

ROAM

POWERING MCOMMERCE | An Ingenico Company

Deployment Guide

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Introduction

This document describes how to install, deploy, and configure the software.

Hardware and Software Requirements

For the software and hardware requirements, see the following table:

Type of Customer	To Find the Software and Hardware Requirements:
Customers who use their own data center	Go to: https://confluence.roamdata.com/display/MCM5/MCM5+Document+Center Open the document entitled CTO Tech Spec for MCM5 Architecture.
Customers who use ROAM's data center	Ask your contact person at ROAM Data.

How to Obtain the Installation Software

For information on obtaining the installation software, see the following table:

Type of Customer	To Find the Software and Hardware Requirements:
Customers who use their own data center	ROAM Data sends you an email containing the software, which you install in your Data Center.
Customers who use ROAM's data center	ROAM Data deploys the software on your Data Center and informs you when the installation is complete.

Packages Required for a First-Time Installation

To install the software for the first time, you need the following four packages:

- Database script
- TSP
- ROAMsupport
- myROAM

Database

You use the following scripts to install the database.

Script Name	Function
tsp_db.sql	DROPS the existing TSP database and CREATES a new one.
tsp_create_all.sql	CREATES the TSP schema.

TSP

The package TSP-CORE-1.0.*.noarch.rpm contains the TSP binaries. This package contains the following:

```
/etc/init.d/tsp_snapshot
/opt
/opt/tsp-1.0.0-SNAPSHOT
/opt/tsp-1.0.0-SNAPSHOT/LICENSE
/opt/tsp-1.0.0-SNAPSHOT/NOTICE
/opt/tsp-1.0.0-SNAPSHOT/bin
/opt/tsp-1.0.0-SNAPSHOT/bin/ruyi
/opt/tsp-1.0.0-SNAPSHOT/bin/ruyi-cli
/opt/tsp-1.0.0-SNAPSHOT/bin/ruyi-cli.bat
/opt/tsp-1.0.0-SNAPSHOT/bin/ruyi.bat
/opt/tsp-1.0.0-SNAPSHOT/bin/tspdevdata
/opt/tsp-1.0.0-SNAPSHOT/bin/tspdevdata.bat
/opt/tsp-1.0.0-SNAPSHOT/bin/tspinit
/opt/tsp-1.0.0-SNAPSHOT/bin/tspinit.bat
/opt/tsp-1.0.0-SNAPSHOT/bin/tsptool
/opt/tsp-1.0.0-SNAPSHOT/bin/tsptool.bat
/opt/tsp-1.0.0-SNAPSHOT/branding.properties
/opt/tsp-1.0.0-SNAPSHOT/bundles
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.annotations-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.authentication-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.conn.roamdemo-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.dal.sql-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.dal.sql.mysql-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.dal.sql.postgresql-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.imgsvc-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.intsvc-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.localization-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.localization.zh-CN-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.management-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.messenger-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.parameter-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.payment-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.provisioning-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.rmproto-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.status-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.tlvutility-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/com.roamdata.tsp.util-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/commons-codec-1.8.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/commons-collections-3.2.1.jar
```

```
/opt/tsp-1.0.0-SNAPSHOT/bundles/commons-io-2.4.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/commons-lang-2.6.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/jackson-core-2.2.0.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.bundlerepository-1.6.6.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.configadmin-1.6.0.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.eventadmin-1.3.2.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.framework-4.2.1.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.gogo.runtime-0.10.0.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.metatype-1.0.6.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.apache.felix.scr-1.6.2.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.clid-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.cmd-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.common-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.io-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.me-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.osgi.log-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.timeoutadmin-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/bundles/org.jruyi.workshop-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/inst
/opt/tsp-1.0.0-SNAPSHOT/inst/default
/opt/tsp-1.0.0-SNAPSHOT/inst/default/conf
/opt/tsp-1.0.0-SNAPSHOT/inst/default/conf/bootstrap.xml
/opt/tsp-1.0.0-SNAPSHOT/inst/default/conf/logback.xml
/opt/tsp-1.0.0-SNAPSHOT/inst/default/data
/opt/tsp-1.0.0-SNAPSHOT/inst/default/log
/opt/tsp-1.0.0-SNAPSHOT/inst/default/provisioning
/opt/tsp-1.0.0-SNAPSHOT/inst/default/provisioning/provisioning-postgresql.ry
/opt/tsp-1.0.0-SNAPSHOT/inst/default/provisioning/provisioning.ry
/opt/tsp-1.0.0-SNAPSHOT/lib
/opt/tsp-1.0.0-SNAPSHOT/lib/commons-cli-1.2.jar
/opt/tsp-1.0.0-SNAPSHOT/lib/jruyi-system-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/lib/log4j-over-slf4j-1.7.5.jar
/opt/tsp-1.0.0-SNAPSHOT/lib/logback-classic-1.0.13.jar
/opt/tsp-1.0.0-SNAPSHOT/lib/logback-core-1.0.13.jar
/opt/tsp-1.0.0-SNAPSHOT/lib/slf4j-api-1.7.5.jar
/opt/tsp-1.0.0-SNAPSHOT/main
/opt/tsp-1.0.0-SNAPSHOT/main/jruyi-cli-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/main/jruyi-launcher-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/main/tsp-tool-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/main/tspservice-1.0.0-SNAPSHOT.jar
/opt/tsp-1.0.0-SNAPSHOT/pdf-config
/opt/tsp-1.0.0-SNAPSHOT/pdf-config/fonts
/opt/tsp-1.0.0-SNAPSHOT/pdf-config/fonts/SimHei.ttf
/opt/tsp-1.0.0-SNAPSHOT/pdf-config/fonts/simhei.xml
/opt/tsp-1.0.0-SNAPSHOT/pdf-config/fop-config.xml
/opt/tsp-1.0.0-SNAPSHOT/provisioning
/opt/tsp-1.0.0-SNAPSHOT/provisioning/_orginfo.yml
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/config.yml
```

```
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/hardware.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/merchantuser.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/payment.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/roamdatauser.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/devdata/sublineuser.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/myroam.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/roampayx.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/roamsupport.yml  
/opt/tsp-1.0.0-SNAPSHOT/provisioning/rootconf.yml
```

