

HP Project and Portfolio Management Center

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RESTful Web Services Guide

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1 Getting Started with HP RESTful Web Services

Overview of PPM Center RESTful Web Services

PPM Center includes RESTful Web services support for the following application modules:

- HP Demand Management
- HP Time Management
- PPM Center Solution Integrations

The Web Application Description Language (WADL) descriptor that lists all supported PPM Center RESTful Web services can be found at the following location:

`http(s)://server:port/itg/rest/service.`

Configuration

Starting from PPM Center version 9.13, the following line is added to the `websecurity.conf` file to enable RESTful web services:

```
/rest=com.kintana.core.web.servlet.AllAccessURLSecurity
```

Check and make sure whether the above line is already there. If not, simply copy and paste it to the `websecurity.conf` file, which is located in the `<PPM_Home>/conf` directory.

Authentication

All requests to the RESTful Web services interfaces (URLs) must be authenticated. PPM Center supports the following three authentication types for RESTful Web services:

- HTTP Basic Access Authentication

When you use the HTTP Basic Access Authentication, an authorization HTTP header is sent along with the request, containing the base64-encoded username and password.

For example:

```
Authorization: Basic QWxhZGRpbjpvYVUyIHNlc2FtZQ==
```

For more information about HTTP Basic Access Authentication, see RFC 2617.

- HTTP Request Query String

When you use the HTTP Request Query String, you must specify the username and password parameters in the URL.

For example:

```
http://<instance_address>:<port>/itg/rest/dm/  
requestTypes?username=admin&password=admin
```

- Lightweight Single Sign-on (LWSSO)

For details, see the *Installation and Administration Guide*

- HTTPS is preferred whenever you use RESTful Web services by Basic Access Authentication or Request Query String authentication in order to prevent username and password to be transmitted over the network.
- Since Request Query String authentication requires your username and password as the parameters in the URL, your username and password will be logged in the log file if the web server is configured to log URLs. This will cause a security flaw.



Messaging Type

PPM Center supports the following two messaging types for RESTful Web services:

- XML (default)
- JSON

To enable JSON messaging type, you have to append the string `alt=application/json` to the parameter list of the URL.

For example:

```
http://<instance_address>:<port>/itg/rest/dm/  
requestTypes?username=admin&password=admin&alt=application/json
```

1 HP Demand Management RESTful Web Services

Overview

The implementation of HP Demand Management RESTful Web services contains a set of operations to read request types and read & write requests in the HP Demand Management module.

Data Types

RESTful Web services for PPM Requests include the following data types:

- *Request*
- *Requests*
- *RequestType*
- *RequestTypes*
- *Field*
- *RequestField*
- *Reference*
- *Note*

Request

The `Request` data type represents the detailed information about a request in the system.

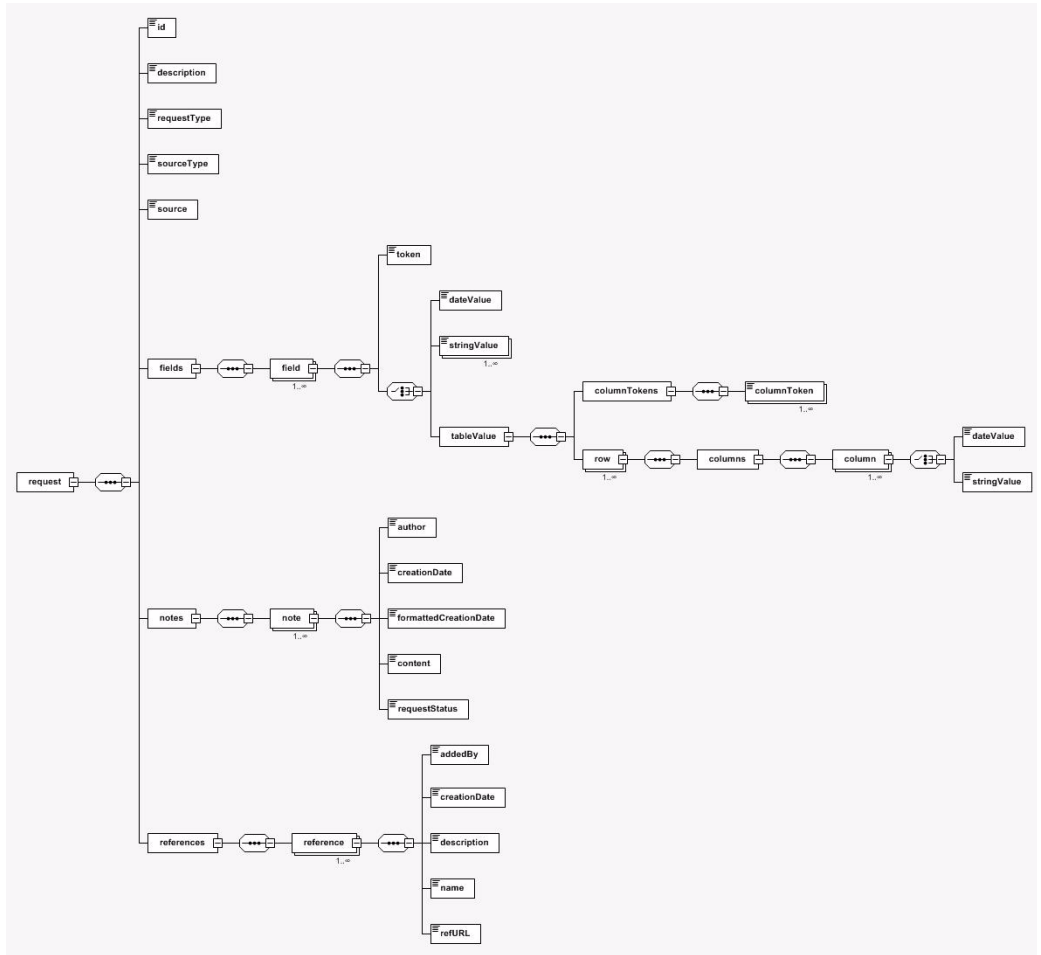


Table 1-1. Request

Property	Type	Description	Required?	Default Value
id	String	Request ID (system-generated unique identifier)	Yes	N/A
description	String	Brief description of the request	No	N/A
requestType	String	Name of the request type to which the request belongs	Yes	N/A
sourceType	String	Indicates the type of external update, such as specific interface or migrator name, etc.	No	N/A
source	String	Used by records that are updated by an interface or migrator. Provides additional information about the source of the external update.	No	N/A

Table 1-1. Request

Property	Type	Description	Required?	Default Value
fields	List< <i>RequestField</i> >	List of elements of the <i>RequestField</i> data type. Contains information about all individual fields of the request.	Yes	N/A
notes	List< <i>Note</i> >	List of elements of the <i>Note</i> data type. Contains user notes of the request. Field change notes are not included.	No	N/A
references	List< <i>Reference</i> >	List of elements of the <i>Reference</i> data type. Describes reference entities linked to the request through reference relationships.	No	N/A

Requests

The `Requests` data type represents a list of requests in the system.

Table 1-2. Requests

Property	Type	Description	Required?	Default Value
Request	List< <i>Request</i> >	List of the <i>Request</i> elements.	Yes	N/A

RequestType

The `RequestType` data type represents a list of requests in the system.

Table 1-3. RequestType

Property	Type	Description	Required?	Default Value
id	String	Request type ID (system-generated unique identifier).	No	N/A
name	String	Name of the request type	Yes	N/A
description	String	Description of the request type	No	N/A
referenceCode	String	Reference code of the request type	No	N/A
fields	List< <i>Field</i> >	List of the Field elements	No	N/A

RequestTypes

The `RequestTypes` data type represents a list of `RequestType` elements.

Table 1-4. Requests

Property	Type	Description	Required?	Default Value
RequestTypes	List< <i>RequestType</i> >	List of the <i>RequestType</i> elements.	Yes	N/A

Field

The `Field` data type represents the detailed information about a request field in a request.

Table 1-5. Field

Property	Type	Description	Required?	Default Value
token	String	Token value of the field	Yes	N/A
prompt	String	Prompt name of the field	Yes	N/A
dataType	String	Data type of the field	Yes	N/A
defaultValue	String	Default value of the field	Yes	N/A
required	boolean	Indicates whether the field is required.	No	false

RequestField

The `RequestField` data type represents the data of a table field in a request. This data type contains the following inner data types:

- *RequestField.TableValue*
- *RequestField.TableValue.ColumnTokens*
- *RequestField.TableValue.Row*

- *RequestField.TableValue.Row.Columns*
- *RequestField.TableValue.Row.Columns.Column*

RequestField.TableValue

The `RequestField.TableValue` data type represents the data of a table component field in the request.

Table 1-6. RequestField.TableValue

Property	Type	Description	Required?	Default Value
columnToken	List< <i>RequestField.TableValue.ColumnTokens</i> >	List of tokens for the various columns in the table component	Yes	N/A
row	List< <i>RequestField.TableValue.Row</i> >	List of the Row elements. Contains the information for each row of the table component.	Yes	N/A

RequestField.TableValue.ColumnTokens

The `RequestField.TableValue.ColumnTokens` data type represents the tokens for various columns in the table component.

Table 1-7. RequestField.TableValue.ColumnTokens

Property	Type	Description	Required?	Default Value
columnTokens	List<String>	List of tokens for the various columns in the table component.	Yes	N/A

RequestField.TableValue.Row

The `RequestField.TableValue.Row` data type represents the information about a row in the table component.

Table 1-8. RequestField.TableValue.Row

Property	Type	Description	Required?	Default Value
columns	<i>RequestField.TableValue.Row.Columns</i>	Columns data type. Contains the value of each column for a row in the table component.	Yes	N/A

RequestField.TableValue.Row.Columns

The `RequestField.TableValue.Row.Columns` data type represents the data of an individual cell in the table component.

Table 1-9. RequestField.TableValue.Row.Columns

Property	Type	Description	Required?	Default Value
Column	<i>List<RequestField.TableValue.Row.Columns.Column></i>	List containing the Column elements for a particular row in the table component.	Yes	N/A

RequestField.TableValue.Row.Columns.Column

The `RequestField.TableValue.Row.Columns.Column` data type describes the Column elements for a particular row in the table component,

Table 1-10. RequestField.TableValue.Row.Columns.Column

Property	Type	Description	Required?	Default Value
dateValue	XMLGregorianCalendar	Value of the field if the type is Date	No	N/A
StringValue	String	Value of the field if the type is not Date	No	N/A

Reference

The `Reference` data type represents detailed information about a reference in a request.

Table 1-11. Reference

Property	Type	Description	Required?	Default Value
addedBy	String	User who added this reference to the request	Yes	N/A
creationDate	XMLGregorianCalendar	Date-time value when this reference was added to the request	Yes	N/A
description	String	Description of the relationship between the reference and the request	Yes	N/A
name	String	Name of the reference	Yes	N/A
refURL	String	URL of the reference	No	N/A

Note

The `Note` data type represents detailed information about a note field in a request.

