

Integrating Universal Worklist in SAP Master Data Management

Applies to:

SAP MDM 5.5 SP4 patch1

NW04 SP16

NW04s SPS9

Summary

This article will show you:

- scenario samples with Universal Worklist (UWL) for SAP Master Data Management (MDM)
- how to configure UWL for SAP MDM, and for custom MDM development (new portal content and repository)
- code samples of MDM WF Java API related to UWL.

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Author Bio



After working 6 years in USA as Consultant in SAP R/3, Laszlo joined SAP AG in 2001 as Java developer working with SAP NetWeaver since the very first releases achieving cross platform, software production and development experience. With the very first releases of MDM, Laszlo contributed to the integration of MDM content with Enterprise Portal.

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Business Benefits

Master Data Management (MDM) Workflow (WF) handles the tasks specific to MDM power processes, and these tasks are stored in MDM Core. The MDM power processes require rich client user interface (GUI). Integrating the Universal Worklist (UWL) functionalities with MDM Workflow and with MDM iViews is a benefit for MDM from all existing UWL features in Enterprise Portal, like:

- One single point for all daily tasks of a user with personalization options and with tasks from other systems.
- Improved Collaboration on Portal using the Knowledge Management and Collaboration (KMC) features.
- UWL is integrated with Guided Procedures, and this opens a road to Business Process Management (BPM).

Key Features

The following UWL Actions can be performed on MDM WF objects:

- Display all MDM Jobs/Tasks assigned to a user
- Maintain and Display which MDM records are assigned to Unlaunched MDM WF Jobs
- Display the MDM records assigned to MDM WF Tasks
- Delete the MDM WF Jobs and/or Tasks.

Scenarios with MDM UWL – Examples

Display MDM WF Tasks and Jobs

Features:

- Unified list of all tasks of a user originating from MDM repositories (cross repositories) and other systems, like R/3.

The screenshot shows the SAP Universal Worklist interface. At the top, there are tabs for 'Tasks (7 / 9)', 'Alerts', 'Notifications', and 'Tracking'. Below the tabs, there are filters for 'Show: New and In Progress Tasks (7 / 9)', 'Select a Subview...', and 'All'. A 'Create Task' button and 'Show Filters Hide Preview' link are also visible.

Subject	From	Sent	Priority	Due	Status	System ID
Feedback Request	MDM 5.5, Master Data Expert MD_SPEC	Today	Normal	Oct 23, 2006	New	AdflocSystem
L-updat record	admin	Yesterday	Normal	Yesterday	New	iviews_test_SP4
L-branch	admin	Today	Normal	Today	New	iviews_test_SP4
UWL testing on Distributors	admin	Today	Normal	Today	New	iviews_test_SP4
UWL testing on Distributors	admin	Today	Normal	Today	New	iviews_test_SP4
Test Workflow 1 BP Process	Admin2	Today	Normal	Today	In Progress	SAP_MDM_Repository_BuPa
Test Workflow 1 BP Process	Admin2	Today	Normal	Today	In Progress	SAP_MDM_Repository_BuPa
Test Workflow 1	Admin2	Today	Normal	Today	New	SAP_MDM_Repository_BuPa
Products WF Test	Admin2	Today	Normal	Today	New	SAP_MDM_Repository_Prod

Row 1 of 9

L-updat record

MDM Status: Unlaunched
 Due: Yesterday
 User Names: Admin2
 Workflow Table: Products

Priority: Normal
 Sent: Yesterday by admin
 Job ID: 10189
 Status: New

[Launch](#) [Add/Remove Records](#)

You can also:
[Create Ad-Hoc Request](#)
[View All My Open MDM Jobs](#)

- Personalization: the available MDM Workflow attributes in UWL Items are: mdmStatus, stepId, stepName, jobId, userNames, workflowTable. They are available for personalization in UWL MDM Views My Open MDM Jobs, My Open MDM Tasks, and Completed MDM Tasks:

The screenshot shows the SAP Universal Worklist interface with the filter 'My Open MDM Jobs (4 / 6)' selected. The table below lists the tasks:

MDM Status	Priority	Due	Sent	Subject	From	User Names	Job ID	Workflow Table	System ID
Unlaunched	Normal	Yesterday	Yesterday	L-updat record	admin	Admin2	10189	Products	iviews_test_SP4
Unlaunched	Normal	Today	Today	L-branch	admin	Admin2	10194	Products	iviews_test_SP4
Unlaunched	Normal	Today	Today	Products WF Test	Admin2	Admin2	10082	Products	SAP_MDM_Repository_Prod
Unlaunched	Normal	Today	Today	UWL testing on Distributors	admin	Admin2	10195	Distributors	iviews_test_SP4
Unlaunched	Normal	Today	Today	UWL testing on Distributors	admin	Admin2	10196	Distributors	iviews_test_SP4
Unlaunched	Normal	Today	Today	Test Workflow 1	Admin2	Admin2	10084	Distributors	SAP_MDM_Repository_BuPa

Row 1 of 6

L-updat record

MDM Status: Unlaunched
 Due: Yesterday
 User Names: Admin2
 Workflow Table: Products

Priority: Normal
 Sent: Yesterday by admin
 Job ID: 10189
 Status: New

[Launch](#) [Add/Remove Records](#)

You can also:
[Create Ad-Hoc Request](#)

Add/Remove Records

Select a Job, then click on UWL Add/Remove Records. Depending on the repository and the workflow table, the UWL will launch the corresponding portal page that allows adding and removing records from a job:

The screenshot shows the Universal Worklist interface with a search form and results. The search form is titled "Search Text - Products" and includes fields for Keyword, Distributor, Part Number, and Name. The results are displayed in a table titled "Result Set - Products".

