

SAP How-to Guide

Mobility

SAP Sybase365 Mobiliser

HTG - Set up a Stand-alone Mobiliser Development Environment

provided by SAP Rapid Innovation Group – RIG

Applicable Releases:

Mobiliser 5.1

Linux platform

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Document History

| Document Version | Authored By | Description |
|------------------|------------------|---|
| 1.1 | Simmaco Ferriero | Corrected some errors and added some information about the supported DB |
| 1.0 | Simmaco Ferriero | First release of this guide |

Typographic Conventions

| Type Style | Description |
|-----------------------------|--|
| <i>Example Text</i> | 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 |
|  | Important |
|  | Note |
|  | Recommendation or Tip |
|  | Example |

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1. Business Scenario

Utility service providers are currently challenged when it comes to their relationships with consumers. They face very high call center volumes for low touch interactions and they are not able to provide real-time communication to their customers to share important information regarding service downtime, outages, or important offers.

This has led to low customer satisfaction and impersonal customer relationships. The SAP Utilities Customer Engagement mobile application gives these companies the opportunity to offer consumers a rich user interface to carry out the most important actions on their account and to receive valuable information from their utility provider.



The SAP Utilities Customer Engagement Business-to-Consumer (B2C) mobile application enables utility consumers to manage all aspects of their gas and electric accounts anywhere and anytime.

Important functions include viewing and paying bills, updating account information, service usage, reporting problems or outages, viewing outage information on a map, and receiving alerts from their utility company.

Having these self-service capabilities is empowering for consumers and will reduce operating costs and increase customer satisfaction for utility companies.

2. Background Information

SAP Customer Engagement Utilities can be installed on any existing Sybase365 Mobiliser 5.1 installation. Indeed, the rich client application is built based on Sybase365 Mobiliser and connects to the SAP ERP backend system.

The ERP backend system is the leading system and requires the Industry Solution Utilities (IS-U) and the Contract Accounts Receivable and Payable (FI-CA) add-ons. All data persistency is maintained exclusively at the ERP backend level. The client app is an online hybrid application that is communicating to the ERP backend system by calling Web Services on the Sybase Mobiliser Platform in a request/response manner. In the first version, the client app will run on iPhone and Android smartphone devices.

In order to download the software you can access the SAP Download Portal and search for the following packages:

| Software Component | Location |
|---|---|
| Needed components for Mobiliser 5.1. This is the patch 4. | SAP Software Download Center → Support Packages and Patches → A-Z Index → M → SAP Mobile Solutions → SAP Mobile Utilities → MOB UTILITIES INT → MOB UTILITIES INT 1.0.0 → Comprised Software Component Versions → MUTILITIES CONTENT 1.0.0 → #OS independent → #Database independent → SAPUtIMobCont00_4-20010585.ZIP |
| Android version of the client application (it can be downloaded from Google Play as well) | SAP Software Download Center → Support Packages and Patches → A-Z Index → M → SAP Mobile Solutions → SAP Mobile Utilities → MOB UTILITIES AND → MOB UTILITIES AND 1.0.0 → Comprised Software Component Versions → MOB MUTILITIES AND 1.0.0 → Android → MOBMUTILITIES00_5-10011796.ZIP |
| SAP for Utilities Add-on for SAP Utility Customer Engagement (MUTIL001) | SAP Software Download Center → Installation and Upgrades → A-Z Index → M → SAP Mobile Solutions → SAP Mobile Utilities → MOB UTILITIES INT → Installation → SAPK-100AGINMUTIL001 |

Note

The iOS version of the app needs to be downloaded directly from the Apple Store.

Also read carefully the following two SAP Notes:

[Release Note 1784558](#)

[Limitation Note 1782729](#)

3. Prerequisites

Here it is a list of all the software components needed for SAP Customer Engagement utilities installation.

- SAP ERP 6.0 EhP4+, up to EhP6
- SAP for Utilities (SAP IS-U) 6.0 SP04+
- SAP FI-CA 6.0 SP04+
- Sybase Mobiliser Platform 5.1
- One of the following supported DB platforms:
 - Sybase Adaptive Server® Enterprise 15.5 or later
 - IBM DB2 9.7.4 or later
 - Oracle 11g Release 2
- SAP Java Connector 3.0.9
- iOS 5.0+
- Android 4.0

In this guide we will use the following naming convention:

| Variable | Description | Value in this document |
|-----------------------|--|-----------------------------------|
| TERM | Linux Terminal | Run it by pressing [CTRL]+[ALT]+T |
| <server_name> | The name of the machine where you install the software. | UBUNTU or UBUNTU.local |
| <ase_server_name> | The name of the ASE server | aseserver |
| <linux_user_name> | The name of the Windows user who logs in and installs the software | mobiliser |
| <linux_user_password> | The password of the Windows user who logs in and installs the software | sybase |
| <local_user_path> | The Windows path for the current user profile | /home/mobiliser |

4. Step-by-Step Procedure

Our installation will be made by the following steps:

- 1) Installing SAP Java Connector (sapjco)
- 2) Applying a SQL script to the ASE DB
- 3) Installing the mUtilities bundles
- 4) Configuring the mUtilities preferences
- 5) Testing the services

4.1 Install SAP Java Connector (sapjco)

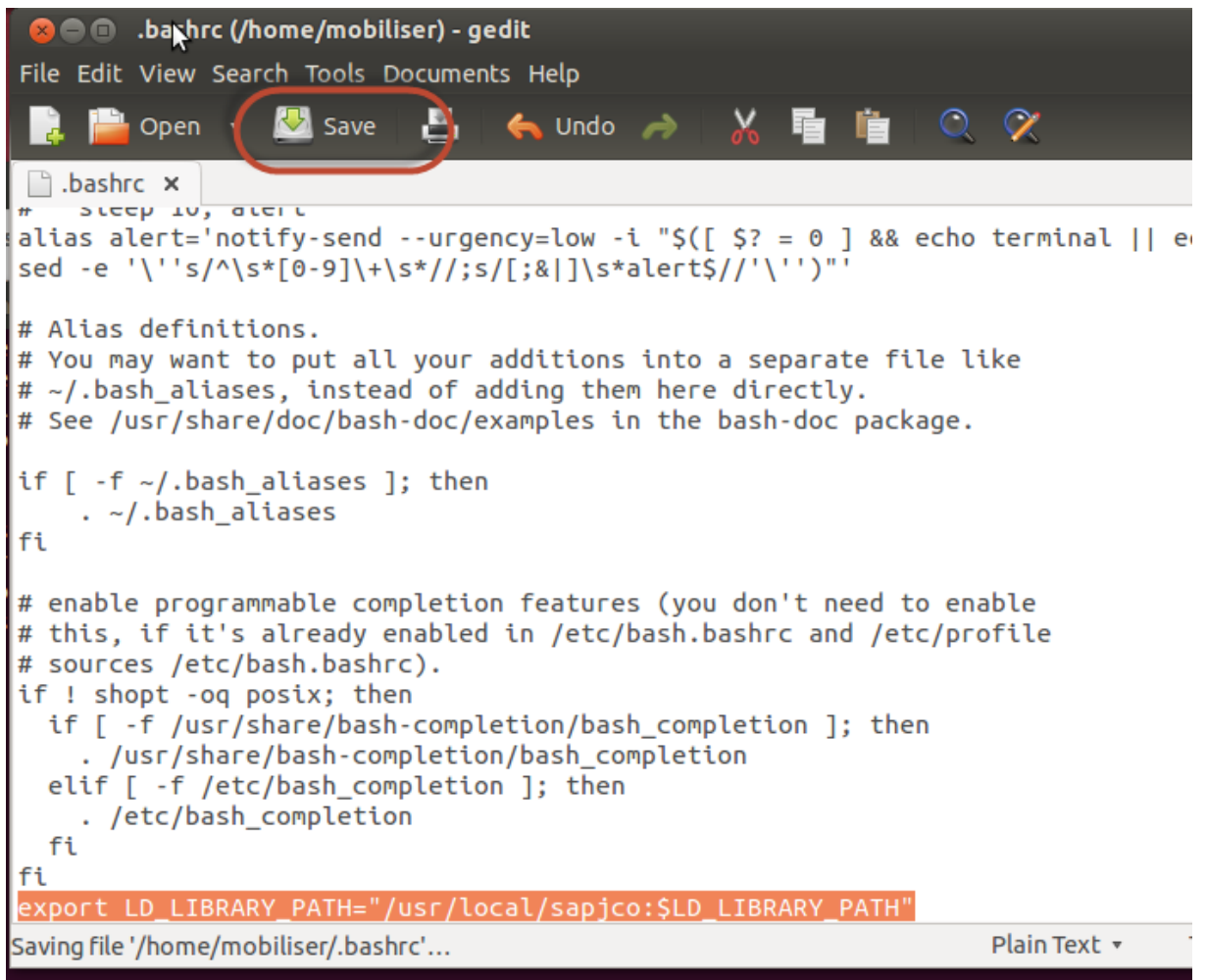
1. Stop Money Mobiliser and Web Mobiliser if they are still running.
2. Download the SAP Java Connector from the SMP or use the one that comes with this guide (sapjco3-linuxx86_64-3.0.9.tgz).
3. Put in on a temporary folder, i.e. in the <local_user_path>\temp\sapjco folder.
4. Extract it in the same path

```
mobiliser@ubuntu:~/temp$ ls
mUtilities  sapjco
mobiliser@ubuntu:~/temp$ cd sapjco
mobiliser@ubuntu:~/temp/sapjco$ ls
sapjco3-linuxx86_64-3.0.9.tgz
mobiliser@ubuntu:~/temp/sapjco$ tar xvfz sapjco3-linuxx86_64-3.0.9.tgz
examples/
Readme.txt
examples/CustomDestinationDataProvider.java
examples/MultiThreadedExample.java
examples/RepositoryChain.java
examples/StatefulServerExample.java
examples/StepByStepClient.java
examples/StepByStepServer.java
libsapjco3.so
```

5. At the end you will have the following folders:

```
mobiliser@ubuntu: ~/temp/sapjco
mobiliser@ubuntu:~/temp/sapjco$ ls -la
total 10200
drwxrwxr-x 4 mobiliser mobiliser 4096 Feb  1 17:39 .
drwxrwxr-x 4 mobiliser mobiliser 4096 Feb  1 17:39 ..
drwxr-xr-x 2 mobiliser mobiliser 4096 Feb  1 17:39 examples
drwxr-xr-x 4 mobiliser mobiliser 4096 Jul 23  2012 javadoc
-rwxr-xr-x 1 mobiliser mobiliser 5301240 Jul 23  2012 libsapjco3.so
-rwxr-xr-x 1 mobiliser mobiliser 353 Jul 23  2012 Readme.txt
-rwxr-xr-x 1 mobiliser mobiliser 1334031 Jul 23  2012 sapjco3.jar
-rwxrwxrwx 1 mobiliser mobiliser 3777088 Jul 23  2012 sapjco3-linuxx86_64-3.0.9.tgz
-rw-r--r-- 1 mobiliser mobiliser 145 Jul 23  2012 sapjcomanifest.mf
mobiliser@ubuntu:~/temp/sapjco$
```

