moves the selected node (which cannot be the last node in its level) down relative to its true or false sibling nodes.

4. The following buttons further identify the node:

	Indicates a closed branch. Click to expand and view the contents of the branch.
	Indicates an open branch. Click to close the branch.
	Indicates a node with no children.

Testing Configuration Models

This section discusses how to:

- Select configuration models for testing.

- Review configuration model test results.

Pages Used to Test Configuration Models

Page Name	*Definition Name*	*Navigation*	*Usage*
Test Model - Input	CP_TREE_TEST_IN	Configuration Modeler, Maintain Models, Test Models, Test Model - Input	Enter the information for the configuration model that you want to test and initiate the test configuration process.
Model - Test page	CP_DYNAMIC_PANEL	Click the Configure button on the Test Model - Input page	A configuration session is initiated for the model.
Test Model - Output	CP_TREE_TEST_OUT	Configuration Modeler, Maintain Models, Test Models, Test Model - Output	Review the results from the configuration model test.

Selecting Configuration Models for Testing

Access the Test Model - Input page (Configuration Modeler, Maintain Models, Test Models, Test Model - Input).

Define Input Data

Functional Area Select the functional area that contains the model that you wish to test. Values are: *Both, Distribution,* and *Production.Distribution* appears as the default which allows you to enter a Distribution Model to test. If *Production* is selected, then you can enter a Production Model to test. If *Both* is selected, then you must enter both a Distribution model and a Production model to test together, a complete manufactured configuration.

Configuration Type Select whether you want to configure at the item or product level. Values are: *Product* or *Item.* Product appears as the default.

Inventory Business Unit Select the inventory business unit for your configuration test.

Processing Date Enter the date that you want to use as the processing date for your configuration test. The default is today's date. This date will determine which rules and matrices are launched during your configuration based on their effective dates.

Currency Code Select the transactional currency code for your configuration test.

Base Currency Select the base currency code for your configuration test.

Launch Configuration

Configure

Click the Configure button to test the models that you specified in the input data selection criteria.

After you click the Configure button a configuration session will be launched based on the specified input data. After you have finished the configuration session, the Test Models - Output page will appear with the results from the test.

Review Configuration Model Test Results

Access the Test Models - Output page (Configuration Modeler, Maintain Models, Test Models, Test Model - Output).

This page is dynamic and the fields and sections that appear on this page are dependant on the models you are testing.

If you are testing a distribution model these sections appear:

- Configuration Components: A list of the components that make up the configuration. This list includes configured components, purchased components, and kit components in addition to the main high-level configured item or product itself.
- Option Information: A list of the options and their associated values within a configuration.
- Configuration Details: A list of the configuration details that have been established with print codes within a configuration.

If you are testing production models these sections appear:

- Component List: A list of the dynamic manufacturing components (BOM) for a configuration.
- Operation List: A list of the dynamic manufacturing operations (routing) for a configuration.
- Custom Operation Times: A list of the dynamic operation times (routing times) for a configuration.

The Product Configuration Trace section will always appear whether you are testing a distribution model or a production model. In addition, to assist with model testing the Product Configuration Trace section will always appear regardless of the state of the Start and End Trace rules in the configuration models.

Chapter 7

Working With Configuration Codes

This chapter provides an overview of configuration codes and discusses how to:

- Set up automatic configuration code generation.
- Create configuration codes manually.
- Inquire about configured inventory items and templates.

Understanding Configuration Codes

Configuration codes are 50-character, alphanumeric identifiers for configured items. The system automatically generates configuration codes as you configure items, using information about the customer's selections that you define as elements of the code.

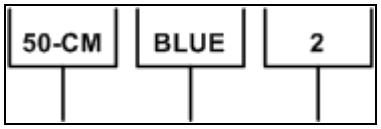
Configuration codes enable you to easily identify the options for a configured item. You can also use configuration codes to track and cost configured inventory. After you define the elements of the configuration code for an item, the system automatically assigns a configuration code to each product that it configures during distribution configuration.

When configured items pass to Inventory, they are put away and shipped in lots that carry that same configuration code. In addition, because lots are linked through the configuration code to the cost information, you have access to standard costing data for the configuration.

The configuration code can consist of options, abbreviations for options, and other configuration data. Most of the characters in the code should come from variables that are defined by choices in configuration.

Here is a sample configuration code:

```
50-CM  BLUE    2
```



Configuration code example

This could be an edit mask for the size, color, and trim option values for a configured bicycle with the value of the option for size stored in the first seven characters, color stored in the next eight characters, and trim stored in the next and last character of the configuration code.

Configuration codes can include the following values:

- Global variables
- Internal variables
- Literals
- Matrix variables
- Option variables (with support for value list long description as well)
- Secondary variables

See Also

Chapter 3, "Understanding Configuration Models," Configuration Variable Types, page 23

Product Alias and Configuration Code Associations

You can use the customer's part numbers as *product aliases* to represent specific configurations of configured products and kits (a product alias can map to a product ID that is combined with a configuration code). A single product can have multiple product aliases. The product alias can also represent a promotional configured product.

An organization might offer one configured product that could be referred to as multiple products or aliases depending on the customer's country and language. For example, if you offer a product with an alias of *January Promotion,* and a customer is from France, the name could appear as *Especialle d'Janvier.*

When the sales order prompts for product ID, the Product ID available options list box displays either the system product ID or the customer product ID (alias) and the corresponding description, based on the production source selection for the sold to customer. To use the customer alias, select *Customer Product ID* for production source.

See Also

PeopleSoft Order to Cash Common Information 9.1 PeopleBook, "Maintaining General Customer Information," Setting Up Product Aliases

Setting Up Automatic Configuration Code Generation

To create configuration code templates, use the Template component (TEMPLATE_MAINT_GBL). Before you can automatically generate configuration codes, set up the edit mask (template) that the codes will use.

