

TIBCO® Fulfillment Catalog Product Catalog Guide

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<https://docs.tibco.com>

Product-Specific Documentation

The following documents for this product can be found on the TIBCO Documentation site:

- *TIBCO Fulfillment Catalog Installation Guide*
- *TIBCO Fulfillment Catalog Product Catalog Guide*
- *TIBCO Fulfillment Catalog User's Guide*
- *TIBCO Fulfillment Catalog Web Services Guide*
- *TIBCO Fulfillment Catalog Offer and Price Designer User's Guide*
- *TIBCO Fulfillment Catalog Release Notes*

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- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

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Introduction to TIBCO Fulfillment Catalog

TIBCO Fulfillment Catalog enables you to easily manage and maintain complex Product Offerings. The Product Offerings, Services and rules for Pricing, Provisioning and Eligibility are actively maintained within the Fulfillment Catalog's Data Repository.

A complete graphical user interface allows the users to create, edit, search, and maintain their data. User access, responsibilities and lifecycle workflows can be configured for the ongoing management of this information. The complete data model for your product offerings and their components can be exported to the downstream order provisioning systems, such as TIBCO Fulfillment Order Management.

This document details the out of box data model supplied with TIBCO® Fulfillment Catalog. Specifically, this document describes in detail:

Product Catalog Definition: TIBCO® Fulfillment Catalog provides a flexible mechanism for defining a complete product offering data model and maintaining the data objects in the repository. At run-time, TIBCO® Fulfillment Order Management can provide fast access caching to send queries of the catalog to the querying application for the data. The definition of Product Offerings not only includes the component building blocks of a Sales Offer, but also:

- Definition of Product or Services
 - Underlying components
 - Characteristics
 - Features
- Definition of Prices and Price Sets
- Definition of Rules Governing Product Validity
 - Optional Components
 - Eligibility Rules
 - Compatibility Rules
 - Customer Type or other Segmentation Rules
- Definition of Fulfillment rules
 - Sequencing
 - Provision Processes
 - Dependencies

TIBCO Fulfillment Orchestration Suite Overview

TIBCO Fulfillment Orchestration provides a comprehensive suite of products that accelerates the concept-to-cash cycle for multi-play Communications Service Providers (CSPs) by automating the end-to-end process from product definition and design to the efficient, accurate fulfillment of the orders.

Concept to Cash is defined as following:

- Businesses that provide their customers a multitude of 'Sales Packages' of bundled goods and services. Sales Packages often re-use existing Products or Services and need to react quickly to changing market conditions and opportunities.
- The different Sales Packages or underlying goods and services often have complex rules governing price and validity based on any number of factors.

- Seasonality
- Customer type
- Existence of compatible or incompatible services for the customer
- Products and Services may require a provisioning or fulfillment process before being usable to the customer
 - Provisioning processes are complex
 - Depend on many factors
 - What else was purchased
 - The results of previous steps in the process. For example, was the copper line sufficient to provide high-speed internet?
- The complete life-cycle, therefore is:
 - Product offering definition
 - Up-front definition of product offerings
 - Offer Validation
 - Product definition allows systematic and automatic validation of orders based on the rules defined
 - Order Fulfillment
 - Provisioning process automatically determined based on the original complete Definition of the Product Offering

Advantages

- Reduced time to market
- React to customer, market, competitor actions
- Reduction in provisioning time
- Increase in efficiency
- Reduction in order errors
- Reduction in fulfillment errors

Benefits

- Cost savings in process efficiency
- Increased revenue through market agility and customer satisfaction

The Suite is architected in a modular approach using TIBCO's infrastructure software products. Each software in the Suite is loosely coupled with other via the use of industry standard JMS messaging and XML messages. This architecture provides scalability, fault tolerance and load balancing.

The Suite set consists of:

TIBCO® Fulfillment Catalog

Fulfillment Catalog provides the Product Catalog component of the offering. It is a J2EE application that runs in an application server, and uses relational database as data store. The Fulfillment Catalog is a plug-in for TIBCO MDM.

TIBCO® Fulfillment Order Management

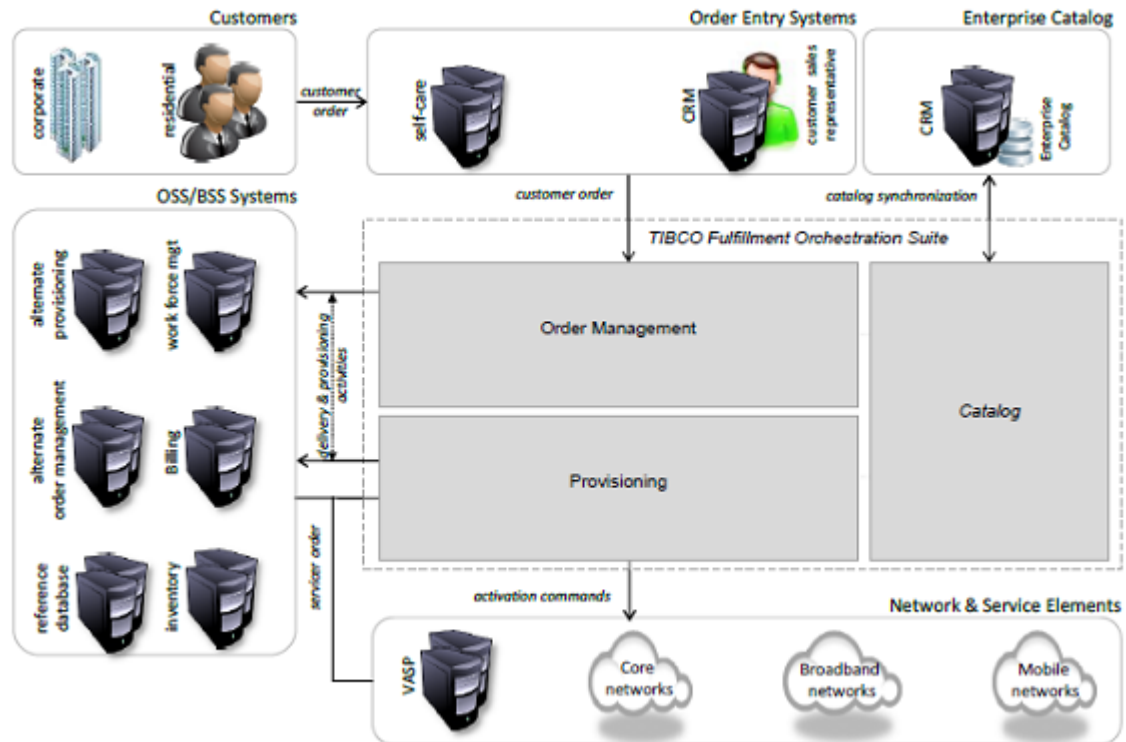
Fulfillment Order Management provides the Offering Configuration and Validation component of the offering. It is based on TIBCO's complex events, rules, and BPM software products.

TIBCO® Fulfillment Provisioning

Fulfillment Provisioning automates the activation of underlying network services and the allocation of network resources.

The following diagram describes the solution placement in an enterprise architecture.

Fulfillment Orchestration Suite Component Diagram



High Level Data Model

The description below is composed of the following parts:

- The extensible Data Model for TIBCO® Fulfillment Catalog.
- UML Diagrams of the Data Model.
- Additional SID Concepts within the Fulfillment Catalog Data Model for Extensibility and Composite Entities.
- The Fulfillment Catalog Data Model using Sample Data from the TIBCO Telco Product Catalog.

TIBCO Fulfillment Catalog is, by design, an extensible and dynamic Master Data Repository, able to handle any type of Master Data Modeling.

This document provides the Telecommunications Industry a complete schema for a Product Catalog Data Model that can handle a customer's specific needs, while conforming to SID modeling and extensible principles. Specifically, the TIBCO Fulfillment Catalog Telco Data Model uses a recursive, component-based building block approach to model complex product, prices (including tariffs), and product price policy rules for the Telecommunications industry.

The data model outlined here can be used as is, extended, or used as a starting point to build out a customer's specific data model and terminology. SID compliance is maintained via internal identifiers and data models while Business Users view their information in the context of their own terminology .

Fulfillment Catalog Illustrating the Internal Master Repositories of Data for each main type of SID ABE

Repositories

| Repository Name | ID | Description |
|------------------------|-------|--|
| ACTION | 40080 | Defines all valid actions that may be used to describe how particular fulfillment process should be modeled |
| ALLOWANCE | 40094 | Allowance information that can modify ProductOfferingPrice (e.g. 250 minutes free, then the normal 10 cents per minute thereafter) |
| CATALOG | 40212 | CATALOG |
| CATEGORY | 40203 | CATEGORY |
| CHARACTERISTIC | 40130 | Characteristics or Usages that a Product or ProductOfferingPrice may relate to. A record can be both a characteristic and a usage at the same time (e.g. a handset has an "SMS" characteristic AND is also a type of "Usage"). |
| CHARACTERISTICDATATYPE | 40143 | Supports data types for Product Characteristic repository such as string, boolean, telephone number, email address and SIM serial number etc |
| DISCOUNT | 40297 | Discount information that can modify ProductOfferingPrice |
| MIGRATION | 40327 | MIGRATION |
| MILESTONE | 40265 | MILESTONE |
| PARTY | 40154 | Party Entities, including Organizations (Corporations) and Individuals |
| PARTYEXTENSION | 41078 | Additional information related to a Party entity |
| PLANFRAGMENT | 40248 | Configuration information for a Process Component/Plan Fragment of BPM Engines. Has information for SLA |
| POLICYRULE | 40111 | Rule definitions that may be applied to Products to further specify unique qualification rules or events for a ProductOffering (e.g. "this product only sellable to females", "after one year get something free") |
| PRICE | 40276 | The data repository used to maintain price and price matrices, as well as usage charge information for products that have associated charges |
| PRODUCT | 40182 | Product information for ProductOffering, CompositeProducts, ProductSpecification information |
| PROJECTTAG | 41096 | PROJECTTAG |
| REQUIRES_PRODUCT | 40314 | REQUIRES_PRODUCT |
| RULE | 40221 | RULE |
| RULECONDITION | 40230 | RULECONDITION |
| RULEPARAMETER | 40239 | RULEPARAMETER |
| SEGMENT | 40169 | Contains a list of other reference entities that may impact the definition of Products (e.g. Product may be available only to Corporate customers, or Pricing may differ based on Customer Risk) |

Fulfillment Catalog Data Model for the Telecommunications Product Catalog

The Fulfillment Catalog Data Model is designed to maintain all Business Entities, Rules, and Relationships required to define complex Product Offerings. Although the data concepts described here may apply to a number of Industries, the examples and nomenclature described in the rest of this document uses terminology and examples from the Telecommunications industry. The Model handles Product Definition, Tariff Definition, Product Offering Definition, Product Pricing (Simple and Matrix), Tariff Charges, Discounts, Promotions, Allowances, as well as Policy Rules to define additional policies not automatically expressed within the relationships between the Business Entities.

Fulfillment Catalog Master Repositories

TIBCO Fulfillment Catalog models and manages its SID-based objects in the following separate repositories:

Repository details

| Repository name | Description |
|------------------------|---|
| Product | Each record in the Product repository represents a Component. Components comprise other Components, which may include other Components. Depending on the complexity of the data there is no limit to the level of componentization you wish to model. From a SID perspective, a top-level Component is called a Product. Sub-components are known as Composite Products (if made of a distinct group of components) or simply Components. In turn, TIBCO Fulfillment Catalog also allows the user to classify their components into logical types (Device, Tariffs, Services, Options, and so on). |
| Characteristic | Characteristics or Usages that a Product or Price may relate to. A record can be both a characteristic and a usage at the same time (for example, a handset has an "SMS" characteristic. "SMS" is also be defined as a type of "Usage" that can be charged for. Characteristics often contain values that describe the amount of the Characteristic. Such values may be defined once (500 Free Minutes), user or system input at time of order (MSISDN = ?), or may be "Instanced" and vary per Product Offering (Sales Package has the "Free Minutes" Characteristic. The value of Free Minutes for the Sales Package = 1000). |
| CharacteristicDataType | Additional information for Characteristic. |
| Price | The data repository used to maintain price and price matrices, as well as usage charge information for products that have associated fixed, usage, recurring, simple, or one-time charges. |
| Allowance | Allowance information that can modify Price (for example, 250 minutes free, then the normal 10 cents per minute thereafter). |
| Discount | Discount information that can modify Price (for example, 25% off from 10 - 14 February, 50 Euros off the cost of installation) |
| PolicyRule | Rule definitions that may be applied to Products to further specify unique qualification rules or events for a ProductOffering (for example, "this product only sellable to females", "after one year get something free") |
| Segment | Contains a list of other reference entities that may impact the definition of Products (for example, Product may be available only to Corporate customers, or Pricing may differ based on Customer Risk). |
| Catalog | List of subset of offerings, to allow for management of multiple catalogs of ProductOfferings. |

| Repository name | Description |
|-----------------|--|
| Party | List of Party Entities that may be used to further define compatibility of Products, Prices, or Policies with specific Parties. Parties may be defined as Organizations, Roles or People. Organizations may be individual Corporations, or Corporations and their subsidiaries (Corporate Hierarchies). A Role represents a group of people (for example, IT Staff, Administrator, Senior Management). People represent actual named, individuals (for example, John Smith). |
| PartyExtension | Additional information associated with Parties. |
| PlanFragment | It provides configuration information for a Process Component/Plan Fragment of BPM Engines. It has information for SLA. |
| Milestone | Representation of the start and end of part of an executing plan item. |
| Action | It stores meta information for valid fulfillment actions and provides you the flexibility to define your own set of actions. This repository defines all valid actions that may be used to describe how a particular fulfillment process should be modeled. |
| ProjectTag | It provides a central repository to manage the Project Tag Names. These tag names are later used across other repositories. |
| Category | Category |
| Migration | Migration |
| RequiresProduct | Requires Product |
| Rule | Rule |
| RuleCondition | Rule Condition |
| RuleParameter | Rule Parameter |

Fulfillment Catalog Relationships

TIBCO Fulfillment Catalog Relationships also allow the definition of relationship types within and between Fulfillment Catalog Repositories, conforming to SID entity relationship modeling.

The SID-compliant Relationships applicable for all Repositories are the following:

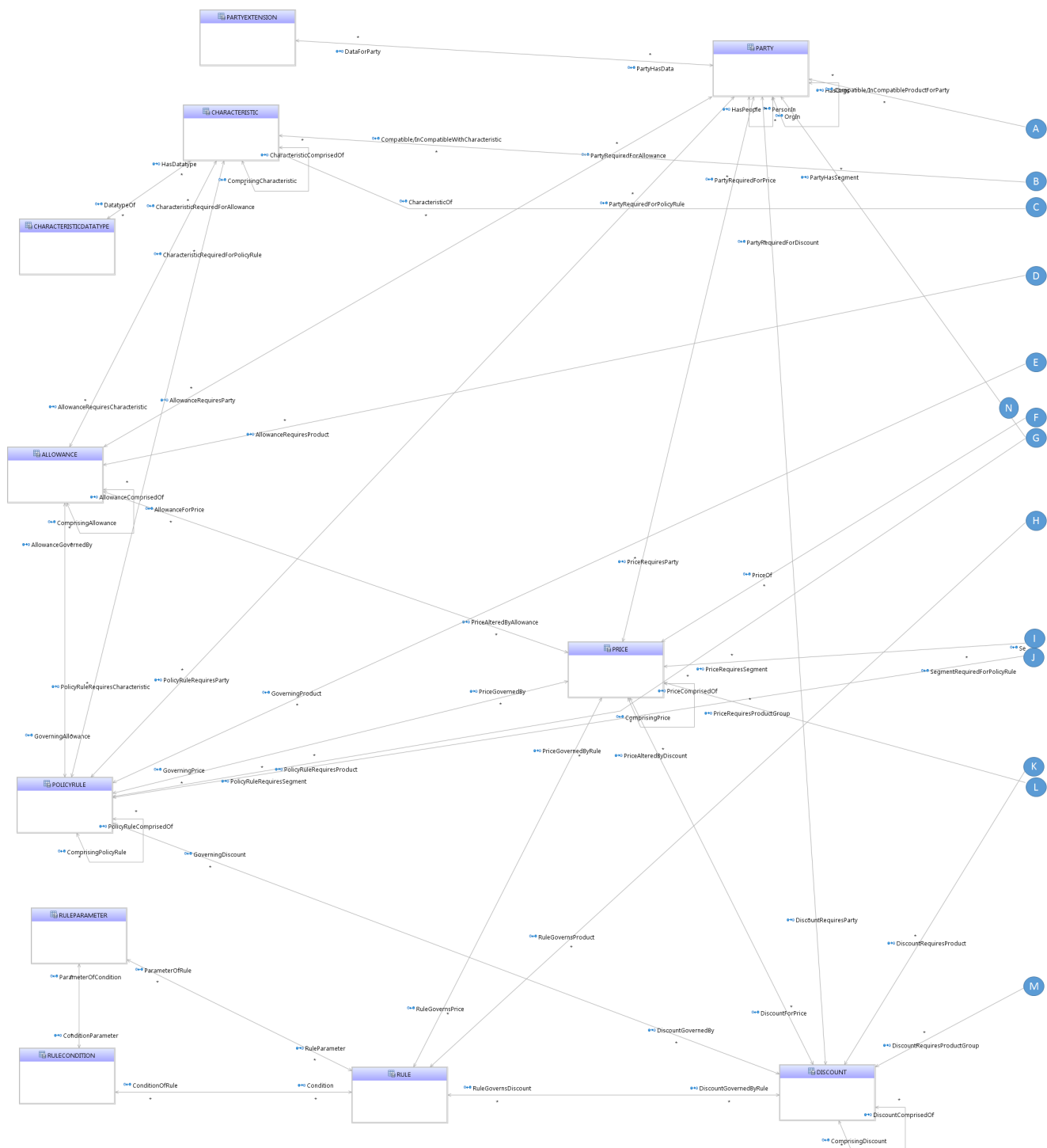
- **ComprisedOf**- Used to denote bundled ABE's within a repository (using SID terminology, contains relationships express composite entities)
- **ExtensionEntity**- Expresses any future new data models that are extensions to an existing model

Other ABE's within the Fulfillment Catalog Repository use a host of other relationships, (for example, ProdValuedByPrice). These are documented in the subsequent section for each Repository/Business Entity Data Dictionary.

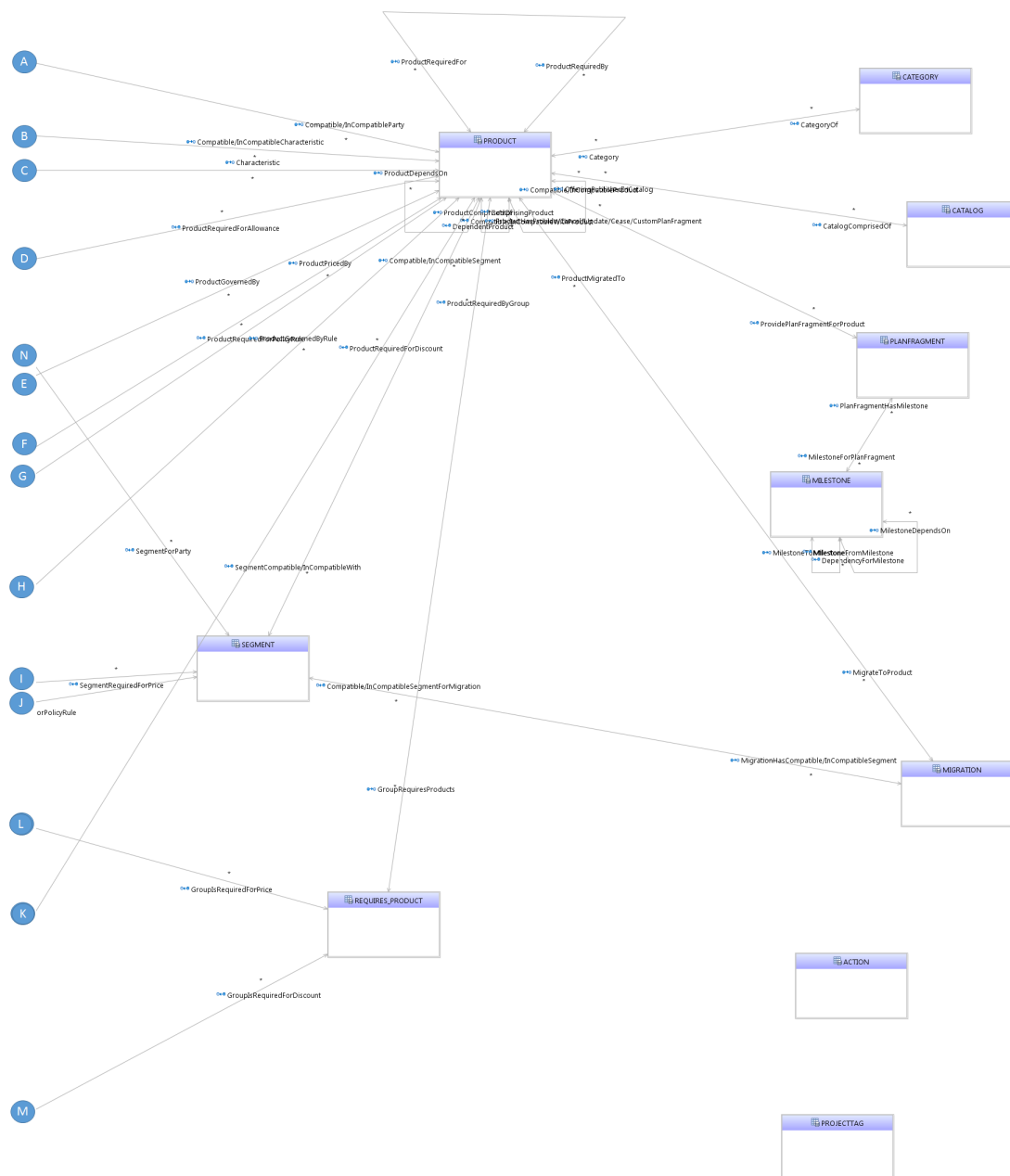
Fulfillment Catalog Telco Entity-Relationship Diagram

The following is the Entity-Relationship Diagram for Fulfillment Catalog Telco Enterprise

Fulfillment Catalog Telco Entity-Relationship Diagram Part 1



Fulfillment Catalog Telco Entity-Relationship Diagram Part 2



Fulfillment Catalog Data Repository Dictionary

The following list comprises of all the repositories available in the Fulfillment Catalog Telco Data Repository.