Table 1-12. Note

Property	Type	Description	Required?	Default Value
addedBy	String	User who added this note to the request	Yes	N/A
creationDate	XMLGregorianCalendar	Date-time value when this note was added to the request	Yes	N/A
formattedCreationDate	String	Date-time (formatted as per the user's regional settings) when this note was added to the request	Yes	N/A
content	String	Content of the note	Yes	N/A
requestStatus	String	Status of the request when this note was added	Yes	N/A

Entities

RESTful Web services for PPM Requests enables you to do the followings:

- *Get Enabled Request Types*
- *Get a Request Type*
- *Get Requests of a Certain Type*
- *Get Details of a Request*
- *Create/Update a Request*

Get Enabled Request Types

Table 1-13. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/dm/requestTypes</code>
HTTP Method	GET
Function	This operation retrieves a list of all enabled request types. For more information, see the <i>Function</i> section.
Returns	This operation returns an object of the <i>RequestTypes</i> data structure. For more information, see <i>Returns on page 24</i> .
Message Examples	See <i>Message Example on page 24</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 25</i> .

Function

This operation returns a list of all the enabled request types in the system. To perform this operation, you must have the Demand Management license and one of the following access grants:

- Demand Mgmt: Edit Requests

- Demand Mgmt: Edit All Requests
- Demand Mgmt: View Requests

Returns

This operation returns an object of the *RequestTypes* data structure, which contains a list of RequestType objects.

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/dm/requestTypes`

Message in XML:

```
<ns2:requestTypes xmlns:ns2="http://www.hp.com/ppm/dm/">
  <requestType>
    <id>31060</id>
    <name>DEM - Application Bug</name>
    <description> Application bugs should be used to report
      problems in current IT applications.
    </description>
  </requestType>
  <requestType>
    <id>31120</id>
    <name>DEM - Database Refresh</name>
    <description> Database refresh requests can be made for
      all IT Ops applications in the testing phase.
      Standard IT Ops service levels apply.
    </description>
  </requestType>
  <requestType>
    <id>31150</id>
    <name>DEM - Initiative</name>
    <description> Initiative request should be used to
      request key projects for future quarters.
      Provided approval from key stakeholders,
      Initiative requests will be reviewed in the
      third week of each quarter.
    </description>
  </requestType>
  <requestType>
    <id>31430</id>
    <name>test</name>
    <description>Bug Request type</description>
  </requestType>
</ns2:requestTypes>
```


Errors and Exceptions

Table 1-14. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE000	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	Cannot Get Internal Server Connection	There was an error when you tried to connect to the PPM server.	N/A
PPM_WSE021	You do not have access to view Request Types	The user executing this operation does not have the required access grants.	Verify that the user has the required access grants. For more information, see Function.

Get a Request Type

Table 1-15. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/dm/requestTypes/{id}
HTTP Method	GET
Function	This operation retrieves a specific request type. For more information, see the <i>Function</i> section.

Table 1-15. Operation Overview

Returns	This operation returns an object of the <i>RequestType</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See the <i>Message Example</i> section.
Errors and Exceptions	See <i>Errors and Exceptions on page 35</i> .

Function

This operation returns a request type specified by the request type ID in the system. To perform this operation, you must have the Demand Management License. Additionally, one of the following conditions must be met:

- You have the Demand Mgmt: Override Demand Management Participant Restriction access grant
- You are in one or more of the authorized security groups under the Ownership tab of the request type in Workbench.

Returns

This operation returns an object of the *RequestType* data structure, which contains information about the RequestType object.

Message Example

Method URL:

`http://<PPM_Home>:<port>/itg/rest/dm/requestTypes/31430`

Message in XML:

```
<ns2:requestType xmlns:ns2="http://www.hp.com/ppm/dm/">
  <id>31430</id>
  <name>test</name>
  <description>Bug Request type</description>
  <referenceCode>TEST</referenceCode>
  <fields>
    <field>
      <token>REQ.REQUEST_ID</token>
```

```

<prompt>Request No.:</prompt>
<description />
<section>Summary</section>
<validationId>1027</validationId>
<dataType>Text</dataType>
<maxLength>200</maxLength>
<defaultValue />
<required>>false</required>
<multi>>false</multi>
<display>>true</display>
<displayOnly>>true</displayOnly>
<readOnly>>true</readOnly>
<createOnly>>false</createOnly>
<updateOnly>>false</updateOnly>
<migrateOK>>false</migrateOK>
<viewRestricted>>false</viewRestricted>
<editRestricted>>false</editRestricted>
</field>
<field>
<token>REQ.REQUEST_TYPE_NAME</token>
<prompt>Request Type:</prompt>
<description />
<section>Summary</section>
<validationId>2001</validationId>
<dataType>Text</dataType>
<maxLength>200</maxLength>
<defaultValue />
<required>>false</required>
<multi>>false</multi>
<display>>true</display>
<displayOnly>>false</displayOnly>
<readOnly>>true</readOnly>
<createOnly>>false</createOnly>
<updateOnly>>false</updateOnly>
<migrateOK>>false</migrateOK>
<viewRestricted>>false</viewRestricted>
<editRestricted>>false</editRestricted>
</field>
<field>
<token>REQ.CREATED_BY</token>
<prompt>Created By:</prompt>
<description />
<section>Summary</section>
<validationId>1065</validationId>
<dataType>Text</dataType>
<maxLength>200</maxLength>
<defaultValue />
<required>>false</required>
<multi>>false</multi>
<display>>true</display>
<displayOnly>>true</displayOnly>
<readOnly>>true</readOnly>
<createOnly>>false</createOnly>
<updateOnly>>false</updateOnly>

```

```

    <migrateOK>true</migrateOK>
    <viewRestricted>false</viewRestricted>
    <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.DEPARTMENT_NAME</token>
  <prompt>Department:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1156</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>false</required>
  <multi>false</multi>
  <display>true</display>
  <displayOnly>false</displayOnly>
  <readOnly>false</readOnly>
  <createOnly>false</createOnly>
  <updateOnly>false</updateOnly>
  <migrateOK>false</migrateOK>
  <viewRestricted>false</viewRestricted>
  <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.REQUEST_SUB_TYPE_NAME</token>
  <prompt>Sub-Type:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1068</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>false</required>
  <multi>false</multi>
  <display>true</display>
  <displayOnly>false</displayOnly>
  <readOnly>false</readOnly>
  <createOnly>false</createOnly>
  <updateOnly>false</updateOnly>
  <migrateOK>false</migrateOK>
  <viewRestricted>false</viewRestricted>
  <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.CREATION_DATE</token>
  <prompt>Created On:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1028</validationId>
  <dataType>Date</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>false</required>

```

```

    <multi>>false</multi>
    <display>>true</display>
    <displayOnly>>true</displayOnly>
    <readOnly>>true</readOnly>
    <createOnly>>false</createOnly>
    <updateOnly>>false</updateOnly>
    <migrateOK>>true</migrateOK>
    <viewRestricted>>false</viewRestricted>
    <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.WORKFLOW_NAME</token>
  <prompt>Workflow:</prompt>
  <description />
  <section>Summary</section>
  <validationId>2003</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>true</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.STATUS_NAME</token>
  <prompt>Request Status:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1036</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>true</displayOnly>
  <readOnly>>true</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.PRIORITY_NAME</token>
  <prompt>Priority:</prompt>
  <description />

```

```

<section>Summary</section>
<validationId>1063</validationId>
<dataType>Text</dataType>
<maxLength>200</maxLength>
<defaultValue />
<required>>false</required>
<multi>>false</multi>
<display>>true</display>
<displayOnly>>false</displayOnly>
<readOnly>>false</readOnly>
<createOnly>>false</createOnly>
<updateOnly>>false</updateOnly>
<migrateOK>>false</migrateOK>
<viewRestricted>>false</viewRestricted>
<editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.APPLICATION_NAME</token>
  <prompt>Application:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1064</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.CONTACT_NAME</token>
  <prompt>Contact Name:</prompt>
  <description />
  <section>Summary</section>
  <validationId>130</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>

```

```

    <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.ASSIGNED_TO_NAME</token>
  <prompt>Assigned To:</prompt>
  <description />
  <section>Summary</section>
  <validationId>2004</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.ASSIGNED_TO_GROUP_NAME</token>
  <prompt>Assigned Group:</prompt>
  <description />
  <section>Summary</section>
  <validationId>2005</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.CONTACT_PHONE_NUMBER</token>
  <prompt>Contact Phone:</prompt>
  <description />
  <section>Summary</section>
  <validationId>2024</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>

```

```

    <readOnly>true</readOnly>
    <createOnly>false</createOnly>
    <updateOnly>false</updateOnly>
    <migrateOK>false</migrateOK>
    <viewRestricted>false</viewRestricted>
    <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.REQUEST_GROUP_NAME</token>
  <prompt>Request Group:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1440</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>false</required>
  <multi>false</multi>
  <display>true</display>
  <displayOnly>false</displayOnly>
  <readOnly>false</readOnly>
  <createOnly>false</createOnly>
  <updateOnly>false</updateOnly>
  <migrateOK>false</migrateOK>
  <viewRestricted>false</viewRestricted>
  <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.CONTACT_EMAIL</token>
  <prompt>Contact Email:</prompt>
  <description />
  <section>Summary</section>
  <validationId>2022</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>false</required>
  <multi>false</multi>
  <display>true</display>
  <displayOnly>false</displayOnly>
  <readOnly>true</readOnly>
  <createOnly>false</createOnly>
  <updateOnly>false</updateOnly>
  <migrateOK>false</migrateOK>
  <viewRestricted>false</viewRestricted>
  <editRestricted>false</editRestricted>
</field>
<field>
  <token>REQ.DESCRPTION</token>
  <prompt>Description:</prompt>
  <description />
  <section>Summary</section>
  <validationId>1069</validationId>

```



```

<dataType>Text</dataType>
<maxLength>200</maxLength>
<defaultValue />
<required>>false</required>
<multi>>false</multi>
<display>>true</display>
<displayOnly>>false</displayOnly>
<readOnly>>false</readOnly>
<createOnly>>false</createOnly>
<updateOnly>>false</updateOnly>
<migrateOK>>false</migrateOK>
<viewRestricted>>false</viewRestricted>
<editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQ.PERCENT_COMPLETE</token>
  <prompt>% Complete:</prompt>
  <description>Percent Complete Field</description>
  <section>Summary</section>
  <validationId>1027</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>false</display>
  <displayOnly>>true</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</field>
<field>
  <token>REQD.TABLE_TEST</token>
  <prompt>tablecomponent</prompt>
  <description />
  <section>Bug</section>
  <validationId>32863</validationId>
  <dataType>Table</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
  <table>

```

```

<column>
  <token>T.TABLE_TEST.ID</token>
  <prompt>ID</prompt>
  <description />
  <validationId>1027</validationId>
  <dataType>Text</dataType>
  <maxLength>40</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</column>
<column>
  <token>T.TABLE_TEST.NAME</token>
  <prompt>Name</prompt>
  <description />
  <validationId>1027</validationId>
  <dataType>Text</dataType>
  <maxLength>40</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>
  <viewRestricted>>false</viewRestricted>
  <editRestricted>>false</editRestricted>
</column>
<column>
  <token>T.TABLE_TEST.GENDER</token>
  <prompt>gender</prompt>
  <description />
  <validationId>32864</validationId>
  <dataType>Text</dataType>
  <maxLength>200</maxLength>
  <defaultValue />
  <required>>false</required>
  <multi>>false</multi>
  <display>>true</display>
  <displayOnly>>false</displayOnly>
  <readOnly>>false</readOnly>
  <createOnly>>false</createOnly>
  <updateOnly>>false</updateOnly>
  <migrateOK>>false</migrateOK>

```

```

        <viewRestricted>>false</viewRestricted>
        <editRestricted>>false</editRestricted>
    </column>
</table>
</field>
</fields>
</ns2:requestType>

```

Errors and Exceptions

Table 1-16. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE000	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	Cannot Get Internal Server Connection	There was an error when you tried to connect to the PPM server.	N/A
PPM_WSE020	The Request Type {0} doesn't exist	The request type that the user tried to access does not exist.	Correct the Request Type ID in the URL.
PPM_WSE021	You do not have access to view Request Types	The user executing this operation does not have the required access grants.	Verify that the user has the required access grants. For more information, see Function.
PPM_WSE023	The request type with ID {0} is not enabled	The request type that the user tried to access is not enabled.	Enable the request type.

