PRIMAVERA

Using Events with P6
Release 8.0

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Overview

Depending on administrative settings, events can be triggered when P6, P6 Web Services, or the P6 Integration API is used to update or create objects in the P6 database. These events are known as business object events. In addition to events that are triggered by updating or creating an object that supports events, many operations trigger events when the operation is invoked. These events are known as special operation events. When a change triggers an event, the P6 Event Notification system sends the event message to a user configured message queue. You can use the events in a client application to trigger subsequent actions. You could, for example, launch an external workflow based on the existence of a specific event.

Additionally, an event is triggered when you run either the Apply Actuals or Summarize Job service from the P6 Professional. Receiving either of these events depends on administrative settings and requires that P6, or P6 Web Services, or the P6 Integration API is running on the same database as the P6 Professional.

In This Chapter

Event Triggers

Changes that trigger events

With the exception of the Timesheet object, create and update changes made to supported objects using P6, P6 Web Services, or the P6 Integration API will trigger an event. When a status change is made to a Timesheet object using P6, a TimesheetUpdated event will be triggered.

Changes that do not trigger events

The following create and update changes do not trigger events:

- Create and update changes made to objects that do not support events
- Create and update changes made to objects that support events but are not configured to send events
- Changes made in P6 Professional

Business Object vs Special Operation Events

Events are triggered when a supported business object is updated or changed. Forty-six P6 business objects support both create and update event notification messages.

> **Note**: Only updates to physical fields trigger events. Updates or changes to calculated fields or BLOBs, GUIDs, or SequenceNumbers do not trigger events.

In addition to update and create changes to the database, changes caused by special operations also trigger events. Seventeen special operations trigger events when the operation specified by the message completes.

- For additional information about business object events, see ***Business Object Events*** (on page 11).
- For additional information about special operation events, see ***Special Operation Events*** (on page 17).

Administrators can enable and disable event notification messages on a per object basis. Refer to the *Oracle Primavera P6 EPPM Administrator's Guide* for additional information.

About the Event Messages

About the Event Messages

The system sends the event messages in an XML format. You can configure the system to send these to a message queue or to an Enterprise Service Bus (ESB). See the *Oracle Primavera P6 EPPM Administrator's Guide* for information on configuring where the system sends the messages.

Cost Information

Using the administrator setting *Show costs*, you can determine whether cost information is included in events.

Event Schema File

The p6events.xsd file is installed in the <installation directory>/schema directory for P6 Integration API and P6 Web Services. You can use this file to determine the format of the event messages.

Business Object Events

Forty-six P6 business objects support create and update event notification messages. Administrators can enable and disable event notification messages on a per object basis.

The table below lists the business objects that support event notification messages along with the message that is sent when an event is triggered:

Object	Message
Activity	***ActivityCreated Message*** (on page 40)
	ActivityUpdated Message (on page 49)
ActivityCodeAssignment	***ActivityCodeAssignmentCreated Message*** (on page 39)
	ActivityCodeAssignmentUpdated Message (on page 39)
ActivityExpense	***ActivityExpenseCreated Message*** (on page 40)
	ActivityExpenseUpdated Message (on page 41)
ActivityNote	***ActivityNoteCreated Message*** (on page 44)
	ActivityNoteUpdated Message (on page 44)
ActivityOwner	***ActivityOwnerCreated Message*** (on page 45)
	ActivityOwnerUpdated Message (on page 45)
ActivityRisk	***ActivityRiskCreated Message*** (on page 46)
	ActivityRiskUpdated Message (on page 46)
ActivityStep	***ActivityStepCreated Message*** (on page 47)
	ActivityStepUpdated Message (on page 47)
BaselineProject	***BaselineProjectCreated Message*** (on page 51)
	BaselineProjectUpdated Message (on page 51)
Calendar	***CalendarCreated Message*** (on page 54)
	CalendarUpdated Message (on page 54)
EPS	***EPSCreated Message*** (on page 57)
	EPSUpdated Message (on page 60)
EPSBudgetChangeLog	***EPSBudgetChangeLogCreated Message*** (on page 56)

Object	Message
	EPSBudgetChangeLogUpdated Message (on page 56)
EPSFunding	***EPSFundingCreated Message*** (on page 58)
	EPSFundingUpdated Message (on page 58)
EPSNote	***EPSNoteCreated Message*** (on page 59)
	EPSNoteUpdated Message (on page 59)
Project	***ProjectCreated Message*** (on page 65)
	ProjectUpdated Message (on page 74)
ProjectBudgetChangeLog	***ProjectBudgetChangeLogCreated Message*** (on page 61)
	ProjectBudgetChangeLogUpdated Message (on page 62)
ProjectCodeAssignment	***ProjectCodeAssignmentCreated Message*** (on page 63)
	ProjectCodeAssignmentUpdated Message (on page 64)
ProjectFunding	***ProjectFundingCreated Message*** (on page 65)
	ProjectFundingUpdated Message (on page 65)
ProjectIssue	***ProjectIssueCreated Message*** (on page 66)
	ProjectIssueUpdated Message (on page 67)
ProjectNote	***ProjectNoteCreated Message*** (on page 70)
	ProjectNoteUpdated Message (on page 70)
ProjectPortfolio	***ProjectPortfolioCreated Message*** (on page 71)
	ProjectPortfolioUpdated Message (on page 71)
ProjectResource	***ProjectResourceCreated Message*** (on page 72)
	ProjectResourceUpdated Message (on page 73)
Relationship	***RelationshipCreated Message*** (on page 77)
	RelationshipUpdated Message (on page 77)
Resource	***ResourceCreated Message*** (on page 84)
	ResourceUpdated Message (on page 89)

Object	Message
ResourceAssignment	***ResourceAssignmentCreated Message*** (on page 79)
	ResourceAssignmentUpdated Message (on page 80)
ResourceCodeAssignment	***ResourceCodeAssignmentCreated Message*** (on page 83)
	ResourceCodeAssignmentUpdated Message (on page 83)
ResourceRate	***ResourceRateCreated Message*** (on page 84)
	ResourceRateUpdated Message (on page 85)
ResourceRole	***ResourceRoleCreated Message*** (on page 86)
	ResourceRoleUpdated Message (on page 87)
ResouceTeam	***ResourceTeamCreated Message*** (on page 87)
	ResourceTeamUpdated Message (on page 88)
Risk	***RiskCreated Message*** (on page 92)
	RiskUpdated Message (on page 105)
RiskCategory	***RiskCategoryCreated Message*** (on page 91)
	RiskCategoryUpdated Message (on page 91)
RiskImpact	***RiskImpactCreated Message*** (on page 92)
	RiskImpactUpdated Message (on page 92)
RiskMatrix	***RiskMatrixCreated Message*** (on page 93)
	RiskMatrixUpdated Message (on page 97)
RiskMatrixScore	***RiskMatrixScoreCreated Message*** (on page 93)
	RiskMatrixScoreUpdated Message (on page 94)
RiskMatrixThreshold	***RiskMatrixThresholdCreated Message*** (on page 96)
	RiskMatrixThresholdUpdated Message (on page 96)
RiskResponseAction	***RiskResponseActionCreated Message*** (on page 97)
	RiskResponseActionUpdated Message (on page 99)

Object	Message
RiskResponseActionImpact	***RiskResponseActionImpactCreated Message*** (on page 98)
	RiskResponseActionImpactUpdated Message (on page 98)
RiskResponsePlan	***RiskResponsePlanCreated Message*** (on page 100)
	RiskResponsePlanUpdated Message (on page 101)
Risk Threshold	***RiskThresholdCreated Message*** (on page 102)
	RiskThresholdUpdated Message (on page 104)
RiskThresholdLevel	***RiskThresholdLevelCreated Message*** (on page 103)
	RiskThresholdLevelUpdated Message (on page 103)
Role	***RoleCreated Message*** (on page 108)
	RoleUpdated Message (on page 111)
RoleRate	***RoleRateCreated Message*** (on page 108)
	RoleRateUpdated Message (on page 108)
RoleTeam	***RoleTeamCreated Message*** (on page 109)
	RoleTeamUpdated Message (on page 110)
Timesheet	***TimesheetUpdated Message*** (on page 112)
User	***UserCreated Message*** (on page 113)
	UserUpdated Message (on page 115)
UserOBS	***UserOBSCreated Message*** (on page 114)
	UserOBSUpdated Message (on page 114)
WBS	***WBSCreated Message*** (on page 117)
	WBSUpdated Message (on page 117)

Sample Business Object Event Message

Sample ActivityCreated Messsage: When an activity is created, the system sends an ActivityCreated message similar to the following message:

```
<?xml version="1.0" encoding="UTF-8"?>
<MessagingObjects xmlns="http://xmlns.oracle.com/Primavera/P6/V8/Common/Event"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ActivityCreated>
   <Id>Auto-1</Id>
   <ObjectId>125500</ObjectId>
   <ProjectObjectId>11840</ProjectObjectId>
   <WBSObjectId>36320</WBSObjectId>
  </ActivityCreated>
</MessagingObjects>
```

Sample ActivityUpdated Messsage: When an activity is updated, the system sends an ActivityUpdated message similar to the following message:

```
<?xml version="1.0" encoding="UTF-8"?>
<MessagingObjects xmlns="http://xmlns.oracle.com/Primavera/P6/V8/Common/Event"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ActivityUpdated>
    <Id>Auto-1</Id>
    <Name>t2</Name>
    <ObjectId>125500</ObjectId>
    <ProjectObjectId>11840</ProjectObjectId>
    <WBSObjectId>36320</WBSObjectId>
    <NewValues>
      <Name>t2</Name>
    </NewValues>
    <OldValues>
      <Name>Auto-1</Name>
    </OldValues>
  </ActivityUpdated>
</MessagingObjects>
```

Special Operation Events

Special operation events are triggered when the operations listed below complete. The special operation event messages contain operation-specific fields that are included with the message depending on which operation triggered the event message. For additional information relating to the messages, refer to the reference section of this document or the p6events.xsd schema file that is shipped on P6 media.

Special Operation Type	Operation	Message
JobService: Occurs when the JobService completes. The event message includes a status element that indicates whether the operation completed successfully or not.	ApplyActuals	***ApplyActualsInvoked Message*** (on page 121)
	Level	***LevelInvoked Message*** (on page 121)
	RecalculateAssignmentCosts	***RecalculateAssignmentCostsInvoked Message*** (on page 122)
	Schedule	***ScheduleInvoked Message*** (on page 122)
	StorePeriodPerformance	***StorePeriodPerformanceInvoked Message*** (on page 123)
	Summarize	***SummarizeInvoked Message*** (on page 124)
API: Occurs after an XML file has been imported regardless of success or failure of the import.	XML Import	***XMLImportInvoked Message*** (on page 125)
Content Repository: Occurs when a document has been successfully checked into the content repository, or when a folder or document has been successfully added to the repository.	AddDocument	***ContentRepositoryDocumentAdded Message*** (on page 125)
	AddFolder	***ContentRepositoryFolderAdded Message*** (on page 126)
	CheckedIn	***ContentRepositoryDocumentCheckedIn Message*** (on page 126)
Stored Procedure: Occurs when the	ConvertProjectToBaseline	***ConvertProjectToBaselineInvoked Message*** (on page 127)

Special Operation Type	Operation	Message
stored procedure completes successfully.	CopyProject	***CopyProjectInvoked Message*** (on page 127)
	CopyProjectAsBaselines	***CopyProjectAsBaselineInvoked Message*** (on page 127)
	CopyBaselineProject	***CopyBaselineProjectInvoked Message*** (on page 128)
	CreateCopyAsTemplate	***CreateCopyAsTemplateInvoked Message*** (on page 128)
	CreateProjectFromTemplate	***CreateProjectFromTemplateInvoked Message*** (on page 128)
	RestoreBaselineProject	***RestoreBaselineProjectInvoked Message*** (on page 129)