- [Product Repository](#)
- [Characteristic Repository](#)

- [CharacteristicDataType Repository](#)
- [Price Repository](#)
- [Allowance Repository](#)
- [Discount Repository](#)
- [PolicyRule Repository](#)
- [Segment Repository](#)
- [Catalog Repository](#)
- [Party Repository](#)
- [PartyExtension Repository](#)
- [PlanFragment Repository](#)
- [Milestone Repository](#)
- [Action Repository](#)
- [ProjectTag Repository](#)
- [Category Repository](#)
- [Migration Repository](#)
- [RequiresProduct Repository](#)
- [Rule Repository](#)
- [RuleCondition Repository](#)
- [RuleParameter Repository](#)

Each Repository is extensible. The attributes described, in the respective topics, use the TIBCO Telco Product Catalog structure as the starting point.

Product Repository

Principal SID Entities within the Product Repository are Product, CompositeProductOffering, CompositeProductSpecification, and ProductSpecification.

Product Repository Attributes

| Attributes | Display Name | Data Type | Description |
|-------------|-------------------|--------------|-----------------------------|
| ProductID | PRODUCTID | String(255) | Product Identifier |
| RECORD_TYPE | Class | String(35) | Product type |
| UOM | UOM | String(40) | Unit of measure |
| Name | Name | String(255) | Internal Name |
| SubsetType | SubClass | String(255) | Second level classification |
| SHORTDESC | Short Description | String(2000) | Short Description |

| Attributes | Display Name | Data Type | Description |
|-----------------|------------------|--------------|---|
| LongDesc | Long Description | String(2000) | Long Description |
| SingleUse | SingleUse | Boolean | Single use flag for provisioning |
| MustComplete | MustComplete | Boolean | Must complete flag for provisioning |
| ConcurrentOrder | ConcurrentOrder | Boolean | Concurrent order flag for validation |
| Owner | Owner | String(255) | System that maintains the record that the products are created by Fulfillment Catalog or imported from Fulfillment Provisioning (INFO group). |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |
| RecordUse | Record Use | String(256) | <p>The meta data of the record that describes whether the product is Commercial, Technical, or None.</p> <p>This is a read-only attribute whose value is decided based on the RECORD_TYPE and constraints (ValidCommercialRecordTypes, ValidTechnicalRecordTypes) defined in catalogvalidation.xml for PRODUCT repository. For example, if the RECORD_TYPE is BUNDLE then -</p> <ul style="list-style-type: none"> RecordUse would be Technical if BUNDLE appears in ValidTechnicalRecordTypes RecordUse would be Commercial if BUNDLE appears in ValidCommercialRecordTypes RecordUse would be All if BUNDLE appears neither in ValidTechnicalRecordTypes nor in ValidCommercialRecordTypes. RecordUse would be Technical if BUNDLE appears both in ValidTechnicalRecordTypes as well as in ValidCommercialRecordTypes. |
| Image | Image | File | Supporting Image |

| Attributes | Display Name | Data Type | Description |
|----------------------|-----------------------|--------------|---|
| StartDate | Start Date | Date | Start Date for the record to be effective (if applicable) |
| StartTime | Start Time | String(40) | Start Time for the record to be effective (if applicable) |
| EndDate | End Date | Date | End Date for the record to be effective (if applicable) |
| EndTime | End Time | String(40) | End Time for the record to be effective (if applicable) |
| Memo | Memo | String(4000) | Additional information for customer support to understand |
| SupportingDocument | Supporting Document | File | Any media to attach |
| StandardDeliveryTime | Standard Delivery | Decimal | Standard time to deliver product |
| StandardDeliveryUOM | Standard Delivery UOM | String(255) | Unit of Measure |
| PremiumDeliveryTime | Premium Delivery | Decimal | Premium time to deliver product |
| PremiumDeliveryUOM | Premium Delivery UOM | String(256) | Unit of Measure |
| DeliveryType | Delivery Type | String(255) | Delivery type offered |
| ContractLength | Contract Length | Decimal | Standard contract length |
| ContractUOM | ContractUOM | String(255) | Contract Unit of Measure |
| CancellationPeriod | Cancellation Period | Decimal | Timeframe for cancellation |
| ImageUrl | ImageUrl | String(255) | Display image for the Order Entry UI. |
| lifecyclestatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| ProvidePlan | Provide Plan | String(255) | References Technical plans to allow an order and/or provisioning system know how to provision the product |

| Attributes | Display Name | Data Type | Description |
|---------------------|---------------------|---------------|---|
| UpdatePlan | Update Plan | String(255) | References Technical plans to allow an order and/or provisioning system know how to update the product for the customer |
| CancelPlan | Cancel Plan | String(255) | References Technical plans to allow an order and/or provisioning system know how to cancel the product for the customer |
| CeasePlan | Cease Plan | String(256) | References Technical plans to allow an order and/or provisioning system know how to cease the product for the customer |
| Type | Affinity Type | String(256) | Affinity group type |
| AffinityProvide | AffinityProvide | String(256) | References technical plans to allow an order provisioning system to know how to provision a product when grouped. |
| AffinityCancel | AffinityCancel | String(256) | References technical plans to allow an order provisioning system to know how to cancel a product when grouped. |
| AffinityCease | AffinityCease | String(256) | References technical plans to allow an order provisioning system to know how to cease a product when grouped. |
| AffinityUpdate | AffinityUpdate | String(256) | References technical plans to allow an order provisioning system to know how to update a product when grouped. |
| AffinityCondition | AffinityCondition | Varchar(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelation | Varchar(2000) | Xpath expression to specify String used for Affinity Group. |
| AffinityParentGroup | AffinityParentGroup | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGroup | Boolean | Same Action Only (True or False). |

| Attributes | Display Name | Data Type | Description |
|---------------------|---------------------|---------------|---|
| AffinityActionValue | AffinityActionValue | Varchar(2000) | Xpath expression for an Order Action. |
| GroupNumber | GroupNumber | Integer | An identifying group number to allow logical grouping between children. |
| GroupMinQty | Minimum Quantity | Integer | Minimum quantity of children within the same GroupNumber (if applicable). |
| GroupMaxQty | Maximum Quantity | Integer | Maximum quantity of children within the same GroupNumber (if applicable). |
| GroupOptional | Optional | Boolean | |
| OfferId | Offer Id | String(4000) | The ID of the offer for which the product is offered. |
| IsTemplate | IsTemplate | Boolean(5) | Describes if the record is a template record or non-template record. |
| OPDEdition | OPDEdition | String(256) | This is used by Offer and Price Designer to provide a dummy information to MDM web service. |

Product Type

Product Type

| Value | Display Value | Description |
|----------------------------|---------------|--|
| Product | Bundle | Represents a sellable offering of bundled products. (Display names based on TIBCO Telco PC, underlying data naming conform to SID Modeling). |
| CompositeProduct | Group | Represents a composite product (collection of other products) that can then be treated as any other single product. |
| DeviceProductSpecification | Device | Physical Devices. |
| TariffProductSpecification | Tariff | Tariff information. |
| OptionProductSpecification | Option | Optional Service information. |

Product Relationships

Product Relationships

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|-----------------------------|---------------------------|-------------------------|--------------------------------|
| Category | All | Category | CategoryOf |
| Characteristic | All | Characteristic | CharacteristicOf |
| CompatibleCharacteristic | All | Characteristic | CompatibleWithCharacteristic |
| CompatibleParty | All | Party | CompatibleProductForParty |
| CompatibleProduct | All | Other Included Products | CompatibleWithProduct |
| CompatibleSegment | All | Segment | SegmentCompatibleWith |
| IncompatibleCharacteristic | All | Characteristic | IncompatibleWithCharacteristic |
| IncompatibleParty | All | Party | IncompatibleWithParty |
| IncompatibleProduct | All | Other Included Products | IncompatibleWithProduct |
| IncompatibleSegment | All | Segment | SegmentIncompatibleWith |
| OfferingPublishedIn Catalog | All | Catalog | CatalogComprisedOf |
| ProductComprisedOf | Product, CompositeProduct | Other Included Products | ComprisingProduct |
| ProductGovernedBy | All | PolicyRule | GoverningProduct |
| ProductGovernedBy Rule | All | Rule | RuleGovernsProduct |
| ProductPricedBy | All | Price | PriceOf |
| ProductRequiredFor | All | Other Included Products | ProductRequiredBy |

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|-------------------------------|------------------------|--------------|-------------------------------|
| ProductHasProvidePlanFragment | All | PlanFragment | ProvidePlanFragmentForProduct |
| ProductHasUpdatePlanFragment | All | PlanFragment | UpdatePlanFragmentForProduct |
| ProductHasCeasePlanFragment | All | PlanFragment | CeasePlanFragmentForProduct |
| ProductHasCancelPlanFragment | All | PlanFragment | CancelPlanFragmentForProduct |
| ProductHasCustomPlanFragment | All | PlanFragment | CustomPlanFragmentForProduct |
| ProductDependsOn | Products as applicable | Product | DependentProduct |
| ProductToMigrate | All | Migration | MigrateByProduct |

Characteristic Repository

Principal SID Entities within the Characteristic Repository are ProductSpecCharacteristic, Characteristic, and Usage.

Characteristic Repository Attributes

| Attributes | Display Name | Data Type | Description |
|-----------------|-------------------|--------------|--|
| ProductID | PRODUCTID | String(255) | Record Identifier |
| ShortDesc | Short Description | String(2000) | Short Description |
| RECORD_TYPE | Class | String(35) | Characteristic type |
| SubsetType | SubClass | String(255) | Second level classification |
| DisplaySequence | Display Sequence | Integer | Sequence number for displaying characteristics on a user interface |
| Name | Name | String(256) | Name |
| Mandatory | Mandatory | Boolean | Mandatory or Optional (if applicable) |
| DefaultValue | Default Value | String(255) | Default or Instance Value (if applicable) |

| Attributes | Display Name | Data Type | Description |
|-----------------|---------------------------------------|--------------|---|
| Source | Source | String(255) | If input required where is it sourced from |
| DataType | Date Type | String(255) | Data Type of the characteristic (if requiring an input) |
| InputLength | Input Length | Integer | Maximum data input length |
| IsChargeable | Is this Feature Chargeable | Boolean | Flag indicating if this feature should be available to Charge records (for example, is there a usage charge associated with this feature) |
| RangeValue | RangeValue | String(256) | Range of valid values for the characteristic |
| PersistValue | Persist Value in Subscriber Inventory | Boolean | Flag indicating if characteristic value is to be stored in inventory |
| lifecyclestatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| PRODUCTIDEXT | PRODUCTIDEXT | String | Auxiliary identifier for current entity. |
| IMAGE | IMAGE | File | Name or location of a picture file for this record |
| UOM | UOM | String | Unit of measure |
| CONTAINS | CONTAINS | String | Contains |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |
| OfferId | Offer Id | String(4000) | The ID of the offer for which the product is offered. |

Characteristic Type

Characteristic Repository Type

| Value | Display Value | Description |
|----------|---------------|--|
| Feature | Feature | Feature characteristics describes a certain aspect of a product. A Feature can be a distinct feature or capability of a product. In general, features distinguish a product from other products of the same class. For example features of a mobile device might include: SMS, Voice, MMS, 4G, Stereo Wireless Headset, Keyboard, etc. Features could also be chargeable or non-chargeable. For instance, for billing purposes, a device that provides SMS capability could mean it may need a SMS capable billing plan |
| Input | Input | Input characteristics represent information values that need to be captured and associated with the product at time of order/order fulfillment. They generally represent information that needs to be propagated to other systems OR will impact the fulfillment process. Input characteristics generally have no values until the order is placed/fulfilled. An example of an Input characteristic could be an MSISDN (phone number) allocated to a mobile device, or a "Contact Address" captured for a business internet product at time of order |
| Instance | Instance | Instance characteristics are similar to Feature. The feature in question has measurable quantity that is defined for each related product. For instance, a discrete "Free 500 SMS Package" product could have an "Instance" characteristic called "Free SMS". This characteristic would have a relationship value = 500. Another similar product could be created and called "Free 1000 SMS Package". It would have the same "Free SMS" characteristic associated with it but have a relationship value = 1000. |
| Shared | Shared | It indicates that the attribute is shared |

Characteristic Relationships

Characteristic Repository Relationships

| Name of Relationship | CharacteristicType Applicable | Relates to | Reverse Relationship Name |
|---------------------------|-------------------------------|---------------------------------|---------------------------|
| CharacteristicComprisedOf | All | Other records in Characteristic | ComprisingCharacteristic |

| Name of Relationship | CharacteristicType Applicable | Relates to | Reverse Relationship Name |
|----------------------|-------------------------------|----------------------------|---------------------------|
| HasDatatype | All | CharacteristicDataT ype | DataTypeOf |

CharacteristicDataType Repository

CharacteristicDataType Repository Attributes

| Attributes | Display Name | Data Type | Description |
|----------------|-------------------------|--------------|---|
| RECORD_TYPE | Class | String(35) | Characteristic data type |
| ProductID | PRODUCTID | String(255) | ID type name |
| ProductIDExt | Product ID Extension | String(255) | Data type name |
| SHORTDESC | Short Description | String(2000) | Data type description |
| RegEx | Data Type Definition | String(4000) | Data type definition regular expression |
| VariableLength | Variable Length | Boolean | Flag indicating if this data type permits variable length data |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Price Repository

Principal SID Entities within the Price: Price, CompositeProdOfferingPrice, ProductPrice, CompositeProdPrice ProdOfferPriceCharge, and ProductPriceCharge.

| Attributes | Display Name | Data Type | Description |
|--------------|-------------------------|-------------|--|
| ProductID | PRODUCTID | String(255) | Charge Identifier |
| ProductIDExt | Product ID Extension | String(255) | Charge identifier extension |
| RECORD_TYPE | Class | String(35) | Type of Charge Entity (See table below for list of valid Types) |
| SubsetType | SubClass | String(255) | Second level classification |
| Name | Name | String(255) | Internal Name |
| ProductName | Commercial Name | String(255) | Commercial Name |

| Attributes | Display Name | Data Type | Description |
|---------------------|-------------------|--------------|---|
| ShortDesc | Short Description | String(2000) | Short Description |
| LongDesc | Long Description | String(2000) | Long Description |
| StartDate | Start Date | Date | Start Date for the record to be effective (if applicable) |
| StartTime | Start Time | String(40) | Start Time for the record to be effective (if applicable) |
| EndDate | End Date | Date | End Date for the record to be effective (if applicable) |
| EndTime | End Time | String(256) | End Time for the record to be effective (if applicable) |
| Duration | Duration | Integer | Duration of the charge |
| DurationUOM | DurationUOM | String(10) | Duration unit of measure for the charge |
| UsageCharacteristic | Usage | String(255) | Characteristic that is being charged (SMS, 3G, etc) |
| ChargeValue | Charge Amount | Decimal | The fee to charge |
| ChargeUOM | Per | String(255) | Per measurement unit |
| ChargeMinBoundary | Charge From | Decimal | The starting range of when to apply this charge |
| ChargeMaxBoundary | Charge To | Decimal | The endpoint when this charge no longer applies |
| ChargePriority | Charge Priority | Integer | If the customer has or is buying a product that provides a similar charge, this provides the system a way to choose which Charge to bill. |
| LifeCycleStatus | Record Status | String(240) | Status of Record (Retired, Active, etc) |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |
| OPDEdition | OPDEdition | String(256) | This is used by Offer and Price Designer to provide a dummy information to MDM web service. |

Price Charge Type

| Value | Display Value | Description |
|----------------|---------------|---|
| TariffUsage | Tariff Usage | Collection of other charges |
| Usage | Usage | Fee based on usage |
| Fixed | Fixed | Fixed rate charge |
| Recurring | Recurring | Recurring fee |
| One-Time | One-Time | One time charge |
| Fee | Fee | Special one-time charges (example: Activation fee) |
| CompositePrice | Price Matrix | Group of pricing applying to one product. Price based on conditions |
| Product | Product | Simple Price of a Product |

Price Relationships

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|-------------------------|------------------------|------------------------|---------------------------|
| CharacteristicCharge | All | Characteristic | ChargeOf |
| PriceAlteredByAllowance | All | Allowance | AllowanceForPrice |
| PriceAlteredByDiscount | All | Discount | DiscountForPrice |
| PriceComprisedOf | All | Other charges in Price | ComprisingPrice |
| PriceGovernedBy | All | PolicyRule | GoverningPrice |
| PriceGovernedByRule | All | Rule | RuleGovernsPrice |

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|-----------------------------|------------------------|--------------------|--------------------------------|
| PriceRequiresCharacteristic | All | Characteristic | CharacteristicRequiredForPrice |
| PriceRequiresParty | All | Party | PartyRequiredForPrice |
| PriceRequiresProduct | All | Product Repository | ProductRequiredForPrice |
| PriceRequiresProductGroup | All | Requires Product | GroupsRequiredForPrice |
| PriceRequiresSegment | All | Segment Repository | SegmentRequiredForPrice |

Allowance Repository

Principal SID Entities within the Allowance Repository: ProdOfferPriceAlteration and AllowanceProdOfferPriceAlteration.

| Attributes | Display Name | Data Type | Description |
|-------------|-------------------|--------------|--|
| ProductID | PRODUCTID | String(255) | Allowance Identifier |
| RECORD_TYPE | Class | String(35) | Type of Allowance Entity (See table below for list of valid Types) |
| SubsetType | SubClass | String(255) | Second level classification |
| Name | Name | String(255) | Internal Name |
| ProductName | Commercial Name | String(255) | Commercial Name |
| ShortDesc | Short Description | String(2000) | Short Description |
| LongDesc | Long Description | String(2000) | Long Description |
| StartDate | Start Date | Date | Start Date for the record to be effective (if applicable) |
| StartTime | Start Time | String(40) | Start Time for the record to be effective (if applicable) |
| EndDate | End Date | Date | End Date for the record to be effective (if applicable) |

| Attributes | Display Name | Data Type | Description |
|---------------------|---------------------|-------------|--|
| EndTime | End Time | String(40) | End Time for the record to be effective (if applicable) |
| UsageCharacteristic | Usage | String(255) | Usage Characteristic that is being altered by this allowance |
| AllowanceValue | Charge Amount | Decimal | Amount to allow |
| AllowanceUOM | Per | String(256) | Per measurement unit |
| AllowancePeriod | Length of Allowance | Decimal | Number of units to allow |
| lifecyclestatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Allowance Type

| Value | Display Value | Description |
|--------------------|---------------|----------------------------|
| CompositeAllowance | Group | Composite allowance bundle |
| Allowance | Allowance | Allowance Entity |

Allowance Relationships

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|----------------------------------|------------------------|-------------------------------|-------------------------------------|
| AllowanceComprise dOf | All | Other allowances in Allowance | ComprisingAllowance |
| AllowanceGoverned By | All | PolicyRule | GoverningAllowance |
| AllowanceRequires Characteristic | All | Characteristic | CharacteristicRequiredForAl lowance |
| AllowanceRequiresP arty | All | Party | PartyRequiredForAllowance |
| AllowanceRequiresP roduct | All | Product | ProductRequiredForAllowa nce |

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|--------------------------|------------------------|------------|-----------------------------|
| AllowanceRequiresSegment | All | Segment | SegmentRequiredForAllowance |

Discount Repository

Principal SID Entities within the Discount Repository: ProdOfferPriceAlteration and DiscountOfferPriceAlteration.

| Attributes | Display Name | Data Type | Description |
|---------------------|-------------------|--------------|---|
| ProductID | PRODUCTID | String(255) | Discount Identifier |
| Record_Type | Class | String(35) | Type of Discount Entity (See table below for list of valid Types) |
| SubsetType | SubClass | String(255) | Second level classification |
| Name | Name | String(255) | Internal Name |
| ShortDesc | Short Description | String(2000) | Short Description |
| ProductName | Commercial Name | String(255) | Commercial Name |
| LongDesc | Long Description | String(2000) | Long Description |
| StartDate | Start Date | Date | Start Date for the record to be effective (if applicable) |
| StartTime | Start Time | String(40) | Start Time for the record to be effective (if applicable) |
| EndDate | End Date | Date | End Date for the record to be effective (if applicable) |
| EndTime | End Time | String(40) | End Time for the record to be effective (if applicable) |
| UsageCharacteristic | Usage | String(255) | Characteristic that is being discounted (SMS, 3G, etc) |
| DiscountValue | Discount Amount | Decimal | The discount to apply |
| DiscountUOM | Percent or Flat | String(255) | Percent or Absolute discount |

| Attributes | Display Name | Data Type | Description |
|-----------------|------------------|-------------|---|
| lifecyclestatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| IMAGE | IMAGE | File | Name or location of a picture file for this record |
| UOM | UOM | String | Unit of measure |
| CONTAINS | CONTAINS | String | Contains |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |
| OPDEdition | OPDEdition | String(256) | This is used by Offer and Price Designer to provide a dummy information to MDM web service. |

Discount Type

| Value | Display Value | Description |
|-------------------|---------------|----------------------------|
| CompositeDiscount | Group | Composite allowance bundle |
| Discount | Discount | Allowance Entity |

Discount Relationships

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|--------------------------------|------------------------|-----------------------------|-----------------------------------|
| DiscountComprised Of | All | Other discounts in Discount | ComprisingDiscount |
| DiscountGovernedBy | All | PolicyRule | GoverningDiscount |
| DiscountGovernedByRule | All | Rule | RuleGovernsDiscount |
| DiscountRequiresCharacteristic | All | Characteristic | CharacteristicRequiredForDiscount |
| DiscountRequiresParty | All | Party | PartyRequiredForDiscount |

| Name of Relationship | ProductType Applicable | Relates to | Reverse Relationship Name |
|------------------------------|------------------------|------------------|----------------------------|
| DiscountRequiresProduct | All | Product | ProductRequiredForDiscount |
| DiscountRequiredProductGroup | All | Requires Product | GroupsRequiredForDiscount |
| DiscountRequiresSegment | All | Segment | SegmentRequiredForDiscount |