Get Requests of a Certain Type

Table 1-17. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/dm/requestTypes/{id}/requests</code>
HTTP Method	GET
Function	This operation retrieves a list of requests of a certain request type. For more information, see the <i>Function</i> section.
Returns	This operation returns an object of the <i>Requests</i> data structure. For more information, see <i>Returns on page 36</i> .
Message Examples	See <i>Message Example on page 37</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 37</i> .

Function

This operation returns a list of requests of a certain request type, specified by the request type ID. To perform this operation, you must have the Demand Management License and one or more of the following access grants:

- Demand Mgmt: Edit Requests
- Demand Mgmt: Edit All Requests
- Demand Mgmt: View Requests

Returns

This operation returns an object of the *Requests* data structure, which contains a list of Request objects. The value for the last update field is formatted according to the user's regional settings.

Message Example

Method URL:

http://<PPM_Server_IP>:<port>/itg/rest/dm/requestTypes/31430/requests

Message in XML:

```
<ns2:requests xmlns:ns2="http://www.hp.com/ppm/dm/">
  <request>
    <id>30332</id>
    <description>WebService Test</description>
  </request>
  <request>
    <id>30182</id>
    <description>Test SOAP web service</description>
  </request>
</ns2:requests>
```

Errors and Exceptions

Table 1-18. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE000	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	Cannot Get Internal Server Connection	There was an error when you tried to connect to the PPM server.	N/A

Table 1-18. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE020	The Request Type {0} doesn't exist	The request type that the user tried to access does not exist.	Correct the Request Type ID in the URL.
PPM_WSE021	You do not have access to view Request Types	The user executing this operation does not have the required access grants.	Verify that the user has the required access grants. For more information, see Function .
PPM_WSE023	The request type with Id {0} is not enabled	The request type that the user tried to access is not enabled.	Enable the request type.

Get Details of a Request

Table 1-19. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/dm/requests/{reqId}</code>
HTTP Method	GET
Function	This operation retrieves the detailed information about a request. For more information, see the Function section.
Returns	This operation returns an object of the Request data structure. For more information, see Returns on page 39 .

Table 1-19. Operation Overview

Message Examples	See Message Example on page 40.
Errors and Exceptions	See Errors and Exceptions on page 43.
Limitation	This operation returns the visual field values instead of the parameter values. It does not return all the types fields, such as financial summary, staffing profile, attachment, and etc.

Function

This operation returns a request, specified by the request ID. To perform this operation, you must have the Demand Management License and be a participant on the request. Alternatively, you must have one or more of the following access grants:

- Demand Mgmt: Edit Requests
- Demand Mgmt: Edit All Requests
- Demand Mgmt: View Requests
- Project Mgmt: View All Projects
- Demand Mgmt: Override Demand Management Participant Restriction

Returns

This operation returns an object of the [Request](#) data structure, which contains the information about the request.

The values for the fields of the following types are formatted according to the user's regional settings:

- Date
- Numeric text field
- Percentage field

- Currency field

Message Example

Method URL:

http://<PPM_Server_IP>:<port>/itg/rest/dm/requests/30362

Message in XML:

```
<ns2:request xmlns:ns2="http://www.hp.com/ppm/dm/">
  <id>30362</id>
  <description>This is a test request</description>
  <requestType>test</requestType>
  <sourceType />
  <source />
  <fields>
    <field>
      <token>REQD.LINK</token>
      <stringValue>17.11.http://www.hp.com.HP web site</stringValue>
    </field>
    <field>
      <token>REQ.REQUEST_GROUP_NAME</token>
      <stringValue />
    </field>
    <field>
      <token>REQ.STATUS_NAME</token>
      <stringValue>New</stringValue>
    </field>
    <field>
      <token>REQ.PERCENT_COMPLETE</token>
      <stringValue>0</stringValue>
    </field>
    <field>
      <token>REQ.PRIORITY_NAME</token>
      <stringValue />
    </field>
    <field>
      <token>REQD.RESOL_SUM</token>
      <stringValue />
    </field>
    <field>
      <token>REQ.DEPARTMENT_NAME</token>
      <stringValue>Finance</stringValue>
    </field>
    <field>
      <token>REQ.WORKFLOW_NAME</token>
      <stringValue>Bug Request Type Workflow</stringValue>
    </field>
    <field>
      <token>REQ.CONTACT_EMAIL</token>
      <stringValue />
    </field>
  </fields>
</request>
```



```

</field>
<field>
  <token>REQ.REQUEST_ID</token>
  <stringValue>30362</stringValue>
</field>
<field>
  <token>REQ.DESCRPTION</token>
  <stringValue>This is a test request</stringValue>
</field>
<field>
  <token>REQ.ASSIGNED_TO_NAME</token>
  <stringValue />
</field>
<field>
  <token>REQ.CREATED_BY</token>
  <stringValue>Admin User</stringValue>
</field>
<field>
  <token>REQ.STATUS_CODE</token>
  <stringValue>IN_PROGRESS</stringValue>
</field>
<field>
  <token>REQ.LAST_UPDATE_DATE</token>
  <dateValue>2012-08-29T15:41:55.000+08:00</dateValue>
</field>
<field>
  <token>REQD.MODULE</token>
  <stringValue>Module B</stringValue>
</field>
<field>
  <token>REQ.ASSIGNED_TO_GROUP_NAME</token>
  <stringValue />
</field>
<field>
  <token>REQ.REQUEST_TYPE_NAME</token>
  <stringValue>test</stringValue>
</field>
<field>
  <token>REQ.REQUEST_SUB_TYPE_NAME</token>
  <stringValue />
</field>
<field>
  <token>REQ.CONTACT_NAME</token>
  <stringValue />
</field>
<field>
  <token>REQ.CONTACT_PHONE_NUMBER</token>
  <stringValue />
</field>
<field>
  <token>REQ.ENTITY_LAST_UPDATE_DATE</token>
  <dateValue>2012-08-29T15:41:55.000+08:00</dateValue>
</field>
<field>

```

```

        <token>REQ.CREATION_DATE</token>
        <dateValue>2012-08-29T15:41:54.000+08:00</dateValue>
    </field>
    <field>
        <token>REQ.APPLICATION_NAME</token>
        <stringValue />
    </field>
    <field>
        <token>REQD.TABLE_TEST</token>
        <tableValue>
            <columnTokens>
                <columnToken>T.TABLE_TEST.ID</columnToken>
                <columnToken>T.TABLE_TEST.NAME</columnToken>
                <columnToken>T.TABLE_TEST.GENDER</columnToken>
            </columnTokens>
            <row>
                <columns>
                    <column>
                        <stringValue>1000</stringValue>
                    </column>
                    <column>
                        <stringValue>Alexander</stringValue>
                    </column>
                    <column>
                        <stringValue>male/man</stringValue>
                    </column>
                </columns>
            </row>
            <row>
                <columns>
                    <column>
                        <stringValue>1001</stringValue>
                    </column>
                    <column>
                        <stringValue>Beetle</stringValue>
                    </column>
                    <column>
                        <stringValue>male/man</stringValue>
                    </column>
                </columns>
            </row>
        </tableValue>
    </field>
</fields>
<notes />
<references />
</ns2:request>

```

Errors and Exceptions

Table 1-20. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE000	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	Cannot Get Internal Server Connection	There was an error when you tried to connect to the PPM server.	N/A
PPM_WSE101	Error when trying to read request with id {0}	There was some error when the system tried to read the request.	N/A
PPM_WSE108	The request {0} does not exist	The request ID you entered does not exist.	Correct the request ID in the URL
PPM_SWE209	No eligible actions for this request	The request you tried to access does not have any eligible actions for the you.	Add the user to the workflow step security.

Create/Update a Request

Table 1-21. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/dm/requests
HTTP Method	POST
Function	This operation creates/updates a request, depending on whether you specify a request ID. If you specify a request ID, this operation will update a request. Otherwise, it will create a request. For more information, see the <i>Function</i> section.
Parameters	This operation contains 8 parameters. For more information, see the <i>Parameters</i> section.
Returns	This operation returns an object of the <i>Request</i> data structure. For more information, see <i>Returns on page 45</i> .
Message Examples	See <i>Message Example on page 46</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 47</i> .
Limitation	This operation supports field security check, but it ignores user interface (UI) rules or status dependency. Such constraints have to be validated and enforced on the client side before this operation is invoked.

Function

This operation creates/updates a request, specified by the request type. This depends on whether you specify a request ID. If you specify a request ID, this operation will update a request. Otherwise, it will create a request.

To perform this operation, you must be in one or more of the authorized security groups for the create/update action.

Parameters

This operation contains the following parameters:

Table 1-22. Parameters

Parameter	Description
id	Request ID. Indicates whether this operation will update or create a request. If you specify a request ID, this operation will update a request. If you do not specify a request ID, this operation will create a request.
description	Brief description of the request
requestType	Name of the request type to which the request belongs
sourceType	Indicates the type of external update, such as specific interface or migrator name, etc.
source	Provides additional information about the source of the external update.
fields	Contains information about all individual fields of the request.
notes	Contains user notes of the request.
references	Describes reference entities linked to the request through reference relationships.

Returns

This operation returns an object of the *Request* data structure, which contains the information about the request.

The values for the fields of the following types are formatted according to the user's regional settings:

- Date
- Numeric text field
- Percentage field

- Currency field

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/dm/requests`

Message in XML:

```
<tns:request xmlns:tns="http://www.hp.com/ppm/dm/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.hp.com/ppm/dm/Request.xsd ">
  <id>32412</id>
  <description>description</description>
  <requestType>Project Issue</requestType>
  <sourceType>sourceType</sourceType>
  <source>source</source>
  <fields>
    <field>
      <token>REQ.DESCRPTION</token>
      <stringValue>My Sample</stringValue>
    </field>
    <field>
      <token>REQ.PRIORITY_NAME</token>
      <stringValue>Normal</stringValue>
    </field>
  </fields>
</tns:request>
```

Errors and Exceptions

Table 1-23. Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPM_WSE001	Cannot Get Internal Server Connection	There was an error when you tried to connect to the PPM server.	N/A
PPM_WSE107	This request already exists in PPM	There was an error when you tried to create a request.	N/A
PPM_WSE109	The request type of request cannot be empty	The request type of request is empty.	Specify a request type for the request.
PPM_SWE117	Invalid workflow step	The workflow step is not valid.	N/A

2 HP Time Management RESTful Web Services (Time Sheets)

Overview

The implementation of HP Time Management RESTful Web services contains a set of operations to read, create, update, and submit time sheets in the HP Time Management module.

