SAP® Mobile On-Site Billing by PROLOGA
Configuration Guide

Document History

Before you start the implementation, make sure you have the latest version of this document. You can find the latest version at the following location: http://service.sap.com/instguides -> *SAP Solution Extensions -> SAP Waste and Recycling Applications by PROLOGA -> Release 7.0*

The following table provides an overview of the most important document changes.

Version	Important Changes
1	Initial Version
2	Minor corrections
3	The content of this document has been changed to reflect the new SAP Gateway functionality that comes with Support Package 3. If you are using add-on 7.0 with Support Package 1 or 2 or if you do not use the SAP Gateway functionality please open a message for component XX-PART-PLG-UTL-OSB to request the corresponding version of this configuration guide.
4	Correction in the task settings

Table 1: Most important document changes

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1 Introduction

SAP® Mobile On-Site Billing by PROLOGA will support and optimize your business process regarding meter reading and billing & invoicing on site at the customer location. For that process all required data are downloaded from SAP for Utilities into the Mobile On-Site Billing solution transmitting the data to the mobile devices. On site at the customer location the meter reading result will be captured. Based on the connectivity available the billing and invoicing process will be performed Online in communication with the SAP backend or Offline on the mobile device.

The deep integration into SAP for Utilities enables a reliable and accurate process of reading, billing and invoicing on site, using the same validation, billing and invoicing rules as defined in the backend system and synchronized into the Mobile On-Site Billing solution.

SAP® Mobile On-Site Billing by PROLOGA supports a series of mobile devices. Installed in your company these units form the interface between meter reader and your SAP® backend system.

This document describes which steps are necessary to put *SAP® Mobile On-Site Billing by PROLOGA* into operation after you successful installed the add-on 7.0.

The content of this document has been changed to reflect the new SAP Gateway functionality that comes with Support Package 3. If you are using add-on 7.0 with Support Package 1 or 2 or if you do not use the SAP Gateway functionality please open a message for component XX-PART-PLG-UTL-OSB to request the corresponding version of this configuration guide.

1.1 System overview

By the implementation of the PROLOGA software are two different architecture opportunities available:

- The one system architecture that actually means the system is going to run within your SAP® as parallel system next to your SAP® Backend. Optionally, data transfer interface can be implemented for providing sufficient functionality and security.
- The double system architecture means 2 separated *SAP®* system, where a, interface will be used to provide the communication between the PROLOGA middleware software and your *SAP®* backend system. In this case, the interface for data transfer is mandatory.

In case the one system architecture was chosen, the whole process should be done in one system, but in the case of 2 system architecture the Backend configuration (Chapter 2) should be done in CCS side and the Middleware configuration (Chapter 3) need to be done inside of the middleware.

2 Backend Configuration

2.1 Requirements

A prerequisite for executing the configuration is the successful and correct installation of add-on *SAP® Applications by PROLOGA* in version 7.0 with Support Package 3.

If you need more information on the Gateway service configuration, please look into standard *SAP®* documentation: *Installing and Configuring SAP®NetWeaver Gateway 2.0*.

2.2 The Backend Configuration process

2.2.1 Form activation

When the add-on import was finished, the delivered form can be found by the Client 000. You need to make a copy of the forms into the goal Client (100, 200…). Start the transaction *Utilities->Copy from Client* or use the transaction code *EFRM*.

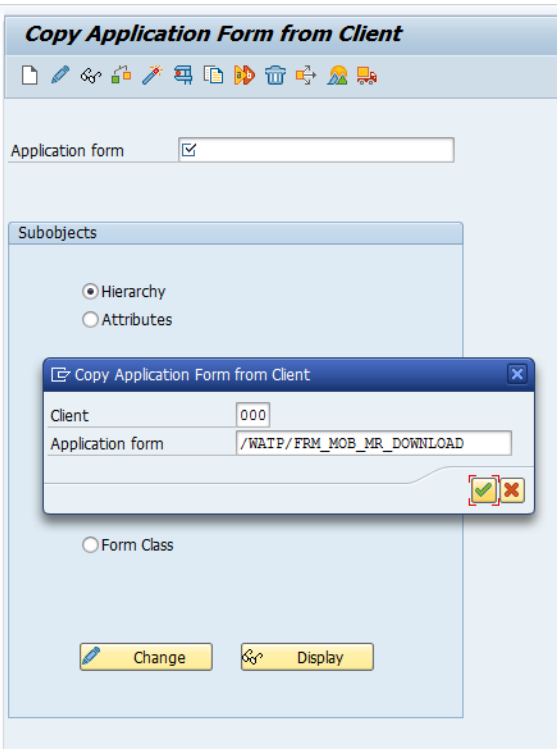

Figure 1: Copy the Application Form

The necessary information is the following (shown on picture below)

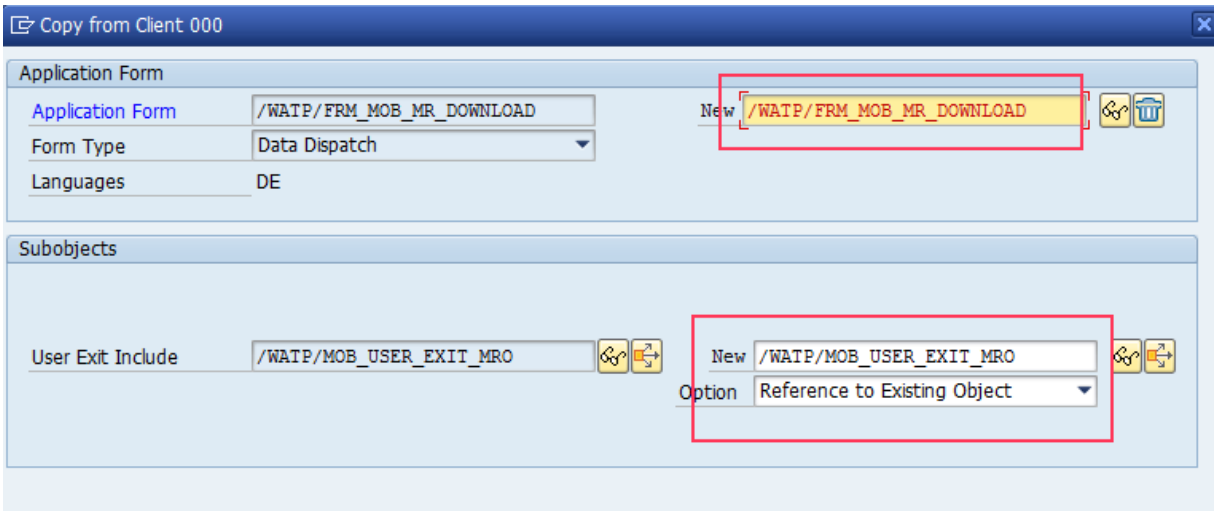

Figure 2: Information screen for Copy

Finally the application form needs to be activated via the transaction *EFRM*.

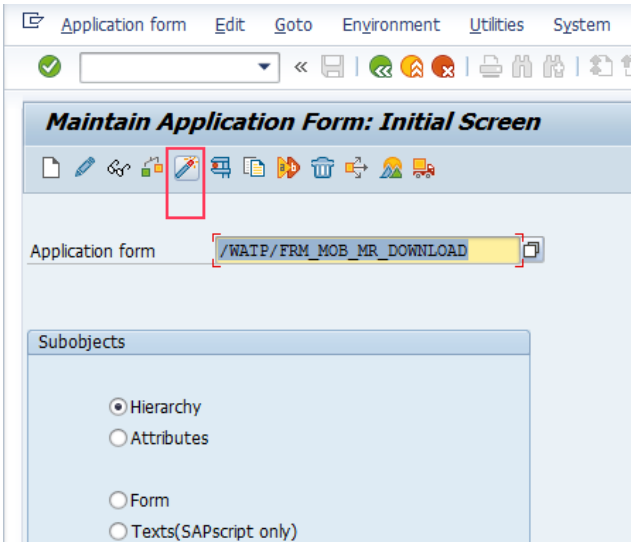

Figure 3: Activation of the Application form

2.2.2 BAdI activation

The BAdI (Classic / Enhancement Implementations) needs to be activated, because it was delivered in inactive state (see Figure 4 and Figure 5). The necessary object is:

- */WATP/MOB_DOWNLOAD* (Classic BAdI)

