

Developing and using “Get List” BAPI-Wrappers with ‘mass data’ in DOE



Applies to:

SAP NetWeaver Mobile 7.10 onwards. For more information, visit the [Mobile homepage](#).

Summary

While downloading data from the backend to DOE, using Get List BAPI-wrapper with the ‘mass data’ option enabled helps in managing very large volumes of data. This tutorial explains the expected signature of the GetList BAPI-Wrapper with mass data option enabled and the protocol for data exchange.

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Introduction

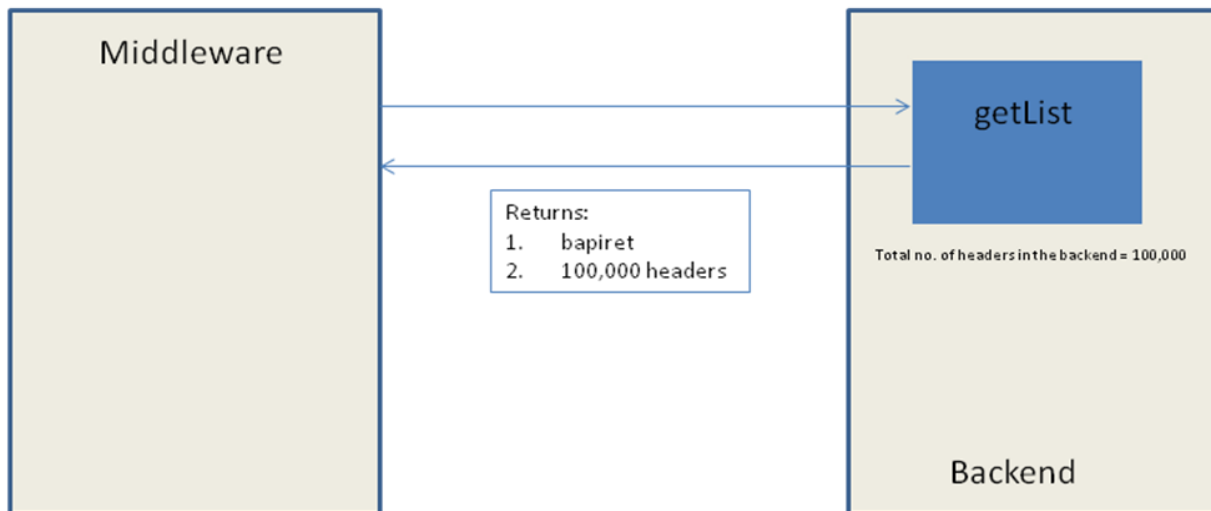
One of the key functionalities of DOE is to download data from a backend system and distribute it to mobile devices. Backend adapters are the components in DOE which enable this download of backend data. BAPI-wrappers with predefined interface patterns are primarily used in this paradigm.

This tutorial deals with the usage of Get List BAPI-Wrapper with 'mass data' option enabled. This is crucial when the data volumes in the backend system are so huge that a normal Get List BAPI-Wrapper becomes too slow or just will not work.

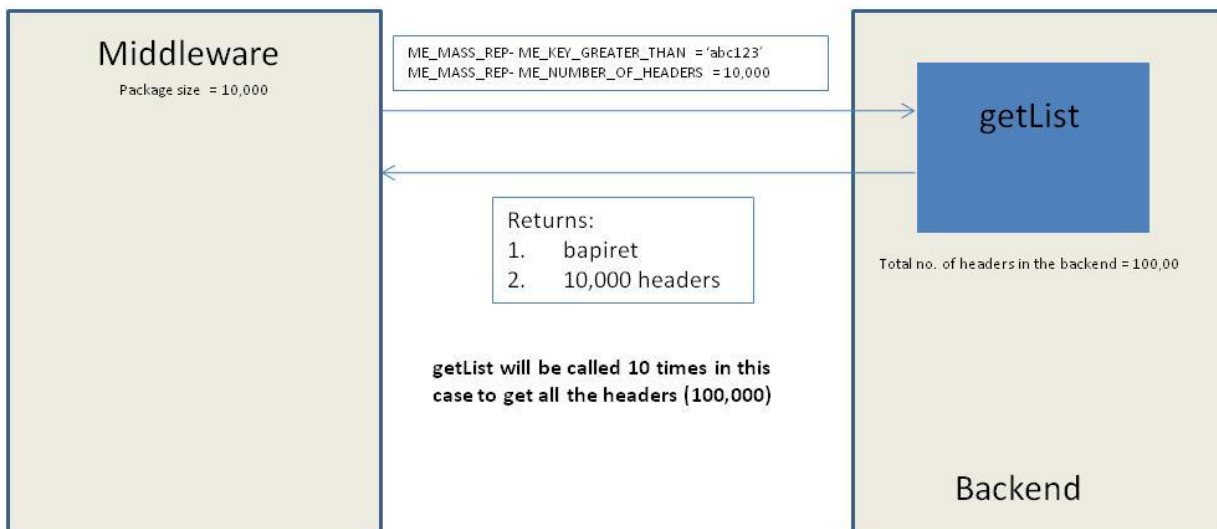
Please refer to the BAPI-Wrapper Adapter development guide for more details.