6. Go in the upper folder with the command `cd ..`
7. Run the command
`sudo mv sapjco /usr/local`
to move the `sapjco` folder in a proper position
8. Make the user “mobiliser” the owner of the `sapjco` folder with the command:
`sudo chown -R mobiliser /usr/local/sapjco/`
9. Go in the `<local_user_path>` and edit the file `.bashrc` with the command
`sudo gedit .bashrc`
10. Add the following line to that file and save it.
`export LD_LIBRARY_PATH="/usr/local/sapjco:$LD_LIBRARY_PATH"`



```

# sleep 10, alert
alias alert='notify-send --urgency=low -i "$([ $? = 0 ] && echo terminal || echo error)" --title "Bash Terminal Alert" --text "Process ID: $PID, Error: $?"'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

export LD_LIBRARY_PATH="/usr/local/sapjco:$LD_LIBRARY_PATH"

```

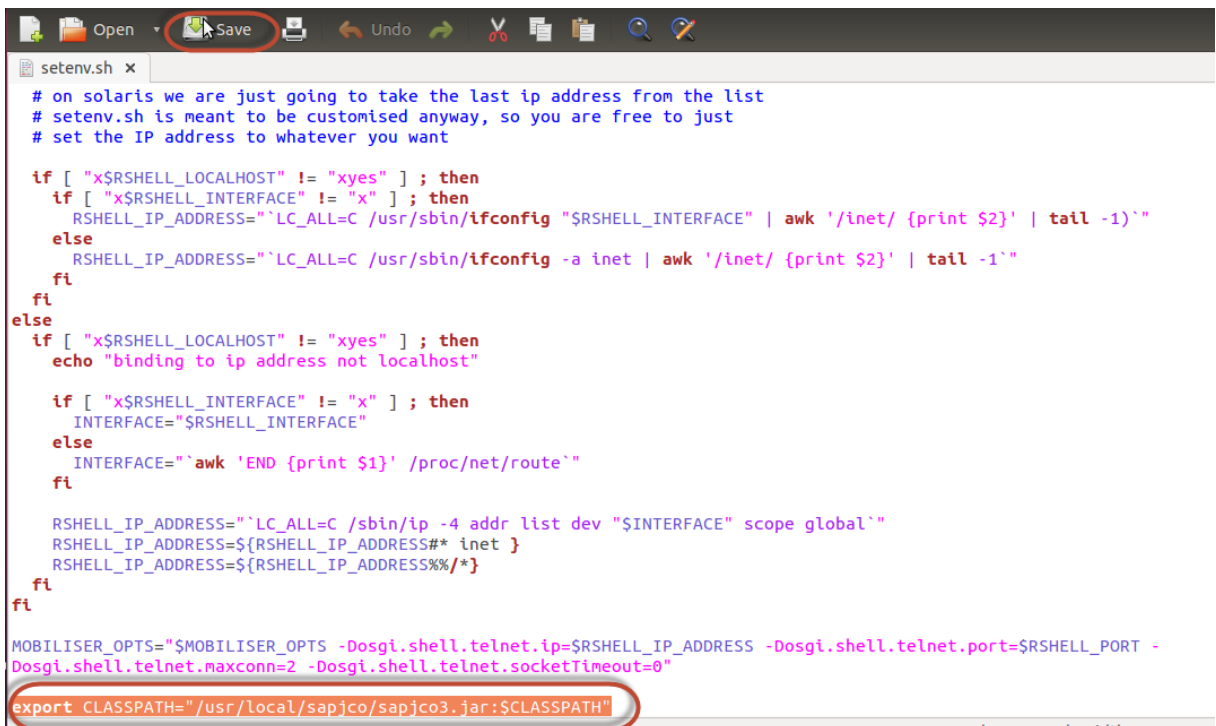
11. Run the command `source .bashrc` in order to apply the changes immediately.

12. Run the command `echo $LD_LIBRARY_PATH`. You should receive the following output:

```
mobiliser@ubuntu:~$ sudo gedit .bashrc
mobiliser@ubuntu:~$ source .bashrc
mobiliser@ubuntu:~$ echo $LD_LIBRARY_PATH
/usr/local/sapjco:
mobiliser@ubuntu:~$
```

This means that the variable has been setup properly.

13. Go in the Money Mobiliser folder
`cd /opt/mobiliser/money`
14. Edit the file `bin/setenv.sh`
`gedit bin/setenv.sh`
15. Add the following line at the end of the file and save it.
`export CLASSPATH="/usr/local/sapjco/sapjco3.jar$CLASSPATH"`



```
setenv.sh
# on solaris we are just going to take the last ip address from the list
# setenv.sh is meant to be customised anyway, so you are free to just
# set the IP address to whatever you want

if [ "$RSHELL_LOCALHOST" != "xyes" ] ; then
if [ "$RSHELL_INTERFACE" != "x" ] ; then
RSHELL_IP_ADDRESS="LC_ALL=C /usr/sbin/ifconfig "$RSHELL_INTERFACE" | awk '/inet/ {print $2}' | tail -1)"
else
RSHELL_IP_ADDRESS="LC_ALL=C /usr/sbin/ifconfig -a inet | awk '/inet/ {print $2}' | tail -1"
fi
fi
else
if [ "$RSHELL_LOCALHOST" != "xyes" ] ; then
echo "binding to ip address not localhost"

if [ "$RSHELL_INTERFACE" != "x" ] ; then
INTERFACE="$RSHELL_INTERFACE"
else
INTERFACE="`awk 'END {print $1}' /proc/net/route`"
fi

RSHELL_IP_ADDRESS="LC_ALL=C /sbin/ip -4 addr list dev "$INTERFACE" scope global"
RSHELL_IP_ADDRESS=${RSHELL_IP_ADDRESS##* inet }
RSHELL_IP_ADDRESS=${RSHELL_IP_ADDRESS%/*}
fi
fi

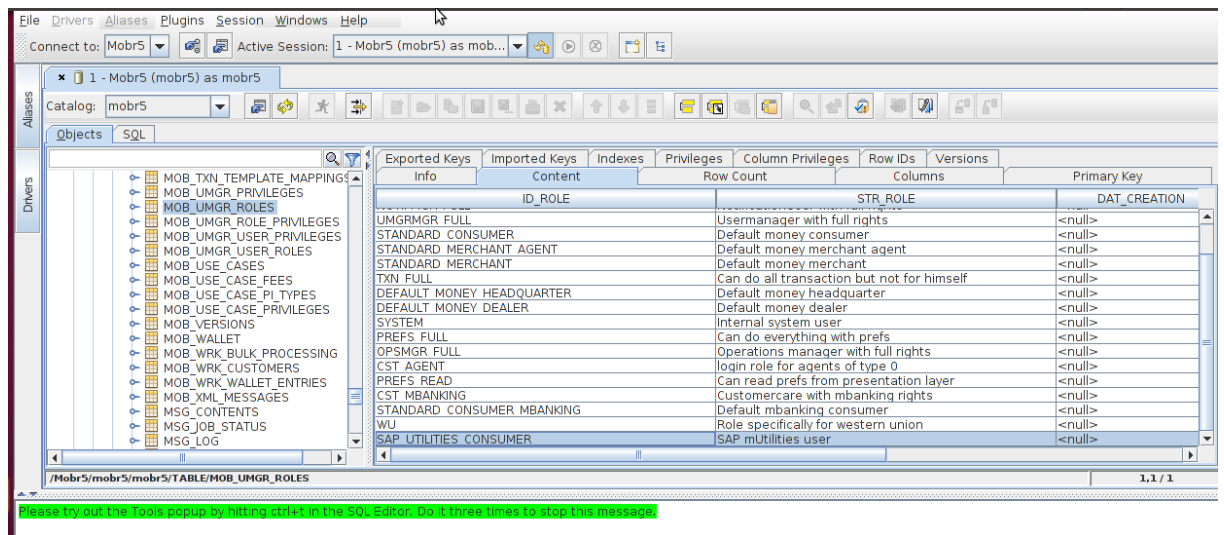
MOBILISER_OPTS="$MOBILISER_OPTS -Dosgi.shell.telnet.ip=$RSHELL_IP_ADDRESS -Dosgi.shell.telnet.port=$RSHELL_PORT -
-Dosgi.shell.telnet.maxconn=2 -Dosgi.shell.telnet.socketTimeout=0"

export CLASSPATH="/usr/local/sapjco/sapjco3.jar:$CLASSPATH"
```


4. Open the Squirrel tool.
5. Logon on the “mobr5” database with the user

| USER | PASSWORD |
|-------|----------|
| mobr5 | paybox |

6. Browse the table “MOB_UMGR_ROLES” and check that you have a new ID_ROLE named “SAP_UTILITIES_CONSUMER”.



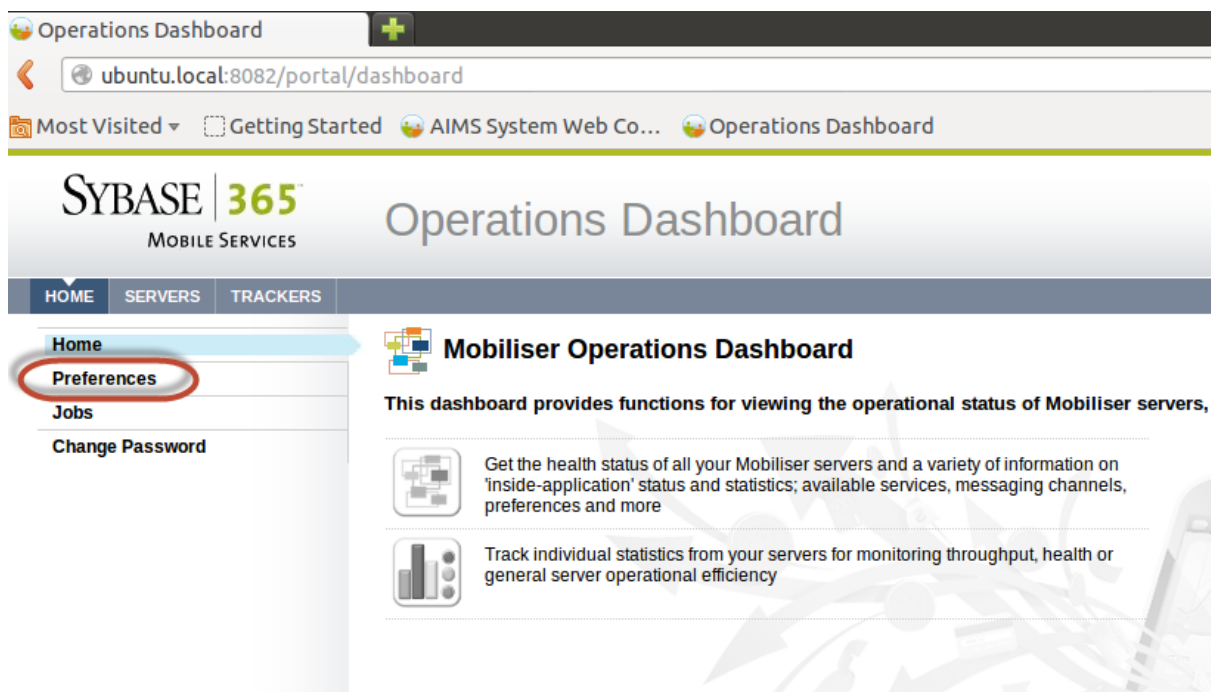
Please try out the Tools popup by hitting ctrl+t in the SQL Editor. Do it three times to stop this message