Sample Special Operation Event Message

A message similar to the following is triggered by the ScheduledInvoked event:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<MessagingObjects xmlns="http://xmlns.oracle.com/Primavera/P6/V8/Common/Event"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <ScheduleInvoked>
   <DataDate>2015-01-03T08:00:00</DataDate>
   <Project>
    <Id>Auto-Testproj2</Id>
    <Name>Auto-Testproj2</Name>
    <ObjectId>1001</ObjectId>
   </Project>
   <Status>Completed</Status>
  </ScheduleInvoked>
</MessagingObjects>
```

Configuring Your Environment to Support Event Notification

In This Chapter

Configuring your Environment

If you would like to receive notification when events occur, you must configure the JMS message queue and the P6 Administrator application to send the events in which you are interested.

To configure your environment to support notification:

1) Configure the WebLogic message queue:
   a. Determine if the WebLogic message queue will be on the same domain as P6.
      - If the queue and the application are on the same domain, see ***Configuring the WebLogic Message Queue*** (on page 20).
      - If the queue and the application are on different domains, see ***Sending Events to a Remote WebLogic JMS Server*** (on page 28).
   b. (Optional) Configure the message queue security policy. See ***Configuring the Security Policy for the WebLogic Message Queue*** (on page 32).
2) Configure the P6 Administrator application to send event notification. See ***Configuring Eventing in the P6 Administrator application*** (on page 23).

   An event may be one of two types, a business object event or a special operation event.
   - For a list of business object events, see ***Business Object Events*** (on page 11).
   - For a list of special operation events, see ***Special Operation Events*** (on page 17).

Configuring the WebLogic Message Queue

When an event is triggered, the P6 Event Notification system sends the event message to a message queue. To receive these notifications, you must first configure the message queue.

The following procedure indicates how to set up a WebLogic Java Messaging Service (JMS) message queue when the queue and P6 are on the same domain. If the application and the queue are on different domains, see ***Sending Events to a Remote WebLogic JMS Server*** (on page 28). For information about setting up other JMS-based message queues, see the vendor documentation.

To set up the WebLogic JMS message queue:

1) In either a new or existing WebLogic domain, launch the WebLogic **Administration Console** if it is not already open.
2) In the WebLogic **Administration Console**:
   a. Create a new JMS server and persistence store. See ***Creating a JMS Server and Persistence Store*** (on page 20).
   b. Create a JMS module. See ***Creating a JMS Module*** (on page 21).
   c. Create a new connection factory. See ***Creating a JMS Connection Factory*** (on page 21).
   d. Create a new queue or topic. See ***Creating a JMS Message Queue and Subdeployment*** (on page 22) to see how to create a new queue.

> **Note**: Create a queue to deliver a message to a specific group of users. Create a topic to distribute a message amongst several users.

Creating a JMS Server and Persistence Store

Create a JMS server to hold queues and topics.

To create a JMS server and persistence store:

1) If it is not already open, launch the WebLogic **Administration Console** on the remote or local server.
2) In the WebLogic **Administration Console**, expand **Services/Messaging** and click **JMS Servers** in the **Domain Structure** pane.
3) On the **Summary of JMS Servers** page, click **New**.
4) On the **Create a New JMS Server** page:
   a. Under **JMS Server Properties**:
      1. Enter a name in the **Name** field.
      2. Click **Create a New Store**.
   b. Under **Select a store type**, select **File Store** from the **Type** list and click **Next**.

c. Under **File Store Properties**:
   1. Enter a name in the **Name** field.
   2. Select a server instance from the **Target** list.
   3. Specify a location for the file store in the **Directory** field. This location should already exist on your machine.
   4. Click **OK**.

d. Under **JMS Server Properties**, select the new store from the **Persistent Store** list and click **Next**.

e. Under **Select Targets**, select a target from the **Target** list and click **Finish**.

Creating a JMS Module

Create a JMS module to manage and configure resources.

To create a JMS module:

1) If it is not already open, launch the WebLogic **Administration Console** on the remote or local server.
2) In the WebLogic **Administration Console**, expand **Services**/**Messaging** and click **JMS Modules** in the **Domain Structure** pane.
3) On the **JMS Modules** page, click **New**.
4) On the **Create JMS System Module** page:
   a. Under **The following properties will be used to identify your new module**, enter a name in the **Name** field and click **Next**.

> **Note**: Make a note of this name, you will need to know which module to expand in the ***Configuring the Security Policy for the WebLogic Message Queue*** (on page 32) topic.

   b. Under **The following properties will be used to target your new JMS system module**, select a target server in the **Servers** box and click **Next**.
   c. Under **Add resources to this JMS system module**, select the **Would you like to add resources to this JMS system module** option and click **Finish**.

Creating a JMS Connection Factory

Create a connection factory to enable connections between your JMS elements.

To create a JMS connection factory:

1) If it is not already open, launch the WebLogic **Administration Console**.
2) In the WebLogic **Administration Console**, expand **Services**/**Messaging** and click **JMS Modules** in the **Domain Structure** pane.
3) On the **JMS Modules** page, select the module to which you want to add the connection factory.

4) On the **Settings** page, click the **Configuration** tab and under **Summary of Resources** click **New**.
5) On the **Create a New JMS System Module Resource** page:
   a. Under **Choose the type of resource you want to create**, select the **Connection Factory** option and click **Next**.
   b. Under **Connection Factory Properties**:
      1. Enter a name for the connection factory in the **Name** field.
      2. Enter a name in the **JNDI** field.

> **Note**: Make note of the JNDI name. You will need to enter this name in the **JMS Connection Factory** field of the P6 Administrator application. If you are using a remote server, you will need to enter this name in the **Remote JNDI Name** field on the **Connection Factories** tab in the ***Creating a Foreign JMS Server*** (on page 31) topic.

      3. Click **Next**.
   c. Under **The following properties will be used to target your new JMS system module resource**, ensure the correct server is targeted and click **Finish**.

Creating a JMS Message Queue and Subdeployment

Create a message queue to act as a receptacle for event messages sent from P6.

To create a JMS message queue and subdeployment:

1) If it is not already open, launch the WebLogic **Administration Console**.
2) In the WebLogic **Administration Console**, expand **Services/Messaging** and click **JMS Modules** in the **Domain Structure** pane.
3) On the **JMS Modules** page, select the module to which you want to add the queue.
4) On the **Settings** page, click the **Configuration** tab.
5) On the **Configuration** tab under **Summary of Resources**, click **New**.
6) On the **Create a New JMS System Module Resource** page:
   a. Under **Choose the type of resource you want to create**, select the **Queue** option and click **Next**.
   b. Under **JMS Destination Properties**:
      1. Enter a name for the queue in the **Name** field.
      2. Enter a name in the **JNDI** field.

> **Note**: Make note of the JNDI name. You will need to enter this name in the **JMS Destination Name** field of the P6 Administrator application. If you are using a remote server, you will need to enter this name in the **Remote JNDI Name** field on the **Destinations** tab in the ***Creating a Foreign JMS Server*** (on page 31) topic.

3. Click **Next**.

c. Under **The following properties will be used to target your new JMS system module resource**, click **Create a New Subdeployment**.

7) On the **Create a New Subdeployment** page, enter a name in the **Subdeployment Name** field and click **OK**.
8) On the **Create a New JMS System Module Resource** page:
   a. Select the new subdeployment from the **Subdeployments** list.
   b. Select the JMS server you are using as a target from the **JMS Servers** box.
   c. Click **Finish**.

Configuring Eventing in the P6 Administrator application

Depending on administrative settings, events can be triggered when P6, P6 Web Services, or P6 Integration API is used to update or create objects in the P6 database or when one of the special operations completes. When a business object change or special operation triggers an event, the P6 Event Notification system sends an event message to a user-configured message queue. If you are planning to use P6 Event Notification with P6 EPPM products, follow the steps below to configure the notification to work with your Java Messaging Service (JMS), the application server, and P6. Refer to the message queue vendor documentation.

Before you begin, add the JMS vendor jar files to the appropriate classpath. If you launch the P6 Administrator application from the web, add the vendor jar to the application server classpath. If your application server is WebLogic and you are pointing to a WebLogic message queue, then the required jar file is already in your classpath. If you are launching the P6 Administrator application from a desktop, then you will need to add the message queue vendor jar file to the P6 Administrator application classpath. If you are using the WebLogic message queue, you can obtain the required jar file (wlfullclient.jar) by running java –jar wljarbuilder.jar in <WL_HOME>/server/lib.

To configure eventing:

1) Launch the P6 Administrator application.
2) In the P6 Administrator application, click the **Configurations** tab.
3) On the **Configurations** tab, expand **Custom/<your configuration>/Directory Services** and configure the directory services settings. See ***Configuring Directory Services*** (on page 24) for more information on each field.
4) In **<your configuration>**, expand **Database/<the instance in which you need to configure events>/Eventing**:

a. Configure the eventing options. See ***Configuring Eventing Options*** (on page 24).
b. Right-click **Eventing** and select **Test Connection** to test the new connection. Click **Yes** in the resulting message box and you should see a successful connection message.

> **Note**: For the test to be successful, the vendor's jar file must already exist in the appropriate classpath.

5) In the P6 Administrator application, click **Save Changes** when you are finished.

Configuring Directory Services

To configure directory services:

1) Launch the P6 Administrator application.
2) In the P6 Administrator application, click the **Configurations** tab.
3) On the **Configurations** tab, expand **Custom/<your configuration>/Directory Services**.
4) In the **Directory Services** folder, configure the settings:
   a. In the **Provider URL** field, enter the URL of the JNDI provider. For example, t3://<hostname>:7001.
   b. In the **Initial Context Factory** field, enter the class name of the initial context factory for the JNDI connection. For example, weblogic.jndi.WLInitialContextFactory.
   c. In the **Security Principal** field, enter the principal to connect to the JNDI provider. If you are using WebLogic, this is the name of a WebLogic user.
   d. In the **Security Credentials** field, enter the credentials to connect to the JNDI provider. If you are using WebLogic, this is the password for the WebLogic user you entered in the **Security Principal** field.
   e. In the **Security Level** field, enter the security level to use when authenticating to the directory service.
   f. In the **Lookup Name** field, enter the lookup used to test the directory connection. This can be the JNDI name of the JMS connection factory or the JMS destination.
5) In the P6 Administrator application, click **Save Changes** when you are finished.
6) To test the configuration changes you just made, right click on the **Directory Services** node and then click **Test Connection**.

Configuring Eventing Options

Configure event options to determine where events are sent, what operations are enabled, and which, if any, notifications you will receive for business objects.

To configure eventing options:

1) Launch the P6 Administrator application.
2) In P6 Administrator application, click the **Configurations** tab.

3) On the **Configurations** tab, expand **Custom/<your configuration>/Database/<the instance in which you need to configure events>/Eventing**.
4) In the **Eventing** folder:
   a. Set the **Enabled** setting to true.
   b. Set additional settings as appropriate for your implementation. See ***Eventing Settings*** (on page 26) for details on available settings.

   Notes:

   - See ***Creating a JMS Connection Factory*** (on page 21) for information about how to create a **JMS Connection Factory**. Use the JNDI name to fill in the JMS Connection Factory setting in the P6 Administrator application.
   - See ***Creating a JMS Message Queue and Subdeployment*** (on page 22) for information about how to create a **JMS Destination Name**. Use the JNDI name to fill in the JMS Connection Factory setting in the P6 Administrator application.