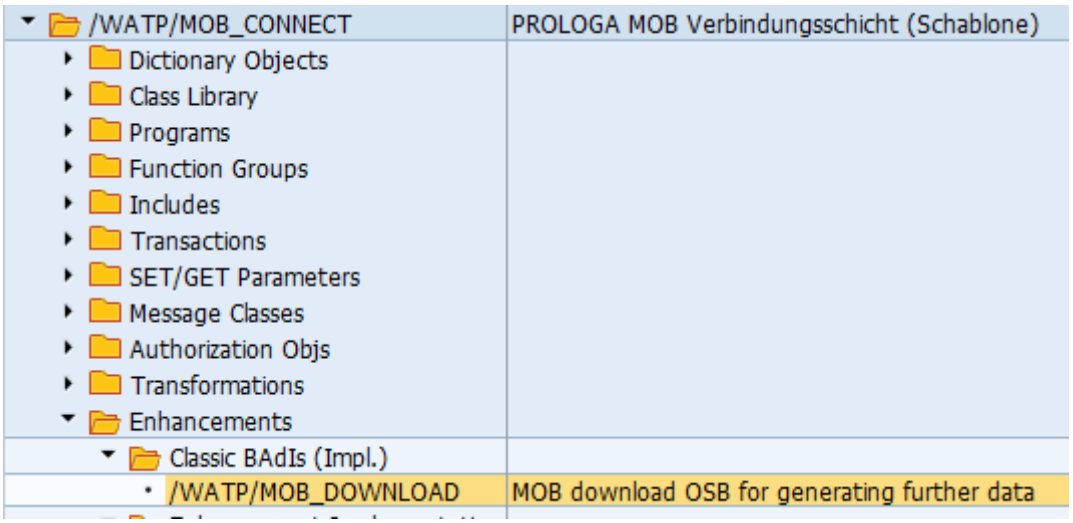

Figure 4: /WATP/MOB_DOWNLOAD (Classic BAdI)

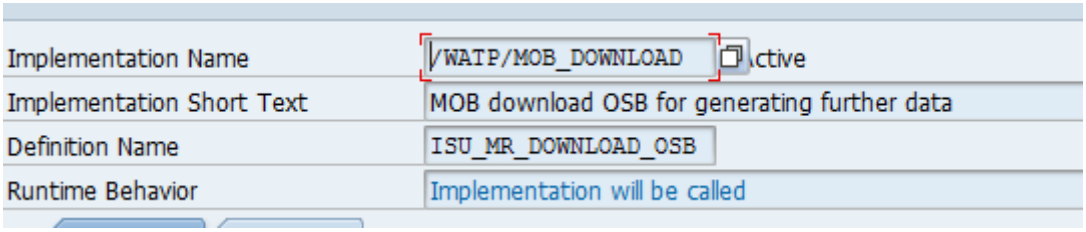

Figure 5: Application form description

2.2.3 Middleware Destination in Backend

This destination is going to connect the Backend system to the *PROLOGA* Middleware software. This connection provides a channel for the order downloading into the middleware software. For the implementation use the transaction */WATP/MOB_CNNCT_CNFG* and navigate to node *New Entries: Details of Added Entries.*

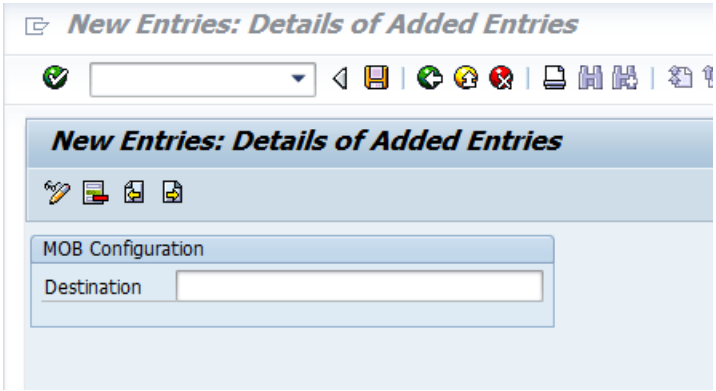

Figure 6: Destinations in MOB side

3 Middleware Configuration

3.1 Registration of the license keys

To be able to use the component *SAP® Mobile On-Site Billing by PROLOGA*, you need license keys, whereby 2 kinds of license keys are differentiated:

- License key for using the component (Component Key)
- License key for the number of the meter readers (Meter Reader Key)

With the Component Key you activate the component for the general use. With the Meter Reader Key you define how many meter readers with the component can be used.

3.1.1 How to get license keys

If you not already have got the license keys, see SAP note 2005279 (*http://service.sap.com/notes*) which describes how to get the license keys.

3.1.2 How to register the license keys

Before you start registering the license keys please check whether the installation number conveyed with the license key matches with the installation number of your *SAP®* system.

License keys are always linked to the installation number of the *SAP®* system and therefore cannot be used with other *SAP®* system. Log in at your *SAP®* system with your user name and password.

3.1.2.1 Registration of the Component Key

Start transaction */n/WATP/BASE_KEYREG*. If you should not have any authorization to start this transaction please contact your system administrator.

Select the component MOB in the list and press the button Register (*Ctrl+Shift+F8*).

Enter the license key in the opening dialog and, if you acquired a temporal limited license, the expiration date.

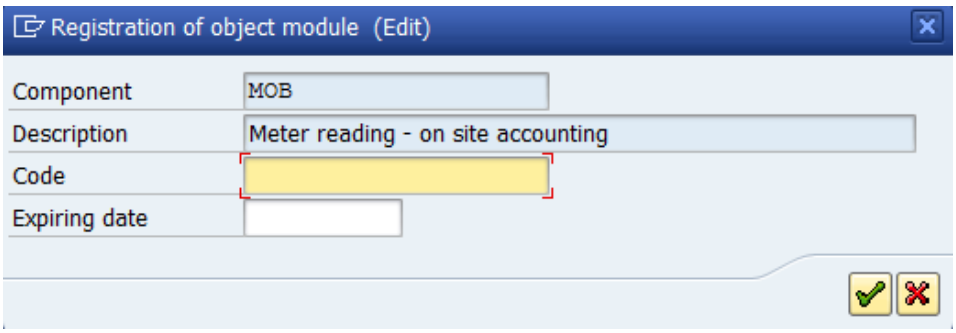

Figure 7: Input of the license key to the use of the component

Confirm the input.

Success of the registration process will be indicated by the green symbol in the status column (see *Figure 8: Successful registration of the license key to the use of the component*).

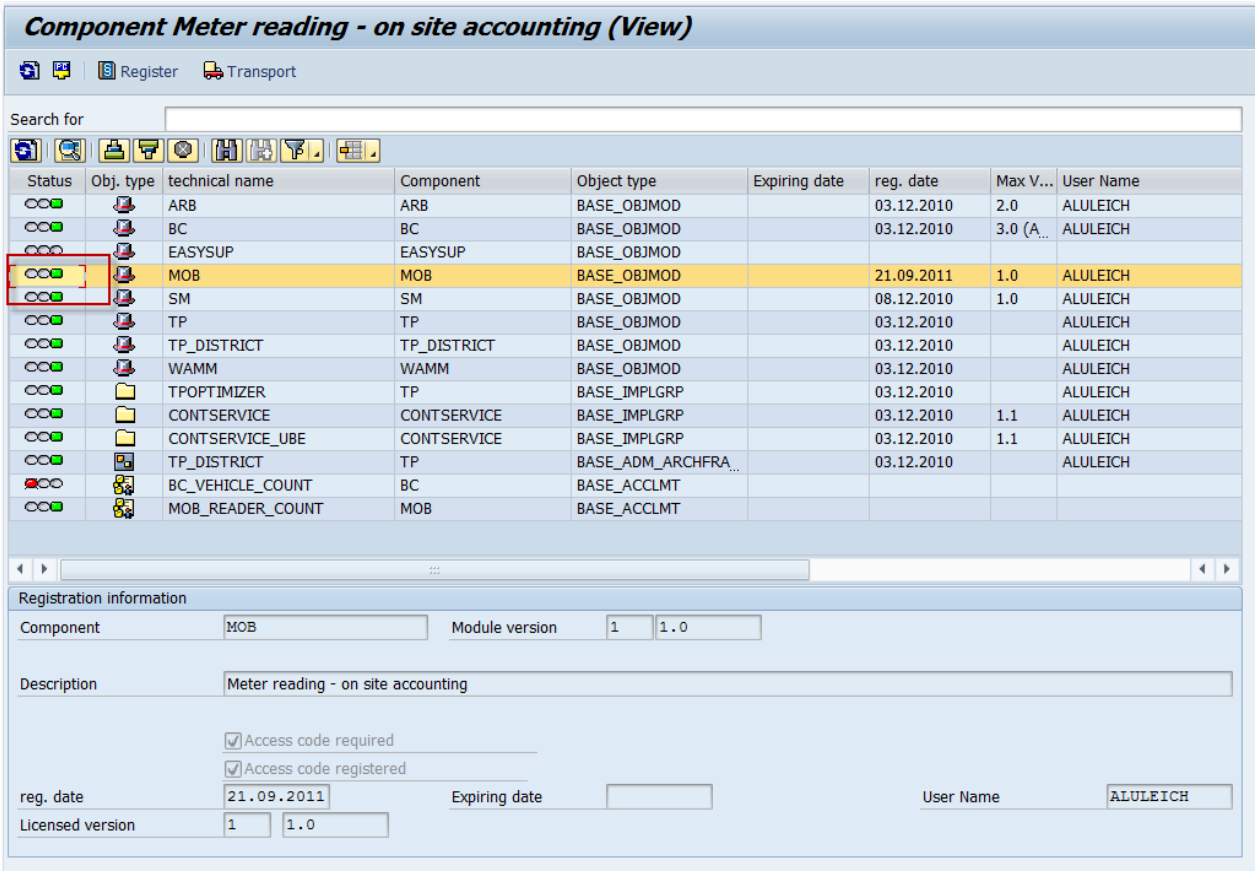

Figure 8: Successful registration of the license key to the use of the component

If you should receive an error message please check the following details:

- Does the *SAP®* installation number indicated in the request form matches with the installation number of the system?
- Does the add-on version indicated in the request form matches with the version installed in the system?
- Was the correct component selected?
- If you have a temporally limited license: Was the correct expiration date entered?