Data Types

RESTful Web services for Time Management include the following data types:

- *TimeSheet*
- *TimeSheets*
- *TimePeriod*
- *TimePeriods*
- *WorkItem*
- *WorkItems*
- *TimeSheetLine*
- *TimeSheetLines*
- *Policy*

- *Policies*
- *Actual*
- *Actuals*
- *Activity*
- *Efforts*
- *Note*
- *WorkUnit*

TimeSheet

The `TimeSheet` data type represents detailed information about a time sheet.

Table 2-1. TimeSheet

Property	Type	Description	Required?	Default Value
id	Long	Time sheet ID (system-generated unique identifier)	Yes	N/A
periodId	Long	Period ID of the time sheet	Yes	N/A
resourceId	Long	Resource ID of the time sheet	Yes	M/A
sequence	Int	Sequence number of the time sheet	Yes	N/A
status	Int	Status of the time sheet	Yes	N/A
description	String	Description of the time sheet	No	N/A
policies	List< <i>Policy</i> >	Policies applied to the time sheet	No	N/A
lastUpdatedDate	XML Gregorian Calendar	Last updated time of the time sheet	No	N/A
creationDate	XML Gregorian Calendar	Creation date of the time sheet	Yes	N/A
notes	List< <i>Note</i> >	Notes of the time sheet	No	N/A
createdBy	Long	User ID of the time sheet creator	Yes	N/A
lastUpdatedBy	Long	User ID of the last modifier of the time sheet	Yes	N/A

TimeSheets

The `TimeSheets` data type represents a list of `TimeSheet` elements.

Table 2-2. TimeSheets

Property	Type	Description	Required?	Default Value
timeSheets	List< <i>TimeSheet</i> >	List of <i>TimeSheet</i> elements	Yes	N/A

TimePeriod

The `TimePeriod` data type represents detailed information about a time period.

Table 2-3. TimePeriod

Property	Type	Description	Required?	Default Value
id	Long	Time period ID (system-generated unique identifier).	Yes	N/A
sequence	Long	Sequence of the time period	Yes	N/A
type	Int	ID of the time period type: <ul style="list-style-type: none">• 1: Weekly• 2: Bi-Weekly• 3: Semi-Monthly• 4: Monthly	Yes	N/A
name	String	Name of the time period	Yes	N/A
startDate	XML Gregorian Calendar	Start date of the time period	Yes	N/A
endDate	XML Gregorian Calendar	End date of the time period	Yes	N/A

TimePeriods

The `TimePeriods` data type represents a list of `TimePeriod` elements.

Table 2-4. TimePeriods

Property	Type	Description	Required?	Default Value
timePeriods	List< <i>TimePeriod</i> >	List of <i>TimePeriod</i> elements	Yes	N/A

WorkItem

The `WorkItem` data type represents detailed information about a work item of a time sheet.

Table 2-5. WorkItem

Property	Type	Description	Required?	Default Value
id	String	Work item ID (system-generated unique identifier)	Yes	N/A
type	String	Enumeration of: <ul style="list-style-type: none">• REQUEST• PACKAGE• TASK• PROJECT• MISC	Yes	N/A
setId	String	SetID of the work item	Yes	N/A
name	String	Name of the work item	Yes	N/A
description	String	Description of the work item	No	N/A
activities	List< <i>Activity</i> >	The activities in the work item	No	N/A

WorkItems

The `workItems` data type represents a list of `WorkItem` elements.

Table 2-6. WorkItems

Property	Type	Description	Required?	Default Value
<code>workItems</code>	List< <i>WorkItem</i> >	List of <i>WorkItem</i> elements	Yes	N/A

TimeSheetLine

The `TimeSheetLine` data type represents detailed information about a time sheet line.

Table 2-7. TimeSheetLine

Property	Type	Description	Required?	Default Value
<code>id</code>	Long	ID of the time sheet line	Yes	N/A
<code>workItemId</code>	String	ID of the work item	Yes	N/A
<code>workItemType</code>	String	Type of the work item	Yes	N/A
<code>workItemName</code>	String	Name of the work item	No	N/A
<code>workItemDescription</code>	String	Description of the work item	No	N/A
<code>status</code>	Int	Status of the time sheet line	No	1
<code>approver</code>	List< <i>Approver</i> >	Approvers of the time sheet line	No	N/A
<code>actuals</code>	List< <i>Actual</i> >	Actuals of time sheet lines	No	N/A

Table 2-7. TimeSheetLine

Property	Type	Description	Required?	Default Value
workUnit	WorkUnit	Work unit of the time sheet	No	N/A
workItemSetId	String	SetId of the work item	Yes	N/A
notes	List <Note>	Notes of time sheet lines	No	N/A

TimeSheetLines

The `TimeSheetLines` data type represents a list of `TimeSheetLine` elements.

Table 2-8. TimeSheetLines

Property	Type	Description	Required?	Default Value
timesheetlines	List< <i>TimeSheetLine</i> >	List of <i>TimeSheetLine</i> elements	Yes	N/A

Policy

The `Policy` data type represents detailed information of a time sheet policy.

Table 2-9. Policy

Property	Type	Description	Required?	Default Value
name	String	The name of the time sheet policy	Yes	N/A
value	String	The value of the time sheet policy	No	empty

Policies

The `Policies` data type represents a list of `Policy` elements.

Table 2-10. Policies

Property	Type	Description	Required?	Default Value
<code>policies</code>	List< <i>Policy</i> >	List of the <i>Policy</i> elements	Yes	N/A
<code>type</code>	Enum	Enumeration of: <ul style="list-style-type: none">• Global• User	Yes	Global

Approver

The `Approver` data type represents the time sheet approver information.

Table 2-11. Approver

Property	Type	Description	Required?	Default Value
<code>id</code>	Long	The time sheet approver id	Yes	N/A
<code>type</code>	Enum	Enumeration of: <ul style="list-style-type: none">• UserBillingApprover• ParticipantGroupBillingApprover• SecurityGroupBillingApprover• UserTimeApprover• ParticipantGroupTime Approver• SecurityGroupTimeApprover	Yes	N/A

Actual

The `Actual` data type represents the actual time logged against a time sheet line.

Table 2-12. Actual

Property	Type	Description	Required?	Default Value
activityId	Long	Activity ID	No	N/A
activityName	String	Activity name	No	N/A
activityType	Enum	Enumeration of: <ul style="list-style-type: none"> • added • inherited 	No	N/A
efforts	List< <i>Efforts</i> >	List of <i>Efforts</i> elements	No	N/A

Actuals

The `Actuals` data type represents the actual time logged against a time sheet.

Table 2-13. Actuals

Property	Type	Description	Required?	Default Value
actual	List< <i>Actual</i> >	Actual time logged against a time sheet line	Yes	N/A
actualType	Enum	Enumeration of: <ul style="list-style-type: none"> • activity • common 	Yes	N/A

Activity

The `Activity` data type represents detailed information about an activity in a work item.

Table 2-14. Activity

Property	Type	Description	Required?	Default Value
id	Long	Activity ID	Yes	N/A
description	String	Activity description	Yes	N/A
name	String	Activity name	No	N/A
category	String	Activity category	No	N/A
enable	Booleam	Indicate whether or not activity is enabled	No	false

Efforts

The `Efforts` data type represents the detailed information about the time logged against a time sheet line per day.

Table 2-15. Efforts

Property	Type	Description	Required?	Default Value
dayNum	Int	Ordinal number of the day in the time period.	Yes	N/A
effort	Double	Hours logged against a day of a time sheet line	Yes	N/A

Note

The `Note` data type represents the detailed information about the Note field of a time sheet line.

Table 2-16. Efforts

Property	Type	Description	Required?	Default Value
id	Long	ID of the note of the time sheet	Yes	N/A
description	String	Description of the note of the time sheet	Yes	N/A
type	String	Type of the note of the time sheet	No	N/A
createdBy	String	User ID of the the note creator	No	N/A
creationDate	XML Gregorian Calendar	Creation date of the note	No	N/A
lastUpdatedBy	String	User who last updates the note	No	N/A
lastUpdatedDate	XML Gregorian Calendar	Last update date of the note	No	N/A

WorkUnit

The `WorkUnit` data type represents the detailed information about work unit of a time sheet line.

Table 2-17. WorkUnit

Property	Type	Description	Required?	Default Value
id	Long	Work unit ID	No	N/A
actualStart	XML Gregorian Calendar	Earliest date for which you enter time on any time sheet for the item	No	N/A
actualFinish	XML Gregorian Calendar	Latest date for which you enter time on any time sheet for your assignment on the item	No	N/A
actualEffort	double	Total effort you have contributed to a task or request for the cumulative time you have reported on time sheets	No	N/A
percentageComplete	double	Your personal total percentage contribution towards completing a task or request	No	N/A
estimatedFinish	XML Gregorian Calendar	Estimated finish date for a task	No	N/A

Entities

RESTful Web services for Time Sheets enables you to do the following:

- *Get Time Sheets*
- *Get a Time Sheet*
- *Get Time Periods*
- *Get a Time Period*
- *Get Work Items*
- *Get Time Sheet Lines*
- *Get a Time Sheet Line*
- *Get Time Sheet Policies*
- *Create a Time Sheet*
- *Update a Time Sheet*
- *Submit a Time Sheet*

Get Time Sheets

Table 2-18. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets
HTTP Method	GET
Query Parameters	<ul style="list-style-type: none">• ownerUserId: ID of the time sheet owner• periodId: the time period ID
Function	This operation retrieves a list of time sheets For more information, see the <i>Function</i> section.

Table 2-18. Operation Overview

Returns	This operation returns an object of the <i>TimeSheets</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 64</i> .

Function

This operation returns a list of time sheets. To perform this operation, you must have the Time Management License and the access grant: Time Mgmt: View Time Sheets.

Returns

This operation returns an object of the *TimeSheets* data structure, which contains a list of *TimeSheet* objects.

If only the query parameter `ownerUserId` is provided, this operation returns the top 15 time sheets owned by the user.

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/`

Message in XML:

```
<ns2:timesheets xmlns:ns2="http://www.hp.com/ppm/tm/">
  <timeSheet>
    <id>446363</id>
    <periodId>30277</periodId>
    <resourceId>1</resourceId>
    <sequence>1</sequence>
    <status>1</status>
    <description>User, Admin - 11/5/12 - 11/11/12
    </description>
    <policies>
      <policy>
        <name>AllowMultipleTimeSheets</name>
        <value>>false</value>
      </policy>
    </policies>
  </timeSheet>
</ns2:timesheets>
```

```

    </policy>
  <policy>
    <name>MaximumHoursPerDay</name>
    <value>>false</value>
  </policy>
  <policy>
    <name>BucketShowLevel</name>
    <value>DAY</value>
  </policy>
  <policy>
    <name>BucketReportMethod</name>
    <value>HOUR</value>
  </policy>
  <policy>
    <name>HourInPeriodType</name>
    <value>Fixed</value>
  </policy>
  <policy>
    <name>ReqActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
</policies>
<notes>
  <note>
    <id>30180</id>
    <description>test11111</description>
    <type>TS</type>
    <createdBy>1</createdBy>
    <createdDate>2013-01-23T21:02:42.000-8:00</createdDate>
    <lastUpdatedBy>1</lastUpdatedBy>
    <lastUpdatedDate>2013-01-23T21:02:42.000-8:00</lastUpdatedDate>
  </note>
</notes>
<createdBy>1</createdBy>
<lastUpdatedBy>1</lastUpdatedBy>
</timeSheet>
<timeSheet>
  <id>30222</id>
  <periodId>102463</periodId>
  <resourceId>1</resourceId>
  <sequence>1</sequence>
  <status>0</status>
  <description>User, Admin-11/5/12-11/11/12</description>
  </policy>
  <policy>
    <name>BucketShowLevel</name>
    <value>DAY</value>
  </policy>
  <policy>
    <name>BucketReportMethod</name>

```

```

        <value>HOUR</value>
    </policy>
    <policy>
        <name>HourInPeriodType</name>
        <value>Fixed</value>
    </policy>
    <policy>
        <name>ReqActivitiesRequiredFlag</name>
        <value>>true</value>
    </policy>
</policies>
<createdBy>1</createdBy>
<lastUpdatedBy>1</lastUpdatedBy>
</timeSheet>
</ns2:timesheets>

```

Errors and Exceptions

Table 2-19. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE507	400	Error when trying to get time sheets. The operation to get time sheets is supported by two APIs: (1) get a time sheet by id (URL: itg/rest/tm/timeSheets/id); (2) get time sheets by periodId and ownerId (URL: itg/rest/tm/timeSheets?periodId=1&ownerId=1).	Query parameters are incorrect.	Input correct query parameters.
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user has no access to this resource.	N/A

Get a Time Sheet

Table 2-20. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/id</code>
HTTP Method	GET
Function	This operation retrieves a specific time sheet. For more information, see the <i>Function</i> section.
Returns	This operation returns an object of the <i>TimeSheet</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions</i> on page 67.