   - If you are working with the WebLogic message queue, you do not need to enter information in the **JMS Destination Security Enabled**, **JMS Destination Username**, or **JMS Destination Password** fields.

   c. Right-click **Configuration** and select **Configure**.
5) In the **Event Options** dialog box, click the **Business Objects** tab to configure when you will receive notifications for events.
6) On the **Business Objects** tab, expand a business object type and configure the options to determine the type of notifications you will receive.
   - Select or clear the **Create** option for an object to determine whether you will receive a notification when that object is created.
   - Select or clear the **Update** option for an object to determine whether you will receive a notification when that object is updated.
7) In the **Event Options** dialog box, click the **Special Operations** tab to configure which operations are enabled.
8) On the **Special Operations** tab, expand an operation type and select or clear the **Enabled** option for each operation to determine if it is enabled or disabled.
9) In the **Event Options** dialog box, click **OK** when you are finished.
10) In P6 Administrator application, click **Save Changes**.
11) To test the configuration changes you just made, right click on the **Eventing** node and then click **Test Connection**.

Tips

- Select the **Create** or **Update** option for a business object type to receive notifications when any object of that type is modified. Clear the options to receive no notifications for objects of that type.

- Select the **Enabled** option for an operation type to enable all the operations of that type. Clear the option to disable all operations of that type.

Eventing Settings

Setting Name and Description	Default	Valid Ranges/Values
Database/Instance[*n*]/Eventing/Enabled Set to true to enable the sending of events for P6, P6 Web Services, and P6 Integration API.	false	true/false
Database/Instance[*n*]/Eventing/Interval The length of time that the Event Notification System uses to determine how often it sends events to the message queue. Specifying a smaller time increases the frequency with which the Event Notification System reports event occurrences to the message queue.	5m	1s-10m
Database/Instance[*n*]/Eventing/Max Queue Size The amount of memory allocated to the queue for events. Once exceeded, events will be published immediately.	1000	10-5000
Database/Instance/Eventing/Show Costs Set to true to enable the display of cost fields in event notifications.	false	true/false
Database/Instance[n]/Eventing/JMS Connection Factory Specify the JNDI name of the JMS Connection Factory.	—	—
Database/Instance[n]/Eventing/JMS Destination Name Specify the JNDI name of the queue or topic where events are published.	—	—

Setting Name and Description	Default	Valid Ranges/Values
Database/Instance[n]/Eventing/JMS Destination Security Enabled Set to true to use the user name and password specified when sending messages to JMS queue.	true	true/false
Database/Instance[n]/Eventing/JMS Destination Username Specify the user name to use when sending events to the specified JMS destination specified.	—	—
Database/Instance[n]/Eventing/JMS Destination Password Specify the password to use when sending events to the JMS Destination specified.	—	—
Database/Instance[*n*]/Eventing/Configuration Options for which Business Object changes and Special Operation processes trigger event notifications. Right-click to select the node, then select Configure to customize options. For detailed information about these options, refer to the document titled Using Events with P6 located in the \Documentation\<language>\Technical_Documentation\Event_Handling folder of the P6 EPPM physical media or download. **Note**: The "Timesheet" business object only has update notification functionality.	—	—

Testing Event Notification

Test event notification to ensure event messages are sent when an event occurs.

To test event notification:

1) If it is not already installed, install P6. See Installing P6.

> **Note**: If you are using more than one server, install P6 on the local server.

2) Configure WebLogic for eventing:
   - See ***Configuring the WebLogic Message Queue*** (on page 20) if the queue and the application are on the same domain.
   - See ***Sending Events to a Remote WebLogic JMS Server*** (on page 28) if the queue and the application are on different servers.
3) Open P6 and create a project. See Creating Projects.
4) In P6:
   a. Add one or more activities to the project. See Creating Activities.
   b. Summarize the project to test if an event is generated. See Summarizing Projects.
5) Launch the WebLogic **Administration Console** to verify that the event is generated and sent to the queue.
6) In the WebLogic **Administration Console**, expand **Services**/**Messaging** and click **JMS Modules** in the **Domain Structure** pane.
7) On the **JMS Modules** page, click the module you created for the remote server.
8) On the **Settings** page for the module, click the queue you created for the remote server.
9) On the **Settings** page for the queue, click the **Monitoring** tab.
10) On the **Monitoring** tab, select the option for the remote server destination you created and click **Show Messages**. The event message should be visible in the **JMS Messages** list.

Sending Events to a Remote WebLogic JMS Server

When an event is triggered, the P6 Event Notification system sends the event message to a message queue. If you are using a remote JMS server, then you must configure the local and remote servers to receive these notifications.

The following procedure should be used when the queue is on a different domain than P6. For information about setting up other JMS-based servers, see the vendor documentation.

To send events to a remote WebLogic JMS server:

1) Start the WebLogic **Configuration Wizard**.
2) In the wizard, create a WebLogic domain on the remote server to which you will be sending the events. Rename the administration server to a name that is different from the name you used to deploy the P6 application. For example, RemoteAdminServer. See ***Creating a WebLogic Domain on a Remote or Local Server*** (on page 29).

3) Start the new server and launch the WebLogic **Administration Console**. The new server will act as the remote server.
4) In the WebLogic **Administration Console**:
   a. Create a WebLogic message queue.
      1. Create a new JMS server. See ***Creating a JMS Server and Persistence Store*** (on page 20).
      2. Create a JMS module. See ***Creating a JMS Module*** (on page 21).
      3. Create a connection factory. See ***Creating a JMS Connection Factory*** (on page 21).
      4. Create a new queue or topic. See ***Creating a JMS Message Queue and Subdeployment*** (on page 22) to see how to create a queue.

      Note: Create a queue to deliver a message to a specific group of users. Create a topic to distribute a message amongst several users.

   b. Configure the trust relationship on the remote server. See ***Configuring a Trust Relationship*** (on page 30).
5) Create a WebLogic domain on the local server from which the events will be sent. See ***Creating a WebLogic Domain on a Remote or Local Server*** (on page 29).
6) Start the local server and launch the WebLogic **Administration Console**.
7) In the WebLogic **Administration Console**:
   a. Create a new JMS server. See ***Creating a JMS Server and Persistence Store*** (on page 20).
   b. Create a JMS module. See ***Creating a JMS Module*** (on page 21).
   c. Create a foreign server. See ***Creating a Foreign JMS Server*** (on page 31).
   d. Configure the trust relationship on the local server. You must use the same credentials that were used on the remote server. See ***Configuring a Trust Relationship*** (on page 30).
8) Restart both Weblogic **Administration Console** servers (restart the domains, not the machines).
9) If it is not already installed, install P6 Web Services or P6 on the local server.
10) Launch the P6 Administrator application to configure message queue settings and event notification options. See ***Configuring Eventing in the P6 Administrator application*** (on page 23).

Creating a WebLogic Domain on a Remote or Local Server

Create a WebLogic domain on a remote or local server to define how the server and domain interact.

To create a WebLogic domain:

1) Start the Weblogic **Configuration Wizard** on the local or remote server.

2) In the **Welcome** window, select **Create a new WebLogic domain** and click **Next**.
3) In the **Select Domain Source** window, click **Next** to accept the default selections.
4) In the **Specify Domain Name and Location** window:
   a. Enter the domain name. If you are creating a domain on both a local and remote server, give the domains a different name.
   b. Select the domain location.
   c. Click **Next**.
5) In the **Configure Administrator User name and Password** window, enter the user name and password information and click **Next**.

> **Note**: Make a note of the name and password, you will need this information for the **JNDI Properties Credential** fields and the **JNDI Properties** box in the ***Creating a Foreign JMS Server*** (on page 31) topic.

6) In the **Configure Server Start Mode and JDK** window:
   a. Select **Production Mode** in the left pane.
   b. Select an appropriate JDK in the right pane.
   c. Click **Next**.
7) In the **Select Optional Configuration** window, click **Next**.
8) In the **Configuration Summary** window, click **Create**.
9) In the **Creating Domain** window, select **Start Admin Server** and click **Done**.

Configuring a Trust Relationship

If you are sending events between different servers, you must establish a trust relationship between the local server, on which P6 is installed, and the remote server, on which you have setup the JMS message queue.

To configure a trust relationship:

1) If it is not already open, launch the WebLogic **Administration Console** on the server where you need to configure the trust relationship.
2) In the WebLogic **Administration Console**, click the name of your domain which is the top element in the **Domain Structure** pane.
3) On the **Settings** page, click the **Security** tab and then the **General** tab.
4) On the **General** tab, expand the **Advanced** section.
5) In the **Advanced** section:
   a. Enter and confirm credentials in the **Credential** and **Confirm Credential** fields.

> **Note**: Make a note of the credentials you enter for the remote server; you must enter the same credentials for both servers.

   b. Click **Save**.

Creating a Foreign JMS Server

Create a foreign JMS server to establish a link between the WebLogic domains.

To create a foreign JMS server:

1) If it is not already open, launch the WebLogic **Administration Console**.
2) In the WebLogic **Administration Console**, expand **Services/Messaging** and click **JMS Modules** in the **Domain Structure** pane.
3) On the **JMS Modules** page, select the module you created for the remote server.
4) On the **Settings** page, click the **Configuration** tab and under **Summary of Resources** click **New**.
5) On the **Create a New JMS System Module Resource** page:
   a. Under **Choose the type of resource you want to create**, select the **Foreign Server** option and click **Next**.
   b. Under **Foreign Server Properties**, enter a name in the **Name** field and click **Next**.
   c. Under **The following properties will be used to target your new JMS system module resource**, ensure the correct server is targeted and click **Finish**.
6) On the **Configuration** tab of the **Settings** page, click the name of the new foreign server.
7) On the **Settings** page, click the **Configuration** tab and then click the **General** tab.
8) On the **General** tab:
   a. Enter the URL of the remote server in the **JNDI Connection URL** field. For example, t3://<hostname>:7001.
   b. Enter the password that you used to log on to the remote WebLogic server in the **JNDI Properties Credential** field.
   c. Reenter this password in the **Confirm JNDI Properties Credential** field.
   d. Enter *java.naming.security.principal*=<name> in the **JNDI Properties** box, where *name* is the user name you used to log on to the remote WebLogic server.
   e. Click **Save**.
9) On the **Configurations** tab, click the **Destinations** tab and click **New** under **Foreign Destinations**.
10) On the **Create a New Foreign JMS Destination** page:
   a. Enter a name in the **Name** field.
   b. Enter a JNDI name in the Local JNDI Name field. Ensure that the Local JNDI name is different from the JNDI name that you had previously assigned to the message queue for the remote server.
   c. Enter the JNDI name that you assigned to the message queue for the remote server in the **Remote JNDI Name** field.
   d. Click **OK**.

11) On the **Configurations** tab, click the **Connection Factories** tab and click **New** under **Foreign Connection Factories**.
12) On the **Create a New Foreign JMS Connection Factory** page:
    a. Enter a name in the **Name** field.
    b. Enter a JNDI name in the **Local JNDI Name** field. Ensure that the Local JNDI name is different from the JNDI name that you had previously assigned to the connection factory for the remote server.
    c. Enter the JNDI name that you assigned to the connection factory for the remote server in the **Remote JNDI Name** field.
    d. Click **OK**.

Configuring the Security Policy for the WebLogic Message Queue