Part Number	Name
<input checked="" type="checkbox"/> TFV-6.00X28.00-SPR2	Back-Up Ring
<input type="checkbox"/> TFV-6.00X28.00-CONT	Back-Up Ring
<input type="checkbox"/> TFV-6.00X28.00-SOLID	Back-Up Ring

Launch MDM WF Job

This UWL action is set in runtime (not in UWL Content Configuration), and it is returned by the MDM WF Java API. Clicking on the UWL action Launch, the MDM WF Job will be available for processing:

The screenshot shows the Universal Worklist interface with a list of MDM tasks. The task list is titled "My Open MDM Tasks" and includes columns for MDM Status, Priority, Due, Sent, Subject, From, User Names, Job ID, Step ID, Step Name, Workflow Table, and System ID.

MDM Status	Priority	Due	Sent	Subject	From	User Names	Job ID	Step ID	Step Name	Workflow Table	System ID
Received	Normal	Today	Today	Test Workflow 1 BP Process	Admin2	Admin2	10002	2	BP Process	SAP_MDM_Repository_BuPa	
Received	Normal	Today	Today	Test Workflow 1 BP Process	Admin2	Admin2	10003	2	BP Process	SAP_MDM_Repository_BuPa	
Received	Normal	Today	Today	Products WF Test Products	Admin2	Admin2	10002	2	Products	SAP_MDM_Repository_Prod	

The detailed view for "Test Workflow 1 BP Process" shows the following information:

- MDM Status: Received
- Due: Today
- User Names: Admin2
- Step ID: 2
- Status: In Progress
- Priority: Normal
- Sent: Today by Admin2
- Job ID: 10002
- Step Name: BP Process

Delete MDM WF Task or Job

This UWL action is set in runtime (not in UWL Content Configuration), and it is returned by the MDM WF Java API. Clicking on the UWL action Delete, the MDM WF Job or Task will be deleted.

MDM Collaboration on Portal

UWL allows to create an Ad-Hoc Request as sub-task of any UWL Item. In particular, creating an Ad-Hoc Request as sub-task of an MDM WF Job and/or Task allows Collaboration on Portal:

The screenshot displays the SAP Universal Worklist (UWL) interface. On the left, there is a sidebar with 'My Open MDM Jobs' and 'UWL testing on Distributors' details. The main area shows a 'Create Task Subprocess' dialog box with the following fields:

- Title: UWL testing on Distributors
- Priority: Normal
- Due: 10/23/2006 00:00
- Description: do not Launch until called Business Ops !!
- Map Decision to Parent Task:
- Issue Tasks Sequentially:

Below the dialog, a table lists the tasks:

#	Task	Type	Assigned To
1		Action Item	

On the right side of the UWL interface, there is a 'Task' section with a table showing workflow details:

Workflow Table	System ID
Products	views_test_SP4
Distributors	views_test_SP4
Distributors	views_test_SP4
Products	views_test_SP4

At the bottom right, there is a 'You can also:' section with a link to 'Create Ad-Hoc Request'.

Architecture Information

With MDM 5.5 SP4 a new component was shipped, the MDM UWL Connector with the following characteristics:

- implements the [UWL public APIs](#)
- uses the available MDM 5.5. SP04 patch1 WF Java APIs
- connects the MDM repositories using the MDM Connector
- integrates with MDM iViews with UWL action type IViewLauncher
- pulls the tasks from MDM WF, and the valid operations on a task are returned by the MDM WF Java API - Delete and Launch can be performed in UWL.

Prerequisites

Software Components

- Installed Portal with KMC
- Installed SAP MDM Server, MDM Console, MDM Data Manager Client, and MDM Workflow
- Deployed MDM Software Component Archives: MDMJAVAAPI04_0.sca, BPMDMTECHN04_0.sca, and BPMDMAPPLI04_0.sca.

Note: at this time, all software components are available on [SAP Service Marketplace](#) for those customers who already downloaded SP4 patch0 (no patch). The sca files and the MDM Server must have the same patch level otherwise the connection from Portal to MDM repositories will not work.

User Access

- EP/J2EE: System Administration, Content Administration, User Administration, UWL Administration, J2EE SDM (in these areas advanced skills are recommended)
- MDM Console, MDM Data Manager Client, MS Visio

MDM Systems

- Portal is running and UWL is operational
- MDM Data Manager Client can maintain records of initialized SAP MDM repositories, for example SP4_BUSINESS_PARTNER_INI, SP4_PRODUCTS_INI
- the content of SAP MDM repositories is visible in Portal MDM iViews.

Note: recommended to review the document MDM 5.5 SP04 Enterprise Portal Content available on [SAP Service Marketplace](#) with emphasis on Technical Description and Configuration.

Process Flow

This process flow describes further details and aspects related to Configuring Universal Worklist for MDM in the context of two scenarios:

- configuring UWL for SAP MDM (shipped MDM 5.5 Business Packages with SAP MDM Repositories)
- configuring UWL for custom development (MDM portal content and repositories)

Note: there are steps only for testing / checking of an existing configuration, and these are mainly for troubleshooting purpose. These steps too are included in the configuration process.

