



Constraint Definition Language in Oracle Configurator – A Holistic Perspective

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Session Objectives

- To expound the features of Constraint Definition Language – its terminology, syntax, grammar and the like
- To contrast the CDL approach with the interactive rules definition for typical business scenarios
- To explicate the advantages, challenges and implementation considerations







Oracle Configurator – An overview

- To create a valid product based on design and customer requirements
- Enforces rules and constraints resulting in a valid product
- Source is Oracle Bills of Material
- Assemble to Order, Pick to Order and Hybrid models







Oracle Configurator – An overview

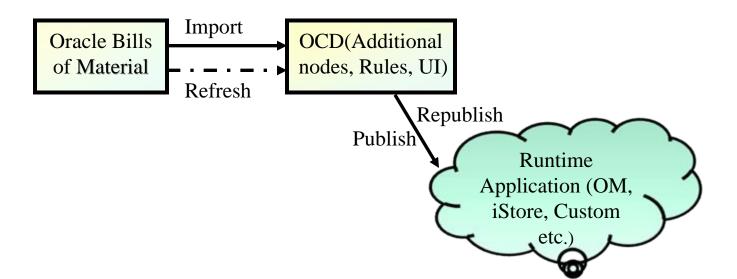
- Define BOM with Option Classes and Options
- Import BOM into CZ
- Define rules and UI
- Test and Publish
- Calling Applications Order Management, iStore, Quoting, Custom web application etc.
- Refresh, redefine and republish







Oracle Configurator – An overview





home of the OAUG KNOWledge Factory







Configurator Rules

- Constraining conditions for a product
- Requires significant product expertise and knowledge of end customer requirements
- Finalized during product design and modified as required
- Various types of rules that are supported in Oracle







Configurator Rules

- Logical Requires, Implies, Defaults, Defaults, Negates
- Numeric quantitative relationships
- Comparison compare numeric relationships
- Compatibility decide validity of other items
- Configurator Extensions custom logic for business-specific requirements







CDL – Building Blocks

- Purpose of rule, participants and expressions
- Flexibility and Versatility
- Model definition Design/Manufacturing considerations
- Simplify BOM structure
- Statement rules in CDL multiple rules and operands in a single rule







CDL – Building Blocks

- Elements rule, statements, case sensitivity, quotation marks, comments
- Definition Name, Description, Effectivity, Usage
- Statement rule content
- Case sensitivity nodes
- Quotation marks when operand same as node

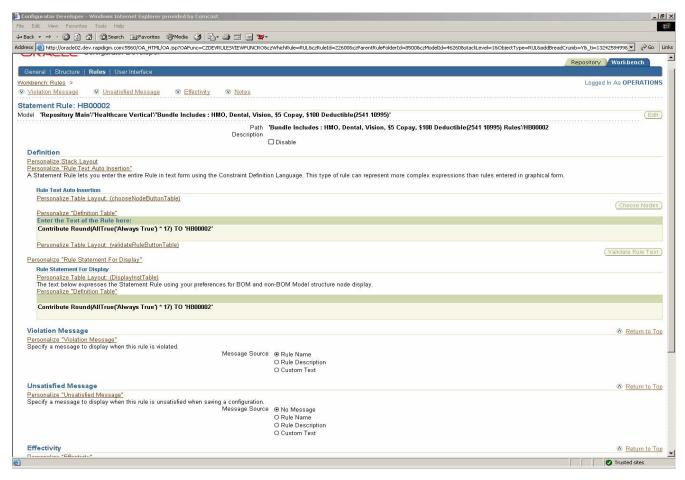








CDL – Building Blocks











CDL – Rule Definition

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CDL – Rule Definition

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Explicit and Iterator statements

- Explicit participants identified explicitly
- Rule confined to these participants
- Iterator range of nodes based on properties
- FOR ALL IN, WHERE
- Rule applies to every node that satisfy properties
- Complement Compatibility rules









Expressions

- An operator and two operands
- Advanced Expressions in previous releases
- X AND (Y OR Z) two expressions
- Mathematical expressions for calculation, comparison
- Efficient and accurate structuring







CDL Keywords

- CONSTRAIN optional in certain conditions
- CONSTRAIN X IMPLIES Y
- CONTIRBUTE...TO
- CONTIBUTE X TO Y
- COMPATIBLE
- COMPATIBLE X OF Y







CDL and Non-CDL Rules

- Advanced Expressions necessitate CDL
- Simple expressions non-CDL
- Comparison
- X DEFAULTS Y
- X EXCLUDES Y AND Z









Non-CDL Rule

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CDL Rule

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Implementation Considerations

- Product structure, complexity
- Boolean operator rules CDL mandatory
- During upgrade to 11i10 and beyond
 - Advanced Expressions converted
 - Functional Companions to Configurator Extensions
 - Logic regenerated for current rules
 - CONSUMES FROM modified
 - AnyTrue, AllTrue for Numeric rules converted









Implementation Considerations

- Number of models, type and complexity
- Calling applications impact
- Order Management setups and requirements
- Custom Application totally different setups









Integration Touch Points

- Starting point in the business flow
- Manufacturing, Procurement, Inventory control, Planning etc.
- ATP and Pricing requirements
- Inventory controls
- Sourced from vendor, subsidiary
- Service Contracts
- Customer facing documents







Questions and Answers

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