4.3 Configure the mUtilities preferences

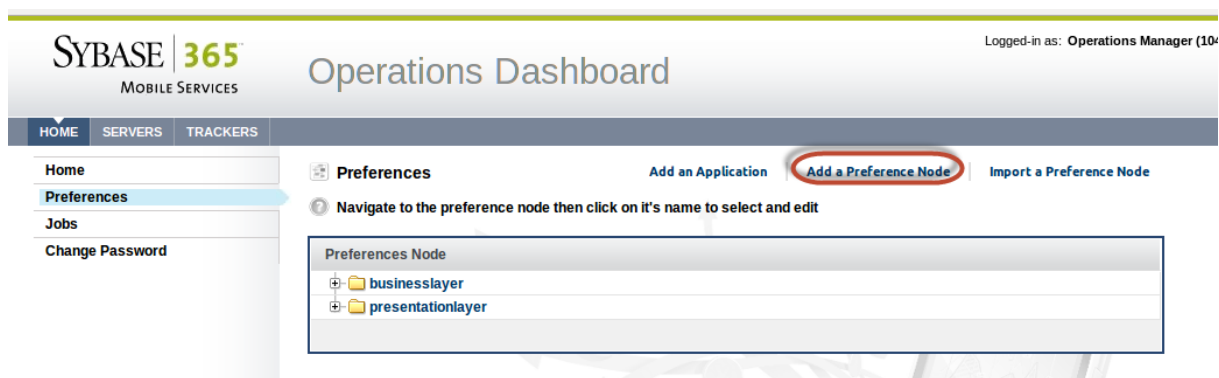
1. Start-up Money Mobiliser and Web Mobiliser
2. Go on the Web Mobiliser portal through the following address:
http://<server_name>:8082/portal
(in our case it is <http://ubuntu.local:8082/portal>) and enter the following credentials:

| USER | PASSWORD |
|--------|----------|
| opsmgr | secret |

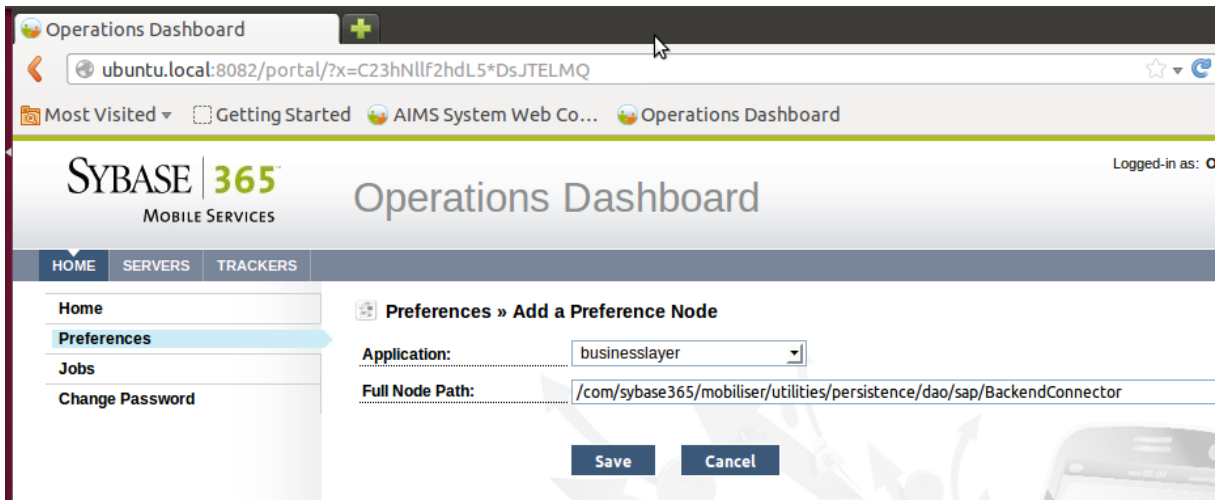
3. Click on the Preferences menu on the left.



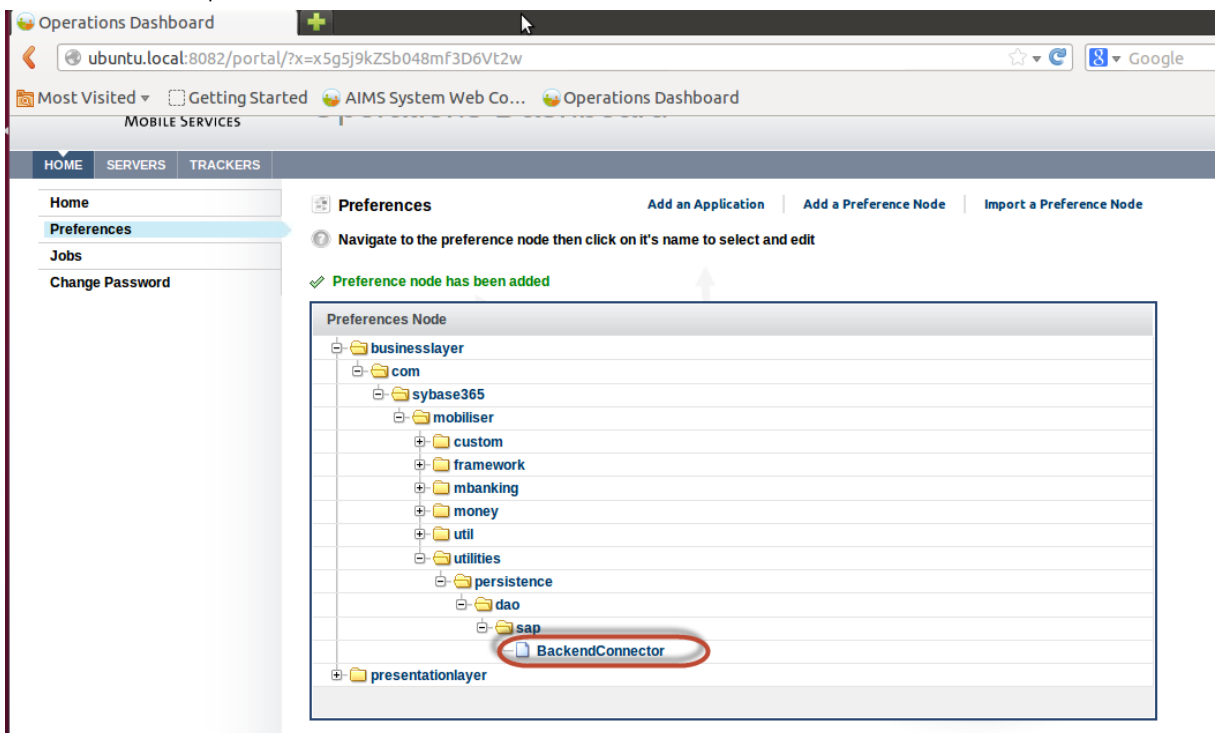
4. Click on Add a Preference Node



5. Select “businesslayer” as the application and fill the full node path with the following string:
/com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector



6. Click on the new preference node named “BackendConnector”



7. Click on Add a Preference

Logged-in as: **Operations Manager (1)**

Operations Dashboard

Preferences » Node

Selected Node

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector

Buttons: Refresh Remove Export Cancel

Preferences

Showing: 0 - 0 (0 Total)

| Key | Value | Actions |
|--|-------|---------|
| No preferences found for this node Click on Add a Preference to add a preference to this node | | |

Add a Preference

8. Fill all the fields as in the [Appendix C – Table 1](#)

Operations Dashboard

ubuntu.local:8082/portal/?x=nfiQAmlQU87PpUEwC7SlaQ

Most Visited Getting Started AIMS System Web Co... Operations Dashboard

SYBASE 365 MOBILE SERVICES

Operations Dashboard

Logged-in as

HOME SERVERS TRACKERS

Home

Preferences

Jobs

Change Password

Preferences » Node » Add a Preference

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector

Key: JCO_ASHOST

Value: uxcicq5j.wdf.sap.corp

Type: java.lang.String

Description: SAP ERP Application Server

Save With Encryption: No encryption

Using Passphrase:

Buttons: Save Cancel

9. You will get the first row for your preferences' table. Do the same for all the other preferences.

Logged-in as: **Operations Manager (104)**

Operations Dashboard

Preferences » Node

✔ **Preference has been saved**

Selected Node

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector

Preferences Add a Preference

Showing: 1 - 1 (1 Total)

| Key | Value | Actions |
|------------|----------------------|--|
| JCO_ASHOST | uxciq5j.wdf.sap.corp | Edit Remove |

10. At the end you will get a table with 12 preferences spread on two pages:

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector

Preferences Add a Preference

Showing: 1 - 10 (12 Total)

| Key | Value | Actions |
|---------------------------|---|--|
| JCO_ASHOST | uxciq5j.wdf.sap.corp | Edit Remove |
| JCO_CLIENT | 340 | Edit Remove |
| JCO_DENY_INITIAL_PASSWORD | 0 | Edit Remove |
| JCO_GROUP | PUBLIC | Edit Remove |
| JCO_LANG | EN | Edit Remove |
| JCO_MSHOST | uxciq5j.wdf.sap.corp | Edit Remove |
| JCO_PEAK_LIMIT | 10 | Edit Remove |
| JCO_POOL_CAPACITY | 20 | Edit Remove |
| JCO_R3NAME | Q5J | Edit Remove |
| JCO_REPOSITORY_PASSWD | {AES-128}QMXSRptpXME+WoSrprPDXKmLGqgPnw/01FYv3AAhTLI= | Edit Remove |