Configuring UWL for SAP MDM

These steps are related to the configuration of the SAP MDM components.

Step	Process Step Name	Description
1	Check connection (only testing)	Portal system object must be operational
2	Refresh the UWL Services	Activate the MDM UWL Connector after deployment
3	Create UWL System	Create a new UWL Provider for MDM using MdmUwlConnector
4	Check UWL mdm config (only testing)	The UWL Configuration must show the mdm xml file
5	Clear UWL Cache	To ensure all users will get refreshed data after UWL configuration
6	Display MDM UWL (only testing)	Display the MDM Tasks in UWL

Step 1 - Check connection (only testing)

Logon to Portal with System Administration access, and check the portal system objects (alias SAP_MDM_Repository_BuPa and SAP_MDM_Repository_Prod) to make sure the connection from Portal to repositories works successfully:

System Administration -> System Configuration -> System Landscape -> Portal Content -> <yourPcdFolder> -> MDM Repository - Business Partner -> select Open -> Connection Test. This is the proof of a successful connection from Portal to MDM Server:

Overview MDM Repository - ...

Save Close Preview Refresh Edit Mode Display: Connection Tests

System Connection Tests

You can test the connectivity to the backend application represented by the current system object. Choose the relevant tests.
Note: The test is based on the properties currently defined in the system object. It does not check if the system properties are correct.

System Connection Tests			
	Test Name	Description	Status
<input type="checkbox"/>	Connection Test for Connectors	Tests the connection to a backend system using an associated connector	✓

Line 1 / 1

Test Clear Results

Results

✓ **Test Connection with Connector**

Test Details:
The test consists of the following steps:
1. Retrieve the default alias of the system
2. Check the connection to the backend application using the connector defined in this system object

Results
Retrieval of default alias successful
Connection successful

Check the SAP MDM system objects to make sure the value of the attribute Tables for Workflows is blank (this is how the SAP MDM Business Packages are shipped).

Logon to Portal with Content Administration access, and check the iViews to make sure the repository content is displayed. For example:

Content Administration -> Portal Content -> Browse Portal Content -> Content Provided by SAP -> specialist -> MDM Application -> iViews -> Business Partners -> Result Set.

The screenshot shows the SAP MDM Portal interface. At the top, there's a breadcrumb 'Portal Content | Multiple Property Replacement'. Below that, a search bar and navigation tabs 'Browse' and 'Search' are visible. A tree view on the left shows a hierarchy: 'Business Partners' (expanded) containing 'Analytics', 'Current Search', 'Item Details', 'Item Details', 'Key Mapping', 'Qualifiers', 'Result Set', 'Search P...', 'Search Q...', and 'Search T...'. A context menu is open over 'Result Set', listing options: 'Open', 'Preview' (highlighted), 'Change ID', 'Copy', 'Cut', and 'Delete'. Below the tree, a tab 'MDM_BUSINESS_PARTNERS' is active, showing 'Comparison (0)'. A summary bar indicates 'Found Business Partners: 7 of 7' with a 'My Bags' link. An 'Add To Comparison' button is present. A table with columns 'Partner Number' and 'Name 1' contains two rows: 'STL-2' and 'STL-3'. At the bottom right, it says 'Page 2 / 2'.

Step 2 – Refresh the UWL Services

Refresh the services of application com.sap.netweaver.bc.uwl by navigating to System Administration -> Support -> Portal Runtime -> Application Console. The dependent application com.sap.mdm.uwl must be visible.

com.sap.netweaver.bc.uwl show

Portal Application Name	Depends on	Dependents
com.sap.netweaver.bc.uwl	com.sap.portal.ivs.connectorservice SAPJ2EE::library:tc~kmc~bc.uwl~api SAPJ2EE::service:webdynpro com.sap.portal.appintegrator.sap.bwc	service: com.sap.netweaver.bc service: com.sap.netweaver.bc application: com.sap.mdm.uwl application: tc.eu.odi.conn.uwl

Step 3 – Create UWL System

The repositories must be registered as workflow providers in the UWL Service. For example, with the system aliases SAP_MDM_Repository_BuPa, and SAP_MDM_Repository_Prod new UWL Systems can be created:

System Administration -> System Configuration -> Universal Worklist & Workflow -> Universal Worklist Administration -> click on New, at Create New System Connection, select Connector Type MdmUwlConnector, enter the system alias, then Save.

Universal Worklist - Configuration	
Universal Worklist Systems	
Here you can define connections to systems as item providers for the UWL Service. The 'System Alias' is an alias for the system as defined in the system landscape. For the UWL Service after defining a new system connection. If you configure Web Dynpro system specified as a Web Dynpro system.	
System Alias	Connector Type
AdHocSystem	AdHocWorkflowConnector
SAP_MDM_Repository_BuPa	MdmUwlConnector
ActionInbox	ActionInboxConnector
SAP_MDM_Repository_Prod	MdmUwlConnector

Step 4 – Check UWL mdm config (only testing)

On Universal Worklist Administration page, click on Click to Administrate Item Types and View Definitions -> then the mdm Current Configuration is visible:

Universal Worklist Configuration Content			
You can administrate Universal Worklist configuration content (in XML) here. You can set up provider systems and connectors. For troubleshooting the configuration content click here .			
Current Configurations	Upload New Configuration	Reset Personalizations	
Display or download the XML configurations here. Configurations with low priority are either shipped or generated by SAP.			
Configuration Name	Priority	Zip Format	Modified Date
mdm	Medium	<input type="checkbox"/>	2006.08.25 02:44:26 PM

Here there is no need to configure anything, since this configuration is shipped by SAP.

