

TIBCO® Order Management - Long Running

Getting Started

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About this Product

TIBCO® Order Management is an elastic, catalog-driven order management system for digital service providers. It accepts orders from any customer engagement system and orchestrates the tasks required for fulfilling the orders.

TIBCO Order Management is the next generation of TIBCO® Fulfillment Order Management and partially replaces the old product. To better align TIBCO Fulfillment Order Management with market demand, the product's capabilities have been reorganized into two new products: TIBCO® Order Management and TIBCO® Offer and Price Engine.

TIBCO Order Management is further divided into variant products:

- **TIBCO® Order Management - Low Latency:** Use this new product for scalable processing of low-latency orders
- **TIBCO Order Management - Long Running:** This product continues to support the processing of long-running orders

Use Case Submitting an Order

The first use case describes submitting an order by using TIBCO® Product and Service Catalog and TIBCO Order Management - Long Running.

1. Creating a product bundle in TIBCO Order Management - Long Running, named Triple Play, comprising of the following products:
 - Cable
 - Internet
 - Telephone
2. Publishing the catalog to TIBCO Order Management - Long Running and making these models available.
3. Starting the test harness.
4. Submitting the order and retrieving the order reference by using SOAP UI.
5. Searching the order based on order reference by using the TIBCO Order Management - Long Running user interface.
6. Viewing the execution plan.
7. Viewing the Gantt Chart to confirm the successful fulfillment of an order.

Create Products by using TIBCO Product and Service Catalog

The first requirement of the use case requires the creation of the product by using TIBCO Product and Service Catalog. To create a product in TIBCO Product and Service Catalog, you have to understand the product, plan fragment, and milestone relationship.

Product, Plan Fragment, and Milestone Relationship

The relationship between product, plan fragment, and milestone are as follows:

- Each product or product bundle must have a plan fragment associated with it. For this use case, we create four plan fragments, one each for the three products and one for the product bundle.
- The plan fragment record can be created without milestone records, but the SLA data part must be provided. For more information, refer to the *TIBCO Product and Service Catalog User's Guide*. For this use case, we create four milestone pairs, one pair each for the three products and one pair for the product bundle.
- A single plan fragment associated with a milestone pair can be linked to all the products and the product bundle created in this use case. You can create just one plan fragment and link it with all the products and product bundle.
- The use case mentions creating four plan fragments and four milestone pairs (one each for products and the product bundle) because each product is a different service or bundle and can be associated with its plan fragment having its milestones.



Logging in to TIBCO Product and Service Catalog

For logging in to the TIBCO Product and Service Catalog application, perform the following steps:

Procedure

1. Open the TIBCO Product and Service Catalog application.

2. Enter your **Company Name**, **User Name**, and **Password**.

TIBCO Product and Service Catalog Login Screen

3. Click the **Login** button or press **Enter** on the keyboard.

Creating the START-END Milestone Pair

To create milestones perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Milestone Repository

2. Select the value **MILESTONE** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.
4. Enter the values for the following fields in the **Info** tab:

FIELD NAME	VALUES
PRODUCTID	MLSTN_CBL_02
Product ID Extension	ProvideCable
Milestone Name	END

Creating Milestones

Add Record

Perspective: None

Repository Name: MILESTONE
Repository Description: MILESTONE
PRODUCTID: MLSTN_CBL_02
Product ID Extension: ProvideCable

INFO System

PRODUCTID: MLSTN_CBL_02
Milestone Name: END
Project Tag Name: [Empty]

Product ID Extension: ProvideCable
Plan Fragment ID: [Empty]
Record Status: TESTING

Buttons: Validate Save **Save and Process** Cancel

- Click the **Save and Process** button. You are redirected to the **Browse and Search** page.
- Click the **View All** button and the created milestone is visible in the list.
- Perform Step 3 through Step 4 again and use the following value for the new milestone:

FIELD NAME	VALUES
PRODUCTID	MLSTN_CBL_01
Product ID Extension	ProvideCable
Milestone Name	START

- Click the **Relationships** tab, select the option **MilestoneToMilestone** in the left panel, and click **Add Relationship**. The **Record Search for Relationships** page opens.

Adding Relationships to Milestones

Add Record

Perspective: None

MLSTN_CBL_01 - ProvideCable > MilestoneToMilestone
Relationship Name: MilestoneToMilestone
Repository Name: MILESTONE

Buttons: Create Related Record **Add Relationship** Remove Relationship Quick Export Show Errors

Page 1 of 1

Buttons: Validate Save **Save and Process** Cancel

- Click the **Search** button to display the list of milestones. Select the milestone you created earlier, MLSTN_CBL_02, and click **Done**. You are redirected to the **Add Record** page.

Searching Milestones for Relationship

Add Relationship

Record Search Relationships For MLSTN_CBL_01-ProvideCable

Repository Name
MILESTONE

PRODUCTID equals ☐ Case-sensitive

Project Tag Name equals ☐ Case-sensitive

Record Status equals

Modification Date equals

Search **Clear** **Close**

[Select All Pages](#) [Deselect All Pages](#)

<input type="checkbox"/>	PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
<input checked="" type="checkbox"/>	MLSTN_CBL_02	ProvideCable	END		
<input type="checkbox"/>	MLSTN_CBL_03	ProvideCable	START		
<input type="checkbox"/>	MLSTN_CBL_04	ProvideCable	END		

Page 1 of 1 Items/Page 50

Done

Cancel

10. The END milestone MLSTN_CBL_02 is displayed as linked to START milestone MLSTN_CBL_01. Click **Save and Process** to save the milestone and the relationship.

Saving Milestone Relationship

Add Record

Perspective
None

MLSTN_CBL_01 - ProvideCable > MilestoneToMilestone

Relationship Name
MilestoneToMilestone

Repository Name
MILESTONE

Create Related Record **Add Relationship** **Remove Relationship** **Quick Export** **Show Errors**

<input type="checkbox"/>	PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name	Typical Duration	Maximum Duration	Project Tag Name
<input checked="" type="checkbox"/>	MLSTN_CBL_02	ProvideCable	END					

Page 1 of 1

Validate **Save** **Save and Process** **Cancel**

Viewing Related Milestones

Browse and Search

Repository Name
MILESTONE

MILESTONE

PRODUCTID equals
Project Tag Name equals
Record Status equals
Modification Date equals

Case-sensitive
Case-sensitive

Search Clear Close

View All

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

PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
MLSTN_CBL_01	ProvideCable	START		
MLSTN_CBL_02	ProvideCable	END		

Items/Page 50 Page 1 of 1

11. We have now created a milestone pair for the product Cable. Similarly, perform Step 3 through Step 10 to create milestone pairs for the products Internet and Telephone, and product bundle TriplePlay, by using the following values:

FIELD NAME	VALUES
PRODUCTID	MLSTN_INT_02
Product ID Extension	ProvideInternet
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_INT_01
Product ID Extension	ProvideInternet
Milestone Name	START

FIELD NAME	VALUES
PRODUCTID	MLSTN_TEL_02
Product ID Extension	ProvideTelephone
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_TEL_01
Product ID Extension	ProvideTelephone
Milestone Name	START

FIELD NAME	VALUES
PRODUCTID	MLSTN_TRPLPLY_02
Product ID Extension	ProvideTriplePlay
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_TRPLPLY_01

FIELD NAME	VALUES
Product ID Extension	ProvideTriplePlay
Milestone Name	START

Viewing All Related Milestones

Browse and Search

Repository Name

MLESTONE

MLESTONE

PRODUCTID

Project Tag Name

Record Status

Modification Date

equals

equals

equals

equals

Case-sensitive

Case-sensitive

Search

Clear

Close

View All

Create Record

Modify

Correction

Merge

Copy

Compare

Show History

Quick Export

Delete Record

Update/Resolve Relationship Tag

Hierarchy Management

PRODUCTID

Product ID Extension

Milestone Name

Plan Fragment ID

Project Tag Name

MLSTN_CBL_01

ProvideCable

START

MLSTN_CBL_02

ProvideCable

END

MLSTN_CBL_03

ProvideCable

START

MLSTN_CBL_04

ProvideCable

END

Items/Page

50

<<

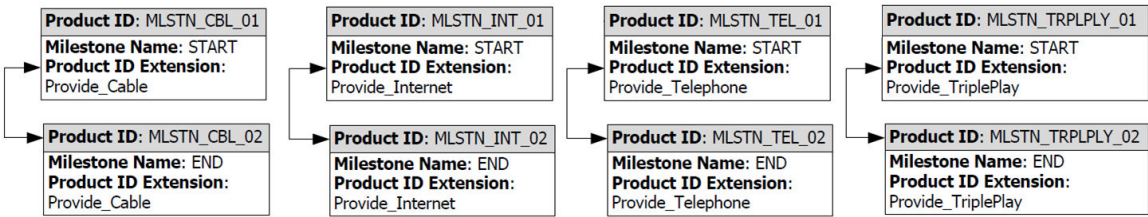
>>

Page

1

of 1

Conceptual Diagram of the Relationship between Milestones



Creating Plan Fragments for Products

To create plan fragments for the created milestones, perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Plan Fragment Repository

Browse and Search

Repository Name

PLANFRAGMENT

PLANFRAGMENT

PRODUCTID

Plan Fragment Name

Plan Fragment Version

Project Tag Name

Record Status

Modification Date

equals

equals

equals

equals

equals

equals

Case-sensitive

Case-sensitive

Case-sensitive

Case-sensitive

Search

Clear

Close

View All

Create Record

Modify

Correction

Merge

Copy

Compare

Show History

Quick Export

Delete Record

Update/Resolve Relationship Tag

Hierarchy Management

Specify search criterion and click on search to retrieve records

2. Select the value **PLANFRAGMENT** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.
4. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PLNFRG_CBL
Plan Fragment Name	CablePlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_CBL
Short Description	Plan for Cable Service

Creating Plan Fragments

Add Record

Perspective: None

Repository Name: PLANFRAGMENT
Repository Description: Configuration information for a Process Component/Plan Fragment of BPM Engines. Has information for SLA
PRODUCTID: PLNFRG_CBL

INFO RETRY System SLA Classifications

PRODUCTID: PLNFRG_CBL
*Plan Fragment Version: V01
Error Handler: ERR_PF_CBL
Class: Process
Record Status: TESTING

*Plan Fragment Name: CablePlan
Owner: Example Corporation
*Short Description: Plan for Cable Service
Project Tag Name: [Empty]

Validate Save Save and Process Cancel

5. Select **PlanFragmentHasMilestone** on the left panel.
6. Click **Add Relationship**. The **Record Search for Relationships** page opens.
7. Click **Search** to view all the milestones available. Select **MLSTN_CBL_01** and **MLSTN_CBL_02**, and click **Done**.