PolicyRule Repository

Principal SID Entities within the PolicyRule Repository: PolicyRule, PolicyGroup, PolicyEvent, PolicyAction, and PolicyCondition.

| Attributes | Display Name | Data Type | Description |
|-------------|-------------------|--------------|--|
| ProductID | PRODUCTID | String(255) | Product Identifier |
| RECORD_TYPE | Class | String(35) | Type of Product Entity (See table below for list of valid Types) |
| SubsetType | SubClass | String(255) | Second level classification |
| Name | Name | String(255) | Internal Name |
| ProductName | Commercial Name | String(255) | Commercial Name |
| ShortDesc | Short Description | String(2000) | Short Description |
| LongDesc | Long Description | String(2000) | Long Description |
| StartDate | Start Date | Date | Start Date for the record to be effective (if applicable) |
| StartTime | Start Time | String(40) | Start Time for the record to be effective (if applicable) |
| EndDate | End Date | Date | End Date for the record to be effective (if applicable) |
| EndTime | End Time | String(40) | End Time for the record to be effective (if applicable) |
| MinPrice | Minimum Price | Decimal | Minimum Price |
| MaxPrice | Maximum Price | Decimal | Maximum Price |

| Attributes | Display Name | Data Type | Description |
|------------------------|---------------------------------|-------------|---|
| MinOrderPrice | Minimum Order Price | Decimal | Minimum Order Price |
| MaxOrderPrice | Maximum Order Price | Decimal | Maximum Order Price |
| MinContractLength | Minimum Contract Length | Decimal | Minimum Contract Length |
| MaxContractLength | Maximum Contract Length | Decimal | Maximum Contract Length |
| NumberOfSales | Number of Sales | Decimal | Sales Conditions: evaluate the last N of sales |
| TotalValue | Total Value | Decimal | Value of the last N sales threshold |
| GreaterOrLower | Greater or Lower | Boolean | Trigger if exceeding or below threshold |
| PenaltyPeriod | Penalty Period | Decimal | The duration until an early termination fee is waived |
| EvaluateCharacteristic | Evaluate Characteristic | String(255) | If Policy is evaluating the values input for a particular characteristic |
| EvaluateEqual | Characteristic Equals | String(255) | The characteristic's value must be equal to this |
| EvaluateMinRange | Characteristic Min Range | String(256) | The characteristic's range must be within the two values |
| EvaluateMaxRange | Characteristic Max Range | String(255) | The characteristic's range must be within the two values |
| InvalidIfFail | Invalid Order if Policy Failed? | Boolean | Entire Order is invalid if conditions of the policy are not met |
| ExclusivePolicy | Acts as an exclusive offer? | Boolean | The Price policy attached to this policy is an exclusive offer not combinable and superseding any other price alterations. |
| TriggerEvent | Operation Event to Perform | String(255) | Alerts the order system to perform the specified event to fulfill the Policy (query a promotional partner for customer's eligibility) |

| Attributes | Display Name | Data Type | Description |
|-----------------|------------------|-------------|--|
| LifeCycleStatus | Record Status | String(256) | Status of Record within (Retired, Active, etc) |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

PolicyRule Type

| Value | Display Value | Description |
|---------------|---------------|---|
| Alteration | Alteration | Additional criteria to evaluate Discounts, Promotions, Allowances |
| ValidityCheck | ValidityCheck | Additional criteria to evaluate validity of the order |

PolicyRule Relationships

| Name of Relationship | PolicyType Applicable | Relates to | Reverse Relationship Name |
|----------------------------------|-----------------------|--------------------|-------------------------------------|
| PolicyRuleComprisedOf | PolicySet | PolicyRule | ComprisingPolicyRule |
| PolicyRuleRequiresCharacteristic | All | Characteristic | CharacteristicRequiredForPolicyRule |
| PolicyRuleRequiresParty | All | Party | PartyRequiredForPolicyRule |
| PolicyRuleRequiresProduct | All | Product | ProductRequiredForPolicyRule |
| PolicyRuleRequiresSegment | All | Segment Repository | SegmentRequiredForPolicyRule |

Segment Repository

Principal SID Entities within the Segment Repository: Any ABE's not within the Product Domain but impact Product (Market Domain, Customer Domain, Geography Domain, etc)

| Attributes | Display Name | Data Type | Description |
|-----------------|----------------------|-------------|---|
| ProductID | PRODUCTID | String(255) | A record within the segment's domain (Market Segment has records: Consumer, SME, Corporate) |
| ProductIDExt | Product ID Extension | String(255) | Name of a particular Segment ABE (Market, Customer, Credit Rating, Geography, see list below) |
| lifecyclestatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| SHORTDESC | SHORTDESC | String | Description of record entity. |
| RECORD_TYPE | RECORD_TYPE | String | Defines record type for current record |
| IMAGE | IMAGE | File | Name or location of a picture file for this record |
| UOM | UOM | String | Unit of measure |
| CONTAINS | CONTAINS | String | Contains |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Segment ID Extension

| Segment | List |
|--------------------------|--|
| Channel | Online, Store, Customer Service Representative |
| Market | Consumer, SME, Corporate |
| Customer Risk | Low, Medium, High |
| Customer Rating | Low, Standard, Excellent |
| Customer Type | PostPaid, PrePaid |
| (Extendable list of BEs) | (Extendable List of ID's) |

Catalog Repository

Principal SID Entities within the Catalog Repository: Catalog, and ProdCatOffering.

| Attributes | Display Name | Data Type | Description |
|----------------|----------------------|-------------|--|
| ProductID | ProductID | String(255) | Name of a particular catalog (Spain Online, Czech Store) |
| ProductIDExt | Product ID Extension | String(255) | Catalog extension name |
| SHORTDESC | SHORTDESC | String | Description of record entity. |
| RECORD_TYPE | RECORD_TYPE | String | Defines record type for current record |
| IMAGE | IMAGE | File | Name or location of a picture file for this record |
| UOM | UOM | String | Unit of measure |
| CONTAINS | CONTAINS | String | Contains |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Catalog Example

| CatalogID | OfferIDExt |
|-------------------------------|---------------------------|
| Spain Online | Bundle_Web_&_Talk |
| Spain Online | Bundle_X |
| Czech Store | Bundle_Web_&_Talk |
| Czech Store | Bundle_Mobile_Office |
| Czech Store | Bundle_Surf_&_Talk |
| (Extendable list of Catalogs) | (Extendable List of ID's) |

Party Repository

Principal SID Entities within the Party Repository: Product, Party, Organization, Individual, and PartyRole.

| Attributes | Display Name | Data Type | Description |
|------------|--------------|-------------|---------------------------------------|
| ProductID | PRODUCTID | String(255) | Unique identifier for current entity. |

| Attributes | Display Name | Data Type | Description |
|-----------------|---------------------------|--------------|--|
| SHORTDESC | Short Description | String(2000) | Description of record entity. |
| RECORD_TYPE | Class | String(35) | Defines record type for current record |
| Name | Name | String(256) | Internal Name |
| SubsetType | SubClass | String(256) | Second level classification |
| LongDesc | Long Description | String(2000) | Long Description |
| Override | Override | Boolean | Override Flag |
| Type | Affinity Type | String(256) | inclusive or exclusive |
| LifeCycleStatus | Record Status | String(255) | Status of Record within (Retired, Active, etc) |
| LOCALE | Locale | String(256) | Locale |
| Language | Primary Language | String(256) | Primary Language |
| telephone | Primary Phone | String(256) | Primary Phone |
| email | Primary Email | String(256) | Primary Email |
| Contact | Primary Contact | String(256) | Primary Contact |
| Address1 | Primary Address 1 | String(256) | Primary Contact |
| Address2 | Primary Address 2 | String(256) | Primary Address 2 |
| City | Primary City | String(256) | Primary City |
| Region | Primary State or Province | String(256) | Primary State or Province |
| PostCode | Primary Post Code | String(256) | Primary Post Code |
| Country | Primary Country | String(256) | |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Party Type

| Value | Display Value | Description |
|--------------|---------------|---|
| Organization | Corporation | A Corporation. May be a subsidiary of another Organization Party Type |
| Role | Role | A group of people |
| Person | Person | Person |

Party Relationships

| Name of Relationship | PartyType Applicable | Relates to | Reverse Relationship Name |
|------------------------------|----------------------|---|------------------------------|
| HasOrgs | Organization | Other Organizations in Party | OrgIn |
| HasPeople | Role, Person | Relates an Organization to Role or People; OR relates a Role to People in Party | PersonIn |
| PartyCompatibleWithSegment | All | Segment | SegmentCompatibleWithParty |
| PartyHasSegment | All | Segment | SegmentForParty |
| PartyIncompatibleWithSegment | All | Segment | SegmentIncompatibleWithParty |

PartyExtension Repository

| Attributes | Display Name | Data Type | Description |
|----------------|----------------------|--------------|-----------------------------------|
| ProductID | PRODUCTID | String(255) | Extension attribute name |
| ProductIDExt | Product ID Extension | String(255) | Related party name |
| SHORTDESC | Short Description | String(2000) | Extension attribute value |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

PartyExtension Type

| Class | Display Value |
|--------------|---------------|
| ORGANIZATION | ORGANIZATION |
| ROLE | ROLE |
| PERSON | PERSON |

PartyExtension Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|----------------------|------------|---------------------------|
| DataForParty | PARTY | PartyHasData |

PlanFragment Repository

| Attributes | Display Name | Data Type | Description |
|---------------------|-----------------------|-------------|--|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for a Plan Fragment |
| PLANFRAGMENTNAME | Plan Fragment Name | String(255) | Identifier or name of process component |
| PLANFRAGMENTVERSION | Plan Fragment Version | String(255) | Version of process component |
| PLANFRAGMENTTYPE | Owner | String(255) | System on which the Plan Fragment is executed. The Attribute group is 'Info' |
| RECORD_TYPE | Class | String(40) | Class of plan fragment. The Default value is 'Process' (for read only) and the Attribute group is 'Info' |
| ERRORHANDLER | Error Handler | String(255) | Error handler to use in case of failure |
| RETRYOVERRIDE | Retry Override | Boolean | Flag to indicate if the engine default values for retry are overridden or not |
| RETRYFAILED | Retry Failed | Boolean | Flag to indicate if the failed plan items should be retried or not |

| Attributes | Display Name | Data Type | Description |
|-----------------|------------------|-------------|--|
| RETRYCOUNT | Retry Count | Integer | Number of times the failed plan item is retried |
| RETRYDELAY | Retry Delay | Integer | Delay in milliseconds between calls when failed plan item is retried |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |
| TYPICALDURATION | Typical Duration | Integer | Typical duration for fulfillment of the plan fragment. |
| MAXIMUMDURATION | Maximum Duration | Integer | Maximum duration for fulfillment of the plan fragment. |

PlanFragment Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|--------------------------|------------|---------------------------|
| PlanFragmentHasMilestone | Milestone | MilestoneForPlanFragment |

Milestone Repository

| Attributes | Display Name | Data Type | Description |
|----------------|------------------|-------------|--|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for a Milestone |
| MILESTONENAME | Milestone Name | String(255) | Name of the Milestone . For instance, 'START' |
| PLANFRAGMENTID | Plan Fragment ID | String(255) | ID of the Plan Fragment to which the Milestone belongs |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Milestone Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|----------------------|------------|---------------------------|
| MilestoneToMilestone | Milestone | DependencyForMilestone |

| Name of Relationship | Relates to | Reverse Relationship Name |
|----------------------|------------|---------------------------|
| MilestoneDependsOn | Milestone | MilestoneFromMilestone |

Action Repository

All the attributes are created under the INFO attribute group type. The attributes for action repository are as follows:

| Attributes | Display Name | Data Type (Length) | Description | Display in Record List | Default Value |
|----------------|---------------------|--------------------|--|------------------------|--|
| ProductID | PRODUCTID | String(255) | Verb used to describe a fulfillment action, for example, Cancel, Cease, Provide , Update | Yes | |
| ShortDesc | Short Description | String(4000) | Information on the action | Yes | |
| Record_Type | Class | String(40) | Classification for Action | Yes | <ol style="list-style-type: none"> 1. PROVIDE 2. CEASE 3. UPDATE 4. CANCEL |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity | NO | |
| CONTAINS | Related Records | String(4000) | Contains | NO | |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. | Yes | |

ProjectTag Repository

| Attributes | Display Name | Data Type | Description |
|------------|--------------|-------------|--|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for a Project Tag Name |

| Attributes | Display Name | Data Type | Description |
|--------------|---------------------|--------------|--|
| Name | Name | String(256) | Project Tag Name |
| Description | Description | String(400) | Project Tag Name description |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity. |
| CONTAINS | Related Records | String(4000) | Contains. |

Category Repository

Attributes and their details for the Category Repository

| Attributes | Display Name | Data Type | Description |
|-----------------|---------------------|--------------|---|
| PRODUCTID | PRODUCT ID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity |
| CONTAINS | CONTAINS | String(4000) | Contains |
| IMP_DATE | IMP_DATE | String(256) | IMP_DATE |
| PROJECTTAGNAME | Project Tag Name | String(4000) | Tag name for repository instance |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |

Migration Repository

Attributes and their details for the Migration Repository

| Attributes | Display Name | Data Type | Description |
|--------------|---------------------|-------------|---|
| PRODUCTID | PRODUCT ID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity |

| Attributes | Display Name | Data Type | Description |
|-----------------|------------------|--------------|----------------------------------|
| CONTAINS | CONTAINS | String(4000) | Contains |
| NAME | Name | String(256) | Name given as an identifier |
| PROJECTTAGNAME | Project Tag Name | String(256) | Tag name for repository instance |
| DESCRIPTION | Description | String(4000) | Description for the record |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |
| STARTDATE | Start Date | Date | Starting Date |
| STARTTIME | Start Time | String(40) | Starting Time |
| ENDDATE | End Date | Date | Ending Date |
| ENDTIME | End Time | String(40) | Ending Time |

Migration Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|---------------------------------|------------|---------------------------------|
| MigrationHasCompatibleSegment | Segment | CompatibleSegmentForMigration |
| ConsequentialProduct | Product | ProductIsConsequenceOfMigration |
| MigrationHasIncompatibleSegment | Segment | IncompatibleSegmentForMigration |
| MigrateToProduct | Product | ProductMigratedTo |

RequiresProduct Repository

Attributes and their details for the Requires Product Repository

| Attributes | Display Name | Data Type | Description |
|-------------------|----------------------|--------------|--|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extensions | String(255) | Auxiliary identifier for current entity |
| CONTAINS | CONTAINS | String(4000) | Contains |
| IMP_DATE | IMP_DATE | String(256) | IMP_DATE |
| PROJECTTAGNAME | Project Tag Name | String(256) | Tag name for repository instance |
| DESCRIPTION | Description | String(4000) | Description for the record |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |
| GROUPMIN | GroupMin | Integer | Minimum value required to fulfill the group. Empty or '-1' defines no limit. |
| GROUPMAX | GroupMax | Integer | Maximum value required to fulfill the group. Empty or '-1' defines no limit. |
| CALCULATEPRODUCTS | CalculatedProducts | Boolean(5) | Calculated Products |
| RELATEDPRODUCTS | RelatedProducts | Boolean(5) | Related Products |
| LINKEDONLY | LinkedOnly | Boolean(5) | Linked Only |
| LINKDEFINITIONS | LinkDefinitions | String(512) | Linked Definitions |

RequiresProduct Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|-----------------------|------------|---------------------------|
| GroupRequiresProducts | Product | ProductRequiredByGroup |

Rule Repository

Attributes and their details for the Rule Repository

| Attributes | Display Name | Data Type | Description |
|----------------------|-----------------------|--------------|---|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity |
| CONTAINS | CONTAINS | String(4000) | Contains |
| NAME | Name | String(512) | Name given as an identifier |
| EXECUTIONPOINT | Execution Point | String(256) | Execution Point |
| DESCRIPTION | Description | String(4000) | Description for the record |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |
| STARTDATE | Start Date | Date | Starting Date |
| STARTTIME | Start Time | String(8) | Starting Time |
| ENDDATE | End Date | Date | Ending Date |
| ENDTIME | End Time | String(8) | Ending Time |
| ACTIONIMPLEMENTATION | Action Implementation | String(512) | Action Implementation |
| IMP_DATE | IMP_DATE | String(256) | IMP_DATE |
| RULEEXECUTION | Rule Execution | String(256) | Rule Execution |
| PROJECTTAGNAME | Project Tag Name | String(256) | Tag name for repository instance |

Rule Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|----------------------|----------------|---------------------------|
| Condition | Rule Condition | ConditionOfRule |
| RuleParameter | Rule Parameter | ParameterOfRule |

RuleCondition Repository

Attributes and their details for the Rule Condition Repository

| Attributes | Display Name | Data Type | Description |
|-------------------------|--------------------------|--------------|---|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity |
| CONTAINS | CONTAINS | String(4000) | Contains |
| CONDITIONNAME | Condition Name | String(400) | Name of the rule condition |
| CONDITIONIMPLEMENTATION | Condition Implementation | String(512) | Condition Implementation |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |
| IMPLEMENTATIONTYPE | Implementation Type | String(12) | The type of implementation for rule condition |
| STARTDATE | Start Date | Date | Starting Date |
| STARTTIME | Start Time | String(8) | Starting Time |
| ENDDATE | End Date | Date | Ending Date |
| ENDTIME | End Time | String(8) | Ending Time |
| PROJECTTAGNAME | Project Tag Name | String(256) | Tag name for repository instance |

RuleCondition Relationships

| Name of Relationship | Relates to | Reverse Relationship Name |
|----------------------|----------------|---------------------------|
| ConditionParameter | Rule Parameter | ParameterOfCondition |

RuleParameter Repository

Attributes and their details for the Rule Parameter Repository

| Attributes | Display Name | Data Type | Description |
|-----------------|---------------------|--------------|---|
| PRODUCTID | PRODUCTID | String(255) | Unique identifier for Project Tag Name |
| PRODUCTIDEXT | Record ID Extension | String(255) | Auxiliary identifier for current entity |
| CONTAINS | CONTAINS | String(4000) | Contains |
| NAME | Name | String(512) | Name given as an identifier |
| VALUE | Value | String(1000) | Value |
| PROJECTTAGNAME | Project Tag Name | String(256) | Tag name for repository instance |
| LIFECYCLESTATUS | Record Status | String(256) | Status of the record |

Relationship Attributes

Relationship Attributes are the attributes that are used to establish the available relationships between the repositories.

Relationship Attributes for ProductHasProvidePlanFragment Relationship

| Attributes | Display Name | Data Type | Description |
|----------------------------|------------------------------|-------------------|---|
| PLANFRAGMENTACTION MODE | Plan Fragment Action Mode | String(255) | For a plan, this is the sub-action for selecting a particular plan. This has no meaning within IPC, however it will be used to further differentiate which plan fragment should be chosen for particular order line configuration |
| AFFINITY | Affinity | Boolean | For a plan this flag indicates if a plan fragment should be affinity grouped |
| AFFINITYTYPE | Affinity Type | String | For a plan this is the type of affinity grouping required |
| AffinityCondition | AffinityCondition | Varcha r(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelatio n | Varcha r(2000) | Xpath expression to specify String used for Affinity Group. |
| AffinityParentGroup | AffinityParentGro up | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGro up | Boolean | Same Action Only (True or False). |
| AffinityActionValue | AffinityActionVal ue | Varcha r(2000) | Xpath expression for an Order Action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for ProductHasUpdatePlanFragment Relationship

| Attributes | Display Name | Data Type | Description |
|----------------------------|------------------------------|-------------|---|
| PLANFRAGMENTACTION MODE | Plan Fragment Action Mode | String(255) | For a plan, this is the sub-action for selecting a particular plan. This has no meaning within IPC, however it will be used to further differentiate which plan fragment should be chosen for particular order line configuration |

| Attributes | Display Name | Data Type | Description |
|---------------------|---------------------|---------------|--|
| AFFINITY | Affinity | Boolean | For a plan this flag indicates if a plan fragment should be affinity grouped |
| AFFINITYTYPE | Affinity Type | String | For a plan this is the type of affinity grouping required |
| AffinityCondition | AffinityCondition | Varchar(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelation | Varchar(2000) | Xpath expression to specify String used for Affinity Group. |
| AffinityParentGroup | AffinityParentGroup | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGroup | Boolean | Same Action Only (True or False). |
| AffinityActionValue | AffinityActionValue | Varchar(2000) | Xpath expression for an Order Action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for ProductHasCeasePlanFragment Relationship

| Attributes | Display Name | Data Type | Description |
|------------------------|---------------------------|---------------|---|
| PLANFRAGMENTACTIONMODE | Plan Fragment Action Mode | String(255) | For a plan, this is the sub-action for selecting a particular plan. This has no meaning within IPC, however it will be used to further differentiate which plan fragment should be chosen for particular order line configuration |
| AFFINITY | Affinity | Boolean | For a plan this flag indicates if a plan fragment should be affinity grouped |
| AFFINITYTYPE | Affinity Type | String | For a plan this is the type of affinity grouping required |
| AffinityCondition | AffinityCondition | Varchar(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelation | Varchar(2000) | Xpath expression to specify String used for Affinity Group. |

| Attributes | Display Name | Data Type | Description |
|---------------------|---------------------|---------------|--|
| AffinityParentGroup | AffinityParentGroup | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGroup | Boolean | Same Action Only (True or False). |
| AffinityActionValue | AffinityActionValue | Varchar(2000) | Xpath expression for an Order Action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for ProductHasCancelPlanFragment Relationship

| Attributes | Display Name | Data Type | Description |
|------------------------|---------------------------|---------------|---|
| PLANFRAGMENTACTIONMODE | Plan Fragment Action Mode | String(255) | For a plan, this is the sub-action for selecting a particular plan. This has no meaning within IPC, however it will be used to further differentiate which plan fragment should be chosen for particular order line configuration |
| AFFINITY | Affinity | Boolean | For a plan this flag indicates if a plan fragment should be affinity grouped |
| AFFINITYTYPE | Affinity Type | String | For a plan this is the type of affinity grouping required |
| AffinityCondition | AffinityCondition | Varchar(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelation | Varchar(2000) | Xpath expression to specify String used for Affinity Group. |
| AffinityParentGroup | AffinityParentGroup | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGroup | Boolean | Same Action Only (True or False). |
| AffinityActionValue | AffinityActionValue | Varchar(2000) | Xpath expression for an Order Action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for ProductHasCustomPlanFragment Relationship

| Attributes | Display Name | Data Type | Description |
|------------------------|---------------------------|---------------|---|
| PLANFRAGMENTACTIONMODE | Plan Fragment Action Mode | String(255) | For a plan, this is the sub-action for selecting a particular plan. This has no meaning within IPC, however it will be used to further differentiate which plan fragment should be chosen for particular order line configuration |
| AFFINITY | Affinity | Boolean | For a plan this flag indicates if a plan fragment should be affinity grouped |
| AFFINITYTYPE | Affinity Type | String | For a plan this is the type of affinity grouping required |
| AffinityCondition | AffinityCondition | Varchar(2000) | Xpath expression for Affinity condition. |
| AffinityCorrelation | AffinityCorrelation | Varchar(2000) | Xpath expression to specify String used for Affinity Group. |
| AffinityParentGroup | AffinityParentGroup | Boolean | Immediate Parent Only (True or False). |
| AffinityActionGroup | AffinityActionGroup | Boolean | Same Action Only (True or False). |
| AffinityActionValue | AffinityActionValue | Varchar(2000) | Xpath expression for an Order Action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for HasCustomPlanFragment Relationship

| Attribute | Display Name | Type | Length | Display in Record List | Search Tab |
|-----------|--------------|--------|--------|------------------------|------------|
| ACTIONID | Action | String | 256 | Yes | No |