Preferences » Node

Selected Node

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/persistence/dao/sap/BackendConnector

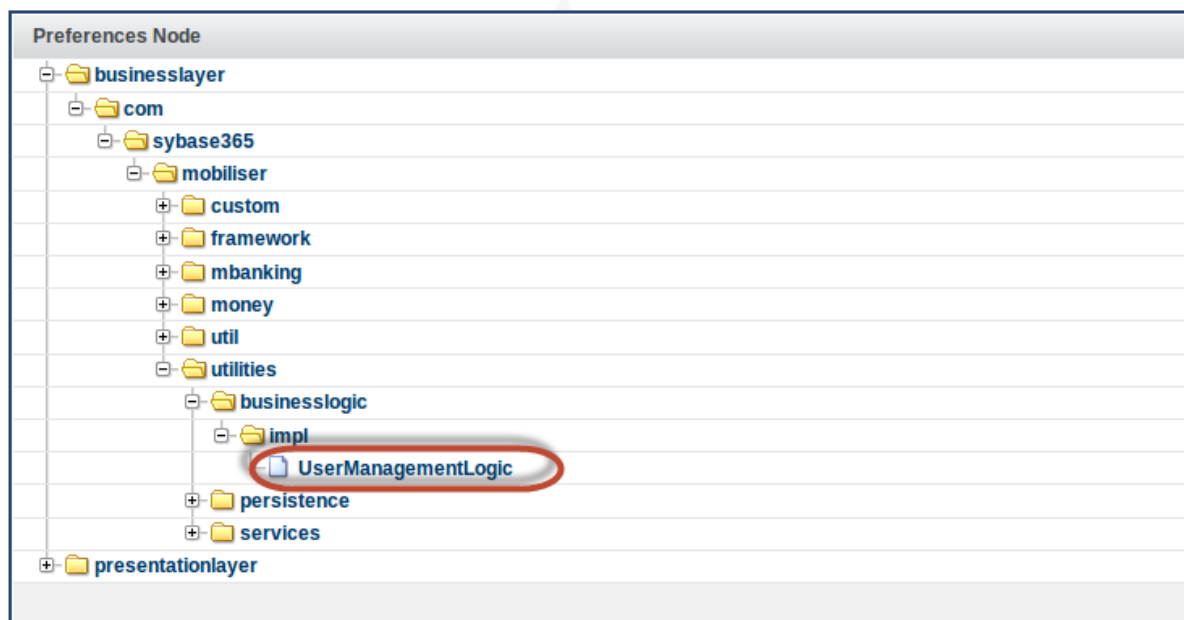
Buttons: Refresh Remove Export Cancel

Preferences Add a Preference

Showing: 11 - 12 (12 Total)

| Key | Value | Actions |
|---------------------|---------|----------------|
| JCO_REPOSITORY_USER | d043634 | Edit Remove |
| JCO_SYSNR | 76 | Edit Remove |

11. Go back on the home page and add a new preference node in the “businesslayer” application with the following full node path:
/com/sybase365/mobiliser/utilities/businesslogic/impl/UserManagementLogic
12. Click on the new preference node named “UserManagementLogic”



13. Fill all the fields as in the [Appendix C – Table 2](#)

Preferences » Node

Selected Node

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/businesslogic/impl/UserManagementLogic

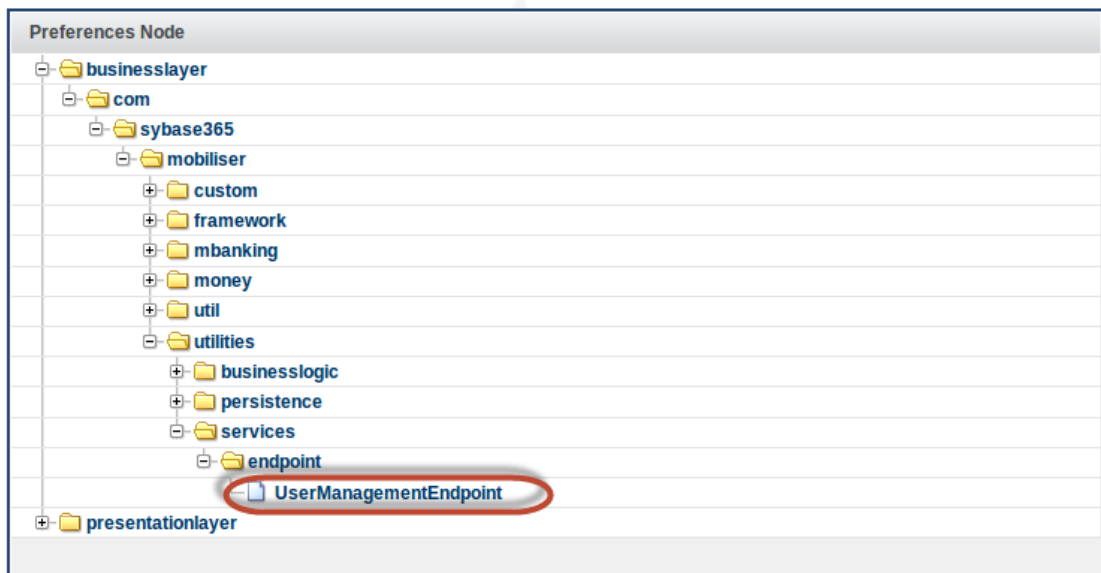
Buttons: Refresh Remove Export Cancel

Preferences [Add a Preference](#)

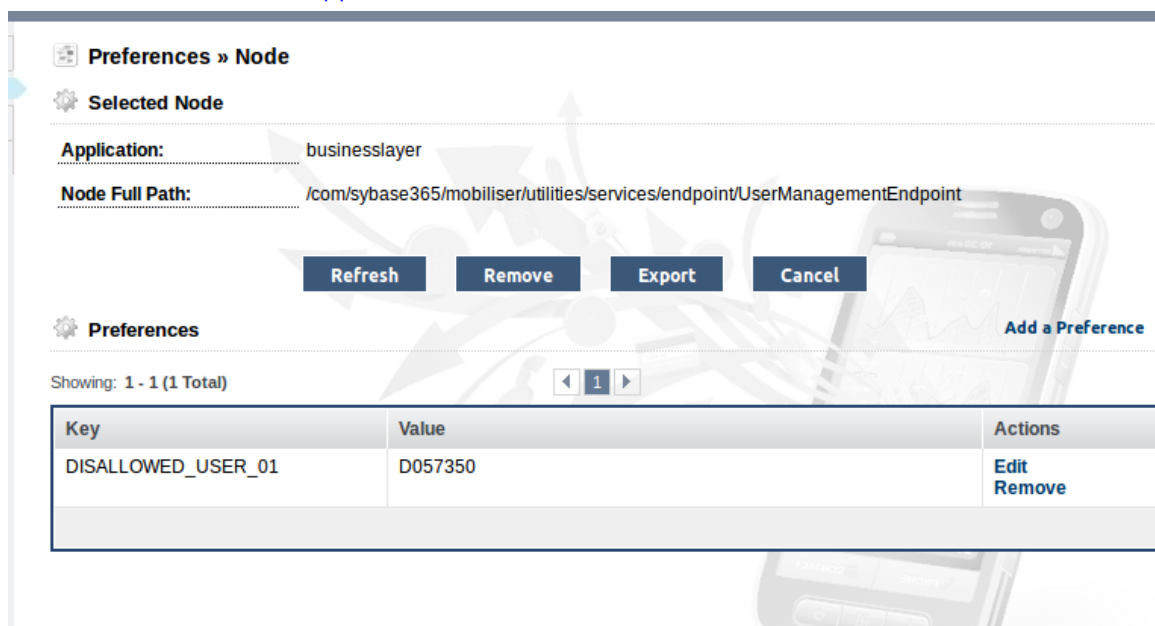
Showing: 1 - 2 (2 Total)

| Key | Value | Actions |
|-----------------------------|-------|-------------|
| SAP_UTILITIES_CUSTOMER_TYPE | 999 | Edit Remove |
| SAP_UTILITIES_ORG_UNIT | 0000 | Edit Remove |

14. Go back one more time on the home page and add a new preference node in the “businesslayer” application with the following full node path:
/com/sybase365/mobiliser/utilities/services/endpoint/UserManagementEndpoint
15. Click on the new preference node named “UserManagementEndpoint”



16. Fill all the fields as in the [Appendix C – Table 3](#)



Preferences » Node

Selected Node

Application: businesslayer

Node Full Path: /com/sybase365/mobiliser/utilities/services/endpoint/UserManagementEndpoint

Buttons: Refresh Remove Export Cancel

Preferences [Add a Preference](#)

Showing: 1 - 1 (1 Total)

| Key | Value | Actions |
|--------------------|---------|--|
| DISALLOWED_USER_01 | D057350 | Edit Remove |

4.4 Install the mUtilities bundles

1. Stop Money Mobiliser and Web Mobiliser if they are running.
2. Download the SAP Consumer Engagement Utilities from the SAP Market Place or use the one that comes with this guide. You should be able to find the file "SAPUtlMobCont00_4-20010585.zip" in the <local_user_path>/temp/mUtilities folder.
3. Extract it with the command:
unzip SAPUtlMobCont00_4-20010585.zip

```
mobiliser@ubuntu: ~/workspace/custom/dist/target
mobiliser@ubuntu:~/workspace/custom/dist/target$ ls -la
total 217496
drwxrwxr-x 11 mobiliser mobiliser 4096 Jan 30 11:52 .
drwxrwxr-x 5 mobiliser mobiliser 4096 Jan 30 10:54 ..
drwxr-xr-x 9 mobiliser mobiliser 4096 Jan 30 10:55 activemq
drwxrwxr-x 2 mobiliser mobiliser 4096 Jan 30 10:55 antrun
drwxrwxr-x 2 mobiliser mobiliser 4096 Jan 30 10:55 archive-tmp
drwxrwxr-x 3 mobiliser mobiliser 4096 Jan 30 10:55 brand
drwxrwxr-x 4 mobiliser mobiliser 4096 Jan 30 10:55 classes
-rw-rw-r-- 1 mobiliser mobiliser 220261734 Jan 30 10:55 com.sybase365.mobiliser.custom.project.dist-1.2.0-SNAPSHOT-dist-ase.zip
-rw-rw-r-- 1 mobiliser mobiliser 2364897 Jan 30 10:55 com.sybase365.mobiliser.custom.project.dist-1.2.0-SNAPSHOT-scriptarchive-ase.js
-rw-rw-r-- 1 mobiliser mobiliser 17301 Jan 30 11:07 dbmaintain.properties
-rw-rw-r-- 1 mobiliser mobiliser 17304 Nov 19 07:21 dbmaintain.properties-
drwxrwxr-x 2 mobiliser mobiliser 4096 Jan 30 10:55 dependency-maven-plugin-markers
drwxrwxr-x 3 mobiliser mobiliser 4096 Jan 30 10:55 money
drwxrwxr-x 8 mobiliser mobiliser 4096 Jan 30 10:55 sql
drwxrwxr-x 9 mobiliser mobiliser 4096 Jan 30 10:55 tomcat
mobiliser@ubuntu:~/workspace/custom/dist/target$ unzip com.sybase365.mobiliser.custom.project.dist-1.2.0-SNAPSHOT-dist-ase.zip
```