Function

This operation retrieves a specific time sheet, specified by the time sheet ID. To perform this operation, you must have the Time Management License and the access grant: Time Mgmt: View Time Sheets.

Returns

This operation returns an object of the *TimeSheet* data structure, which contains the information about the time sheet.

Message Example

Method URL:

```
http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/id
```

Message in XML:

```
<ns2:timesheet xmlns:ns2="http://www.hp.com/ppm/tm/">  
  <id>446363</id>  
  <periodId>30277</periodId>
```

```

<resourceId>1</resourceId>
<sequence>1</sequence>
<status>1</status>
<description>User, Admin - 11/5/12 - 11/11/12</description>
<policies>
  <policy>
    <name>AllowMultipleTimeSheets</name>
    <value>>false</value>
  </policy>
  <policy>
    <name>BucketShowLevel</name>
    <value>DAY</value>
  </policy>
  <policy>
    <name>BucketReportMethod</name>
    <value>HOURS</value>
  </policy>
  <policy>
    <name>HoursInPeriodType</name>
    <value>>true</value>
  </policy>
  <policy>
    <name>MaximumHoursPerTimeSheet</name>
    <value>20.0</value>
  </policy>
  <policy>
    <name>EnforcementLevelError</name>
    <value>>false</value>
  </policy>
  <policy>
    <name>ReqActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
  <policy>
    <name>TskActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
  <policy>
    <name>PrjActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
  <policy>
    <name>PkgActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
  <policy>
    <name>MiscActivitiesRequiredFlag</name>
    <value>>true</value>
  </policy>
</policies>
<notes>
  <note>
    <id>159463</id>

```

```

        <description>wwwww</description>
        <type>TS</type>
        <createdBy>1</createdBy>
        <creationDate>2012-12-24T00:00:00.000-08:00
        </creationDate>
        <lastUpdatedBy>1</lastUpdatedBy>
        <lastUpdatedDate>2012-12-24T00:00:00.000-08:00
        </lastUpdatedDate>
    </note>
</notes>
</ns2:timeSheet>

```

Errors and Exceptions

Table 2-21. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE507	400	Error when trying to get time sheets. The operation to get time sheets is supported by two APIs: (1) get a time sheet by id (URL: itg/rest/tm/timeSheets/id); (2) get time sheets by periodId and ownerId (URL: itg/rest/tm/timeSheets?periodId=1&ownerId=1).	The query parameters are incorrect.	Input correct query parameters.
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user has no access to this resource.	N/A

Get Time Periods

Table 2-22. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/timePeriods</code>
HTTP Method	GET
Query Parameters	<ul style="list-style-type: none">• type: the type of the time period• date: the date you want to check. The format of the date should be yyyy-MM-ddTHH:mm:ssZ.
Function	This operation retrieves a list of time periods. For more information, see the Function section.
Returns	This operation returns an objects of the TimePeriods data structure. For more information, see the Returns section.
Message Examples	See Message Example .
Errors and Exceptions	See Errors and Exceptions .

Function

This operation retrieves a list of time periods. To perform this operation, you must have the Time Management License.

Returns

This operation returns an object of the [TimePeriods](#) data structure, which contains a list of [TimePeriod](#) objects.

Message Example

Method URL:

```
http://<PPM_Server_IP>:<port>/itg/rest/tm/timePeriods
```

Message in XML:

```

<ns2:periods xmlns:ns2="http://www.hp.com/ppm/tm/">
  <period>
    <id>102321</id>
    <sequence>131</sequence>
    <type>2</type>
    <startDate>2012-12-24T00:00:00.000-08:00</startDate>
    <endDate>2013-01-06T23:59:59.000-08:00</endDate>
  </period>
</ns2:periods>

```

Errors and Exceptions

Table 2-23. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPM_WSE000	500	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	503	Cannot Get Internal Server Connection.	There was an error when you tried to connect to the PPM server.	N/A
PPM_WSE506	400	The input date or type is invalid, for the data supports the format yyyy-MM-ddTHH:mm:ssZ, and the type is defined as 1, 2, 3, or 4.	The input date or type is invalid	Input correct query parameters.

Get a Time Period

Table 2-24. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/Periods/id</code>
HTTP Method	GET
Function	This operation retrieves a specific time period. For more information, see the <i>Function</i> section.
Returns	This operation returns an object of the <i>TimePeriod</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions</i> .

Function

This operation retrieves a specific time period, specified by time period ID. To perform this operation, you must have the Time Management License.

Returns

This operation returns an object of the *TimePeriod* data structure, which contains detailed information about the *TimePeriod* object.

Message Example

Method URL:

```
http://<PPM_Server_IP>:<port>/itg/rest/tm/Periods/id/30274
```

Message in XML:

```
<ns2:period xmlns:ns2="http://www.hp.com/ppm/tm/">
  <id>30274</id>
  <sequence>275</sequence>
  <type>1</type>
```

```

    <startDate>1350230400000</startDate>
    <endDate>1350835199000</endDate>
  </ns2:period>

```

Errors and Exceptions

Table 2-25. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPM_WSE000	500	Internal Error	There was an internal error when you executed the operation.	N/A
PPM_WSE001	503	Cannot Get Internal Server Connection.	There was an error when you tried to connect to PPM Server.	N/A
PPM_WSE506	400	The input date or type is invalid, for the data supports the format yyyy-MM-ddTHH:mm:ssZ, and the type is defined as 1, 2, 3, or 4.	The input date or type is incorrect.	Input correct query parameters.

Get Work Items

Table 2-26. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/tm/workItems
HTTP Method	GET
Function	This operation retrieves a list of work items. For more information, see the <i>Function</i> section.

Table 2-26. Operation Overview

Query Parameters	<ul style="list-style-type: none"> • type: [REQUEST, PACKAGE, TASK, PROJECT, MISC] • ownerId: the user ID of the work items owner
Returns	<p>This operation returns an object of <i>WorkItems</i> data structure.</p> <p>For more information, see the <i>Returns</i> section.</p>
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions</i> .

Function

This operation retrieves a list of work items. To perform this operation, you must have the Time Management License.

Returns

This operation returns an object of *WorkItems* data structure, which contain a list of *WorkItem* objects.

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/tm/workItems`

Message in XML:

```
<ns2:workItems xmlns:ns2="http://www.hp.com/tm/">
  <workItem>
    <id>217037</id>
    <type>TASK</type>
    <setId>31600</setId>
    <name>IPS - Interest Rate Risk Management Processing
      System (R20) (D791)</name>
    <description>ESO PBS GMGI BB-Flexi Loan R20 &gt; IPS -
      Interest Rate Risk Management Processing
      System (R20) (D791)</description>
  </workItem>
```



```

<workItem>
  <id>3282935</id>
  <type>PROJECT</type>
  <setId>60000</setId>
  <name>MS Mail Strategy</name>
  <description>MS Mail Strategy</description>
</workItem>
</ns2:workItems>

```

Errors and Exceptions

Table 2-27. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE502	400	The owner user id is invalid. Please input correct owner user id.	The owner user ID should be more than 0.	Input correct owner user ID.
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the required access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user does not have access to this resource.	N/A
PPMC_WSE508	400	Cannot find the resource with the owner user id.	The owner user ID is not correct.	Correct the owner user ID.
PPMC_WSE000	500	Internal error	There was an internal error when you executed this operation.	N/A

Get Time Sheet Lines

Table 2-28. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/id/timeSheetLines</code>
HTTP Method	GET
Function	This operation retrieves a list of time sheet lines. For more information, see the <i>Function</i> section.
Returns	The operation returns an object of the <i>TimeSheetLines</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 78</i> .

Function

This operation retrieves a list of time sheet lines of a time sheet. To perform this operation, you must have the Time Management License and the access grant: View Time Sheets.

Returns

This operation returns an object of the *TimeSheetLines* data structure, which contains a list of the *TimeSheetLine* objects.

Message Example

Method URL:

```
http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/id/timeSheetLines
```

Message in XML:

```
<ns2:timeSheetLines xmlns:ns2="http://www.hp.com/ppm/tm/">
  <timeSheetLine>
    <id>1467001</id>
```

```

<workItemId>3282935</workItemId>
<workItemType>PROJECT</workItemType>
<workItemName>MS Mail Strategy</workItemName>
<workItemDescription>MS Mail Strategy</
workItemDescription>
<status>1</status>
<approver>
  <id>33877</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31448</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31476</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31446</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31702</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>103632</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31777</id>
  <type>UsersTimeApprover</type>
</approver>
<actuals>
  <actual>
    <activityId>30131</activityId>
    <activityName>914 upgrade act1</activityName>
    <activityType>added</activityType>
    <efforts>
      <dayNum>3</dayNum>
      <effort>4.0</effort>
    </efforts>
  </actual>
  <actualsType>activity</actualsType>
</actuals>
<workUnit>
  <id>171904</id>
  <actualStart>1357459200000</actualStart>
  <actualFinish>0</actualFinish>
  <actualEffort>2222.0</actualEffort>
  <estimatedFinish>0</estimatedFinish>
  <effortModified>true</effortModified>
</workUnit>

```

```

<workItemSetId>60000</workItemSetId>
<notes>
  <note>
    <id>159801</id>
    <description>vincent testing line details.
    </description>
    <type>TSL</type>
    <createdBy>1</createdBy>
    <lastUpdatedBy>1</lastUpdatedBy>
  </note>
</notes>
</timeSheetLine>
<timeSheetLine>
  <id>1467004</id>
  <workItemId>217037</workItemId>
  <workItemType>TASK</workItemType>
  <workItemName>IPS - Interest Rate Risk Management
  Processing System (R20) (D791)</workItemName>
  <workItemType>TASK</workItemType>
  <workItemName>IPS - Interest Rate Risk Management
  Processing System (R20) (D791)</workItemName>
  <workItemDescription>ESO PBS GMGI BB-Flexi Loan R20
  &gt; IPS - Interest Rate Risk Management
  Processing System (R20) (D791)
  </workItemDescription>
  <status>1</status>
  <approver>
    <id>30772</id>
    <type>UsersTimeApprover</type>
  </approver>
  <approver>
    <id>30968</id>
    <type>UsersTimeApprover</type>
  </approver>
  <approver>
    <id>31791</id>
    <type>UsersTimeApprover</type>
  </approver>
  <approver>
    <id>31476</id>
    <type>UsersTimeApprover</type>
  </approver>
  <approver>
    <id>31446</id>
    <type>UsersTimeApprover</type>
  </approver>
  <approver>
    <id>30897</id>
    <type>UsersTimeApprover</type>
  </approver>
  <actuals>
    <actual>
      <activityId>30078</activityId>

