

## FU BAPI\_PROJECT\_MAINTAIN

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### Short Text

Edit project including networks

### Functionality

With the Maintain BAPI of the WorkBreakdownStruct business object you can edit the objects of a project definition. You can also use all the functions of the Maintain BAPI of the Network business object.

For more information, see Network.Maintain. With WorkBreakdownStruct.Maintain it is possible to edit the project definition, its WBS elements and their hierarchical relationships. The BAPI encapsulates a complete transaction in itself. As a result, several operations on project elements can be processed by only one call. The Project System determines in which order the operations are to be executed on the objects. The caller can choose the operations in any order.

As a result, processing is very speedy and effective. However, this transaction concept does not include the use and combination of other SAP BAPIs in the same LUW.

### Procedure

The WorkBreakdownStruct business object is a facade of the project definition for WBS elements and their hierarchy.

To edit a project object, enter a command for an object type. In addition, enter the object key and a reference to its attributes.

In the table of the IMethodProject parameter enter the object type, the command and the object key. As a reference enter the index of the object data table of the relevant object type. In the object data table enter the information about the object. If necessary, use an update structure for the object. When entering the object type and method in the IMethodProject table remember that the entries are case-sensitive.

To finish the transaction and store the data in the database, enter the Save command. If you only want to test whether the changes can be carried out, do not use the save command.

In general, you cannot change the keys of objects.

The return parameter Return indicates whether errors occurred during processing. After the call you find the error messages created during processing in the EmessageTable table.

### Commands of the Object Types

For the description of the object types Network, NetworkActivity, NetworkActivityElement, ActivityMilestone, and NetworkRelation, see Network.Maintain.

### Object type: Project definition

The Maintain BAPI must always refer to one project definition. Therefore, always enter the structure of a project definition in the IProjectDefinition parameter. Use the project definition as a key. The reference to the data part is always 1. Always enter the project definition in upper case.

**Command: Create**

Enter the project definition and the project profile. The project profile must exist in the Project System.

*Example - Create a Project Definition in the Project System*

- IMethodProject
  - OBJECTTYPE = ProjectDefinition
  - METHOD = Create
  - OBJECTKEY = PD-TRAINING
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
  - DESCRIPTION = Training project
  - PROJECT\_PROFILE = PPRO001

#### **Command: Update**

Use this command to change a project definition that already exists in the Project System. If you enter an update structure you can change individual fields without having to specify the other fields.

*Example - Changing the description of a project definition (Only the description is changed.)*

- IMethodProject
  - OBJECTTYPE = ProjectDefinition
  - METHOD = Update
  - OBJECTKEY = PD-TRAINING
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =

- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
  - DESCRIPTION = Training project
  - IProjectDefinitionUp
  - PROJECT\_DEFINITION =
  - DESCRIPTION = X

**Command: Lock (from Release 4.6A)**

Use this command to lock a project definition. The "Master data locked" system status is set for the project definition.

LS>Example - Locking the project definition PD-TRAINING

- IMethodProject
  - OBJECTTYPE = ProjectDefinition
  - METHOD = Lock
  - OBJECTKEY = PD-TRAINING
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING

**Command: Unlock (from Release 4.6A)**

Use this command to unlock the project definition. The "Master data locked" system status is removed from the project definition.

*Example - Unlocking the project definition PD-TRAINING*

- IMethodProject
  - OBJECTTYPE = ProjectDefinition
  - METHOD = Unlock
  - OBJECTKEY = PD-TRAINING

- REFNUMBER = 000001
- OBJECTTYPE =
- METHOD = Save
- OBJECTKEY =
- REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING

**Command: Release (from Release 4.5A)**

Releasing a project. The system status "released" is set for the project definition and all WBS elements.

*Example - Releasing the project definition PD-TRAINING*

- IMethodProject
  - OBJECTTYPE = ProjectDefinition
  - METHOD = Release
  - OBJECTKEY = PD-TRAINING
  - REFNUMBER =
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING

**Object type: WBS element**

You can edit all WBS elements of a project definition. The name and key of the WBS element are identical.

Enter the WBS element in uppercase.

