

Complete MDM Taxonomy Operations Using MDM JAVA API



Applies to:

This article applies to SAP Master Data Management. For more information, visit the [Master Data Management homepage](#).

Summary

SAP MDM Taxonomy has acquired a good amount of attention from all data modelers and business analysts due to its sheer complex level representation of hierarchical data with attributes. While Integrating MDM with Portal the biggest challenge is to maintain the Taxonomy using MDM JAVA APIs. This article is a step by step procedure for maintaining Taxonomy through MDM JAVA API

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Overview

SAP MDM Taxonomy has acquired a good amount of attention from all data modelers and business analysts due to its sheer complex level representation of hierarchical data with attributes. While Integrating MDM with Portal the biggest challenge is to maintain the Taxonomy using MDM JAVA APIs

The Document aims at covering all the aspects of SAP MDM Taxonomy management via MDM JAVA API. It explains the step by step procedure for the following operations on Taxonomy

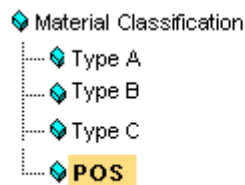
- 1) Fetching Taxonomy Attribute values (text, numeric and coupled)
- 2) Creating a record along with Attribute values
- 3) Updating a record with Attribute Values
- 4) Deleting Taxonomy value from a record.

Pre-requisites

- 1) All the required JAR files are already referenced.
- 2) One should know how to create connection with MDM Repository.
- 3) Should fetch the FieldIDs and TableIDs before hand.

Step 1 Fetching taxonomy attributes values

Consider the below given Taxonomy. We shall fetch all the attributes for the hierarchy value "POS".



The image below shows you all the linked attributes to the leaf node "POS".

Attributes						
	Linked	Name	Type	Alias	Priority	
		INDUSTRY_CATEGORY	Text		Normal	
		ITEM_CATEGORY	Text		Normal	
		ITEM_LANGUAGE	Text		Normal	

The MDM JAVA API code to fetch all the linked attributes to the leaf node and the attribute Values is given below. First fetch the RecordID for the leaf node "POS" by using "`RetrieveRecordsByValueCommand`" and search for the RecordID of POS in Taxonomy table "Material classification".

Here I have hardcoded the RecordID fieldID and TableID for the sake of demo which can be ignored in case of using the field and table codes.

```

RetrieveAttributeLinksCommand objRetrieveAttributeLinksCommand = new RetrieveAttributeLinksCommand(objConnect
objRetrieveAttributeLinksCommand.setRecordId(new RecordId("R6"));
objRetrieveAttributeLinksCommand.setTaxonomyTableId(new TableId("T97"));
objRetrieveAttributeLinksCommand.setSession(strUserSessionID);
objRetrieveAttributeLinksCommand.setIncludeAncestors(true);
try {

    objRetrieveAttributeLinksCommand.execute();

} catch (CommandException e1) {
    TODO Auto-generated catch block
}
AttributeProperties [] AttributeProperties = objRetrieveAttributeLinksCommand.getAttributes();
AttributeId objAttributeId = null;
for(int i=0;i<AttributeProperties.length;i++)
{
    RetrieveAttributeCommand atcom= new RetrieveAttributeCommand(objConnectionPool);
    atcom.setSession(strUserSessionID);
    atcom.setTaxonomyTableId(new TableId("T97"));
    atcom.setAttributeId(AttributeProperties[i].getId());
    try {
        atcom.execute();
    } catch (CommandException e2) {
        // TODO Auto-generated catch block
        e2.printStackTrace();
    }
    AttributeProperties atp = atcom.getAttribute();
    if(atp.getClass().toString().equalsIgnoreCase("class com.sap.mdm.schema.TextAttributeProperties"))
    {
        /*****Attribute name*****/
        String ID = (AttributeProperties[i].getId().toString());

        /*****Attribute ID*****/
        String Name = (AttributeProperties[i].getName().toString());

        System.out.println("Text Attribute Name : "+ Name+ " Text Attribute ID : "+ID);
        TextAttributeProperties textAttribute = (TextAttributeProperties)atp;
        TextAttributeValueProperties []pnew = textAttribute.getTextAttributeValues();
        for(int properties=0;properties<pnew.length;properties++)
        {
            /*****Attribute Value ID*****/
            String TextName= (pnew[properties].getName().toString());

            /*****Attribute Value Name*****/
            String TextID = (pnew[properties].getId().toString());

            System.out.println("Text AttributeValue Name : "+ TextName + " Text AttributeValue ID : "+TextID);
        }
    }
    else if(atp.getClass().toString().equalsIgnoreCase("class com.sap.mdm.schema.NumericAttributeProperties"))
    {
        /*****Attribute ID*****/
        String NumericID = (AttributeProperties[i].getId().toString());

        /*****Attribute Name*****/
        String NumericName = AttributeProperties[i].getName().toString();

        System.out.println("Numeric Attribute Name : "+ NumericName + " Numeric Attribute ID : "+NumericID);
    }
    else if(atp.getClass().toString().equalsIgnoreCase("class com.sap.mdm.schema.CoupledAttributeProperties"))
    {
        /*****Attribute ID*****/
        String CoupledID = (AttributeProperties[i].getId().toString());

        /*****Attribute Name*****/
        String CoupledName = AttributeProperties[i].getName().toString();
    }
}

