

Sybase Mobiliser Platform Money Mobiliser Installation and Setup

Version 5.0

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1 Introduction

1.1 Purpose

This Document describes the process of installing and configuring the Mobiliser R5.0.0 Server (Server) and User Interface (UI). The software package allows for immediate test (pre-configured), manual installation, and automated installation. The included Apache webserver comes pre-configured to support the Mobiliser R5.0.0 Server and User Interface.

1.2 General Requirements

For the purpose of demonstration and testing, the Server and UI can be installed on a single system. Minimum system configurations are as follows:

Operating System	RHEL5, IBM AIX6.1
CPU	2 Core (2.93GHz)
Memory	8GB
Storage	50GB
Database	Oracle 11gR2, IBM DB2 9.7.1

The Server and UI should be deployed on separate systems for improved security and performance. The requirements for these systems are dependent on performance objectives.

1.2.1 User and Group

For the test (localhost) installation, the 'sybase' user can be used to manage both the Server and UI.

User	primary Group
sybase	sybase
apache	apache

For the database, use the default accounts as recommended by the respective User Manual.

1.2.2 Directory structure

The following directories are recommended to be in place. All other directories are created by the installer or installation procedure.

File / Directory	Description	Owner	Mode
/opt/sybase	Partition for Sybase® Software	sybase:sybase	rwxrwx

2 Installation

2.1 Database Setup

2.1.1 Manual Procedure

The following procedure is used to create the database structure, users, and seed data required for normal operation and testing. It is important the scripts be executed in the order as listed.

- Unpack the Mobiliser Release 5.0.0 Software in the application user home directory = {Mobiliser_Installation}



 Navigate to the {Mobiliser_Installation}/applications/oracle/sql directory in order to obtain the Oracle database build scripts. Note: If using a DB2 database, follow the same instruction but navigate to {Mobiliser_Home}/applications/ibm/sql



- Execute the following script as the sys/system user. For DB2 databases, execute as the DB2 instance owner.
 - /001_MONEY/001_SETUP/001_MONEY_drop_and_create_user.DDL
 - (This script creates and application schema named mobr5 in your database instance, where all subsequent tables will be installed under)
- Execute the following scripts (in order) as the newly created mobr5 user (user: mobr5 / password: paybox).
 - /001_MONEY/001_SETUP/002_MONEY_gen_oracle.ddl
 - /002_MSG/001_SETUP/001_MSG_gen_oracle.sql
 - /003_EVENT/001_SETUP/001_EVENT_oracle.ddl
 - o /003_EVENT/002_DATA/001_EVENT_MobiliserEvents-Base-Data.sql
 - o /004_SCHEDULER/001_SETUP/001_SCHEDULER_tables_oracle.sql
 - o /101_MONEY/002_DATA/001_UMGR_PRIVS.sql
 - /101_MONEY/002_DATA/002_UMGR_ROLES.sql
 - o /101_MONEY/002_DATA/100_MONEY_Data.sql
 - o /101_MONEY/002_DATA/200_VANILLA_DATA.sql
 - o /101_MONEY/002_DATA/210_VANILLA_USERS.sql

- o /101_MONEY/002_DATA/220_VANILLA_MSG_TEMPLATES.sql
- o /101_MONEY/002_DATA/300_VANILLA_TEST_DATA.sql
- o /101_MONEY/002_DATA/300_VANILLA_TEST_DATA.sql
- o /101_MONEY/003_PREFS/003_WEB_prefs.sql
- o /102_MSG/002_DATA/001_MSG_Data.sql
- o /102_MSG/003_PREFS/002_MSG_prefs.sql

At this point, the Mobiliser database is online and ready for testing.

2.2 Server Setup

2.2.1 Server Setup - Deploy

The following procedure is used to setup and initialize the Server. The Server application is OSGi based and requires very little configuration to be made operable.

- Navigate to the {Mobiliser_Installation}/applications/oracle directory
- Unpack the com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1-dist.zip file. This action will create a com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1 directory
- Copy the com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1 directory to /opt/sybase/ to create the {MOBILISER_HOME} directory
 - Note: For DB2 installations, navigate to {Mobiliser_Installation}/applications/ibm and unpack com.sybase365.mobiliser.vanilla.db2-5.0.0.RELEASE1.zip.
 - o Note: It is useful to create a symbolic link 'mobiliser' to the {MOBILISER_HOME} directory

