

SAP Manufacturing  
Intelligence and Integration  
How-To Guide – MDO Indexes



# **How to Set Up and Use the SAP MII – MDO Indexes**

**Applicable Release: MII 15.1**

**Version 1.0**

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# SAP MII How-To-Guide for MDO Indexes

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<b>Document Version</b>	<b>Description</b>	<b>Author</b>
1.0	Initial version	Sindhu Hariharan

The value of y will be incremented by 1 for a new version of the How-To-Guide for a new version of MII.

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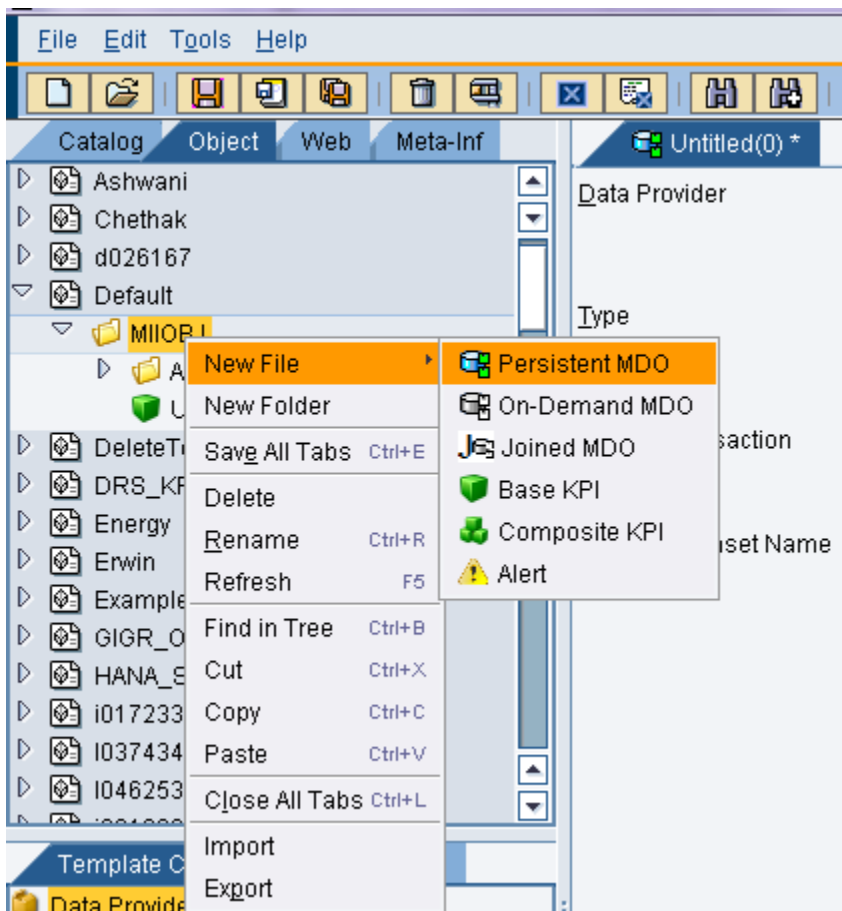
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## 1.1 MDO Enhancements with Indexes