4. You should find a new folder named com.sybase365.mobiliser.utilities.dist-1.0.0
5. Go inside the folder
cd com.sybase365.mobiliser.utilities.dist-1.0.0/money

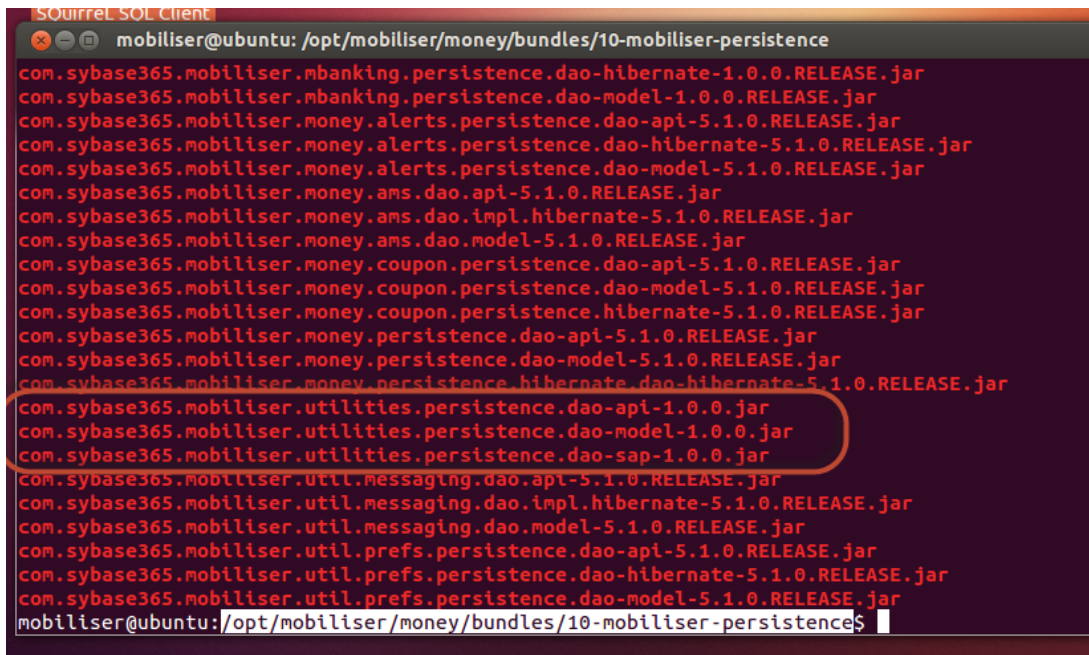
```
051_PROJECT_Privs.sql preferences.xml UserManagementLogic.xml
com.sybase365.mobiliser.utilities.dist-1.0.0 SAPUtlMobCont00_4-20010585.zip
MOBMUTILITIES00_5-10011796.zip UserManagementEndpoint.xml
mobiliser@ubuntu:~/temp/mUtilities$ cd com.sybase365.mobiliser.utilities.dist-1.0.0/
mobiliser@ubuntu:~/temp/mUtilities/com.sybase365.mobiliser.utilities.dist-1.0.0$ ls
money sql
mobiliser@ubuntu:~/temp/mUtilities/com.sybase365.mobiliser.utilities.dist-1.0.0$ ls
money sql
mobiliser@ubuntu:~/temp/mUtilities/com.sybase365.mobiliser.utilities.dist-1.0.0$ cd money
mobiliser@ubuntu:~/temp/mUtilities/com.sybase365.mobiliser.utilities.dist-1.0.0/money$ ls
bundles
mobiliser@ubuntu:~/temp/mUtilities/com.sybase365.mobiliser.utilities.dist-1.0.0/money$
```

6. In this folder you have one single subfolder named bundles. Now we need to merge this folder with the one already present in the Money Mobiliser. So run the command:
cp -r bundles /opt/mobiliser/money

This command will copy all the new bundles in the right position.

7. Now you should have 13 new bundles in Money Mobiliser. You can check it in the following way:

cd /opt/mobiliser/money/bundles/10-mobiliser-persistence

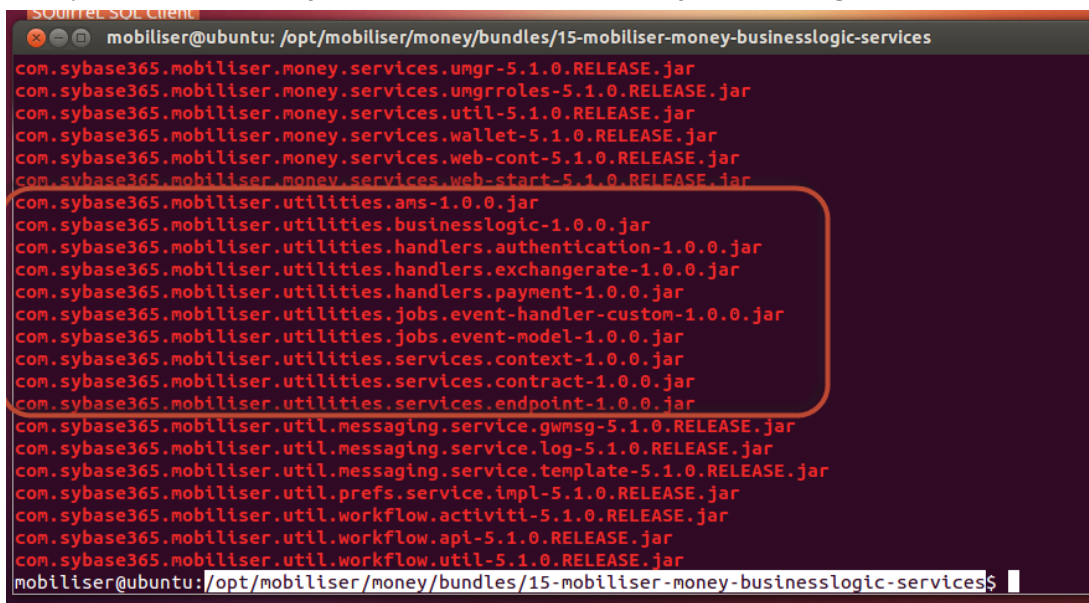


```

Squirrel SQL Client
mobiliser@ubuntu: /opt/mobiliser/money/bundles/10-mobiliser-persistence
com.sybase365.mobiliser.mbanking.persistence.dao-hibernate-1.0.0.RELEASE.jar
com.sybase365.mobiliser.mbanking.persistence.dao-model-1.0.0.RELEASE.jar
com.sybase365.mobiliser.money.alerts.persistence.dao-api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.alerts.persistence.dao-hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.alerts.persistence.dao-model-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.ams.dao.api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.ams.dao.impl.hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.ams.dao.model-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.coupon.persistence.dao-api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.coupon.persistence.dao-model-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.coupon.persistence.hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.persistence.dao-api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.persistence.dao-model-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.persistence.hibernate.dao-hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.utilities.persistence.dao-api-1.0.0.jar
com.sybase365.mobiliser.utilities.persistence.dao-model-1.0.0.jar
com.sybase365.mobiliser.utilities.persistence.dao-sap-1.0.0.jar
com.sybase365.mobiliser.util.messaging.dao.api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.messaging.dao.impl.hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.messaging.dao.model-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.prefs.persistence.dao-api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.prefs.persistence.dao-hibernate-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.prefs.persistence.dao-model-5.1.0.RELEASE.jar
mobiliser@ubuntu: /opt/mobiliser/money/bundles/10-mobiliser-persistence$

```

8. cd /opt/mobiliser/money/bundles/15-mobiliser-money-businesslogic-services



```

Squirrel SQL Client
mobiliser@ubuntu: /opt/mobiliser/money/bundles/15-mobiliser-money-businesslogic-services
com.sybase365.mobiliser.money.services.umgr-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.services.umgroles-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.services.util-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.services.wallet-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.services.web-cont-5.1.0.RELEASE.jar
com.sybase365.mobiliser.money.services.web-start-5.1.0.RELEASE.jar
com.sybase365.mobiliser.utilities.ams-1.0.0.jar
com.sybase365.mobiliser.utilities.businesslogic-1.0.0.jar
com.sybase365.mobiliser.utilities.handlers.authentication-1.0.0.jar
com.sybase365.mobiliser.utilities.handlers.exchangerate-1.0.0.jar
com.sybase365.mobiliser.utilities.handlers.payment-1.0.0.jar
com.sybase365.mobiliser.utilities.jobs.event-handler-custom-1.0.0.jar
com.sybase365.mobiliser.utilities.jobs.event-model-1.0.0.jar
com.sybase365.mobiliser.utilities.services.context-1.0.0.jar
com.sybase365.mobiliser.utilities.services.contract-1.0.0.jar
com.sybase365.mobiliser.utilities.services.endpoint-1.0.0.jar
com.sybase365.mobiliser.util.messaging.service.gwmsg-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.messaging.service.log-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.messaging.service.template-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.prefs.service.impl-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.workflow.activiti-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.workflow.api-5.1.0.RELEASE.jar
com.sybase365.mobiliser.util.workflow.util-5.1.0.RELEASE.jar
mobiliser@ubuntu: /opt/mobiliser/money/bundles/15-mobiliser-money-businesslogic-services$