This section provides an overview of automatic configuration code generation and discusses how to:

- Create configuration code templates.
- Associate configuration code templates with items.

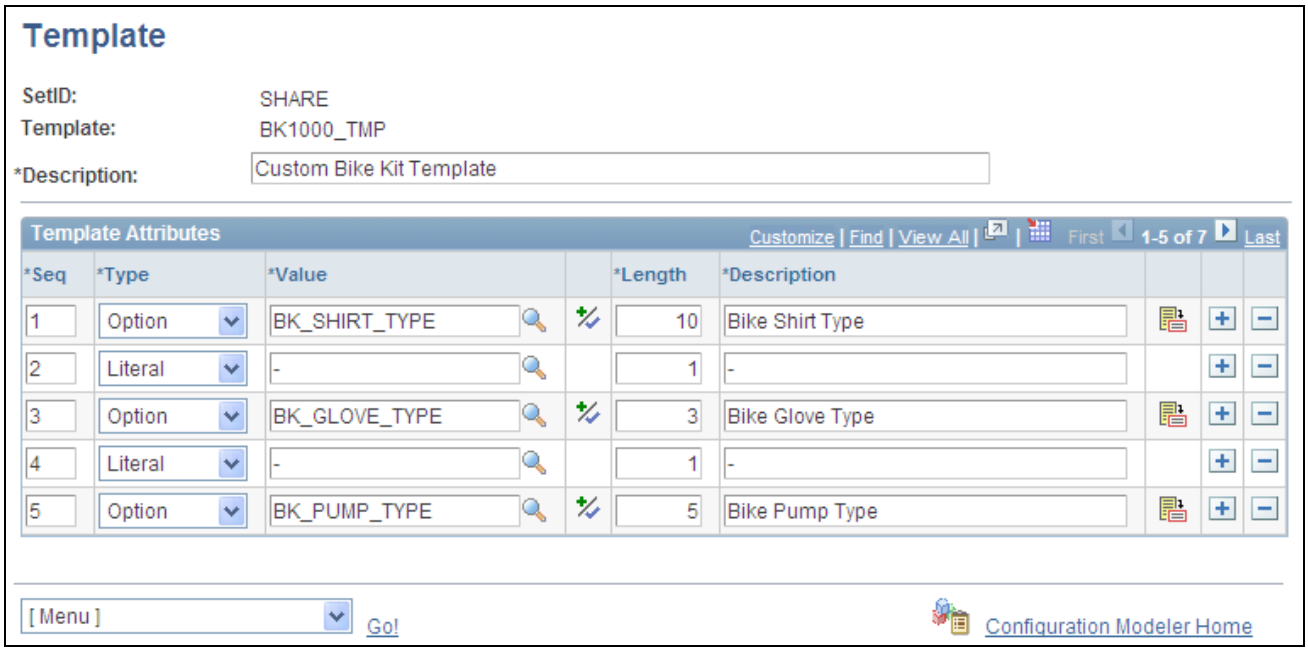
Pages Used to Set Up Automatic Configuration Code Generation

Page Name	*Definition Name*	*Navigation*	*Usage*
Template	CP_TEMPLATE_PNL	Configuration Modeler, Print Codes and Templates, Template	Establish the formatting rules for generating configuration codes for an item.
Template - Template Copy	CP_TEMPLATECPY_SEC	 Click the Template Copy button in Add mode on the Template page.	Copy the values of an existing template to a new template definition.
Template - Use Long Description	CP_TEMPLATE_SEC	 Click the Value List Description button on the Template page.	(Optional) Enter a value list for an option variable on a template. The system then uses the long description for the option variable in the configuration code.
Configuration Code	CP_CONFIG_PNL	Product Configurations, Identify Configuration Code, Configuration Code	View and update the system-generated configuration codes that are associated with an item. The template that creates each Configuration Code also appears.
Configuration Code Template Breakdown	CP_INV1_TEMP_PNL	 Select a template and click the Configuration Code Breakdown button on the Configuration Code page.	View the details that describe each position in the 50-character configuration code in relation to its template.

Creating Configuration Code Templates

You can set up many templates. Each item can be associated with only one template, but you can apply a template to more than one item.

Access the Template page (Configuration Modeler, Print Codes and Templates, Template).



Template page

Seq (sequence) Specifies the order of the configuration code elements.

Type Value for the configuration code. Values are: *Constant*, *Global*, *Internal*, *Literal*, *Matrix*, *Option*, and *Secondary*. You can also define a *Literal* value.

Value Value to display in the configuration code. You can only use values in the configuration code from the configuration model for the item to which you assign the template. Be sure to enter a value that configuration model has defined. If you specify literal as the variable type, enter a string literal value.

Click the Add/Update button to access the search page that is associated with the adjacent field, where you can add or modify values by using the field's source component. If the field is blank, the source component is accessed in Add mode. If the field is populated, the source component appears in Update mode.

Length One to 18 characters. When a variable value is longer than the number of characters that are assigned to the code element, the template truncates it to fit. When the value does not entirely fill the element position, the system leaves the extra spaces blank.

Click the Value List Description button to associate a value list with an option variable type.

Using Option Variable Long Descriptions

If the template variable type is an option variable and it has an associated value list, you can direct the system to use the long description from its value list, rather than using the variable value that is on the configuration code.

To use a long description for an option variable in the configuration code:

1. Click the Value List Description button on the Template page.
2. Enter the value list from which to draw the description on the Template - Use Long Description page; the field accepts only the names of the tables that you have already defined.

   For example, suppose the value of *O-COLOR* is defined as *RED*, with *CARDINAL RED* as its long description on the value list in this configuration. By specifying the Value List *COLORS* on the configuration code template, the description of *Cardinal Red* appears in the configuration code instead of *RED*, as follows:

   ```
   54-CM CARDINAL RED   2
   ```

   If the description of the value list value is longer than the number of spaces that are allowed in the template (18 characters maximum), the template truncates the description.