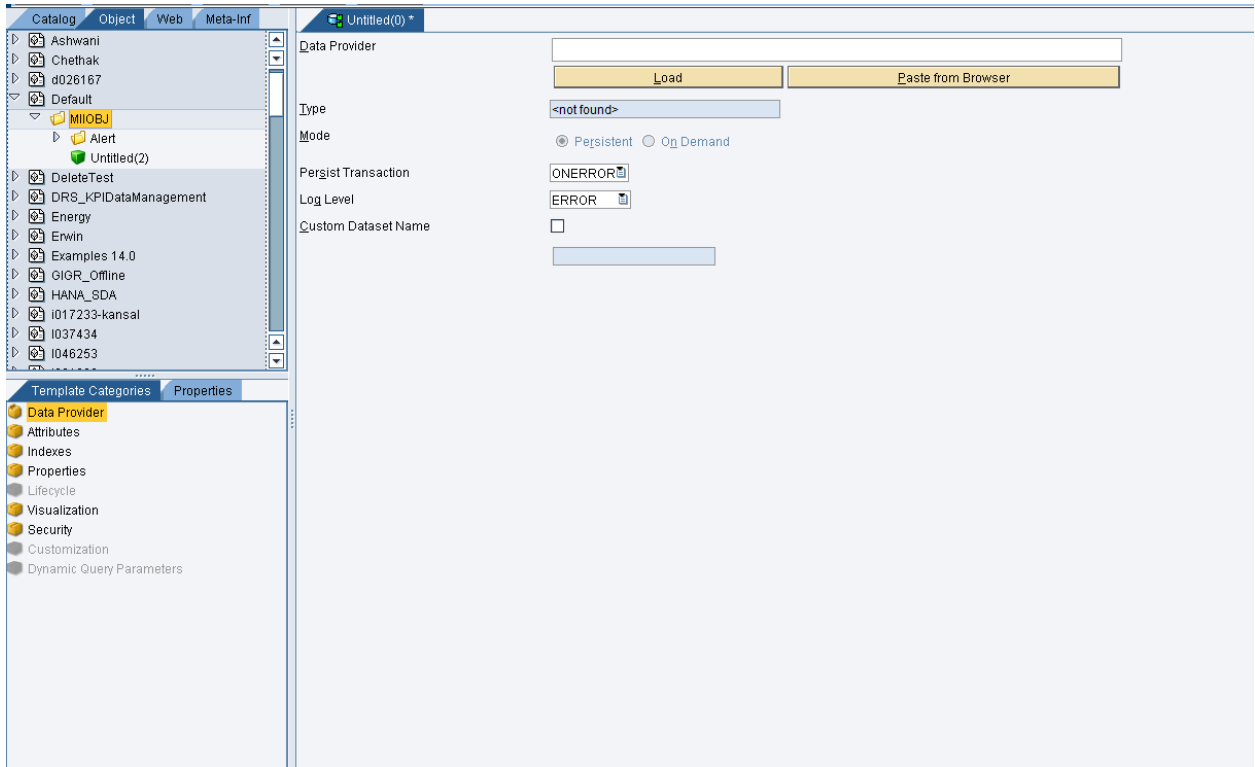
Manufacturing Data Objects (MDO) to define object models and data structures and to persist data. MDO indexes supports Persistent MDO by increasing the performance of data provider while persists the data is returned.

## 2.1 Creating a Persistent MDO

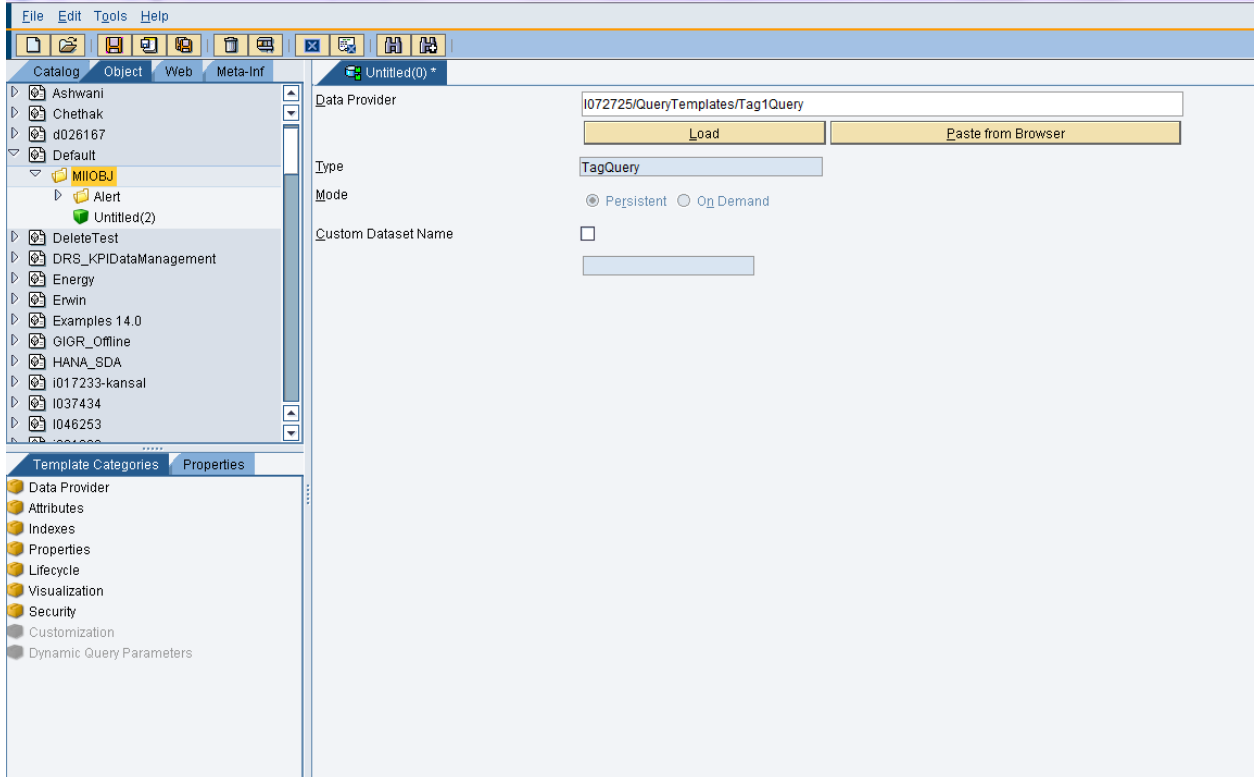
1. In Object tab; Expand and Select Default -> MIIOBJ
2. Right Click-> New -> Persistent MDO