```

```

        <activityName>Close - Project Closure
      </activityName>
      <activityType>inherited</activityType>
      <efforts>
        <dayNum>2</dayNum>
        <effort>3.0</effort>
      </efforts>
      <efforts>
        <dayNum>4</dayNum>
        <effort>5.0</effort>
      </efforts>
    </actual>
  <actual>
    <activityId>30131</activityId>
    <activityName>914 upgrade act1</activityName>
  </actual>
  <actualsType>activity</actualsType>
</actuals>
<workUnit>
  <id>172244</id>
  <actualStart>1357977600000</actualStart>
  <actualFinish>0</actualFinish>
  <actualEffort>2248.8</actualEffort>
  <estimatedFinish>0</estimatedFinish>
  <effortModified>true</effortModified>
</workUnit>
  <workItemSetId>31600</workItemSetId>
</timeSheetLine>
</ns2:timeSheetLines>

```

Errors and Exceptions

Table 2-29. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE005	404	Not found	The time sheet does not exist.	N/A
PPMC_WSE000	500	Internal error	There was an internal error when you executed the operation.	N/A
PPMC_WSE509	500	Error when trying to convert the time sheet attributes.	There was a data issue when converting the time sheet attributes.	Fix the data issue

Get a Time Sheet Line

Table 2-30. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheetLines/id</code>
HTTP Method	GET
Function	This operation retrieves a specific time sheet line. For more information, see the Function section.
Query Parameters	timeSheetLineId
Returns	This operation returns an object of the TimeSheetLine data structure. For more information, see the Returns section.
Message Examples	See Message Example .
Errors and Exceptions	See Errors and Exceptions on page 81 .

Function

This operation retrieves a specific time sheet line of a time sheet, specified by the time sheet line ID. To perform this operation, you must have the Time Management License and the access grant: View Time Sheet.

Returns

This operation returns an object of the *TimeSheetLine* data structure, which contains detailed information of the *TimeSheetLine* object.

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheetLines/id`

Message in XML:

```
<ns2:timeSheetLines xmlns:ns2="http://www.hp.com/ppm/tm/">
  <timeSheetLine>
    <id>1467001</id>
    <workItemId>3282935</workItemId>
    <workItemType>PROJECT</workItemType>
    <workItemName>MS Mail Strategy</workItemName>
    <workItemDescription>MS Mail Strategy</
      workItemDescription>
    <status>1</status>
    <approver>
      <id>33877</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31448</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31476</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31446</id>
      <type>UsersTimeApprover</type>
    </approver>
    <approver>
      <id>31702</id>
      <type>UsersTimeApprover</type>
    </approver>
  </timeSheetLine>
</ns2:timeSheetLines>
```

```

<approver>
  <id>103632</id>
  <type>UsersTimeApprover</type>
</approver>
<approver>
  <id>31777</id>
  <type>UsersTimeApprover</type>
</approver>
<actuals>
  <actual>
    <activityId>30131</activityId>
    <activityName>914 upgrade act1</activityName>
    <activityType>added</activityType>
    <efforts>
      <dayNum>3</dayNum>
      <effort>4.0</effort>
    </efforts>
  </actual>
  <actualsType>activity</actualsType>
</actuals>
<workUnit>
  <id>171904</id>
  <actualStart>1357459200000</actualStart>
  <actualFinish>0</actualFinish>
  <actualEffort>2222.0</actualEffort>
  <estimatedFinish>0</estimatedFinish>
  <effortModified>true</effortModified>
</workUnit>
<workItemSetId>60000</workItemSetId>
<notes>
  <note>
    <id>159801</id>
    <description>vincent testing line details.
      </description>
    <type>TSL</type>
    <createdBy>1</createdBy>
    <lastUpdatedBy>1</lastUpdatedBy>
  </note>
</notes>
</timeSheetLine>
</ns2:timeSheetLine>

```


Errors and Exceptions

Table 2-31. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE005	404	Not found	The time sheet does not exist.	N/A
PPMC_WSE000	500	Internal error	There was an internal error when you executed the operation.	N/A
PPMC_WSE509	500	Error when trying to convert the time sheet attributes.	There was a data issue when converting the time sheet attributes.	Fix the data issue.

Get Time Sheet Policies

Table 2-32. Operation Overview

URL	<code>http://<PPM_Server_IP>:<port>/itg/rest/tm/policies</code>
HTTP Method	GET
Function	This operation retrieves a list of policies. For more information, see the <i>Function</i> section.
Query Parameters	ownerUsreId: user ID of the time sheet owner.
Returns	This operation returns an object of the <i>Policies</i> data structure. For more information, see the <i>Returns</i> section.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions</i> .

Function

This operation retrieves a list of time sheet policies. To perform this operation, you must have the Time Management License.

Returns

This operation returns an object of the *Policies* data structure, which contains a list of *Policy* objects.

Message Example

Method URL:

```
http://<PPM_Server_IP>:<port>/itg/rest/tm/policies
```

Message in XML:

```
<ns2:policies xmlns:ns2="http://www.hp.com/ppm/tm/">  
  <policy>
```

```

        <name>BucketShowLevel<name>
        <value>DAY</value>
    </policy>
    <policy>
        <name>BucketReportMethod<name>
        <value>HOUR</value>
    </policy>
    <policy>
        <name>HourInPeriodType<name>
        <value>FIXED</value>
    </policy>
    <policy>
        <name>AllowMultipleTimeSheets<name>
        <value>>false</value>
    </policy>
    <policy>
        <name>NotifyDelinquentTimeSheet<name>
        <value>>true</value>
    </policy>
    <policy>
        <name>MaximumHourPerTimeSheet<name>
        <value>20.0</value>
    </policy>
    <policy>
        <name>EnforcementLevelError<name>
        <value>>false</value>
    </policy>
    <policy>
        <name>OverrideWorkAllocationFlag<name>
        <value>>false</value>
    </policy>
    <policy>
        <name>AutoApprovalFlag<name>
        <value>>false</value>
    </policy>
    <policy>
        <name>ReqActivitiesRequiredFlag<name>
        <value>>true</value>
    </policy>
    <policy>
        <name>TskActivitiesRequiredFlag<name>
        <value>>true</value>
    </policy>
    <policy>
        <name>PrjActivitiesRequiredFlag<name>
        <value>>true</value>
    </policy>
    <policy>
        <name>PkgActivitiesRequiredFlag<name>
        <value>>true</value>
    </policy>
    <policy>
        <name>MiscActivitiesRequiredFlag<name>
        <value>>true</value>
    </policy>

```

```

</policy>
<policy>
  <name>ActivitiesDisplayFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>ExpHrsDisplayFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>ReqWorkItemEnabledFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>TskWorkItemEnabledFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>PrjWorkItemEnabledFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>PkgWorkItemEnabledFlag<name>
  <value>true</value>
</policy>
<policy>
  <name>MiscWorkItemEnabledFlag<name>
  <value>true</value>
</policy>
<type>Global</type>
</ns2:policies>

```

Errors and Exceptions

Table 2-33. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE502	400	The owner user id is invalid. Please input the correct owner user id.	The owner user ID is invalid.	Input the correct owner user id
PPMC_WSE508	500	Cannot find the resource with the owner user id.	The owner user ID does not exist.	N/A

Create a Time Sheet

Table 2-34. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets
HTTP Method	POST
Function	This operation creates a time sheet. For more information, see the <i>Function</i> section.
Parameters	This operation contains five parameters. For more information, see the <i>Parameters</i> section.
Returns	This operation returns the time sheet ID and time sheet line IDs.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions on page 88</i> .

Function

This operation creates a time sheet. To perform this operation, you must be in one or more of the authorized security groups for the create action.

Parameters

Table 2-35. Parameters

Parameter	Description
periodId	Time period ID
resourceId	Resource ID
Status	Time sheet status
Policies	Time sheet policies
timeSheetLines	Time sheet lines

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets`

Message in XML:

Request Body:

```
<TimeSheet>
  <periodId>30075</periodId>
  <resourceId>1</resourceId>
  <status>1</status>
  <policies>
    <policy>
      <name>BucketReportMethod</name>
      <value>HOURS</value>
    </policy>
    <policy>
      <name>HoursInPeriodType</name>
      <value>WORKDAY</value>
    </policy>
    <policy>
      <name>HoursInPeriod</name>
      <value></value>
    </policy>
    <policy>
      <name>AllowMultipleTimeSheets</name>
      <value>true</value>
    </policy>
    <policy>
      <name>BucketShowLevel</name>
      <value>DAY</value>
    </policy>
    <policy>
      <name>NotifyDelinquentTimeSheet</name>
      <value>>false</value>
    </policy>
  </policies>
  <timeSheetLines>
    <workItemId>30125</workItemId>
    <workItemSetId>30089</workItemSetId>
    <workItemType>PROJECT</workItemType>
    <actuals>
      <actual>
        <efforts>
          <dayNum>2</dayNum>
          <effort>8.0</effort>
        </efforts>
        <efforts>
          <dayNum>3</dayNum>
        </efforts>
      </actual>
    </actuals>
  </timeSheetLines>
</TimeSheet>
```

```

                <effort>9.0</effort>
            </efforts>
        </actual>
    </actualsType>common</actualsType>
</actuals>
</timeSheetLines>
<timeSheetLines>
    <workItemId>17</workItemId>
    <workItemSetId>1</workItemSetId>
    <workItemType>MISC</workItemType>
    <actuals>
        <actual>
            <activityId>30131</activityId>
            <activityType>inherited</activityType>
            <efforts>
                <dayNum>2</dayNum>
                <effort>8.0</effort>
            </efforts>
            <efforts>
                <dayNum>3</dayNum>
                <effort>9.0</effort>
            </efforts>
        </actual>
    </actualsType>activity</actualsType>
</actuals>
</timeSheetLines>
</TimeSheet>

```

Response Body:

```

<ns2:createTimeSheetResponse>
    <timeSheetId>30291</timeSheetId>
    <timeSheetLineIds>30527</timeSheetLineIds>
</ns2:createTimeSheetResponse>

```

Errors and Exceptions

Table 2-36. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user has no access to this resource.	N/A
PPMC_WSE513	400	Field {0} cannot be null or empty.	Field {0} is or empty.	Fill the field with a value.
PPMC_WSE514	400	Field {0} should be greater than {1}.	Field {0} is less than {1}.	Correct the field value.
PPMC_WSE515	400	Field {0} should be greater than or equal to {1}.	Field {0} is less than {1}.	Correct the field value.
PPMC_WSE516	400	Field {0} should be less than {1}.	Field {0} is not less than {1}	Correct the field value.
PPMC_WSE517	400	Field {0} should be less than or equal to {1}.	Field {0} is greater than {1}.	Correct the field value.
PPMC_WSE518	400	Field {0} should be greater than {1} and less than {2}.	Field {0} is not greater than {1} and less than {2}	Correct the field value.
PPMC_WSE519	400	Field {0} should be greater than or equal to {1} and less than or equal to {2}.	Field {0} is not greater than or equal to {1} and less than or equal to {2}.	Correct the field value.
PPMC_WSE520	400	The status can only be UNSIBMITTED when a time sheet is created.	The status is not UNSIBMITTED when a time sheet is created.	Correct the field value.