³ mwa	ılker@ı	r5dev	/04:/opt/s	ybase/RE	LEASE/ap	plicat	tions	s/oracle/com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1	
nwall	ker@r	5dev	704 com	.sybase3	65.mok	bilis	ser.	.dist.oracle-5.0.0.RELEASE1]\$ ls -1	
otal	108								
cwxr	-xr-x		sybase	sybase	4096	Apr		01:31 bin	
cwxr	-xr-x	23	sybase	sybase	4096	Mar	19	10:16 bundles	
cwxr	-xr-x		sybase	sybase	4096	Apr	4	21:10 conf	
cwxr	-xr-x		sybase	sybase	4096	Apr	4	21:11 files	
cwxr	-xr-x		sybase	sybase	4096	Mar	19	10:16 licences	
cwxr	-xr-x		sybase	sybase	69632	Apr	10	19:01 logs	
cwxr	-xr-x		sybase	sybase	4096	Mar	19	10:16 META-INF	
cw-r	r		sybase	sybase	2863	Mar	16	14:02 NOTICE	
cwxr	-xr-x		sybase	sybase	4096	Apr	4	21:11 reports	
cwxr	-xr-x		sybase	sybase	4096	Apr	10	19:47 temp	
nwall	ker@r	5der	704 com	.sybase3	365.mok	bilis	ser.	.dist.oracle-5.0.0.RELEASE1]\$	
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2.2.2 Server Setup – Configure Database Connections

The following procedure is necessary to connect to the Mobiliser database.

- Navigate to {MOBILISER_HOME}/conf/cfgbackup to locate the files which contain the jdbcUrl (or jdbc.url) parameter
 - o com.sybase365.mobiliser.framework.persistence.jdbc.bonecp.pool.properties
 - o com.sybase365.mobiliser.util.report.crystalreports.properties

2.2.3 Server Setup – Create JDBC Bundles

The JDBC jar for the respective database provider must be packaged in an OSGi bundle. Once the JDBC driver is available on the system (download from database provider), use the 'create_jdbc_bundle.sh' utility to create the necessary bundle.

- Navigate to the {MOBILISER_INSTALLATION}/applications/oracle directory. (For DB2 database configurations navigate to {MOBILISER_HOME}/applications/ibm



- Download an Oracle or DB2 JDBC driver that is compatible with the JRE that was installed onto your system (<u>http://www.oracle.com</u>) or (<u>http://www.ibm.com</u>)
- Run ./create_jdbc_bundle.sh script using oraclemanifest and JDBC jar as input variables
 - o ex: ./create_jdbc_bundle.sh oraclemanifest ojdbc6.jar (Oracle)
 - o ex: ./create_jdbc_bundle.sh db2manifest db2jcc4.jar (DB2)
- Rename created jar file bundle_<name of jdbc> to oracle-jdbc-osgi_11.2.0.2.0-1.0.1.jar (com.sybase365.com.ibm.db2jcc4-9.7.4.jar for DB2)
- Copy oracle-jdbc-osgi_11.2.0.2.0-1.0.1.jar or com.sybase365.com.ibm.db2jcc4-9.7.4.jar to {MOBILISER_HOME}/bundles/07-frameworks

This completes the database configuration

2.2.4 Server Setup - Third Party Software installation

Several third party jar files are required for normal operation. Obtain this software from the respective vendors and deploy directly onto the OSGi container.

Bouncycastle

- Download and copy into {MOBILISER_HOME}/bundles/07-frameworks directory:
 - o bcprov-jdk16-146.jar (Rename to bcprov-jdk16-1.46.jar)
 - o bcpg-jdk16-146.jar (Rename to bcpg-jdk16-1.46.jar)

Springsource

- Download and copy into {MOBILISER_HOME}/bundles/04-xml directory:
 - o com.springsource.org.xmlpull-1.1.4.c.jar

Springsource

- Download and copy into {MOBILISER_HOME}/bundles/07-frameworks directory:
 - o com.springsource.org.apache.commons.digester-1.8.1.jar
 - o com.springsource.org.jgroups-2.2.8.jar

Springsource

- Download and copy into {MOBILISER_HOME}/bundles/16-framework-reports directory:
 - o com.springsource.com.ibm.icu-3.8.1.jar
 - o com.springsource.javax.el-1.0.0.jar
 - o com.springsource.javax.media.jai.codec-1.1.3.jar
 - o com.springsource.javax.media.jai.core-1.1.3.jar
 - o com.springsource.javax.servlet.jsp-2.1.0.jar
 - o com.springsource.org.apache.commons.configuration-1.5.0.jar
 - o com.springsource.org.apache.commons.dbcp-1.2.2.osgi.jar
 - o com.springsource.org.apache.commons.discovery-0.4.0.jar