3.1.2.2 Registration of the Meter Reader Key

In order to set or increase the number of licensed meter readers, start transaction */n/WATP/BASE_OBJCONFIG*. If you should not have any authorization to start this transaction please contact your system administrator.

In the tree select node *Meter Reading – On-Site Billing → Accounts → MOB_READER_COUNT* and select in the menu *Account → Register* (*Ctrl + F8*).

After you selected a transport request, a dialog opens for the input of the license key.

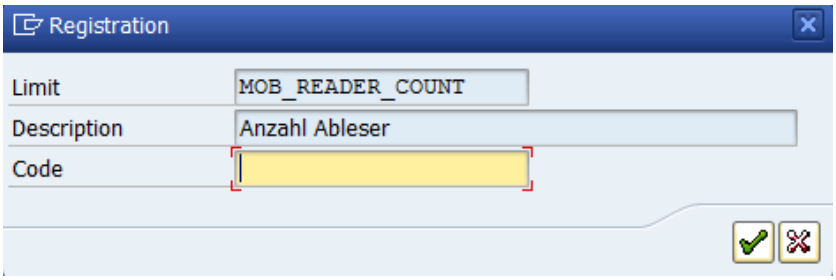

Figure 9: Input of the license key to the definition of the number of meter readers

Enter the license key and save your changes.

After a successful registration you see the current values on the right side of the mask.

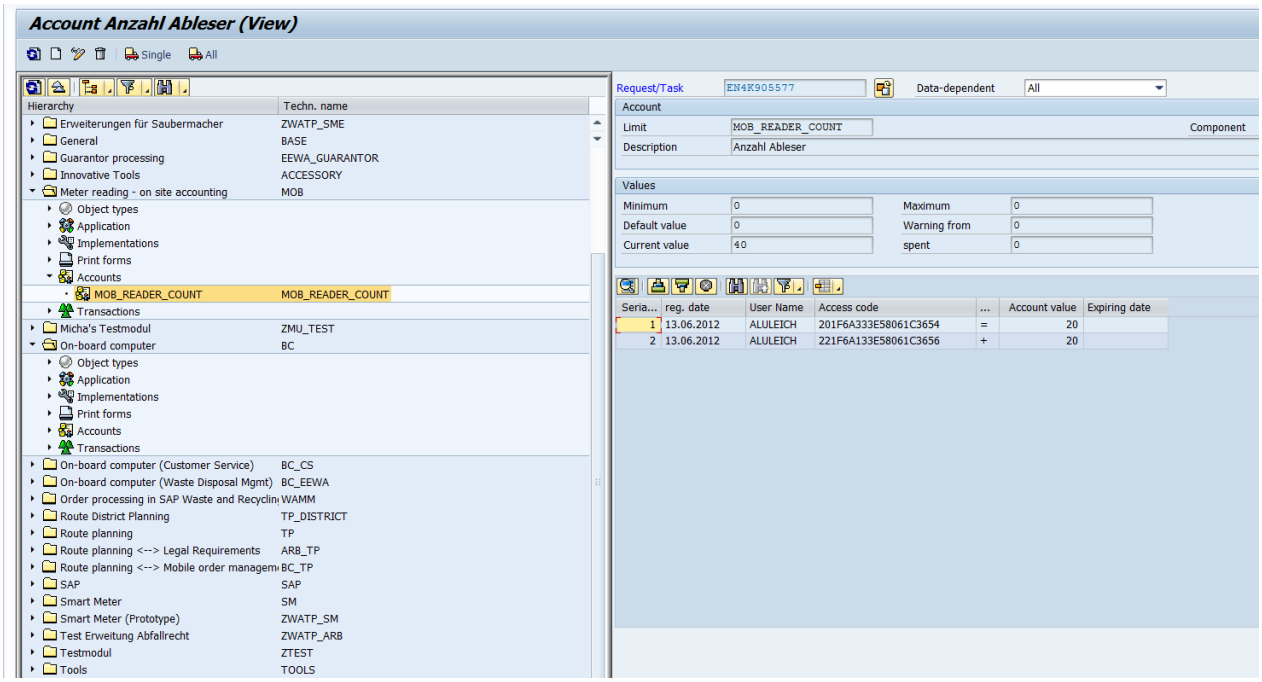

Figure 10: Successful registration of the license key

If you should receive an error message please check the following details:

- Does the *SAP*® installation number indicated in the request form matches with the installation number of the system?
- Does the add-on version indicated in the request form matches with the version installed in the system?
- Was the correct component selected?
- If you have a temporally limited license: Was the correct expiration date entered?

The license key for the meter reader count has always to be entered in the development system and then transported to the other systems. To automatically update the licensed meter reader count after you have imported the license key a new task has to be created and to be scheduled.

3.2 Activate the new components and generate the number ranges

In order to significantly reduce the implementation efforts *SAP® Mobile On-Site Billing by PROLOGA* contains pre-defined application scenarios, which can be activated range-specifically.

3.2.1 Activate of the base functionality of the add-on

Base functionality contains general settings, which are used not exclusively in *SAP® Mobile On-Site Billing by PROLOGA*, but can also be used in other components of the add-on. Thus, it is possible that these functions are already activated and do not have to be activated again.

The activation of this functionality is a prerequisite for the use of functions of the add-ons.

Whether functionality is activated or not can be recognized by the icons in the tree:

-  Function is activated
-  Function is deactivated

To activate base functionality start transaction: */n/WATP/BASE_OBJCONFIG*

In the tree select node *General → Implementations → General → Number ranges* and press button *Activate (Shift + F6)*.

Our procedure is divided into 3 groups:

- Activate the component and creation of the number ranges for the base component
- Activate the component and creation of the number ranges for the *SAP® Mobile On-Site Billing by PROLOGA*
- Activate the component *Extension with Gateway by PROLOGA*

The component and the implementations of the component can be activated in different levels of the hierarchy. You may have the opportunity to activate the full component or activate the implementations selectively.

3.2.1.1 Activate the base component

The full component needs to be activated. In the tree select node *General → Implementations → General* and press button *Activate* (*Shift + F6*).

3.2.1.2 Activate the component *SAP® Mobile On-Site Billing by PROLOGA*

The full component needs to be activated except the implementation called *Application profile MOB for short term tours planning* (see on figure below).

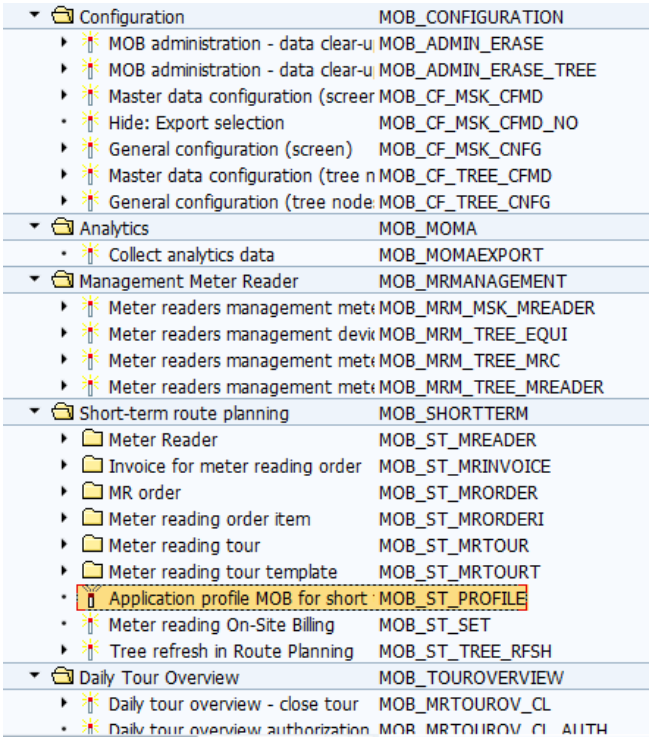

Figure 11: Activate the component

3.2.1.3 Activate the component *Extension with Gateway by PROLOGA*

As we have seen before, the full component has to be activated by the same way as before.