Table 2-36. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE521	400	Fail to pass business restriction.	Fail to pass business restriction.	N/A
PPMC_WSE522	500	Time Management service internal error.	There was an internal error when you executed this operation.	N/A
PPMC_WSE523	400	Total actual effort cannot be less than 0.	Total actual effort is less than 0.	Correct the total actual effort.
PPMC_WSE524	400	The day number exceeds the time period duration, and the day number {0} cannot be greater than {1}.	The day number exceeds the time period duration, and the day number {0} is greater than {1}.	Correct the day number.
PPMC_WSE525	400	Work item type must be one of the following types: [TASK, PROJECT, REQUEST, PACKAGE, MISC].	Work item type is undefined.	Choose the work item type from the [TASK, PROJECT, REQUEST, PACKAGE, MISC] list.
PPMC_WSE526	400	The work item [{0}:{1}] is invalid for resource {2} and time period {3}.	The work item [{0}:{1}] is invalid for resource {2} and time period {3}.	Choose a valid work item for resource {2} and time period {3}.

Update a Time Sheet

Table 2-37. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets/timeSheetsId
HTTP Method	PUT
Function	This operation updates a time sheet. For more information, see the <i>Function</i> section.
Parameters	This operation contains four parameters. For more information, see the <i>Parameters</i> section.
Returns	This operation returns the time sheet ID and time sheet line IDs.
Message Examples	See <i>Message Example</i> .
Errors and Exceptions	See <i>Errors and Exceptions</i> .

Function

This operation updates a time sheet if you specify the time sheet ID. To perform this operation, you must be in one or more of the authorized security groups for the update action.

Parameters

Table 2-38. Parameters

Parameter	Description
periodId	Time period ID
resourceId	Resource ID
Status	Time sheet status
timeSheetLines	Time sheet lines

Message Example

Method URL:

`http://<PPM_Server_IP>:<port>/itg/rest/tm/timeSheets`

Message in XML:

Request Body:

```
<TimeSheet>
  <id>444745</id>
  <periodId>30245</periodId>
  <resourceId>1</resourceId>
  <sequence>2</sequence>
  <status>1</status>
  <description>First TimeSheet</description>
  <timeSheetLines>
    <id>1465081</id>
    <workItemId>30110</workItemId>
    <workItemType>PROJECT</workItemType>
    <workItemName>CMS-MDL</workItemName>
    <workItemDescription>CMS-MDL</workItemDescription>
    <actuals>
      <actual>
        <efforts>
          <dayNum>1</dayNum>
          <effort>1.0</effort>
        </efforts>
        <actualsType>common</actualsType>
      </actual>
    </actuals>
    <workUnit>
      <id>172042</id>
      <actualStart>0</actualStart>
      <actualFinish>0</actualFinish>
      <actualEffort>1.0</actualEffort>
      <estimatedFinish>0</estimatedFinish>
      <effortModified>true</effortModified>
    </workUnit>
    <workItemSetId>30001</workItemSetId>
    <notes>
      <note>
        <id>159641</id>
        <description>dfsdf</description>
        <type>TSL</type>
        <createdBy>1</createdBy>
        <lastUpdatedBy>1</lastUpdatedBy>
      </note>
      <note>
        <id>159642</id>
        <description>sdfsdf</description>
        <type>TSL</type>
        <createdBy>1</createdBy>
      </note>
    </notes>
  </timeSheetLines>
</TimeSheet>
```

```

        <lastUpdatedBy>1</lastUpdatedBy>
    </note>
</notes>
</timeSheetLines>
<timeSheetLines>
    <id>1465103</id>
    <workItemId>17</workItemId>
    <workItemType>MISC</workItemType>
    <workItemName>M & S - HR</workItemName>
    <workItemDescription>M & S - HR
    </workItemDescription>
    <status>1</status>
    <actuals>
        <actual>
            <activityId>30153</activityId>
            <activityName>rachel_atv1</activityName>
            <activityType>added</activityType>
            <efforts>
                <dayNum>5</dayNum>
                <effort>10.0</effort>
            </efforts>
        </actual>
        <actual>
            <activityId>30213</activityId>
            <activityName>rachel-0808</activityName>
            <activityType>added</activityType>
        </actual>
        <actualsType>activity</actualsType>
    </actuals>
    <workItemSetId>1</workItemSetId>
</timeSheetLines>
</TimeSheet>

```

Response Body:

```

<ns2:updateTimeSheetResponse>
    <timeSheetId>30291</timeSheetId>
    <timeSheetLineIds>30527</timeSheetLineIds>
</ns2:updateTimeSheetResponse>

```

Errors and Exceptions

Table 2-39. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user has no access to this resource.	N/A
PPMC_WSE513	400	Field {0} cannot be null or empty.	Field {0} is or empty.	Fill the field with a value.
PPMC_WSE514	400	Field {0} should be greater than {1}.	Field {0} is less than {1}.	Correct the field value.
PPMC_WSE515	400	Field {0} should be greater than or equal to {1}.	Field {0} is less than {1}.	Correct the field value.
PPMC_WSE516	400	Field {0} should be less than {1}.	Field {0} is not less than {1}	Correct the field value.
PPMC_WSE517	400	Field {0} should be less than or equal to {1}.	Field {0} is greater than {1}.	Correct the field value.
PPMC_WSE518	400	Field {0} should be greater than {1} and less than {2}.	Field {0} is not greater than {1} and less than {2}	Correct the field value.
PPMC_WSE519	400	Field {0} should be greater than or equal to {1} and less than or equal to {2}.	Field {0} is not greater than or equal to {1} and less than or equal to {2}.	Correct the field value.
PPMC_WSE520	400	The status can only be UNSIBMITTED when a time sheet is created.	The status is not UNSIBMITTED when a time sheet is created.	Correct the field value.

Table 2-39. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE521	400	Fail to pass business restriction.	Fail to pass business restriction.	N/A
PPMC_WSE522	500	Time Management service internal error.	There was an internal error when you executed this operation.	N/A
PPMC_WSE523	400	Total actual effort cannot be less than 0.	Total actual effort is less than 0.	Correct the total actual effort.
PPMC_WSE524	400	The day number exceeds the time period duration, and the day number {0} cannot be greater than {1}.	The day number exceeds the time period duration, and the day number {0} is greater than {1}.	Correct the day number.
PPMC_WSE525	400	Work item type must be one of the following types [TASK, PROJECT, REQUEST, PACKAGE, MISC].	Work item type is undefined.	Choose the work item type from the [TASK, PROJECT, REQUEST, PACKAGE, MISC] list.
PPMC_WSE526	400	The work item [{0}:{1}] is invalid for resource {2} and time period {3}.	The work item [{0}:{1}] is invalid for resource {2} and time period {3}.	Choose a valid work item for resource {2} and time period {3}.

Submit a Time Sheet

Table 2-40. Operation Overview

URL	http://<PPM_Server_IP>:<port>/itg/rest/tm/timesheets/timeSheetId/actions/submit
HTTP Method	POST
Function	This operation submits a time sheet without policy validation.
Errors and Exceptions	See <i>Errors and Exceptions</i> .
HTTP Status Code	200

Errors and Exceptions

Table 2-41. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE000	500	Internal error	There was an internal error when you executed this operation.	N/A
PPMC_WSE006	403	The user does not have the access grant to perform this action.	The user does not have the required access grant.	Get the access grant.
PPMC_WSE007	403	The user does not have access to this resource.	The user has no access to this resource.	N/A

Table 2-41. Errors and Exceptions

Message Code	HTTP Return Code	Message	Cause	Possible Corrective Action
PPMC_WSE510	400	Error when submitting time sheets, for the time sheet does not contain any time sheet line.	The time sheet does not have any time sheet lines.	Add a time sheet line to the time sheet.
PPMC_WSE511	400	Error when submitting time sheets, for the status of the time sheet lines are not REWORK or UNSUBMITTED.	The time sheet lines status are not correct.	Correct the time sheet lines status.
PPMC_WSE512	400	Error when submitting time sheets, for the time sheet is missing approvers.	There is no approver for the time sheet.	Appoint an approver for the time sheet.

3 RESTful Web Services for PPM Center Solution Integrations

Overview

The implementation of PPM Center Solution Integrations RESTful Web services contains a set of operations to get, create, and update Manage Application Change configurations.

Data Types

RESTful Web services for PPM Requests include the following data types:

- *MACConfigs*
- *MACConfig*
- *FieldMapping*
- *ValueMapping*

MACConfigs

Property	Type	Description	Required?	Default Value
mACConfig	List<MACConfig>	List of MACConfigs	Yes	N/A

MACConfig

Property	Type	Description	Required?	Default Value
configurationKey	String	Configuration Key (system generated unique identifier)	No	N/A
serverURL	String	ALM server URL	Yes	N/A
userName	String	User name of the account for logging on to ALM	Yes	N/A
password	String	Password of the account for logging on to ALM	Yes	N/A
timeZone	String	ALM server time zone	Yes	N/A
domain	String	Domain of the project in ALM	Yes	N/A
project	String	ALM project	Yes	N/A
enabled	Boolean	Indicates whether this configuration is enabled	Yes	N/A
qcMajorVersion	Int	ALM major version	Yes	N/A
qcMinorVersion	Int	ALM minor version	Yes	N/A
requestTypeId	Int	ID of the request type you want to integrate with	Yes	N/A
entityType	String	Entity type, "Defect" or "Requirement"	Yes	N/A

Property	Type	Description	Required?	Default Value
dominateCenter	String	Indicates dominant center: "PPM", "QC" or "BOTH". The value is valid when the entity type is "Defect".	No	N/A
qcControlField	String	Specifying a value allows the ALM end users to control whether they want to create a defect in PPM Center as a result of creating a defect in ALM	No	N/A
syncHierarchy	Boolean	Specifies the Make QC/ALM requirement hierarchy match PPM request hierarchy option for this request type. Only valid when entity type is "Requirement".	No	N/A
defaultFolder	String	Default QC/ALM Folder Name	No	N/A
normalNotificationEnabled	Boolean	Indicates whether to send event notification when the integration creates or updates entities	No	N/A
errorNotificationEnabled	Boolean	Indicates whether to send error notification when error occurs	No	N/A
consolidateNormalNotification	Boolean	Indicates whether to send notification immediately	No	N/A
consolidateErrorNotification	Boolean	Indicates whether to send consolidated notification daily	No	N/A

Property	Type	Description	Required?	Default Value
emailForNormal Notification	String	Email for normal notification	No	N/A
emailForErrorNo tification	String	Email for error notification	No	N/A
fieldMappings	List< <i>Field Mapping</i> >	List of elements of the FieldMapping data type	Yes	N/A

FieldMapping

Property	Type	Description	Required?	Default Value
qcFieldName	String	ALM field name	Yes	N/A
qcFieldLabel	String	ALM field label	No	N/A
ppmfieldToken	String	PPM field token	Yes	N/A
ppmfieldPrompt	String	PPM field prompt	No	N/A
fieldControl	String	QC Synchronization		
Control Field	Yes	N/A		
allowValueMap	Boolean	Indicate if allowing value mapping	Yes	N/A
ppmToQCValueMaps	List< <i>ValueMa pping</i> >	QC/ALM project	Yes	N/A
qcToPPMValueMaps	List< <i>ValueMa pping</i> >	Indicates whether this configuration is enabled	Yes	N/A

ValueMapping

Property	Type	Description	Required?	Default Value
ppmValue	String	PPM Field Value	Yes	N/A
qcValue	String	QC Field Value	Yes	N/A

Entities

RESTful Web services for *MACConfigs* enables you to do the followings:

- *Create/Update a MACConfig*
- *Get MACConfigs*

Create/Update a MACConfig

RESTful Web Service Operation	Description
URL	http://<PPM_Server_IP>:<Port>/itg/rest/integration/MACConfigurations
HTTP Method	POST/PUT
Function	This operation creates/updates a request, depending on whether you specify a configuration key. If you specify a configuration key, this operation updates a mac config. Otherwise, it creates a mac config.
Parameters	This operation contains 23 parameters. For more information, see the <i>Parameters</i> section.