- o com.springsource.org.apache.commons.fileupload-1.2.1.jar
- o com.springsource.org.apache.commons.jxpath-1.2.0.jar
- o com.springsource.org.apache.commons.net-1.4.1.jar
- o com.springsource.org.apache.poi-3.0.2.FINAL.jar
- o com.springsource.org.jdom-1.1.0.jar

SAP[®] Crystal Reports (Available at SPDC)

- Download and copy into {MOBILISER_HOME}/bundles/17-crystalreports directory:
 - o com.businessobjects.cvom_12.2.212.1346-1.0.1.jar
 - o com.businessobjects.foundation.logging_12.2.212.1346-1.0.1.jar
 - o com.businessobjects.reports.jdbinterface_12.2.212.1346-1.0.1.jar
 - o com.businessobjects.visualization.pfjgraphics_12.2.212.1346-1.0.1.jar
 - o com.crystaldecisions.common.keycode_12.2.212.1346-1.0.1.jar
 - o com.crystaldecisions.reports.runtime_12.2.212.1346-1.0.1.jar

SAP Crystal Reports (Available at SPDC)

- Download and copy into {MOBILISER_HOME}/bundles/20-mobiliser-reports-services directory:
 - o com.sybase365.mobiliser.util.report.crystalreports.impl-5.0.0.RELEASE1.jar
 - o com.sybase365.mobiliser.util.report.crystalreports.util-5.0.0.RELEASE1.jar
 - o com.sybase365.mobiliser.util.report.crystalreports.web-5.0.0.RELEASE1.war
 - o com.sybase365.mobiliser.util.report.watcher-5.0.0.RELEASE1.jar

Azalea

- Download and copy into {MOBILSER_HOME}/bundles/18-report-fragments directory:
 - o com.azalea.ufl.barcode_1.0-1.0.1.jar

2.3 UI Setup

2.3.1 UI Setup - Tomcat

The UI will be deployed on Tomcat (6.0.33) or later. The UI provides access to End User and Administrative Portals.

- The Tomcat Container and UI application are located at {MOBILISER_INSTALLATION}/applications/apache

🛃 sybase@r5dev03:~/applications/apache	_ 🗆 🗡
[sybase@r5dev03 apache]\$ ls	▲
apache-tomcat-6.0.33 com.sybase365.mobiliser.ui.web.application-5.0.0.war	
[sybase@r5devO3 apache]\$	
	-

- Copy the Tomcat Container from {MOBILISER_INSTALLATION}/applications/apache/apache-tomcat-6.0.33 to /opt/sybase to create the {TOMCAT_HOME} directory
 - Note: It is useful to create a symbolic link 'tomcat' to the {TOMCAT_HOME} directory

- Note: All other necessary application directories are generated automatically on start up by Tomcat
- Copy the UI application 'com.sybase365.mobiliser.ui.web.application-5.0.0.war' to the {TOMCAT_HOME}/webapps directory and rename it to ROOT.war
- Copy the Bouncycastle jar file into {TOMCAT_HOME}/webapps/ROOT/WEB-INF/lib directory
 - o bcprov-jdk16-146.jar (Rename to bcprov-jdk16-1.46.jar)
 - o The webapps/ROOT directory is created after Tomcat is initialized

2.4 Password Encryption (Optional)

2.4.1 Password Encryption Overview

The purpose of the password encryption tool is to secure passwords that are present in Mobiliser configuration files. The Mobiliser configuration files are located in {MOBILSIER_HOME}/conf/cfgbackup and will support passwords configured in an encrypted BASE64 format.

Obtain the software used for password encryption, cm-loader-0.3.3-encrypt.zip, at the following URL:

http://optimus.sybase.com/nexus/content/repositories/releases/com/sybase365/arf/container/system/cmloader/0.3.3/cm-loader-0.3.3-encrypt.zip

2.4.2 Encryption Software Installation

After downloading the encryption software, extract its contents in any location on the Mobiliser system. This location is {ENCRYPTION_HOME}.