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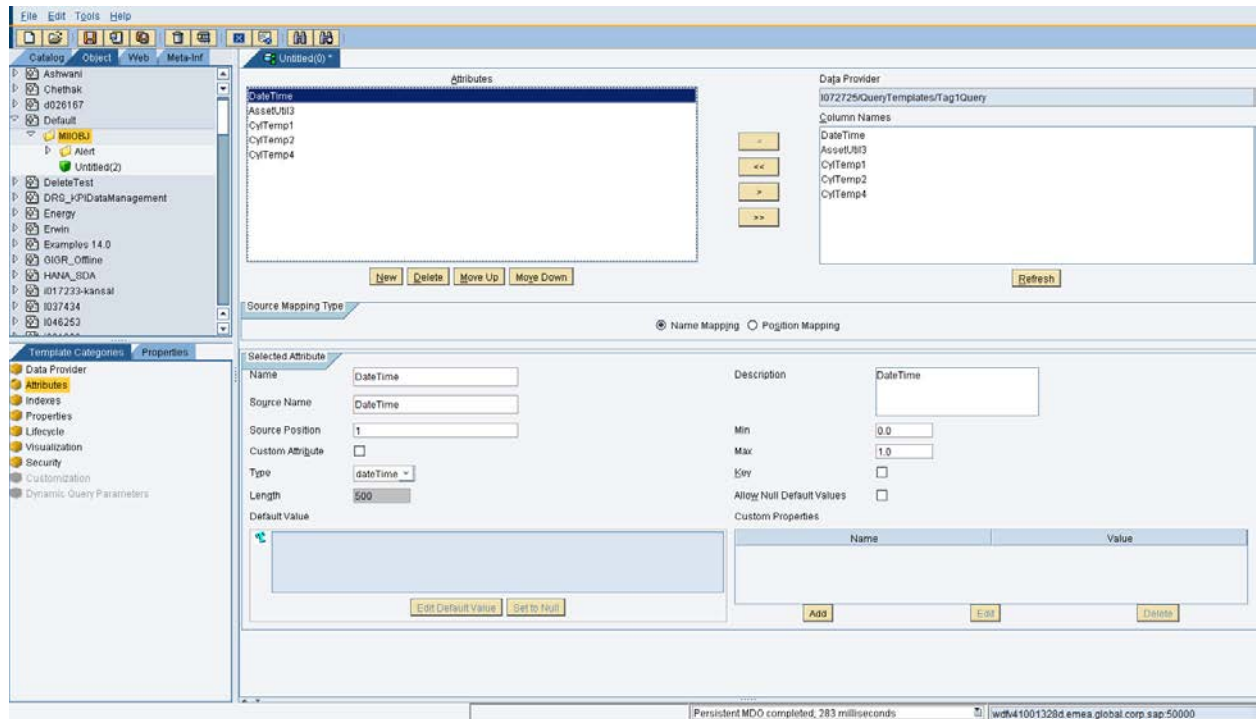
3. Add the Data Provider (Ex: Any Query Template – TagQuery1) by clicking on Load