Searching Milestones for Relationship with Plan Fragments

Add Relationship

Record Search Relationships For PLNFRG_CBL-

Repository Name: MILESTONE
MILESTONE

PRODUCTID: equals
Project Tag Name: equals
Record Status: equals
Modification Date: equals

Case-sensitive

Search Clear Close

Select All Pages Deselect All Pages

PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
<input checked="" type="checkbox"/> MLSTN_CBL_01	ProvideCable	START		
<input checked="" type="checkbox"/> MLSTN_CBL_02	ProvideCable	END		
<input type="checkbox"/> MLSTN_CBL_03	ProvideCable	START		
<input type="checkbox"/> MLSTN_CBL_04	ProvideCable	END		

Page 1 of 1 Items/Page 50

Done

Cancel

8. Click **Save and Process**.
9. Repeat **Step 3** through **Step 8** to create the remaining three plan fragments by using the following values:

FIELD	VALUE
PRODUCTID	PLNFRG_INT
Plan Fragment Name	InternetPlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_INT
Short Description	Plan for Internet Service
START Milestone	MLSTN_INT_01
END Milestone	MLSTN_INT_02

FIELD	VALUE
PRODUCTID	PLNFRG_TEL
Plan Fragment Name	TelephonePlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_TEL
Short Description	Plan for Telephone Service
START Milestone	MLSTN_TEL_01
END Milestone	MLSTN_TEL_02

FIELD	VALUE
PRODUCTID	PLNFRG_TRPLPLY
Plan Fragment Name	TriplePlayPlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_TRPLPLY
Short Description	Plan for TriplePlay Service
START Milestone	MLSTN_TRPLPLY_01
END Milestone	MLSTN_TRPLPLY_02

Viewing All Plan Fragments

Browse and Search

Repository Name
PLANFRAGMENT

PLANFRAGMENT

PRODUCTID equals
Plan Fragment Name equals
Plan Fragment Version equals
Project Tag Name equals
Record Status equals
Modification Date equals

Search Clear Close

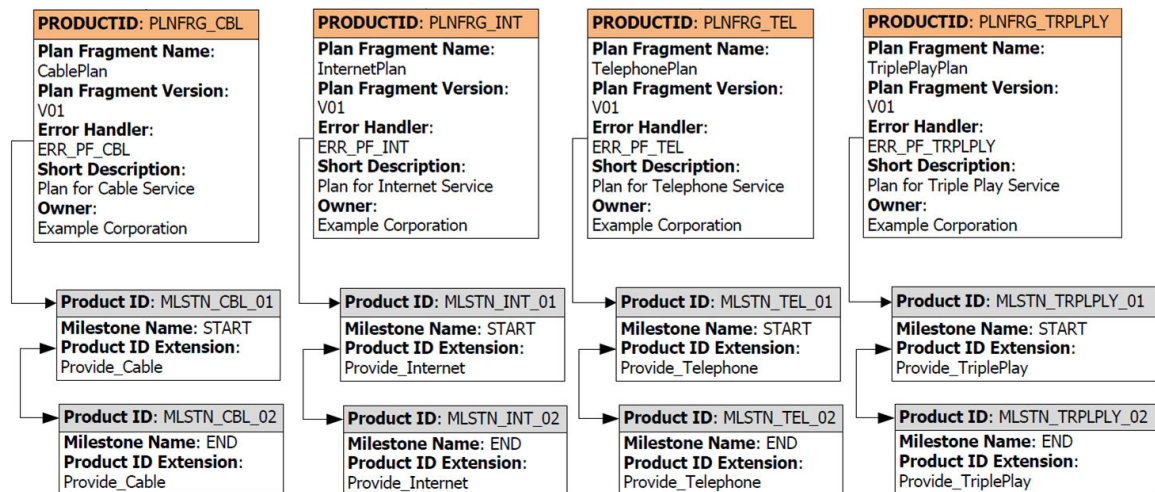
View All

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

PRODUCTID	Plan Fragment Name	Plan Fragment Version	Project Tag Name
NO_RECIPROCAL_ACTION	NO_RECIPROCAL_ACTION	1	
NON_EXECUTING	NON_EXECUTING	1	
PLNFRG_CBL	CablePlan	V01	

Items/Page: 50 Page: 1 of 1

Conceptual Diagram showing the Relationship between Plan Fragments and Milestones



Creating the Products

To create products, perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Product Repository

Browse and Search

Repository Name
PRODUCT

PRODUCT

COMPONENT_CLASS Co

PRODUCTID equals
Class equals
SubClass equals
SingleUse equals
MustComplete equals
Project Tag Name equals
Record Use equals

Search Clear Close

View All

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

Specify search criterion and click on search to retrieve records

2. Select the value **PRODUCT** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.
4. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PRD_CBL
Name	Cable
Class	Service
Short Description	Digital Cable Service
Long Description	Digital Cable Service for Global Consumers
Owner	Example Corporation

Creating Products of Type Service

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_CBL
Product ID Extension: PRD_CBL

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

PRODUCTID: PRD_CBL
UOM:
SubClass:
Long Description: Digital Cable Service for Global Consumers
MustComplete: true
Owner: Example Corporation
Record Use: Technical
IsTemplate: false

Class: SERVICE
Name: Cable
Short Description: Digital Cable Service
SingleUse:
Concurrent Order:
Project Tag Name:
Offer Id:

Validate Save Save and Process Cancel

- Click the **Internal** tab and select the plan fragment CablePlan in the **Provide Plan** field.

Adding Plan Fragment Relationship to Product of Type Service

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_CBL
Product ID Extension: PRD_CBL

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

Record Status: TESTING
Update Plan:
Cease Plan:
Provide Plan: NON_EXECUTING,1,NONE
Cancel Plan:

Validate Save Save and Process Cancel

- Click **Save and Process**.
- Repeat **Step 3** through **Step 6** to create the remaining two products by using the following values:

FIELD	VALUE
PRODUCTID	PRD_INT
Name	Internet
Class	Service
Short Description	Digital Internet Service
Long Description	Digital Internet Service for Global Consumers

FIELD	VALUE
Owner	Example Corporation
Provide Plan	InternetPlan

FIELD	VALUE
PRODUCTID	PRD_TEL
Name	Telephone
Class	Service
Short Description	Digital Telephone Service
Long Description	Digital Telephone Service for Global Consumers
Owner	Example Corporation
Provide Plan	TelephonePlan

Viewing All Products of Type Service

Browse and Search

Repository Name: PRODUCT

[Create Classification Scheme](#) [Text Search](#) [Configure](#)

COMPONENT_CLASS: PRODUCT

PRODUCTID: equals ☐ Case-sensitive

Class: equals ☐ Case-sensitive

SubClass: equals ☐ Case-sensitive

SingleUse: equals Ignore ☐ Case-sensitive

MustComplete: equals Ignore ☐ Case-sensitive

Project Tag Name: equals ☐ Case-sensitive

Record Use: equals ☐ Case-sensitive

[Search](#) [Clear](#) [Close](#)

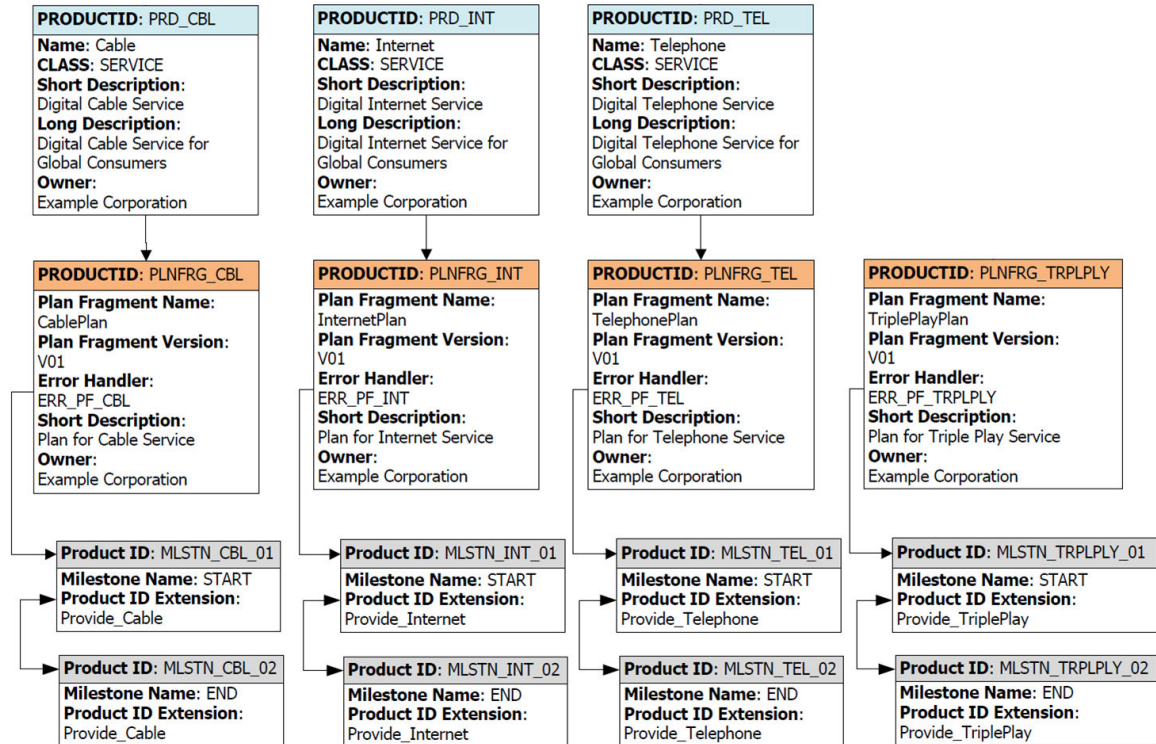
[View All](#)

