**SAP NetWeaver
How-To Guide**

How To... Use the SMS Channel of SAP NetWeaver Mobile 7.1

Applicable Releases:

SAP NetWeaver Mobile 7.10 - SP04 and above

Topic Area:

User Productivity

Capability:

Mobile

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Document History

Document Version	Description
1.00	First official release of this guide

Typographic Conventions

Type Style	Description
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.
	Cross-references to other documentation
Example text	Emphasized words or phrases in body text, graphic titles, and table titles
`Example text`	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE TEXT`	Keys on the keyboard, for example, `F2` or `ENTER`.

Icons

Icon	Description
⚠️	Caution
💡	Note or Important
⚙️	Example
⬆️	Recommendation or Tip

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1. Business Scenario

Short Messaging Service or SMS in short is a very common way of communicating information to mobile users. You can leverage this fact for communicating enterprise information, too. Let us say a customer places a request for an order. The deal is quite important for the company (say, the deal is greater than $ 10,000), and you want the concerned manager to be alerted in his or her mobile device. You can easily realize this scenario in SAP NetWeaver Mobile.

2. Background Information

This guide provides information on the SMS channel, including its concept, configuration activities, and implementation steps. SAP NetWeaver Mobile provides the SMS channel as part of its multi-channel capability. The other channels currently provided with the platform are RSS and the mobile client for laptops and handhelds.

SAP NetWeaver Mobile uses the *SAPconnect* module of SAP NetWeaver Application Server. *SAPconnect* provides a standard interface for external communication, which supports sending using telecommunication services, such as FAX, text messages (pager/SMS), Internet mail and X.400, as well as sending to printers and between different SAP Systems. It enables external communication components to be connected to the SAP System.

In technical terms, the SMS channel in the Data Orchestration Engine (DOE) is an outbound channel that implements the interface *IF_OUTBOUND_CHANNEL*. Since SMS is only an outbound channel, this channel cannot be assigned to devices in isolation. It can be assigned in addition to the default channel so that the data is sent to the device outbound queue and also to the SMS channel handler.

3. Prerequisites

SAPconnect provides a direct connection to the Internet through the SMTP plug-in of the SAP NetWeaver Application Server. This enables you to send and receive Internet mails, faxes and text messages (pager/SMS) directly, without having to use additional external communication systems.

In order to have the SMS channel working in the DOE, the following are mandatory:

1. An active SMS Gateway that can be reached via SMTP from the DOE.

2. The application server profile parameters have to be configured to enable SMTP. This can be done in transaction `RZ10`.

3. The SMS service has to be added under Pager Services in transaction `SA14`.

4. The SMTP Node in SAPconnect has to be configured with the SMS Gateway address.

> Steps 2-4 of the prerequisites are listed in detail in this guide.

4. Step-by-Step Procedure

To send SMS messages from the DOE, an SMS Gateway should be reachable from the DOE; the SMTP plug-in of the SAP NetWeaver Application Server must be configured; the SMS channel must be assigned to mobile devices; and data objects must be configured to send messages as SMS.
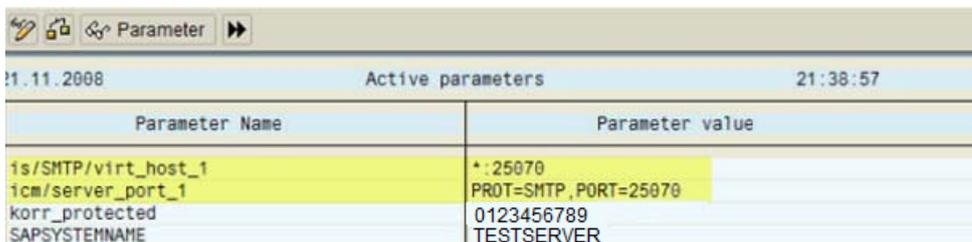
4.1 Enabling the Server to send SMS

1. **Configuring the Application Server profile parameters**

   To enable the SMS service on an application server, the application server profile has to be configured in transaction **RZ10**. The following parameters have to be configured in the profile paramaters:

   icm/server_port_<*> = PROT=SMTP,PORT=<port>

   **is/SMTP/virt_host_<*> = <host>:<port>,<port>,...;**

   Figure 1: Application Server Parameters in RZ10

   More information about the profile parameters can be obtained in the SMTP configuration guide. Link to the SMTP configuration guide is provided in the *References* section.