Associating Configuration Code Templates With Items

All of the items that are associated with templates are assigned configuration codes as they are configured, so you don't need to perform manual maintenance on configuration codes. However, you might want to manually maintain a configuration code to add existing inventory items when you set up the system for the first time.

If the options for an item change, or if you want to change the way that the configuration codes appear, you can create a new template and assign it to the specified items. You can change existing templates, but only if they have *not* been used to generate a configuration code.

Access the Configuration Code page (Product Configurations, Identify Configuration Code, Configuration Code).

To add a new template-configuration code to an item:

1. Add a new row by clicking the Insert Config Code Row (insert configuration code row) button.
2. Select a template and click the Configuration Code Breakdown button to enter new values for the code.

See Also

PeopleSoft Managing Items 9.1 PeopleBook, "Defining Items by SetID," Defining Configuration Attributes for an Item

Creating Configuration Codes Manually

After you define the elements of the configuration code for an item (the template), the system automatically assigns a configuration code to each product that it configures. *There are very few times that you need to create configuration codes manually.*

- When you install Product Configurator, you might want to link some of the items that are ordered or manufactured to the PeopleSoft applications that use configuration codes.
- When you purchase configured items for resale, enter the supplier's (or any) configuration code to enable putaway in Inventory.

Creating Configured Item Lots

To track configured items in Inventory, you must assign those items to lots:

- When the system automatically generates configuration codes as part of product configuration, the configured items go to Inventory in lots that are identified by configuration code.
- When you create configuration codes manually, you must manually assign the item to a configuration-coded lot.

This section discusses how to define a configuration code manually.

See Also

PeopleSoft Managing Items 9.1 PeopleBook, "Defining Items by SetID," Establishing Item Tracking and Lot-Control Attributes

PeopleSoft Inventory 9.1 PeopleBook, "Managing Item Lots," Understanding Lot Management

Pages Used to Set Up Configuration Codes Manually

Page Name	*Definition Name*	*Navigation*	*Usage*
Configuration Code	CP_CONFIG_PNL	Product Configurations, Identify Configuration Code, Configuration Code	View and update the system-generated configuration codes that are associated with an item. The template that created each configuration code also appears.
Lot Control Information	INV_LOT_CONTROL	Inventory, Manage Inventory, Lot Control Information	Establish or update the configuration code for a specific lot.

Defining a Configuration Code Manually

To define a configuration code manually:

1. Access the Configuration Code page.

   The system displays any existing configuration codes for the item-business unit combination.

   a. Click the Insert Config Code Row (insert configuration code row) button.

   b. Select a template.

   c. Enter a code manually, or click the Configuration Code Breakdown button to use the configuration code elements that are associated with the template.

      The values in the From and To fields on the Configuration Code Template Breakdown page indicate character-length requirements for each variable that is included in the code.

2. Access the Lot Control Information page.

   The item's configuration code appears at the bottom of the page for a configured item. The Config Code (configuration code) field appears only on lot control pages for configurable items. If you don't see the Config Code field for a configured item, go back to the Business Unit Item Definition - Configuration page and make sure that the item is set to *Distribution Configured.*

See Also

PeopleSoft Inventory 9.1 PeopleBook, "Managing Item Lots," Establishing or Updating Control Parameters for a Specific Lot

Inquiring About Configured Inventory Items and Templates

This section discusses searching for configured items and templates.

Pages Used to Search for Configured Inventory Items

Page Name	*Definition Name*	*Navigation*	*Usage*
Configured Inventory - Search (inquiry)	CP_INV1_INQ_PNL	Product Configurations, Review Configuration Info, Configured Inventory, Configured Inventory - Search	View information and availability for the item that you select.

Page Name	*Definition Name*	*Navigation*	*Usage*
Configured Inventory - Result (inquiry)	CP_INV1_INQ_PNL2	Enter an item, business unit, and configuration code, and click the Search button on the Configured Inventory - Search page.	View information about configured items.
Configured Inventory - Configuration Code Template Breakdown (inquiry)	CP_INV1_TEMP_PNL	 Click the Configuration Code Breakdown button on the Configured Inventory Search page.	View the template elements that comprise each position in the 50-character configuration code, and perform wildcard searches.

Searching for Configured Inventory Template Items

To search for configured inventory template items:

1. Access the Configured Inventory - Search inquiry page.
2. Enter the business unit and item ID.
3. Click the Configuration Code Breakdown button to access the Configuration Code Template Breakdown page, where you can search for particular elements of the code:

   From Starting position for the element in the configuration code. Each element in the configuration code can occupy 1 to 18 characters in the code.

   To Ending position for the element in the configuration code.

   You can use wildcards to search for a configuration code template element.

   For example, when you enter an asterisk in the field where you want a wildcard search, you can specify a search for a black color by leaving the COLOR field blank. This retrieves all colors (including black). If you enter *B* or *B**, you get all values that begin with *B.* To further restrict the search, enter *BL**, and you get everything that starts with *BL*.

4. Click the OK button to return to the Configured Inventory - Search inquiry page, where you see that the configuration code is padded with special characters for the search.

   You can change the wildcard search value only on the Configuration Code Template Breakdown page.