[Create Record](#) [Modify](#) [Correction](#) [Merge](#) [Copy](#) [Compare](#) [Show History](#) [Quick Export](#) [Delete Record](#) [Update/Resolve Relationship Tag](#) [Hierarchy Management](#) [Template Instance](#)

PRODUCTID	Class	Short Description	Owner	Project Tag Name
PRD_CBL	SERVICE	Digital Cable Service	Example Corporation	
PRD_INT	SERVICE	Digital Internet Service	Example Corporation	
PRD_TEL	SERVICE	Digital Telephone Service	Example Corporation	

Items/Page: 50 Page: 1 of 1

Conceptual Diagram showing Relationship between Products, Plan Fragments, and Milestones



Creating the Product Bundle

To create a product of class bundle, perform the following steps:

Procedure

1. Click **Create Record**. The **Add Record** page opens.
2. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PRD_TRPLPLY
Name	TriplePlay
Class	Bundle
Short Description	Digital Service Bundle
Long Description	Digital Service Bundle for Global Consumers
Owner	Example Corporation

Creating Products of Type Bundle

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_TRPLPLY
Product ID Extension:

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

PRODUCTID: PRD_TRPLPLY
UOM:
SubClass:
Long Description: Digital Service Bundle for Global Consumers
MustComplete: true
Owner: Example Corporation
Record Use: Commercial
IsTemplate: false

Class: BUNDLE
Name: TriplePlay
Short Description: Digital Service Bundle
SingleUse:
Concurrent Order:
Project Tag Name:
Offer id:

Validate Save Save and Process Cancel

- Click the **Internal** tab and select the plan fragment **TriplePlayPlan** in the **Provide Plan** field.

Adding Plan Fragment Relationship to Product of Type Bundle

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_TRPLPLY
Product ID Extension:

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

Record Status: TESTING
Update Plan:
Cease Plan:

Provide Plan: NON_EXECUTING.1.NONE
Cancel Plan:

Validate Save Save and Process Cancel

- Click the **Relationships** tab, select the **ProductComprisedOf** option in the left panel, and click **Add Relationship**.

Adding Relationship to Products of Type Bundle

Add Record

Perspective: PRD_TRPLPLY > ProductComprisedOf

Relationship Name: PRODUCT
Repository Name: PRODUCT

Create Related Record Add Relationship Remove Relationship Quick Export Show Errors

Page 1 of 1

Validate Save Save and Process Cancel

- Click **Search** to display all the products.

6. Select the options PRD_CBL, PRD_INT, and PRD_TEL to add the products Cable, Internet and Telephone within the bundle respectively.
7. Click **Done**. You are redirected to the **Relationships** tab of Add Record page.

Searching Products for Relationship

The screenshot shows the 'Add Relationship' window with the title 'Record Search Relationships For PRD_TRPLPLY-'. The 'Repository Name' is 'PRODUCT'. The 'PRODUCT' section contains several dropdown menus for search criteria: PRODUCTID, Class, SubClass, SingleUse, MustComplete, Project Tag Name, Record Use, Offer Id, and IsTemplate. Each dropdown has 'equals' selected. There are also checkboxes for 'Case-sensitive' and 'Ignore' for some criteria. At the bottom, there are 'Search', 'Clear', and 'Close' buttons. Below the search criteria is a table with columns: PRODUCTID, Class, Short Description, Owner, and Project Tag Name. The table contains three rows: PRD_CBL (SERVICE, Digital Cable Servi..., Example Corporat...), PRD_INT (SERVICE, Digital Internet Se..., Example Corporat...), and PRD_TEL (SERVICE, Digital Telephone ..., Example Corporat...). The first three rows are highlighted with a red box. At the bottom of the table, there are 'Page 1 of 1' and 'Items/Page 50' indicators. There are also 'Done' and 'Cancel' buttons at the bottom of the window.

8. Click the **ProductComprisedOf** option in the left panel to view all the added products.

Saving Product Relationship

The screenshot shows the 'Add Record' window with the title 'PRD_TRPLPLY > ProductComprisedOf'. The 'Relationship Name' is 'ProductComprisedOf'. The 'Repository Name' is 'PRODUCT'. The left panel shows a tree view of relationships, with 'ProductComprisedOf' selected and highlighted with a red box. The main panel shows a table with columns: PRODUCTID, Class, Short Description, Owner, Project Tag Name, Record Use, Offer Id, IsTemplate, Record Min, Record Max, Start Date, End Date, Sequence, Cease Sequence, Update Sequence, Auto Provision, Action, and Project. The table contains three rows: PRD_CBL (SERVICE, Digital Cable Service, Example Corporation, Technical, false), PRD_INT (SERVICE, Digital Internet Service, Example Corporation, Technical, false), and PRD_TEL (SERVICE, Digital Telephone Service, Example Corporation, Technical, false). The first three rows are highlighted with a red box. At the bottom, there are 'Validate', 'Save', 'Save and Process', and 'Cancel' buttons.

9. Click **Save and Process**.

Viewing All Products of Type Service and Type Bundle

Browse and Search

Repository Name:

COMPONENT_CLASSES

PRODUCT

PRODUCTID: equals
 Class: equals
 SubClass: equals
 SingleUse: equals
 MustComplete: equals
 Project Tag Name: equals
 Record Use: equals

Search Clear Close

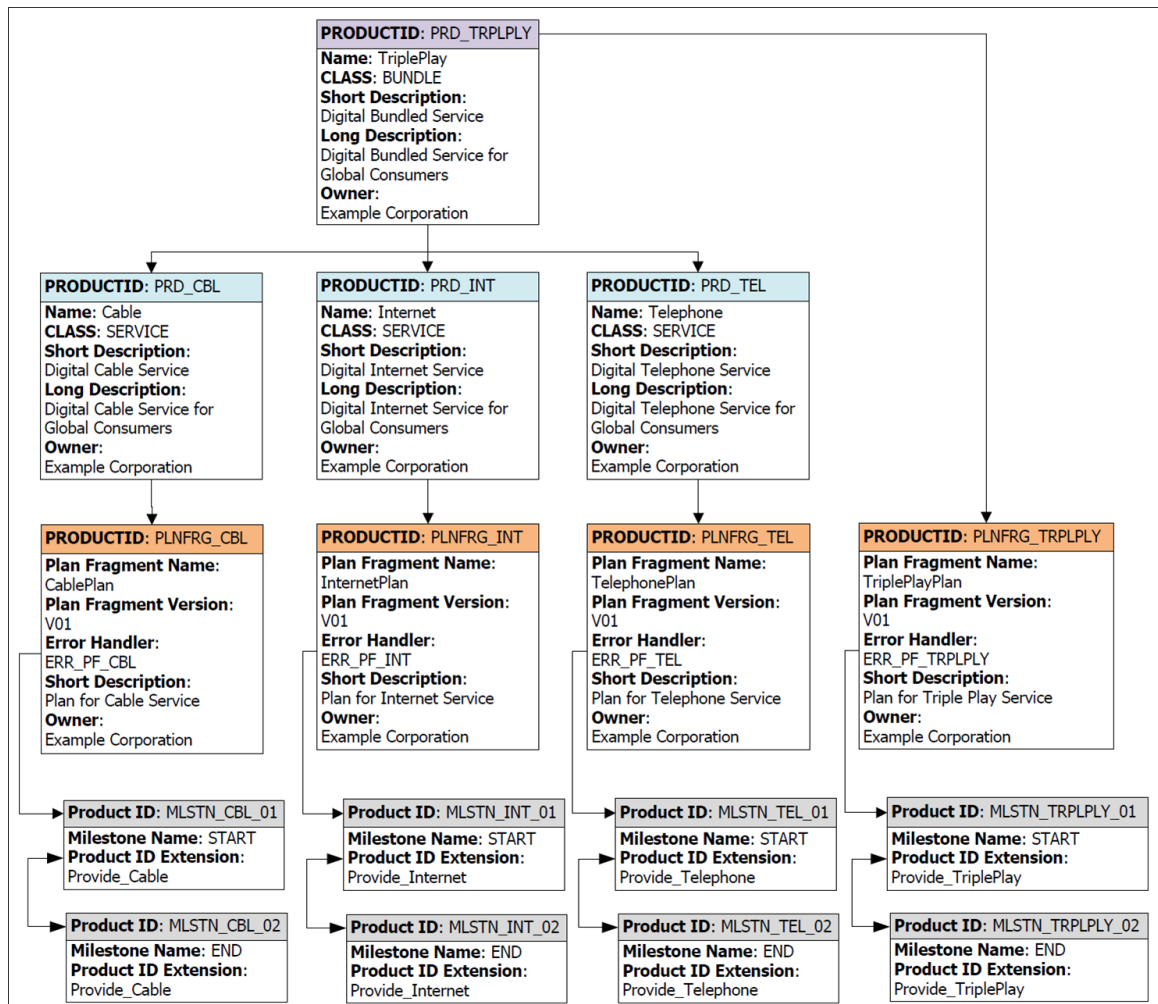
View All

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

PRODUCTID	Class	Short Description	Owner	Project Tag Name
PRD_CBL	SERVICE	Digital Cable Service	Example Corporation	
PRD_INT	SERVICE	Digital Internet Service	Example Corporation	
PRD_TEL	SERVICE	Digital Telephone Service	Example Corporation	

Items/Page: 50 Page: 1 of 1

Conceptual Diagram showing Relationship between the Products and the Product Bundles



Publishing the Products and Making the Products Available

After completing the creation of products on TIBCO Product and Service Catalog, the products have to be published from TIBCO Product and Service Catalog to TIBCO Order Management - Long Running where the order is processed.

To publish the product or products on TIBCO Order Management - Long Running, perform the following steps in the TIBCO Product and Service Catalog user interface:

Procedure

1. Click **Product and Service Catalog Operation > Publish Catalog**. The **Bulk Model Publish** page opens.
2. The **Select Publish Type** options lets you to publish **Full Data Publish** or **Delta Publish**. To publish manually to TIBCO Order Management - Long Running, select the option **JMS/XML**. To publish automatically to TIBCO Order Management - Long Running, select the option **JMS/XML**. As JMS publishes models on the TIBCO Order Management - Long Running queues, which is automatic. XML contains off-line published models, which is manual.