You can configure the WebLogic security policy to allow only specific users, roles, or groups to access the queue. The following is an example a security policy configured for one user. If you need more information, refer to the WebLogic documentation.

To configure the WebLogic message queue security policy for one user:

1) Launch the WebLogic **Administration console**.
2) In the WebLogic **Administration console**, click **Security Realms** in the **Domain Structure** pane.
3) On the **Summary of Security Realms** page, click the security realm you are using in the **Name** column under **Realms**.
4) On the **Settings** page for the realm, click the **Users and Groups** tab and then click the **Users** tab.
5) On the **Users** tab, under **Users** click **New**.
6) On the **Create a New User** page, enter a name and password in the appropriate fields and click **OK**.

> **Note**: Make a note of the name and password as they will be needed in the ***Configuring and Testing Directory Services User Name and Password*** (see "***Configuring and Testing the WebLogic Message Queue Security***" on page 33) topic.

7) On the **Settings** page for the user, click the **Roles and Policies** tab and then click the **Realm Policies** tab.
8) On the **Realm Policies** tab, under **Policies** expand **JMS** then expand the module you created for the remote server and click the queue you created for the remote server.
9) On the **Settings** page for the queue, click the **Security** tab and then click the **Policies** tab.
10) On the **Policies** tab:
    a. In the **Policy Conditions** section, click **Add Conditions**.
    b. Under **Choose a Predicate**, select **User** from the **Predicate** list and click **Next**.

c. Under **Edit Arguments**:

1. Enter the user name for the user you just created in the **User Argument Name** field and click **Add**. You can now use this user in the P6 Administrator application.
2. Click **Finish**.

11) On the **Settings** page for the queue, click **Save**.

12) Launch the P6 Administrator application.

13) In the P6 Administrator application, change and test the **Directory Services** user name and password. See ***Configuring and Testing Directory Services User Name and Password*** (see "***Configuring and Testing the WebLogic Message Queue Security***" on page 33).

Configuring and Testing the WebLogic Message Queue Security

After you create a new user on the Users and Groups tab in Security Realms, you must change the Security Principal and the Security credentials listed under Directory Services in the P6 Administrator application.

To configure and test the WebLogic message queue security:

1) Launch the P6 Administrator application.
2) In the P6 Administrator application, click the **Configurations** tab.
3) On the **Configurations** tab, expand **Custom/<your configuration>/Directory Services**.
4) In the **Directory Services** folder:
   a. Enter the new user name in the **Security Principal** field.

   > **Note**: The user name and password were set in the ***Configuring the Security Policy for the WebLogic Message Queue*** (on page 32) topic.

   b. Enter the new password in the **Security Credentials** field.
5) In the P6 Administrator application, click **Save Changes**.
6) In **<your configuration>**, expand **Database/<the instance in which you need to configure events>/Eventing**.
7) In the **Eventing** folder, configure the settings and test the connection. See ***Configuring Eventing in the P6 Administrator application*** (on page 23).
8) In the **Directory Services** folder, test the original user name and password to ensure they no longer work:
   a. Enter the original user name in the **Security Principal** field.
   b. Enter the original password in the **Security Credentials** field.
9) In the **Eventing** folder, right-click **Eventing** and select **Test Connection** to test the original connection. A connection test failed message should display.

Using Events with an SSL Connection

Configuring a WebLogic Deployment of P6 to Use an SSL connection

You must configure your WebLogic deployment of P6 if you would like to use a Secure Sockets Layer (SSL) connection.

To configure a WebLogic deployment of P6 to use SSL:

- If P6 and the WebLogic message queue are on the same server, see ***Configuring an SSL Connection on One Server*** (on page 34).
- If P6 and the WebLogic message queue are on different servers, see ***Configuring an SSL Connection on Different Servers*** (on page 34).

Configuring an SSL Connection on One Server

You can configure your WebLogic deployment of P6 to use a Secure Sockets Layer (SSL) connection when P6 and the WebLogic message queue are on the same server.

> **Note**: When P6 and the WebLogic message queue are on the same server, they will use the same certificate and trust store.

To configure an SSL connection on one server:

1) Launch the WebLogic **Administration Console**.
2) In the WebLogic **Administration Console**, enable the SSL port. See ***Enabling the SSL Port*** (on page 35).
3) Launch the P6 Administrator application.
4) In the P6 Administrator application, click the **Configurations** tab.
5) On the **Configurations** tab, expand **Custom/<your configuration>/Directory Services**.
6) In the **Directory Services** folder, use the protocol over SSL (t3s:// or iiops://) and the SSL port in the **Provider URL** field.

> **Example**: t3s://<hostname>:7002

Configuring an SSL Connection on Different Servers

You can configure your WebLogic deployment of P6 to use a Secure Sockets Layer (SSL) connection when P6 and the WebLogic message queue are on different servers.

> **Note**: This topic assumes that you have already set up a foreign JMS server. See ***Creating a Foreign JMS Server*** (on page 31).

To configure an SSL connection on different servers:

1) Launch the WebLogic **Administration Console**.

2) In the WebLogic **Administration Console**, enable the SSL port on both servers. See ***Enabling the SSL Port*** (on page 35).
3) Launch the P6 Administrator application.
4) In the P6 Administrator application, click the **Configurations** tab.
5) On the **Configurations** tab, expand **Custom/<your configuration>/Directory Services**.
6) In the **Directory Services** folder, use the protocol over SSL (t3s:// or iiops://) and the SSL port in the **Provider URL** field. For example, t3s://<hostname>:7002.
7) Import the certificate of the server hosting the WebLogic message queue into the trust store of the server hosting P6. Please refer to the WebLogic documentation for detailed instructions.
   - ***http://download.oracle.com/docs/cd/E14571_01/web.1111/e13707/identity_trust.htm***
   - ***http://download.oracle.com/docs/cd/E14571_01/apirefs.1111/e13952/taskhelp/security/ConfigureIdentityAndTrust.html***
8) In the WebLogic **Administration Console**, expand **Services** and click **JMS Modules** in the **Domain Structure** pane.
9) On the **JMS Modules** page, click the module that contains the foreign JMS server you are using.
10) On the **Settings** page for the module, click the foreign JMS server on the **Configuration** tab.
11) On the **Settings** page for the foreign JMS server, use the protocol over SSL (t3s:// or iiops://) and the SSL port in the **JNDI Connection URL** on the **General** tab. For example, t3s://<hostname>:7002.

Enabling the SSL Port

To enable the SSL port:

1) Launch the WebLogic **Administration Console**.
2) In the WebLogic **Administration Console**, expand **Environment** and click **Servers** in the **Domain Structure** pane.
3) On the **Summary of Servers** page, click your server in the **Name** column under **Servers**.
4) On the **Settings** page for the server, click the **Configuration** tab and then click the **General** tab.
5) On the **General** tab, select the **SSL Listen Port Enabled** option and click **Save**.

Configuring your Java client to use an SSL connection

You may configure the Java client to use a Secure Sockets Layer (SSL) connection. For more information, please refer to the documentation for WebLogic.

To configure Java to use an SSL connection:

1) In order to use an SSL connection, include the following jar files in you classpath:

- **wlfullclient.jar**
- **wlcipher.jar** (This can be found in the <WL_HOME>/server/lib (e.g. C:\Oracle\Middleware\wlserver_10.3\server\lib).)

a. To obtain the jar file *wlfullclient.jar*, run *java –jar wljarbuilder.jar* in <WL_HOME>/server/lib.

b. To obtain the provider URL, you can use either *t3s://* or *iiops://* protocol (t3 or iiop over SSL).

> **Note**: Use the SSL port (7002 by default).

2) To obtain the keystore file that contains the server's certificate:
   a. Export the server's certificate from the browser to a certificate file.
   b. Import the certificate file into your keystore using java's keytool:
      - **keytool -import -trustcacerts -alias demotrust -file server_cert.crt -keystore mykeystore.jks**
3) When running the client, specify the following parameters:
   - **Dweblogic.security.TrustKeyStore=CustomTrust**
   - **Dweblogic.security.CustomTrustKeyStoreFileName=mykeystore.jks**
   - **Dweblogic.security.CustomTrustKeyStorePassPhrase=<your keystore password>**
   - (Optional) **Dweblogic.security.SSL.ignoreHostnameVerification=true** (Specify this parameter to ignore hostname verification.)

Reference Material

In This Chapter

Business Object Event Message Contents

ActivityCodeAssignmentCreated Message

Field	Type	Description
ActivityCodeObjectId	int	The unique ID of the associated activity code.
ActivityCodeTypeObjectId	int	The unique ID of the parent activity code type.
ActivityObjectId	int	The unique ID of the activity to which the activity code is assigned.
ProjectObjectId	int	The unique ID of the associated project.

ActivityCodeAssignmentUpdated Message

Field	Type	Description
ActivityCodeObjectId	int	The unique ID of the associated activity code.
ActivityCodeTypeObjectId	int	The unique ID of the parent activity code type.
ActivityObjectId	int	The unique ID of the activity to which the activity code is assigned.
ProjectObjectId	int	The unique ID of the associated project.
NewValues	ActivityCodeAssignmentType Refer to the entries for "Old Values," below. Additional information can be	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td>found in the p6events.xsd schema.</td><td></td></tr>
<tr><td>OldValues</td><td>Type: ActivityCodeAssignmentType<table><tr><th>Elements</th><th>Type</th></tr><tr><td>ActivityCodeObjectId</td><td>int</td></tr><tr><td>ActivityObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityCreated Message

Field	Type	Description
Id	string	The short ID that uniquely identifies the activity within the project.
Name	string	The name of the activity. The activity name does not have to be unique.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS for the activity.

ActivityExpenseCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the project expense is linked. Every project expense is associated

Field	Type	Description
		with one activity in the project.
CostAccountObjectId	int	The unique ID of the cost account associated with the project expense.
ExpenseCategoryObjectId	int	The unique ID of the expense category for the project expense.
ExpenseItem	string	The name of the project expense.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.

ActivityExpenseUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the project expense is linked. Every project expense is associated with one activity in the project.
CostAccountObjectId	int	The unique ID of the cost account associated with the project expense.
ExpenseCategoryObjectId	int	The unique ID of the expense category for the project expense.
ExpenseItem	string	The name of the project expense.

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
NewValues	ActivityExpenseType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ActivityExpenseType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>AccrualType</td><td>string restricted to 'Start of Activity' 'End of Activity' 'Uniform Over Activity</td></tr>
<tr><td>ActivityObjectId</td><td>int</td></tr>
<tr><td>ActualCost</td><td>double</td></tr>
<tr><td>AutoComputeActuals</td><td>boolean</td></tr>
<tr><td>CostAccountObjectId</td><td>int</td></tr>
<tr><td>DocumentNumber</td><td>string</td></tr>
<tr><td>ExpenseCategoryObjectId</td><td>int</td></tr>
<tr><td>ExpenseItem</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>PlannedCost</td><td>double</td></tr>
<tr><td>PlannedUnits</td><td>double</td></tr>
<tr><td>PricePerUnit</td><td>double</td></tr>
<tr><td>RemainingCost</td><td>double</td></tr>
<tr><td>UnitOfMeasure</td><td>string</td></tr>
<tr><td>Vendor</td><td>string</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityNoteCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the activity note is assigned.
NotebookTopicObjectId	int	The unique ID of the associated notebook topic.
ObjectId	int	The unique ID generated by the system.

ActivityNoteUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the activity note is assigned.
NotebookTopicObjectId	int	The unique ID of the associated notebook topic.
ObjectId	int	The unique ID generated by the system.
NewValues	ActivityNoteType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>Type: ActivityNoteType<table><tr><th>Elements</th><th>Type</th></tr><tr><td>ActivityObjectId</td><td>int</td></tr><tr><td>NotebookTopicObjectId</td><td>int</td></tr><tr><td>ObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityOwnerCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the associated activity.
ProjectObjectId	int	The unique ID of the associated project.
UserObjectId	int	The unique ID of the associated user.

ActivityOwnerUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the associated activity.
ProjectObjectId	int	The unique ID of the associated project.
UserObjectId	int	The unique ID of the associated user.
NewValues	ActivityOwnerType	The new values of Physical

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td>Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.</td><td>and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td><table><tr><th colspan="2">Type: ActivityOwnerType</th></tr><tr><th>Elements</th><th>Type</th></tr><tr><td>ActivityObjectId</td><td>int</td></tr><tr><td>UserObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityRiskCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the risk is assigned.
ProjectObjectId	int	The unique ID of the associated project.
RiskObjectId	int	The unique ID of the associated risk.

ActivityRiskUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the risk is assigned.
ProjectObjectId	int	The unique ID of the associated project.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>RiskObjectId</td><td>int</td><td>The unique ID of the associated risk.</td></tr>
<tr><td>NewValues</td><td>ActivityRiskType
Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td><table><tr><th colspan="2">Type: ActivityRiskType</th></tr><tr><th>Elements</th><th>Type</th></tr><tr><td>ActivityObjectId</td><td>int</td></tr><tr><td>RiskObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityStepCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the steps are assigned.
Name	string	The name of the activity step.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.

ActivityStepUpdated Message

Field	Type	Description

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>ActivityObjectId</td><td>int</td><td>The unique ID of the activity to which the steps are assigned.</td></tr>
<tr><td>Name</td><td>string</td><td>The name of the activity step.</td></tr>
<tr><td>ObjectId</td><td>int</td><td>The unique ID generated by the system.</td></tr>
<tr><td>ProjectObjectId</td><td>int</td><td>The unique ID of the associated project.</td></tr>
<tr><td>NewValues</td><td>ActivityStepType
Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ActivityStepType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>ActivityObjectId</td><td>int</td></tr>
<tr><td>IsCompleted</td><td>boolean</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>PercentComplete</td><td>doubl</td></tr>
<tr><td>Weight</td><td>doubl</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ActivityUpdated Message

Field	Type	Description
Id	string	The short ID that uniquely identifies the activity within the project.
Name	string	The name of the activity. The activity name does not have to be unique.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS for the activity.
NewValues	ActivityType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

Field	Type		Description
	Type: ActivityType		
	Elements	Type	
	ActualFinishDate	dateTime	
	ActualLaborUnits	double	
	ActualNonLaborUnits	double	
	ActualStartDate	dateTime	
	ActualThisPeriodLaborUnits	double	
	ActualThisPeriodNonLaborUnits	double	
	AtCompletionLaborUnits	double	
	AtCompletionNonLaborUnits	double	
	AutoComputeActuals	boolean	
	CalendarObjectId	int	
	DBPhysicalPercentComplete	double	
	DurationType	string restricted 'Fixed Units/Time 'Fixed Duration and Units/Time 'Fixed Unit 'Fixed Duration and Units'	
	ExpectedFinishDate	dateTime	
	Id	string	
	IsNewFeedback	boolean	
		string restricted	

BaselineProjectCreated Message

Field	Type	Description
Id	string	The short code assigned to each WBS element for identification. Each WBS element is uniquely identified by concatenating its own code together with its parents' codes.
Name	string	The name of the baseline project.
ObjectId	int	The unique ID generated by the system.

BaselineProjectUpdated Message

Field	Type	Description
Id	string	The short code assigned to each WBS element for identification. Each WBS element is uniquely identified by concatenating its own code together with its parents' codes.
Name	string	The name of the baseline project.
ObjectId	int	The unique ID generated by the system.
NewValues	BaselineProjectType Refer to the entries for "Old Values," below. Additional information can be found in the	The new values of Physical and writable fields that

Field	Type	Description
	p6events.xsd schema.	have changed.

Field	Type		Description
	Type: BaselineProjectType		
	Elements	Type	
	ActivityDefaultActivityType	string restricted to 'Task Depende 'Resource Dependent' 'Level of Effort' 'Start Milestone 'Finish Mileston 'WBS Summary	
	ActivityDefaultCalendarObjectId	int	
	ActivityDefaultCostAccountObjectId	int	
	ActivityDefaultDurationType	string restricted to 'Fixed Units/Tim 'Fixed Duration and Units/Time 'Fixed Units' 'Fixed Duration and Units'	
	ActivityDefaultPercentCompleteType	string restricted to 'Physical' 'Duration' 'Units'	
	ActivityDefaultPricePerUnit	double	
	ActivityIdBasedOnSelectedActivity	boolean	
	ActivityIdIncrement	int	
	ActivityIdPrefix	string	
	ActivityIdSuffix	int	
	ActivityPercentCompleteBasedOnActivitySteps	boolean	

CalendarCreated Message

Field	Type	Description
Name	string	The name of the calendar.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
Type	string restricted to 'Global' 'Project' 'Resource'	The calendar type - either 'Global', 'Resource', or 'Project'. 'Global' calendars can be assigned to projects and resources. 'Resource' calendars can be assigned only to resources. 'Project' calendars are specific to projects.

CalendarUpdated Message

Field	Type	Description
Name	string	The name of the calendar.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
Type	string restricted to 'Global' 'Project' 'Resource'	The calendar type - either 'Global', 'Resource', or 'Project'. 'Global' calendars can be assigned to projects and resources. 'Resource' calendars can be assigned only to resources. 'Project' calendars are specific

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td></td><td>to projects.</td></tr>
<tr><td>NewValues</td><td>CalendarType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: CalendarType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>BaseCalendarObjectId</td><td>int</td></tr>
<tr><td>HoursPerDay</td><td>double</td></tr>
<tr><td>HoursPerMonth</td><td>double</td></tr>
<tr><td>HoursPerWeek</td><td>double</td></tr>
<tr><td>HoursPerYear</td><td>double</td></tr>
<tr><td>IsDefault</td><td>boolea</td></tr>
<tr><td>IsPersonal</td><td>boolea</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>Type</td><td>string restricte to 'Global' 'Project 'Resour</td></tr>
<tr><td>CalendarData</td><td>string</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

EPSBudgetChangeLogCreated Message

Field	Type	Description
ChangeNumber	string	The change number that is automatically incremented according to when changes are added. This can be changed to any number.
EPSObjectId	int	The unique ID of the EPS element to which the budget change log applies.
ObjectId	int	The unique ID generated by the system.

EPSBudgetChangeLogUpdated Message

Field	Type	Description
ChangeNumber	string	The change number that is automatically incremented according to when changes are added. This can be changed to any number.
EPSObjectId	int	The unique ID of the EPS element to which the budget change log applies.
ObjectId	int	The unique ID generated by the system.
NewValues	EPSBudgetChangeLogType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td>schema.</td><td></td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: EPSBudgetChangeLogType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Amount</td><td>double</td></tr>
<tr><td>ChangeNumber</td><td>string</td></tr>
<tr><td>Date</td><td>dateTime</td></tr>
<tr><td>EPSObjectId</td><td>int</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>Reason</td><td>string</td></tr>
<tr><td>Responsible</td><td>string</td></tr>
<tr><td>Status</td><td>string restricted to 'Pending' 'Approved' 'Not Approve</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

EPSCreated Message

Field	Type	Description
Id	string	The short code assigned to each EPS element for identification.
Name	string	The name of the EPS element.

Field	Type	Description
ObjectId	int	The unique ID generated by the system.

EPSFundingCreated Message

Field	Type	Description
EPSObjectId	int	The unique ID of the associated EPS for this EPS funding.
FundingSourceObjectId	int	The unique ID of the associated funding source for this EPS funding.
ObjectId	int	The unique ID generated by the system.

EPSFundingUpdated Message

Field	Type	Description
EPSObjectId	int	The unique ID of the associated EPS for this EPS funding.
FundingSourceObjectId	int	The unique ID of the associated funding source for this EPS funding.
ObjectId	int	The unique ID generated by the system.
NewValues	EPSFundingType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: EPSFundingType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Amount</td><td>double</td></tr>
<tr><td>FundShare</td><td>double</td></tr>
<tr><td>FundingSourceObjectId</td><td>int</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

EPSNoteCreated Message

Field	Type	Description
EPSObjectId	int	The unique ID of the associated EPS.
NotebookTopicObjectId	int	The unique ID of the associated notebook topic.
ObjectId	int	The unique ID generated by the system.

EPSNoteUpdated Message

Field	Type	Description
EPSObjectId	int	The unique ID of the associated EPS.
NotebookTopicObject	int	The unique ID of the

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>Id</td><td></td><td>associated notebook topic.</td></tr>
<tr><td>ObjectId</td><td>int</td><td>The unique ID generated by the system.</td></tr>
<tr><td>NewValues</td><td>EPSNoteType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>Type: EPSNoteType<table><tr><th>Elements</th><th>Type</th></tr><tr><td>EPSObjectId</td><td>int</td></tr><tr><td>NotebookTopicObjectId</td><td>int</td></tr><tr><td>ObjectId</td><td>int</td></tr><tr><td>ProjectObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

EPSUpdated Message

Field	Type	Description
Id	string	The short code assigned to each EPS element for identification.
Name	string	The name of the EPS element.
ObjectId	int	The unique ID generated by the

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td></td><td>system.</td></tr>
<tr><td>NewValues</td><td>EPSType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td><table><tr><th colspan="2">Type: EPSType</th></tr><tr><th>Elements</th><th>Type</th></tr><tr><td>AnticipatedFinishDate</td><td>dateTime</td></tr><tr><td>AnticipatedStartDate</td><td>dateTime</td></tr><tr><td>Id</td><td>string</td></tr><tr><td>Name</td><td>string</td></tr><tr><td>OBSObjectId</td><td>int</td></tr><tr><td>ObjectId</td><td>int</td></tr><tr><td>OriginalBudget</td><td>double</td></tr><tr><td>ParentObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectBudgetChangeLogCreated Message

Field	Type	Description
ChangeNumber	string	The change number that is automatically incremented according to when changes are added. This can be changed to any number.
ObjectId	int	The unique ID generated by the system.

Field	Type	Description
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS element to which the budget change log applies.

ProjectBudgetChangeLogUpdated Message

Field	Type	Description
ChangeNumber	string	The change number that is automatically incremented according to when changes are added. This can be changed to any number.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS element to which the budget change log applies.
NewValues	ProjectBudgetChangeLogType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ProjectBudgetChangeLogType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Amount</td><td>double</td></tr>
<tr><td>ChangeNumber</td><td>string</td></tr>
<tr><td>Date</td><td>dateTime</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>Reason</td><td>string</td></tr>
<tr><td>Responsible</td><td>string</td></tr>
<tr><td>Status</td><td>string restricted to 'Pending' 'Approved' 'Not Approved'</td></tr>
<tr><td>WBSObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectCodeAssignmentCreated Message

Field	Type	Description
ProjectCodeObjectId	int	The unique ID of the associated project code.
ProjectCodeTypeObjectI	int	The unique ID of the parent project

Field	Type	Description
d		code type.
ProjectObjectId	int	The unique ID of the project to which the project code is assigned.

ProjectCodeAssignmentUpdated Message

Field	Type	Description
ProjectCodeObjectId	int	The unique ID of the associated project code.
ProjectCodeTypeObjectId	int	The unique ID of the parent project code type.
ProjectObjectId	int	The unique ID of the project to which the project code is assigned.
NewValues	ProjectCodeAssignmentType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.
OldValues	Type: ProjectCodeAssignmentType Elements / Type: ProjectCodeObjectId — int ProjectObjectId — int Additional information can be found in the p6events.xsd schema.	The old values of Physical and writable fields that have changed.

ProjectCreated Message

Field	Type	Description
Id	string	The short code assigned to each Project element for identification. Each Project element is uniquely identified by this short code.
Name	string	The name of the Project element.
ObjectId	int	The unique ID generated by the system.

ProjectFundingCreated Message

Field	Type	Description
FundingSourceObjectId	int	The unique ID of the associated funding source for this project funding.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project source for this project funding.

ProjectFundingUpdated Message

Field	Type	Description