Chapter 8

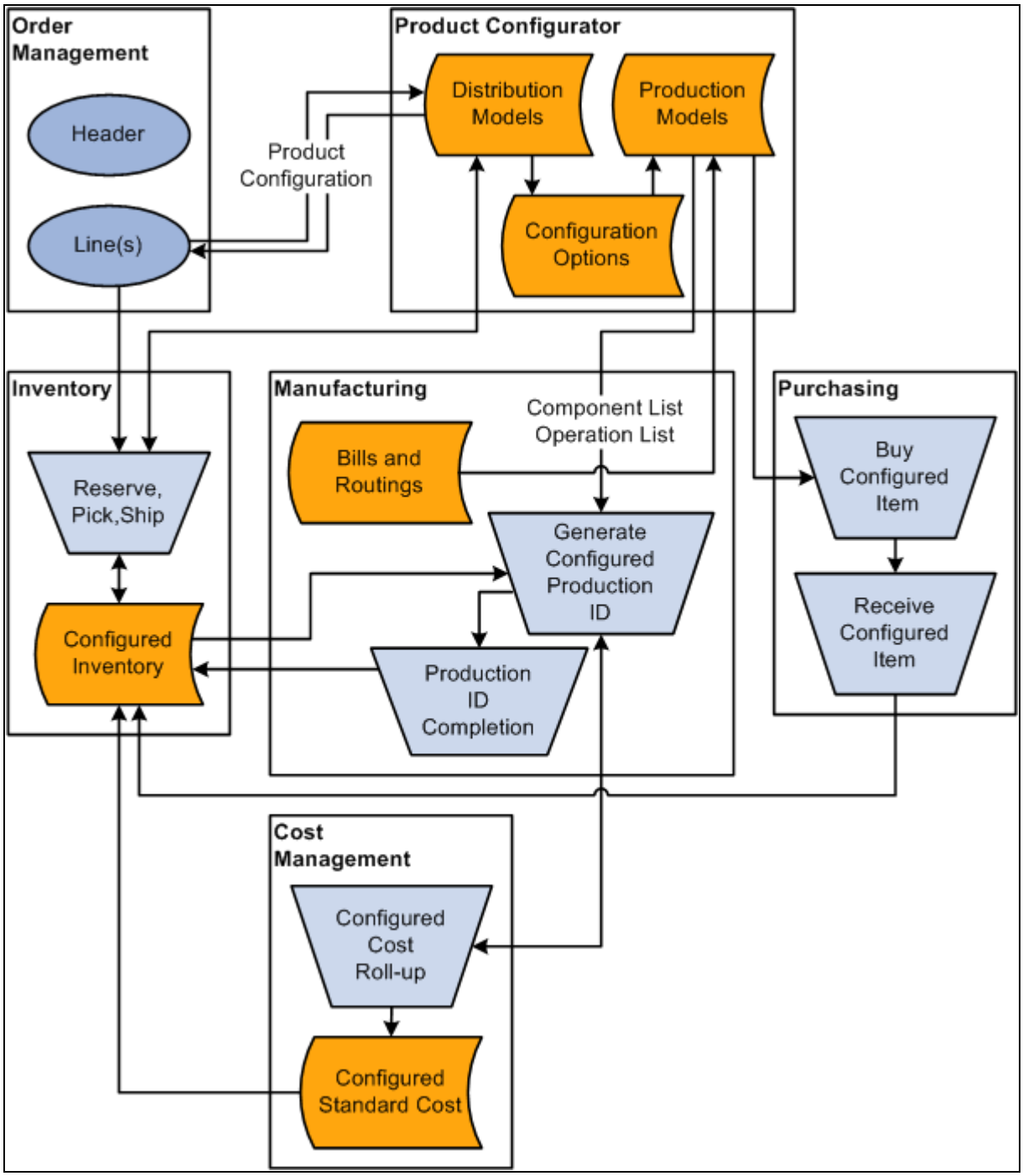
Using PeopleSoft Product Configurator

This chapter provides an overview of Product Configurator integration, and overview of product configuration methods, and discusses how to:

- Create configured product sales orders.
- Create direct production and requisition orders.
- Establish configured production costs.
- Run the Create Production Request process.
- Request automatic lot allocation for completed production IDs.

Understanding Product Configurator Integration

The Product Configurator integrates with several other Supply Chain Management applications. The following diagram illustrates the integration of Product Configurator with SCM applications like Inventory, Purchasing, Manufacturing, Order Management and so on.



Product Configurator integrations with Supply Chain Management applications

Understanding Product Configuration Methods

Ways to configure products by using Product Configurator include:

- You can enter sales orders and process customer returns in Order Management.

  You can also use electronic data interchange (EDI) or XML to transmit sales orders for configured products.

- You can create direct configured orders in Manufacturing to build configured subassemblies and items in advance to satisfy customer lead-time requirements or to create make-to-stock prototypes.

- You can create direct configured requisitions in Purchasing to purchase items that exist in purchase item rules within a configured item.

  You can store those items in inventory.

Inbound EDI Configured Sales Orders

You can accept orders for configured products by EDI (Electronic Data Interchange) to create sales orders.

If you receive an EDI order for a configured product with incorrect configuration information, the system creates a line and puts the order on hold in Order Management. To correct the configuration information, manually remove the hold and go through the online configuration process.

The EDI configuration process is the same as in Order Management, except for the following differences:

- Availability date rule.

  The availability date rule returns the current date in EDI because the time-phase availability information is not available in EDI processing.

- Internal variables.

  Not all fields are available for the sales order header and line in EDI.

See Also

PeopleSoft Order Management 9.1 PeopleBook, "Using Sales Order and Quotation Enterprise Integration Points"

Configured Product Returns

You can use returned material authorizations (RMAs) to manage customer returns of configured products.

The RMA process is the same as in Order Management, with one difference. After entering a product ID on the RMA Form page, click the Select Config Code link on the RMA Line - General page to access the Configuration Code Entry page, which displays the configuration code for the product that is being returned. You can change the configuration code on this page.

See Also

PeopleSoft Order to Cash Common Information 9.1 PeopleBook, "Managing Returned Material," Associating Notes and Attachments With Returned Material Headers and Lines

Production Requests

You can run configuration processes that interact with other applications (including Order Management, Inventory, Manufacturing, Cost Management, and Purchasing).

The Create Production Request COBOL SQL process (CPPIPRDN):

- Uses the configuration information that you enter in Order Management and sends requirements to Manufacturing.