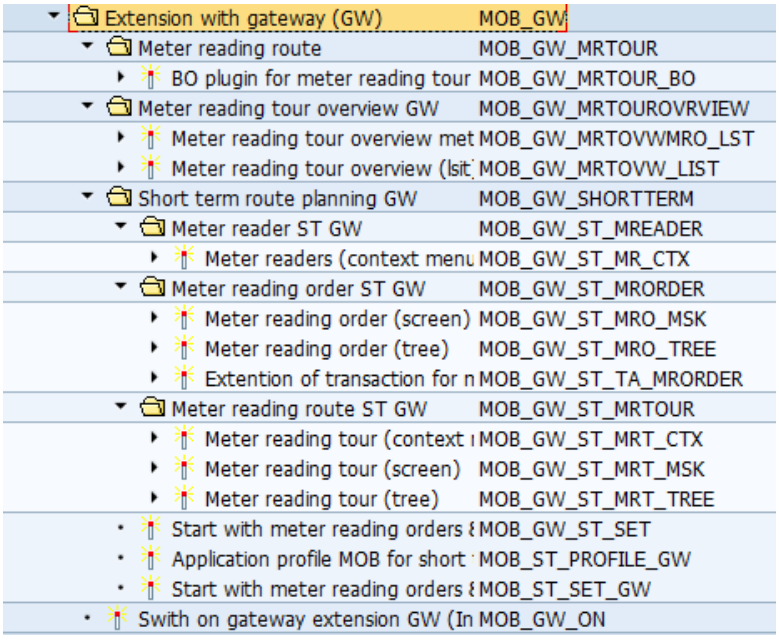

Figure 12: Activate the component (2)

3.2.2 Creation of the number ranges for the base component

In the tree select node *General → Implementations → General → Number ranges* and chose from menu *Extras → Create number ranges*.

By executing this function it is getting checked whether a number range already exists or has to be created. Existing number ranges are not changed, thus repeated execution of this function has no negative consequences.

You will get a message about which number ranges were created respective were already present.

3.2.3 Creation of the number ranges for the component SAP® Mobile On-Site Billing by PROLOGA

In the tree select node *Meter Reading – OnSite Billing MOB → Implementations → Meter Reading – OnSite Billing MOB → General* from menu *Additional -> Create Number ranges*. Alternative number ranges can be created by pressing button *Activate (Shift+F6)*.

Please keep in mind, that in the test and productive system you need to create and activate the number range interval manually. This opportunity is located in *Main menu/ Extras/ Create Number Ranges*.

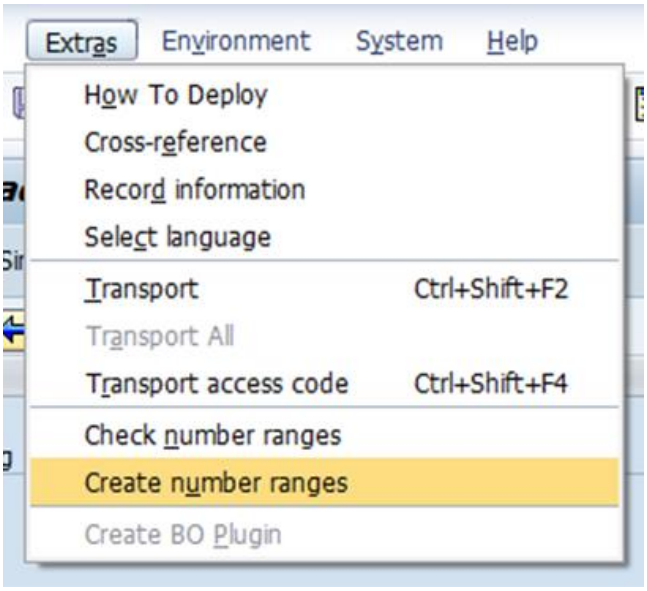

Figure 13: Create number ranges

3.3 Configuration of Middleware & Backend Destinations

3.3.1 Configure BGRFC destinations

The creation of the RFC destinations has the following steps:

Step 1: Use transaction *SM59* to be able to create the RFC destination (see Figure below)

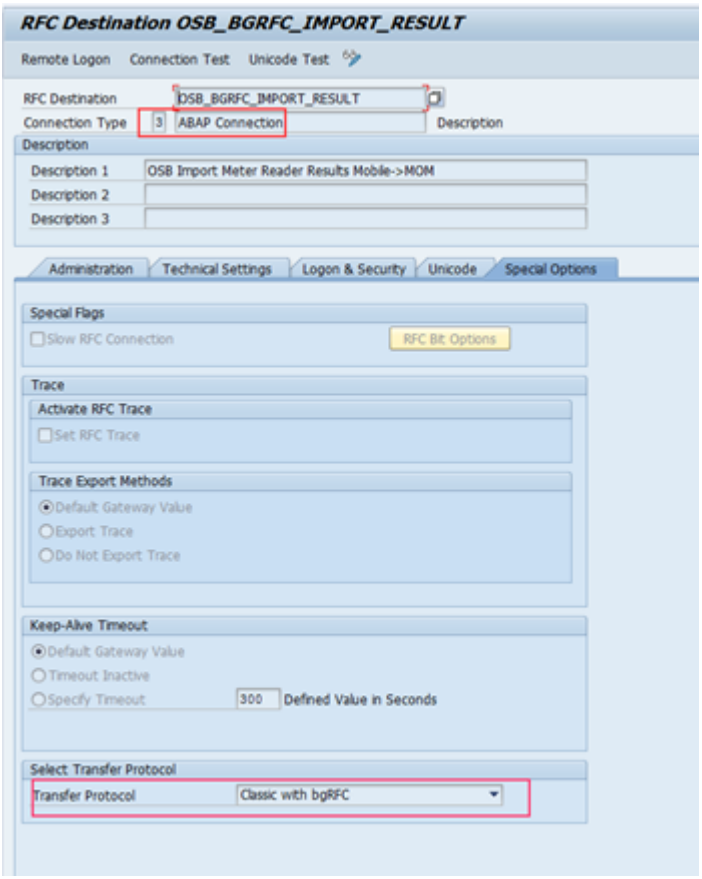

Figure 14: Define RFC destination

Step 2: After the RFC destinations are created, the 2 necessary inbound destinations need to be identified. Use the transaction *SBGRFCCONF.*

Figure 15: Transaction for bgRFC Configuration

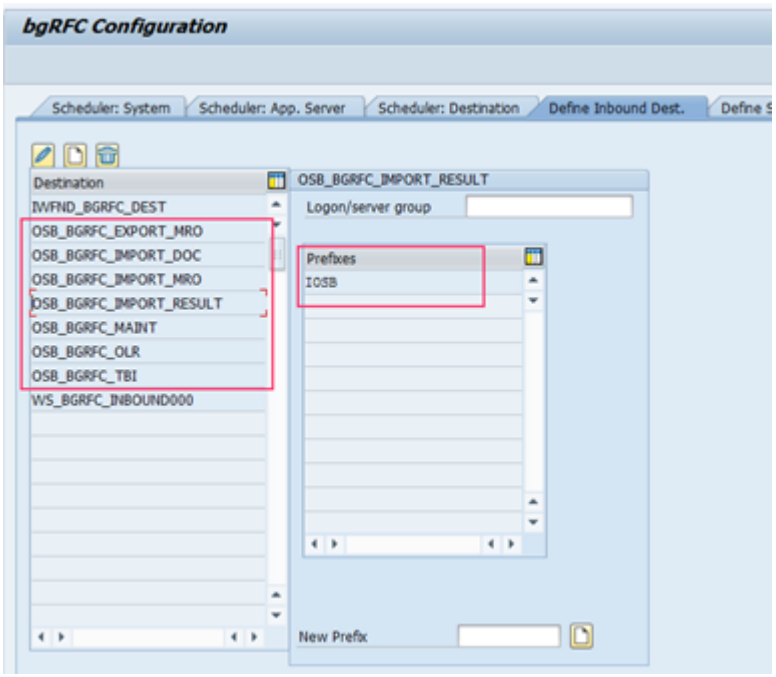

Figure 16 : Inbound destinations

Step 3: Use the Scheduler to configure the destinations

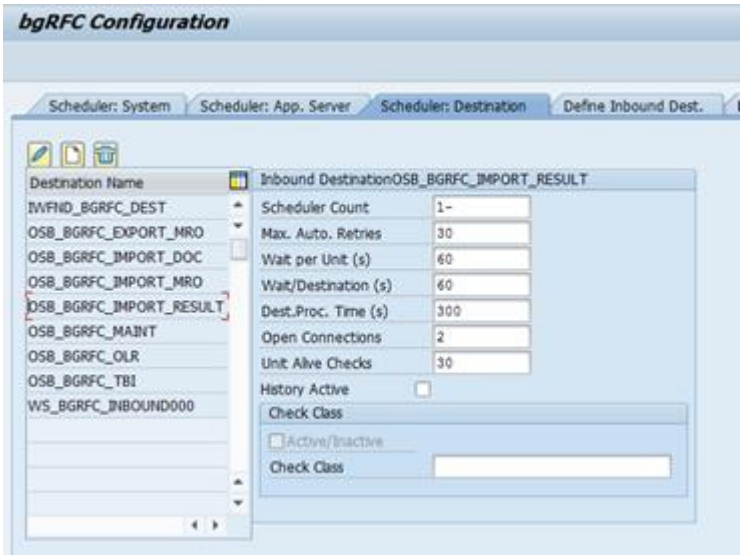

Figure 17: Destination configuration

Step 4: The MOB configuration needs to be finished. In case you follow our recommended way, the bgRFC destinations are the following:

bgRFC type	Inbound Destination Name	Queue- Prefix
E_MRO_COMP	OSB_BGRFC_EXPORT_MRO	
E_TBI	OSB_BGRFC_TBI	