2.4.3 Password Encryption Instructions

Navigate to the {ENCRYPTION_HOME}/bin directory. The script is encrypt.sh creates the encrypted password. The encrypt.sh script requires two variables to execute successfully:

- Decryption Key This value is the key that Mobiliser uses to decrypt any password that is in BASE64 format. The decryption key can be changed by an administrator and is located in the {MOBILISER_HOME}/conf/system.properties file; the default value for this decryption key is 'sybase365'.
- *Password Value* This value is the password in plain text that you would like to have converted to BASE64 format
- Ex. ./encrypt.sh <decryption key> <password value>

./encrypt.sh sybase365 secret



Once the encrypt.sh script has been executed successfully a BASE64 encrypted version of your password will be returned to you. In order to use this newly encrypted password within a configuration file it must be entered in the following way:

Ex. {enc}<BASE64 encoded value>

{enc}Do/p2/KXu10LGXx8Z4I9dA==



When Mobiliser is initialized, it will use its configured decryption key to understand the password that is provided in its various configuration files.

3 Initialization and System Check

3.1 Start Server and UI

- Execute the following start script {MOBILISER_HOME}/bin/startup.sh to start the Server

🛃 mwalker@r5dev04:/opt/sybase/RELEASE/applications/oracle/com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1/bin	×
[mwalker@r5dev04 bin]\$ clear	
[mwalker@r5dev04 bin]\$ ls -1	
total 128	
-rwxr-xr-x 1 sybase sybase 1373 Mar 16 14:01 create_jdbc_bundle.sh	
-rwxr-xr-x 1 sybase sybase 2614 Mar 16 14:01 encrypt_pref.sh	
-rw-rr 1 sybase sybase 18767 Mar 16 14:01 mobiliser.bat	
-rw-rr 1 sybase sybase 6 Apr 7 01:31 mobiliser.pid	
-rwxr-xr-x 1 sybase sybase 22338 Mar 16 14:01 mobiliser.sh	
-rwxr-xr-x 1 sybase sybase 3227 Mar 16 14:01 r5_continuous.sh	
-rwxr-xr-x 1 sybase sybase 2659 Mar 16 14:01 r5_continuous_tomcat.sh	
-rw-rr 1 sybase sybase 361 Mar 16 14:01 replace.bat	
drwxr-xr-x 5 sybase sybase 4096 Apr 4 21:11 reports	
-rw-rr 1 sybase sybase 3506 Mar 16 14:01 setclasspath.bat	
-rwxr-xr-x 1 sybase sybase 3635 Mar 16 14:01 setclasspath.sh	
-rw-rr 1 sybase sybase 975 Mar 16 14:01 setenv.bat	
-rwxr-xr-x 1 sybase sybase 2091 Mar 16 14:01 setenv.sh	
-rwxr-xr-x 1 sybase sybase 10510 Mar 16 14:01 setup_m5_db.sh	
-rw-rr 1 sybase sybase 2386 Mar 16 14:01 shutdown.bat	
-rwxr-xr-x 1 sybase sybase 2173 Mar 16 14:01 shutdown.sh	
-rw-rr 1 sybase sybase 2382 Mar 16 14:01 startup.bat	
-rwxr-xr-x 1 sybase sybase 2171 Mar 16 14:01 startup.sh	
-rwxr-xr-x 1 sybase sybase 4626 Mar 16 14:01 upgrademobiliser.sh	
-rwxr-xr-x 1 sybase sybase 2807 Mar 16 14:01 upgrade_prefs.sh	
[mwalker@r5dev04 bin]\$	
	-

- Monitor the Server log at {MOBILISER_HOME}/logs/felix.log until the log specifies that "AutoDeploy finished"

🚰 mwalker@r5dev04:/opt/sybase/RELEASE/applications/oracle/com.sybase365.mobiliser.dist.oracle-5.0.0.RELEASE1/logs
Welcome to Apache Felix Gogo [^] M
^ II
2012-04-07 01:31:44.434:INFO:oejs.Server:jetty-7.x.y-SNAPSHOT
2012-04-07 01:31:44.503:INF0:cejs.AbstractConnector:Started NIOSocketConnectorWrapper@0.0.0.0:8080 STARTING
2012-04-07 01:31:46.137:INF0:oejsh.ContextHandler:started HttpServiceContext{httpContext=org.apache.felix.webconso
le.internal.servlet.OsgiManagerHttpContext07d6ac92e)
2012-04-07 01:31:46.185:INFO:oejsh.ContextHandler:stopped HttpServiceContext(httpContext=org.apache.felix.webconso
le.internal.servlet.OsgiManagerHttpContext07d6ac92e)
2012-04-07 01:31:46.535:INFO:oejsh.ContextHandler:started HttpServiceContext{httpContext=org.apache.felix.webconso
le.internal.servlet.OsgiManagerHttpContext02c4dd413)
Persistence bundle starting
Persistence bundle started.
2012-04-07 01:31:55.470:INF0:oejsh.ContextHandler:started HttpServiceContext{httpContext=DefaultHttpContext{bundle
<pre>=com.sybase365.mobiliser.framework.gateway.httpservice [308]})</pre>
2012-04-07 01:31:55.679:INF0:/:Initializing Spring FrameworkServlet 'Mobiliser'
2012-04-07 01:31:56.794:INF0:oejsh.ContextHandler:started HttpServiceContext{httpContext=DefaultHttpContext{bundle
<pre>=com.sybase365.mobiliser.framework.gateway.security.filters.session [314]})</pre>
2012-04-07 01:33:03.181:INFO:oejsh.ContextHandler:started HttpServiceContext{httpContext=org.ops4j.pax.web.extende
r.war.internal.WebAppWebContainerContextU3ddb7e6d)
2012-04-07 01:33:03:907:INFO:oejsh.ContextHandler:started HttpServiceContext{httpContext=DefaultHttpContext{bundle
<pre>=com,sybase365.mobiliser.util.management.logic [1]}}</pre>
Autopeploy finished
e
53,1 278