4. Go to Template Categories – Attributes

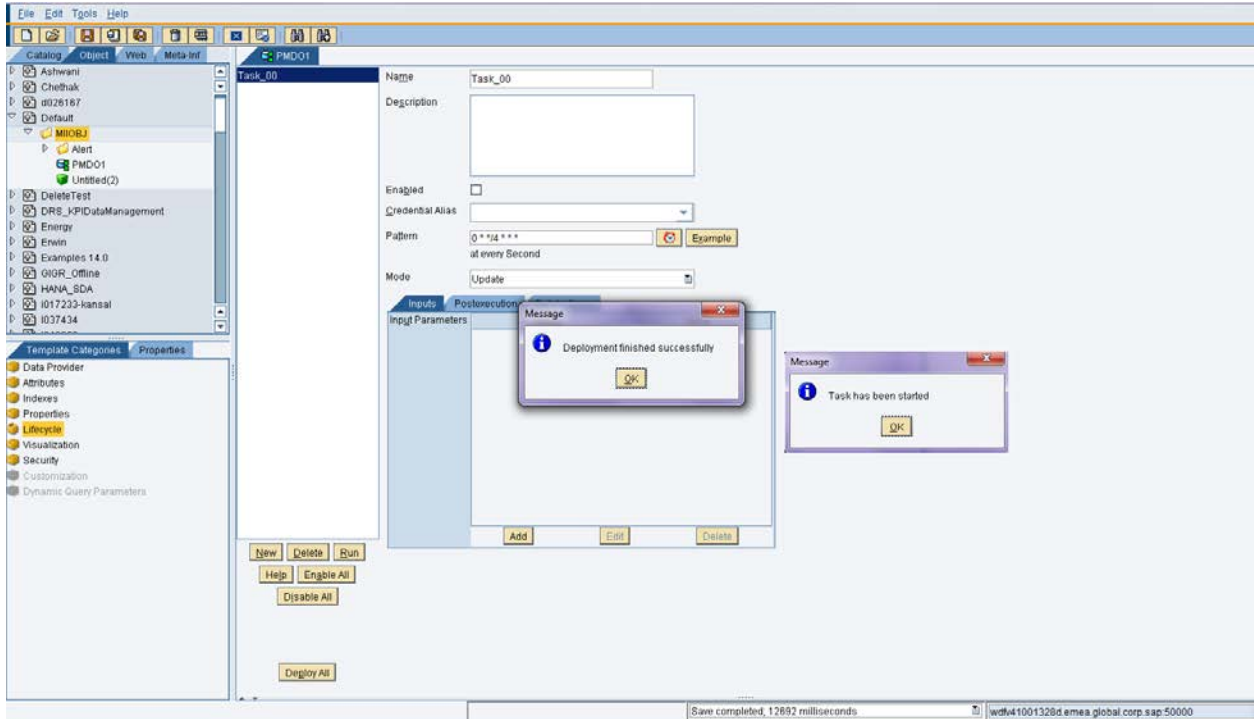
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## 5. Map the Attributes of Data Provider Query to MDO



6. Go to Template Categories – Lifecycle
7. Create a new task (Ex: Task\_00)
8. Enable the Task
9. Select the Frequency Pattern as 0 \* \*/4 \* \* \* (on 0<sup>th</sup> Second at every Minute at every 4 hours)
10. Select the Mode as Update
11. Save the MDO as 'PMDO1'
12. Deploy the Task
13. Run the Task