Please refer to the *TIBCO Product and Service Catalog User's Guide* for more details.

3. Select the data model that you want to publish. For this use case, we select the data model **PRODUCT** and provide values for the fields **ProductID** or **ProductID EXT**.
4. Click **Publish** and the values are published on TIBCO Order Management - Long Running automatically.
5. Click **Event Log** to check if the publishing of the product is successful.

Starting the Test Harness

You must have *TIBCO ActiveMatrix BusinessWorks* installed on your machine to use the test harness.

The `AF_TestHarness` project is intended for testing only. Perform the following steps to use the test harness for the use case:

Procedure

1. After performing installation and post-installation steps for TIBCO Order Management - Long Running engines, start and verify that the following server has been started or deployed without any errors. To start the Order Management Server, perform the following steps:

1. To start the server, run the following command:

```
$cd $OM_HOME/roles/omsServer/standalone/bin
$./start.sh
```

2. Open the `AF_TestHarness_BW6` project available in `$OM_HOME/samples/TestHarness/AF_TestHarness_BW6.zip` through TIBCO Business Studio.
3. Change the values of module properties related to JMS connection parameters for Orchestrator and the test harness output directory path as shown in the following figures.

JMS Connection Parameters for Orchestrator

Module Properties

Properties

Property Configurations

User System

Groups / Properties	Type	default
testHarness		
sleep		
interfaces		
jms		
tdsoms		
MIG_Password	Password	*****
MIG_QueueConnect	String	QueueConnectionFactory
MIG_TopicConnect	String	TopicConnectionFactory
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Username	String	admin
outputPath	String	D:/Temp/local/
affv4		
orchestrator		
interfaces		
jms		
events		
MIG_Password	Password	*****
MIG_QueueConn	String	QueueConnectionFactory
MIG_TopicConne	String	TopicConnectionFactory
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Username	String	admin
jdbc		
configuration		
flags		
constants		
messaging		
common		
commonServices		
interfaces		
jms		
events		
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Password	Password	*****
MIG_QueueConnect	String	QueueConnectionFactory
MIG_TopicConnect	String	TopicConnectionFactory
MIG_Username	String	admin
configuration		
flags		
messaging		
Deployment	String	AF_TestHarness
Domain	String	domain
afforchestratorsharedConnectic	JMS Connection	aff.orchestrator.sharedConn...
affv4-common-messaging-jms	String	tibco.aff.orchestrator.provi...
affv4-common-messaging-jms	String	tibco.aff.orchestrator.provi...
sharedConnectionsjmstsdomsJk	JMS Connection	sharedConnectionsjms.tdso...

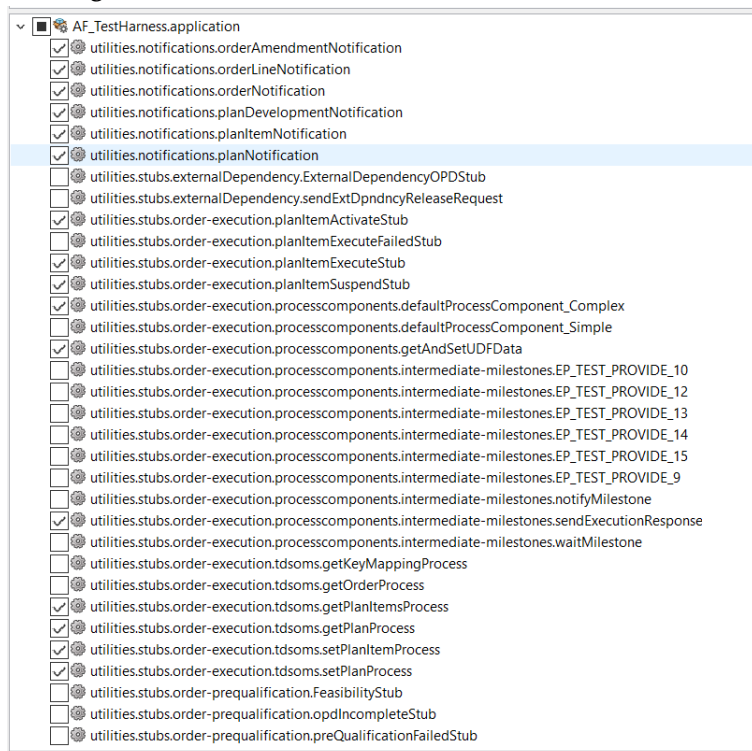
The AF_TestHarness_BW6 project contains several BW processes integrating with OM Orchestrator or Order Management Server components over the JMS channels as according to the following list. These are the stub processes just to show how the integration is done, and to have an end-to-end run.

- process component stubs (execute, suspend, activate)
- error handler stub
- pre-qualification failed handler stub
- status notification subscriber stubs

All these processes log the relevant details (for example, execution request payload) in different files. These files are created under the directory named as orderref of the corresponding order. These directories are created under a parent directory whose path is configured in testharness/outputPath module properties.

4. Start the following starter processes in TIBCO Business Studio.

Starting Processes



Orchestrator Notifications Listener Processes:

- `utilities/notifications/orderAmendmentNotification.process`
- `utilities/notifications/orderLineNotification.process`
- `utilities/notifications/orderNotification.process`
- `utilities/notifications/planDevelopmentNotification.process`
- `utilities/notifications/planItemNotification.process`
- `utilities/notifications/planNotification.process`

These processes subscribe to the notification events from the Orchestrator. By using these events the exact state of the order/plan can be known.



The publishing of status change notifications for each entity is not enabled in Orchestrator out of the box. To subscribe to the status change notifications by using the above-mentioned processes, the notification publishing must be enabled for each entity through the respective flags. These flags are available in the **Orchestrator Configuration > Generic Configuration** category in the Configurator UI.

Orchestrator Task Stubs:

- `utilities/stubs/planItemActivateStub`
- `utilities/stubs/planItemExecuteStub`
- `utilities/stubs/planItemSuspendStub`

The process `planItemExecuteStub` is a dummy process component implementation. It calls a default process that gets and sets plan/planItem data by using JMS based data access interfaces and finally sends an execution success response to Orchestrator. The `planItemSuspendStub` and `planItemActivateStub` processes are used for testing the order amendments functionality.

5. Verify that the following queues or topics are up and have listeners:

- `tibco.aff.oms.ordersService`
- `tibco.aff.catalog.planfragment.request`
- `tibco.aff.catalog.product.request`

6. Publish the following models:

Model	Send Model on Queue
Product Model	<code>tibco.aff.catalog.product.request</code>
Plan Fragment Model	<code>tibco.aff.catalog.planfragment.request</code>

7. Submit a dummy order through SOAP over HTTP or SOAP over JMS to the Order Management Server according to the `SubmitOrderRequest` sample located at `OM_HOME/samples/Webservice/SubmitOrderRequest.xml`. Use the WSDL available at `$OM_HOME/schemas/wsd1/http/OrderServiceHTTP.wsd1` or `$OM_HOME/schemas/wsd1/jms/OrderServiceJMS.wsd1` to submit orders. For instance, `http://localhost:8080/api/orderService?wsdl`.
8. Verify that the jobs of processes selected in the test harness are created. The `planItemExecute` stub acts as the basic process component, which processes and responds to the execution request sent by Orchestrator for each plan item.
9. Navigate to `http://<machineIPAddress>:<port number>/Login/Login.jsp`. Verify that you can see the order and the plan in the Order Management Server UI. Check whether the status of the order is COMPLETE.

Submitting Order and Retrieving Order Reference by using SOAP UI

Submitting an order and retrieving the order reference requires a user interface. We use SOAP UI to perform this step.

To submit the order and retrieve the order reference by using SOAP UI, perform the following steps:

Procedure

1. Open the SOAP UI application and create a New Project.
2. Enter the name for the project (example TriplePlay) in the Project Name field and provide the path of the WSDL file, created during the Test Harness session, in the **Initial WSDL / WADL** field. Click **Ok** to create the project.
3. The newly created project (named TriplePlay) appears in the left panel named Navigation. The new project has a tree-based structure. Expand the tree to open **Project Name > OrderServiceSoapBinding > SubmitOrder > Request1**. An XML file displays on the right panel. Click **Run** to execute the submit request. This submits an order.
4. On the Navigation Panel click **GetOrderDetails > Request1**. An XML file is displayed on the right panel. Click **Run** to execute the request. The Order ID displays in the rightmost panel enclosed in the `<ns7: OrderRef>` tags. Copy the order reference ID.

Searching for Orders by using Order Reference

To search the order on TIBCO Order Management - Long Running, you have to use the Order Management System user interface.

Open the Order Management Server UI and perform the following steps:

Procedure

1. Click the menu Orders and paste the copied Order Reference ID in the search field.

2. Click the Search icon, and the result is displayed for the order with the values for the following fields:
 - a) Order Ref ID
 - b) Customer ID
 - c) Status
 - d) Submitted Date
 - e) Originator
 - f) Fulfillment Engine
3. Click the result to view the order.

Viewing the Execution Plan

When you view an order on the Order Management Server UI, you can notice a button named **Show Execution Plan**.

Click **Show Execution Plan** to view the execution plan for the submitted order.

Viewing the Gantt Chart to Confirm Fulfillment of Order

When you view an execution plan of a submitted order, an icon called Gantt Chart lets you to view the Gantt Chart representation of the execution plan of the submitted order.

Use Case Amending an Order

The second use case describes amending an order by using TIBCO Product and Service Catalog and TIBCO Order Management - Long Running.

1. Creating a product bundle in TIBCO Product and Service Catalog, named Triple Play, comprising of the following products:
 - Cable
 - Internet
 - Telephone
2. Publishing the catalog to TIBCO Order Management - Long Running and making these models available.
3. Starting the test harness.
4. Submitting the order and retrieving the order reference by using SOAP UI.
5. Searching the order based on order reference by using the TIBCO Order Management - Long Running user interface.
6. Viewing the execution plan.
7. Viewing the Gantt Chart to confirm the fulfillment of an order.
8. Submitting Order Amendment by changing the original order.
9. Searching the amended order based on order reference by using the TIBCO Order Management - Long Running user interface.
10. Viewing the execution plan for the amended order.
11. Viewing the Gantt Chart to confirm the fulfillment of an amended order.