2. **Maintain Service Names of Pager Services**

   The name of the service (SMS), has to be maintained in the list of pager services, in transaction SA14. The name of the service created in SA14 is used in SCOT while configuring the address and number format for SMTP.
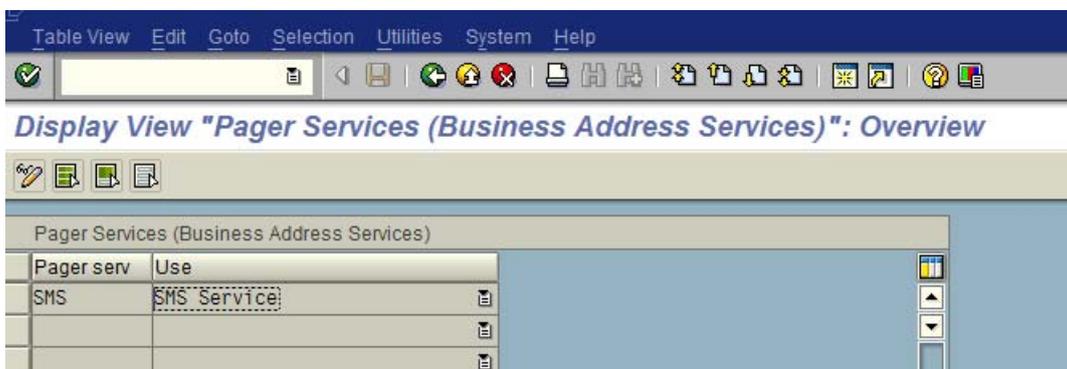

   Figure 2 – A Pager service named SMS created in SA14

4.2 Configuring SMTP Plug-in

SAP NetWeaver Application Server has an SMTP plug-in that provides a direct connection to the Internet. The server connects to mail servers via the SMTP protocol. Since the application server supports SMS in the mail format, you must configure the SMTP plug-in of SAPconnect to enable text messaging.
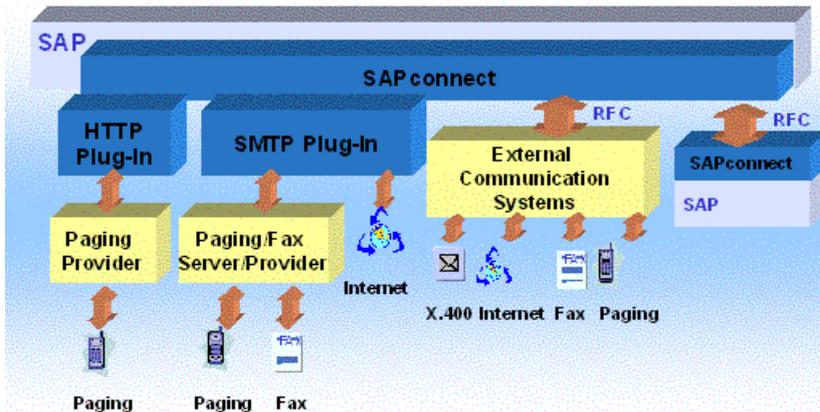
Figure 3: Overview of SAP Connect

Follow the steps below to configure SAPconnect to send SMS via a specified gateway:

1. To go to the SAPconnect administration, start transaction **SCOT**.

2. Double-click on the node `SMTP`.

3. Change the value in the `Mail Host` field to the SMS gateway address.
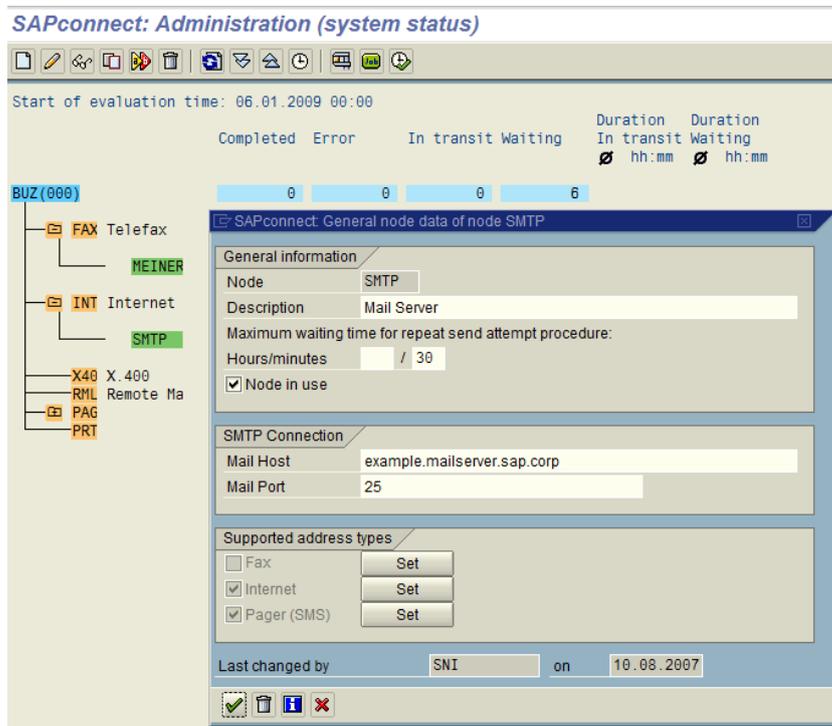
Figure 4.a – Configuring the SMTP Node

4. To set the mobile number format for the SMS messages, choose the `Set` button, which is next to the `Pager(SMS)` checkbox.

> For the example gateway that we have taken in this guide, the number format should be specified as 00<country code>*. You must enter the value depending on the address specificiations of your gateway.
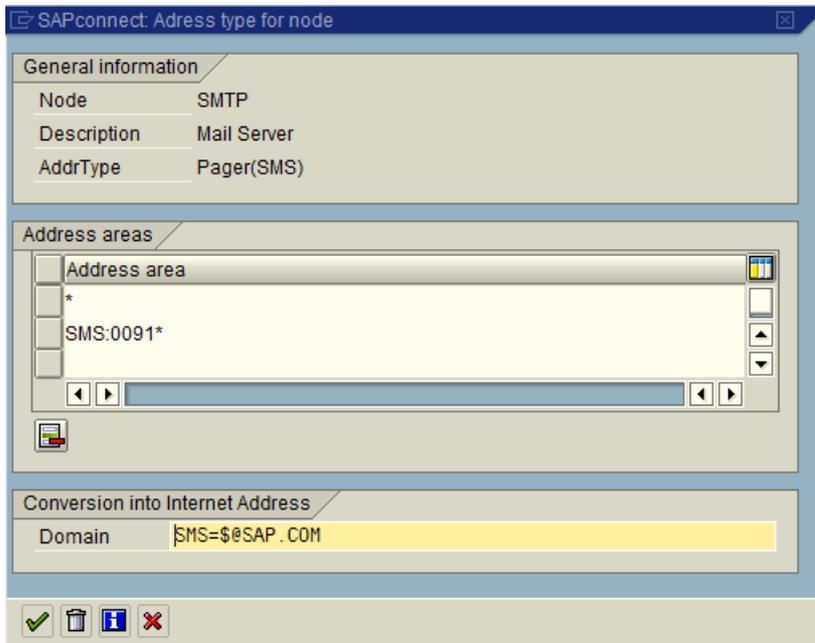
Figure 4.b – Configuring details of Pager services on the SMTP Node

5. Save and close.

> It can be seen from the figure above that the name of the service is SMS, which is the same as the service name specified earlier in transaction SA14. This is mandatory. The address of the SMS service provider has to be maintained so that the number is converted to a mail address.