Relationship Attributes for MilestoneToMilestone Relationship

| Attributes | Display Name | Data Type | Description |
|----------------|------------------|-------------|---|
| CONDITION | Condition | String | Conditional expression value to evaluate whether or not to include the intermediate milestone dependency. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Additionally, for the various relationships, the following relational attributes are stored on the relationship internally within the Fulfillment Catalog repository. These general relationship attributes further define the exact nature of the relationship between a parent and its children.

| Attributes | Display Name | Data Type | Description |
|----------------------|-------------------|-------------|--|
| RelationshipValue | RelationshipValue | String(255) | Instance Value specific to a particular use of the relationship. |
| GroupMinQty | Minimum Quantity | Integer | Minimum Quantity of Children within the same GroupNumber (if applicable). |
| GroupMaxQty | Maximum Quantity | Integer | Maximum Quantity of Children within the same GroupNumber (if applicable). |
| StartDate | Start Date | Date | Start Date for the relationship to be effective (if applicable). |
| EndDate | End Date | Date | End Date for the relationship to be effective (if applicable). |
| SequenceNumber | SequenceNumber | Decimal | Sequence of provisioning (Provide action) step for this child records (if applicable). |
| CeaseSequenceNumber | Cease Sequence | Decimal | Sequence number for Cease action. |
| UpdateSequenceNumber | Update Sequence | Decimal | Sequence number for Update action. |
| AutoProvision | Auto Provision | Boolean | Autoprovision. |

Relationship Attributes for MilestoneDependsOn Relationship

| Attributes | Display Name | Data Type | Description |
|----------------|------------------|-------------|---|
| CONDITION | Condition | String | Conditional expression value to evaluate whether or not to include the intermediate milestone dependency. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for repository instance. |

Relationship Attributes for ProductComprisedOf Relationship

| Attribute | Display Name | Data Type | Length | Display in Record List | Description |
|----------------|-----------------------|-----------|--------|------------------------|--|
| ActionID | Action | String | 255 | Yes | Include if performing the specified fulfillment action. |
| ProjectTagName | Project Tag Name | String | 256 | Yes | Tag name for repository instance. |
| RelOfferId | Relationship Offer id | String | 4000 | Yes | The ID of the offer for which the product is offered. |
| RecordMinQty | Record Min | Integer | | Yes | Minimum quantity of children related to the productcomprisedof relationship. |
| RecordMaxQty | Record Max | Integer | | Yes | Maximum quantity of children related to the productcomprisedof relationship. |

Relationship Attributes for ProductRequiredFor Relationship

To develop the ProductDependsOn feature, following relationship attributes are added to the ProductRequiredFor relationship.

| Attribute | Display Name | Data Type | Length | Display in Record List | Searchable | Description |
|------------------|-----------------------|-----------|--------|------------------------|------------|---|
| sourceAction | SourceAction | String | 256 | Yes | No | |
| targetAction | TargetAction | String | 256 | Yes | No | |
| OCVValidationReq | OCVValidationReq | Boolean | | Yes | No | |
| ProjectTagName | Project Tag Name | String | 256 | Yes | No | |
| RelOfferId | Relationship Offer id | String | 4000 | Yes | Yes | |
| RecordMinQty | Record Min | Integer | | Yes | No | Minimum quantity of children related to RequiredFor relationship. |
| RecordMaxQty | Record Max | Integer | | Yes | No | Maximum quantity of children related to RequiredFor relationship. |

Relationship Attributes for ProductDependsOn Relationship

| Attribute | Display Name | Data Type | Length | Display in Record List | Searchable |
|----------------|-----------------------|-----------|--------|------------------------|------------|
| sourceAction | SourceAction | String | 256 | Yes | No |
| targetAction | TargetAction | String | 256 | Yes | No |
| ProjectTagName | Project Tag Name | String | 256 | Yes | No |
| RelOfferId | Relationship Offer Id | String | 4000 | Yes | Yes |

Relationship Attributes for CharacteristicCharge Relationship

| Attribute | Display Name | DataType (Length) | Description |
|-------------------|--------------------|-------------------|-------------------------------------|
| RelationshipValue | Relationship Value | String(256) | Relationship Value. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceRequiresCharacteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|-------------------|--------------------|-------------------|-------------------------------------|
| RelationshipValue | Relationship Value | String(256) | Relationship Value. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for CompatibleCharacteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|-------------------|--------------------|-------------------|-------------------------------------|
| RelationshipValue | Relationship Value | String(256) | Relationship Value. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for IncompatibleCharacteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|-------------------|--------------------|-------------------|-------------------------------------|
| RelationshipValue | Relationship Value | String(256) | Relationship Value. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for Characteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|-------------------|--------------------|-------------------|---------------------|
| RelationshipValue | Relationship Value | String(256) | Relationship Value. |

| Attribute | Display Name | DataType (Length) | Description |
|--------------------|---------------------|-------------------|---|
| EvaluationPriority | Evaluation Priority | String(4000) | Evaluation Priority. |
| ActionID | Action | String(255) | Include if performing the specified fulfillment action. |
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceComprisedOf Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceGovernedBy Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceRequiresCharacteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceRequiresParty Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceRequiresProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for AllowanceRequiresSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for CharacteristicComprisedOf Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for HasDatatype Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountComprisedOf Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountGovernedBy Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountRequiresCharacteristic Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountRequiresParty Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountRequiresProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DiscountRequiresSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for HasOrgs Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for HasPeople Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PartyCompatibleWithSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PartyHasSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PartyIncompatibleWithSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for DataForParty Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|-----------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PlanFragmentHasMilestone Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|-----------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PolicyRuleComprisedOf Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|-----------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PolicyRuleRequiresCharacteristic Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|-----------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PolicyRuleRequiresParty Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|-----------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PolicyRuleRequiresProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PolicyRuleRequiresSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceAlteredByAllowance Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceAlteredByDiscount Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceComprisedOf Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceGovernedBy Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceRequiresParty Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceRequiresProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for PriceRequiresSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for CompatibleParty Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for CompatibleProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|-----------------------|-------------------|---|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |
| RelOfferId | Relationship Offer id | String(4000) | The ID of the offer for which the product is offered. |

Relationship Attributes for CompatibleSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|-----------------------|-------------------|---|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |
| RelOfferId | Relationship Offer id | String(4000) | The ID of the offer for which the product is offered. |

Relationship Attributes for IncompatibleParty Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for IncompatibleProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|-----------------------|-------------------|---|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |
| RelOfferId | Relationship Offer id | String(4000) | The ID of the offer for which the product is offered. |

Relationship Attributes for IncompatibleSegment Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|-----------------------|--------------------|---|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |
| RelOfferId | Relationship Offer id | String(4000) | The ID of the offer for which the product is offered. |

Relationship Attributes for OfferingPublishedInCatalog Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|--------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for ProductGovernedBy Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|--------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for ProductPricedBy Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|--------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(256) | Tag name for relationship instance. |

Relationship Attributes for Category Relationship

| Attribute | Display Name | Data Type (Length) | Description |
|----------------|------------------|--------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for ProductGovernedByRule Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for ProductToMigrate Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for MigrationHasCompatibleSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for ConsequentialProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for MigrationHasIncompatibleSegment Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for MigrateToProduct Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for GroupRequiresProducts Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for Condition Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for RuleParameter Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Relationship Attributes for ConditionParameter Relationship

| Attribute | Display Name | DataType (Length) | Description |
|----------------|------------------|-------------------|-------------------------------------|
| ProjectTagName | Project Tag Name | String(4000) | Tag name for relationship instance. |

Sample Data Examples with the Fulfillment Catalog Telco Data Model

The following screen shots illustrate key data concepts of the Fulfillment Catalog Data Model in a *real-world* scenario, based on the TIBCO Telco Product Catalog structure.

Segment Data

Segment data represent Business Entities outside of the Product Catalog domain that may be used to define rule conditions for a Product Offering, Price, or Policy Rule.

The list of defined Market Segments (Consumer, Corporate, SME)

Repository Name
SEGMENT

SEGMENT_CLASS > MARKET
[View All](#)

Create Record Modify Copy Compare Show History Quick Export

| | PRODUCTID | Product ID Extension | Project Tag Name |
|--------------------------|-----------|----------------------|------------------|
| <input type="checkbox"/> | Consumer | | |
| <input type="checkbox"/> | Corporate | | |
| <input type="checkbox"/> | SME | | |

Segments are used to define conditions for Products or Prices. Tariff "TA_000017" is available to Post paid, Corporate, or SME Customers only

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

TA_000017

ProductPricedBy
ProductRequiredForDis
ProductComprisedOf
ProductRequiredFor
ProductGovernedByRu
CompatibleWithProduct
ComprisingProduct
CompatibleSegment
IncompatibleCharacteri
ProductMigratedTo

TA_000017 > CompatibleSegment
Relationship Name
Repository Name

CompatibleSegment
SEGMENT

Quick Export Show Errors

| | PRODUCTID | Product ID Extension | Project Tag Name | Project Tag Name | Relationship Offer id |
|--------------------------|-----------|----------------------|------------------|------------------|-----------------------|
| <input type="checkbox"/> | Corporate | | | | |
| <input type="checkbox"/> | PostPaid | | | | |
| <input type="checkbox"/> | SME | | | | |

Product Data

From a data modeling perspective, Products are broken into Product Offerings, Composite Products, and Components. A Component can be a physical device, a Tariff, Options or Services that a Customer might have.

Components can have any number of Characteristics or Features that define the Component's capabilities. Components can be classified by an extensible Class and Subclass. The following examples demonstrate common types of components: Device, Tariffs, Services, and Options. Further classes can always be added to meet new product requirements.

Recursive levels of Product Data

As stated above, a top level logical distinction of a Product Offering may contain one or many Composite Products and/or one or many Components. The data model itself allows for any of these entities to be recursively nested to any number of Component levels. This means that a Component may be composed of a lower level of Components, which in turn may be composed of still lower level components. A simple example can be a Device component, for example, Modem, composed of two lower level (and mutually exclusive as a choice) Option components (Self Install versus Installation Service). The data model allows further levels of componentization (for example, the Self Install

Component, might be comprised of an "IP Address Provisioning Component" and a "Service Start Component".

An example list of different components, product offerings (bundles), and composite products. The classification type can be extended at any time to classify additional components.

Browse and Search

Repository Name
PRODUCT

COMPONENT_CLASS > DEVICE
[View All](#)

Create Record Modify Copy Compare Show History Quick Export

| | PRODUCTID | Class | Short Description | Owner | Project Tag Name |
|--------------------------|-----------------------|--------|-----------------------|-------|------------------|
| <input type="checkbox"/> | ASDL_Modem | DEVICE | ASDL_Modem | | |
| <input type="checkbox"/> | BPO_DUO | DEVICE | BPO_DUO | | |
| <input type="checkbox"/> | Modem_Self_Service | DEVICE | Modem_Self_Service | | |
| <input type="checkbox"/> | Modem_install_Service | DEVICE | Modem_install_Service | | |

Devices or Hardware

A Modem with optional services underneath (install options).

The Modem has the characteristic of providing ADSL capability.

Devices / Hardware

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

ASDL_Modem > ProductComprisedOf
Relationship Name ProductComprisedOf

Quick Export Show Errors

| | PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use | Offer Id | IsTemplate |
|--------------------------|-----------------------|--------|-----------------------|-------|------------------|------------|----------|------------|
| <input type="checkbox"/> | Modem_Self_Service | DEVICE | Modem_Self_Service | | | Technical | 1 | |
| <input type="checkbox"/> | Modem_install_Service | DEVICE | Modem_install_Service | | | Technical | 1 | |

Tariffs

Products can express compatibilities with other Products or Characteristics. Tariffs, for instance can be defined to be compatible with characteristics.

In this manner Tariffs need not be tied to a list of distinct devices, but may instead be declared as compatible with any device that provides a specific characteristic. In this example, the Fixed Line Flat Tariff is defined to be compatible with any device that provides ADSL capability:

Tariffs

View Record

The screenshot shows the 'View Record' interface for a tariff named 'Tariff_Fixed_Line_Flat'. The left sidebar contains a tree view of various relationship types, with 'CompatibleCharacteristic' selected. The main area displays the record details for this relationship. At the top, it shows the 'Relationship Name' as 'CompatibleCharacteristic' and the 'Repository Name' as 'CHARACTERISTIC'. Below this, there are buttons for 'Quick Export' and 'Show Errors'. A table lists the record details:

| PRODUCTID | Class | Is this Feature Chargeable | Record Status | Project Tag Name | Relationship Value | Project Tag Name |
|-----------|---------|----------------------------|---------------|------------------|--------------------|------------------|
| ADSL | Feature | true | ACTIVE | | | |

At the bottom right, it indicates 'Page 1 of 1'.

Services

Services are standalone optional services offered to a customer. Often they modify a usage charge a customer already has from a Tariff, or they may represent new services charged separately.

In the example below, the Service Product is modeled below, with the associated billing charge defined by the PRODUCTPRICEDBY relationship.

Services Relationship

View Record

The screenshot shows the 'View Record' interface for a service product named '40_SMS_Price'. The left sidebar contains a tree view of various relationship types, with '40_SMS_Price' selected. The main area displays the record details for this product. At the top, it shows the 'Repository Name' as 'PRICE' and the 'Version Number' as '2 Confirmed'. Below this, there are buttons for 'Show Errors'. A table lists the record details:

| PRODUCTID | Class | Product ID Extension | SubClass | Commercial Name |
|--------------|-------|----------------------|----------|-----------------|
| 40_SMS_Price | FIXED | 40_SMS_Price | | 40SMS |

The Charge for the service is defined below. Note that the fixed charge of 5 Euros applies to the first 40 SMS messages, as defined by the "Charge From" and "Charge To" parameters. Also note that the Charge Priority of 1 means that this price overrides any other SMS charges that the customer may have on any other Tariffs:

The screenshot shows the 'View Record' interface for a service product named '40_SMS_Price', specifically the 'Charge' tab. The left sidebar contains a tree view of various relationship types, with '40_SMS_Price' selected. The main area displays the record details for this product. At the top, it shows the 'Repository Name' as 'PRICE' and the 'Version Number' as '2 Confirmed'. Below this, there are buttons for 'Show Errors'. A table lists the record details:

| PRODUCTID | Class | Product ID Extension | SubClass | Commercial Name |
|--------------|-------|----------------------|----------|-----------------|
| 40_SMS_Price | FIXED | 40_SMS_Price | | 40SMS |

Below the table, there are fields for 'Short Description' and 'Long Description', both containing the text 'Pack of 40 For fixed price'. There are also fields for 'Start Date', 'End Date', and 'Duration'.

| | | | | |
|--|--------------|----------------------|-----------|-------------|
| Repository Name | PRICE | Version Number | 2 | Show Errors |
| PRODUCTID | 40_SMS_Price | State | Confirmed | |
| Product ID Extension | | | | |
| <div> INFODETAILSChargeINTERNALSystemMigrationClassifications </div> | | | | |
| Usage | SMS | Charge Amount | 5.00 | |
| Per | usage | Charge From | 1.00 | |
| Charge To | 40.00 | Charge Priority | 1.00 | |
| Charge Frequency | | Charge Frequency UOM | | |
| Charge Per | | Charge Per UOM | | |
| Currency | | Min Amount | | |

Product

Product represent bundled Products that can be offered or sold to customers.

At the basic level, a Product contains other Products, and can then be further refined to express compatibility or other requirements for the bundle as a whole:

View Record

ModifyRestoreCompareShow HistoryShow UsageSend MessageDelete Related Records

Perspective
None

Bundle_Web_and_Talk

- ProductPricedBy
- ProductRequiredForDis
- ProductComprisedOf
- ProductRequiredFor
- ProductGovernedByRu
- CompatibleWithProduct
- ComprisingProduct
- CompatibleSegment
- IncompatibleCharacteri
- ProductMigratedTo
- Category
- OfferingPublishedInCat
- ProductToMigrate
- IncompatibleParty
- ProductDependsOn
- ProductGovernedBy
- CompatibleProduct
- IncompatibleProduct
- ProductRequiredForPri
- ProductsConsequence
- ProductRequiredForAlk

Repository NamePRODUCTPRODUCTIDProduct ID Extension

Bundle_Web_and_Talk

Version Number1Confirmed

INFODETAILSINTERNALSystemhiddenAffinity GroupClassifications

PRODUCTIDBundle_Web_and_Talk

UOM

Class NameBUNDLE

SubClassTariffGroup

Short DescriptionBundle_Web_and_Talk Web and Talk Bundle

Long Description

This is a bundle that combines flat rate fixed inventory (which is available on a stand-alone basis as well) and a ADSL based web surf flat rate with variable bandwidth

SingleUse

MustComplete

true

Concurrent Order

Owner

Project Tag Name

Record Use

Commercial

Offer Id

2

IsTemplate

View Record

ModifyRestoreCompareShow HistoryShow UsageSend MessageDelete Related Records

Perspective
None

Bundle_Web_and_Talk

- ProductPricedBy
- ProductRequiredForDis
- ProductComprisedOf
- ProductRequiredFor
- ProductGovernedByRu
- CompatibleWithProduct
- ComprisingProduct
- CompatibleSegment
- IncompatibleCharacteri

Bundle_Web_and_Talk > ProductComprisedOf

Relationship NameProductComprisedOf

Quick ExportShow Errors

| | PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use | Offer Id | IsTemplate |
|--------------------------|------------------------|--------|--------------------------|-------|------------------|------------|----------|------------|
| <input type="checkbox"/> | Tariff_ADSL | TARIFF | Basic ADSL Tariff charge | | | Commercial | 1 | |
| <input type="checkbox"/> | Tariff_Fixed_Line_Flat | TARIFF | Fixed Line Flat | | | Commercial | 4 | |

Composite Products and Complex Product Offerings

Products may also be composites of other products. In this example three Composite Groups have been created that is used later in a more complex Product Offering Bundle:

Browse and Search

Repository Name
PRODUCT

COMPONENT_CLASS > COMPOSITE

View All

Create Record Modify Copy Compare Show History Quick Export

| PRODUCTID | Class | Short Description | Owner | Project Tag Name |
|-----------------------|-----------|-----------------------|-------|------------------|
| Group_Mobile_Office_A | COMPOSITE | Group_Mobile_Office_A | | |
| Group_Mobile_Office_B | COMPOSITE | Group_Mobile_Office_B | | |
| Group_Mobile_Office_C | COMPOSITE | Group_Mobile_Office_C | | |

The Group Mobile Office A is comprised of a selection of Tariffs, a Device, and an entire Bundled Product Offering:

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

Group_Mobile_Office_A

ProductPricedBy
ProductRequiredForDis
ProductComprisedOf
Bundle_Web_and_T
Mail_pager
Tariff_B
Tariff_C
Tariff_G
ProductRequiredFor

Group_Mobile_Office_A > ProductComprisedOf
Relationship Name ProductComprisedOf

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use |
|---------------------|--------|--------------------------------|-------|------------------|------------|
| Bundle_Web_and_Talk | BUNDLE | Web and Talk Bundle | | | Commercial |
| Mail_pager | BUNDLE | Basic mail pager | | | Commercial |
| Tariff_B | TARIFF | This is a talk and more tariff | | | Commercial |

The composite groups themselves are not sellable offerings, but they are then used to define a more complex Product Offering (Mobile Office Bundle consists of three separate packages, represented by Groups A, B, and C). Note that at any level, additional compatibility or other rules may be added to further define the conditions for offering/purchasing the product:

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

Bundle_Mobile_Office

ProductPricedBy
ProductRequiredForDis
ProductComprisedOf
Group_Mobile_Office
Group_Mobile_Office
Group_Mobile_Office
ProductRequiredFor
ProductGovernedByRu
CompatibleWithProduct

Bundle_Mobile_Office > ProductComprisedOf
Relationship Name ProductComprisedOf

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use |
|-----------------------|-----------|-----------------------|-------|------------------|------------|
| Group_Mobile_Office_A | COMPOSITE | Group_Mobile_Office_A | | | All |
| Group_Mobile_Office_B | COMPOSITE | Group_Mobile_Office_B | | | All |
| Group_Mobile_Office_C | COMPOSITE | Group_Mobile_Office_C | | | All |

An expanded view of the sub-component within the Composite component "Group_Mobile_Office_A" of the Bundle component "Mobile Office Bundle":

Group_Mobile_Office_A > ProductComprisedOf

Relationship Name: ProductComprisedOf

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use |
|---------------------|--------|--------------------------------|-------|------------------|------------|
| Bundle_Web_and_Talk | BUNDLE | Web and Talk Bundle | | | Commercial |
| Mail_pager | BUNDLE | Basic mail pager | | | Commercial |
| Tariff_B | TARIFF | This is a talk and more tariff | | | Commercial |

Extensibility - Adding a new Product Component

The Telco Product Catalog is designed to be flexible to support future sellable products and offerings. Logically the Product Catalog is divided into Product, Composite Products, and Components.