I_DOCS	OSB_BGRFC_IMPORT_DOC	
I_MRO	OSB_BGRFC_IMPORT_MRO	IMRO
I_ONLI_REQ	OSB_BGRFC_OLR	
I_RESULT	OSB_BGRFC_IMPORT_RESULT	IOSB
MAINTENANC	OSB_BGRFC_MAINT	

Table 2: Table of bgRFC destinations

In the transaction, as you have seen before */N /WATP/MOB_CONFIG* adjust the correct destination for the ECC middleware system:

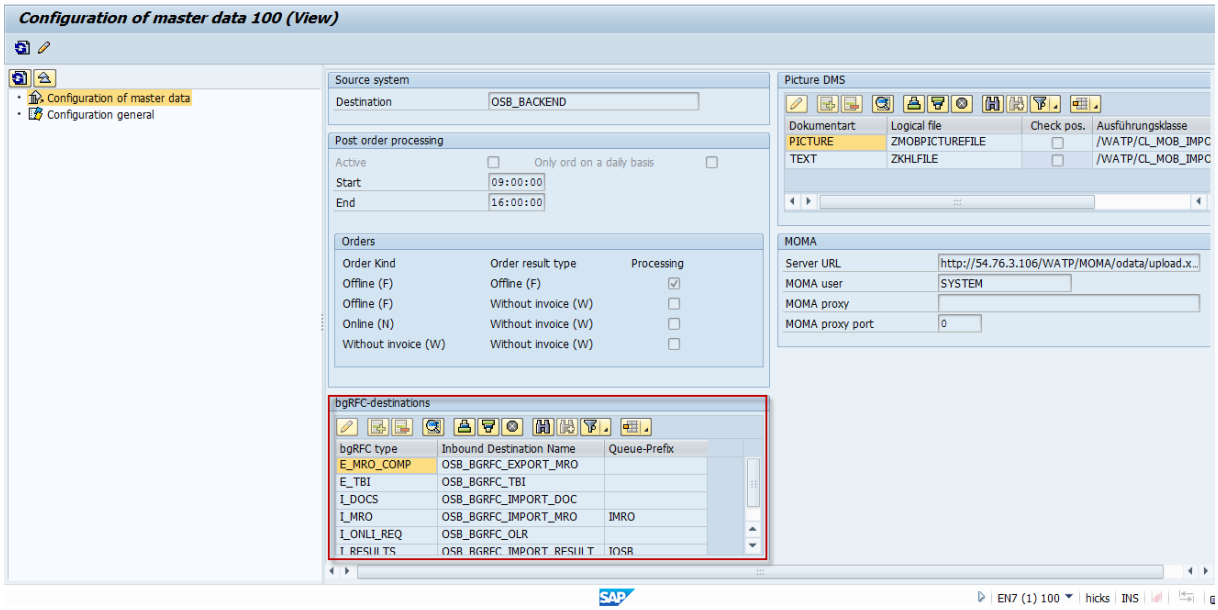

Figure 18: MOB Configuration

The number of bgRFC type is equal as task type you have, this is our recommended way of the configuration, but other solutions also can be acceptable.

Queue-Prefix needs to be created minimum 2 times: once for the import of the Meter Reading orders (IMRO) and a second one for the Meter Reading Order Result (IOSB).

3.3.2 Configure Backend Destination

This setting is used to specify the backend RFC Destination.

In the transaction */N /WATP/MOB_CONFIG* navigate to node *Configuration of master data*.

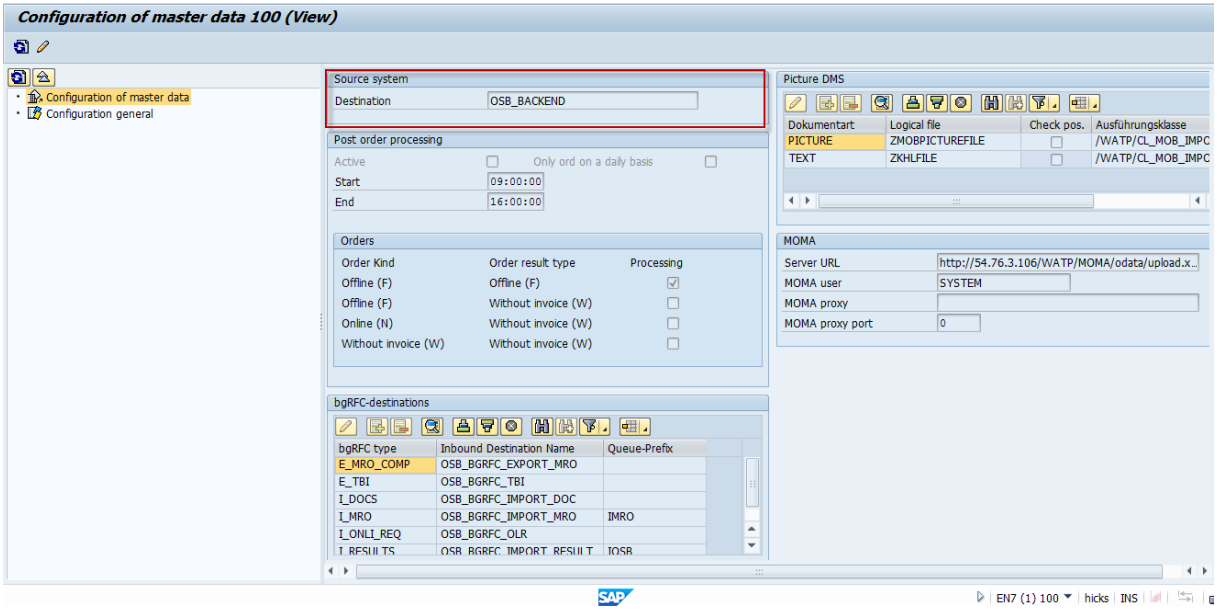

Figure 19: Backend Destination

The user who is logged on when the system called the RFC destination in the backend system needs enough rights to upload meter results and create billing and invoicing documents and must be registered at reconciliation key.

3.4 Configuration of the OData service in the middleware

With the help of the transaction */IWFND/MAINT_SERVICE* you can configure OData service (See *Figure 20: Configure OData service*)

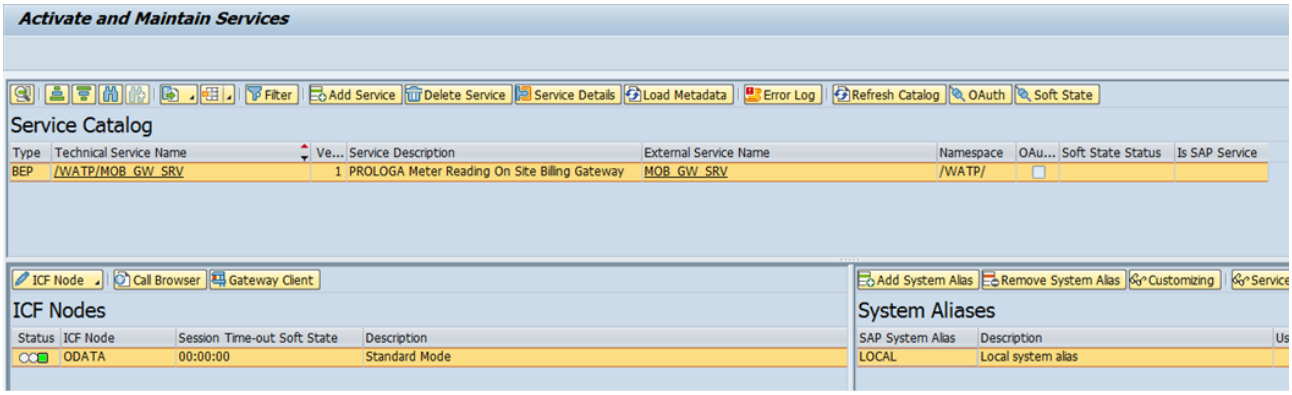

Figure 20: Configure OData service

3.5 Configuration of tasks and jobs

This chapter describes the available tasks as well as their recommended scheduling.

According to your needs the scheduling can be different.
Tasks are maintained in the transaction */n/WATP/BASE_ADMIN*.