Note: the MDM WF Job/Task is focusing on a main table. All records assigned to a Job/Task must belong to the same main table. The SAP MDM Business Packages provide portal content focusing on main tables like Business Partners (table code MDM_BUSINESS_PARTNERS), and Products (table code MDM_PRODUCTS). For example, for Business Partners, this is reflected in the UWL Configuration Content in the following:

- pcd link to the launched iView:

```
<UWLConfiguration version="1.0">
  <ItemTypes>
    <ItemType name="uwl.completedtask.mdm.all.S&P_MDM_Repository_BuPa" connector="MdmUwlConnector" defaultView="iView">
      <Actions>
        <Action name="showMdmDetails" groupAction="no" handler="iViewLauncher" returnToDetailViewAllowed="yes" label="showMdmDetails">
          <Properties>
            <Property name="taskId" value="{item.jobId}"/>
            <Property name="externalRequestEvent" value="com.sap.pct.mdm.appl.masteriviews.events.externals.ViewTaskR">
            <Property name="iView" value="pcd:portal_content/com.sap.pct/specialist/com.sap.pct.mdm.appl.mdm_550/com.sap.pct.mdm.appl.roles/com.sap.pct.mdm.appl.roles_mdm_550">
          </Properties>
        </Action>
      </Actions>
    </ItemType>
  </ItemTypes>
</UWLConfiguration>
```

- Mapping of UWL Item Types to MDM WF Task Type encoded in MdmUwlConnector:

UWL Item Type	MDM Task Type	MDM Task Status
uwl.completedtask.mdm.all.SAP_MDM_Repository_BuPa	Any type	Task.COMPLETED or Task.TRASH
uwl.task.mdm.jobs.SAP_MDM_Repository_BuPa	Task.JOB_TASK_TYPE	-
uwl.task.mdm.tasks.SAP_MDM_Repository_BuPa	Task.SIMPLE_TASK_TYPE, and default	-

Note: please notice, the above table does not specify the SAP MDM WF table code since it is defaulted. The system object does not specify either the Tables for Workflows (the attribute value is blank). This will be different (!) for custom development.

In addition to the standard UWL attributes, the available MDM WF attributes in UWL Items are the following:


- mdmStatus – the Status of the MDM WF Job/Task
- stepId – StepID of the MDM WF Task
- stepName – StepName of the MDM WF Task
- jobId – JobID of the MDM WF Job/Task
- usernames – the MDM repository users assigned as processors of the MDM WF Job/Task
- workflowTable – the records on which the MDM WF Job/Task is focusing.

The above attributes are available for personalization in the following UWL MDM Views:

- My Open MDM Jobs
- My Open MDM Tasks
- Completed MDM Tasks.

Step 5 - Clear UWL Cache

On Universal Worklist Administration page, click on Cache Administration Page, then Clear Cache:

 Cache Operation Successful

Universal Worklist Items Cache

Maintain the item cache for the Universal Worklist. The cache needs to be cleared when item type customization is complete

System Alias: *

Removes all items from the cache. The items are retrieved again from the pr

Removes only expired items from the UWL cache

[Return To UWL Configuration Page](#)

Step 6 - Display MDM UWL (only testing)

Logon to portal with a user assigned to the portal user group Master Data Expert, and navigate to Workflow - > Universal Worklist. The Connection Status in UWL displays the results:

Connection Status				
System	Connector	Last Access Date	Status	Message
SAP_MDM_Repository_BuPa	MdmUwlConnector	Oct 16, 2006 12:02:02 AM	Successful	
AdHocSystem	AdHocWorkflowConnector	Oct 16, 2006 12:01:57 AM	Successful	
SAP_MDM_Repository_Prod	MdmUwlConnector	Oct 16, 2006 12:02:02 AM	Successful	
ActionInbox	ActionInboxConnector	Oct 16, 2006 12:01:57 AM	Successful	

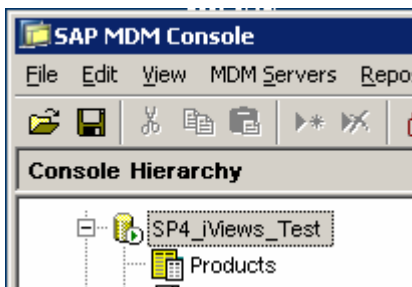
[Refresh](#)

Configuring UWL for custom MDM repositories

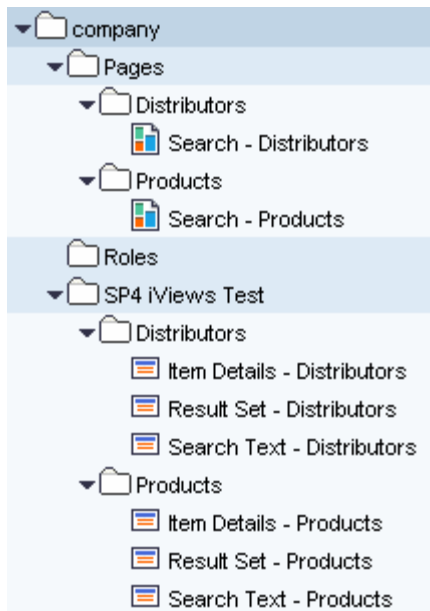
These steps are related to the configuration of UWL for custom developed MDM portal content and repositories enabling UWL for MDM WF Tasks from multiple tables and cross-repository. For our development example, we will work with a custom repository SP4_iViews_Test, and the main tables Product and Distributors (the WF Tasks of these tables will be pulled by UWL).