Components are further classified by Class Type. Common Component Classes include Device, Tariffs, and Services. Entirely new classifications may be created and added to support future device or service classifications. *In the following example, a new generic "Component" classification has been added to the list of Component Types:*

Repository Name

PRODUCT

COMPONENT_CLASS Compon

- Unclassified Records
- HARDWARE HARDWARE
- DEVICE DEVICE
- BUNDLE BUNDLE
- COMPOSITE COMPOSITE
- SERVICE SERVICE
- TARIFF TARIFF

Components and Product Hierarchies

Any new component represents a logical classification, and components may be built up from other components (for example, a Device component might be composed of other Device components). It is important to note, therefore, that the list of component classifications does *not* represent the number of levels allowed when creating a product offering, it merely represents common classifications of a component. To state things more succinctly, the complexity of the products you model is not limited by the TIBCO MDM Telco data model, for example, you can have a Product Offering consisting of any number of components, that in turn may be built up by other components, recursing down to however many levels of componentization you desire.

New components can then immediately be created and maintained within the Catalog, classified by the new classification (in this example the new component class is a generic "Component"):

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Repository Name: PRODUCT
 PRODUCTID: HAUS_CONVERGENCE_PRODUCT
 Version Number: 1
 State: Confirmed

Product ID Extension

INFO DETAILS INTERNAL System hidden Affinity Group Classifications

PRODUCTID: HAUS_CONVERGENCE_PRODUCT
 UOM: SERVICE
 SubClass: Haus Convergence Product
 Short Description: Haus Convergence Product

Long Description: Haus Convergence Product
 SingleUse: SingleUse

MustComplete: true
 Owner: Concurrent Order
 Project Tag Name: Project Tag Name

Record Use: Technical
 Offer Id: 2

IsTemplate

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

HAUS_CONVERGENCE_PRODUCT > ProductComprisedOf
 Relationship Name: ProductComprisedOf

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use | Offer Id | IsTemplate |
|------------|----------|-------------------------------------|-------|------------------|------------|----------|------------|
| 3G_Router | HARDWARE | 3G speeds router for mobile devices | | | Technical | 1 | |
| ASDL_Modem | DEVICE | ASDL_Modem | | | Technical | 2 | |

Price

The Product Catalog stores ProductPrice, Simple, Price Group (or Price Matrix), and Tariff Usage Charge information.

The following image displays the various tariff charges that are modeled and linked to the appropriate Product Component.

An example classification list of price entities:

Browse and Search

Repository Name: PRICE

PRICE_CLASS Price Class

- Unclassified Records
- FIXED FIXED
- TARIFFUSAGE TARIFFUSAGE
- USAGE USAGE
- RECURRING RECURRING**
- COMPOSITE COMPOSITE

PRICE_CLASS > RECURRING
[View All](#)

Create Record Modify Copy Compare Show History Quick I

| PRODUCTID | Product ID Extension | Class | Project Tag Name | Usage |
|-----------|----------------------|-----------|------------------|-------|
| PI_000001 | | RECURRING | | |
| PI_000002 | | RECURRING | | |
| PI_000015 | | RECURRING | | |
| PI_000017 | | RECURRING | | |

Simple Price

A simple price or usage charged is defined as Product Offering Price record. In the case of a Usage Charge, the type of usage is captured in order to match the usage fee to the feature being used:

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Repository Name: PRICE Charge_Group_A Version Number: 2 State: Confirmed

Product ID Extension: Charge_Group_A

Product ID Class: Charge_Group_A

Product ID SubClass: TARIFFUSAGE

Product ID Commercial Name: Charge Group for Tariff A

Product ID Project Tag Name: Charge Group for Tariff A

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Repository Name: PRICE Charge_Group_A Version Number: 2 State: Confirmed

Product ID Extension: Charge_Group_A

Product ID Class: Charge_Group_A

Product ID SubClass: TARIFFUSAGE

Product ID Commercial Name: Charge Group for Tariff A

Product ID Project Tag Name: Charge Group for Tariff A

Usage Per: Charge Amount

Charge To: Charge From

Charge Frequency: Charge Priority

Charge Per: Charge FrequencyUOM

Currency: ChargePerUOM

MinAmount: MinAmount

Modify Restore Compare Show History Show Usage Send Message

Perspective: None

MMS - Charge_Group_A > CharacteristicCharge

Relationship Name: CharacteristicCharge

Repository Name: CHARACTERISTICCHARGE

Quick Export Show Errors

| PRODUCTID | Class | Is this Feature Chargeable |
|-----------|---------|----------------------------|
| MMS | Feature | true |

Composite Pricing

More often, usage charges define a range of pricing based on number of uses, type of use, or other factors.

Such groupings are represented by composite charges:

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

SMS - Charge_Group_A

Repository Name: PRICE Charge_Group_A Version Number: 4 State: Confirmed

Product ID Extension: Charge_Group_A

Product ID Class: SMS COMPOSITE

Product ID SubClass: SMS charge for Tariff A

Product ID Commercial Name: SMS charge for Tariff A

Product ID Project Tag Name: SMS charge for Tariff A

SMS - Charge_Group_A > PriceComprisedOf

Relationship Name: PriceComprisedOf

| PRODUCTID | Product ID Extension | Class | Usage | Charge Amount |
|-----------|----------------------|-----------|-------|---------------|
| SMS | Charge_Group_A_1 | COMPOSITE | SMS | .10 |
| SMS | Charge_Group_A_2 | COMPOSITE | SMS | .05 |

Composite Pricing Detail

The price breakdown for each tier is often defined by segmentation.

In this example different charge amounts are applied depending on the network usage (seen in the PRICEREQUIRESSEGMENT relationships, a charge of .10 cents is applied for Fixed National or other mobile networks, versus .05 for SMS messaging on own network):

Charge Group A Detail

SMS - Charge_Group_A_1

| Repository Name | PRICE | Version Number | State |
|----------------------|------------------|----------------|-----------|
| PRODUCTID | SMS | 2 | Confirmed |
| Product ID Extension | Charge_Group_A_1 | | |

| PRODUCTID | Class | Product ID Extension | SubClass |
|------------------|---|----------------------|----------|
| SMS | COMPOSITE | Charge_Group_A_1 | |
| Name | SMS Charge per Traff A - Own mobile Network | | |
| Project Tag Name | | | |

SMS - Charge_Group_A_1

| Repository Name | PRICE | Version Number | State |
|----------------------|------------------|----------------|-----------|
| PRODUCTID | SMS | 2 | Confirmed |
| Product ID Extension | Charge_Group_A_1 | | |

| Usage | Charge Amount |
|--------------------|---------------|
| SMS | .10 |
| Charge From | |
| Charge Priority | |
| ChargeFrequencyUOM | |
| ChargePerUOM | |
| MinAmount | |

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

SMS - Charge_Group_A_1 > PriceRequiresSegment

Relationship Name PriceRequiresSegment
Repository Name SEGMENT

Quick Export Show Errors

| | PRODUCTID | Product ID Extension | Project Tag Name | Project Tag Name |
|--------------------------|---------------|----------------------|------------------|------------------|
| <input type="checkbox"/> | FixedNational | | | |
| <input type="checkbox"/> | Roaming | | | |

Charge Group A 2 Detail

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

SMS - Charge_Group_A_2

Repository Name PRICE
PRODUCTID SMS
Product ID Extension Charge_Group_A_2
Version Number 2
State Confirmed

INFO DETAILS Charge INTERNAL System Migration

| PRODUCTID | SMS | Product ID Extension | Charge_Group_A_2 |
|------------------|--|----------------------|--|
| Class | COMPOSITE | SubClass | Usage |
| Name | SMS Charge for Tariff A - Own Mobile Network | Commercial Name | SMS Charge for Tariff A - Own Mobile Network |
| Project Tag Name | | | |

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective
None

SMS - Charge_Group_A_2

Repository Name PRICE
PRODUCTID SMS
Product ID Extension Charge_Group_A_2
Version Number
State

INFO DETAILS Charge INTERNAL System Migration

| Usage | SMS | Charge Amount | .05 |
|-----------------|-------|--------------------|-----|
| Per | Usage | Charge From | |
| Charge To | | Charge Priority | |
| ChargeFrequency | | ChargeFrequencyUOM | |
| ChargePer | | ChargePerUOM | |
| Currency | | MinAmount | |

SMS - Charge_Group_A_2 > PriceRequiresSegment

Relationship Name: PriceRequiresSegment
Repository Name: SEGMENT

Quick Export Show Errors

| PRODUCTID | Product ID Extension | Project Tag Name | Project Tag Name |
|------------|----------------------|------------------|------------------|
| Own_Mobile | Network | | |

Tariff Usage Group

For PRICE that represent the charge information for Tariffs, each Price record is further grouped into a Tariff Usage class.

This lets any number of complex charge information to be easily linked to the appropriate Tariff.

In the example below, Charge Group A is linked to the Product Tariff A (seen in the PRICEOF relationship link).

Tariff A charges are comprised of a flat Monthly Tariff Charge, along with charges applied to Voice, SMS, and MMS usage:

View Record

Charge_Group_A > PriceComprisedOf > Tariff_Charge - Charge_Group_A

Repository Name: PRICE
PRODUCTID: Tariff_Charge
Product ID Extension: Charge_Group_A

Version Number: 2
State: Confirmed

INFO DETAILS Charge INTERNAL System Migration Classifications Relationship Attributes

| PRODUCTID | Class Name | Project Tag Name | Product ID Extension | SubClass | Commercial Name | Charge_Group_A |
|-----------|------------|------------------|----------------------|----------|-----------------|----------------|
| | FIXED | | | | | Charge_Group_A |

View Record

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Charge_Group_A > PriceComprisedOf

Relationship Name: PriceComprisedOf

Quick Export Show Errors

| PRODUCTID | Product ID Extension | Class | Usage | Charge Amount | Currency | Project Tag Name | Project Tag Name |
|---------------|----------------------|-----------|--------|---------------|----------|------------------|------------------|
| MMS | Charge_Group_A | USAGE | MMS | 20.00 | | | |
| SMS | Charge_Group_A | COMPOSITE | SMS | .10 | | | |
| Tariff_Charge | Charge_Group_A | FIXED | Tariff | 10.00 | | | |
| Voice | Charge_Group_A | COMPOSITE | | | | | |

Page 1 of 1

Party Data

Simple Corporate Hierarchy:

Repository Name: PRODUCTID
Product ID Extension

PARTY: TeleCo

Version Number: 1
State: Confirmed

Show Errors

INFO INTERNAL DETAILS Unassigned System Classifications

PRODUCTID Short Description: TeleCo HQ

Product ID Extension Class: ORGANIZATION

Name Long Description: TeleCo Company Large TeleCo Company

SubClass Override

Override Type

Project Tag Name

Browse and Search

Repository Name: PARTY

Create Classification Scheme Search Text Search Configure

PARTY CLASSIFICATION > ORGANIZATION

View All

Create Record Modify Copy Compare Show History Quick Export Delete Record Update/Resolve Relationship Tag Hierarchy Management

| PRODUCTID | Name | Override | Override Type | Project Tag Name |
|-----------|-------------------|----------|---------------|------------------|
| TeleCo | TeleCo Company | | | |
| TeleCo-EU | TeleCo Company EU | | | |
| TeleCo-NA | TeleCo Company NA | | | |

Additional Class type for PRICE - Corporate Framework Agreement

The following is the additional definition of 'Corporate Framework Agreement' as a Class Type for PRICE. It represents a top-level Price Plan that may apply to a Party or Several Parties.

The Corporate Framework Agreement can have lower level (child) price elements describing any combination of special product pricing relevant only to the Party, particular subsidiaries or Roles/People specified.

| Value | Display Value | Description |
|-------------------------------|-------------------------------|---|
| Corporate Framework Agreement | Corporate Framework Agreement | Top-Level Price Plan associated with a Party Entity. May have child price plans to further describe prices for the associated Party or Parties. |

Corporate Framework Agreement Definition

A Corporate Framework Agreement is designed to be the top-level record that describes a complete set of price lists and product offerings available to a Party (Corporation), describing global discounts and product price lists, as well as any specific price/product lists for the corporation's subsidiaries and or employee roles (for example, special price lists/product lists for Senior Management).

By definition it is designed to ALWAYS require a Party or Parties to apply to.

Together with the Party Entity, the Corporate Framework agreement is a complex object describing entire price agreements for Corporations.

Corporate Framework Agreements - PRICE Class

The screens describe the creation of a Corporate Framework Agreement (CFA) for the fictional corporation, ACME Worldwide. The major price agreement examples are:

- Defining the Corporate Framework Agreement and applying it to ACME Worldwide.
- Adding Child Price entities in two equally valid ways:
 - Adding specific price entities for ACME worldwide that identify negotiated fixed prices for products in the ProductOffering repository.
 - Alternatively using standard price entities (for example, non-ACME, generic price entities) and applying ACME-specific price discount entities.
- Creating a specific price object that applies only to an ACME subsidiary or Employee Role.
- The modeling described in the above bullet points may be created ad infinitum to create as many specific price objects necessary to fully describe a complete CFA.

Scenario

ACME Worldwide CFA agreement calls for the following:

For ACME Worldwide and all Subsidiaries the following has been agreed:

- SMS usage is a flat 5 cents per SMS message for all employees.
- A 10% discount off the standard price will apply if an employee purchases any from a list of specified devices.
- Voice usage charges will be charged at a 10% Discount against the Standard Tariff A price.
- Senior Management may purchase any GSM device for free.

Example 1

ACME Worldwide, is a multi-subsidiary Corporation modeled with 2 subsidiaries and 2 Employee Roles as displayed:

View Record

ModifyRestoreCompareShow HistoryShow UsageSend MessageDelete Related Records

PerspectiveNone

ACME_Worldwide

PartyIncompatibleWithSegment

PartyHasData

PersonIn

PartyRequiredForDiscount

PartyCompatibleWithSegment

PartyRequiredForPrice

PartyRequiredForPolicyRule

PartyRequiredForAllowance

OrgIn

PartyHasSegment

CompatibleProductForParty

IncompatibleWithParty

HasOrgs

ACME_EU

ACME_NA

HasPeople

Admin - ACME_Worldwide

Senior_Management - ACME_Worldwide

ACME_Worldwide > HasOrgs

Relationship NameHasOrgs

Quick ExportShow Errors

| PRODUCTID | Name | Locale | Override | Override Type | Project Tag Name | Project Tag Name |
|-----------|---------|--------|----------|---------------|------------------|------------------|
| ACME_EU | ACME_EU | | | | | |
| ACME_NA | ACME_NA | | | | | |

Let us create a simple Corporate Framework Agreement for ACME.

The Top Level Corporate Framework Agreement is created as a "container" and associated with the Party "ACME Worldwide": The CFA class does not normally specify pricing, as it is meant to group more complex price objects underneath it.

Repository NamePRICEVersion NumberShow Errors

PRODUCTIDCFA_12

Product ID ExtensionACME AgreementStateConfirmed

INFODETAILSChargeINTERNALSystemMigrationClassifications

PRODUCTID

Class

Name

Project Tag Name

CFA_1

Corporate Framework Agreement

ACME Agreement

Product ID Extension

SubClass

Commercial Name

ACME Agreement

CFA_1 - ACME Agreement > PriceRequiresParty > ACME_Worldwide

Repository NamePARTY

PRODUCTIDACME_Worldwide

Product ID ExtensionVersion NumberShow Errors

State1Confirmed

INFOINTERNALDETAILSUnassignedSystemClassificationsRelationship Attributes

PRODUCTID

Short Description

Name

Long Description

Override Type

ACME_Worldwide

ACME Worldwide

Product ID Extension

Class

SubClass

Override

Project Tag Name

ORGANIZATION

| | | | | |
|----------------------|-----------|----------------|-----------|-------------|
| Repository Name | PRICE | Version Number | 2 | Show Errors |
| PRODUCTID | GSM_Price | State | Confirmed | |
| Product ID Extension | | | | |

| | | | | | | |
|------|---------|--------|----------|--------|-----------|-----------------|
| INFO | DETAILS | Charge | INTERNAL | System | Migration | Classifications |
|------|---------|--------|----------|--------|-----------|-----------------|

| | | | |
|-----------------|----------|--------------------|-------|
| Usage | One-Time | Charge Amount | 50.00 |
| Per | | Charge From | |
| Charge To | | Charge Priority | |
| ChargeFrequency | | ChargeFrequencyUOM | |
| ChargePer | | ChargePerUOM | |
| Currency | | MinAmount | |

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

GSM_Price

- PriceGovernedByRule
- PriceRequiresParty
- PriceRequiresCharacteristic
- Characteristic Charge
- PriceAlteredByAllowance
- PriceGovernedBy
- PriceOf**
 - GSM_E220
 - GSM_E270
 - GSM_E870
 - GSM_OPT_GT
 - GSM_OPT_GTEXP
- PriceRequiresSegment
- PriceComprisedOf
- ComprisingPrice
- PriceRequiresProduct
- PriceRequiresProductGroup
- PriceAlteredByDiscount

GSM_Price > PriceOf

Relationship Name: PriceOf

Repository Name: PRODUCT

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use | Project Tag Name |
|------------|----------|-------------------|-------|------------------|------------|------------------|
| GSM_E220 | HARDWARE | GSM_E220 | | | Technical | |
| GSM_E270 | HARDWARE | GSM_E270 | | | Technical | |
| GSM_E870 | HARDWARE | GSM_E870 | | | Technical | |
| GSM_OPT_GT | HARDWARE | GSM_OPT_GT | | | Technical | |

Page

Standard Price for Wireless router, no Discount specified:

| | | | | |
|----------------------|-----------------------|----------------|-----------|-------------|
| Repository Name | PRICE | Version Number | 2 | Show Errors |
| PRODUCTID | Price_Wireless_Router | State | Confirmed | |
| Product ID Extension | | | | |

| | | | | | | |
|------|---------|--------|----------|--------|-----------|-----------------|
| INFO | DETAILS | Charge | INTERNAL | System | Migration | Classifications |
|------|---------|--------|----------|--------|-----------|-----------------|

| | | | |
|------------------|---------------------------------|----------------------|---------------------------------|
| PRODUCTID | Price_Wireless_Router | Product ID Extension | Wireless Router Device |
| Class | ONE-TIME | SubClass | Price \ VERDE Wireless N Router |
| Name | Price \ VERDE Wireless N Router | Commercial Name | |
| Project Tag Name | | | |

| | | | | |
|----------------------|-----------------------|----------------|-----------|-------------|
| Repository Name | PRICE | Version Number | 2 | Show Errors |
| PRODUCTID | Price_Wireless_Router | State | Confirmed | |
| Product ID Extension | | | | |

| | | | | | | |
|------|---------|--------|----------|--------|-----------|-----------------|
| INFO | DETAILS | Charge | INTERNAL | System | Migration | Classifications |
|------|---------|--------|----------|--------|-----------|-----------------|

| | | | |
|-----------------|----------|--------------------|-------|
| Usage | One-Time | Charge Amount | 80.00 |
| Per | | Charge From | |
| Charge To | | Charge Priority | |
| ChargeFrequency | | ChargeFrequencyUOM | |
| ChargePer | | ChargePerUOM | |
| Currency | | MinAmount | |

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Price_Wireless_Router

- PriceGovernedByRule
- PriceRequiresParty
- PriceRequiresCharacteristic
- Characteristic Charge
- PriceAlteredByAllowance
- PriceGovernedBy
- PriceOf**
 - Wireless_Router
- PriceRequiresSegment
- PriceComprisedOf
- ComprisingPrice
- PriceRequiresProduct
- PriceRequiresProductGroup
- PriceAlteredByDiscount

Price_Wireless_Router > PriceOf

Relationship Name: PriceOf

Repository Name: PRODUCT

Quick Export Show Errors

| PRODUCTID | Class | Short Description | Owner | Project Tag Name | Record Use | Project Tag Name |
|-----------------|----------|-------------------------|-------|------------------|------------|------------------|
| Wireless_Router | HARDWARE | VERDE Wireless N Router | | | Technical | |

Page

Creating a specific ACME Price Discount object

We now create a Price Discount object specific to ACME Worldwide and referencing the above standard price objects. We create a discount of 10 Percent for One-Time charges (for example, the price of the device). We make the Discount require the Party "ACME Worldwide", and attach it to the Standard Price Objects that we want the discount to apply to. Finally, we also add the discount to the CFA_1 Corporate Framework Agreement:



the repository name is PriceDiscount. Discounts and Allowances are in separate repositories (master catalogs) and are used to MODIFY Prices in the PRICE repository.

Repository Name: PRODUCTID
Product ID Extension: DISCOUNT
Device_Discount
CFA_1
Version Number: 1
State: Confirmed
Show Errors

INFO DETAILS Discount INTERNAL System Unassigned Classifications

PRODUCTID: Device_Discount
Class: DISCOUNT
Name: Device Discounts for ACME
Product ID Extension: CFA_1
SubClass: Project Tag Name

Repository Name: PRODUCTID
Product ID Extension: DISCOUNT
Device_Discount
CFA_1
Version Number: 1
State: Confirmed
Show Errors

INFO DETAILS Discount INTERNAL System Unassigned Classifications

Usage: One-Time
Percent or Flat: PERCENT
DiscountPriority: Discount Amount: 10.00
Currency:

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Device_Discount - CFA_1
DiscountGovernsBy
DiscountForPrice
CFA_1 - ACME Agree
GSM_Price
Price_Wireless_Router
ComprisingDiscount
DiscountRequiresProduct
DiscountComprisesOf
DiscountGovernsByRule
DiscountRequiresSegment
DiscountRequiresProductC
DiscountRequiresParty
DiscountRequiresCharacte

Device_Discount - CFA_1 > DiscountForPrice
Relationship Name: DiscountForPrice
Repository Name: PRICE

Quick Export Show Errors

| PRODUCTID | Product ID Extension | Class | Usage | Charge Amount | Currency | Project Tag Name | Project Tag Name |
|-----------------------|----------------------|-------------------------------|----------|---------------|----------|------------------|------------------|
| CFA_1 | ACME Agreement | Corporate Framework Agreement | One-Time | 50.00 | | | |
| GSM_Price | | ONE_TIME | One-Time | 80.00 | | | |
| Price_Wireless_Router | | ONE_TIME | One-Time | | | | |

Page 1 of 1

Modeling a 10% discount against an existing, standard Tariff

This is another example that shows modeling an ACME specific discount against a more complex price object: the Tariff.