3.5.1 Base Tasks - Create and Configure Task UPDATE ACCOUNTLIMIT

The task *UPDATE ACCOUN LIMIT* deals with the number of devices that the application can handle.

In the transaction */WATP/BASE_ADMIN* navigate to *General → Task management → Task templates* and select *BASE_OBJ_ACCOUNTLMT.*

It is recommended to run this task once a day.

Create a new task by pressing *Task* in the Function Toolbar of the Navigation Tree.

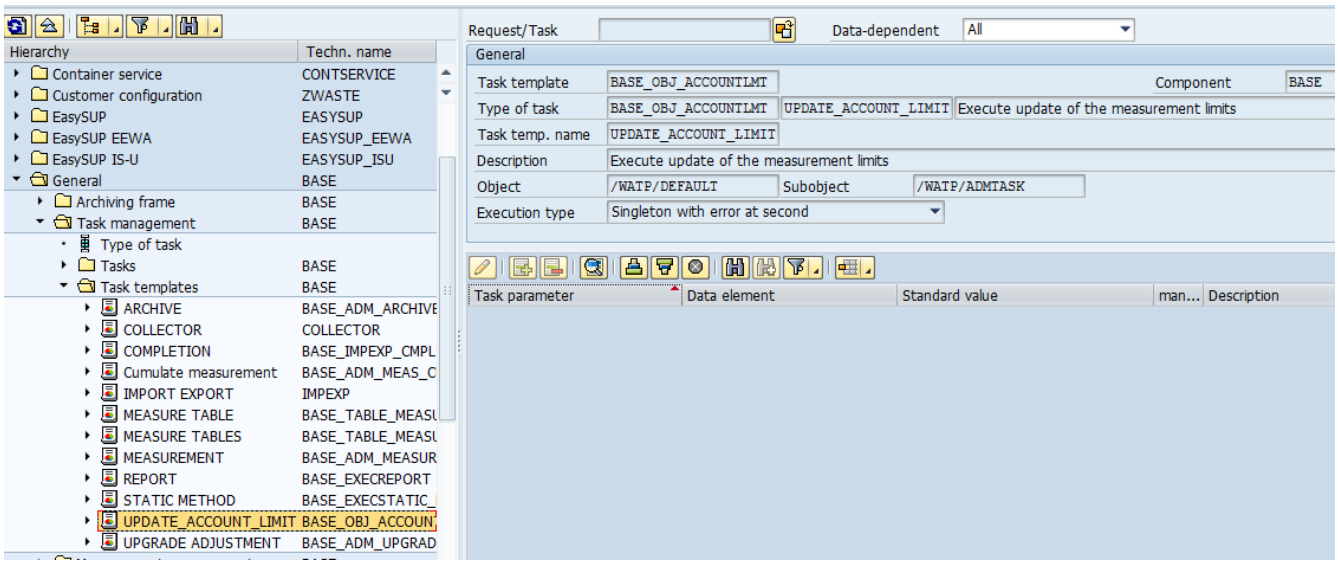

Figure 21: Task template UPDATE ACCOUNTLIMIT

1. Use the button *Schedule* or (*Ctrl* + *F1*) to schedule the task. Choose dates with the next button Schedule *Schedule* or (*Ctrl* + *F6*). The SAP standard open window *Start time* (background job) value is populated. If you need information on this, please look into standard SAP documentation.
2. Finally, please press the button *Activate* or *(Ctrl* + *F3)*. Afterwards, the background job is active.

3.5.2 Configure Tasks for SAP® Mobile On-Site Billing by PROLOGA

Within the component *SAP® Mobile On-Site Billing by PROLOGA* there are several tasks that have to be executed on a regular basis which are essential for a correct operation and maintenance purposes.

Since not every task is necessary in each system environment, *SAP® Mobile On-Site Billing by PROLOGA* provides task templates from which with few steps tasks can be created and scheduled.

To create a certain task from a task template start transaction */n/WATP/BASE_ADMIN* and open node *Meter Reading – On- Site Billing → Task management → Task templates*

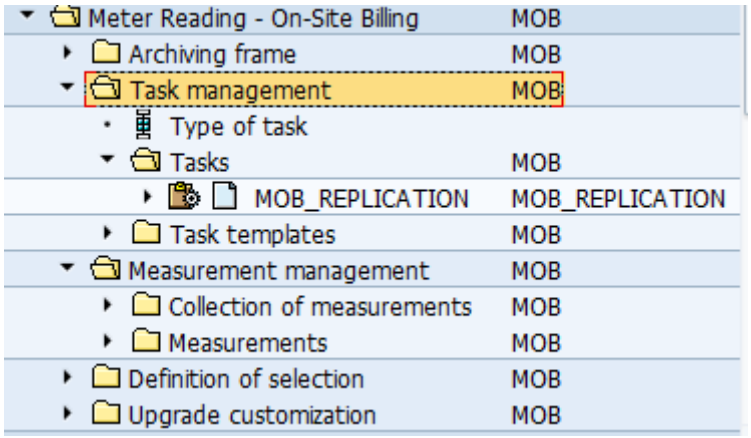

Figure 22: Starting state by creating the necessary tasks

The following chapter describes the tasks need to be created, scheduled and activated for the PROLOGA Software. Keep an eye on the table below and follow the steps!

You are going to need to create the following tasks:

- MOB_REPLICATION
- MOB_TOUR_STAT
- COLLECTOR (with the following sub-tasks): MD_BC_GET, MD_GET, MD_IEPROCESSING, MD_SYNC_VERSION

This task checks whether since the last execution master data were changed.

Step 1: Create a new task – with using the right task template - by pressing *Task* in the Function Toolbar of the Navigation Tree.

Step 2: Fill the necessary fields (shown on picture below)

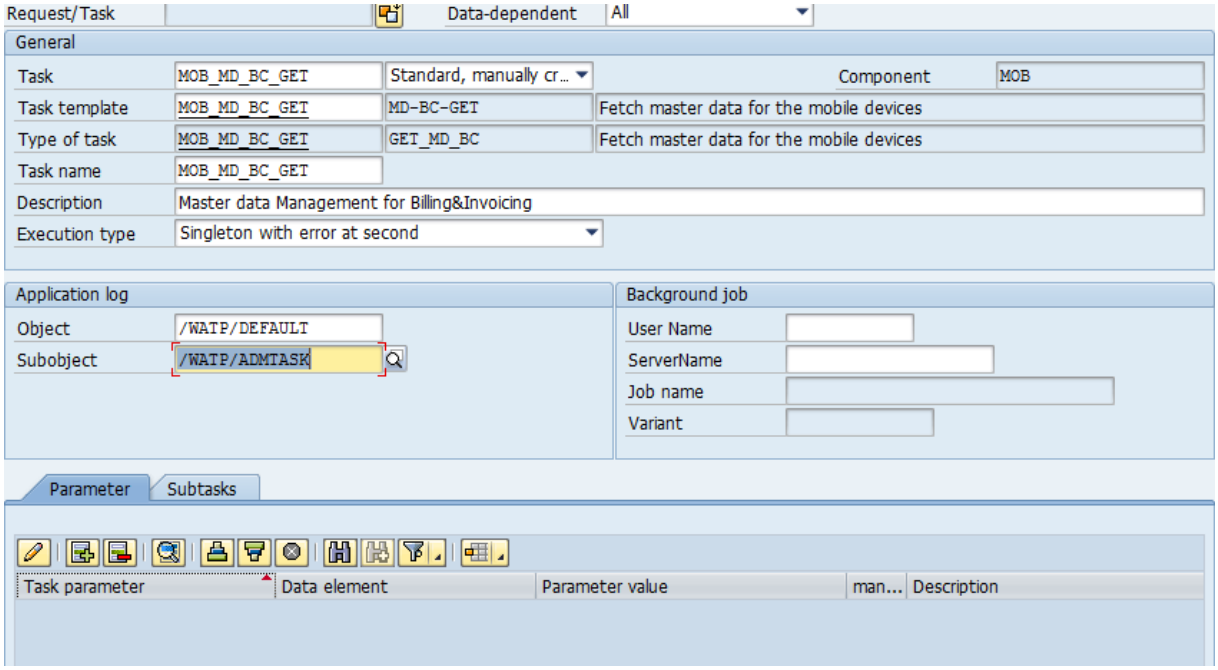

Figure 23: Create MD_BC_GET task

Step 3: save your work by pressing the (save) button.

Now repeat these steps for the other necessary tasks - except the parent task, which is called *COLLECTOR* - and create the rest of them. In case you need more information check the screen shots below.