Prerequisites:

- The UWL for standard SAP MDM content must work (see above Configuring UWL for SAP MDM), otherwise UWL will not work for custom developed MDM portal content and MDM repositories.
- The repository SP4_iViews_Test, must be available using MDM Data Manager Client (logon and data maintenance possible):



- The custom developed MDM portal content is available in PCD, for example for tables Product and Distributors:



For further details see the document MDM 5.5 SP04 Enterprise Portal Content, chapter Portal Content Development for Custom Repositories).

This means the iViews can display content and there is already an operational connection to MDM repository SP4_iViews_Test using the portal system alias iviews_test_SP4 (Connection Test is successful):

The screenshot shows the SAP Enterprise Portal interface. The top navigation bar includes 'Home', 'Business Partners', 'Products', 'Workflow', and 'Test Workset'. The current page is 'Search - Products'. The search criteria are: Keyword 'Contains' and Distributor 'Starts with'. The result set shows 'Found Products: 12,719 of 12,719' with a table listing products like '010306-1' and 'Unit@ Hall'.

Note:

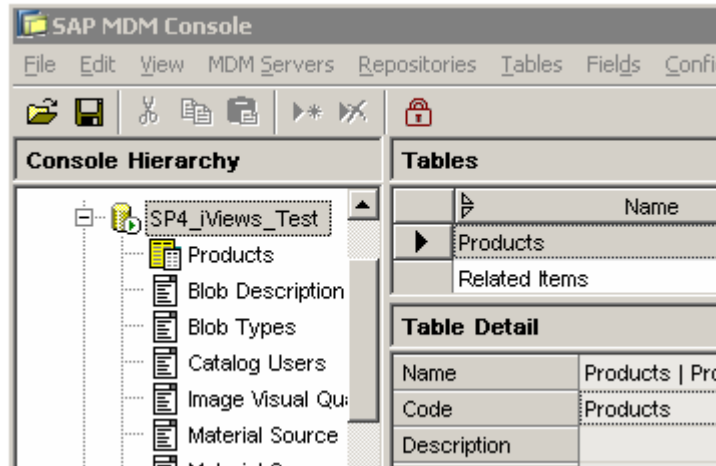
- the custom developed iViews must use the MDM iView Templates.
- the maximum length of system alias is 25 characters, as required by UWL Systems.

The summarized steps of Configuring UWL for custom MDM repositories are the following:

Step	Process Step Name	Description
1	Set the Tables with Workflows attribute	Portal system object <systemAlias> must know the main tables
2	Create Portal Content with Workflow enabled MDM iViews	UWL will launch MDM iView/page
3	Refresh the UWL Services	Activate the MDM UWL Connector
4	Integrate UWL with MDM iViews	Create UWL Content Configuration to launch MDM iViews by UWL
5	Upload the UWL Configuration	Activate the UWL configuration
6	Create UWL System Connection	Using the MdmUwlConnectgor, create a new UWL Provider for system alias
7	Clear UWL Cache	To ensure all users will get refreshed data after UWL configuration
8	Display MDM UWL	Check the MDM Tasks in UWL and Connection Status

Step 1 – Set the Tables with Workflows

Display the code of the tables Products and Distributors:



The attribute Tables with Workflows of portal system object MDM Repository – iViews – Test SP4 alias iviews_test_SP4 contains those main tables of the repository which UWL pulls the MDM WFTasks from. Set the value of attribute Tables with Workflows to Products,Distributors (tables codes separated by comma):

Property Editor - MDM Repository - iViews - Test SP4

Property Category:

▶ MDM 5.5 Host Server

▶ Repository Language

▶ Repository Name

▶ Schema Language

▶ Server Password

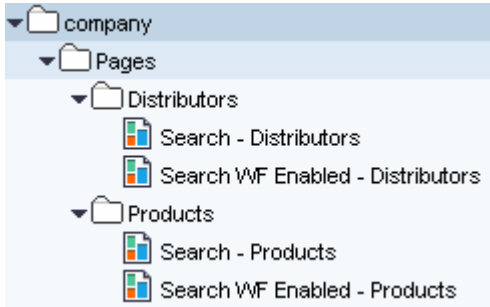
▶ Tables with Workflows

Note: once set the table codes in portal system object, the UWL will pull only (!) the WF tasks from those tables. If the table codes are not set in portal system object (the attribute Tables with Workflows is blank), then all WF tasks of all tables of repository SP4_iViews_Test will be pulled by UWL – in this case for all tables with WF Tasks must create portal content (not only for Products, and Distributors). If there is no portal content for a table with WF tasks, then an error will be displayed when clicking on UWL Show Records or Add/Remove Records (the UWL will launch the iView of the shipped SAP MDM portal content – as fallback solution).

Step 2 – Create Portal Content with Workflow enabled MDM iViews

For example, for table Products:

1. copy the page Search – Products, and paste it as delta link (DL), then change the DL page name to Search WF Enabled – Product and its ID for example to com.company.pct.mdm.appl.test.prod.search_wf_enabled:



Edit the page attribute:

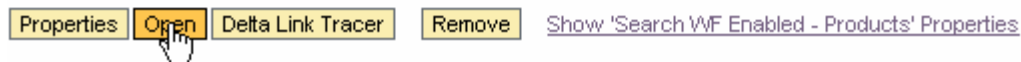


and Save the page.