Typically, a Tariff price is composed of a price matrix of charge "bands". A Voice Tariff, for example might be composed of two charge bands:

- For voice usage up to 500 minutes, there is no charge
- For voice usage over 500 minutes, a charge of .10 per minutes is assessed

Typically a Tariff price is composed of a price matrix of charge "bands". A Voice Tariff, for example might be composed of two charge bands:

Repository Name: PRICE
PRODUCTID: Voice_Tariff_A
Product ID Extension: TARIFF_USAGE
Voice_Tariff_A Plan
Version Number: 2
State: Confirmed
Show Errors

INFO DETAILS Charge INTERNAL System Migration Classifications

PRODUCTID: Voice_Tariff_A
Class: TARIFF_USAGE
Name: Voice Tariff A Plan
Project Tag Name

Product ID Extension: Voice
SubClass: Voice Tariff A Plan
Commercial Name

Repository Name: PRICE
 PRODUCTID: Voice_Tariff_A
 Version Number: 2
 State: Confirmed

Product ID Extension: [Empty]

Charge Amount
 Charge From
 Charge Priority
 ChargeFrequencyUOM
 ChargePerUOM
 MinAmount

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Voice_Tariff_A

- PriceGovernedByRule
- PriceRequiresParty
- PriceRequiresCharacteristic
- Characteristic Charge
- PriceAlteredByAllowance
- PriceGovernedBy
- PriceOf
- PriceRequiresSegment
- PriceComprisedOf**
 - Voice_0_500 - Voice_T
 - Voice_500_and_Over -
 - ComprisingPrice
 - PriceRequiresProduct
 - PriceRequiresProductGroup
 - PriceAlteredByDiscount

Voice_Tariff_A > PriceComprisedOf

Quick Export Show Errors

| PRODUCTID | Product ID Extension | Class | Usage | Charge Amount | Currency | Project Tag Name | Project Tag Name |
|--------------------|----------------------|-------|---------|---------------|----------|------------------|------------------|
| Voice_0_500 | Voice_Tariff_A | USAGE | Feature | .00 | | | |
| Voice_500_and_Over | Voice_Tariff_A | USAGE | Feature | .10 | | | |

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The Tariff A has no charges related to itself, instead it has two child price objects that specify a charge band of 0 cents per minute and 10 cents per minute.

The detailed charges of the two child records (Voice_0_500, Voice_500_and_Over) is as follows:

Voice_0_500

Repository Name: PRICE
 PRODUCTID: Voice_0_500
 Version Number: 2
 State: Confirmed

Product ID Extension: Voice_Tariff_A

Class: Voice Free First 500 Minutes

Product ID Extension: Voice_Tariff_A
 SubClass: Voice
 Commercial Name: Voice Free First 500 Minutes

Repository Name: PRICE
 PRODUCTID: Voice_0_500
 Version Number: 2
 State: Confirmed

Product ID Extension: Voice_Tariff_A

Usage: Feature
 Per: Minute
 Charge To: 500.00

Charge Amount: .00
 Charge From: .00
 Charge Priority: 1.00
 ChargeFrequencyUOM
 ChargePerUOM
 MinAmount

Voice_500_and_Over

Repository Name: PRICE
 PRODUCTID: Voice_500_and_Over
 Version Number: 2
 State: Confirmed

Product ID Extension: Voice_Tariff_A

Usage: Voice Charge 500

Product ID Extension: Voice_Tariff_A
 SubClass: Voice
 Commercial Name: Voice Charge 500+

Repository Name: PRICE
 PRODUCTID: Voice_500_and_Over
 Version Number: 2
 State: Confirmed

Product ID Extension: Voice_Tariff_A

Usage: Feature
 Per: Minute
 Charge To: 999999.00

Charge Amount: .10
 Charge From: 500.01
 Charge Priority: 1.00
 ChargeFrequencyUOM
 ChargePerUOM
 MinAmount

Creating a specific ACME Price Discount object

We now create a Price Discount object specific to ACME Worldwide and apply it to this group of Tariff Charges. We create a discount of 10 Percent for "Feature" charges (for example, use of the specified feature on the standard price object). We make the Discount require the Party "ACME Worldwide", and attach it to Voice_Tariff_A price object. Finally, we also add the discount to the CFA_1 Corporate Framework Agreement:



The catalog name is Discount. Discounts and Allowances are in separate repositories (master catalogs) and are used to MODIFY Prices in the PRICE repository.

Repository Name: DISCOUNT
PRODUCTID: Voice_Discount
Product ID Extension: CFA_1
Version Number: 1
State: Confirmed
Show Errors

INFO DETAILS Discount INTERNAL System Unassigned Classifications

PRODUCTID: Voice_Discount
Class: DISCOUNT
Name: Voice Discount for ACME
Product ID Extension: CFA_1
SubClass: Project Tag Name: [Empty Box]

Repository Name: DISCOUNT
PRODUCTID: Voice_Discount
Product ID Extension: CFA_1
Version Number: 1
State: Confirmed
Show Errors

INFO DETAILS Discount INTERNAL System Unassigned Classifications

Usage: Feature
Percent or Flat: PERCENT
DiscountPriority: [Empty Box]
Discount Amount: 10.00
Currency: [Empty Box]

Modify Restore Compare Show History Show Usage Send Message Delete Related Records

Perspective: None

Voice_Discount - CFA_1 > DiscountForPrice
Relationship Name: DiscountForPrice
Repository Name: PRICE

Quick Export Show Errors

| PRODUCTID | Product ID Extension | Class | Usage | Charge Amount | Currency | Project Tag Name | Project Tag Name |
|----------------|----------------------|-------------------------------|-------|---------------|----------|------------------|------------------|
| CFA_1 | ACME Agreement | Corporate Framework Agreement | | | | | |
| Voice_Tariff_A | | TARIFFUSAGE | | | | | |

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Example 3

The next example displays how to add specific rules that apply to a subsidiary or specific employee role within a Corporation.

In this example, let us model the requirement that Senior Managers get GSM devices for Free (overriding the already modeled 10% discount). For this example we create a specific Price Object and make it require the Senior Management role for ACME. To complete it we also attach it to the CFA_1 Corporate Framework Agreement:

Repository Name: PRICE
PRODUCTID: ACME_Management_GSM_Price
Product ID Extension: [Empty Box]
Version Number: 2
State: Confirmed
Show Errors

INFO DETAILS Charge INTERNAL System Migration Classifications

PRODUCTID: ACME_Management_GSM_Price
Class: ONE TIME
Name: ACME Managers Price for GSM Devices
Project Tag Name: [Empty Box]
Product ID Extension: [Empty Box]
SubClass: Commercial Name: ACME Managers Price for GSM Devices

Repository Name
PRODUCTID
Product ID Extension

PRICE
ACME_Management_GSM_Price

Version Number
State
2
Confirmed

Show Errors

INFODETAILSChargeINTERNALSystemMigrationClassifications

Usage
Per
Charge To
Charge Frequency
Charge Per
Currency

One-Time
Charge Amount
Charge From
Charge Priority
Charge Frequency UOM
Charge Per UOM
Min Amount
.00

ModifyRestoreCompareShow HistoryShow UsageSend MessageDelete Related Records

Perspective
None

ACME_Management_GSM_Price > PriceRequiresParty
Relationship Name
PriceRequiresParty
Repository Name
PARTY

Quick ExportShow Errors

| | PRODUCTID | Name | Locale | Override | Override Type | Project Tag Name | Project Tag Name |
|--------------------------|-------------------|-------------------|--------|----------|---------------|------------------|------------------|
| <input type="checkbox"/> | Senior_Management | Senior_Management | | | | | |

Page

Example 4

Complete CFA

The complete CFA object is displayed as:

Repository Name
PRODUCTID
Product ID Extension

PRICE
CFA_1
ACME Agreement

Version Number
State
2
Confirmed

Show Errors

INFODETAILSChargeINTERNALSystemMigrationClassifications

PRODUCTID
Class
Name
Project Tag Name

CFA_1
Corporate Framework Agreement
ACME Agreement

Product ID Extension
Sub/Class
Commercial Name

ACME Agreement
ACME Agreement

ModifyRestoreCompareShow HistoryShow UsageSend MessageDelete Related Records

Perspective
None

CFA_1 - ACME Agreement > PriceRequiresParty
Relationship Name
PriceRequiresParty
Repository Name
PARTY

Quick ExportShow Errors

| | PRODUCTID | Name | Locale | Override | Override Type | Project Tag Name | Project Tag Name |
|--------------------------|----------------|----------------|--------|----------|---------------|------------------|------------------|
| <input type="checkbox"/> | ACME_Wroldwide | ACME Wroldwide | | | | | |

Page

SID-based Data Modeling for the Product Catalog

The concepts for SID define self-describing Business Entities that can be extended or added to as the business requires.

You can use all or some of the entities described below as they see fit.



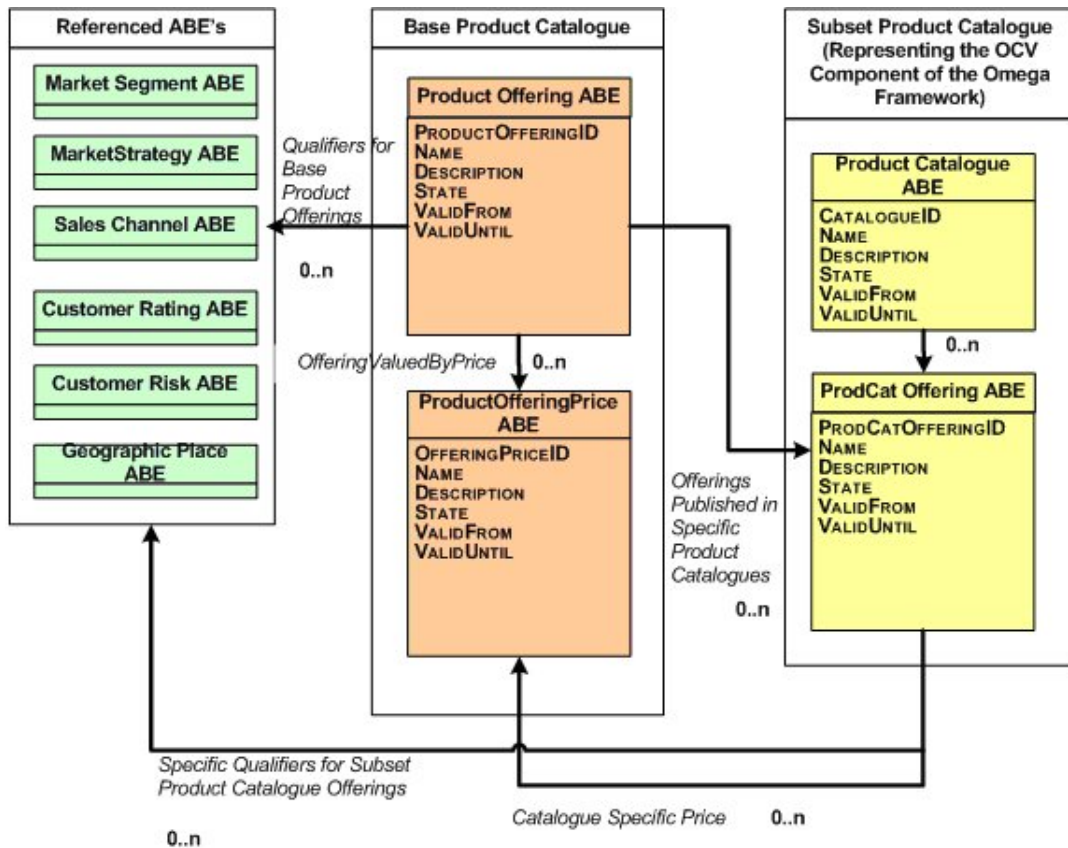
The SID data modeling concepts described in this section are logical data diagrams only. SID describes logical constructs, not an actual database dictionary. This chapter includes the details of how such constructs are physically mapped into the TIBCO® Fulfillment Catalog Data Model in the next section.

ProductOffering ABE and other Top-Level SID Entities for the Telco Product Catalog Model

From a SID perspective, the TIBCO Fulfillment Catalog Product Catalog model uses the following top-level SID Business Entities.

At the top-level, Product Offerings make up a Base Product Catalog, which are then related to other ABE's as displayed:

Base Product Catalog



A Product Offering is the Atomic Business Entity (ABE) that describes an offer able product to a customer, be it a simple product or a composite of multiple products. For both SID and Fulfillment Catalog's Telco Data Model, the Product Offering Entity is the main object for the Product Domain.

SID also allows Product Offering Entities to be related to other Business Domain entities to express conditions on which an Offering is available. For instance, an Offering may only be valid for on-line sales (Sales Channel ABE), or may be offered to business but not consumers (Market Segment ABE). This can be modeled from either the Product Offering Entity (making the relationship always true) or

for Subset ProductCatalogOfferings (making the relationship true only in the context of the specific catalog).

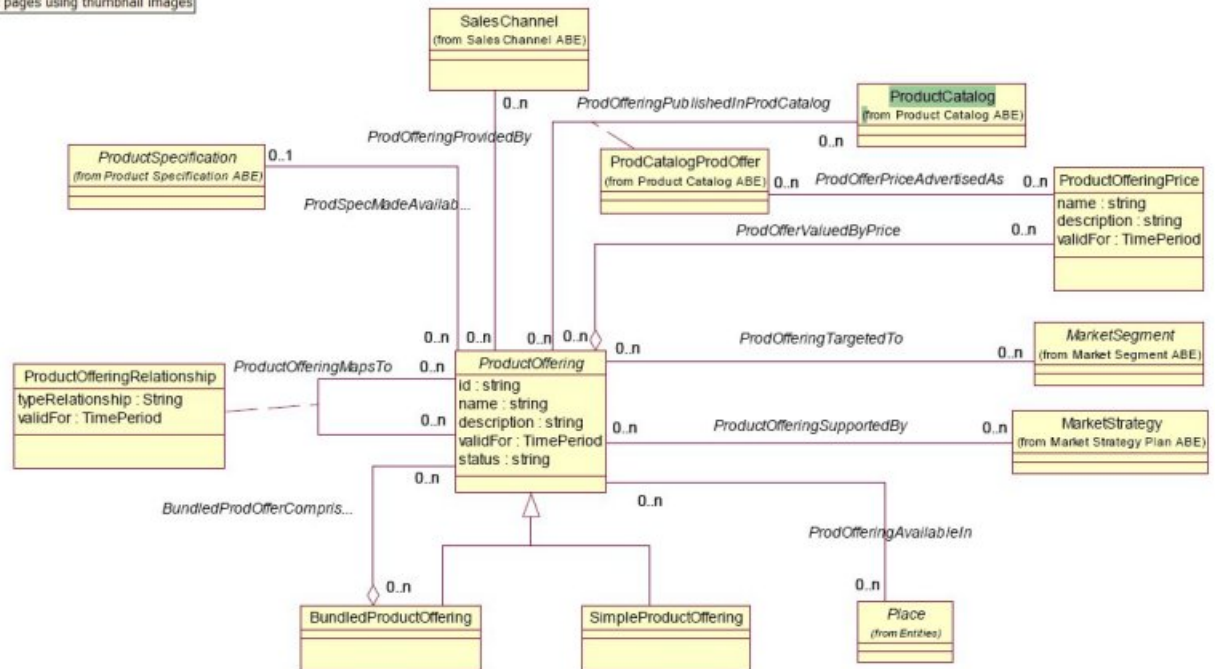
ProductOfferings may be offered to customers all together, or they may be filtered into any number of subset catalogs exposed to customers. Subset Product Catalogs in SID are called ProductCatalogs and represent specific offerings available to customers, based on a variety of factors. They can represent an On-Line catalog or a Small/Medium Enterprise catalog, or any other delineation.

SID Business Entities Below ProductOffering

The SID Data Model expresses numerous Business Entities and methods for modeling data objects.

An SID Product Example

specific pages using thumbnail images



For the TIBCO MDM Data Model, the principal Business Entities modeled within our database were listed next to each Data Dictionary Object in Section 2 of this document, you may refer to other SID documentation for further details.

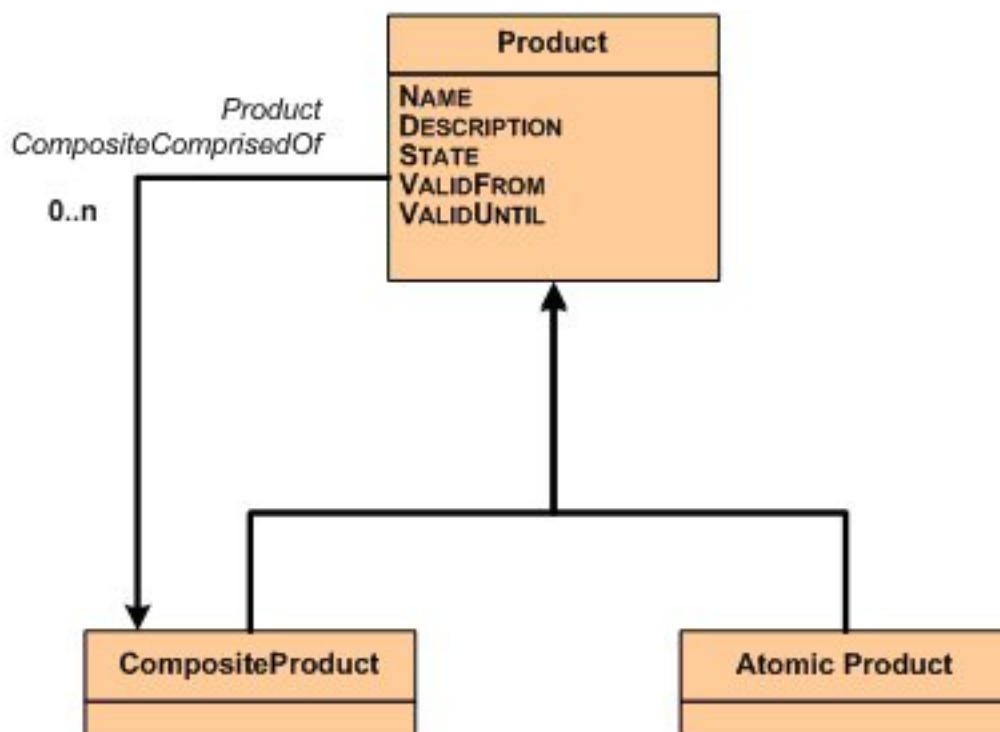
TIBCO MDM Uses the logical entities expressed in SID's Product Domain and expresses then within it's own Data Dictionary. Each Fulfillment Catalog repository, relationship, and attribute use the SID names for internal reference. However, display names to the business user are always allowed to be as customer-centric as you wish.

SID Patterns for Complex Entities and Extensibility

Conceptually, Fulfillment Catalog utilizes the SID Pattern of Atomic/Composite Entities to model grouping and containment of complex entities, and fully supports the extensible data modeling concept expressed in SID:

Atomic/Composite Entities within Fulfillment Catalog:

The Fulfillment Catalog Data Model supports the SID concept of Composite/Atomic Data Models. This allows for Fulfillment Catalog to Model complex Product Offerings that may be bundles of other Product Offerings).



In Fulfillment Catalog, each repository can contain both Atomic Entities and Composite Entities. For Composite Entities, the TIBCO MDM relationship of "...CompositeComprisedOf is used to link Composite Entities with their Atomic constituents:

Example of Composite and Atomic ProductOfferingStructure within TIBCO MDM

Browse and Search



Extending Existing Entities within the Fulfillment Catalog Data Model

Fulfillment Catalog's Business Entities can be extended by either:

- adding new Attribute Groups directly into the existing Data Repository.

Or

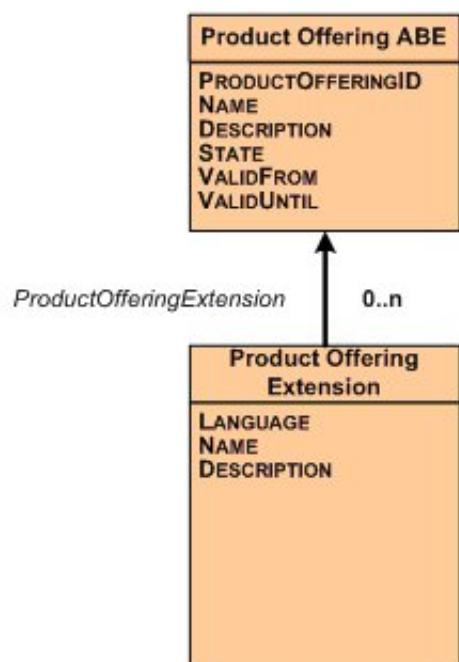
- by creating a new Extension Data Repository, with a relationship to the original ABE Data Repository.

For Fulfillment Catalog, new Attribute Groups within an existing Data Repository can be treated as "logically" separate objects, with their own security, access control, read/write, and integration.

Because of this either method of extending the Fulfillment Catalog Data Model is valid from a SID perspective:

Fulfillment Catalog Data Model Extension via Attribute Groups (Single Data Repository, logically separated by Attribute Group)

| |
|--|
| Product Offering ABE |
| Base Attribute Group |
| PRODUCTOFFERINGID NAME DESCRIPTION STATE VALIDFROM VALIDUNTIL |
| CzechDescriptors Attribute Group |
| CZ_NAME CZ_DESCRIPTION |

Fulfillment Catalog Data Model Extension via Additional Data Repository and Relationships

Interfaces


The Interfaces comprises of:

- [Import Interfaces](#)
- [Export Interfaces](#)

Import Interfaces

TIBCO Fulfillment Catalog uses TIBCO MDM's standard Import capabilities.

Data may be maintained manually using the web-based user interface, or the following integration methods apply:

- Web Services
 - Flat file import
 - Database import
- 
- See *TIBCO MDM* documentation for more details.
 - See *TIBCO Fulfillment Catalog Web Services Guide* for details related to Import web services.
 - See *TIBCO Fulfillment Catalog User's Guide* for details related to Import and types of Import.