**Command: Create**

*Example - Creating a WBS element for the project definition. Creating three WBS elements TRAINING, TRAINING.1 and TRAINING.2 for project definition PD-TRAINING*

- IMethodProject

- OBJECTTYPE = WBS-Element
- METHOD = Create
- OBJECTKEY = TRAINING
- REFNUMBER = 000001
- OBJECTTYPE = WBS-Element
- METHOD = Create
- OBJECTKEY = TRAINING.1
- REFNUMBER = 000002
- OBJECTTYPE = WBS element
- METHOD = Create
- OBJECTKEY = TRAINING.2
- REFNUMBER = 000003
- OBJECTTYPE =
- METHOD = Save
- OBJECTKEY =
- REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
  - IWbsElementTable
  - Index = 1
  - WBS\_ELEMENT = TRAINING
  - PROJECT\_DEFINITION = PD-TRAINING
  - DESCRIPTION = Whole project
  - Index = 2
  - WBS\_ELEMENT = TRAINING.1
  - PROJECT\_DEFINITION = PD-TRAINING
  - DESCRIPTION = Preparation
  - Index = 3

- WBS\_ELEMENT = TRAINING.2
- PROJECT\_DEFINITION = PD-TRAINING
- DESCRIPTION = Execution

## Command: Update

Use this command to change a WBS element that already exists in the Project System. If you enter an update structure, you can change individual fields without having to specify the other fields.

*Example - Changing the description of the WBS element TRAINING.1 for the project definition PD TRAINING*

- IMethodProject
  - OBJECTTYPE = WBS element
  - METHOD = Update
  - OBJECTKEY = TRAINING.1
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
- IWbsElementTable
  - Index = 1
  - WBS\_ELEMENT = TRAINING.1
  - PROJECT\_DEFINITION = PD-TRAINING
  - DESCRIPTION = Preparation and documentation
- IWbsElementTableUpdate
  - Index = 1
  - WBS\_ELEMENT =
  - PROJECT\_DEFINITION =
  - DESCRIPTION = X

**Command: Delete**

Use this command to delete a WBS element that already exists in the Project System. The WBS element receives the "Deletion flag" system status and is not deleted physically. You cannot create a new WBS element with the same key.

*Example - Deleting the WBS element TRAINING.2 for the project PD*

TRAINING

- IMethodProject
  - OBJECTTYPE = WBS element
  - METHOD = Delete
  - OBJECTKEY = TRAINING.2
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
  - IWbsElementTable
  - Index = 1
  - WBS\_ELEMENT = TRAINING.2
  - PROJECT\_DEFINITION = PD-TRAINING

**Command: Lock (from Release 4.6A)**

Use this command to lock a WBS element. The "Master data lock" system status is set for the WBS element.

*Example - Locking the WBS element TRAINING.1*

- IMethodProject
  - OBJECTTYPE = WBS-Element
  - METHOD = Lock
  - OBJECTKEY = TRAINING.1
  - REFNUMBER = 000001

- OBJECTTYPE =
- METHOD = Save
- OBJECTKEY =
- REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
- IWbsElementTable
  - Index = 1
  - WBS\_ELEMENT = TRAINING.1

**Command: Unlock (from Release 4.6A)**

Use this command to unlock a WBS element. The "Master data lock" system status is removed from a WBS element.

*Example - Unlocking the WBS element TRAINING.1*

- IMethodProjectIMethodProject
  - OBJECTTYPE = WBS-Element
  - METHOD = Unlock
  - OBJECTKEY = TRAINING.1
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING

IWbsElementTable

- Index = 1
- WBS\_ELEMENT = TRAINING.1

**Command: Release (from Release 4.5A)**

Releasing a WBS element. The system status "Released" is set for the WBS element and all lower-level WBS



elements.

*Example - Releasing the WBS element TRAINING.1*

- IMethodProject
  - OBJECTTYPE = WBS-Element
  - METHOD = Release
  - OBJECTKEY = TRAINING.1
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
- IWbsElementTable
  - Index = 1
  - WBS\_ELEMENT = TRAINING.1

**Object type: WBS milestone (from Release 4.6A)**

The key for the object WBS milestone is the milestone number.

**Command: Create**

Use this command to create a new WBS milestone for a network. It is not necessary to enter a number for the milestone. The system gives the milestone a number when it is created. The system returns the milestone in the message table as an information message.

If however, an external number is entered in the method table, both the external and the new milestone number are returned in an information a message in the message table. A WBS element always has to be entered.

*Example - Creating a new WBS milestone for a WBS element TRAINING.2*

- IMethodProject
  - OBJECTTYPE = WBS milestone
  - METHOD = Create
  - OBJECTKEY =

- REFNUMBER = 000001
- OBJECTTYPE =
- METHOD = Save
- OBJECTKEY =
- REFNUMBER =
- IWbsMilestoneTable
  - Index = 1
  - MILESTONE\_NUMBER =
  - WBS\_ELEMENT = TRAINING.2

**Command: Update**

Use this command to change a WBS element that already exists in the Project System. It is always necessary to enter the project definition, if you do not explicitly change the project definition. Use the update structure as for WBS elements.