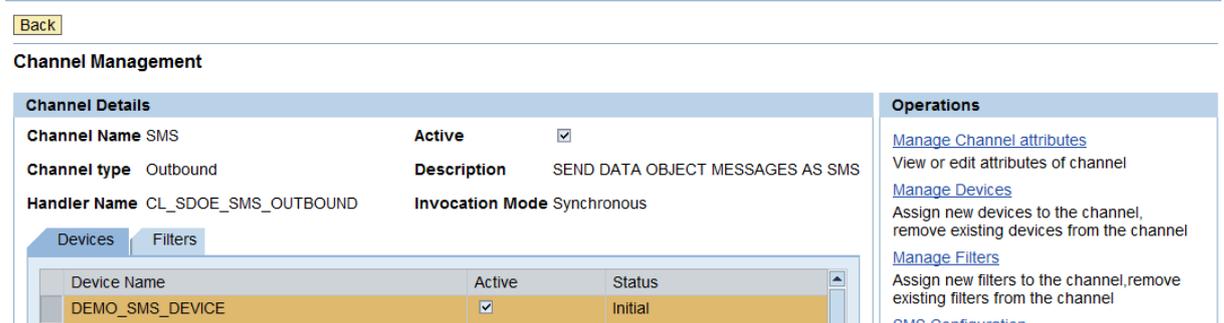# 4.3   Assigning SMS Channel to Devices

In the SAP NetWeaver Mobile Administrator, assign the SMS channel to devices that should receive data object messages in the form of an SMS. Steps to assign an SMS channel to a device are provided below:

1. Log on to the SAP NetWeaver Mobile Administrator and navigate to `Channel Administration`.

2. In the `Channel Name` field, search by entering the text `SMS`.
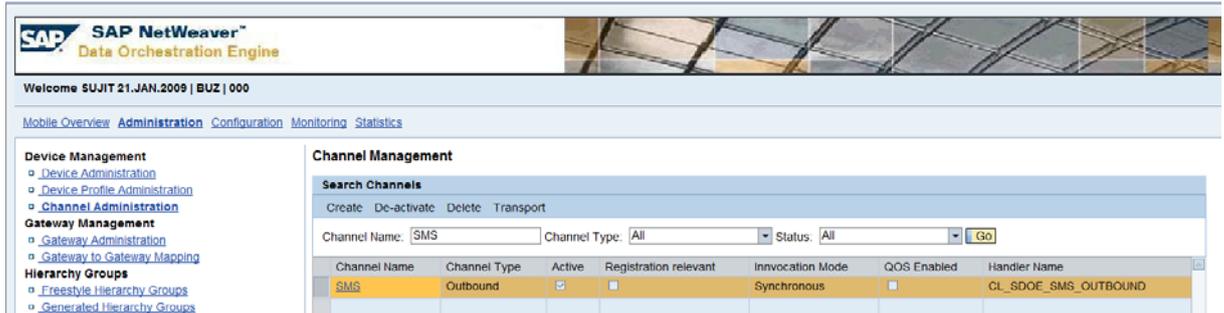
Figure 5a –Select the SMS channel

3. Click on the `SMS` link and choose `Manage Devices`, available under `Operations`. (It is visible on the right-most side of the administration tool).

Figure 5b –Manage Devices for a channel

4. Select the relevant devices.

Figure 5c – Assign devices to the SMS Channel

Devices assigned to the SMS channel must have a valid mobile number specified in the device attribute `Mobile Number`. This should be specified in the format expected by the SMS Gateway.