Create Products by using TIBCO Product and Service Catalog

The first requirement of the use case requires the creation of the product by using TIBCO Product and Service Catalog. To create a product in TIBCO Product and Service Catalog, you have to understand the product, plan fragment, and milestone relationship.

Product, Plan Fragment, and Milestone Relationship

The relationship between product, plan fragment, and milestone are as follows:

- Each product or product bundle must have a plan fragment associated with it. For this use case, we create four plan fragments, one each for the three products and one for the product bundle.
 - The plan fragment record can be created without milestone records, but the SLA data part must be provided. For more information, refer to the *TIBCO Product and Service Catalog User's Guide*. For this use case, we create four milestone pairs, one pair each for the three products and one pair for the product bundle.
- A single plan fragment associated with a milestone pair can be linked to all the products and the product bundle created in this use case. You can create just one plan fragment and link it with all the products and product bundle.
 - The use case mentions creating four plan fragments and four milestone pairs (one each for products and the product bundle) because each product is a different service or bundle and can be associated with its plan fragment having its milestones.



Logging in to TIBCO Product and Service Catalog

For logging in to the TIBCO Product and Service Catalog application, perform the following steps:

Procedure

1. Open the TIBCO Product and Service Catalog application.
2. Enter your **Company Name**, **User Name**, and **Password**.

TIBCO Product and Service Catalog Login Screen

TIBCO Product and Service Catalog
Powered by TIBCO Master Data Management

About | Language

Company Name

User Name

Password

Login

Forgot Password?

Welcome

TIBCO Product and Service Catalog enables you to easily manage and maintain complex product offerings. Offerings, Products, Services, and the rules for Pricing, Provisioning, and Eligibility are all actively maintained.

Additional Information
TIBCO Product and Service Catalog publishes the Product Offering Definition Catalog for use in Order Systems and Provisioning Systems, such as Fulfillment Order Management.

Contact Information
Support Contact
support@tibco.com

Help Center
Community
Developer Forums

3. Click the **Login** button or press **Enter** on the keyboard.

Creating the START-END Milestone Pair

To create milestones perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Milestone Repository

TIBCO Product and Service Catalog

Browse and Search

Repository Name: MILESTONE

PRODUCTID: equiti

Project Tag Name: equiti

Record Status: equiti

Modification Date: equiti

Case-sensitive

Case-insensitive

Search Clear Close

View All

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

Specify search criterion and click on search to retrieve records

2. Select the value **MILESTONE** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.

4. Enter the values for the following fields in the **Info** tab:

FIELD NAME	VALUES
PRODUCTID	MLSTN_CBL_02
Product ID Extension	ProvideCable
Milestone Name	END

Creating Milestones

5. Click the **Save and Process** button. You are redirected to the **Browse and Search** page.
6. Click the **View All** button and the created milestone is visible in the list.
7. Perform Step 3 through Step 4 again and use the following value for the new milestone:

FIELD NAME	VALUES
PRODUCTID	MLSTN_CBL_01
Product ID Extension	ProvideCable
Milestone Name	START

8. Click the **Relationships** tab, select the option **MilestoneToMilestone** in the left panel, and click **Add Relationship**. The **Record Search for Relationships** page opens.

Adding Relationships to Milestones

9. Click the **Search** button to display the list of milestones. Select the milestone you created earlier, MLSTN_CBL_02, and click **Done**. You are redirected to the **Add Record** page.

Searching Milestones for Relationship

Add Relationship

Record Search Relationships For MLSTN_CBL_01-ProvideCable

Repository Name
MILESTONE

PRODUCTID equals ☐ Case-sensitive

Project Tag Name equals ☐ Case-sensitive

Record Status equals

Modification Date equals

Search **Clear** **Close**

[Select All Pages](#) [Deselect All Pages](#)

<input type="checkbox"/>	PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
<input checked="" type="checkbox"/>	MLSTN_CBL_02	ProvideCable	END		
<input type="checkbox"/>	MLSTN_CBL_03	ProvideCable	START		
<input type="checkbox"/>	MLSTN_CBL_04	ProvideCable	END		

Page 1 of 1 Items/Page 50

Done

Cancel

10. The END milestone MLSTN_CBL_02 is displayed as linked to START milestone MLSTN_CBL_01. Click **Save and Process** to save the milestone and the relationship.

Saving Milestone Relationship

Add Record

Perspective
None

MLSTN_CBL_01 - ProvideCable > MilestoneToMilestone

Relationship Name
MilestoneToMilestone

Repository Name
MILESTONE

Create Related Record **Add Relationship** **Remove Relationship** **Quick Export** **Show Errors**

<input type="checkbox"/>	PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name	Typical Duration	Maximum Duration	Project Tag Name
<input checked="" type="checkbox"/>	MLSTN_CBL_02	ProvideCable	END					

Page 1 of 1

Validate **Save** **Save and Process** **Cancel**

Viewing Related Milestones

Browse and Search

Repository Name
MILESTONE

MILESTONE

PRODUCTID equals
Project Tag Name equals
Record Status equals
Modification Date equals

Case-sensitive
Case-sensitive

Search Clear Close

View All

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

PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
MLSTN_CBL_01	ProvideCable	START		
MLSTN_CBL_02	ProvideCable	END		

Items/Page 50 Page 1 of 1

11. We have now created a milestone pair for the product Cable. Similarly, perform Step 3 through Step 10 to create milestone pairs for the products Internet and Telephone, and product bundle TriplePlay, by using the following values:

FIELD NAME	VALUES
PRODUCTID	MLSTN_INT_02
Product ID Extension	ProvideInternet
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_INT_01
Product ID Extension	ProvideInternet
Milestone Name	START

FIELD NAME	VALUES
PRODUCTID	MLSTN_TEL_02
Product ID Extension	ProvideTelephone
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_TEL_01
Product ID Extension	ProvideTelephone
Milestone Name	START

FIELD NAME	VALUES
PRODUCTID	MLSTN_TRPLPLY_02
Product ID Extension	ProvideTriplePlay
Milestone Name	END

FIELD NAME	VALUES
PRODUCTID	MLSTN_TRPLPLY_01

FIELD NAME	VALUES
Product ID Extension	ProvideTriplePlay
Milestone Name	START

Viewing All Related Milestones

Browse and Search

Repository Name
MILESTONE

MILESTONE

PRODUCTID
Project Tag Name
Record Status
Modification Date

equals
equals
equals
equals

☐ Case-sensitive
☐ Case-sensitive

Search

Clear

Close

View All

Create Record

Modify

Correction

Merge

Copy

Compare

Show History

Quick Export

Delete Record

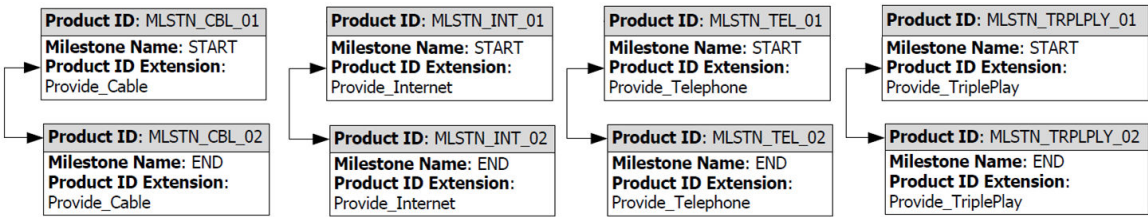
Update/Resolve Relationship Tag

Hierarchy Management

PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
MLSTN_CBL_01	ProvideCable	START		
MLSTN_CBL_02	ProvideCable	END		
MLSTN_CBL_03	ProvideCable	START		
MLSTN_CBL_04	ProvideCable	END		

Items/Page 50 Page 1 of 1

Conceptual Diagram of the Relationship between Milestones



Ways to Create Plan Fragments for Products

Plan fragments can be added in two ways:

Plan fragments with Milestone
Plan fragments without Milestone

Creating Plan Fragments for Products

To create plan fragments for the created milestones, perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Plan Fragment Repository

Browse and Search

Repository Name: PLANFRAGMENT

PLANFRAGMENT

PRODUCTID: equals

Plan Fragment Name: equals

Plan Fragment Version: equals

Project Tag Name: equals

Record Status: equals

Modification Date: equals

Case-sensitive: ☐ Case-sensitive

Case-sensitive: ☐ Case-sensitive

Case-sensitive: ☐ Case-sensitive

Case-sensitive: ☐ Case-sensitive

Search Clear Close

View All

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

Specify search criterion and click on search to retrieve records

2. Select the value **PLANFRAGMENT** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.
4. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PLNFRG_CBL
Plan Fragment Name	CablePlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_CBL
Short Description	Plan for Cable Service

Creating Plan Fragments

Add Record

Perspective: None

Repository Name: PLANFRAGMENT

Repository Description: Configuration information for a Process Component/Plan Fragment of BPM Engines. Has information for SLA

PRODUCTID: PLNFRG_CBL

INFO RETRY System SLA Classifications

PRODUCTID: PLNFRG_CBL

*Plan Fragment Version: V01

Error Handler: ERR_PF_CBL

Class: Process

Record Status: TESTING

*Plan Fragment Name: CablePlan

Owner: Example Corporation

*Short Description: Plan for Cable Service

Project Tag Name:

Validate Save Save and Process Cancel

5. Select **PlanFragmentHasMilestone** on the left panel.
6. Click **Add Relationship**. The **Record Search for Relationships** page opens.
7. Click **Search** to view all the milestones available. Select **MLSTN_CBL_01** and **MLSTN_CBL_02**, and click **Done**.