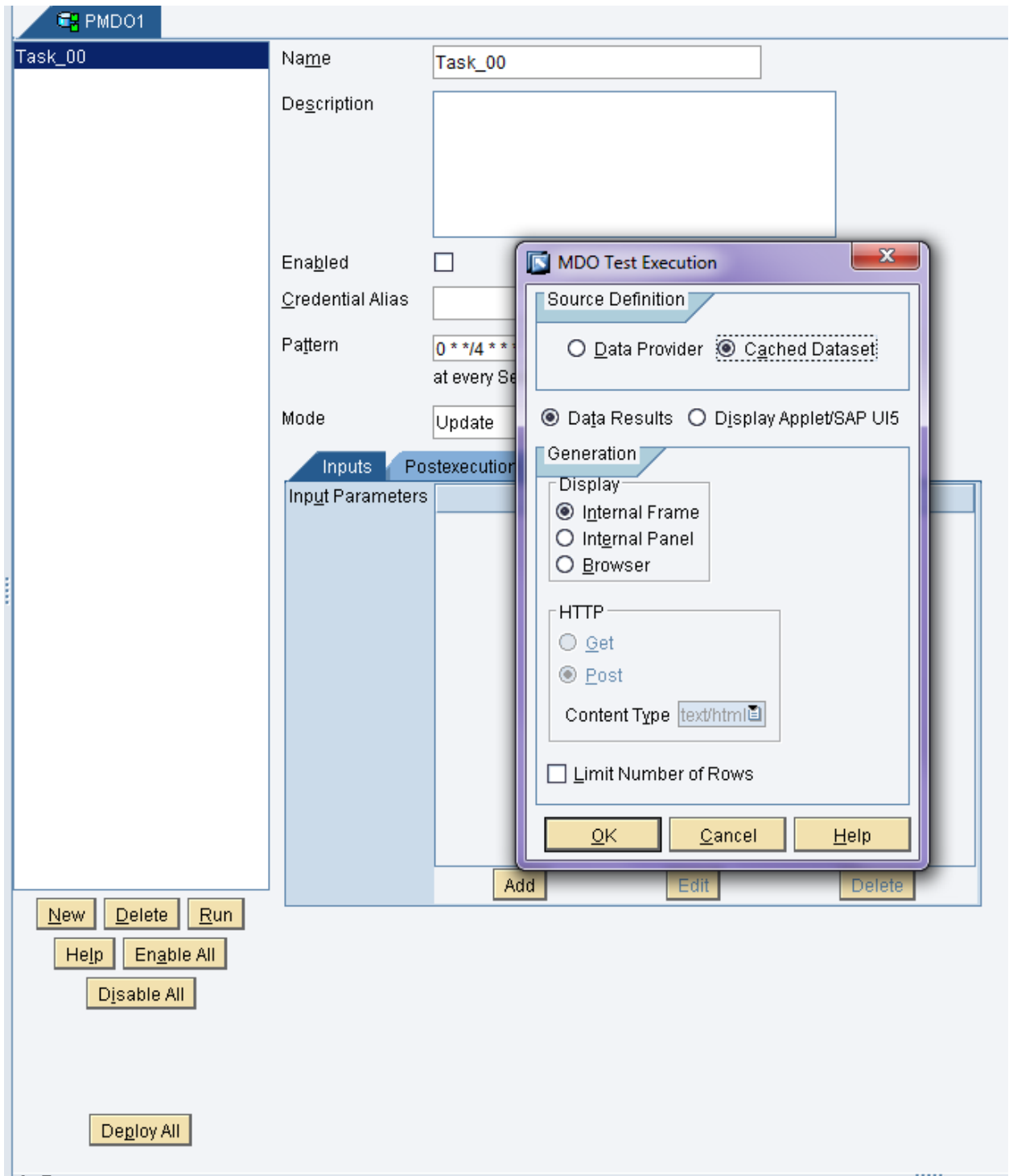
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14. Execute the PMO1 by Click on Test button () or by using Short key as Ctrl+T.



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15. MDO table will return with values