ROAMsupport

The package `roamsupport.war` contains the ROAMSupport binaries. This package contains the following:

```
webapps/myroamsupport/data/*  
webapps/myroamsupport/extjs/*  
webapps/myroamsupport/extjs/calendar/*  
webapps/myroamsupport/extjs/i18n/*  
webapps/myroamsupport/extjs/locale/*  
webapps/myroamsupport/extjs/resources/*  
webapps/myroamsupport/extjs/security/*  
webapps/myroamsupport/extjs/ux/*  
webapps/myroamsupport/META-INF/*  
webapps/myroamsupport/META-INF/maven/*  
webapps/myroamsupport/resources/*  
webapps/myroamsupport/resources/css/*  
webapps/myroamsupport/resources/images/*  
webapps/myroamsupport/resources/js/*  
webapps/myroamsupport/resources/themes/*  
webapps/myroamsupport/WEB-INF/*  
webapps/myroamsupport/WEB-INF/classes/*  
webapps/myroamsupport/WEB-INF/lib/*  
webapps/myroamsupport/WEB-INF/views/*
```

To configure your endpoints and ports, go to:

```
http://<ROAMsupportHostIP>:<Port>/roamsupport/admin_initialportalsetup
```

You can also use ROAMsupport's `web.xml`, but it is not preferred.

myROAM

This package `myroam.war` contains the following:

```
webapps/myroam/META-INF/*  
webapps/myroam/META-INF/maven/*  
webapps/myroam/resources/css/*  
webapps/myroam/resources/images/*  
webapps/myroam/resources/js/*  
webapps/myroam/resources/media/*
```

```
webapps/myroam/resources/themes/*
webapps/myroam/WEB-INF/*
webapps/myroam/WEB-INF/classes/*
webapps/myroam/WEB-INF/lib/*
webapps/myroam/WEB-INF/messages/*
webapps/myroam/WEB-INF/spring/*
webapps/myroam/WEB-INF/tld/*
webapps/myroam/WEB-INF/views/*
```

First-Time Installation and Configuration

Follow these steps:

1. Install JVM, PostgreSQL, and Tomcat.

The Data Center installs JVM, PostgreSQL, and Tomcat.