4.4   Configuring Data Objects to send SMS

When a data object is configured with the SMS channel, messages are sent to mobile numbers of devices subscribed to the particular data object.

Steps to configure data objects to send SMS are provided below:

1. Log on to the SAP NetWeaver Mobile Administrator and navigate to `Channel Administration`.

2. In the `Channel Name` field, search by entering the text **SMS**.

3. Click on the `SMS` link and choose `Manage Channel`.

4. Choose the `SMS Configuration` link, available under `Operations`. (It is visible on the right-most side of the administration tool).
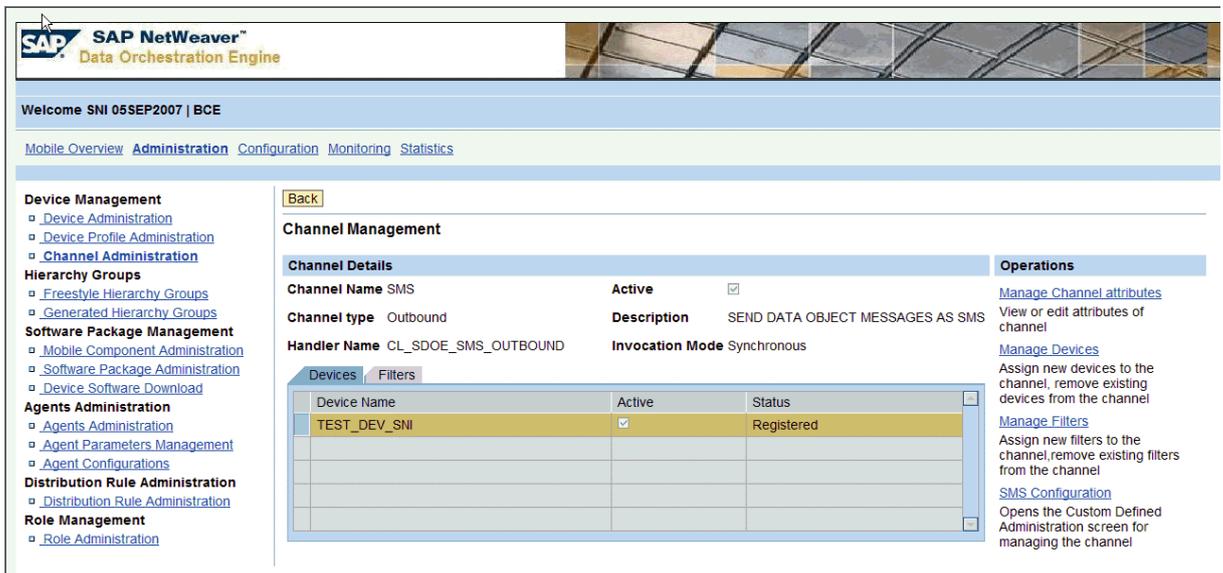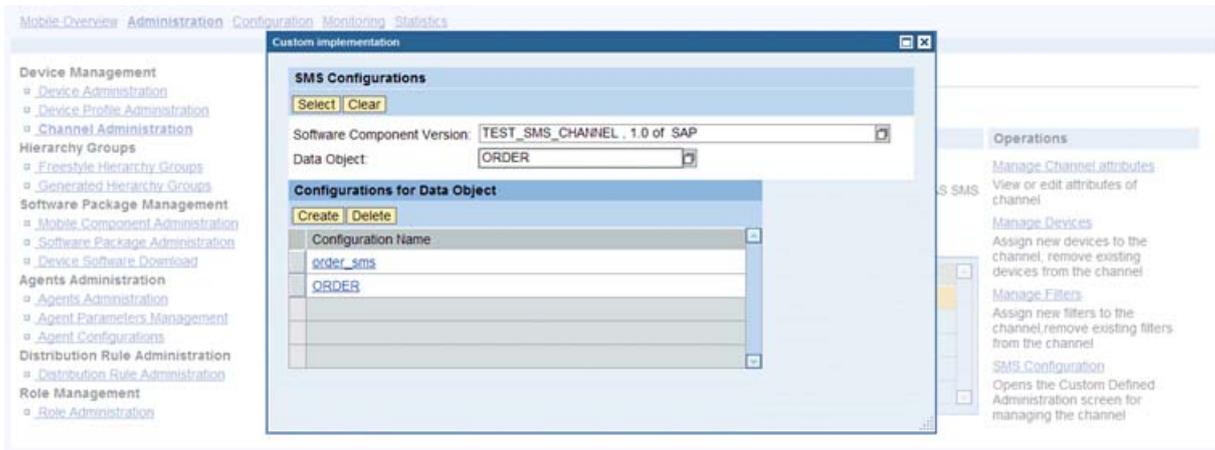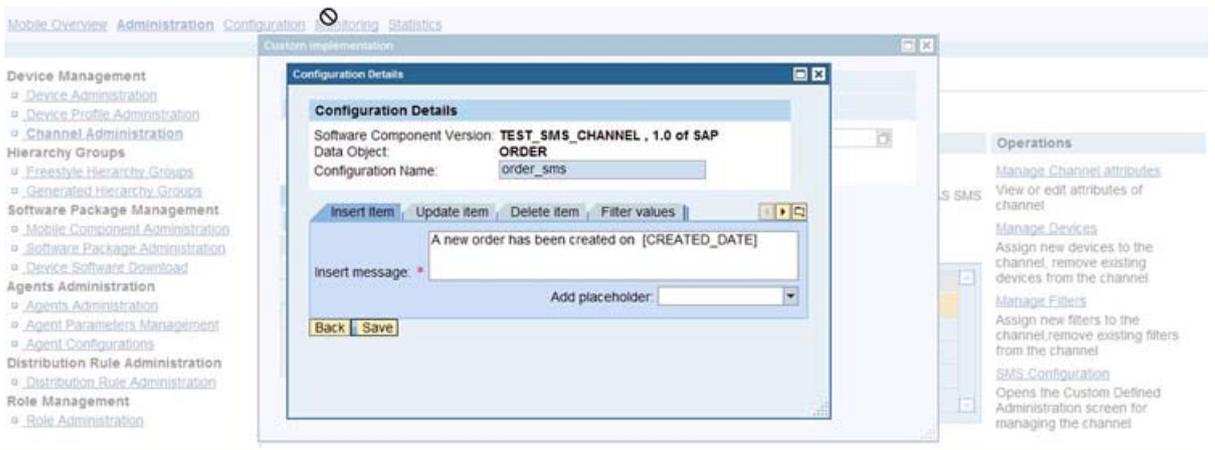