Searching Milestones for Relationship with Plan Fragments

Add Relationship

Record Search Relationships For PLNFRG_CBL-

Repository Name
MILESTONE

MILESTONE

PRODUCTID equals
Project Tag Name equals
Record Status equals
Modification Date equals

Case-sensitive
Case-sensitive

Search **Clear** **Close**

Select All Pages Deselect All Pages

<input type="checkbox"/>	PRODUCTID	Product ID Extension	Milestone Name	Plan Fragment ID	Project Tag Name
<input checked="" type="checkbox"/>	MLSTN_CBL_01	ProvideCable	START		
<input checked="" type="checkbox"/>	MLSTN_CBL_02	ProvideCable	END		
<input type="checkbox"/>	MLSTN_CBL_03	ProvideCable	START		
<input type="checkbox"/>	MLSTN_CBL_04	ProvideCable	END		

Page 1 of 1 Items/Page 50

Done

Cancel

8. Click **Save and Process**.
9. Repeat **Step 3** through **Step 8** to create the remaining three plan fragments by using the following values:

FIELD	VALUE
PRODUCTID	PLNFRG_INT
Plan Fragment Name	InternetPlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_INT
Short Description	Plan for Internet Service
START Milestone	MLSTN_INT_01
END Milestone	MLSTN_INT_02

FIELD	VALUE
PRODUCTID	PLNFRG_TEL
Plan Fragment Name	TelephonePlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_TEL
Short Description	Plan for Telephone Service

FIELD	VALUE
START Milestone	MLSTN_TEL_01
END Milestone	MLSTN_TEL_02

FIELD	VALUE
PRODUCTID	PLNFRG_TRPLPLY
Plan Fragment Name	TriplePlayPlan
Plan Fragment Version	V01
Owner	Example Corporation
Error Handler	ERR_PF_TRPLPLY
Short Description	Plan for TriplePlay Service
START Milestone	MLSTN_TRPLPLY_01
END Milestone	MLSTN_TRPLPLY_02

Viewing All Plan Fragments

Browse and Search

Repository Name: PLANFRAGMENT

PLANFRAGMENT

PRODUCTID: equals
Plan Fragment Name: equals
Plan Fragment Version: equals
Project Tag Name: equals
Record Status: equals
Modification Date: equals

Case-sensitive
Case-sensitive
Case-sensitive
Case-sensitive

Search **Clear** **Close**

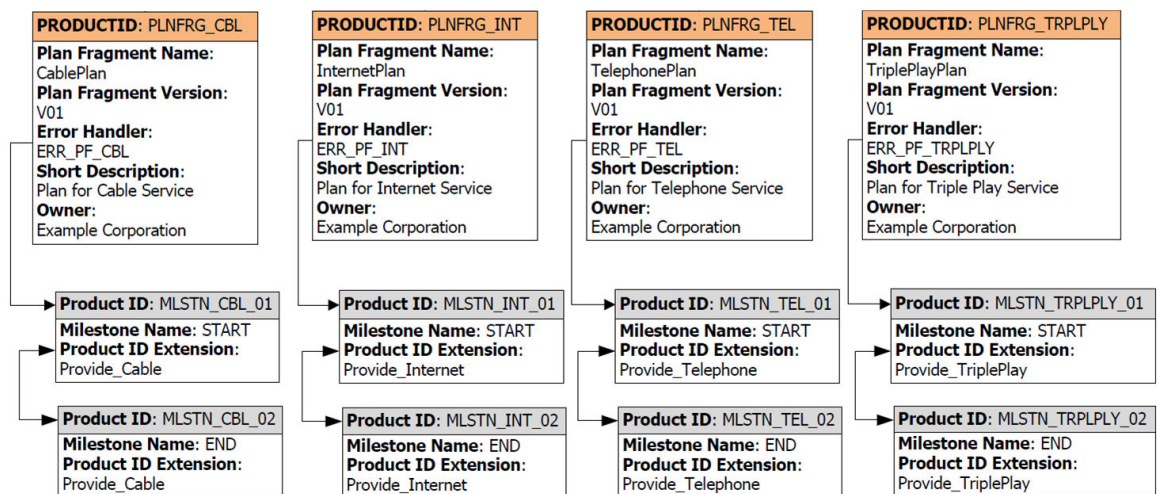
View All

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

PRODUCTID	Plan Fragment Name	Plan Fragment Version	Project Tag Name
NO_RECIPROCAL_ACTION	NO_RECIPROCAL_ACTION	1	
NON_EXECUTING	NON_EXECUTING	1	
PLNFRG_CBL	CablePlan	V01	

Items/Page: 50 Page: 1 of 1

Conceptual Diagram showing the Relationship between Plan Fragments and Milestones



Creating the Products

To create products, perform the following steps:

Procedure

1. Click **Browse and Search**. The **Browse and Search** page opens.

Browse and Search Page for the Product Repository

2. Select the value **PRODUCT** from the **Repository Name** drop-down box.
3. Click **Create Record**. The **Add Record** page opens.
4. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PRD_CBL
Name	Cable
Class	Service
Short Description	Digital Cable Service
Long Description	Digital Cable Service for Global Consumers
Owner	Example Corporation

Creating Products of Type Service

5. Click the **Internal** tab and select the plan fragment **CablePlan** in the **Provide Plan** field.

Adding Plan Fragment Relationship to Product of Type Service

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
Product ID Extension: PRD_CBL

INFO DETAILS **INTERNAL** System hidden AffinityGroup Classifications

Record Status: TESTING

Update Plan: [Dropdown]

Cease Plan: [Dropdown]

Provide Plan: **NON_EXECUTING.1.NONE**

Cancel Plan: [Dropdown]

Validate Save Save and Process Cancel

6. Click **Save and Process**.

7. Repeat **Step 3** through **Step 6** to create the remaining two products by using the following values:

FIELD	VALUE
PRODUCTID	PRD_INT
Name	Internet
Class	Service
Short Description	Digital Internet Service
Long Description	Digital Internet Service for Global Consumers
Owner	Example Corporation
Provide Plan	InternetPlan

FIELD	VALUE
PRODUCTID	PRD_TEL
Name	Telephone
Class	Service
Short Description	Digital Telephone Service
Long Description	Digital Telephone Service for Global Consumers
Owner	Example Corporation
Provide Plan	TelephonePlan

Viewing All Products of Type Service

Browse and Search

Repository Name: PRODUCT

PRODUCT

COMPONENT_CLASS

PRODUCTID: equals

Class: equals

SubClass: equals

SingleUse: equals

MustComplete: equals

Project Tag Name: equals

Record Use: equals

Search Clear Close

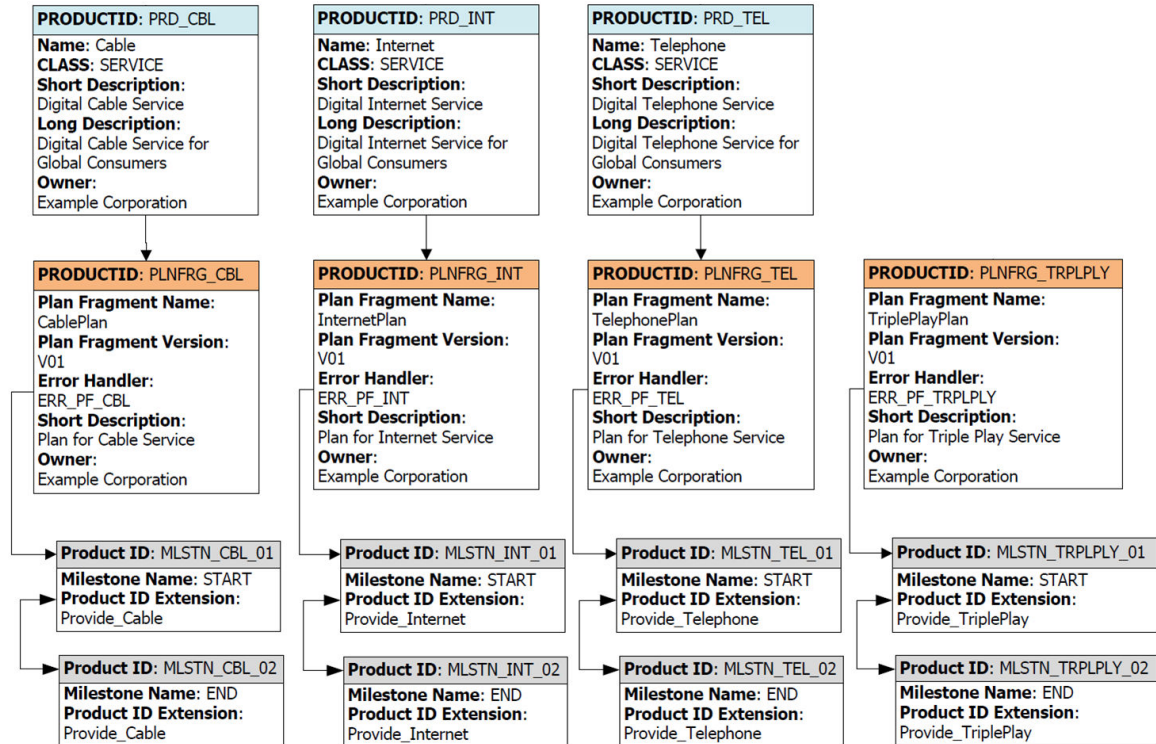
View All

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

PRODUCTID	Class	Short Description	Owner	Project Tag Name
PRD_CBL	SERVICE	Digital Cable Service	Example Corporation	
PRD_INT	SERVICE	Digital Internet Service	Example Corporation	
PRD_TEL	SERVICE	Digital Telephone Service	Example Corporation	

Items/Page: 50 Page: 1 of 1

Conceptual Diagram showing Relationship between Products, Plan Fragments, and Milestones



Creating the Product Bundle

To create a product of class bundle, perform the following steps:

Procedure

1. Click **Create Record**. The **Add Record** page opens.
2. Enter the values for the following fields in the **Info** tab:

FIELD	VALUE
PRODUCTID	PRD_TRPLPLY
Name	TriplePlay
Class	Bundle
Short Description	Digital Service Bundle
Long Description	Digital Service Bundle for Global Consumers
Owner	Example Corporation

Creating Products of Type Bundle

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_TRPLPLY
Product ID Extension:

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

PRODUCTID: PRD_TRPLPLY
UOM:
SubClass:
Long Description: Digital Service Bundle for Global Consumers
MustComplete: true
Owner: Example Corporation
Record Use: Commercial
IsTemplate: false

Class: BUNDLE
Name: TriplePlay
Short Description: Digital Service Bundle
SingleUse:
Concurrent Order:
Project Tag Name:
Offer id:

Validate Save Save and Process Cancel

- Click the **Internal** tab and select the plan fragment **TriplePlayPlan** in the **Provide Plan** field.