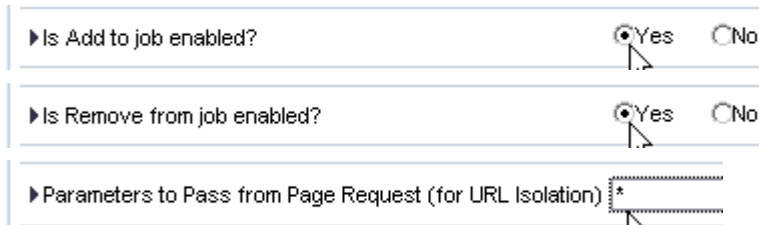
2. edit the DL of the iView on page: open the page Search WF Enabled – Product, and on this page, select the iView Resust Set – Product, and Open this iView:

☐	Type	Name	ID	Visible	Fixed
<input checked="" type="checkbox"/>		Result Set - Products	com.company.pct.mdm.appl.test.prod.result_set	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Item Details - Products	com.company.pct.mdm.appl.test.prod.item_details	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Search Text - Products	com.company.pct.mdm.appl.test.prod.search_text	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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then set the following iView attributes:

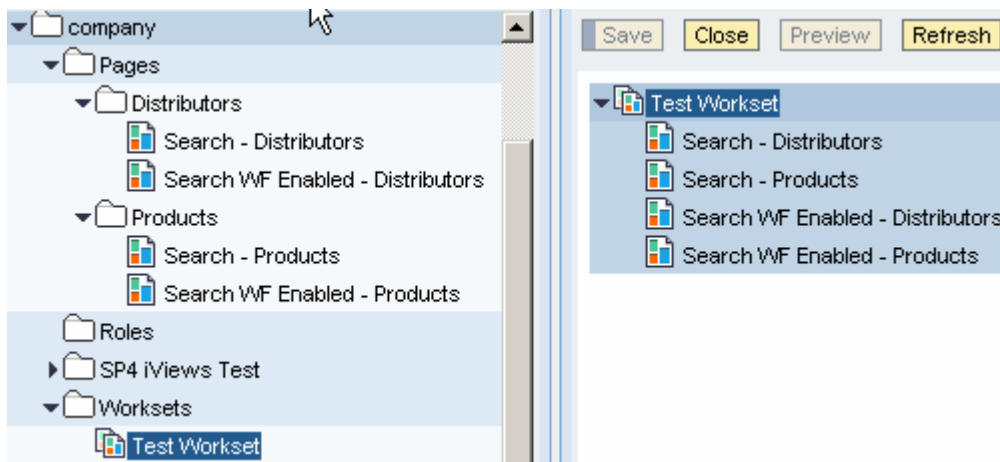


and Save the iView.

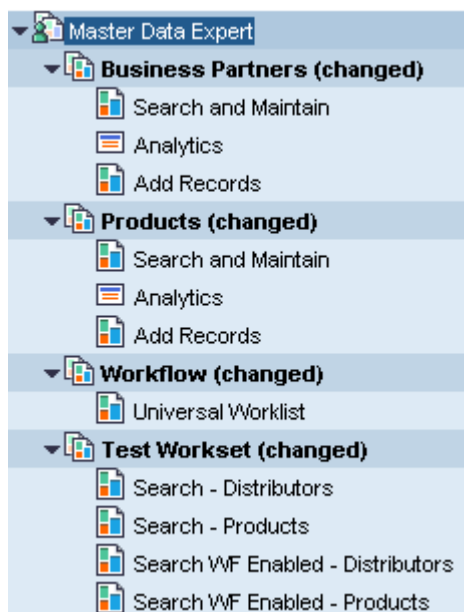


Execute a Preview of the WF enabled pages to make sure the content from the corresponding tables is visible.

3. add the pages to a new workset Test Workset:



4. add the workset Test Workset as DL to the portal MDM role Master Data Expert:



If a portal user should only see his or her data, then following settings are required:

- Create a user with the same ID in the MDM repository.
- Allow individual ("self") user mapping in the portal personalization
- Set the *UserMapping* attribute for the portal system object to *Admin/User*.

Step 3 – Refresh the UWL Services

Refresh the services of application com.sap.netweaver.bc.uwl by navigating to System Administration -> Support -> Portal Runtime -> Application Console. The dependent application com.sap.mdm.uwl must be visible.

Portal Application Name	Depends on	Dependents
com.sap.netweaver.bc.uwl	com.sap.portal.ivs.connector.service SAPJ2EE::library:tc~kmc~bc.uwl~api SAPJ2EE::service:webdynpro com.sap.portal.appintegrator.sap.bwc	service: com.sap.netweaver.bc service: com.sap.netweaver.bc application: com.sap.mdm.uwl application: tc.eu.odi.conn.uwl

Step 4 – Integrate UWL with MDM iViews

Create UWL Content Configuration xml file for the new UWL Item Types

- uwl.completedtask.mdm.all.<systemAlias>.<tableCode>
- uwl.task.mdm.jobs.<systemAlias>.<tableCode>
- uwl.task.mdm.tasks.<systemAlias>.<tableCode>

and for the UWL Actions type IViewLauncher:

- "showMdmDetails"
- "addRecordsToJob".