RESTful Web Service Operation	Description
Returns	This operation returns an object of the MACConfig data structure.
Message Examples	See Message Example on page 103.
Errors and Exceptions	See Errors and Exceptions on page 105.

Parameters

Parameter	Description
configurationKey	Configuration Key (system generated unique identifier)
serverURL	ALM Server URL
userName	Login user name of ALM
password	Login password of ALM. It does not matter whether it is encrypted by PPM Center.
timeZone	ALM server time zone
domain	Domain of the project in ALM
project	ALM project
enabled	Indicates whether this configuration is enabled
qcMajorVersion	ALM major version
qcMinorVersion	ALM minor version
requestTypeId	ID of the request type you want to integrate with
entityType	Entity type, "Defect" or "Requirement"
dominateCenter	Dominating center, "PPM", "QC" or "BOTH". Valid when the entity type is "Defect".
qcControlField	Specifying a value allows the ALM end users to control whether they want to create a defect in PPM Center as a result of creating a defect in ALM.

Parameter	Description
syncHierarchy	Specifies the Make QC/ALM requirement hierarchy match PPM request hierarchy option for this request type. Only valid when the entity type is "Requirement".
defaultFolder	Default QC/ALM Folder Name
normalNotificationEnabled	Indicates whether to send event notification when the integration creates or updates entities.
errorNotificationEnabled	Indicates whether to send error notification when error occurs
consolidateNormalNotification	Indicates whether to send notification immediately
consolidateErrorNotification	Indicates whether to send consolidated notification daily
emailForNormalNotification	Email for normal notification
emailForErrorNotification	Email for error notification
fieldMappings	List of elements of the FieldMapping data type

Message Example

Method URL:

```
http://<PPM_Server_IP>:<Port>/itg/rest/integration/
MACConfigurations
```

Message in XML:

```
<mACConfig>
  <configurationKey>43824eeb-26de-4ad9-b0fd-4b6974373c11</
  configurationKey>
    <serverURL>http://ppmvm48:8080/qcbin/</serverURL>
    <userName>admin</userName>
    <password>admin</password>
    <timeZone>28800000</timeZone>
    <domain>LBC</domain>
    <project>LBC_PRJ1</project>
    <enabled>>false</enabled>
    <qcMajorVersion>11</qcMajorVersion>
    <qcMinorVersion>2</qcMinorVersion>
    <requestTypeId>31420</requestTypeId>
    <entityType>Requirement</entityType>
```

```

<dominateCenter>PPM</dominateCenter>
<syncHierarchy>>false</syncHierarchy>
<defaultFolder>a</defaultFolder>
<normalNotificationEnabled>>false</
normalNotificationEnabled>
<errorNotificationEnabled>>false</
errorNotificationEnabled>
<consolidateNormalNotification>>false</
consolidateNormalNotification>
<consolidateErrorNotification>>false</
consolidateErrorNotification>
<fieldMappings>
  <fieldMapping>
    <qcFieldName>name</qcFieldName>
    <qcFieldLabel>Name</qcFieldLabel>
    <ppmfieldToken>REQ.DESCRPTION</ppmfieldToken>
    <ppmfieldPrompt>RFC Summary:</ppmfieldPrompt>
    <fieldControl>Bidirectional</fieldControl>
    <allowValueMap>>false</allowValueMap>
    <ppmToQCValueMaps/>
    <qcToPPMValueMaps/>
  </fieldMapping>
  <fieldMapping>
    <qcFieldName>req-comment</qcFieldName>
    <qcFieldLabel>Description</qcFieldLabel>
    <ppmfieldToken>REQD.RFC_DESCRIPTION</
ppmfieldToken>
    <ppmfieldPrompt>RFC Description:</ppmfieldPrompt>
    <fieldControl>Bidirectional</fieldControl>
    <allowValueMap>>false</allowValueMap>
    <ppmToQCValueMaps/>
    <qcToPPMValueMaps/>
  </fieldMapping>
  <fieldMapping>
    <qcFieldName>dev-comments</qcFieldName>
    <qcFieldLabel>Comments</qcFieldLabel>
    <ppmfieldToken>REQD.RFC_EFFECT_NO_CHANGE</
ppmfieldToken>
    <ppmfieldPrompt>Effect of no change:</
ppmfieldPrompt>
    <fieldControl>Bidirectional</fieldControl>
    <allowValueMap>>false</allowValueMap>
    <ppmToQCValueMaps/>
    <qcToPPMValueMaps/>
  </fieldMapping>
</fieldMappings>
</mACConfig>

```


Errors and Exceptions

Message Code	Message	Cause	Possible Corrective Action
PPMC_WSE401	ALM MAC configuration validation error	Invalid parameter	Check parameters
PPMC_WSE402	The MAC configuration does not exist	The mac config you try to update does not exist	Check configuration key
PPMC_WSE400	Internal error	Unknown Error	N/A

Get MACConfigs

RESTful Web Service Operation	Description
URL	<code>http://<PPM_Server_IP>:<Port>/itg/rest/integration/MACConfigurations</code>
HTTP Method	GET
Function	This operation retrieves a list of all Manage Application Change configurations.
Returns	This operation returns an object of the <i>MACConfigs</i> data structure. which contains a list of <i>MACConfig</i> objects. The password you get is encrypted.
Message Examples	See <i>Message Example</i> section

Message Example

Method URL:

```
http://<PPM_Server_IP>:<Port>/itg/rest/integration/MACConfigurations
```

Message in XML:

```
<ns2:mACConfigs>
```

```

<mACConfig>
<configurationKey>43824eeb-26de-4ad9-b0fd-4b6974373c11</
configurationKey>
<serverURL>http://ppmvm48:8080/qcbin/</serverURL>
<userName>admin</userName>
<password>
#!#6{P?~oJ}o1Lc3xR*-A_8I|?sOvO
*)p*FBx{Sfb+&iE@Z)A5IZ(h7wa$=OHatC31/dM4d_i_d.m>=<=Z(T||j6x&WDb=
+/,bPvJ@8aRN`+iaCHDc$P(S?Dh343BbW+(3qh+5&O1(f@ @3z ( q&=FgN_
i28>zL<Obj4|nA_>mZ:~DvsAc9cTG.9JJ<Ev#!#
</password>
<timeZone>28800000</timeZone>
<domain>LBC</domain>
<project>LBC_PRJ1</project>
<versioning>>false</versioning>
<enabled>>false</enabled>
<qcMajorVersion>11</qcMajorVersion>
<qcMinorVersion>2</qcMinorVersion>
<requestTypeId>31420</requestTypeId>
<entityType>Requirement</entityType>
<dominateCenter>PPM</dominateCenter>
<syncHierarchy>>false</syncHierarchy>
<defaultFolder>a</defaultFolder>
<normalNotificationEnabled>>false</normalNotificationEnabled>
<errorNotificationEnabled>>false</errorNotificationEnabled>
<consolidateNormalNotification>>false</
consolidateNormalNotification>
<consolidateErrorNotification>>false</
consolidateErrorNotification>
<fieldMappings>
<fieldMapping>
<qcFieldName>name</qcFieldName>
<qcFieldLabel>Name</qcFieldLabel>
<ppmfieldToken>REQ.DESCRPTION</ppmfieldToken>
<ppmfieldPrompt>RFC Summary:</ppmfieldPrompt>
<fieldControl>Bidirectional</fieldControl>
<allowValueMap>>false</allowValueMap>
<ppmToQCValueMaps/>
<qcToPPMValueMaps/>
</fieldMapping>
<fieldMapping>
<qcFieldName>req-comment</qcFieldName>
<qcFieldLabel>Description</qcFieldLabel>
<ppmfieldToken>REQD.RFC.DESCRPTION</ppmfieldToken>
<ppmfieldPrompt>RFC Description:</ppmfieldPrompt>
<fieldControl>Bidirectional</fieldControl>
<allowValueMap>>false</allowValueMap>
<ppmToQCValueMaps/>
<qcToPPMValueMaps/>
</fieldMapping>
<fieldMapping>
<qcFieldName>dev-comments</qcFieldName>
<qcFieldLabel>Comments</qcFieldLabel>
<ppmfieldToken>REQD.RFC_EFFECT_NO_CHANGE</ppmfieldToken>

```

```

<ppmfieldPrompt>Effect of no change:</ppmfieldPrompt>
<fieldControl>Bidirectional</fieldControl>
<allowValueMap>>false</allowValueMap>
<ppmToQCValueMaps/>
<qcToPPMValueMaps/>
</fieldMapping>
</fieldMappings>
</mACConfig>
<mACConfig>
<configurationKey>0e262c3d-0c24-4a15-9fab-d7fd4f374eac</
configurationKey>
<serverURL>http://16.186.74.187:8888/qcbin/</serverURL>
<userName>beta</userName>
<password>
#!#7MZueENT}E5DaAa8-Mw:<:/zOs/Cm16KprC:|P*OrR< 1V?RsmR*EHxya
4Gm3DTSu&1aptWfGd7:@pzNzV_1r2KEBjH:9,bU}BoG<F:QsmXQ.x ~SNPF:-o/
(L`fbl/-mWy9n+qZ11c NMn 5XORb/1PLJ@gF&-
?WaVluL@PvD4MtfQgVbnY4dya3Um>#!#
</password>
<timeZone>Etc/GMT+12</timeZone>
<domain>BETA</domain>
<project>beta1</project>
<versioning>>false</versioning>
<enabled>>false</enabled>
<qcMajorVersion>11</qcMajorVersion>
<qcMinorVersion>5</qcMinorVersion>
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<entityType>Requirement</entityType>
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<errorNotificationEnabled>>false</errorNotificationEnabled>
<consolidateNormalNotification>>false</
consolidateNormalNotification>
<consolidateErrorNotification>>false</
consolidateErrorNotification>
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<qcFieldLabel>Name</qcFieldLabel>
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<ppmfieldPrompt>RFC Summary:</ppmfieldPrompt>
<fieldControl>Bidirectional</fieldControl>
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<ppmToQCValueMaps/>
<qcToPPMValueMaps/>
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</fieldMappings>
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