  Production configuration models enable you to dynamically specify component and operation list elements without creating standard bills of material (BOMs) or routings for each specific configuration.
- Dynamically generates configured production IDs, component lists, operation lists, and configured costs.
- (Sales orders only) Inserts a soft peg into the IN_PEGGING table and its related tables in order to link the configured product on the production ID (incoming supply) and the sales order (outgoing demand).

Prerequisites

To run the Create Production Request process, you must:

- Complete the item setup for production configuration.
- Create open sales or direct production orders with production configured items.

Checking the Setup of a Production Configuration Item

Confirm the following steps to ensure that a production configuration item is set up correctly:

1. The item is defined with production configuration enabled.
2. The item attributes by unit are defined.
3. The configuration attributes are correct on the item.
4. The item is a make item.
5. The item is standard costed.
6. A production area to item relationship exists.
7. A routing exists for the item or the referenced item.
8. If the component list is a standard BOM, a BOM exists for the item or referenced item.
9. If the component list is a rule-based BOM, at least one component list rule exists for that item in the production configuration model.
10. All the lower-level components that are defined in the component list rules are set up in the system and have production costs that are associated with them.
11. Valid date format (YYYYMMDD) is used throughout the production configuration model.

12. Valid configuration variable numbers are used throughout the production configuration model.

    (The maximum length is 15 digits, with 11 maximum significant digits before the decimal point and 7 maximum significant digits after the decimal point).

13. No negative numbers are defined in the production configuration model.

    Negative numbers are not valid in Product Configurator.

14. A component list rule exists in the parent item for every configured component rule from the distribution configuration model for the item (multilevel only).

15. The production area in the configured component rule in the distribution configuration model matches up with the production area in the production rules (multilevel only).

If you encounter an error, or if production IDs are not generated, you can use configuration rule tracing in the production configuration model to help find the problem. With configuration tracing enabled in a production configuration model, model processing is tracked and can be viewed on the Production Trace page.

In addition, the Production Errors inquiry page can help indicate any problems during production configuration processing.

See Also

Chapter 8, "Using PeopleSoft Product Configurator," Running the Create Production Request Process, page 116

Configured Item Production Costs

If you don't have Manufacturing installed, you can manually establish configured production costs. If you do have Manufacturing installed, configured production cost is created automatically by the Production Request process or you can use the cost roll-up to add or update costs.

A fully indented, costed BOM provides a multilevel cost analysis that shows both the parent items' fully rolled-up cost details and all appropriate subassemblies' lower-level cost details.

The system performs the roll-up by using the most recent production ID existing on the system. The components from the production ID are joined to the Cost table to read in the costs. After the first level is finished, any additional levels are added to the chart, based on further configured components.

To calculate the cost correctly, costs for each of the assembly item's components must exist for the cost type and version that is selected for the system. This page performs a basic cost roll up, calculating the assembly cost by summarizing the cost of the components based on the manufacturing BOM that is in effect on the date that is specified or for the revision that is specified. Routing costs are not recalculated. The system uses the existing this level labor, machine, subcontracting, and overhead costs for the cost type and version. The roll-up uses the item's material costs for the cost type and version that is selected.

Viewing BOMs

Depending on the level of the inquiry that you perform, there are times when the same revision-controlled BOM may reflect different costs.

For example, if you search for:

- A depth that is less than the maximum number of levels, then the lower-level costs that the system displays reflect the costs that are generated by the original cost roll-up for this cost version and date.
- Maximum depth, then the lower-level costs that the system displays reflect the most current BOM and routing, not the cost version that you enter on the Costed BOM page.

In addition, if changes occur to the BOM and routing after the cost roll-up, then the cost of the BOM where you enter a depth that is less than the maximum may reflect something that is different than the cost from the maximum-depth BOM. Both of these costed BOMs are considered correct, depending on the depth that you enter.

Note. The Level, Component ID, Description, and Parent Item fields are equivalent to the information that appears in the current cost inquiry for non configured items.

See Also

PeopleSoft Cost Management 9.1 PeopleBook, "Defining the Cost Foundation for Makeable Items"

PeopleSoft Cost Management 9.1 PeopleBook, "Using Standard Costing for Makeable Items," Reviewing Standard Costs

Creating Configured Product Sales Orders

This section provides an overview of configured product sales orders and discusses how to enter configured product sales orders.

Understanding Configured Product Sales Orders

The process for ordering configured products by using Order Management is basically the same as the process for ordering standard products, except for one difference. After you enter the order line on the Order Line page, you must configure the product by clicking the Configure button and selecting the desired options for that configured product on the Configuration pages that you set up within the configuration model.

You can use the customers' part numbers (or aliases) that refer to specific product and configuration code combinations when entering configured products. The product alias can also represent a promotional configured product.

When you enter a product ID at the line level, the Product ID field shows either the system product ID or the customer product ID (alias) and the corresponding description. To use the customer alias, select customer for the product source on the Shipping tab on the Order Lines page.

See Also

Chapter 7, "Working With Configuration Codes," page 95

PeopleSoft Order Management 9.1 PeopleBook, "Introduction to Sales Order Entry"

PeopleSoft Order Management 9.1 PeopleBook, "Maintaining Order Header and Line Information," Maintaining Header and Line Information

PeopleSoft Order to Cash Common Information 9.1 PeopleBook, "Maintaining General Customer Information," Setting Up Product Aliases

Pages Used to Create Configured Product Sales Orders

Page Name	*Definition Name*	*Navigation*	*Usage*
Order Entry Form	ORDENT_FORM_LINE	• Order Management, Quotes and Orders, Create/Update Order, Order Entry Form • Order Management, Quotes and Orders, Create/Update Counter Sales, Order Entry Form	Enter products and quantities for the order.
Quote Entry Form	ORDENT_FORM_LINE	Order Management, Quotes and Orders, Create/Update Order, Order Entry Form	Enter products and quantities for the quote.
Sales Order Entry	ORDENT_FORM_LINE_SS	Order Management, Quotes and Orders, Express Order Add/Edit, Sales Order Entry	Enter products and quantities for the order.
Order Entry Form - Configuration, Order Entry Form - Summary	CP_DYNAMIC_PANEL	Order Management, Quotes and Orders, Create/Update Order, Order Entry Form  Click the Configure button on the Configuration tab of the Order Entry Form page.	Configure the product. The options that you define within the configuration model appear. Select the Summary tab to view the configuration details for the product during a configuration. Configuration Detail rules and any print code that is associated with the Page Generation rules determine which options appear here.
Configuration Code Entry	RMA_LINE_CONFIG	Click the Select Config Code link on the RMA Line page.	Select the configuration code for a particular product return.