```

9. The bundles have been installed successfully.

4.5 Run Mobiliser with mUtilities

1. Now that all the things are in the right place, we can start Mobiliser. The main Mobiliser package is “money” and we are going to start it first. Go inside the money folder and run the following command:

bin/startup.sh

2. All the required variables are set and shown. Notice that the “sapjco3.jar” library is automatically loaded in the CLASSPATH variable.

```
mobiliser@ubuntu:/opt/mobiliser/money$ bin/startup.sh
Using MOBILISER_BASE: /opt/mobiliser/money
Using MOBILISER_HOME: /opt/mobiliser/money
Using MOBILISER_TMPDIR: /opt/mobiliser/money/temp
Using JRE_HOME: /usr/lib/jvm/java-7-openjdk-amd64
Using CLASSPATH: /usr/local/sapjco/sapjco3.jar::/opt/mobiliser/money/bundl
es/com.sybase365.mobiliser.vantila.scripts-5.1.0.RELEASE.jar:/opt/mobiliser/mone
y/bundles/org.apache.felix.main-4.0.3.jar
Using MOBILISER_PID: /opt/mobiliser/money/bin/mobiliser.pid
mobiliser@ubuntu:/opt/mobiliser/money$
```

3. If you want to see the status of this process and if you want to know when it's finished, you can run the command

tail -f logs/felix.out

```
mobiliser@ubuntu:/opt/mobiliser/money$ tail -f logs/felix.out

Welcome to Apache Felix Gogo

2013-02-28 10:51:40.269:INFO:oejs.Server:jetty-7.x.y-SNAPSHOT
2013-02-28 10:51:40.314:INFO:oejs.AbstractConnector:Started SelectChannelConnect
or@0.0.0.0:8080
Persistence bundle starting...
Persistence bundle started.
2013-02-28 10:51:44.758:INFO:oejsh.ContextHandler:started HttpServiceContext{htt
pContext=org.apache.felix.webconsole.internal.servlet.OsgiManagerHttpContext@1e2
0eb85}
```


4. A lot of messages are written in this log. As soon as you see the message “AutoDeploy finished”, you will understand that Mobiliser is now started and you can play with it.

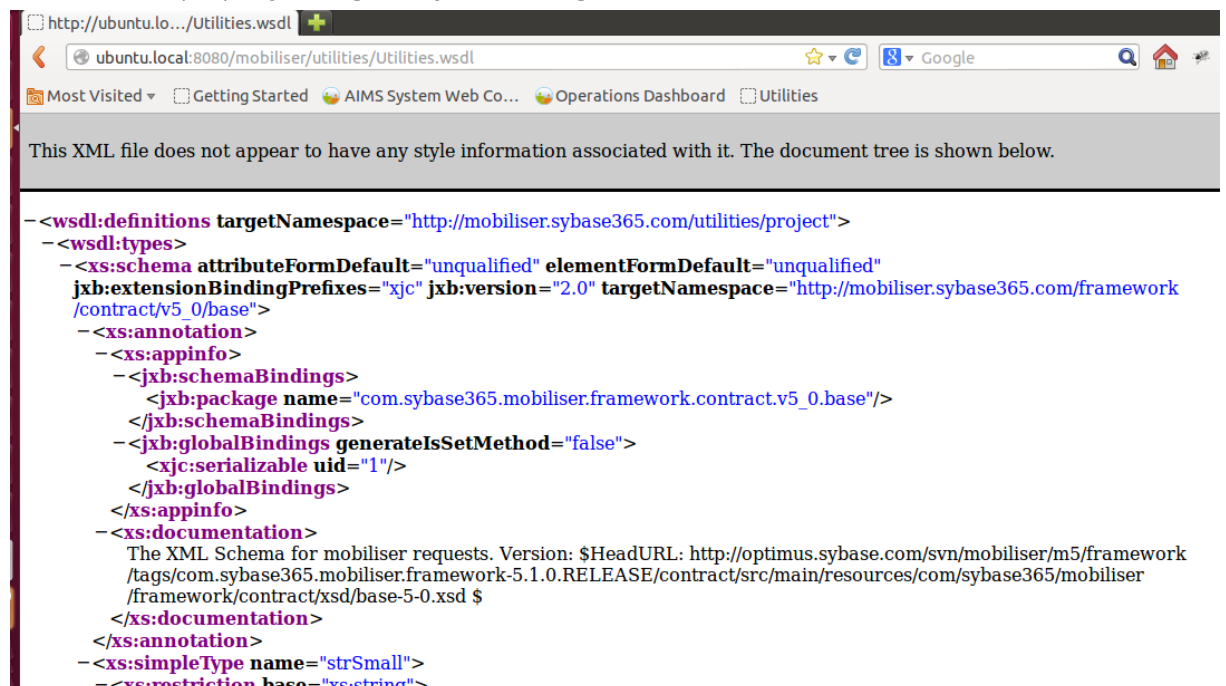
```
2013-02-28 10:55:39.505:INFO:oejsh.ContextHandler:started HttpContext{httpContext=org.ops4j.pax.web.extender.w
ar.internal.WebAppWebContainerContext@441aba6f}
2013-02-28 10:56:01.110:INFO:oejsh.ContextHandler:started HttpContext{httpContext=DefaultHttpContext{bundle=co
m.sybase365.mobiliser.util.management.logic [49]}}
The bundles which previously did not finish initialisation have now finished.
Elapsed time: 444037ms
AutoDeploy finished
```

5. A valid check to do in order to see if mUtilities is fully working is to open the internet browser and run the following URL:

http://<server_name>:8080/mobiliser/utilities/Utilities.wsdl

(in my case it is <http://ubuntu.local:8080/mobiliser/utilities/Utilities.wsdl>)

If mUtilities is properly configured, you should get the Utilities' schema:



This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
-<wsdl:definitions targetNamespace="http://mobiliser.sybase365.com/utilities/project">
  -<wsdl:types>
    -<xs:schema attributeFormDefault="unqualified" elementFormDefault="unqualified"
      jxb:extensionBindingPrefixes="xjc" jxb:version="2.0" targetNamespace="http://mobiliser.sybase365.com/framework
        /contract/v5_0/base">
      -<xs:annotation>
        -<xs:appinfo>
          -<jxb:schemaBindings>
            <jxb:package name="com.sybase365.mobiliser.framework.contract.v5_0.base"/>
          -<jxb:schemaBindings>
            -<jxb:globalBindings generateIsSetMethod="false">
              <xjc:serializable uid="1"/>
            -<jxb:globalBindings>
              </jxb:globalBindings>
            -<xs:appinfo>
              -<xs:documentation>
                The XML Schema for mobiliser requests. Version: $HeadURL: http://optimus.sybase.com/svn/mobiliser/m5/framework
                  /tags/com.sybase365.mobiliser.framework-5.1.0.RELEASE/contract/src/main/resources/com/sybase365/mobiliser
                  /framework/contract/xsd/base-5-0.xsd $
              -</xs:documentation>
            -</xs:annotation>
          -<xs:simpleType name="strSmall">
            -<xs:restriction base="xs:string">
```

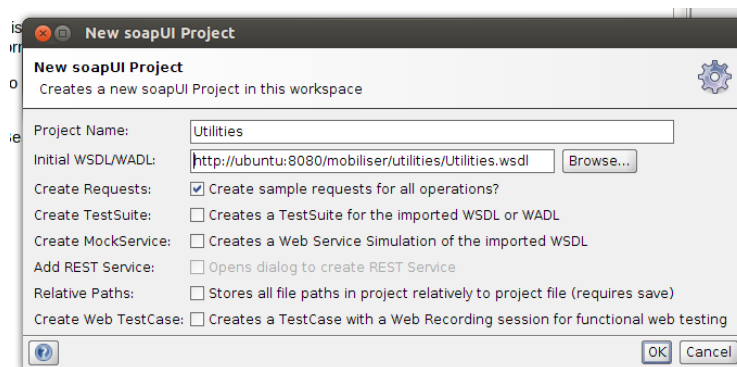

6. There is also another check that you can do by using the SoapUI tool. Open the SoapUI interface and create a new project by providing a project name and the link that you saw at the previous step.

http://<server_name>:8080/mobiliser/utilities/Utilities.wsdl

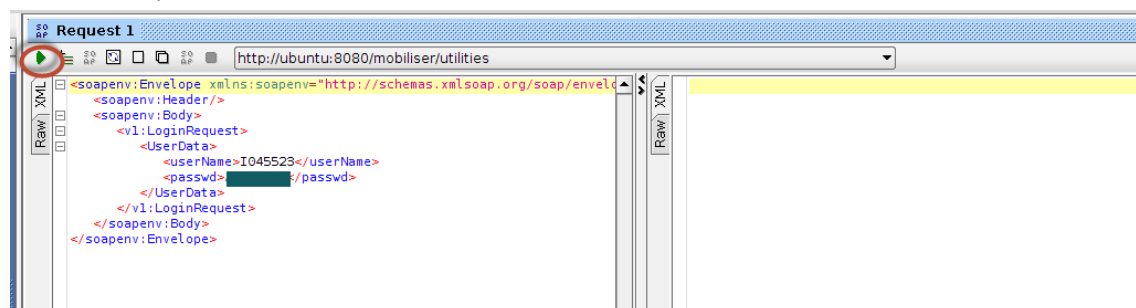
(in my case it is <http://ubuntu:8080/mobiliser/utilities/Utilities.wsdl>)

Note

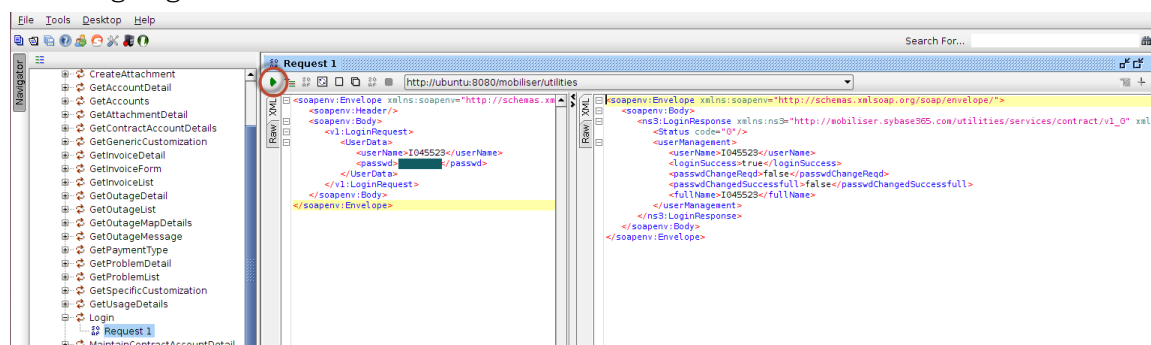
We are using here just “ubuntu” as name of the server. If you use the complete “ubuntu.local” name, you will have to add some exclusion to the proxy settings in the SoapUI tool. This is the easiest way!



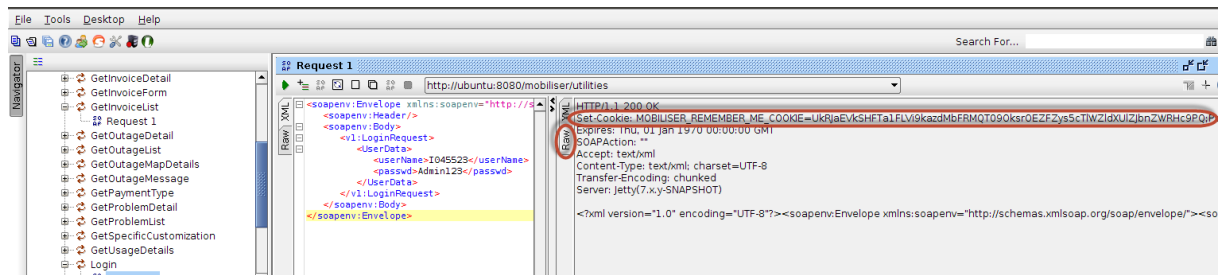
7. Go on the Login function and fill the request as in the picture below, removing all the unneeded statements. You just need the login and the password. Once you have filled the request with the required information, you can click on the “play” button on the toolbar to send the request to the server.



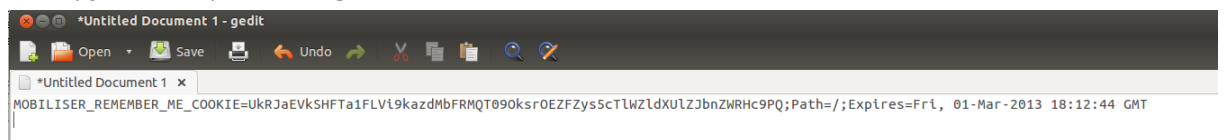
8. You should receive the answer as reported by the picture below. In particular you should get the string “loginsuccess=true”



9. Now on the response tab click on the Raw tab. You should see a string that starts with “Set-Cookie”. This is the cookie that the server gave you together with the answer to the login request. This is the cookie you need to use if you want to further query your server with other requests. Through this cookie the server will be able to recognize your user and to authorize it. If you don't include this cookie in your next requests, they will be ignored and you will receive an “access denied” error. The cookie normally has an expiration time of 15 min: after this time you will have to issue a new login request to the server and get a new cookie.



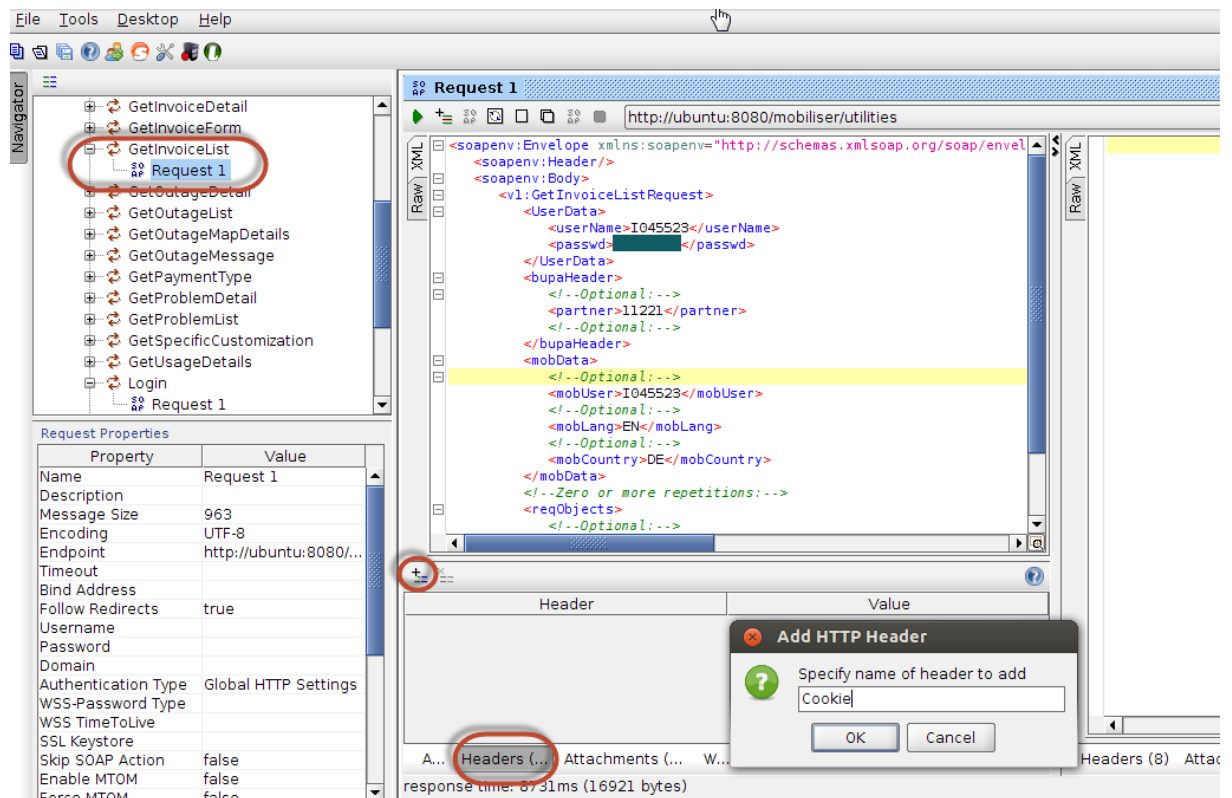
10. So copy the complete string from “MOBILISER_REMEMBER_ME_COOKIE” to “GMT”



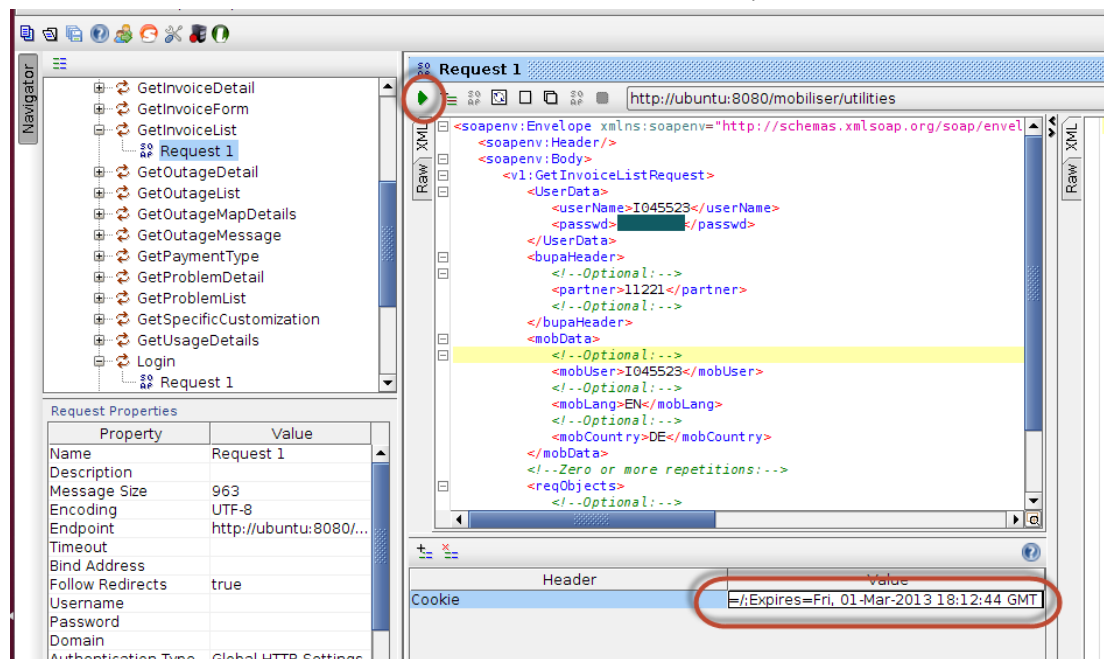
11. Create a new request for the GetInvoiceList function and fill it just with the following information:

| Section | Key | Value |
|------------|-----------------|--|
| UserData | userName | <your user> |
| UserData | Passwd | <password of your user> |
| bupaHeader | partner | <a business partner associated to your user> |
| mobData | mobUser | <your user> |
| mobData | mobLang | <language of your user> |
| mobData | mobCountry | <country of your user> |
| reqObjects | requestedObject | One of the two strings “BILL” or “UNPAID” |

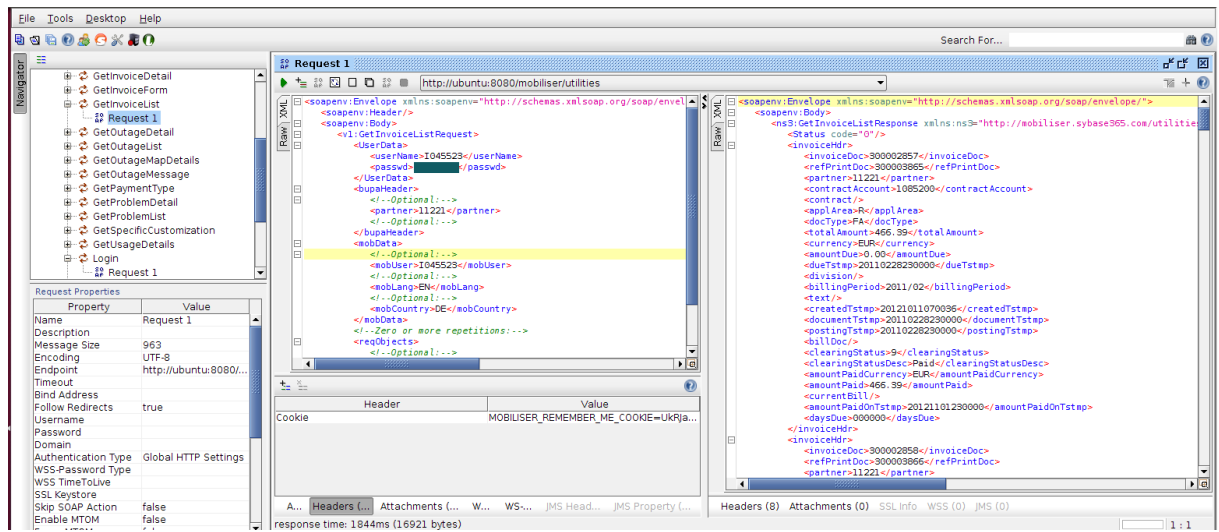
12. After this click on the headers tab to add a new HTTP Header. Name this new header as "Cookie" and click on OK.



13. Paste the cookie string we have copied at step 10 and click on the "play" button to execute the request. The cookie obtained from the first request will be attached to this new request so that the server can authenticate and authorize the new request.



14. You will get the answer with the required information. Your mUtilities installation is working fine.



The screenshot displays a SOAP client interface with the following components:

- Navigator:** A list of service methods including `GetInvoiceDetail`, `GetInvoiceForm`, `GetInvoiceList` (selected), `GetOutageDetail`, `GetOutageList`, `GetOutageMapDetails`, `GetOutageMessage`, `GetPaymentType`, `GetProblemDetail`, `GetProblemList`, `GetSpecificCustomization`, `GetUsageDetails`, and `Login`.
- Request Properties:** A table showing details for 'Request 1':

| Property | Value |
|---------------------|------------------------|
| Name | Request 1 |
| Description | |
| Message Size | 963 |
| Encoding | UTF-8 |
| Endpoint | http://ubuntu:8080/... |
| Timeout | |
| Bind Address | |
| Follow Redirects | true |
| Username | |
| Password | |
| Domain | |
| Authentication Type | Global HTTP Settings |
| WSS Password Type | |
| WSS TimeToLive | |
| SSL KeyStore | |
| Skip SOAP Action | false |
| Enable MTOM | false |
- Request 1:** The raw XML request is shown, including headers and a `GetInvoiceListRequest` body with user and partner information.
- Response:** The raw XML response is shown, starting with `<ns3:GetInvoiceListResponse>` and containing detailed invoice and contract information.
- Headers:** A table showing the response headers:

| Header | Value |
|--------|---------------------------------------|
| Cookie | MOBILISER_REMEMBER_ME_COOKIE=UKRja... |
- Status:** The bottom status bar indicates a 'response time: 1844ms (16921 bytes)'.

5. Appendix

Appendix A – Software collection

Here below you can find a list of all the files used during this guide.

Link to the files repository: \\iwd2280\transfer\Mobility\Mobiliser 5.1\mUtilities

| Filename | Description |
|--------------------------------|--|
| 051_PROJECT_Privs.sql | SQL script to apply to the DB |
| K-100AGINMUTIL001.SAR | Add-on for the ERP system |
| MOBMUTILITIES00_5-10011796.zip | Android mUtilities application |
| sapjco3-linuxx86_64-3.0.9.tgz | SAPjCo Connector for Linux |
| SAPUtIMobCont00_4-20010585.zip | mUtilities components to install inside Sybase Mobiliser 5.1 |

Appendix B – Script for adapting the Mobiliser DB to mUtilities

This is the script that we are using at [step 4.2](#). Create a text file named 051_PROJECT_Privs.sql. Copy it in the <local_user_path>/temp folder and use the “isql” tool to apply it to the DB.