Figure 6 – SMS Configuration in Manage Channel

5. In the screen that appears, select the relevant data object and SWCV.

Figure 7 – Select Data Object in SMS Configuration

6. You can maintain separate message texts depending on the task (insert/update or delete).

Figure 8 – Maintain task-specific message texts with placeholders

7. You can maintain filters on the attributes of the root node for the data object. For example, if a threshold value is set for `ORDER_VALUE GT 10000`, on the data object `ORDER`, then an SMS would be sent only if the value of an incoming order exceeds `10000`. This prevents all messages being sent as SMS, so that the channel is mainly used to send important alerts.
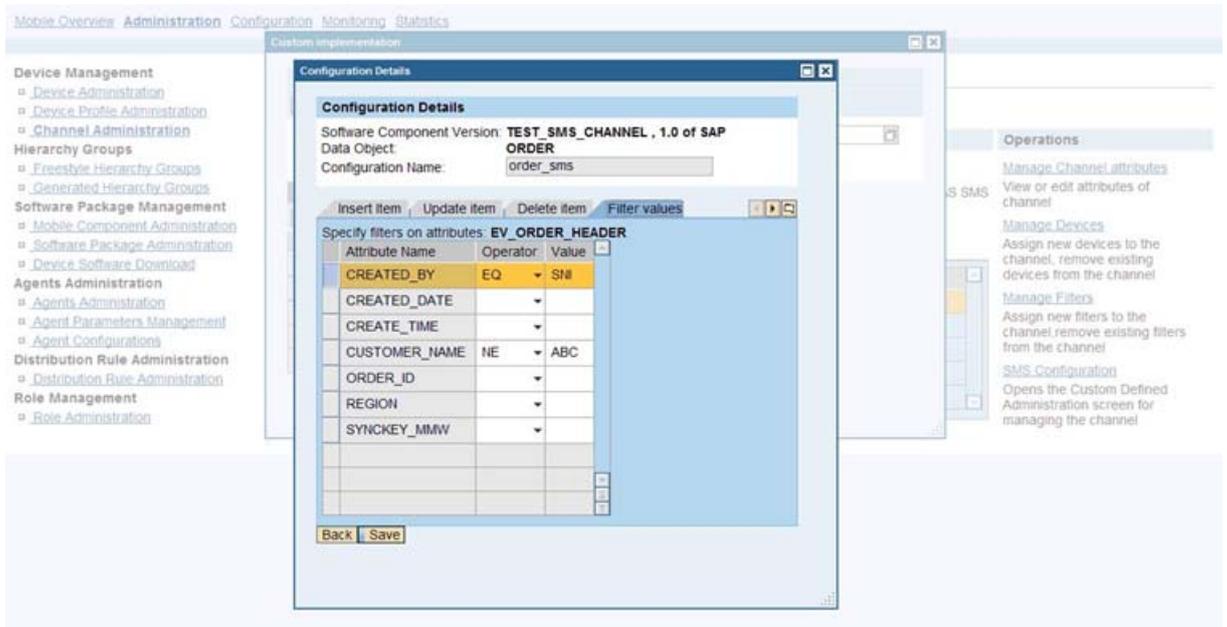

Figure 9 – Set threshold values to filter unwanted messages

You can create multiple alerts for the same data object and they operate on a **logical OR** condition. If the criterion is satisfied for any condition, the DOE sends a message to the devices.
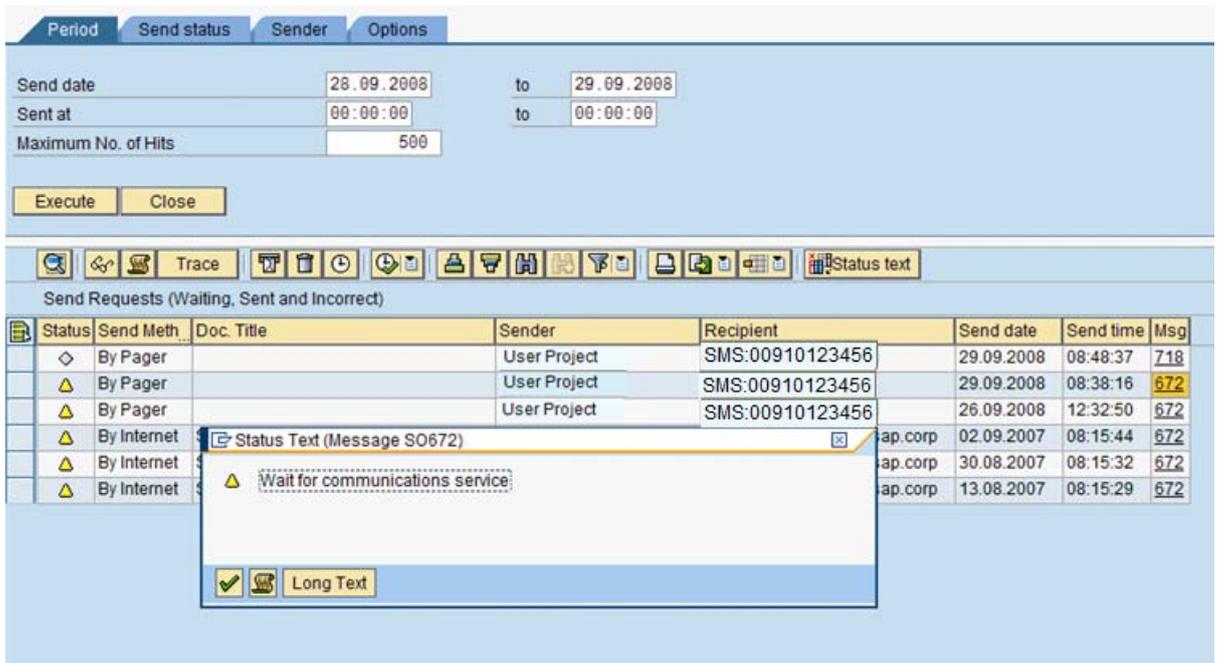
5. Appendix