*Example - Changing an existing WBS milestone with the number 000000002098 assigned to WBS element TRAINING.2.*

- IMethodProject
  - OBJECTTYPE = WBS milestone
  - METHOD = Update
  - OBJECTKEY = 000000002098
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IWbsMilestoneTable
  - Index = 1
  - MILESTONE\_NUMBER = 000000002098
  - DESCRIPTION = Milestone description changed
  - WBS\_ELEMENT = TRAINING.2

- IWbsMilestoneTableUp
  - MILESTONE\_NUMBER =
  - DESCRIPTION = X
  - WBS\_ELEMENT =

### Command: Delete

Use this command to delete a WBS milestone that already exists in the Project System. The milestone is deleted physically. It is always necessary to enter the project definition, if you do not explicitly change the project definition.

*Example - Deleting a WBS element with the number 000000002098 assigned to WBS element TRAINING.2.*

- IMethodProject
  - OBJECTTYPE = WBS milestone
  - METHOD = Delete
  - OBJECTKEY = 000000002098
  - REFNUMBER = 000001
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER =
- IWbsMilestoneTable
  - MILESTONE\_NUMBER = 000000002098
  - WBS\_ELEMENT = TRAINING.2

### Object type: WBS hierarchy

The WBS hierarchy object type defines the hierarchy of the WBS elements. A project definition always has exactly one hierarchy. If the position of a WBS element changes, the whole hierarchy has to be rebuilt. Therefore, the WBS hierarchy object type has only one command: Create. Every WBS element receives exactly one entry in the table parameter IWbsHierarchieTable with which it defines its position.

### Command: Create

Use this command to create or change a WBS element hierarchy for a project definition. Enter the WBS hierarchy object type and the Create command in the table of the IMethodProject parameter. The command refers to all entries in the table of the IWbsHierarchieTable parameter that contains the data for the hierarchy. Each entry in the IWbsHierarchieTable refers to a WBS element that describes its position relative to the other WBS elements.

*Example - Positioning WBS elements TRAINING , TRAINING.1 and TRAINING.2 . (WBS elements TRAINING.1 and TRAINING.2 are subordinate to WBS element TRAINING. WBS element TRAINING1 is positioned on the left of TRAINING.2.)*

- IMethodProject
  - OBJECTTYPE = WBS Hierarchy
  - METHOD = Create
  - OBJECTKEY =
  - REFNUMBER =
  - OBJECTTYPE =
  - METHOD = Save
  - OBJECTKEY =
  - REFNUMBER = I
- ProjectDefinition
  - PROJECT\_DEFINITION = PD-TRAINING
- IWbsHierarchieTable
  - WBS\_ELEMENT = TRAINING
  - PROJECT\_DEFINITION = PD-TRAINING
  - UP =
  - DOWN = TRAINING.1
  - LEFT =
  - RIGHT =
  - WBS\_ELEMENT = TRAINING.1
  - PROJECT\_DEFINITION = PD-TRAINING
  - UP = TRAINING
  - DOWN =
  - LEFT =
  - RIGHT = TRAINING.2
  - WBS\_ELEMENT = TRAINING.2
  - PROJECT\_DEFINITION = PD-TRAINING
  - UP = TRAINING
  - DOWN =

- LEFT = TRAINING.1
- RIGHT =

## Further information

For more information, see the SAP Library under **PS Project System -> Structures -> EPS Interface**

## Parameters

I\_PROJECT\_DEFINITION  
I\_PROJECT\_DEFINITION\_UPD  
RETURN  
I\_METHOD\_PROJECT  
I\_WBS\_ELEMENT\_TABLE\_UPDATE  
I\_WBS\_ELEMENT\_TABLE  
I\_WBS\_MILESTONE\_TABLE  
I\_WBS\_MILESTONE\_TABLE\_UPDATE  
I\_WBS\_HIERARCHIE\_TABLE  
I\_NETWORK  
I\_NETWORK\_UPDATE  
I\_ACTIVITY  
I\_ACTIVITY\_UPDATE  
I\_RELATION  
I\_RELATION\_UPDATE  
E\_MESSAGE\_TABLE  
I\_ACTIVITY\_ELEMENT  
I\_ACTIVITY\_ELEMENT\_UPDATE  
I\_ACTIVITY\_MILESTONE  
I\_ACTIVITY\_MILESTONE\_UPDATE

## Exceptions

## Function Group

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