FundingSourceObjectId	int	The unique ID of the associated funding source for this project funding.
ObjectId	int	The unique ID generated by the system.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>ProjectObjectId</td><td>int</td><td>The unique ID of the associated project source for this project funding.</td></tr>
<tr><td>NewValues</td><td>ProjectFundingType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>Type: ProjectFundingType
<table><tr><th>Elements</th><th>Type</th></tr><tr><td>Amount</td><td>doub</td></tr><tr><td>FundShare</td><td>doub</td></tr><tr><td>FundingSourceObjectId</td><td>int</td></tr><tr><td>ObjectId</td><td>int</td></tr><tr><td>ProjectObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectIssueCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the project issue applies.
Name	string	The name of the project issue. Issues which are automatically generated by the threshold monitor are named after the threshold parameter that triggered the

Field	Type	Description
		project issue.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS to which the project issue applies. If a parent WBS is selected, the project issue applies to all child elements as well. If the top WBS is selected, the project issue applies to the entire project.

ProjectIssueUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the project issue applies.
Name	string	The name of the project issue. Issues which are automatically generated by the threshold monitor are named after the threshold parameter that triggered the project issue.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the WBS to which the project issue applies. If

Field	Type	Description
		a parent WBS is selected, the project issue applies to all child elements as well. If the top WBS is selected, the project issue applies to the entire project.
NewValues	ProjectIssueType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ProjectIssueType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>ActivityObjectId</td><td>int</td></tr>
<tr><td>ActualValue</td><td>double</td></tr>
<tr><td>DateIdentified</td><td>dateTime</td></tr>
<tr><td>IdentifiedBy</td><td>string</td></tr>
<tr><td>LowerThreshold</td><td>double</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>OBSObjectId</td><td>int</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>Priority</td><td>string
restricted to
'Top'
'High'
'Normal'
'Low'
'Lowest'</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>ResolutionDate</td><td>dateTime</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>Status</td><td>string
restricted to
'Open'
'On Hold'
'Closed'</td></tr>
<tr><td>UpperThreshold</td><td>double</td></tr>
<tr><td>WBSObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectNoteCreated Message

Field	Type	Description
NotebookTopicObjectId	int	The unique ID of the associated notebook topic.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the associated WBS.

ProjectNoteUpdated Message

Field	Type	Description
NotebookTopicObjectId	int	The unique ID of the associated notebook topic.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
WBSObjectId	int	The unique ID of the associated WBS.
NewValues	ProjectNoteType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ProjectNoteType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>NotebookTopicObjectId</td><td>int</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>WBSObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectPortfolioCreated Message

Field	Type	Description
Name	string	The name of the project portfolio.
ObjectId	int	The unique ID generated by the system.
UserObjectId	int	The unique ID of a specific user who has access to the selected project portfolio.

ProjectPortfolioUpdated Message

Field	Type	Description
Name	string	The name of the project portfolio.
ObjectId	int	The unique ID generated by the system.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>UserObjectId</td><td>int</td><td>The unique ID of a specific user who has access to the selected project portfolio.</td></tr>
<tr><td>NewValues</td><td>ProjectPortfolioType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ProjectPortfolioType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Description</td><td>string</td></tr>
<tr><td>IncludeClosedProjects</td><td>boolec</td></tr>
<tr><td>IncludeWhatIfProjects</td><td>boolec</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>UserObjectId</td><td>int</td></tr>
<tr><td>Projects</td><td></td></tr>
</table>
Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectResourceCreated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.

Field	Type	Description
ResourceObjectId	int	The unique ID of the associated resource.
RoleObjectId	int	The unique ID of the associated role.
WBSObjectId	int	The unique ID of the associated WBS.

ProjectResourceUpdated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
ResourceObjectId	int	The unique ID of the associated resource.
RoleObjectId	int	The unique ID of the associated role.
WBSObjectId	int	The unique ID of the associated WBS.
NewValues	ProjectResourceType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: ProjectResourceType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>CommittedFlag</td><td>boolean</td></tr>
<tr><td>LifeOfProjectFlag</td><td>boolean</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>ProjectResourceCategoryObjectId</td><td>int</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>RoleObjectId</td><td>int</td></tr>
<tr><td>WBSObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ProjectUpdated Message

Field	Type	Description
Id	string	The short code assigned to each Project element for identification. Each Project element is uniquely identified by this short code.
Name	string	The name of the Project element.

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
NewValues	ProjectType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

Field	Type		Description
	Type: ProjectType		
	Elements	Type	
	ActivityDefaultActivityType	string restricted to 'Task Dependent' 'Resource Dependent' 'Level of Effor 'Start Milestor 'Finish Milesto 'WBS Summar	
	ActivityDefaultCalendarObjectId	int	
	ActivityDefaultCostAccountObjectId	int	
	ActivityDefaultDurationType	string restricted to 'Fixed Units/Time' 'Fixed Duratic and Units/Tim 'Fixed Units' 'Fixed Duratic and Units'	
	ActivityDefaultPercentCompleteType	string restricted to 'Physical' 'Duration' 'Units'	
	ActivityDefaultPricePerUnit	double	
	ActivityIdBasedOnSelectedActivity	boolean	
	ActivityIdIncrement	int	
	ActivityIdPrefix	string	
	ActivityIdSuffix	int	

RelationshipCreated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
PredecessorActivityObjectId	int	The unique ID of the predecessor activity.
PredecessorProjectObjectId	int	The unique ID of the project that owns the predecessor activity.
SuccessorActivityObjectId	int	The unique ID of the successor activity.
SuccessorProjectObjectId	int	The unique ID of the project that owns the successor activity.
Type	string restricted to 'Finish to Start' 'Finish to Finish' 'Start to Start' 'Start to Finish'	The type of relationship: 'Finish to Start', 'Finish to Finish', 'Start to Start', or 'Start to Finish'.

RelationshipUpdated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
PredecessorActivityObjectId	int	The unique ID of the predecessor activity.

Field	Type	Description
PredecessorProjectObjectId	int	The unique ID of the project that owns the predecessor activity.
SuccessorActivityObjectId	int	The unique ID of the successor activity.
SuccessorProjectObjectId	int	The unique ID of the project that owns the successor activity.
Type	string restricted to 'Finish to Start' 'Finish to Finish' 'Start to Start' 'Start to Finish'	The type of relationship: 'Finish to Start', 'Finish to Finish', 'Start to Start', or 'Start to Finish'.
NewValues	RelationshipType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RelationshipType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Lag</td><td>double</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>PredecessorActivityObjectId</td><td>int</td></tr>
<tr><td>SuccessorActivityObjectId</td><td>int</td></tr>
<tr><td>Type</td><td>string restricted to 'Finish to Start' 'Finish to Finish' 'Start to Start' 'Start to Finish'</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ResourceAssignmentCreated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the resource is assigned.
CostAccountObjectId	int	The unique ID of the cost account associated with this resource assignment.

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
ResourceObjectId	int	The unique ID of the associated resource.
RoleObjectId	int	The unique ID of the role the resource is performing on this activity. A resource may be assigned to the same activity more than once, performing different roles. The project manager controls whether the same resource can be assigned to an activity more than once.

ResourceAssignmentUpdated Message

Field	Type	Description
ActivityObjectId	int	The unique ID of the activity to which the resource is assigned.
CostAccountObjectId	int	The unique ID of the cost account associated with this resource assignment.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
ResourceObjectId	int	The unique ID of the associated resource.
RoleObjectId	int	The unique ID of the

Field	Type	Description
		role the resource is performing on this activity. A resource may be assigned to the same activity more than once, performing different roles. The project manager controls whether the same resource can be assigned to an activity more than once.
NewValues	ResourceAssignmentType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

Field	Type		Description
	Type: ResourceAssignmentType		
	Elements	Type	
	ActivityObjectId	int	
	ActualCost	double	
	ActualCurve	string	
	ActualFinishDate	dateTim	
	ActualOvertimeCost	double	
	ActualOvertimeUnits	double	
	ActualRegularCost	double	
	ActualRegularUnits	double	
	ActualStartDate	dateTim	
	ActualThisPeriodCost	double	
	ActualThisPeriodUnits	double	
	ActualUnits	double	
	AtCompletionCost	double	
	AtCompletionUnits	double	
	CostAccountObjectId	int	
	DrivingActivityDatesFlag	boolean	
	IsCostUnitsLinked	boolean	
	ObjectId	int	
	OvertimeFactor	double	
	PendingPercentComplete	double	
	PendingRemainingUnits	double	
	PlannedCost	double	
	PlannedCurve	string	
	PlannedFinishDate	dateTim	

ResourceCodeAssignmentCreated Message

Field	Type	Description
ResourceCodeObjectId	int	The unique ID of the associated resource code.
ResourceCodeTypeObjectId	int	The unique ID of the parent resource code type.
ResourceObjectId	int	The unique ID of the resource to which the resource code is assigned.

ResourceCodeAssignmentUpdated Message

Field	Type	Description
ResourceCodeObjectId	int	The unique ID of the associated resource code.
ResourceCodeTypeObjectId	int	The unique ID of the parent resource code type.
ResourceObjectId	int	The unique ID of the resource to which the resource code is assigned.
NewValues	ResourceCodeAssignmentType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>Type: ResourceCodeAssignmentType
<table><tr><th>Elements</th><th>Type</th></tr><tr><td>ResourceCodeObjectId</td><td>int</td></tr><tr><td>ResourceObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ResourceCreated Message

Field	Type	Description
Id	string	The short code that uniquely identifies the resource.
Name	string	The name of the resource.
ObjectId	int	The unique ID generated by the system.

ResourceRateCreated Message

Field	Type	Description
EffectiveDate	dateTime	The effective date for the resource price and maximum units per time.
ObjectId	int	The unique ID generated by the system.
ResourceObjectId	int	The unique ID of the associated resource.
ShiftPeriodObjectId	int	The unique ID of the associated shift.

ResourceRateUpdated Message

Field	Type	Description
EffectiveDate	dateTime	The effective date for the resource price and maximum units per time.
ObjectId	int	The unique ID generated by the system.
ResourceObjectId	int	The unique ID of the associated resource.
ShiftPeriodObjectId	int	The unique ID of the associated shift.
NewValues	ResourceRateType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: ResourceRateType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>EffectiveDate</td><td>dateTime</td></tr>
<tr><td>MaxUnitsPerTime</td><td>double</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>PricePerUnit</td><td>double</td></tr>
<tr><td>PricePerUnit2</td><td>double</td></tr>
<tr><td>PricePerUnit3</td><td>double</td></tr>
<tr><td>PricePerUnit4</td><td>double</td></tr>
<tr><td>PricePerUnit5</td><td>double</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>ShiftPeriodObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ResourceRoleCreated Message

Field	Type	Description
ResourceObjectId	int	The unique ID of the associated resource.
RoleObjectId	int	The unique ID of the associated role.

ResourceRoleUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>ResourceObjectId</td><td>int</td><td>The unique ID of the associated resource.</td></tr>
<tr><td>RoleObjectId</td><td>int</td><td>The unique ID of the associated role.</td></tr>
<tr><td>NewValues</td><td>ResourceRoleType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ResourceRoleType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Proficiency</td><td>string restricted to
'1 - Master'
'2 - Expert'
'3 - Skilled'
'4 - Proficient'
'5 - Inexperienced</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>RoleObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ResourceTeamCreated Message

Field	Type	Description

Field	Type	Description
Name	string	The name of the resource team.
ObjectId	int	The unique ID generated by the system.