Page Name	Definition Name	Navigation	Usage
Configuration Information (inquiry)	ORDENT_CP_OPT_DTL	 Click the View Configuration Results button on the Configuration tab of the Order Entry Form page.	View option information, configuration details, and any configuration components for the product after the online configuration processes.
Sales Order (inquiry)	CP_ORD1_INQ_PNL	Product Configurations, Review Configuration Info, Sales Order	View information about an entered sales order and the production ID that is generated.
Configured Kit inquiry	CP_PRODKIT_INQ	Product Configurations, Review Configuration Info, Configured Product Kit, Configured Kit	View the components of a configured product kit for the sales order.

Entering Configured Product Sales Orders

You can use the Order Entry Form page to order and view configured products.

Ordering a Configured Product

To order a configured product:

1. Access the Order Entry Form page in Order Management.
2. Complete the order header information.
   a. Enter the configured product and quantity information on the Lines tab.
   b. Select the Configuration tab and optionally select the Skip Display check box to select a specific configuration code and hide the configuration pages during the configuration process.

      The configurator still runs to verify that the configuration is valid. An hourglass icon appears instead of the configuration pages until the configuration is completed in a batch like mode.

      Note. If you select Skip Display and leave the Configuration Code field blank, the system uses the defaults to configure the item (if valid).

      ---
3. Click the Configure button to access the Order Entry Form - Configuration pages that you define within the configuration models.

   The system displays the Configuration pages and, if one is set up, a Summary page. The Summary page displays information that is derived from two sources:

   - The associated configuration detail rule.
   - The print code that is associated with the page generation rule's options.

4. Select the configuration options for the product on the Configuration page.

   a. (Optional) Click the Store button to save a partially completed configuration.

   Note. Pending sales orders and quotes can be saved to the database without completing the configurations, however, open sales order configurations can only be saved temporarily—the sales order itself cannot be saved to the database until the configuration is completed.

   b. Click the Next button to continue to any additional Configuration pages, or perform the configuration and return to the Order Entry Form page.

   The Configure button image changes to indicate that the product is configured.

Viewing Results of the Configuration Process

To view the results of the configuration process:

1. After running the configuration process, select the Order Entry Form - Configuration tab to view the product ID and configuration code.
2. Click the View Configuration Results button to view the configuration options, details, and component information after the online configuration is processed.

See Also

Chapter 5, "Using Configuration Rule Actions," Defining Configuration Detail Rules, page 55

Chapter 5, "Using Configuration Rule Actions," Defining Page Generation and Validation Rules, page 59

Creating Direct Production and Requisition Orders

This section discusses how to:

- Create direct production or direct requisition orders.
- Manage production changes.

If you have a make-to-stock environment for manufactured or purchased items, you can generate a direct production or a direct requisition order from the online distribution configuration engine, using configured direct order entry.

Pages Used to Create Direct Production and Requisition Orders

Page Name	*Definition Name*	*Navigation*	*Usage*
Configuration Orders	CP_ORD_ENTRY	Product Configurations, Create Configuration Order, Configuration Orders	Configure a direct production order or a direct requisition order.

Page Name	Definition Name	Navigation	Usage
Direct Requisition inquiry	CP_ORD1_INQ_PNL	Product Configurations, Review Configuration Info, Direct Requisition Order, Direct Requisition	After you enter a direct requisition order, this page displays information about the requisitions that are tied to the order in Purchasing.
Direct Production inquiry	CP_ORD1_INQ_PNL	Product Configurations, Review Configuration Info, Direct Production Order, Direct Production	After you enter a direct production order, this page displays information about the production orders that are tied to the order in Manufacturing.
Production Comparison - Header inquiry	CP_PRDN_CMPR_HDR	Product Configurations, Review Configuration Info, Production Comparison, Header	View production change summaries and, once production is in process, manage changes to configured sales orders.
Component List inquiry	CP_PRDN_CMPR_CL	Product Configurations, Review Configuration Info, Production Comparison, Component List	View the old and new Production BOM information.
Component's Configuration Code inquiry	CP_PRDN_CMPR_SEC1	 Click the View Config Code button on the Component List inquiry page.	View the configuration code of configured component items.
Operation List (inquiry)	CP_PRDN_CMPR_OP	Product Configurations, Review Configuration Info, Production Comparison, Operation List	View the old and new production routing information, along with the Component Sequence and Operation Sequence.

See Also

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Production Orders and Production Schedules," Common Elements Used in This Chapter

PeopleSoft Purchasing 9.1 PeopleBook, "Creating Requisitions Online," Entering Requisition Line Details

Creating Direct Production or Direct Requisition Orders

Access the Configuration Orders page (Product Configurations, Create Configuration Order, Configuration Orders).

Note. The fields that appear on this page vary, depending on the order type that you select when accessing the page.

Several of the steps that you take to enter a direct production or requisition order duplicate those that are taken to enter a sales order.

Enter the required information, in particular:

Production Due Date	This field is only visible when you select *Direct Production Order* as the order type.
PC Bus Unit (product configurator business unit), **Project,** and **Activity ID**	These fields are not required and are only visible when you select *Direct Requisition Order* as the order type.