2. Set up the database TSP.

Enter the following command line:

```
psql -U postgres -d tsp -f tsp_create_all.sql
```

3. Install JDK 1.6 or a later version.

To install JDK 1.6, enter:

```
yum install java-1.6.0-openjdk-devel
```

4. Install the RPM.

Place the TSP rpm package `tsp-core-snapshot-1.0.*.rpm` in any location and install it by entering:

```
rpm -Uhv tsp-core-1.0.*.rpm
```

Installing the RPM adds the user “TSP” and the group “TSP.”

5. (Optional) Configure the admin port.

NOTE: Do not change the Admin port unless it is necessary.

```
Edit <tsp install dir>/inst/default/conf/bootstrap.xml
```

Edit `jrui.cliid.port` by setting it to the desired value.

After you change the Admin port, restart TSP by entering the command:

```
service tsp restart
```

6. Initialize the TSP core.

Enter the following command lines to provision the TSP core only when you use PostgreSQL:

```
cd <tsp install dir>
bin/ruyi-cli -f inst/default/provisioning/provisioning.ry
bin/ruyi-cli -f inst/default/provisioning/provisioning-postgresql.ry
```

7. Configure the TSP core from a file.

Before configuring TSP, initialize it.

After installing the binary, edit the `tsp.config` file.

The default location of `<tsp install dir>` is `/opt/tsp-1.0.0-SNAPSHOT`.

After you edit the file, type “`service tsp reload`” to load the configuration. Alternatively, go to `<tsp install dir>` and enter:

```
bin/ruyi-cli -f inst/default/conf/tsp.conf
```

This file loads the configuration into TSP. You can delete the `conf` file after configuring TSP, especially if the file contains a password. This is a batch file for `ruyi-cli`, which you can type in the same way in the TSP shell.

```
File: <tsp install dir>/inst/default/conf/tsp.conf
```

8. (Optional; read carefully) Change the startup password.

The default password is `R0amdata`. For example, you can change this startup password to “`NewPassword`,” by entering the following command line.

```
change tsp:startpwd NewPassword
```

IMPORTANT: After you change the startup password, each subsequent start or restart of the TSP Core requires you to enter the password.

To enter the startup password after it has been changed for each start:

- a. Start the TSP service.
- b. Enter the following:

```
cd <tsp install dir>
```

```
bin/ruyi-cli
```

- c. In the TSP shell, enter:

```
tsp:startpwd <password>
```

- d. To change the startup password, enter:

```
tsp:startpwd <old_password> <new_password>
```

9. Edit the settings in the files `tsp.config`.

a. Edit the Database Settings

Find the line “`conf:create tsp.dal.sql.tspdb`” in the file `tsp.config` to modify the following database settings:

Setting Key	Default Value	Use
<code>btm.serverName</code>	127.0.0.1	Database server IP
<code>btm.portNumber</code>	3306	Database server port
<code>btm.user</code>	root	Username

Find the line `tsp:dbpwd` to change the password of the database.

b. Edit the SMTP Settings

Find the line “tsp.messenger” to modify the following SMTP settings:

Setting Key	Default Value	Use
mail.hostname	127.0.0.1	Database server IP
mail.hostport	3306	Database server port
mail.userName	root	Username
mail.password	R0amdata	Password
mail.sslOnConnect	false	Whether Enable the SSL

c. Edit the Server Listening Ports (Thrift and TLV)

Find the line “tsp.server” to modify the following server port settings:

Setting Key	Default Value	Use	Remarks
thrift clients	9000 9001	plain TCP/IP SSL	Change your port to fit your network schema.
ROAMpay clients	10000 10001	TCP SSL	RC1 ONLY: 10001 is not currently configured and enabled because API5 on RC1 only supports plain TCP

d. Edit the Server SSL Configuration

Find the line “jrui.io.ssl.keystore” to modify the following SSL settings:

Setting Key	Default Value	Usage
keyStoreUrl	\${jrui.home.dir}/security/tspkey	Keystore location
keyStorePassword	R0amdata	Keystore password
keyPassword	R0amdata	Key password

NOTE: TSP ships with a default keystore, and Java’s keygen tool can generate new keys.