5.1 Troubleshooting

Transaction **SOST** is used to track SMS messages sent from the DOE. Since SMS is a channel that does not guarantee delivery, the job of the DOE ends with routing messages to the channel handler. You can then track SMS messages in the same manner as you track any pager message sent from the R/3 server.

Listed below are some of the common error scenarios faced when sending SMS via the DOE:

1. **Mobile number format specified incorrectly**

   Each SMS Gateway determines its own mobile number format. For instance, one gateway could accept the number as 0091<number>, whereas another gateway could accept the number as +91<number>. If the number is not specified in the expected format, the message will not be sent. If the gateway is not capable of two way communication, then the transaction SOST will not show an error. The message will remain in a wait state indefinitely.

   The following image is a snapshot of the error when message sending fails because of incorrect number format.

   How to correct the error:

   a. Go to `SAP NetWeaver Mobile Administration` > `Device Administration` > `Manage Device` > `Manage Attributes`.

   b. Change the attribute `Mobile number` to the correct format and choose `Save`.

2. SMS Gateway not configured properly

If the SMS Gateway is not configured properly in SCOT, SMS messages will not be sent. The SMS gateway address has to be maintained along with the email format to which the number gets converted. When sending an SMS via SMTP, if the number is specified as **SMS: 0123456**, it gets converted as a mail to 0123456@smsprovider.com. The web address of the SMS provider must be mentioned in the node details. Complete information for the SMTP node should be as shown below:

3. Gateway properties not maintained properly

You must maintain the address of the SMS Gateway in the SMTP node of SAPconnect. If the SMS Server does not support ESMTP, you do not receive a delivery status notification for the SMS messages. This has to be explicitly maintained in the table SXNODES.

If the message fails because of the server not supporting ESMTP, the error message would be as below in SOST.

How to correct the error:

Start transaction **SE16** and enter the table name as **SXNODES**. Enter the node name as **SMTP** and press F6 (Change). In the field F_ESMTP, change the value from 'X' to space and save. This will ensure that SAPconnect does not wait for a delivery status notification from the receiver. For further information on this, refer SAP Note number 439948.

5.2 References

Help portal information

- SAPconnect: In this section, you find introductory information on SAPconnect, monitoring messages and analyzing errors.

    http://help.sap.com/saphelp_nw04s/helpdata/EN/2b/d925bf4b8a11d1894c0000e8323c4f/frameset.htm

- SMTP Configuration

    http://help.sap.com/saphelp_nw04s/helpdata/EN/af/73563c1e734f0fe10000000a114084/frameset.htm

SAP Notes

- 455129 – Information note explaining in detail about sending SMS via SMTP and HTTP from an R/3 server.

- 439948 – Information note about ESMTP and Delivery Status Notification

www.sdn.sap.com/irj/sdn/howtoguides