For example, the UWL <ItemType> tag for uwl.task.mdm.jobs.SP4_iViews_Test.Products:

```
<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE UWLConfiguration PUBLIC "-//SAP//UWL1.0//EN"
'uw1_configuration.dtd' [

] >

<UWLConfiguration version="1.0">
<ItemType name="uwl.task.mdm.jobs.iviews_test_SP4.Products"
connector="MdmUwlConnector" defaultView="MdmViewJobs"
defaultAction="showMdmDetails" executionMode="default">
<Actions>
<Action name="addRecordsToJob" groupAction="no" handler="IViewLauncher"
returnToDetailViewAllowed="yes" launchInNewWindow="yes">
<Properties>
<Property name="taskId" value="{item.jobId}"/>
<Property name="externalRequestEvent"
value="com.sap.pct.mdm.appl.masteriviews.events.externals.ViewTaskRecordsHan
dler"/>
<Property name="iview"
value="pcd:com.sap.pct/specialist/com.sap.pct.mdm.appl.mdm_550/com.sap.pct.m
```

```

dm.appl.roles/com.sap.pct.mdm.appl.master_data_expert/com.company.pct.mdm.ap
pl.test/com.company.pct.mdm.appl.test.prod.search_wf_enabled"/>
    <Property name="mode" value="result_set"/>
  </Properties>
  <Descriptions default="Add/Remove Records"/>
</Action>
</Actions>
</ItemType>
...
</UWLConfiguration>

```



You can copy the item types of the predefined UWL mdm Content Configuration (delimited by the xml tag <ItemTypes>), and adapt it for the system alias iviews_test_SP4 and table codes Products and Distributors.



If you add custom Actions and/or Views to your UWL Content Configuration, then the description can be [language dependent](#).

The integration of UWL with MDM iViews is possible with the above configuration:

- The UWL IViewLauncher generates a url link in a popup window. The above value for "iview" is equal to the PCD Location of the page Search WF Enabled – Products on the MDM portal role. To find this value, open the role in Edit panel, then select the page Search WF Enabled – Products, and view the page attribute PCD Location. The above properties "taskId", "externalRequestEvent", and "mode" will be included in the generated url as attributes. The MDM iView Template Result Set receives these parameters with their values.
- The above parameter value \${item.jobId} is replaced by UWL with the jobId returned from MDM WF Java API.

For example, a url link generated by UWL when clicking on Add/Remove Records:


```

http://<portalHost>:<port>/irj/servlet/prt/portal/prteventname/Navigate/prtro
ot/pcd!3aportal_content!2fevery_user!2fgeneral!2fdefaultDesktop!2fframeworkP
ages!2fframeworkpage!2fcom.sap.portal.innerpage!2fcom.sap.portal.contentarea
?NavigationTarget=ROLES%3A%2F%2Fportal_content%2Fcom.sap.pct%2Fspecialist%2F
com.sap.pct.mdm.appl.mdm_550%2Fcom.sap.pct.mdm.appl.roles%2Fcom.sap.pct.mdm.
appl.master_data_expert%2Fcom.company.pct.mdm.appl.test%2Fcom.company.pct.md
m.appl.test.prod.search_wf_enabled&externalRequestEvent=com.sap.pct.mdm.appl
.masteriviews.events.externals.ViewTaskRecordsHandler&taskId=10189&wi_id=101
89_1_admin&destination=iviews_test_SP4&item_id=15&task=L-
+updat+record&logsys=L-
+updat+record&uname=USER.R3_DATASOURCE.<portalUserId>&lang=EN&NavMode=1

```

Step 5 – Upload the UWL Configuration

On Universal Worklist Administration page, click to Administrate Item Types and View Definitions and upload the new UWL Content Configuration xml file:

 Successfully registered the configuration

Universal Worklist Configuration Content

You can administrate Universal Worklist configuration content (in XML) here. You can set up provider systems and connectors in For troubleshooting the configuration content [click here](#)

Current Configurations | **Upload New Configuration** | Reset Personalizations

You can upload the XML configuration on this page.

Configuration Name:

Choose a Valid XML or ZIP File:

High Priority:

Adapt to System:

The configuration must be visible:

Universal Worklist Configuration Content

You can administrate Universal Worklist configuration content (in XML) here. You can set up provider systems and connectors in For troubleshooting the configuration content [click here](#)

Current Configurations | **Upload New Configuration** | Reset Personalizations

Display or download the XML configurations here. Configurations with low priority are either shipped or generated by the system.

Configuration Name	Priority	Zip Format	Modified Date
mdm	Medium	<input type="checkbox"/>	2006.08.25 02:44:26 PM
aib	Medium	<input checked="" type="checkbox"/>	2006.10.15 08:46:24 PM
uwl_gp.config	Medium	<input type="checkbox"/>	2006.02.21 12:01:18 PM
uwl_mdm_test	Medium	<input type="checkbox"/>	2006.10.16 02:10:55 PM

Step 6 – Create new UWL System Connection

The system alias iviews_test_SP4 must be registered as UWL workflow provider:

System Administration -> System Configuration -> Universal Worklist & Workflow -> Universal Worklist Administration -> click on New, at Create New System Connection, select Connector Type MdmUwlConnector, enter the system alias, then Save:

Create New System Connection

System Alias: *

Connector Type: *

Web Dynpro Launch System:

User Roles:

System Configuration Groups:

Delta Pull Channel Refresh Period (in Seconds):

Delta Pull Channel Snapshot Refresh Period (in Minutes):

The new UWL System must be visible:

Universal Worklist - Configuration

Universal Worklist Systems


Here you can define connections to systems as item providers for the Universal Worklist. The 'Connector Type' is defined through the connection. The 'System Alias' is an alias for the system as defined in the system land. If you use a 'WebFlowConnector' or 'AlertConnector', you must register item types with the UWL service after you have configured Web Dynpro applications on a different WAS to the WAS for the system alias, then that system is visible in the UWL system.