```
USE mobr5
GO

INSERT INTO MOB_UMGR_PRIVILEGES (ID_PRIVILEGE, STR_PRIVILEGE) VALUES
('UTILITIES_ACCESS', 'Required to get access to UTILITIES services')
GO

INSERT INTO MOB_UMGR_ROLES
(ID_ROLE, STR_ROLE, DAT_CREATION, ID_CUSTOMER_CREATION, DAT_LAST_UPDATE, ID_CUST
OMER_LAST_UPDATE) values ('SAP_UTILITIES_CONSUMER', 'SAP mUtilities
user', null, 0, null, null)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES (ID_ROLE, ID_PRIVILEGE,
ID_CUSTOMER_CREATION) VALUES ('SAP_UTILITIES_CONSUMER', 'UTILITIES_ACCESS',
0)
GO

INSERT INTO MOB_CUSTOMER_TYPES
(ID_CUSTOMER_TYPE, STR_CUSTOMER_TYPE, ID_UMGR_ROLE, ID_RISK_CATEGORY, ID_FEE_SE
T, ID_SESSION_POLICY, BOL_IS_INTERNAL, DAT_CREATION, ID_CUSTOMER_CREATION, DAT_L
AST_UPDATE, ID_CUSTOMER_LAST_UPDATE) values (999, 'SAP Utilities
User', 'SAP_UTILITIES_CONSUMER', 0, null, 1, 'N', null, 0, null, null)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_LOGIN', 'Allows to Login', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_LOGIN', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_CHANGE_PASSWD', 'Allows to change password', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_CHANGE_PASSWD', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_ACCOUNTS', 'Allows to fetch accounts for a given
user', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
```

```
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_ACCOUNTS', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_ACCOUNT_DETAIL','Allows to fetch the details of an
account',null,0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_ACCOUNT_DETAIL', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_UPDATE_ACCOUNT','Updates account for a given user',null,0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_UPDATE_ACCOUNT', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_UPDATE_CARD_DATA','Updates crd details for a given
user',null,0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_UPDATE_CARD_DATA', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_UPDATE_BANK_DATA','Updates bank details for a given
user',null,0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_UPDATE_BANK_DATA', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_SPECIFIC_CUSTOMIZATION','Allows to fetch specific
customization for a given user',null,0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_SPECIFIC_CUSTOMIZATION', 0)
GO
```

```
INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
```

```
values ('WS_GET_PAYMENT_TYPE','Allows to fetch payment types for a given
user',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_PAYMENT_TYPE', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_GENERIC_CUSTOMIZATION','Allows to fetch generic
customization',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_GENERIC_CUSTOMIZATION', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_CONTRACT_ACCOUNT_DETAILS','Allows to fetch contract account
details',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_CONTRACT_ACCOUNT_DETAILS', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_MAINTAIN_CONTRACT_ACCOUNT','Maintain contract account
details',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_MAINTAIN_CONTRACT_ACCOUNT', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_PROBLEM_LIST','Allows to fetch reported problem
list',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_PROBLEM_LIST', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_OUTAGE_LIST','Allows to fetch outage list',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
```



```
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_OUTAGE_LIST', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_PROBLEM_DETAIL', 'Allows to fetch Problem Detail', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_PROBLEM_DETAIL', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_ATTACHMENT_DETAIL', 'Allows to fetch Attachment Detail
', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_ATTACHMENT_DETAIL', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_OUTAGE_DETAIL', 'Allows to fetch Outage Detail', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_OUTAGE_DETAIL', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_MAINTAIN_OUTAGE', 'Allows to Maintain Outage', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_MAINTAIN_OUTAGE', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_MAINTAIN_PROBLEM', 'Allows to Maintain a new Problem', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_MAINTAIN_PROBLEM', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_INVOICE_LIST', 'Allows to fetch invoice list', null, 0)
GO
```

```
INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_INVOICE_LIST', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_OUTAGE_MAP_DETAIL', 'Allows to fetch outage map
data', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_OUTAGE_MAP_DETAIL', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_INVOICE_DETAIL', 'Allows to fetch invoice detail', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_INVOICE_DETAIL', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_MAKE_PAYMENT', 'Allows to make a payment', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_MAKE_PAYMENT', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_OUTAGE_MESSAGE', 'Allows to make a payment', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_OUTAGE_MESSAGE', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
values ('WS_GET_USAGE_DETAILS', 'Allows to fetch usage details', null, 0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER', 'WS_GET_USAGE_DETAILS', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE, STR_PRIVILEGE, DAT_CREATION, ID_CUSTOMER_CREATION)
```

```
values ('WS_SIGN_OUT','Allows to signout',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_SIGN_OUT', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_UTILITIES_CREATE_ATTACHMENT','Allows to create
attachment',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_UTILITIES_CREATE_ATTACHMENT', 0)
GO

INSERT INTO MOB_UMGR_PRIVILEGES
(ID_PRIVILEGE,STR_PRIVILEGE,DAT_CREATION,ID_CUSTOMER_CREATION)
values ('WS_GET_INVOICE_FORM','Allows to get invoice form',null,0)
GO

INSERT INTO MOB_UMGR_ROLE_PRIVILEGES
(ID_ROLE, ID_PRIVILEGE, ID_CUSTOMER_CREATION)
VALUES ('SAP_UTILITIES_CONSUMER','WS_GET_INVOICE_FORM', 0)
GO
```

Appendix C – Preference values to add to the Mobiliser portal

Table 1

| Key | Value | Type | Description |
|---------------------------|----------------------|------------------|---|
| JCO_ASHOST | uxciq5j.wdf.sap.corp | java.lang.String | SAP ERP Application Server |
| JCO_CLIENT | 340 | java.lang.String | SAP Client |
| JCO_DENY_INITIAL_PASSWORD | 0 | java.lang.String | Deny usage of initial passwords (0 [default] or 1 |
| JCO_GROUP | PUBLIC | java.lang.String | Group of SAP Application servers |
| JCO_LANG | EN | java.lang.String | Logon language |
| JCO_MSHOST | uxciq5j.wdf.sap.corp | java.lang.String | SAP Message server |
| JCO_PEAK_LIMIT | 10 | java.lang.String | Maximum number of active connections |
| JCO_POOL_CAPACITY | 20 | java.lang.String | Maximum number of idle connections |
| JCO_R3NAME | Q5J | java.lang.String | System ID of the SAP system |
| JCO_REPOSITORY_USER | mobremote | java.lang.String | User ID used for repository queries. |
| JCO_REPOSITORY_PASSWD | support ¹ | java.lang.String | Password of a repository user |
| JCO_SYSNR | 76 | java.lang.String | SAP System number |

Table 2

| Key | Value | Type | Description |
|-----------------------------|-------|------------------|------------------------------|
| SAP_UTILITIES_CUSTOMER_TYPE | 999 | java.lang.String | mUtilities Customer Type |
| SAP_UTILITIES_ORG_UNIT | 000 | java.lang.String | mUtilities Organization Unit |

Table 3

| Key | Value | Type | Description |
|--------------------|---------|------------------|---|
| DISALLOWED_USER_01 | <user1> | java.lang.String | Name of the first user not allowed to access ERP |
| DISALLOWED_USER_02 | <user2> | java.lang.String | Name of the second user not allowed to access ERP |
| ... | ... | ... | ... |

¹ This password must be encrypted using the AES-128 protocol. The passphrase should be the same as the one contained in the two files

- `com.sybase365.mobiliser.util.prefs.encryption.aes.properties`
- `com.sybase365.mobiliser.util.prefs.encryption.tripledes.properties`

in the folder `/opt/mobiliser/money/conf/cfgbackup`.



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