See Also

Chapter 8, "Using PeopleSoft Product Configurator," Creating Configured Product Sales Orders, page 108

Managing Production Changes

Access the Production Comparison - Header page (Product Configurations, Review Configuration Info, Production Comparison, Header).

If a configured sales order already has production orders for it, you can create new production orders for changes to the configuration or view the effect that those configuration changes have on the existing production orders for that order.

For example, the customer orders a yellow bicycle, the production order is created, and then he calls back to change the color to red. You could then make the changes to the affected production order levels (header, component list, or operation list).

Establishing Configured Production Costs

This section discusses how to:

- Establish configured item costs.
- View configured BOMs.

See Also

Chapter 8, "Using PeopleSoft Product Configurator," Configured Item Production Costs, page 107

Pages Used to Establish Configured Production Costs

Page Name	*Definition Name*	*Navigation*	*Usage*
Item Production Costs	CM_PRODCOST	• Cost Accounting, Item Costs, Update Costs, Manual Cost Update, Item Production Costs • Product Configurations, Determine Production Cost, Config Production Cost	Manually add and update production costs for configured costed items.
Configured BOM - Search inquiry	CP_BOM_INQ_PNL	Product Configurations, Review Configuration Info, Configured Bill of Materials, Configured BOM - Search	Enter search criteria for the Configured BOM inquiry.
Configured BOM - Results inquiry	CP_BOM_INQ_PNL2	Click the Search button on the Configured Bill of Materials - Search page.	View costing information for configurable items and any related configured subassemblies. You can view the fully costed BOM after you create a product ID, complete production, and close accounting.

Establishing Configured Item Costs

Access the Item Production Costs page (Cost Accounting, Item Costs, Update Costs, Manual Cost Update, Item Production Costs).

Enter the required values; in particular:

Cost Element User-defined code that determines a purchased or manufactured item's cost category in its cost structure.

When you perform a cost roll-up, you maintain an item's cost by cost element. You can use cost element categories, such as material, overhead, and setting up production equipment, to define the costs at a summarized level or a very detailed level.

This Level Cost Values that are derived from the production ID's operation list and associated with manufacturing the assembly item that is specified. For example, the labor, machine, subcontracting, and manufacturing overhead portion of an assembly cost that is derived from the assembly's routing.

For configured items, the system derives the costs from the production ID's operation list. It can also include additional costs for material handling or transporting the assembly back to stock or to another production area.

Lower Level Cost Values that are associated with the components that are used on the assembly: labor, machine, subcontracting, and overhead costs if the component is itself a subassembly. It can include material costs if the component is a purchased item.

Viewing Configured BOMs

Access the Configured BOM - Search page (Product Configurations, Review Configuration Info, Configured Bill of Materials, Configured BOM - Search).

To perform a configured BOM inquiry:

1. Enter the required values on Configured BOM - Search page; in particular:

   Item ID Enter only configuration-costed items. The configuration cost flag is set up during item definition.

   Item Depth Maximum number of component levels that the system displays for the costed BOM inquiry. The total cost for the components appears at the bottom of the grid.

   Use *999* to indicate the maximum depth.

   Note. It is best to select the maximum depth for revision-controlled BOMs.

   The system derives cost from the component's this level cost and lower-level cost for the cost type and version that is selected and calculates it for all assemblies and subassemblies that fall within that depth.

2. Click Search to access the Configured BOM - Results page.

   The Cost Information tab displays the costs that are associated with the selected levels. In particular:

   Level Level of subordination to the item ID on the BOM-costed inquiry.

   This Level Cost Costs for this line level. The system derives the total cost from the component's this level cost and lower level cost for the cost type and version that is selected. The system calculates total cost for all assemblies and subassemblies that fall within the specified depth.

   Lower Level Cost Costs for the lower-level line.

   Total Cost Sum of all the extended costs of all components on a manufacturing BOM for a given effective date or revision date, plus only this level costs for the item. The system computes costs for each component, and then sums those values for the assembly item.

Running the Create Production Request Process

This section discusses how to run a configured production request.

See Also

Chapter 8, "Using PeopleSoft Product Configurator," Production Requests, page 106

Pages Used to Run a Configured Production Request

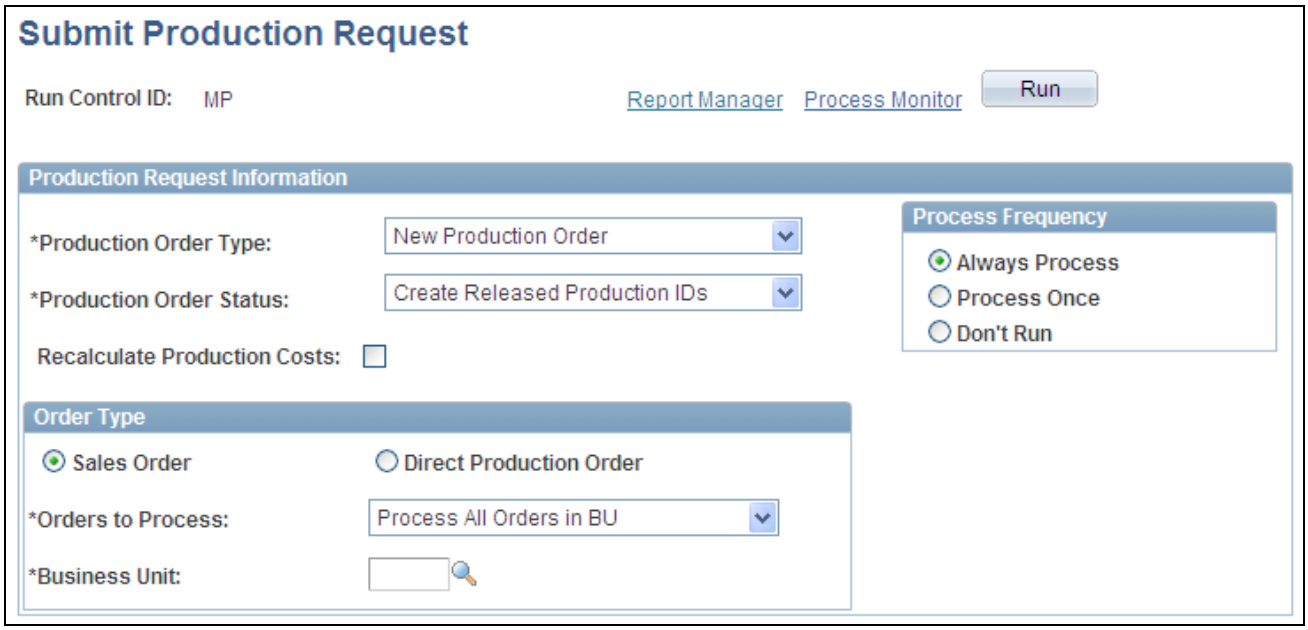
Page Name	*Definition Name*	*Navigation*	*Usage*
Production Request	CP_PRDN_RQST	Product Configurations, Submit Production Request, Production Request	Initiate the Create Production Request COBOL SQL process (CPPIPRDN). This process creates or modifies a production request for a sales order, a direct production order, or a direct requisition order. In addition, this process creates a soft peg between the production ID and the sales order.
Production Errors	CP_PRDN_ERRORS	Product Configurations, Review Configuration Info, Production Errors	After running the Create Production Request process, view error messages and information to help resolve the error.