Export Interfaces

The export interfaces comprises of:

- [Model Publishing](#)
- [Enterprise Data Export](#)

Model Publishing

TIBCO Fulfillment Catalog publishes to downstream systems via an XML doc. By default, the interface method is over JMS (TIBCO Enterprise Message Service).

The data model publish can be performed as a complete data publish, or as incremental update based on the past history of publish.

The data models published are described in the following XML schema files:

- `ProductModel.xsd` (Main Product and Service Model Definition).
- `CustomerModel.xsd` (Party entity information).
- `Segment.xsd` (Segmentation information).
- `PlanFragmentModel.xsd` (PlanFragment information).
- `ActionModel.xsd` (ActionModel information).
- `PriceModel.xsd` (PriceModel information).
- `DiscountModel.xsd` (DiscountModel information).

These `.xsd`s are available(`$AC_HOME/schema/models`) for any third party to use for the purposes of interfacing with TIBCO® Fulfillment Catalog. The complementary product, TIBCO® Fulfillment Order Management natively accepts these data schemas.



- See *TIBCO Fulfillment Catalog Web Services Guide* for details related to Full Publish and Delta Publish web services.
- See *TIBCO Fulfillment Catalog User's Guide* for details related to accessing and executing Full Publish and Delta Publish feature.

Enterprise Data Export

TIBCO Fulfillment Catalog provides capability to export enterprise data in a format which can be used to import the data in a different enterprise.

The data exported can either be the complete enterprise data, which is called *Full Data Export*, or selective data based on the Project Tag Name attribute, which is called *Partial Data Export*, or selective data based on the Last Modified Date, which is called *Delta Export*.

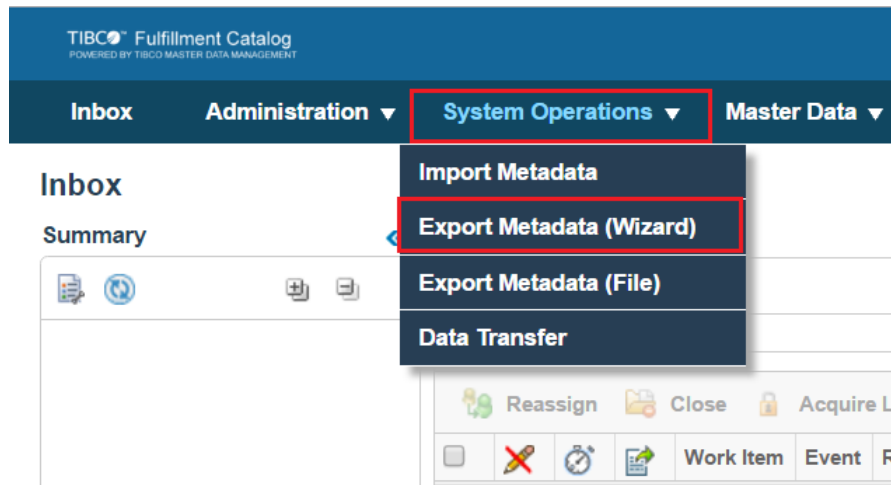
- See *TIBCO Fulfillment Catalog Web Services Guide* for details related to Export web services.
- See *TIBCO Fulfillment Catalog User's Guide* for details related to accessing and executing Full Export, Partial Export, and Delta Export.

Exporting Fulfillment Catalog Metadata from Enterprise

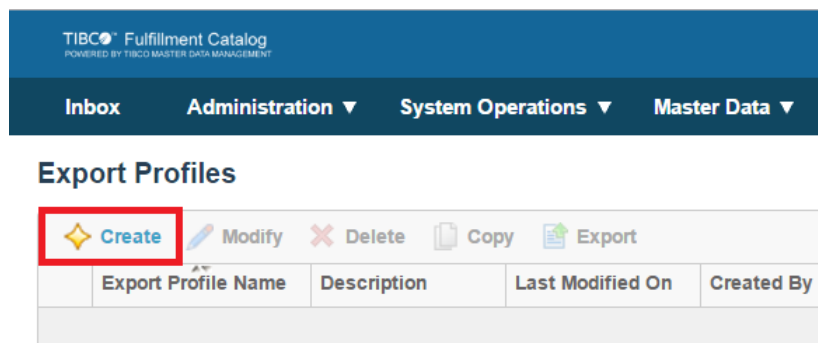
To export Fulfillment Catalog metadata from an enterprise, perform the following steps:

Procedure

1. Click **System Operations > Export Metadata (Wizard)**.
The **Export Profiles** page opens.



2. Click **Create**.
The **Export Wizard** page opens.



3. Enter appropriate values for the **Name** and **Description** field. Click **Next**.
The **Export Configuration Summary** page opens.

Export Wizard

Create Export Profile

Name

ExampleEnterprise

Description (optional)

To export Metadata artifacts of ExampleEnterprise

Next

Save and Exit

4. Click **Select** for Data Sources.

Export Wizard

Export Configuration Summary

Export Profile

ExampleEnterprise

Modify

Data Sources

None selected

Select

Repositories

None selected

Select

Synchronization Formats

None selected

Select

Business Process Rules

None selected

Select

Workflows

None selected

Select

Rulebases

None selected

Select

Forms

None selected

Select


Maps

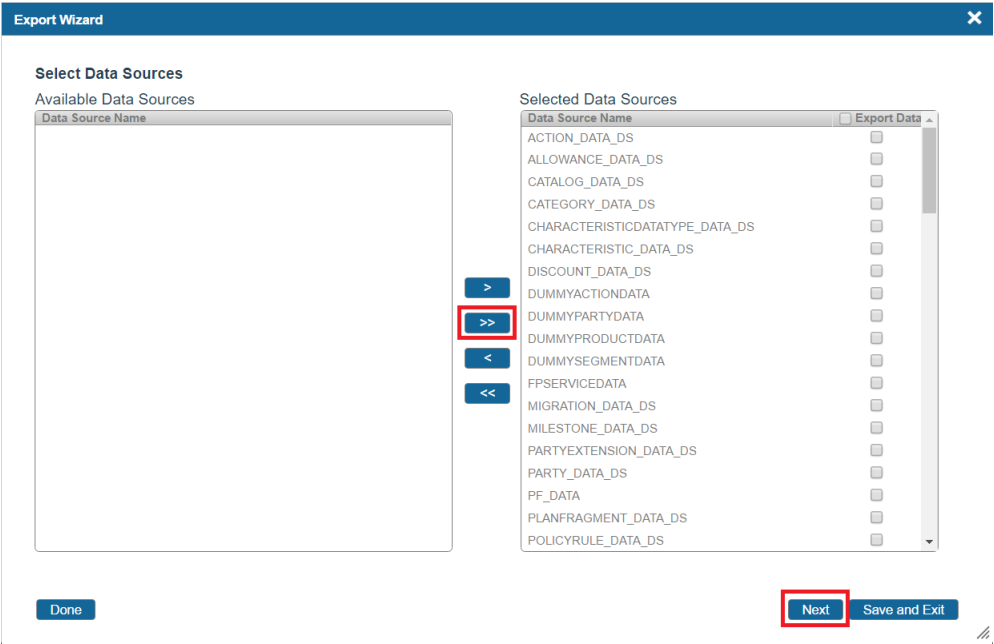
None selected

Select

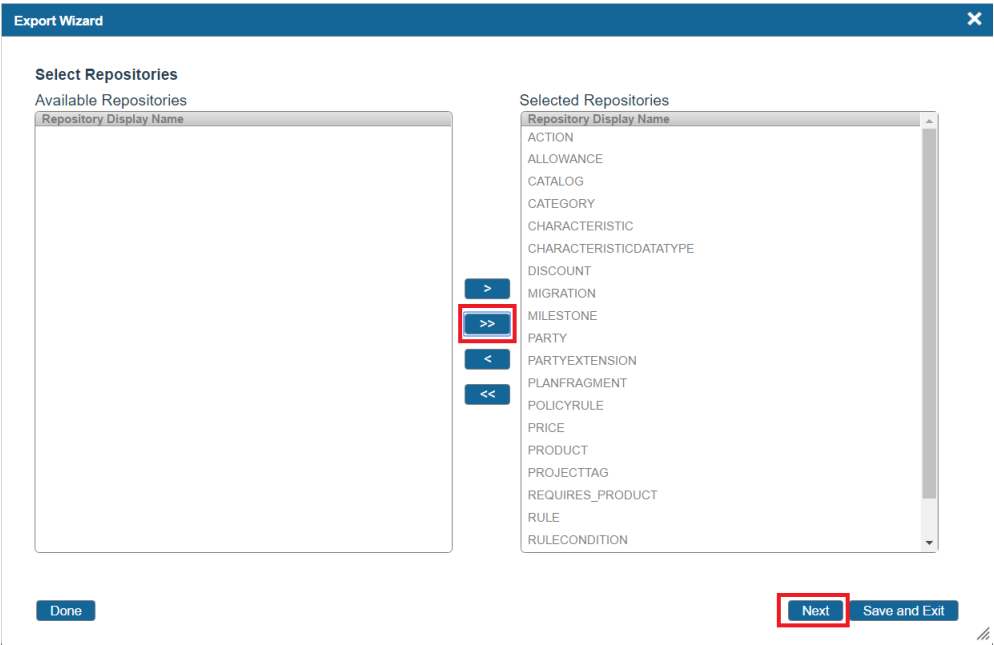
Export

Exit

5. Click the  icon to move data sources from **Available Data Sources** column to **Selected Data Sources** column. Click **Next** to continue.



- Click the >> icon to move repositories from **Available Repositories** column to **Selected Repositories** column. Click **Next** to continue.



- Click the >> icon to move input or output maps from **Available Input / Output Maps** column to **Selected Input / Output Maps** column. Click **Next** to continue.

Export Wizard

Select Input/Output Maps

Available Input/Output Maps

Input/Output Map Name

Selected Input/Output Maps

Input/Output Map Name

ACTION

ACTION_DATA_IMAP

FPCATALOGSYNCHRONIZATION_ACT

ALLOWANCE

ALLOWANCECOMPRISEDCHILD_IMAP

ALLOWANCECOMPRISED_PARENT_IMAP

ALLOWANCEGOVERNEDBY_PARENT_IMAP

ALLOWANCEREQUIRESCHARACTERISTIC_PARENT_IMAP

ALLOWANCEREQUIRESPARTY_PARENT_IMAP

ALLOWANCEREQUIRESPRODUCT_PARENT_IMAP

ALLOWANCEREQUIRESSEGMENT_PARENT_IMAP

ALLOWANCE_DATA_IMAP

PRICEALTEREDBYALLOWANCE_CHILD_IMAP

CATALOG

CATALOG_DATA_IMAP

OFFERINGPUBLISHEDINCATALOG_CHILD_IMAP

CATEGORY

CATEGORY_CHILD_IMAP

CATEGORY_DATA_IMAP


CHARACTERISTIC

Done

Next

Save and Exit

8. Do not perform any actions for Select Synchronization Formats page. Click **Next** to continue.

9. Click the  icon to move business process rules from **Available Business Process Rules** column to **Selected Business Process Rules** column. Click **Next** to continue.

Export Wizard

Select Business Process Rules

Available Business Process Rules

Business Process Rule Name

Selected Business Process Rules

Business Process Rule Name

Conflict Resolution

Custom Protocol Selection

Data Custodian

Import Approval

Match Record Approval

Message Alert

Message or Workflow Completion

New Record Introduction Edit

Process Definition Selection

Record Action Approval

Record Delete Approval

Record Edit Approval

Record Notification

Reminder Setup

Repository Selection

Rulebase Selection

Synchronization Action Alert


Synchronization Approval

Timeout Escalation

Done

Next

Save and Exit

10. Click the  icon to move work flows relevant for your enterprise, one by one, from **Available Workflows** column to **Selected Workflows** column. Additionally move three workflows of **Workflow Scope** *standard*. Click **Next** to continue.

If any of the highlighted *standard* workflow is not seen in the **Available Workflows** column, additional entries into db table *configurationdefinition* has to be made.

For example, if you want to insert *wfin26importdatasubflowv1.xml* workflow into the *configurationdefinition* table, perform the following steps:

1. INSERT INTO CONFIGURATIONDEFINITION (ID, "TYPE", OWNERID, GLOBAL, "NAME", SELECTOR, DESCRIPTION, DEFINITIONTYPE, DEFINITION, ACTIVE, MODMEMBERID, MODDATE, MODVERSION) VALUES ((select (max(id)+1) from CONFIGURATIONDEFINITION), 'PROCESSNAME', 1, 'Y', 'wfin26importdatasubflowv1.xml', 'WORKFLOW', 'Sub Process for import data fc', 'File', 'standard/workflow/wfin26importdatasubflowv1.xml', 'Y', '1', TO_DATE('13-01-2010 04:01:00 pm','DD-MM-YYYY HH:MI:SS AM'), '1');
2. Restart the Fulfillment Catalog server to see *wfin26importdatasubflowv1.xml* in the **Selected Workflows** column from the Export Wizard



Export Wizard [X]

Select WorkFlows


Available WorkFlows

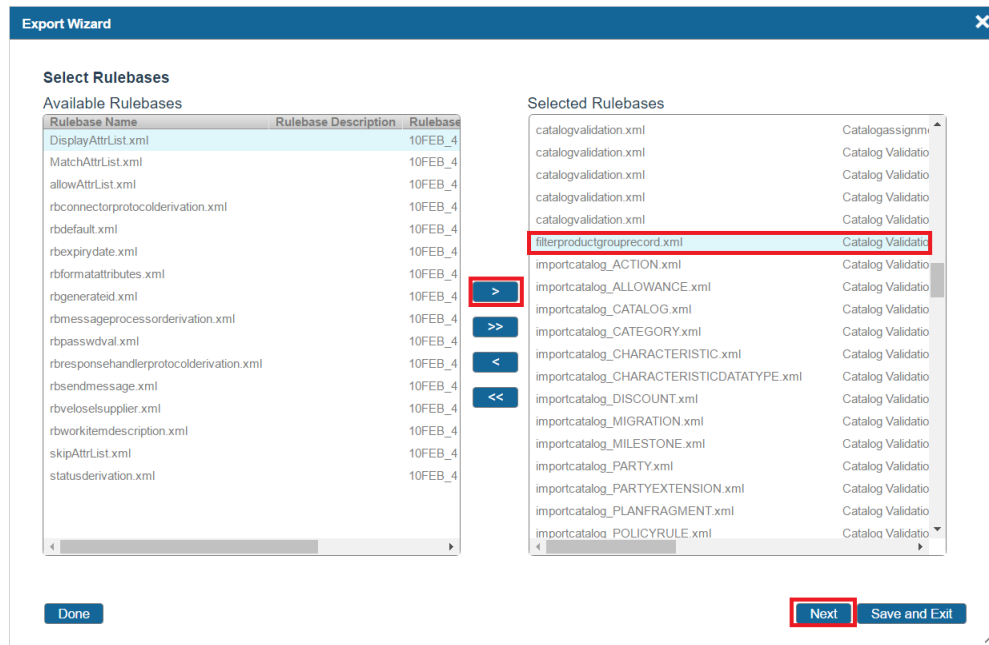
| Workflow Name | Workflow Scope |
|--|----------------|
| cancelworkflowv1.xml | standard |
| checkrestart_subflowv1.xml | standard |
| undoworkflowv1.xml | standard |
| wfin24classimpv2.xml | standard |
| wfin26BackEndIntegrationV1_Sample1.xml | standard |
| wfin26BackEndIntegrationV1_Sample2.xml | standard |
| wfin26cactactionv2.xml | standard |
| wfin26catmassupdatev1.xml | standard |
| wfin26catsourceimportv2.xml | standard |
| wfin26catsourcev6.xml | standard |
| wfin26catsynchdbdumpv4.xml | standard |
| wfin26catsynchdbdumpv4_incremental.xml | standard |
| wfin26catsynchv7.xml | standard |
| wfin26dataservicev2.xml | standard |
| wfin26dqcatsourcev1.xml | standard |
| wfin26dqproductaddapprovalv1.xml | standard |
| wfin26dqscheduleddedupv1.xml | standard |
| wfin26productaddapprovalv3.xml | standard |
| wfin26productadddedupv1.xml | standard |

Selected WorkFlows


| Workflow Name | Workflow Scope |
|---|----------------|
| wfin26bulkmodelpublisherv1.xml | 10FEB_4 |
| wfin26catsourcev6.xml | 10FEB_4 |
| wfin26catsynchdbdumpv4.xml | 10FEB_4 |
| wfin26enterprisedataexport_incrementalv1.xml | 10FEB_4 |
| wfin26enterprisedataexportsubflow_incrementalv1.xml | standard |
| wfin26enterprisedataexportsubflowv1.xml | standard |
| wfin26enterprisedataexportv1.xml | 10FEB_4 |
| wfin26importdatasubflowv1.xml | standard |
| wfin26importdatav1.xml | 10FEB_4 |
| wfin26partialimportfcdatasubflowv1.xml | standard |
| wfin26partialimportfcdataav1.xml | 10FEB_4 |
| wfin26productaddapprovalv3.xml | 10FEB_4 |
| wfin26producteditapprovalv3.xml | 10FEB_4 |

Done [Next] Save and Exit

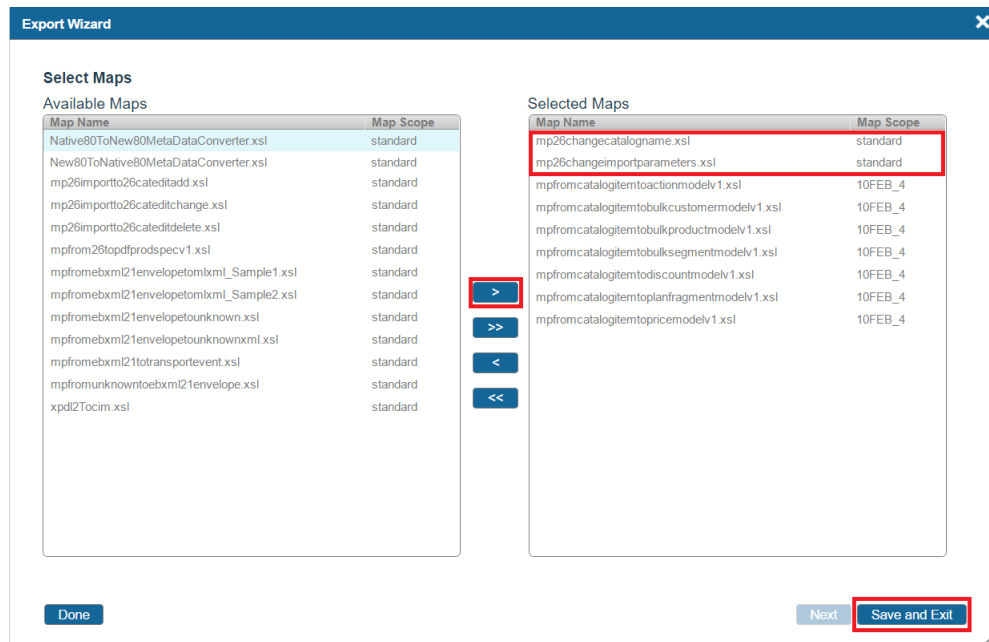
11. Click the  icon to move rule bases relevant for your enterprise, one by one, from **Available Rulebases** column to **Selected Rulebases** column. Additionally move three rulebases of **Rulebase Scope** *standard* named *filterproductgrouprecord.xml*, *rbdeltaexportrecordfilter.xml* and *rbenterpriseexportrecordfilter.xml*. Click **Next** to continue.



12. Do not perform any actions for the Select Forms page. Click **Next** to continue.

13. Click the  icon to move maps relevant for your enterprise, one by one, from **Available Maps** column to **Selected Maps** column. Additionally move two maps of **Map Scope standard**. Click **Save and Exit**.

The control passes back to the **Export Profiles** page.