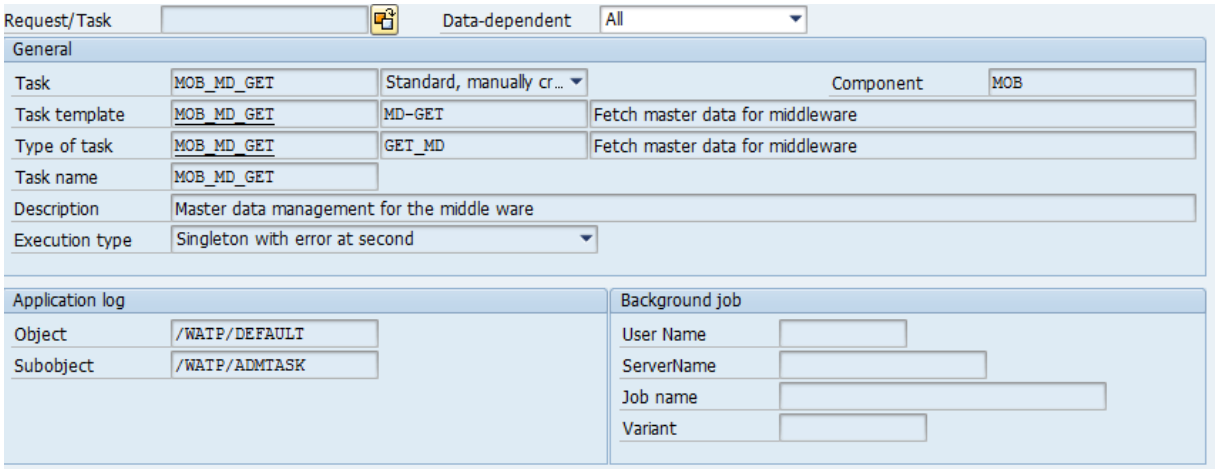

Figure 24: MOB_MD_GET

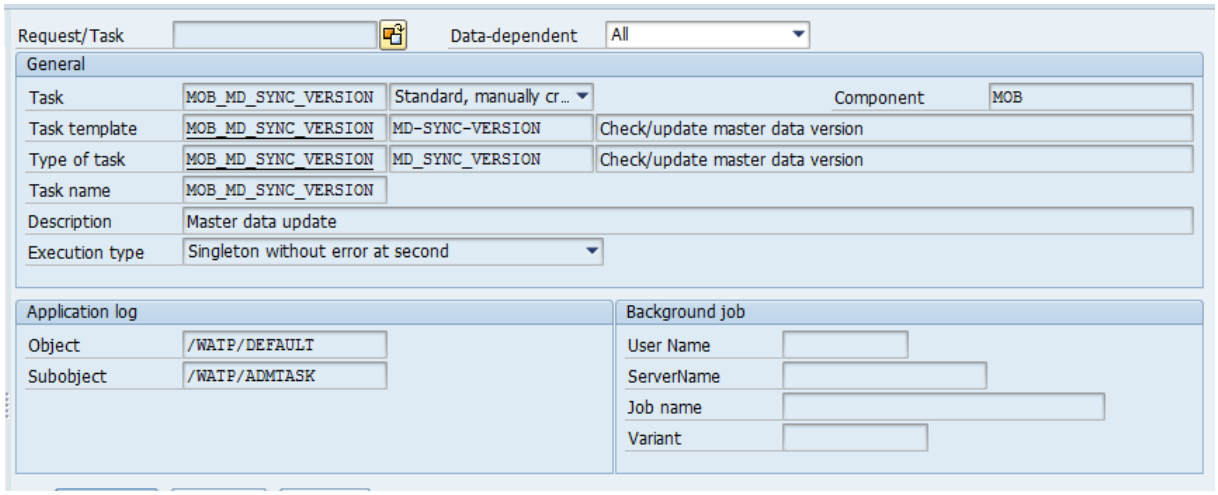

Figure 25: MOB_MD_SYNC_VERSION

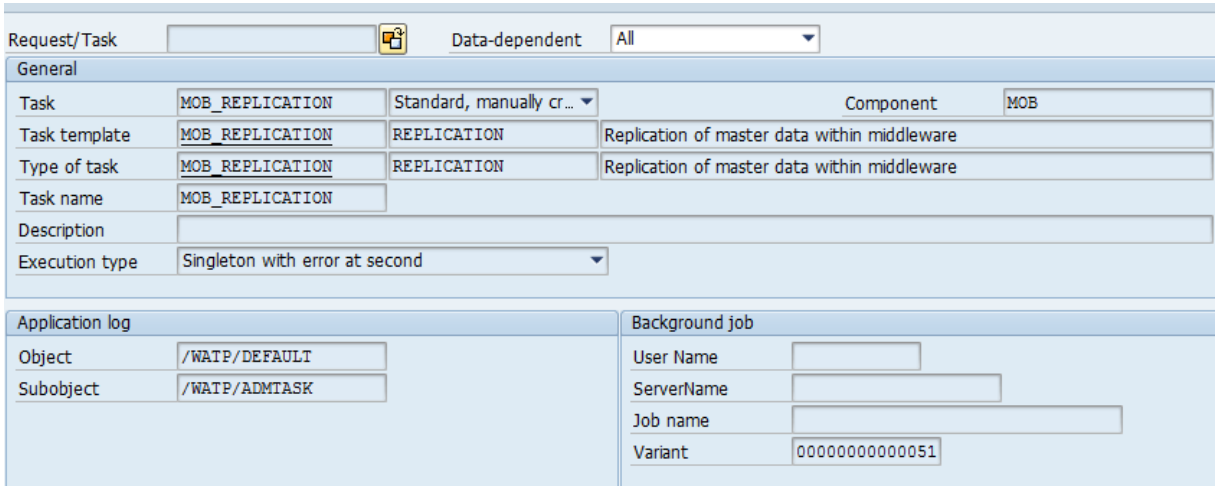

Figure 26:MOB_REPLICATION

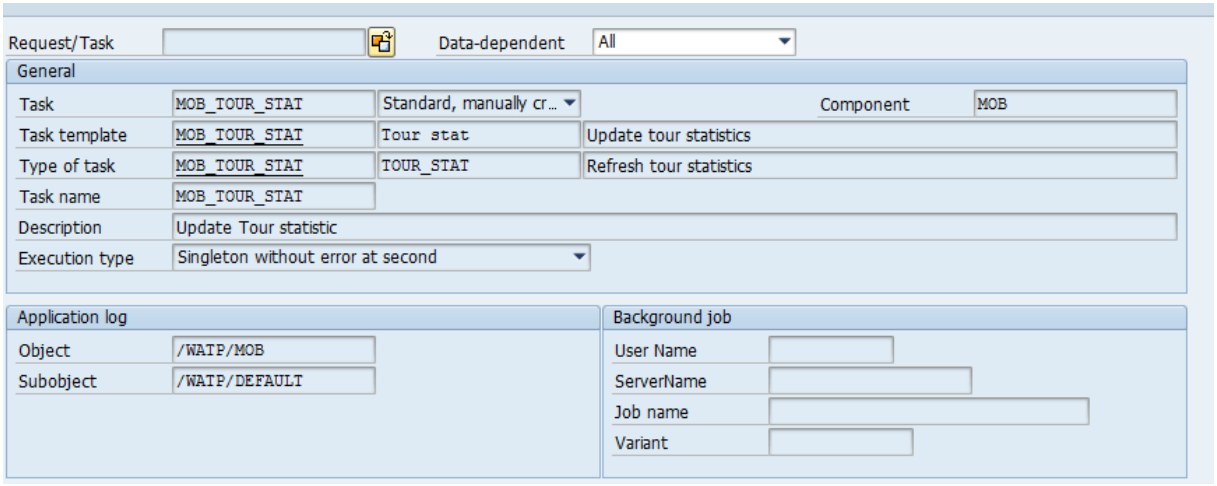

Figure 27: MOB_TOUR_STAT

Step 4: Create a new task, to collect the other sub-tasks! Please follow the sequence of the sub-tasks as it is shown below!