- Verify that the Mobiliser console has initialized successfully by viewing the customer WSDL via web browser (http://localhost:8080/mobiliser/customer/Customer.wsdl)

Image: The second se	🥹 Mozilla Firefox		- 🗆 ×
Proj. (#Sevention)transformation * ** ************************************	Ele Edit View History Bookmarks Jools Help		
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<pre>- vwdl:definitions targetNamespace="http://mobiliser.sybare365.com/money/customer"> - vwsdl:type> - vss:dicype> - vss:dicyp</pre>	This XML file does not appear to have any style information associated with it. The document tree is shown below		<u> </u>
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- ~sx:aphifa>
- <sk:schemaBindings>
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- <sk:schemaBindings
-</td><td>/v5_0/base" unqualified"=""></xx:return></pre>			
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<pre></pre>	- <xx:appinfo></xx:appinfo>		
<pre>syktpackage name="com sybues365 mobiliser framework.contract v5_0 base"/></pre>	- <jxb:schemabindings></jxb:schemabindings>		
<pre></pre>	<jxb:package name="com sybase365.mobiliser.framework.contract.v5_0.base"></jxb:package>		
<pre></pre>			
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- Execute the following startup script {TOMCAT_HOME}/bin/startup.sh to start the UI

异 ^a mwalker@r5dev04:/opt/sybase/tomcat/bin	
[mwalker@r5dev04 bin]\$ ls -1	
total 612	
-rw-rr 1 sybase sybase 22705 Aug 16 2011 bootstrap.jar	
-rw-rr 1 sybase sybase 11830 Aug 16 2011 catalina.bat	
-rwxr-xr-x 1 sybase sybase 17708 Aug 16 2011 catalina.sh	
-rw-rr 1 sybase sybase 2374 Aug 16 2011 catalina-tasks.xml	
-rw-rr 1 sybase sybase 24172 lug 16 2011 commons-daemon.jar	
-rw-rr 1 sybase sybase 199623 Aug 16 2011 commons-daemon-native.tar.gz	
-rw-rr 1 sybase sybase 1342 Aug 16 2011 cpappend.bat	
-rw-rr 1 sybase sybase 2108 Aug 16 2011 digest.bat	
-rwxr-xr-x 1 sybase sybase 1689 Aug 16 2011 digest.sh	
-rw-rr 1 sybase sybase 3150 Aug 16 2011 setclasspath.bat	
-rwxr-xr-x 1 sybase sybase 4114 Aug 16 2011 setclasspath.sh	
-rwxr-xr-x 1 sybase sybase 694 Mar 13 00:01 setenv.sh	
-rw-rr 1 sybase sybase 2108 Aug 16 2011 shutdown.bat	
-rwxr-xr-x 1 sybase sybase 1628 Aug 16 2011 shutdown.sh	
-rw-rr 1 sybase sybase 2109 Aug 16 2011 startup.bat	
-rwxr-xr-x 1 sybase sybase 2023 Aug 16 2011 startup.sh	
-rw-rr 1 sybase sybase 26828 Aug 16 2011 tomcat-juli.jar	
-rw-rr 1 sybase sybase 241274 Aug 16 2011 tomcat-native.tar.gz	
-rw-rr 1 sybase sybase 3479 Aug 16 2011 tool-wrapper.bat	
-rwxr-xr-x 1 sybase sybase 3472 Aug 16 2011 tool-wrapper.sh	
-rw-rr 1 sybase sybase 2113 Aug 16 2011 version.bat	
-rwxr-xr-x 1 sybase sybase 1632 Aug 16 2011 version.sh	
[mvalker@r5dev04 bin] \$	•

- Verify that the Tomcat Web UI application has initialized successfully by viewing it vi web browser (<u>http://localhost:8088</u>)



3.2 Preferences Configuration

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Log into the UI (Operations Dashboard) as the opsmgr user (opsmgr: secret). You will be prompted to change the password for the user before you are logged in.