Running a Configured Production Request

Access the Production Request page (Product Configurations, Submit Production Request).

After you set up the production configured items, create production models, and enter sales or direct production orders, you can create a production request to generate production IDs. This triggers the production configuration processing that enables you to create configured production orders. The Production Request process will soft peg the configured products on the Production ID (incoming supply) to the sales order (outgoing demand). In addition, if the Production Manufacturing Business Unit differs from the location the order is shipping from, an internal MSR will automatically be created to transfer the material to the Ship From Business Unit on the Sales Order.

You can also run a Create Production Change request to manage changes to the configured sales orders after production is already in process.



Submit Production Request page

Production Request Information

Production Order Type Select the order type. Types are:

- *New Production Order (Default):* A new production order type is used to create new production orders for configured sales orders and manufacturing direct orders.
- *Change Production Order:* A change production order type is used to change or cancel exists production orders for configured sales orders whose configuration has changed since the original production orders were created. After you make this selection, the Production Change Type field becomes active.

Production Change Type Select the production change type. Types are:

- *Compare Only:* Generates a Production Compare Report based on the differences between the original configuration and the updated configuration if new production order(s) were to be created.
- *Create New PID + Compare* (create new production ID(s) and report): Creates new production ID(s) and generates a Production Compare Report based on the differences between the original configuration and the updated configuration; In addition, if the original production ID(s) are still in a firmed status, then the system will automatically cancel the original production ID(s) and create new production orders with based on the updated configuration information.

  Note. The production order status option is available when this type is selected
- *Manually Change PID + Compare:* Retains the original production ID(s) and generates a Production Compare Report based on the differences between the original configuration and the updated configuration. However, if the original production ID(s) are still in a firmed status, then the system will automatically cancel the original production ID(s) and create new production orders in a firmed status with based on the updated configuration information.

Production Order Status Select the order status. Statues are:

- *Create Released Production IDs:* Select to indicate that you want to build the product now.
- *Create Firmed Production IDs:* Select to indicate that the product is ready to be built, but you don't want to build it yet.

Recalculate Production Costs Select this check box if you want the system to recalculate costs for configured items on a production ID. If this option is not selected, the system uses the existing cost for the configured items if one already exists.

Note. This option does not revalue any existing configured inventory.

Order Type

Select Sales Order or Direct Production Order.

Sales Order Indicates a make-to-order configured product from Order Management.

Direct Production Order Indicates a make-to-stock order, to produce configured items for stock.

See Also

PeopleSoft Manufacturing 9.1 PeopleBook, "Maintaining Production Orders and Production Schedules," Understanding Production IDs and Production Schedules

PeopleTools PeopleBook: PeopleSoft Process Scheduler

PeopleSoft Supply Chain Management Common Information 9.1 PeopleBook, "Pegging Supply and Demand"

Understanding Automatic Lot Allocation for Completed Production IDs

Once the production ID is complete, the stock is placed in the corresponding Inventory business unit as finished stock. Initially, the stock is placed in the inventory business unit where the item was manufactured. When the finished quantity is placed in this inventory business unit, the *Complete Putaway* process performs a hard allocation between the sales order quantity and the finished stock quantity. This insures that the sales order will receive the finished goods and prevents other orders from taking the stock during the reservations or picking processes in Inventory.

This *Complete Putaway* process is the final stage in overall inventory putaway transaction that updates the available quantity and inbound cost in the appropriate system tables. In addition, for configured items, *Complete Putaway* automatically allocates the putaway quantity to the originating sales order. This allocation is performed at the business unit level, materials stock request level, and lot ID level.

Since the incoming finished goods were initially soft pegged by the *Production Request* process, the *Complete Putaway* process updates the pegging information as follows:

1. The putaway quantity (QTY_COMPLETE) is updated within the Inventory Pegging (IN_PEGGING) table.
2. The peg status is set to *complete* in the Inventory Pegging table as well as in the supply and demand transactions if all the pegged quantity has been received and putaway (QTY_COMPLETE=QTY_PEGGED).
3. A notification is sent to the owner of the peg when putaway is complete.

See Also

PeopleSoft Supply Chain Management Common Information 9.1 PeopleBook, "Pegging Supply and Demand"

PeopleSoft Inventory 9.1 PeopleBook, "Understanding Order Fulfillment Processing," Pre-Allocated Items

PeopleSoft Supply Chain Management Common Information 9.1 PeopleBook, "Pegging Supply and Demand," Setting Up Notifications

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