14. Select the newly created export profile and click **Export**.
A Data Service Query event will be triggered.

TIBCO® Fulfillment Catalog
POWERED BY TIBCO MASTER DATA MANAGEMENT

Inbox Administration System Operations Master Data Browse and Search FulfillmentCatalog Operation

Export Profiles

Create Modify Delete Copy Export

| | Export Profile Name | Description | Last Modified On | Created By | Export Profile Zip File | Last Exported On |
|-------------------------------------|---------------------|---|-----------------------|-------------|-------------------------|------------------|
| <input checked="" type="checkbox"/> | ExampleEnterprise | To export Metadata artifacts of ExampleEnterprise | 2017-03-08 16:53:15.0 | admin admin | | |

15. Upon successful completion of the event, click **System Operations > Export Metadata (Wizard)**.

TIBCO® Fulfillment Catalog
POWERED BY TIBCO MASTER DATA MANAGEMENT

Inbox Administration System Operations Master Data Browse and Search FulfillmentCatalog Operation Business Processes Event Log

Event Log

Cancel Restart Resubmit Rollback

| Event ID | Event | Date/Time | Last Update Date/Time | Duration(D:H:M:S) | Status | Backend System | Current State |
|----------|--------------------------------|-----------------------|-----------------------|------------------------|-------------|----------------|---------------------|
| 46118 | Data Service Query | 2017-03-08 16:55:13.0 | 2017-03-08 16:55:23.0 | 10 Seconds | Success | N/A | Done |
| 46117 | Enterprise Data Export | 2017-03-08 12:45:35.0 | 2017-03-08 13:16:43.0 | 31 Minutes, 8 Seconds | Success | N/A | Done |
| 46116 | Enterprise Data Export | 2017-03-08 12:31:20.0 | 2017-03-08 12:41:50.0 | 10 Minutes, 30 Seconds | Success | N/A | Done |
| 46115 | Export Data | 2017-03-08 12:25:15.0 | 2017-03-08 12:25:25.0 | 10 Seconds | Success | N/A | Done |
| 46114 | Export Data | 2017-03-08 12:24:47.0 | 2017-03-08 12:24:47.0 | 0 Seconds | Error | N/A | Done |
| 46113 | Record Modify | 2017-03-08 12:18:16.0 | 2017-03-08 12:18:16.0 | 0 Seconds | Success | N/A | Record Modification |
| 46112 | Record Modify | 2017-03-08 12:18:16.0 | 2017-03-08 12:18:16.0 | 0 Seconds | Success | N/A | Record Modification |
| 46111 | Record Modify | 2017-03-08 12:18:10.0 | 2017-03-08 12:18:10.0 | 0 Seconds | Success | N/A | Done |
| 46109 | Record Modify | 2017-03-08 12:17:33.0 | 2017-03-08 12:17:51.0 | 18 Seconds | Success | N/A | Done |
| 46108 | Record Modify | 2017-03-08 12:17:28.0 | 2017-03-08 12:17:28.0 | 0 Seconds | Success | N/A | Record Modification |
| 46107 | Record Modify | 2017-03-08 12:17:27.0 | 2017-03-08 12:17:27.0 | 0 Seconds | Success | N/A | Record Modification |
| 46106 | Record Add | 2017-03-08 12:17:27.0 | 2017-03-08 12:17:27.0 | 0 Seconds | Success | N/A | Record Introduction |
| 46105 | Record Modify | 2017-03-08 12:17:20.0 | 2017-03-08 12:17:20.0 | 0 Seconds | Success | N/A | Record Modification |
| 46104 | Record Add | 2017-03-08 12:17:18.0 | 2017-03-08 12:17:19.0 | 1 Seconds | Success | N/A | Done |
| 46103 | Record Add | 2017-03-08 12:16:52.0 | 2017-03-08 12:16:52.0 | 0 Seconds | Success | N/A | Record Introduction |
| 46101 | Record Modify | 2017-03-08 12:10:08.0 | 2017-03-08 12:17:47.0 | 7 Minutes, 39 Seconds | Success | N/A | Done |
| 46100 | Record Add | 2017-03-08 12:10:05.0 | 2017-03-08 12:10:05.0 | 0 Seconds | Success | N/A | Record Introduction |
| 46099 | Enterprise Partial Data Import | 2017-03-07 19:25:33.0 | 2017-03-07 19:33:14.0 | 7 Minutes, 41 Seconds | In Progress | N/A | Evaluate Rulebase |

Items/Page 5... Page 1 of 3

16. Click **Download** to get the zip file to your local machine.

TIBCO® Fulfillment Catalog
POWERED BY TIBCO MASTER DATA MANAGEMENT

Inbox Administration System Operations Master Data Browse and Search FulfillmentCatalog Operation

Export Profiles

Create Modify Delete Copy Export

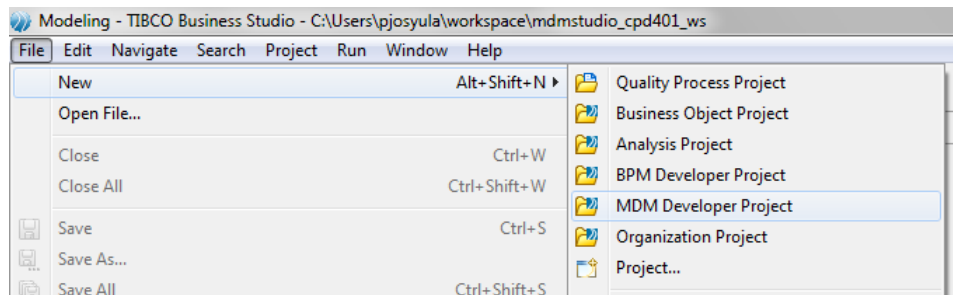
| | Export Profile Name | Description | Last Modified On | Created By | Export Profile Zip File | Last Exported On |
|-------------------------------------|---------------------|---|-----------------------|-------------|--------------------------|-----------------------|
| <input checked="" type="checkbox"/> | ExampleEnterprise | To export Metadata artifacts of ExampleEnterprise | 2017-03-08 16:53:15.0 | admin admin | Download | 2017-03-08 16:55:22.0 |

Setting Up Fulfillment Catalog Metadata Studio Project

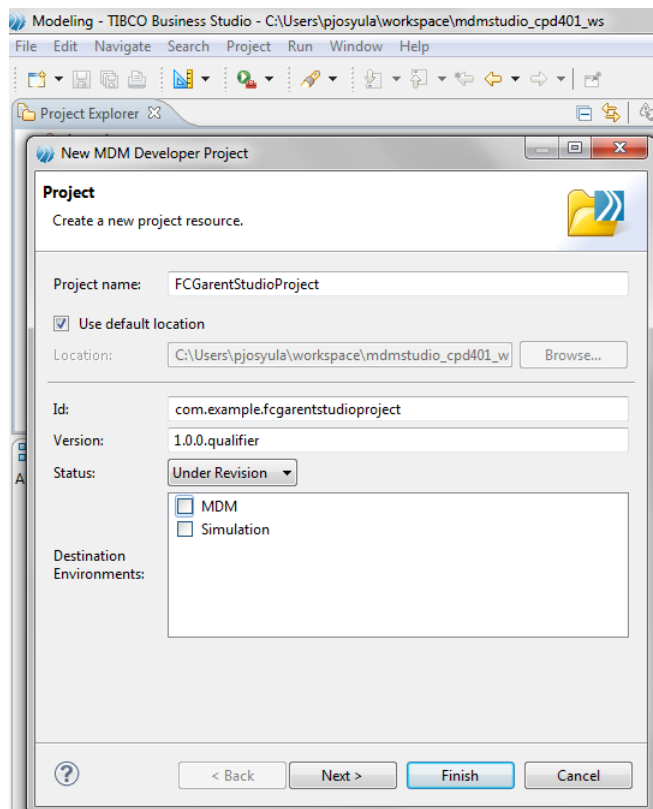
To set up the Fulfillment Catalog metadata studio project, perform the following steps:

Procedure

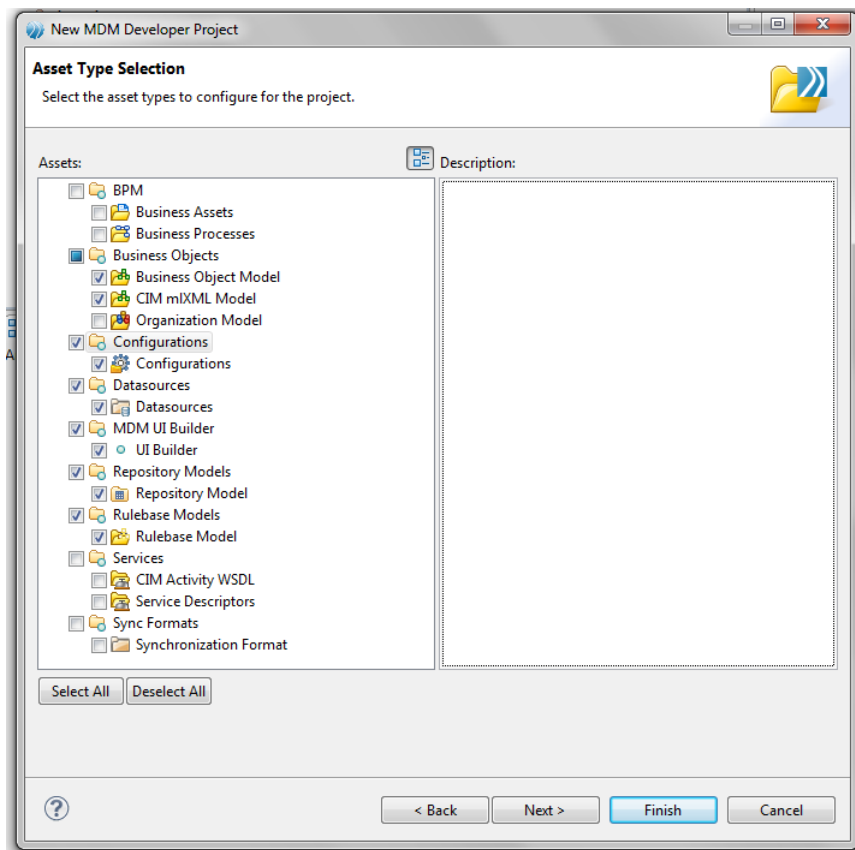
1. Open the workspace of MDM Studio.
2. Click **File > New > MDM Developer Project**.
The **New MDM Developer Project** dialog opens.



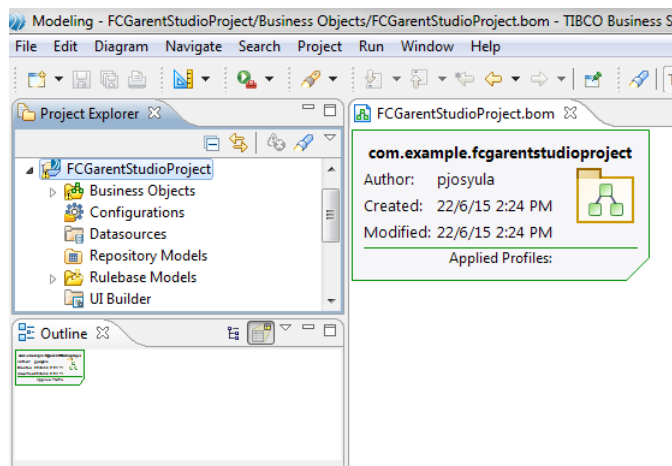
3. Enter a name for the project for the **Project name** field and click **Next**.



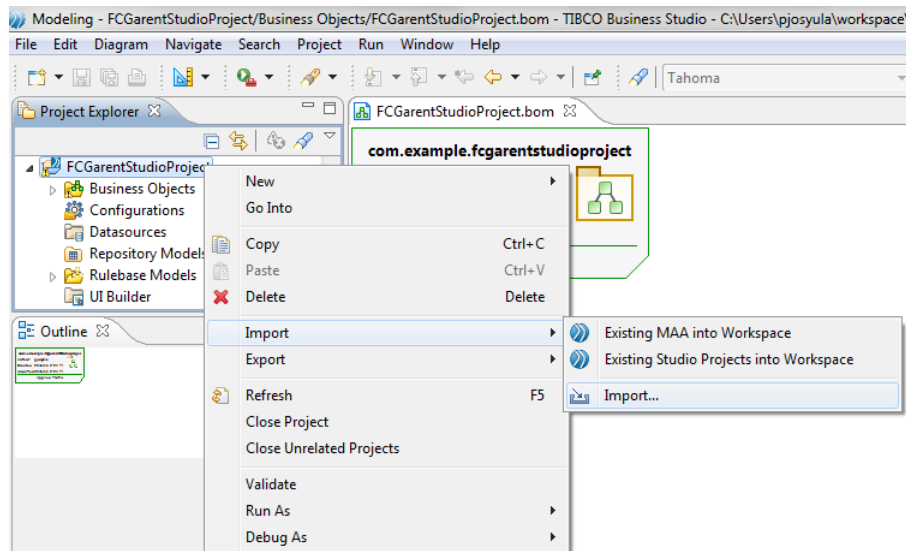
4. Unselect **Services** and **Sync Formats** and click **Next** again.



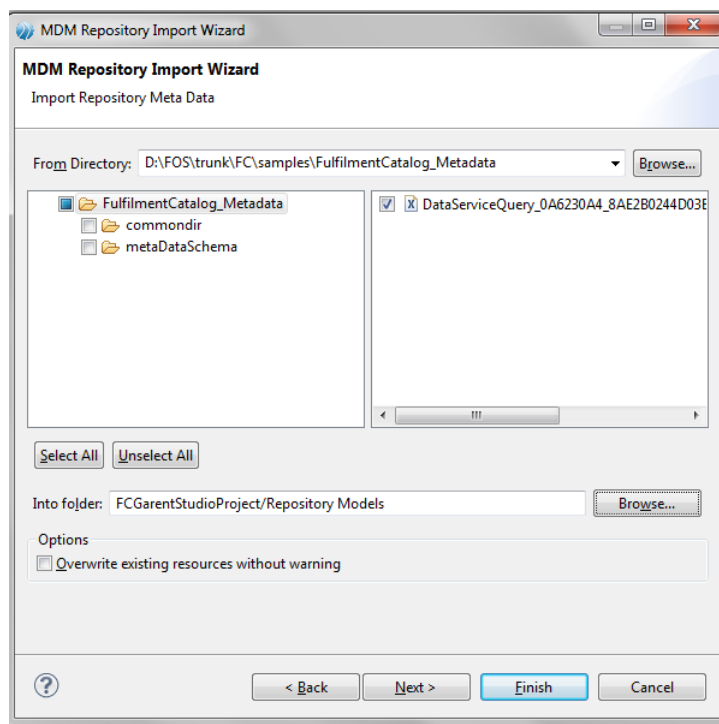
5. Click **Next**.
6. Click **Finish**.
The newly created MDM project will be displayed.



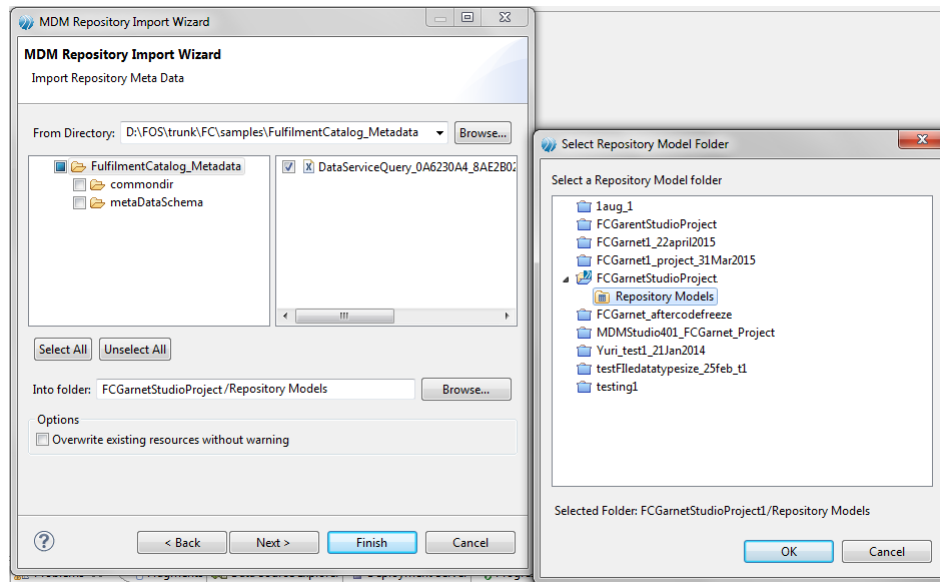
7. Right-click the newly created project and click **Import > Import**.



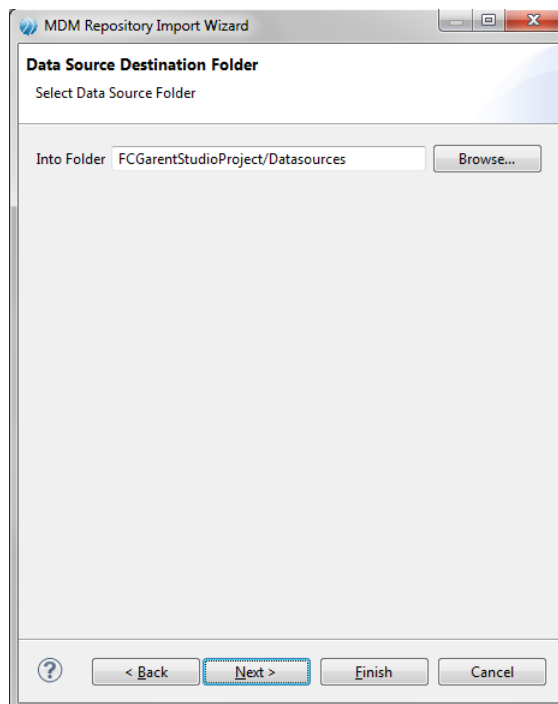
8. The **Import** dialog box opens. Select **MDM Repository Designer > Import Repository Meta Data**. Click **Next**.
9. Locate and select the file
 DataServiceQuery_0A6230A4_8AE2B0244D03B104014D03DD01F1074FMember1.XML by clicking **Browse**. It is placed in the directory where the ZIP file was extracted. Perform the following steps to extract the ZIP file:
 - a) Open the <AC_HOME>/samples directory and select the FulfillmentCatalog_Metadata.zip file.
 - b) Extract the ZIP file and you will find the
 DataServiceQuery_0A6230A4_8AE2B0244D03B104014D03DD01F1074FMember1.XML file.



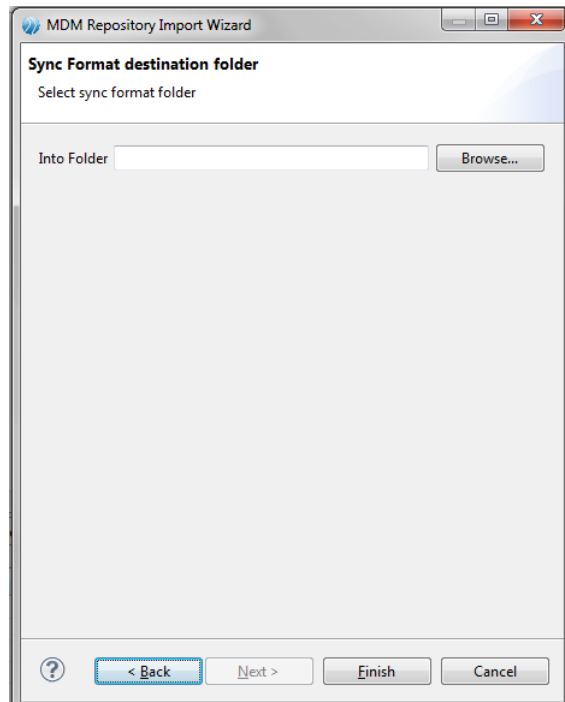
10. Click **Browse** button beside the **Into Folder** field. The **Select Repository Model Folder** dialog opens. Select the **Repository Models** folder and click **OK** and then click **Next**.



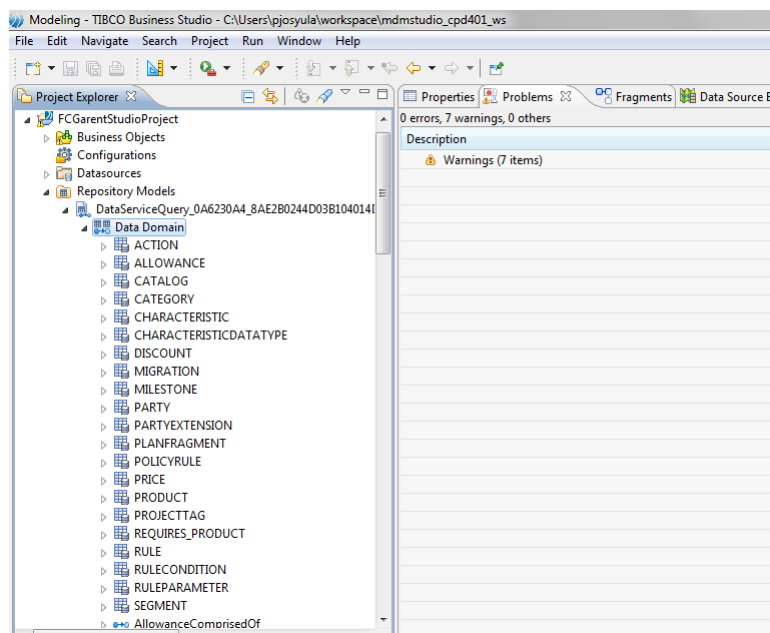
11. Click **Next**.



12. Click **Finish**.



This completes the Import of FC Metadata repositories, relationships, data sources, and input maps. Click the **Problem** tab. If 0 errors is displayed then the import is successful. The warnings can be ignored.



Modifying the New Attribute Added to an Existing Repository or Existing Relationship

To modify the new attribute added to an existing repository or existing relationship, perform the following steps:

Procedure

1. Modify the existing datasource of the repository for which the new attribute has been added.
2. Modify the associated input map of the modified datasource. Deploy the changes into FC enterprise successfully. See *TIBCO MDM Studio Repository Designer User's Guide* for more information on MDM Studio.
3. To identify the repository data sources, refer `<AC_HOME>/samples/CatalogDataMap.csv` file. It contains the repository names, its associated datasource names, and the corresponding input map names.
4. To identify the relationship data sources, refer `<AC_HOME>/samples/RelationshipDataMap.csv` file. It contains the repository names, its associated relationship datasource names, and the corresponding relationship input map names.



- For data source modification, any new attribute should be added before the MODVERSION attribute. MODVERSION attribute should always be the last attribute in the data source.
- Ensure that you verify all the new or modified metadata are deployed properly from MDM Studio.

Using the Partial Export or Partial Import Feature for the Newly Created Repositories

To use the partial export or partial import feature for newly created repositories, perform the following step:

If the user wants to use the Partial Export or Partial Import feature for the newly created repositories then there should be a ProjectTagName attribute created like other delivered repositories, so that the records in the repository will be tagged to the particular tag names.

Using the RecordStatusEnforcement Feature for the Newly Created Repositories

If the user wants to use the RecordStatusEnforcement feature for the newly created repositories then there should be RecordStatus attribute created like other delivered repositories, so that the records in the repository will receive the values ACTIVE, TESTING, and INACTIVE.

Procedure

1. For adding a new attribute to the ProductHasCancelPlanFragment, ProductHasCeasePlanFragment, ProductHasCustomPlanFragment, ProductHasProvidePlanFragment, or ProductHasUpdatePlanFragment relationships, the PRODUCT_DATA_DS datasource and its input map should be modified as these relationships gets embedded into the PRODUCT_DATA.csv for import.
2. For adding a new attribute to the PlanFragmentHasMilestone relationship, the PLANFRAGMENT_DATA_DS datasource and its inputmap should be modified as these relationships gets embedded into the PLANFRAGMENT_DATA.csv for import.
3. For adding a new attribute to the MilestoneToMilestone relationship, the MILESTONE_DATA_DS datasource and its inputmap should be modified as these relationships gets embedded into the MILESTONE_DATA.csv for import.

Modifying the New Attribute Added to the Exported Blank Template

To modify the new attribute added to the exported blank template, perform the following steps:

Procedure

1. Back up the existing <AC_HOME>/samples/BlankTemplate.zip file.
2. Open or Extract the BlankTemplate.zip file at a temporary location, like /opt/temp/.
3. Open the CSV file in edit mode to make changes based on the repository or relationship.
4. Add a new attribute column before MODVERSION column based on the changes in the datasource.
5. Replace the modified CSV files into the BlankTemplate.zip file.
6. Place the updated BlankTemplate.zip file at <AC_HOME>/samples/ directory.