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perations Dashboard	Logged-in as: Operations Manager (194) Logo	ut Languages 🕞
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Cet the health status of all your Mobiliser servers and a variety of information on Inside-application' status and statistics; available services, messaging channels, preferences and more Track-inducat statustics from your servers for monitoring throughput, health or general server operational efficiency		
	Money Mobiliser Operations Dashboard deshboard provides functions for viewing the operational status of Mobiliser servers, such as: of the health status of all your Mobilizer servers and a variety of information on ingeferences and more foreing and status of services, messaging channels, ingerences and more foreing and status of services remonitoring throughput, health or	Money Mobiliser Operations Dashboard deshboard provides functions for viewing the operational status of Mobiliser servers, such as: Of the health status of all your Mobiliser servers and a variety of information on ingreferences and more preferences preferences and mor

- Select Preferences on the left side of the screen, expand to the following path /presentationlayer/com/sybase365/mobiliser/util/web/util and select the Configuration file.

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- Navigate to the Key named publicKeyStore (Page 3) and edit the value to "{MOBILISER_HOME}/keys/mobiliser_pub.jks"
 - o This will allow Mobiliser to use the test keystore which comes with the package

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	Preferences	efresh Remove Export Cancel	Add a Preference	
	Showing: : 21 - 30 (36 Total)	4 1 2 3 4 🕨		
	Key	Value	Actions	
	msisdnOtpConfirmed	false	Edit Remove	
	publicKeyStore	/opt/sybase/RELEASE/keys/mobiliser_pub.jks	Edit Remove	
	reportProxyServerPath	ReportViewer	Edit Remove	
	reportProxyServerUrl	http://localhost:8080/crystairpt	Edit Remove	
	reportServerUn	ReportViewer	Edit Remove	
	riskcategories	0,1,2,3,4,5,6,7	Edit Remove	
	smsOtpTemplate	otpsignup	Edit Remove	
	svaCurrency	EUR	Edit Remove	
	tmCancelTimeBufferInSec	600	Edit Remove	
	bmMaxNumberToFetch	1000	Edit Remove	

- Click Refresh to assure that preferences changes were committed.

3.3 SMPP Configuration (optional)

- Log into the UI (Operations Dashboard) as the opsmgr user
- Select Preferences on the left side of the screen, expand to the following path com/sybase365/mobiliser/util/messaging/channelmanager/engine/impl/ChannelInstantiator/ and select the smppchannel1 node file.

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- Navigate through all of the node preferences, and enter all relevant SMPP account information.

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	Key	Value	Actions		
	_active	false	Edit Remove		
	_channelType	smpp	Edit Remove		
	bindType	transceiver	Edit Remove		
	channelld	defaultQ	Edit Remove		
	incomingChannelld	brandinQueue	Edit Remove		
	registeredDelivery	0	Edit Remove		
	sendAsDataSm	false	Edit Remove		

- Click Refresh to assure that preferences changes were committed

3.4 SMTP Configuration (optional)

Log into the UI (Operations Dashboard) as the opsmgr user

- Select Preferences on the left side of the screen, the select "Add a Preference Node"

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eferences	Preferences » Add a Preference Node	
bs	Application: - Please Select-	
ange Password	Full Node Path:	

- Select businesslayer in the Application drop down list and enter the following path in the Full Node Path field: com/sybase365/mobiliser/util/messaging/channelmanager/engine/impl/ChannelInstantiator/smtpch

annel1, then click save.