Adding Plan Fragment Relationship to Product of Type Bundle

Add Record

Perspective: None

Repository Name: PRODUCT
Repository Description: Product information for ProductOffering, CompositeProducts, ProductSpecification information
PRODUCTID: PRD_TRPLPLY
Product ID Extension:

INFO DETAILS INTERNAL System hidden AffinityGroup Classifications

Record Status: TESTING
Update Plan:
Cease Plan:

Provide Plan: NON_EXECUTING.1.NONE
Cancel Plan:

Validate Save Save and Process Cancel

- Click the **Relationships** tab, select the **ProductComprisedOf** option in the left panel, and click **Add Relationship**.

Adding Relationship to Products of Type Bundle

Add Record

Perspective: PRD_TRPLPLY > ProductComprisedOf
Relationship Name: PRODUCT
Repository Name: PRODUCT

Create Related Record Add Relationship Remove Relationship Quick Export Show Errors

Page 1 of 1

Validate Save Save and Process Cancel

- Click **Search** to display all the products.

6. Select the options PRD_CBL, PRD_INT, and PRD_TEL to add the products Cable, Internet and Telephone within the bundle respectively.
7. Click **Done**. You are redirected to the **Relationships** tab of Add Record page.

Searching Products for Relationship

The screenshot shows the 'Add Relationship' window with the title 'Record Search Relationships For PRD_TRPLPLY-'. The 'Repository Name' is 'PRODUCT'. The 'PRODUCT' section contains several dropdown menus for 'PRODUCTID', 'Class', 'SubClass', 'SingleUse', 'MustComplete', 'Project Tag Name', 'Record Use', 'Offer Id', and 'IsTemplate', all set to 'equals'. There are also checkboxes for 'Case-sensitive' and 'Ignore'. A 'Search' button is highlighted with a red box. Below the search criteria is a table with columns: PRODUCTID, Class, Short Description, Owner, and Project Tag Name. The table contains three rows: PRD_CBL, PRD_INT, and PRD_TEL, all with 'SERVICE' as the class and 'Example Corpora...' as the owner. A red box highlights these three rows. At the bottom, there is a 'Done' button and a 'Cancel' button.

8. Click the **ProductComprisedOf** option in the left panel to view all the added products.

Saving Product Relationship

The screenshot shows the 'Add Record' window with the title 'PRD_TRPLPLY > ProductComprisedOf'. The 'Relationship Name' is 'ProductComprisedOf'. The 'Repository Name' is 'PRODUCT'. The 'ProductComprisedOf' section contains a table with columns: PRODUCTID, Class, Short Description, Owner, Project Tag Name, Record Use, Offer Id, IsTemplate, Record Min, Record Max, Start Date, End Date, Sequence, Cease Sequence, Update Sequence, Auto Provision, Action, and Project. The table contains three rows: PRD_CBL, PRD_INT, and PRD_TEL, all with 'SERVICE' as the class and 'Example Corporation' as the owner. A red box highlights these three rows. On the left side, there is a list of relationship types, with 'ProductComprisedOf' highlighted by a red box. At the bottom, there are buttons for 'Validate', 'Save', 'Save and Process' (highlighted with a red box), and 'Cancel'.

9. Click **Save and Process**.

Viewing All Products of Type Service and Type Bundle

Browse and Search

Repository Name:

COMPONENT_CLASSES

PRODUCT

PRODUCTID: equals
 Class: equals
 SubClass: equals
 SingleUse: equals
 MustComplete: equals
 Project Tag Name: equals
 Record Use: equals

Search Clear Close

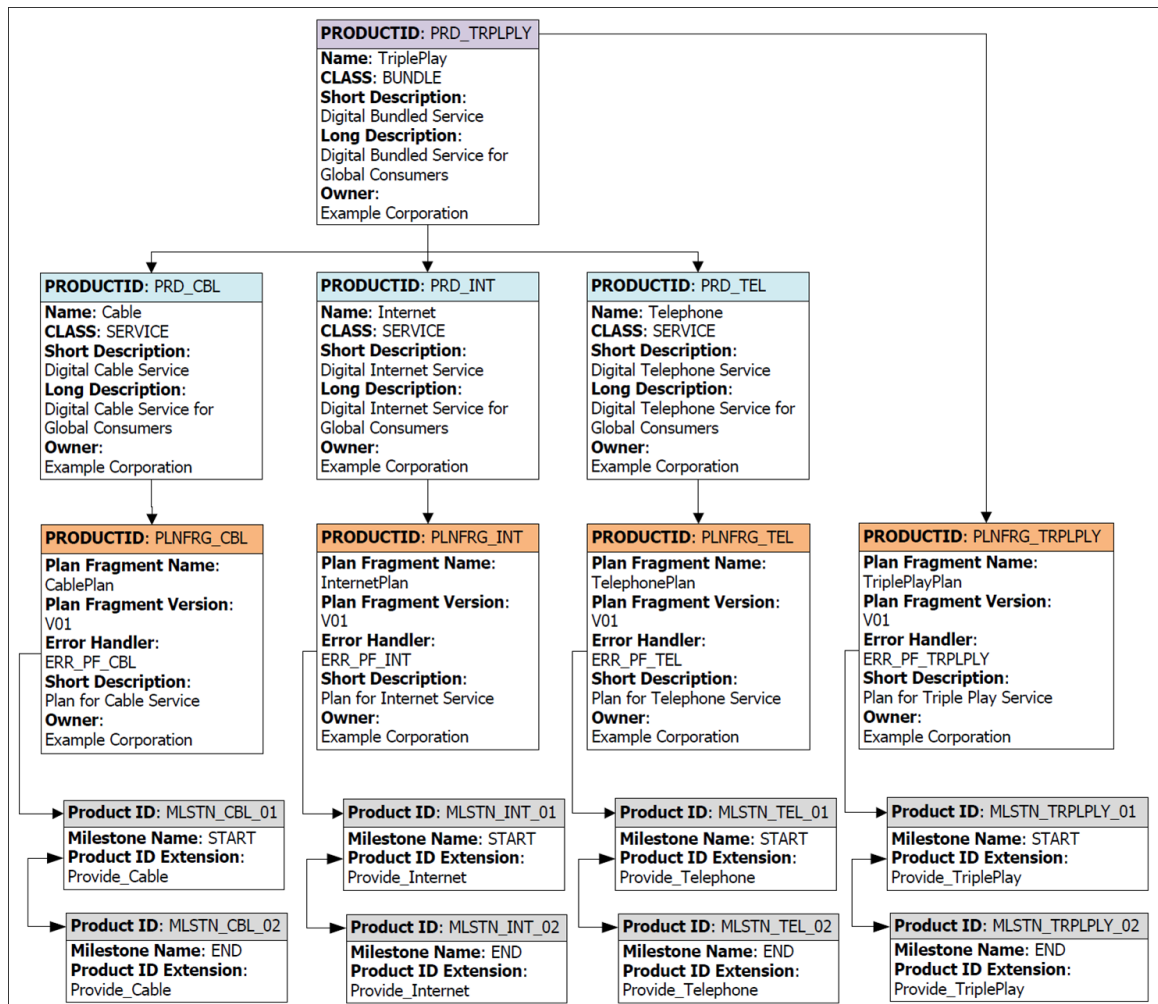
View All

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

PRODUCTID	Class	Short Description	Owner	Project Tag Name
PRD_CBL	SERVICE	Digital Cable Service	Example Corporation	
PRD_INT	SERVICE	Digital Internet Service	Example Corporation	
PRD_TEL	SERVICE	Digital Telephone Service	Example Corporation	

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Conceptual Diagram showing Relationship between the Products and the Product Bundles



Publishing the Products and Making the Products Available

After completing the creation of products on TIBCO Product and Service Catalog, the products have to be published from TIBCO Product and Service Catalog to TIBCO Order Management - Long Running where the order is processed.

To publish the product or products on TIBCO Order Management - Long Running, perform the following steps in the TIBCO Product and Service Catalog user interface:

Procedure

1. Click **Product and Service Catalog Operation > Publish Catalog**. The **Bulk Model Publish** page opens.
2. The **Select Publish Type** options lets you to publish **Full Data Publish** or **Delta Publish**. To publish manually to TIBCO Order Management - Long Running, select the option **JMS/XML**. To publish automatically to TIBCO Order Management - Long Running, select the option **JMS/XML**. As JMS publishes models on the TIBCO Order Management - Long Running queues, which is automatic. XML contains off-line published models, which is manual.



Please refer to the *TIBCO Product and Service Catalog User's Guide* for more details.

3. Select the data model that you want to publish. For this use case, we select the data model **PRODUCT** and provide values for the fields **ProductID** or **ProductID EXT**.
4. Click **Publish** and the values are published on TIBCO Order Management - Long Running automatically.
5. Click **Event Log** to check if the publishing of the product is successful.

Starting the Test Harness

You must have *TIBCO ActiveMatrix BusinessWorks* installed on your machine to use the test harness.

The `AF_TestHarness` project is intended for testing only. Perform the following steps to use the test harness for the use case:

Procedure

1. After performing installation and post-installation steps for TIBCO Order Management - Long Running engines, start and verify that the following server has been started or deployed without any errors. To start the Order Management Server, perform the following steps:

1. To start the server, run the following command:

```
$cd $OM_HOME/roles/omsServer/standalone/bin
$./start.sh
```

2. Open the `AF_TestHarness_BW6` project available in `$OM_HOME/samples/TestHarness/AF_TestHarness_BW6.zip` through TIBCO Business Studio.
3. Change the values of module properties related to JMS connection parameters for Orchestrator and the test harness output directory path as shown in the following figures.