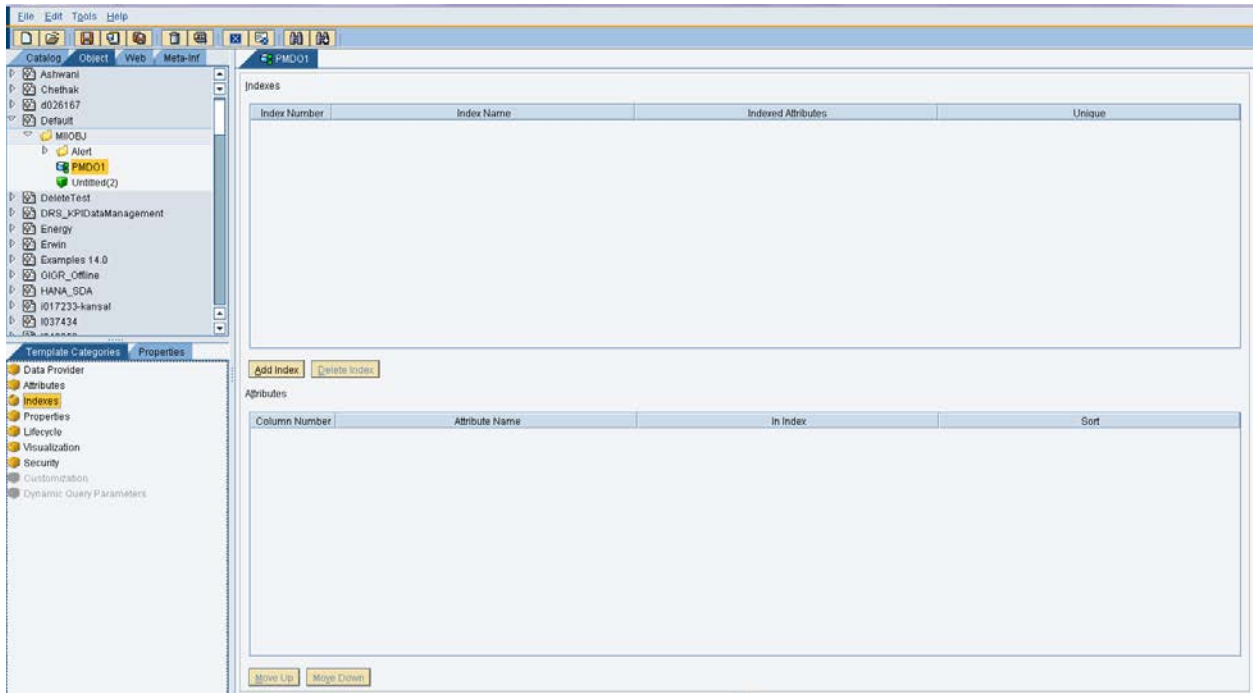
The screenshot shows the SAP MII interface. At the top, there is a tab labeled 'PMD01' and a window titled 'Task\_00'. The 'Name' field contains 'Task\_00' and the 'Description' field is empty. A 'Query Results - Default/MIIOBJ/PMD01' dialog box is open, displaying a table of data. The table has five columns: 'DateTime', 'AssetUtil3', 'CylTemp1', 'CylTemp2', and 'CylTemp4'. The data consists of 20 rows of numerical values. Below the table, it says 'Processing complete' and has a 'Close' button. At the bottom of the main window, there are several buttons: 'New', 'Delete', 'Run', 'Help', 'Enable All', 'Disable All', and 'Deploy All'.

DateTime	AssetUtil3	CylTemp1	CylTemp2	CylTemp4
2013-11-10T10:2...	86.708612367892	46.468849067356	59.800872346561	36.963327727508
2013-11-10T10:3...	87.986542744935	74.926791961373	102.307439581958	119.336794756106
2013-11-10T10:4...	90.711829512753	114.97344825728	139.090679071716	45.440467838856
2013-11-10T11:0...	84.512546823191	0.925126111443	1.108504672445	11.05964654583
2013-11-10T11:1...	86.127117138357	38.34529510197	46.850728157919	17.772702513371
2013-11-10T11:3...	89.052156248985	70.86640447126	90.611713285227	28.092923032588
2013-11-10T11:4...	89.4896629391	102.658132214177	138.496480854501	68.597434682792
2013-11-10T12:0...	84.108375966282	0	0	0
2013-11-10T12:1...	85.628207165993	36.45151548008	42.398207269262	30.244107342057
2013-11-10T12:3...	86.674383078313	68.187974855016	83.108911058101	81.869078439152
2013-11-10T12:4...	90.261289391853	101.343932913207	123.843456729909	101.655277189211
2013-11-10T12:5...	92.911557209907	137.900630826212	170.886846960912	83.620056590424
2013-11-10T13:1...	85.942881954678	27.302540391847	38.881728076972	35.073819121737
2013-11-10T13:2...	87.371877090096	63.813164628524	82.161271449738	73.751624235536
2013-11-10T13:4...	88.58973949932	96.780450841054	120.199781175778	113.405877900699
2013-11-10T13:5...	91.043144953441	131.667955338754	163.794495100951	147.675897545237