UserObjectId	int	The unique ID of the associated user.

ResourceTeamUpdated Message

Field	Type	Description
Name	string	The name of the resource team.
ObjectId	int	The unique ID generated by the system.
UserObjectId	int	The unique ID of the associated user.
NewValues	ResourceTeamType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: ResourceTeamType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Description</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>UserObjectId</td><td>int</td></tr>
<tr><td>Resources</td><td></td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

ResourceUpdated Message

Field	Type	Description
Id	string	The short code that uniquely identifies the resource.
Name	string	The name of the resource.
ObjectId	int	The unique ID generated by the system.
NewValues	ResourceType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: ResourceType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>AutoComputeActuals</td><td>boolean</td></tr>
<tr><td>CalculateCostFromUnits</td><td>boolean</td></tr>
<tr><td>CalendarObjectId</td><td>int</td></tr>
<tr><td>CurrencyObjectId</td><td>int</td></tr>
<tr><td>DefaultUnitsPerTime</td><td>double</td></tr>
<tr><td>EmailAddress</td><td>string</td></tr>
<tr><td>EmployeeId</td><td>string</td></tr>
<tr><td>Id</td><td>string</td></tr>
<tr><td>IntegratedType</td><td>string restricte to 'ERP' 'Fusion'</td></tr>
<tr><td>IsActive</td><td>boolean</td></tr>
<tr><td>IsOverTimeAllowed</td><td>boolean</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>OfficePhone</td><td>string</td></tr>
<tr><td>OtherPhone</td><td>string</td></tr>
<tr><td>OvertimeFactor</td><td>double</td></tr>
<tr><td>ParentObjectId</td><td>int</td></tr>
<tr><td>PrimaryRoleObjectId</td><td>int</td></tr>
<tr><td>ResourceType</td><td>string restricte to 'Labor' 'Nonlab 'Materic</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskCategoryCreated Message

Field	Type	Description
Name	string	The name of the risk category.
ObjectId	int	The unique ID generated by the system.

RiskCategoryUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>Name</td><td>string</td><td>The name of the risk category.</td></tr>
<tr><td>ObjectId</td><td>int</td><td>The unique ID generated by the system.</td></tr>
<tr><td>NewValues</td><td>RiskCategoryType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RiskCategoryType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskCreated Message

Field	Type	Description
Id	string	The ID of the Risk. Must be unique within a project.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.

RiskImpactCreated Message

Field	Type	Description
ProjectObjectId	int	The unique ID of the associated project.
RiskObjectId	int	The unique ID of the associated risk.
RiskThresholdLevelObjectId	int	The unique ID of the associated Risk Threshold.
RiskThresholdObjectId	int	The unique ID of the associated Risk Threshold Type.

RiskImpactUpdated Message

Field	Type	Description
ProjectObjectId	int	The unique ID of the associated project.
RiskObjectId	int	The unique ID of the associated risk.
RiskThresholdLevelObjectId	int	The unique ID of the associated Risk Threshold.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>RiskThresholdObjectId</td><td>int</td><td>The unique ID of the associated Risk Threshold Type.</td></tr>
<tr><td>NewValues</td><td>RiskImpactType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>Type: RiskImpactType
<table><tr><th>Elements</th><th>Type</th></tr><tr><td>RiskObjectId</td><td>int</td></tr><tr><td>RiskThresholdLevelObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskMatrixCreated Message

Field	Type	Description
Name	string	
ObjectId	int	

RiskMatrixScoreCreated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.

Field	Type	Description
RiskMatrixObjectId	int	The unique ID of the associated Risk Matrix.

RiskMatrixScoreUpdated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
RiskMatrixObjectId	int	The unique ID of the associated Risk Matrix.
NewValues	RiskMatrixScoreType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RiskMatrixScoreType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProbabilityThreshold Level</td><td>int</td></tr>
<tr><td>RiskMatrixObjectId</td><td>int</td></tr>
<tr><td>Severity1</td><td>int</td></tr>
<tr><td>Severity1Label</td><td>string</td></tr>
<tr><td>Severity2</td><td>int</td></tr>
<tr><td>Severity2Label</td><td>string</td></tr>
<tr><td>Severity3</td><td>int</td></tr>
<tr><td>Severity3Label</td><td>string</td></tr>
<tr><td>Severity4</td><td>int</td></tr>
<tr><td>Severity4Label</td><td>string</td></tr>
<tr><td>Severity5</td><td>int</td></tr>
<tr><td>Severity5Label</td><td>string</td></tr>
<tr><td>Severity6</td><td>int</td></tr>
<tr><td>Severity6Label</td><td>string</td></tr>
<tr><td>Severity7</td><td>int</td></tr>
<tr><td>Severity7Label</td><td>string</td></tr>
<tr><td>Severity8</td><td>int</td></tr>
<tr><td>Severity8Label</td><td>string</td></tr>
<tr><td>Severity9</td><td>int</td></tr>
<tr><td>Severity9Label</td><td>string</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskMatrixThresholdCreated Message

Field	Type	Description
RiskMatrixObjectId	int	The unique ID of the associated Risk Matrix.
RiskThresholdObjectId	int	The unique ID of the associated Risk Threshold.

RiskMatrixThresholdUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>RiskMatrixObjectId</td><td>int</td><td>The unique ID of the associated Risk Matrix.</td></tr>
<tr><td>RiskThresholdObjectId</td><td>int</td><td>The unique ID of the associated Risk Threshold.</td></tr>
<tr><td>NewValues</td><td>RiskMatrixThresholdType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RiskMatrixThresholdType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>RiskMatrixObjectId</td><td>int</td></tr>
<tr><td>RiskThresholdObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskMatrixUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>Name</td><td>string</td><td></td></tr>
<tr><td>ObjectId</td><td>int</td><td></td></tr>
<tr><td>NewValues</td><td>RiskMatrixType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RiskMatrixType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Description</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>RiskScoringMethod</td><td>string restricted to 'Highest' 'Average of Impacts' 'Average of Individual Scores</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskResponseActionCreated Message

Field	Type	Description
Id	string	
ObjectId	int	

Field	Type	Description
ProjectObjectId	int	
RiskResponsePlanObjectId	int	

RiskResponseActionImpactCreated Message

Field	Type	Description
ProjectObjectId	int	
RiskResponseActionObjectId	int	
RiskThresholdLevelObjectId	int	
RiskThresholdObjectId	int	

RiskResponseActionImpactUpdated Message

Field	Type	Description
ProjectObjectId	int	
RiskResponseActionObjectId	int	
RiskThresholdLevelObjectId	int	
RiskThresholdObjectId	int	
NewValues	RiskResponseActionImpactType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RiskResponseActionImpactType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>RiskResponseActionObjectId</td><td>int</td></tr>
<tr><td>RiskThresholdLevelObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskResponseActionUpdated Message

Field	Type	Description
Id	string	
ObjectId	int	
ProjectObjectId	int	
RiskResponsePlanObjectId	int	
NewValues	RiskResponseActionType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RiskResponseActionType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>ActivityObjectId</td><td>int</td></tr>
<tr><td>Id</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>RiskResponsePlanObjectId</td><td>int</td></tr>
<tr><td>Status</td><td>string restricted 'Proposed 'Sanctione ' 'Rejected 'In Progres 'Complete</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskResponsePlanCreated Message

Field	Type	Description
Id	string	The ID of the risk response plan. This must be unique within the assigned risk.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.

Field	Type	Description
RiskObjectId	int	The unique ID of the associated risk.

RiskResponsePlanUpdated Message

Field	Type	Description
Id	string	The ID of the risk response plan. This must be unique within the assigned risk.
ObjectId	int	The unique ID generated by the system.
ProjectObjectId	int	The unique ID of the associated project.
RiskObjectId	int	The unique ID of the associated risk.
NewValues	RiskResponsePlanType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RiskResponsePlanType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Id</td><td>string</td></tr>
<tr><td>IsActive</td><td>boolean</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ResponseType</td><td>string restricted to 'Avoid' 'Transfer' 'Reduce' 'Accept' 'Exploit' 'Facilitate 'Enhance 'Reject'</td></tr>
<tr><td>RiskObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskThresholdCreated Message

Field	Type	Description
Name	string	The name of the risk score type.
ObjectId	int	The unique ID generated by the system.

RiskThresholdLevelCreated Message

Field	Type	Description
Code	string	The 10 character code for the threshold level. Must be unique.
ObjectId	int	The unique ID generated by the system.
RiskThresholdObjectId	int	The unique ID of the associated Risk Threshold.

RiskThresholdLevelUpdated Message

Field	Type	Description
Code	string	The 10 character code for the threshold level. Must be unique.
ObjectId	int	The unique ID generated by the system.
RiskThresholdObjectId	int	The unique ID of the associated Risk Threshold.
NewValues	RiskThresholdLevelType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RiskThresholdLevelType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Code</td><td>string</td></tr>
<tr><td>Color</td><td>string restricted to pattern '#([A-Fa-f0-9]{</td></tr>
<tr><td>CostRange</td><td>double</td></tr>
<tr><td>Level</td><td>int</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProbabilityRange</td><td>double</td></tr>
<tr><td>Range</td><td>string</td></tr>
<tr><td>RiskThresholdObjectId</td><td>int</td></tr>
<tr><td>ScheduleRange</td><td>double</td></tr>
<tr><td>ToleranceRange</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskThresholdUpdated Message

Field	Type	Description
Name	string	The name of the risk score type.
ObjectId	int	The unique ID

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td></td><td>generated by the system.</td></tr>
<tr><td>NewValues</td><td>RiskThresholdType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RiskThresholdType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ThresholdType</td><td>string
restricted to
'Probability'
'Tolerance'
'Schedule'
'Cost'
'User Define</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RiskUpdated Message

Field	Type	Description
Id	string	The ID of the Risk. Must be unique within a project.
ObjectId	int	The unique ID generated by the

Field	Type	Description
		system.
ProjectObjectId	int	The unique ID of the associated project.
NewValues	RiskType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: RiskType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>Cause</td><td>string</td></tr>
<tr><td>Description</td><td>string</td></tr>
<tr><td>Effect</td><td>string</td></tr>
<tr><td>Id</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>Note</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ProjectObjectId</td><td>int</td></tr>
<tr><td>ResourceObjectId</td><td>int</td></tr>
<tr><td>RiskCategoryObjectId</td><td>int</td></tr>
<tr><td>Status</td><td>string restricted 'Proposed 'Open' 'Active' 'Rejected 'Manage 'Impacte</td></tr>
<tr><td>Type</td><td>string restricted 'Threat' 'Opportu y'</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RoleCreated Message

Field	Type	Description
Id	string	The short code that uniquely identifies the role.
Name	string	The name of the role. The role name uniquely identifies the role.
ObjectId	int	The unique ID generated by the system.

RoleRateCreated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
RoleObjectId	int	The unique ID of the associated role.

RoleRateUpdated Message

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
RoleObjectId	int	The unique ID of the associated role.
NewValues	RoleRateType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td></td><td>schema.</td><td></td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RoleRateType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>PricePerUnit</td><td>double</td></tr>
<tr><td>PricePerUnit2</td><td>double</td></tr>
<tr><td>PricePerUnit3</td><td>double</td></tr>
<tr><td>PricePerUnit4</td><td>double</td></tr>
<tr><td>PricePerUnit5</td><td>double</td></tr>
<tr><td>RoleObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RoleTeamCreated Message

Field	Type	Description
Name	string	The name of the role team.
ObjectId	int	The unique ID generated by the system.
UserObjectId	int	The unique ID of a specific user who has access to the selected role team.

RoleTeamUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>Name</td><td>string</td><td>The name of the role team.</td></tr>
<tr><td>ObjectId</td><td>int</td><td>The unique ID generated by the system.</td></tr>
<tr><td>UserObjectId</td><td>int</td><td>The unique ID of a specific user who has access to the selected role team.</td></tr>
<tr><td>NewValues</td><td>RoleTeamType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td><table><tr><th colspan="2">Type: RoleTeamType</th></tr><tr><th>Elements</th><th>Type</th></tr><tr><td>Description</td><td>string</td></tr><tr><td>Name</td><td>string</td></tr><tr><td>ObjectId</td><td>int</td></tr><tr><td>UserObjectId</td><td>int</td></tr><tr><td>Roles</td><td></td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

RoleUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>Id</td><td>string</td><td>The short code that uniquely identifies the role.</td></tr>
<tr><td>Name</td><td>string</td><td>The name of the role. The role name uniquely identifies the role.</td></tr>
<tr><td>ObjectId</td><td>int</td><td>The unique ID generated by the system.</td></tr>
<tr><td>NewValues</td><td>RoleType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: RoleType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>CalculateCostFromUnits</td><td>boolean</td></tr>
<tr><td>Id</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>ParentObjectId</td><td>int</td></tr>
</table>
Additional information can be found in the p6events.xsd schema.
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

TimesheetUpdated Message

Field	Type	Description
ResourceId	string	The short code that uniquely identifies the resource.
ResourceName	string	The name of the resource.
ResourceObjectId	int	The unique ID of the associated resource.
StatusDate	dateTime	The date on which the status of the timesheet was last changed.
TimesheetPeriodObjectId	int	The unique ID of the timesheet period.
UserName	string	
UserObjectId	int	
NewValues	TimesheetType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>Type: TimesheetType<table><tr><th>Elements</th><th>Type</th></tr><tr><td>Status</td><td>string
restricted to
'Submitted'
'Approved'
'Resource Manager Approved'
'Project Manager Approved'
'Active'
'Rejected'
'Not Started'
'Resubmitted'
'Reopened'
'Submitted for RM'
'Resubmitted for RM'</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

UserCreated Message

Field	Type	Description
Name	string	The user's login name.
ObjectId	int	The unique ID generated by the system.
PersonalName	string	The user's personal or actual name.

UserOBSCreated Message

Field	Type	Description
OBSObjectId	int	The unique ID of the OBS to which the user is granted access.
UserObjectId	int	The unique ID of the user who is assigned to the project OBS.

UserOBSUpdated Message

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OBSObjectId</td><td>int</td><td>The unique ID of the OBS to which the user is granted access.</td></tr>
<tr><td>UserObjectId</td><td>int</td><td>The unique ID of the user who is assigned to the project OBS.</td></tr>
<tr><td>NewValues</td><td>UserOBSType
Refer to the entries for "Old Values," below.
Additional information can be found in the p6events.xsd schema.</td><td>The new values of Physical and writable fields that have changed.</td></tr>
<tr><td>OldValues</td><td>Type: UserOBSType
<table><tr><th>Elements</th><th>Type</th></tr><tr><td>OBSObjectId</td><td>int</td></tr><tr><td>ProjectProfileObjectId</td><td>int</td></tr><tr><td>UserObjectId</td><td>int</td></tr></table>Additional information can be found in the p6events.xsd schema.</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

UserUpdated Message

Field	Type	Description
Name	string	The user's login name.
ObjectId	int	The unique ID generated by the system.
PersonalName	string	The user's personal or actual name.
NewValues	UserType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><th colspan="2">Type: UserType</th></tr>
<tr><th>Elements</th><th>Type</th></tr>
<tr><td>AllResourceAccessFlag</td><td>boole
n</td></tr>
<tr><td>CurrencyObjectId</td><td>int</td></tr>
<tr><td>EmailAddress</td><td>string</td></tr>
<tr><td>EmailProtocol</td><td>string
restric
ed to
'Inter
t Mai
'MAP
Mail'</td></tr>
<tr><td>EnableUserToModifyViewSettingsFlag</td><td>boole
n</td></tr>
<tr><td>GlobalProfileObjectId</td><td>int</td></tr>
<tr><td>MailServerLoginName</td><td>string</td></tr>
<tr><td>Name</td><td>string</td></tr>
<tr><td>ObjectId</td><td>int</td></tr>
<tr><td>OfficePhone</td><td>string</td></tr>
<tr><td>OutgoingMailServer</td><td>string</td></tr>
<tr><td>PersonalName</td><td>string</td></tr>
<tr><td>ReportingFlag</td><td>boole
n</td></tr>
<tr><td>UserInterfaceViewObjectId</td><td>int</td></tr>
<tr><td colspan="2">Additional information can be found in the p6events.xsd schema.</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

WBSCreated Message

Field	Type	Description
Code	string	The short code assigned to each WBS element for identification. Each WBS element is uniquely identified by concatenating its own code together with its parents' codes.
Name	string	The name of the WBS element.
ObjectId	int	The unique ID generated by the system.
ParentObjectId	int	The unique ID of the parent WBS of this WBS in the hierarchy.
ProjectObjectId	int	The unique ID of the associated project.

WBSUpdated Message

Field	Type	Description
Code	string	The short code assigned to each WBS element for identification. Each WBS element is uniquely identified by concatenating its own code together with its parents' codes.
Name	string	The name of the WBS element.

Field	Type	Description
ObjectId	int	The unique ID generated by the system.
ParentObjectId	int	The unique ID of the parent WBS of this WBS in the hierarchy.
ProjectObjectId	int	The unique ID of the associated project.
NewValues	WBSType Refer to the entries for "Old Values," below. Additional information can be found in the p6events.xsd schema.	The new values of Physical and writable fields that have changed.

<table>
<tr><th>Field</th><th>Type</th><th>Description</th></tr>
<tr><td>OldValues</td><td>
<table>
<tr><td colspan="2">Type: WBSType</td></tr>
<tr><td>Elements</td><td>Type</td></tr>
<tr><td>AnticipatedFinishDate</td><td>dateTime</td></tr>
<tr><td>AnticipatedStartDate</td><td>dateTime</td></tr>
<tr><td>Code</td><td>string</td></tr>
<tr><td>EarnedValueComputeType</td><td>string
restricted to
'Activity Percent Complete'
'0 / 100'
'50 / 50'
'Custom Percent Complete'
'WBS Milestones Perc Complete'
'Activity Percent Complete Using Resource Curves'</td></tr>
<tr><td>EarnedValueETCComputeType</td><td>string
restricted to
'ETC = Remaining Co for Activity'
'PF = 1'
'PF = Custom Value'
'PF = 1 / CPI'
'PF = 1 / (CPI * SPI)'</td></tr>
<tr><td>EarnedValueETCUserValue</td><td>double</td></tr>
<tr><td>EarnedValueUserPercent</td><td>double</td></tr>
<tr><td>IndependentETCLaborUnits</td><td>double</td></tr>
<tr><td>IndependentETCTotalCost</td><td>double</td></tr>
<tr><td></td><td>string
restricted to</td></tr>
</table>
</td><td>The old values of Physical and writable fields that have changed.</td></tr>
</table>

Special Operation Event Message Contents

ApplyActualsInvoked Message

The system sends an ApplyActualsInvoked message after processing the Apply Actuals job.

Field	Type	Description
DataDate	dateTime	The DataDate field that is associated with the project.
Project	ProjectIdentityType Id: string Name: string ObjectId: int	The complex element that identifies the project.
Status	JobStatusType string restricted to 'Completed' 'Failed'	Describes the state of the job after completion.

LevelInvoked Message

The system sends a LevelInvoked message after processing the Level job.

Field	Type	Description
Project	ProjectIdentityType Id: string Name: string ObjectId: int	The complex element that identifies the project.

Field	Type	Description
Status	JobStatusType string restricted to 'Completed' 'Failed'	Describes the state of the job after completion.

RecalculateAssignmentCostsInvoked Message

The system sends a RecalculateAssignmentCostsInvoked message after processing the Recalculate Assignment Costs job.

Field	Type		Description
Project	ProjectIdentityType		The complex element that identifies the project.
	Id	string	
	Name	string	
	ObjectId	int	
SyncOTFactor	boolean		The flag to synchronize the overtime factor.
Status	JobStatusType string restricted to 'Completed' 'Failed'		The state of the job after completion.

ScheduleInvoked Message

The system sends a ScheduleInvoked message after processing the Recalculate Assignment Costs job.

Field	Type	Description
DataDate	dateTime	The DataDate field that is associated with the project.
Project	ProjectIdentityType Id: string Name: string ObjectId: int	The complex element that identifies the project.
Status	JobStatusType string restricted to 'Completed' 'Failed'	Describes the state of the job after completion.

StorePeriodPerformanceInvoked Message

The system sends a StorePeriodPerformanceInvoked message after processing the Store Period Performance job.

Field	Type	Description
FinancialPeriod	FinancialPeriodIdentityType EndDate: dateTime Name: string ObjectId: int StartDate: dateTime	The complex element that identifies the FinancialPeriod.

Field	Type		Description
Project	ProjectIdentityType		The complex element that identifies the project.
	Id	string	
	Name	string	
	ObjectId	int	
Status	JobStatusType		Describes the state of the job after completion.
	string restricted to 'Completed' 'Failed'		

SummarizeInvoked Message

The system sends a SummarizeInvoked message after processing the summarizer job. No message is sent when an EPS is summarized; messages are only sent when projects are summarized.

Field	Type		Description
Project	ProjectIdentityType		The complex element that identifies the project.
	Id	string	
	Name	string	
	ObjectId	int	
Status	JobStatusType		Describes the state of the job after completion.
	string restricted to 'Completed' 'Failed'		

XMLImportInvoked Message

The system sends an XMLImportInvoked message after an XML file has been imported. This message is sent regardless of the success or failure of the import.

Field	Type	Description
ImportFile	string	The file name of the XML file imported.
CreateNewProject		This complex element is included in the message if created new project has been specified for the XML import. It contains the EPSObjectId (the EPS where the project is imported to) and the ProjectObjectId (the object ID of the project created by the import). This element is mutually exclusive with the UpdateExistingProject element.
UpdateExistingProject		UpdateExistingProject: This complex element is included in the message if update existing project has been specified for the XML import. It contains the ProjectObjectId which is the object id of the project that has been updated)
Success	boolean	The boolean that indicates if the import is successful or failed
ErrorMessage	string	Contains the exception message if the import fails.

ContentRepositoryDocumentAdded Message

The system sends a ContentRepositoryFolderAdded message after a folder has been added to the content repository.

Field	Type	Description
UUID	string	The Universal Unique Identifier of the document in the content repository.
UserName	string	The user name who performed the operation.

Field	Type	Description
DocumentObjectId	int	The object id of the document that's involved in the operation.

ContentRepositoryDocumentCheckedIn Message

The system sends a ContentRepositoryDocumentCheckedIn message after a document has been checked in to the content repository.

Field	Type	Description
UUID	string	The Universal Unique Identifier of the document in the content repository.
UserName	string	The user name who performed the operation.
DocumentObjectId	int	The object id of the document that's involved in the operation.

ContentRepositoryFolderAdded Message

The system sends a ContentRepositoryFolderAdded message after a folder has been added to the content repository.

Field	Type	Description
UUID	string	The Universal Unique Identifier of the document in the content repository.
UserName	string	The user name who performed the operation.
DocumentObjectId	int	The object id of the document that's involved in the operation.

ConvertProjectToBaselineInvoked Message

The system sends a ConvertProjectToBaselineInvoked message after a project has been converted into a baseline.

Field	Type	Description
NewBaselineProjectObjectId	int	The object id of the new Baseline project (it's the same as the object id of the project that has been converted)
ObjectId	int	The object id of the project in which the new baseline project belongs to

CopyProjectInvoked Message

The system sends a CopyProjectInvoked message after a project has been copied.

Field	Type	Description
NewProjectObjectId	int	The object id of the project created by the stored procedure.
EPSObjectId	int	The object id of the parent EPS of the new project.
ObjectId	int	The object id of the project that was copied.

CopyProjectAsBaselineInvoked Message

The system sends a CopyProjectAsBaselineInvoked message after a project has been copied as a baseline.

Field	Type	Description
NewBaselineProjectObjectId	int	
EPSObjectId	int	

Field	Type	Description
ObjectId	int	

CopyBaselineProjectInvoked Message

The system sends a CopyBaselineProjectInvoked message after a baseline project has been copied.

Field	Type	Description
NewBaselineProjectObjectId	int	
ObjectId	int	
BaselineProjectObjectId	int	

CreateCopyAsTemplateInvoked Message

The system sends a CreateCopyAsTemplateInvoked message after copying a project or template to a template.

Field	Type	Description
NewTemplateProjectObjectId	int	The object id of the template project that was created by the stored procedure.
EPSObjectId	int	The object id of the parent EPS of the new template project
ObjectId	int	The object id of the project or template project that was copied.

CreateProjectFromTemplateInvoked Message

The system sends a CreateProjectFromTemplateInvoked message after creating a project from a template.

Field	Type	Description
NewProjectObjectId	int	The object id of the project created by the stored procedure.
EPSObjectId	int	The object id of the parent EPS of the new project.
ObjectId	int	The object id of the template project.

RestoreBaselineProjectInvoked Message

The system sends a RestoreBaselineProjectInvoked message after restoring a project to a baseline.

Field	Type	Description
ObjectId	int	The object id of the baseline project, which is the same as the object id of the project after the restore.