JMS Connection Parameters for Orchestrator

Module Properties

Properties

Property Configurations

User System

Groups / Properties	Type	default
testHarness		
sleep		
interfaces		
jms		
tdsoms		
MIG_Password	Password	*****
MIG_QueueConnect	String	QueueConnectionFactory
MIG_TopicConnect	String	TopicConnectionFactory
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Username	String	admin
outputPath	String	D:/Temp/local/
affv4		
orchestrator		
interfaces		
jms		
events		
MIG_Password	Password	*****
MIG_QueueConn	String	QueueConnectionFactory
MIG_TopicConne	String	TopicConnectionFactory
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Username	String	admin
jdbc		
configuration		
flags		
constants		
messaging		
common		
commonServices		
interfaces		
jms		
events		
MIG_Url	String	tibjmsnaming://localhost:7...
MIG_Password	Password	*****
MIG_QueueConnect	String	QueueConnectionFactory
MIG_TopicConnect	String	TopicConnectionFactory
MIG_Username	String	admin
configuration		
flags		
messaging		
Deployment	String	AF_TestHarness
Domain	String	domain
afforchestratorsharedConnectic	JMS Connection	aff.orchestrator.sharedConn...
affv4-common-messaging-jms	String	tibco.aff.orchestrator.provi...
affv4-common-messaging-jms	String	tibco.aff.orchestrator.provi...
sharedConnectionsjmstdsomsJk	JMS Connection	sharedConnectionsjms.tdso...

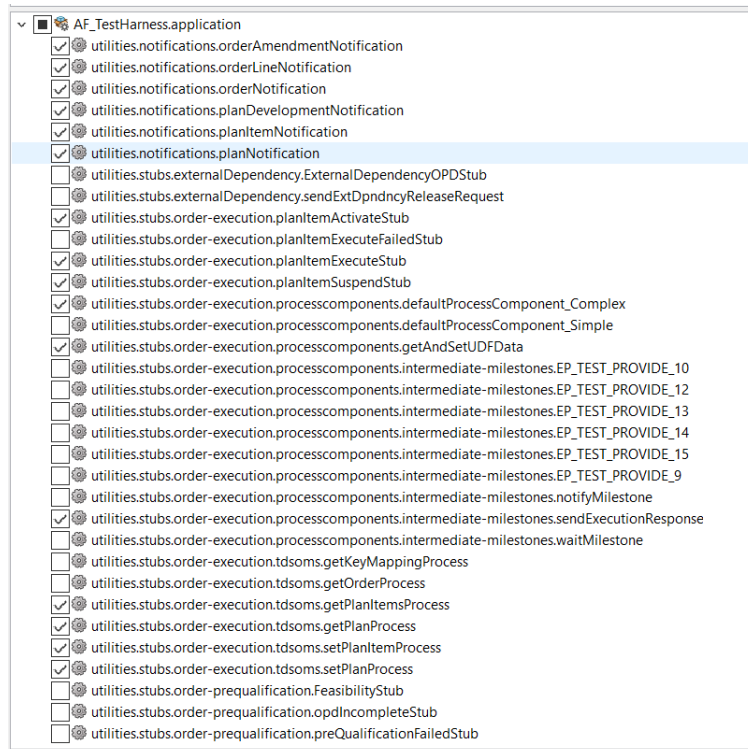
The AF_TestHarness_BW6 project contains several BW processes integrating with OM Orchestrator or Order Management Server components over the JMS channels as according to the following list. These are the stub processes just to show how the integration is done, and to have an end-to-end run.

- process component stubs (execute, suspend, activate)
- error handler stub
- pre-qualification failed handler stub
- status notification subscriber stubs

All these processes log the relevant details (for example, execution request payload) in different files. These files are created under the directory named as orderref of the corresponding order. These directories are created under a parent directory whose path is configured in testharness/outputPath module properties.

4. Start the following starter processes in TIBCO Business Studio.

Starting Processes



Orchestrator Notifications Listener Processes:

- `utilities/notifications/orderAmendmentNotification.process`
- `utilities/notifications/orderLineNotification.process`
- `utilities/notifications/orderNotification.process`
- `utilities/notifications/planDevelopmentNotification.process`
- `utilities/notifications/planItemNotification.process`
- `utilities/notifications/planNotification.process`

These processes subscribe to the notification events from the Orchestrator. By using these events the exact state of the order/plan can be known.



The publishing of status change notifications for each entity is not enabled in Orchestrator out of the box. To subscribe to the status change notifications by using the above-mentioned processes, the notification publishing must be enabled for each entity through the respective flags. These flags are available in the **Orchestrator Configuration > Generic Configuration** category in the Configurator UI.

Orchestrator Task Stubs:

- `utilities/stubs/planItemActivateStub`
- `utilities/stubs/planItemExecuteStub`
- `utilities/stubs/planItemSuspendStub`

The process `planItemExecuteStub` is a dummy process component implementation. It calls a default process that gets and sets plan/planItem data by using JMS based data access interfaces and finally sends an execution success response to Orchestrator. The `planItemSuspendStub` and `planItemActivateStub` processes are used for testing the order amendments functionality.

5. Verify that the following queues or topics are up and have listeners:

- `tibco.aff.oms.ordersService`
- `tibco.aff.catalog.planfragment.request`
- `tibco.aff.catalog.product.request`

6. Publish the following models:

Model	Send Model on Queue
Product Model	<code>tibco.aff.catalog.product.request</code>
Plan Fragment Model	<code>tibco.aff.catalog.planfragment.request</code>

7. Submit a dummy order through SOAP over HTTP or SOAP over JMS to the Order Management Server according to the `SubmitOrderRequest` sample located at `OM_HOME/samples/Webservice/SubmitOrderRequest.xml`. Use the WSDL available at `$OM_HOME/schemas/wsdl/http/OrderServiceHTTP.wsdl` or `$OM_HOME/schemas/wsdl/jms/OrderServiceJMS.wsdl` to submit orders. For instance, `http://localhost:8080/api/orderService?wsdl`.
8. Verify that the jobs of processes selected in the test harness are created. The `planItemExecute` stub acts as the basic process component, which processes and responds to the execution request sent by Orchestrator for each plan item.
9. Navigate to `http://<machineIPAddress>:<port number>/Login/Login.jsp`. Verify that you can see the order and the plan in the Order Management Server UI. Check whether the status of the order is COMPLETE.

Submitting Order and Retrieving Order Reference by using SOAP UI

Submitting an order and retrieving the order reference requires a user interface. We use SOAP UI to perform this step.

To submit the order and retrieve the order reference by using SOAP UI, perform the following steps:

Procedure

1. Open the SOAP UI application and create a New Project.
2. Enter the name for the project (example TriplePlay) in the Project Name field and provide the path of the WSDL file, created during the Test Harness session, in the **Initial WSDL / WADL** field. Click **Ok** to create the project.
3. The newly created project (named TriplePlay) appears in the left panel named Navigation. The new project has a tree-based structure. Expand the tree to open **Project Name > OrderServiceSoapBinding > SubmitOrder > Request1**. An XML file displays on the right panel. Click **Run** to execute the submit request. This submits an order.
4. On the Navigation Panel click **GetOrderDetails > Request1**. An XML file is displayed on the right panel. Click **Run** to execute the request. The Order ID displays in the rightmost panel enclosed in the `<ns7: OrderRef>` tags. Copy the order reference ID.

Searching for Orders by using Order Reference

To search the order on TIBCO Order Management - Long Running, you have to use the Order Management System user interface.

Open the Order Management Server UI and perform the following steps:

Procedure

1. Click the menu Orders and paste the copied Order Reference ID in the search field.

2. Click the Search icon, and the result is displayed for the order with the values for the following fields:
 - a) Order Ref ID
 - b) Customer ID
 - c) Status
 - d) Submitted Date
 - e) Originator
 - f) Fulfillment Engine
3. Click the result to view the order.

Viewing the Execution Plan

When you view an order on the Order Management Server UI, you can notice a button named **Show Execution Plan**.

Click **Show Execution Plan** to view the execution plan for the submitted order.

Viewing the Gantt Chart to Confirm Fulfillment of Order

When you view an execution plan of a submitted order, an icon called Gantt Chart lets you to view the Gantt Chart representation of the execution plan of the submitted order.

Submitting Order Amendment by Changing the Original Order

Submitting an order amendment and retrieving the order reference of the amended order requires by using SOAP UI again. To submit the order and retrieve the order reference by using SOAP UI, perform the following steps:

Procedure

1. Open the SOAP UI application and open an Existing Project (in our use case TriplePlay).
2. The project (named TriplePlay) appears in the left panel named Navigation. Expand the tree to open **Project Name > OrderServiceSoapBinding > AmendOrder > Request1**. An XML file is displayed on the right panel. Modify the `RequiredByDate` with the required date. Click **Run** to execute the submit request. This submits an amended order.
3. On the Navigation Panel click **GetOrderDetails > Request1**. An XML file is displayed on the right panel. Click **Run** to execute the request. The Order ID is displayed in the rightmost panel enclosed in the `<ns7>` tags. Copy the order reference ID.

Searching the Amended Order by using the Order Reference

To search the amended order in TIBCO Order Management - Long Running, you have to use the Order Management System user interface. Open the Order Management Server UI and perform the following steps:

Procedure

1. Click the menu Orders and paste the copied Order Reference ID in the **Search** field.
2. Click the **Search** icon and the result is displayed for the order with the values for the following fields:
 - a) Order Ref ID
 - b) Customer ID
 - c) Status
 - d) Submitted Date

- e) Originator
 - f) Fulfillment Engine
3. Click the result to view the order.

Viewing the Execution Plan of Amended Order

When you view an order on the Order Management Server UI, you can notice a button named **Show Execution Plan**. Click the **Show Execution Plan** button to view the execution plan for the submitted order.

Viewing the Gantt Chart to Confirm Fulfillment of Amended Order

When you view an execution plan of a submitted order, an icon called Gantt Chart, through which you can view the Gantt Chart representation of the execution plan of the submitted order.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join the TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit <https://docs.tibco.com>.

Product-Specific Documentation

The following documentation for this product is available on the [TIBCO® Order Management](#) page.

- *TIBCO® Order Management - Long Running Release Notes*
- *TIBCO® Order Management - Long Running Installation and Configuration Guide*
- *TIBCO® Order Management - Long Running User's Guide*
- *TIBCO® Order Management - Long Running Administration Guide*
- *TIBCO® Order Management - Long Running Getting Started Guide*
- *TIBCO® Order Management - Long Running Best Practices Guide*
- *TIBCO® Order Management - Long Running Concepts and Architecture Guide*
- *TIBCO® Order Management - Long Running Web Services Guide*

How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit <http://www.tibco.com/services/support>.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at <https://support.tibco.com>.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to <https://support.tibco.com>. If you do not have a user name, you can request one by clicking Register on the website.

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