One picture is equivalent to a 1000 words, they say. So here are two pictures illustrating the difference between a normal Get List BAPI-Wrapper and a Get List BAPI-Wrapper with 'mass data' option enabled. In the case of Get List with mass data, the Get List BAPI-Wrapper will be called repeatedly with the last key of the previous call (the first call will have a blank last read key). The invocation stops when the backend system returns no headers.

Normal getList scenario



getList with Mass Data



Get List BAPI-Wrapper Signature

The signature of a normal Get List BAPI-wrapper has to be changed to include a new importing parameter, as shown in the example below:

```

1  function z_ord_getlist.
2  "-----
3  "Global Interface:
4  " IMPORTING
5  " VALUE(ME_MASS_REP) TYPE MEREPASS_REP1 OPTIONAL
6  " EXPORTING
7  " VALUE(RETURN) TYPE BAPIRET2
8  " TABLES
9  " T_TOP STRUCTURE ZMG_ORD_HDR
10 "-----
11
12 select * from zmg_ord_hdr into table t_top.
13
14
15
16 endfunction.
    
```

The structure should have the fields shown below. The field names and component types should be identical to the ones shown below.

Component	Type Category	Component Type	Data Type	Length	Decima	Short Description
ME_KEY_GREATER_THAN	Type	MEREPA_R3KEYS	CHAR	100		R/3 Key Short
ME_NUMBER_OF_HEADERS	Type	INT4	INT4	10		Natural number

The code in the Get List BAPI-wrapper should be changed to handle this new importing parameter like this:

1. The keys of the last record of the previous package will be concatenated into the ME_KEY_GREATER_THAN field of the parameter. For example, if you have 2 keys fields, with values '123' and 'abc', '123abc' will be the value of ME_KEY_GREATER_THAN. The BAPI-wrapper will have to use this to fetch the next package of data to be delivered to the middleware.
2. The BAPI-wrapper will also be passed the number of records to be returned via the ME_NUMBER_OF_HEADERS field of the parameter

Note: The above mentioned BAPI-Wrappers along with the code is available under function group SDOE_SAMPLE_BAPIWRAPPERS from SAP NetWeaver Mobile 7.10 onwards.

Design Time changes needed in the DOE Workbench

You can use a Get List with Mass Data by **checking** the flag, 'Use Mass Data' in the backend adapter screen. Of course, you will have to activate the backend adapter after the change.

The screenshot shows the 'Adapter Details' tab in the SAP DOE Workbench. The interface is divided into several sections:

- Data Object Details:** Data Object: USERDETAILS; SWCV Name: SAP BASIS 7.10; Direction: Download Only.
- Adapter Overview:** Adapter Name: USER_DET_BA; Synchronization Type: DOE TRIGGERED; Backend BO Name: ; Status: Active; Version: BCE0011; RFC Destination: BCECLNT000; Queue(s): DOEBWA_0W_00B_0*. A checkbox labeled 'Default adapter' is checked.
- BADI Exits:** Enhancement Spot Name, BADI Name, and Interface Name fields are empty.
- Bapi Wrappers:**

Get list	SMMW_USER_DETAILS_GETLIST	<input checked="" type="checkbox"/> Use Mass Data
Get detail	SMMW_USER_DETAILS_GETDETAILS	<input type="checkbox"/> Use Bulk <input type="checkbox"/> Call getList
Create		<input type="checkbox"/> Send Confirmation
Modify		<input type="checkbox"/> Send Confirmation
Delete		<input type="checkbox"/> Send Confirmation
Instance Push Function		
Corr Cleanup Function		
- Get Attachments:** Attachment Function Modules field is empty.

Configuration needed to support Get List with Mass Data

You can configure the number of headers to be returned in each call, by setting the parameter, **BACKEND_PACKAGE_SIZE** in the administration portal. Screenshots of navigation to this page are shown below. This value will be passed to the backend in each Get List BAPI-wrapper call. The backend system is free to override this value with any value more suited to the application in question.

The screenshot shows the SAP NetWeaver Mobile Administration interface. The 'Backend configuration' section is active, showing search and parameter configuration options. Two red circles highlight the 'BACKEND_PACKAGE_SIZE' parameter in the 'Parameter Key and Name' table and the 'Parameter List' table.

Parameter Key and Name Table:

Performance Relevant	Parameter Name	Description
<input checked="" type="checkbox"/>	BACKEND_PACKAGE_SIZE	PACKAGE SIZE USED IN GETMASSDATA
<input checked="" type="checkbox"/>	COMPARE_MEMO	Compare memo fields explicitly if backend says there is an update on the memo fields
<input checked="" type="checkbox"/>	PULL_ASSOCIATED_DELTA	NAMESPACE FOR MOBILE MIDDLEWARE PARAMETERS.
<input type="checkbox"/>	ACTIVE_ADAPTER	ACTIVE ADAPTER FOR THIS CLIENT
<input type="checkbox"/>	AUTH_DWLD_BE_DEST	BACKEND DESTINATIONS FOR DOWNLOADING USER AUTHORIZATIONS

Parameter List Table:

SWCV Name	Data Object Name	Adapter Name	Numeric Value
TESTDEMO2, 1.0 of SAP	DEMO2_ADP	TESTADP	10
TESTDEMO2, 1.0 of SAP	TEST_MASSDATA		2
TESTDEMO2, 1.0 of SAP	TEST_MASSDATA_Q		2

Related Content

[Development Cycle and Tools](#)

[Developer's guide](#)

For more information, visit the [Mobile homepage](#).

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