- Navigate to the newly created preference node in the preference tree, and double click on the smtpchannel1 node. Then select "Add a Preference"

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	Key: *			
	Value: *			
	Type:			
	Description:			
	Save With Encryption:	No encryption		
	Using Passphrase:			
		Save Cancel		
2012 Sybase Inc., an SAP company Co	ontact Support About Money M	bbiliser Session Timeout: 13:58 Minutes	S	YBASE" An 💇 Comy

- In the Key field enter _channelType, in the Value field enter email, in the Type field enter java.lang.String. Click Save.
- Repeat previous step to enter the following values
 - o Key: channeled, Value: default, Type: java.lang.String
 - o Key: mail.host, Value: localhost, Type: java.lang.String
 - o Key: mail.port, Value: 25, Type: java.lang.String
 - Key: mail.protocol, Value: smtp, Type: java.lang.String
 - Key: mail.sign, Value: false, Type: java.lang.String
 - o Key: sign.hashAlgorithm, Value: -1, Type: java.lang.String
 - o Key: sign.keyld, Value: -1, Type: java.lang.String
- Click Refresh to assure that preferences changes were committed

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3.5 Default (Administrative) Web UI Accounts

The following user accounts are the administrative accounts that are created after a Mobiliser Installation. Note: After logging attempting to log in with these accounts you will be prompted to change the password for the account before proceeding

3.5.1 Customer Support Accounts

Customer Support Tool – cstfull: secret Manager User Accounts – usermgr: secret Manage Notifications and Alerts – notifmgr:secret 3.5.2 Distribution Partner Portal Account

Create and Manage Merchants - Headquarter:secret

3.5.3 Operations Dashboard Admin Account

View and Manage System Configuration – opsmgr:secret

3.5.4 System Console

Use this console to monitor the functions of the Mobiliser container

- Default url = Error! Hyperlink reference not valid.
- Default Account sysmgr:secret
 - Note: This password may have been updated on first attempt to log into the Operations Dashboard.

4 End to End Test

4.1 Add Customer

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- The consumer signup process begins at the Web UI login screen. Click on the link that says "Consumer Signup"



Click Continue to move on to the Consumer Signup form for new Mobiliser customers

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© 2012 Sybase Inc., an SAP company	antact Support About Money Mobiliser Session Timeout: 28:55 Minutes		SYBASE" An SALY Company

- Fill in all required information fields, accept Terms and Conditions, and confirm captcha image. Click Continue.

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- At the account summary page click Continue again

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- At the final part of the consumer signup, you will be asked for an OTP code to finalize the creation of the account.

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- Go to the Channel Manager console to find the OTP information:
 - o Error! Hyperlink reference not valid.
 - o If asked for credentials to enter page use the following; Mobiliser:secret

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- Enter OTP specified on the page and click Continue
- You will receive a confirmation page specifying a successful consumer signup, click continue and you will be redirected to the Web UI login page again where you can log in with the newly created Mobiliser account

5 System Configuration

System configuration data for Mobiliser 5.0.0 is distributed between 1) configuration files and 2) system preferences (database). Configuration files are specific to the local container. System Preferences are supplied by the preferences server and are therefore available to multiple containers. File based configuration is covered in this section. Preferences configuration is covered in section <u>3.2</u>.

5.1 System Configuration Files

Path: {MOBILISER_HOME}/conf

File:

- config.properties
 - basic felix configuration info
 - jetty.xml
 - threadpool used to accept client connections
- system.properties
 - o define location for configuration files
 - Decryption key for local container
 - Path to user details cache settings
- userdetails-ehcache.xml
 - User Details cache settings
 - mob-ehcache.xml
 - o global and web service specific cache settings

Path: {MOBILISER_HOME}/conf/cfgbackup

File:

- com.sybase365.mobiliser.framework.event.core.properties
- Event Handler (batch, queue, threads) settings for the local container
- com.sybase365.mobiliser.framework.event.scheduler.quartz.properties
 - Database configuration and scheduler settings for Event generation
- com.sybase365.mobiliser.framework.gateway.httpservice.properties
- context root for Mobiliser 5.0.0 web services
- com.sybase365.mobiliser.framework.gateway.security.authentication.jmx.properties o jmx service url
- com.sybase365.mobiliser.framework.gateway.security.authentication.ldap.properties o Idap configuration data
- com.sybase365.mobiliser.framework.gateway.security.authentication.webconsole.properties
 mobiliser privilege (mob_umgr_privileges) required for console access
- com.sybase365.mobiliser.framework.gateway.security.filters.x509.properties
- Subject DN filter
- com.sybase365.mobiliser.framework.gateway.soap.jms.properties
 URL to JMS Provider
- O URL IO JIVIS Provider
- com.sybase365.mobiliser.framework.persistence.hibernate.sessionfactory.properties o hibernate settings
- com.sybase365.mobiliser.framework.persistence.jdbc.bonecp.pool.properties
 jdbc configuration and threadpool provider settings
 - com.sybase365.mobiliser.framework.service.api.properties
 - org.springframework.dao.DataAccessException
 - o org.springframework.transaction.TransactionException
- com.sybase365.mobiliser.util.prefs.encryption.aes.properties
- preferences encryption key
- com.sybase365.mobiliser.util.prefs.encryption.tripledes.properties
- preferences encryption key
- com.sybase365.mobiliser.util.prefs.store.local.properties o preferences node and settings to be used
- com.sybase365.mobiliser.util.report.crystalreports.properties
- jdbc configuration for Crystal Reports
- com.sybase365.mobiliser.util.report.watcher.properties
- o local output directory and polling configuration for reporting function
- org.apache.felix.webconsole.internal.servlet.OsgiManager.properties
- configuration for System Console
- org.ops4j.pax.logging.properties
- log4j settings for Mobiliser Core
- org.ops4j.pax.web.properties
 - log4j settings for Jetty