System Alias	Connector Type	Action	Activate Connection
AdHocSystem	AdHocWorkflowConnector		Deactivate
SAP_MDM_Repository_BuPa	MdmUwlConnector		Deactivate
ActionInbox	ActionInboxConnector		Deactivate
SAP_MDM_Repository_Prod	MdmUwlConnector		Deactivate
iviews_test_SP4	MdmUwlConnector		Deactivate

Delta Pull Channel Refresh Period (in Seconds): 60

Step 7 – Clear UWL Cache

On Universal Worklist Administration page, click on Cache Administration Page, then Clear Cache:

 Cache Operation Successful

Universal Worklist Items Cache

Maintain the item cache for the Universal Worklist. The cache needs to be cleared when item type customization is complete.

System Alias: *

Removes all items from the cache. The items are retrieved again from the provider.

Removes only expired items from the UWL cache.

[Return To UWL Configuration Page](#)

Step 8 – Display UWL

Navigate to Workflow -> Universal Worklist, and the Connection Status is successful for all UWL Systems:

The screenshot shows the SAP NetWeaver Portal interface. The top navigation bar includes 'Home', 'Business Partners', 'Products', 'Workflow', and 'Test Workset'. The 'Workflow' tab is selected. Below the navigation bar, the 'Universal Worklist' section is visible. A table titled 'Connection Status' displays the following data:

System	Connector	Last Access Date	Status
SAP_MDM_Repository_Prod	MdmUwlConnector	Oct 16, 2006 4:32:28 PM	Successful
ActionInbox	ActionInboxConnector	Oct 16, 2006 4:32:15 PM	Successful
iviews_test_SP4	MdmUwlConnector	Oct 16, 2006 4:32:23 PM	Successful
AdHocSystem	AdHocWorkflowConnector	Oct 16, 2006 4:32:15 PM	Successful
SAP_MDM_Repository_BuPa	MdmUwlConnector	Oct 16, 2006 4:32:34 PM	Successful

Below the table is a 'Refresh' button. The browser window title is 'SAP NetWeaver Portal - Microsoft Internet Explorer'.

Code samples

Here are few code snippets of how the available MDM 5.5. SP4 WF Java APIs are executed in the MDM UWL Connector:

```
// how to get the WF Jobs/Tasks of a user already connected to catalog
tasks = catalog.GetWorkflowTasks(Task.ALL);
for (int i = 0; i < tasks.length; i++) {
    // process a task
    Task task = tasks[i];
    TaskCommand tc = catalog.GetTaskCommands(task);
    if (task.GetType() == Task.JOB_TASK_TYPE) {
        // task is an MDM WF Job, and the allowed
        // operations on this Job are in tc
    } else if (task.GetType() == Task.SIMPLE_TASK_TYPE) {
        // task is an MDM WF Task, and the allowed
        // operations on this Task are in tc
    }
}
```

```
// how to execute a command on a Job/Task
TaskCommand[] tcList = tc.Children();
for (int k = 0; k < tcList.length; k++) {
    TaskCommand tcNext = tcList[k];
    if (tcNext.IsEnabled()) {
        // is the Step I want to execute ?
        // ...if...
        catalog.ExecuteTaskCommand(tcNext);
        // ...
    }
}
}
```

Support

In addition to the UWL configuration steps described above, here are few hints that already helped the colleagues when working with older releases:

- if tasks are not visible in UWL, and there are tasks in MDM repository tables, then:
 - check the UWL log files
 - restart the services of component com.sap.netweaver.bc.uwl
 - restart the service of component com.sap.mdm.uwl
 - -clear the UWL Cache
 - increase the time-out for UWL
- if there are still no results in UWL, then:
 - check the version of the MDM software components (they must be originated from the same installation bundle)
 - restart J2EE/Portal, and restart the above services.
- when upgrading MDM Server and/or J2EE/Portal, then:
 - restart J2EE/Portal
 - restart MDM Server.
- when upgrading the MDM applications running on Portal/J2EE, then:
 - remove all mdm components visible in SDM Undeploy view (com.sap.mdm.* and com.sap.pct.mdm.*)
 - using SDM, Deploy the sca files from the installation bundle you got
 - restart (!) J2EE/Portal.

The SAP official support for MDM UWL is available in OSS system in component EP-PCT-MDM.

Related Content

- [SAP Service Marketplace](#) -> Planning – MDM 5.5 SP04 Master Guide
- [SAP Service Marketplace](#) -> Planning – MDM 5.5 SP04 Enterprise Portal Content
- [Business Process Management – Universal Worklist and AdHoc Workflow](#)
- [SAP Note 921870 The UWL APIs](#)
- [SAP Note 921758 How to access the universal worklist integration API](#)
- [Universal Worklist Configuration](#)
- [MDM 5.5 Online Help](#)
- [ISV Enabling Guide](#)
- [Online Help SAP NetWeaver Release 2004s](#)
- [Configuration of Guided Procedures with the Universal Worklist](#)
- [UWL Internationalization of XML Configuration](#)
- [UWL change view title](#)

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