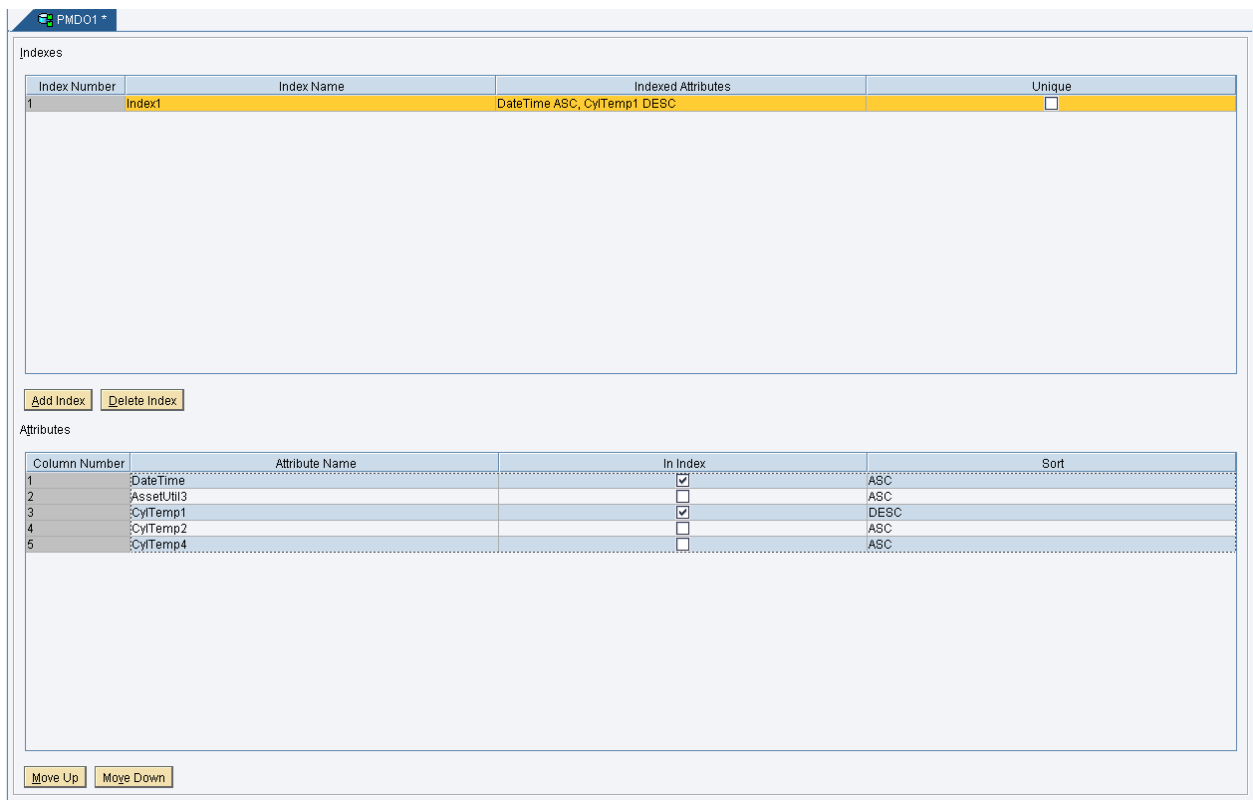
## 2.2 Adding Indexes to Persistent MDO

1. Edit the Persistent MDO (Ex: Default/MIIOBJ/PMD01)
2. Go to Template Categories – Indexes

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3. Click on Add Index. Enter the Index Name as Index1.
4. Select the attributes for Index1 by checking In Index flag in Attributes table and select the Sort order as ASC or DESC accordingly.



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5. Add one more index and provide the name as Index2
6. Select the attributes as well sort order.
7. Set the Index as Unique which acts as Unique Constraint
8. Save the MDO

PMDO1\*

Indexes

Index Number	Index Name	Indexed Attributes	Unique
1	Index1	DateTime ASC, CylTemp1 DESC	<input type="checkbox"/>
2	Index2	DateTime DESC, CylTemp4 DESC	<input checked="" type="checkbox"/>

Attributes

Column Number	Attribute Name	In Index	Sort
1	DateTime	<input checked="" type="checkbox"/>	DESC
2	AssetUtili3	<input type="checkbox"/>	ASC
3	CylTemp1	<input type="checkbox"/>	ASC
4	CylTemp2	<input type="checkbox"/>	ASC
5	CylTemp4	<input checked="" type="checkbox"/>	DESC

## 2.3 How to verify whether MDO indexes are created or not

1. Connect to your local DB where MII tables deployed.
2. Query on NW Basis table name 'BC\_DDDBTABLERT'  
Sample Syntax:  
Select \* from BC\_DDDBTABLERT where BC\_DDDBTABLERT.NAME='MDO14779';
3. You can see same Indexes that defined in Persistent MDO exists in XML Value column result.

NOTE: Sample syntax provided above is on MS SQL DB type. SQL Syntax may vary for different DB types.