5.2 System Tuning

System tuning is achieved through managing various thread and connection pools. These settings are found in configuration files and in preferences. The system can be optimized to accommodate large numbers of client connections, a large number of database connections, or both. With the exception of event and audit processing, the settings that have the greatest impact on performance are:

5.2.1 Web Services

- jetty thread pool size: setting the minimum number of threads to the same value as of the maximum number of threads for the most consistent performance. For minimal performance settings, there should be at least 80 threads (4x default number of acceptor threads (20)).

- small to medium systems (8-32 logical cores):
- large systems (>32 logical cores):

128 threads 256 threads

5.2.2 JDBC Connection Pool

- bonecp connection pool: For best performance use 3 or 4 partitions. The minimum number of connections should be the same value as the maximum number of connections to avoid issues with idle thread eviction policies. Sizing information:

- small to medium systems (8-32 logical cores):
- large systems (>32 logical cores):

128 connections per partition 256-512 connections per partition

Ex.

- -> jdbcUrl=jdbc:oracle:thin:@perf01-xor.resdev.lab:1521:orcl
- -> maxConnectionsPerPartition=512
- -> minConnectionsPerPartition=512
- -> partitionCount=3

5.2.3 JVM Settings

- JVM args are defined in the {MOBILISER_HOME}/bin/setenv.sh script. The following settings provide optimal heap size and management for high performance installations:

- MOBILISER_OPTS="-Xms32G -Xmx32G"
- MOBILISER_OPTS XX:PermSize=256M XX:MaxPermSize=256M"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:ReservedCodeCacheSize=128M"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:+UseLargePages -XX:LargePageSizeInBytes=2M"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:+UseParNewGC -XX:+UseConcMarkSweepGC"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:CMSInitiatingOccupancyFraction=70 -XX:+UseCMSInitiatingOccupancyOnly"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:ParallelCMSThreads=20"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:ParallelGCThreads=40"
- MOBILISER_OPTS="\$MOBILISER_OPTS -XX:+ExplicitGCInvokesConcurrent"

5.2.4 Logging

Felix (OSGi) and Mobiliser logging can become quite verbose. Log level should be set to WARN for best performance

- conf/cfgbackup/org.ops4j.pax.logging.properties
- conf/config.properties
 - o org.ops4j.pax.logging.service.frameworkEventsLogLevel=WARN

5.2.5 Event queuing/recovery Capacity

Status Events are generated through the transaction lifecycle. Optimize the settings for Event Handlers to avoid delayed processing.

- conf/cfgbackup/com.sybase365.mobiliser.framework.event.core.properties

- -> regeneration.batch.size=16384
- -> delayedq.capacity=16777216
- -> processq.capacity=16777216
- -> catchupg.capacity=16777216

5.2.6 Audit Subsystem

Audit Subsystem configuration are defined in system preferences

PATH: /businesslayer/system/com/sybase365/mobiliser/money/auditmgr/AuditDispatcher/ (Name:Value) VALUE: 100 batchSize: 1024 maxInterval: 1000 maxConcurrent: 4

5.2.7 Event Handlers

Event Handlers process status events that are generated for each transaction

PATH:

/businesslayer/system/com/sybase365/mobiliser/money/jobs/event/handler/registration/RegistrationTransac tionEventHandler/ event.handler.maxActive: 128 event.handler.maxIdle: 128

PATH:

/businesslayer/system/com/sybase365/mobiliser/money/jobs/event/handler/transaction/TransactionNotifica tionEventHandler/ event.handler.maxActive: 128 event.handler.maxIdle: 128

PATH:

/businesslayer/system/com/sybase365/mobiliser/money/jobs/event/handler/balancealert/BalanceAlertEvent Handler/ event.handler.maxActive: 128 event.handler.maxIdle: 128

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