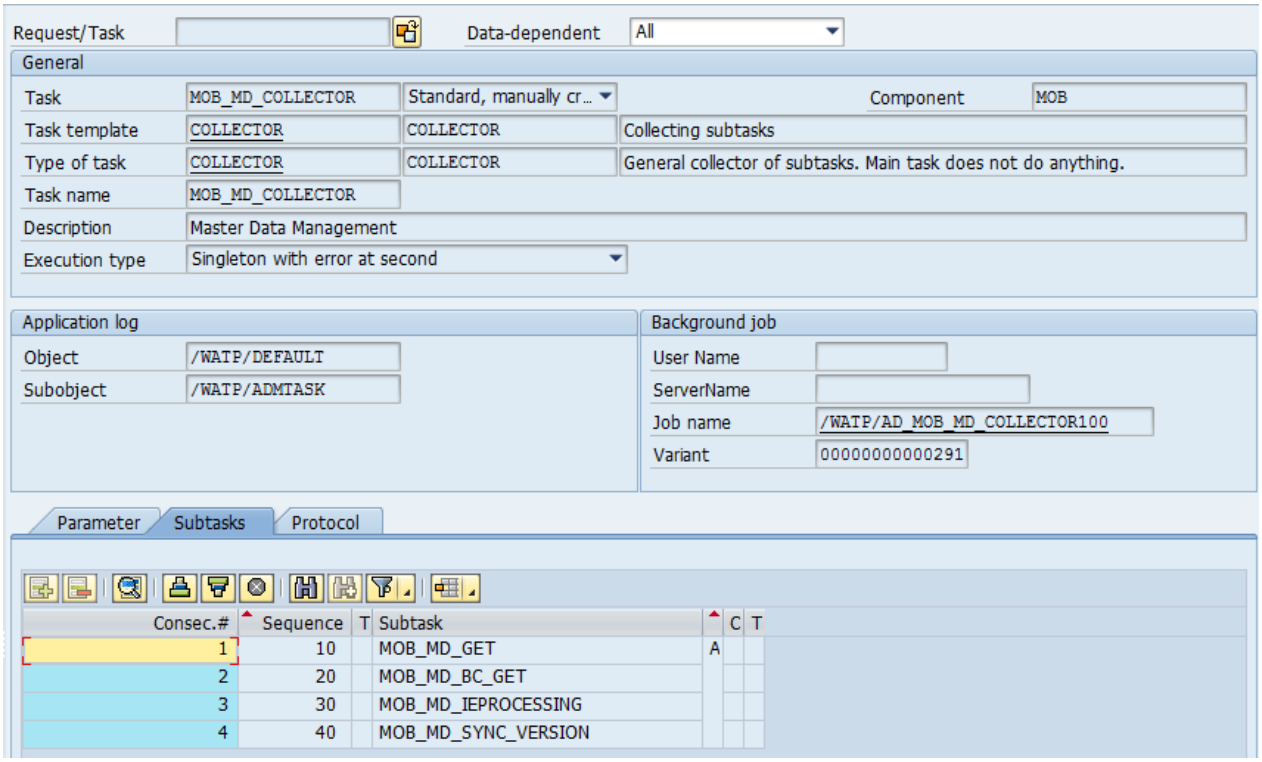

Figure 28: Parent task

Finally, save your work by press the (save) button.

Step 5: Finish the scheduling. Use the button Schedule or (*Ctrl* + *F1*) to schedule the task. Choose dates with the next button Schedule *Schedule* or (*Ctrl* + *F6*). If you need information on this, please look into standard SAP documentation or check the table below.

Finally, please press the button *Activate* or (*Ctrl* + *F3*). Afterwards, the background job is active.

Technical Name	Schedule
MOB_REPLICATION	One time or daily
MOB_TOUR_STAT	Per minute or other small interval
MOB_MD_COLLECTOR	hourly

Table 3: Task scheduling table

If you have followed the description you can see that your task is running by double click on the job name.

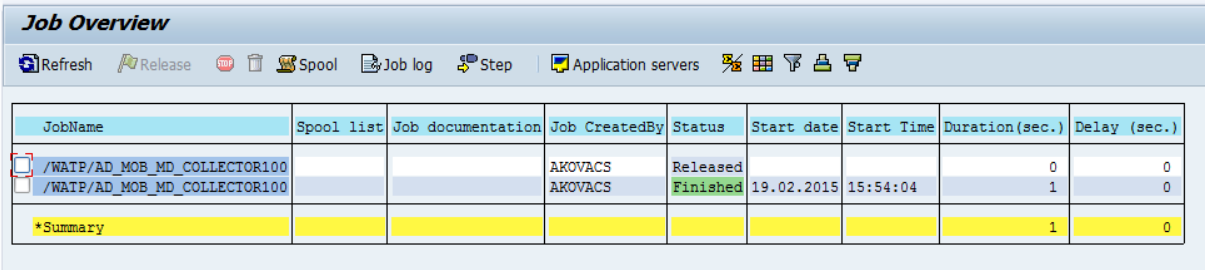

Figure 29: Job overview

3.5.2.1 Configure the Archiving – Clean up tasks

Start transaction */N/WATP/MOB_ADMIN*. If you should not have any authorization to start this transaction please contact your system administrator. This task actually provides the data cleaning activities. The configuration needs to be done in every system of every Client.

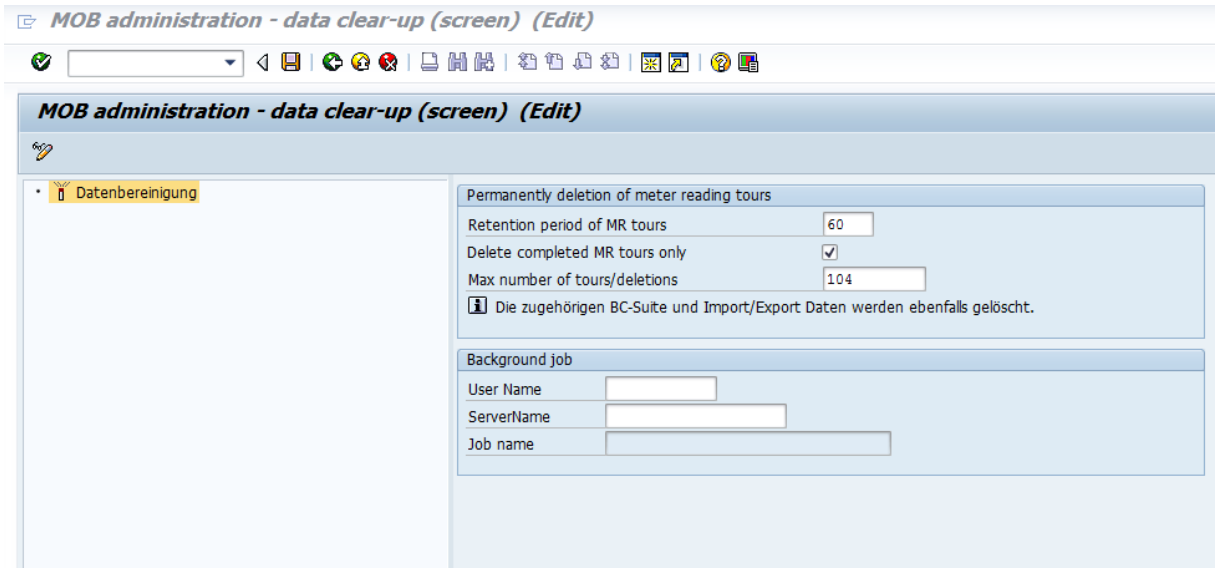

Figure 30: MOB administration

The necessary task will be generated automatically after saving the changes. To check if the task has been created successfully use transaction */n/WATP/BASE_ADMIN.*

In the tree select node *Meter Reading- On-Site Billing → Task management → Tasks → __MOB_MRTOUR_ERASE*

The period of the data cleaning depend on your needs and can be different in different systems.

The parameter of the archive mod must not be "T"! In this case, please modify the parameter as shown on Figure 31: Parameters of archive mod!

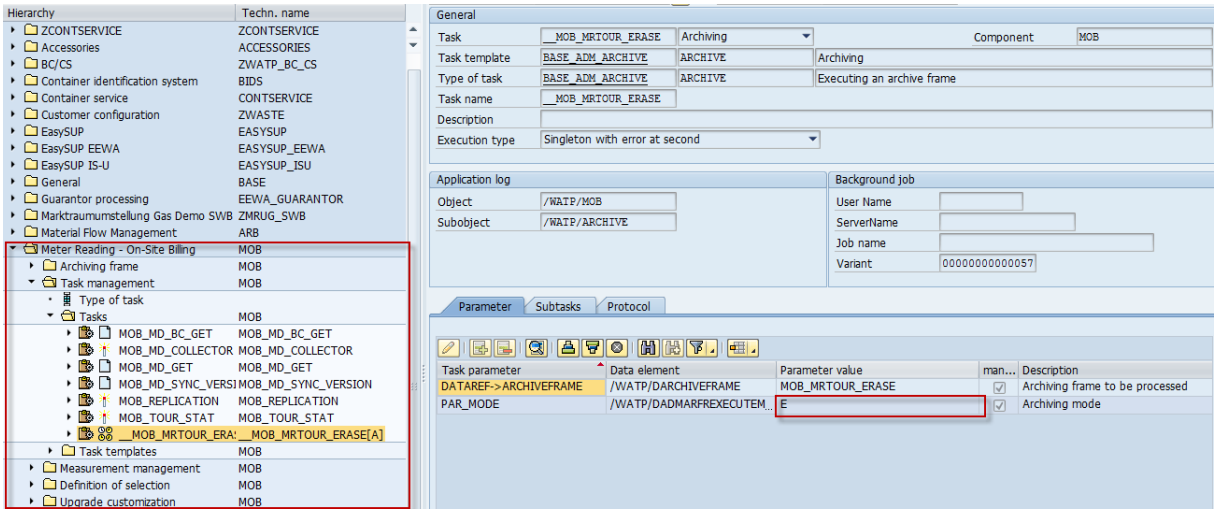

Figure 31: Parameters of archive mod