```

When you execute the given code in JAVA you shall get the desired output as below.

Values maintained in MDM

Property	Value
Name	INDUSTRY_CATEGORY
Alias	
Type	Text
Multi-valued	No
Definition	
Image	

Text Values	Properties
ARMAGNAC	Text Value: ARMAGNAC
BEER	
AQUAVIT	
BITTER	
AMARETTO	
RUM	

Output

```
<terminated> Taxonomy [Java Application] C:\Program Files\Java\jdk1.5.0_14\bin\javaw.exe (Jan 22, 2010 9:46:22 AM)
Text Attribute Name : INDUSTRY_CATEGORY Text Attribute ID : A10_66652
Text AttributeValue Name : ARMAGNAC Text AttributeValue ID : TA2
Text AttributeValue Name : BEER Text AttributeValue ID : TA3
Text AttributeValue Name : AQUAVIT Text AttributeValue ID : TA4
Text AttributeValue Name : BITTER Text AttributeValue ID : TA5
Text AttributeValue Name : AMARETTO Text AttributeValue ID : TA6
```

Step 2 Creating a record with attribute values

For creating a record with attribute values, it follows the same step for a normal record creation. The only additional step for populating EmptyRecord object with attribute values is written as follows.

```
try {
    objEmptyRecord.setFieldValue(new FieldId("F572_66625"), new LookupValue(new RecordId("R6")));
} catch (IllegalArgumentException e1) {
    // TODO Auto-generated catch block
    e1.printStackTrace();
} catch (MdmValueTypeException e1) {
    // TODO Auto-generated catch block
    e1.printStackTrace();
}

//IF its a Text Attribute
try {
    objEmptyRecord.setAttributeValue(new FieldId("F572_66625"),
        new AttributeId("A10_66652"),
        new TextAttributeValue( new TextAttributeValueId( "TA2" )));
} catch (IllegalArgumentException e) {
    // TODO Auto-generated catch block
    e.printStackTrace();
} catch (MdmValueTypeException e) {
    // TODO Auto-generated catch block
    e.printStackTrace();
}
}
```



```
try {
    objRecord.setFieldValue(new FieldId("F572_66625"), new LookupValue(new RecordId("RO")));
} catch (IllegalArgumentException e1) {
    // TODO Auto-generated catch block
    e1.printStackTrace();
} catch (MdmValueTypeException e1) {
    // TODO Auto-generated catch block
    e1.printStackTrace();
}

ModifyRecordCommand objModifyRecordCommand = new ModifyRecordCommand(objConnectionPool);
objModifyRecordCommand.setSession(strUserSessionID);
objModifyRecordCommand.setRecord(objRecord);
objModifyRecordCommand.setModifyAnyway(true);
try
{
    objModifyRecordCommand.execute();
}
catch (CommandException e)
{
    e.printStackTrace();
}
```

Related Content

www.help.sap.com

www.help.sap.com/javadocs

For more information, visit the [Master Data Management homepage](#).

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