10. Initialize tsp-core.

After the database and all configurations are configured, create the initial data and first Admin:

```
cd <tsp install dir>  
bin/tspinit <tspadmin> <adminpassword>
```

11. Install the web components.

Add the path of your myroam.war and roamsupport.war to your Tomcat’s web application path.

Example: tomcat6/webapps/

Tomcat deploys the WAR package.

Alternatively, use the web UI of Tomcat Manager by going to a URL in the following format:

```
http://<IP or Host>:<Port>/manager/html
```

Field	Meaning
IP or Host	Your Tomcat IP or hostname
Port	Your Tomcat port on the server Example: 8080 (the default)

Running the Software After a First-Time Installation

At this stage, you can run the software.

Verifying and Initializing a First-Time Installation

Use a browser to access the following portals:

Portals	Format of the URL
ROAMsupport	http://<your Tomcat server IP>/roamsupport/
myROAM	http://<your Tomcat server IP>/myroam

Use a browser to access your deployed portal. When you access the portal for the first time, a setup screen appears. Enter your TSP IP and ports on this screen. You can access this screen at any time from the Administration menu of ROAMsupport.

Upgrading an Existing Installation

When upgrading an existing installation, you do not reinstall your database schema. Follow these steps to update the structure of your database.

NOTE: Make certain to run all the provided scripts.

12. Run the `tsp_update_<number>.sql` script:

- e. Stop the TSP service using the following command:

```
service tsp stop
```

- f. Check that the service has stopped using:

```
service tsp status
```

NOTE: To run this script, you must have a previously installed database.

13. Run the tsp_update_<number>.sql script:

```
psql -U postgres -f tsp_update_2.sql -d tsp
```

14. Run the tsp_update_<number>_data_clean.sql script:

```
psqlD -U postgres -f tsp_update_<number>_data_clean.sql -d tsp
```

15. Install the latest version of TSP.

Place the package tsp-core-snapshot-1.0.*.rpm in any location and install it:

```
rpm -Uhv tsp-core-1.0.*.rpm
```

The installation of the RPM adds User TSP and Group TSP.

16. Delete osgi and the conf folder:

```
rm -fr inst/default/data/osgi  
rm -fr inst/default/data/conf
```

17. Start TSP:

```
service tsp start
```

18. Configure TSP by entering the following commands within the TSP folder.

```
bin/ruyi-cli -f inst/default/provisioning/provisioning.ry  
bin/ruyi-cli -f inst/default/conf/tsp.conf
```

19. Update the applications definition by entering the following command within the TSP folder:

```
bin/tspinit <tspadmin> <password> <root-organization>
```

20. Run the following command from within the TSP folder:

```
bin/ruyi-cli tsp:email start
```

21. Install the web components:

- g. Add the path of your myroam.war and roamsupport.war to your Tomcat's web application path.
Example: tomcat6/webapps/

Tomcat deploys the WAR package.

- h. Alternatively, use the web UI of Tomcat Manager by going to:

```
http://<IP or Host>:<Port>/manager/html
```

Field	Meaning
IP or Host	Your Tomcat IP or hostname
Port	Your Tomcat port on the server For example, 8080 (the default)

22. Run MCM5.

23. Verify and Initialize:

- i. Use a browser to access the following portals:

Portals	Format of the URL
ROAMsupport	http://<your Tomcat server IP>/roamsupport/
myROAM	http://<your Tomcat server IP>/myROAM/

- j. Use a browser to access your deployed portal. When you first access your portal, a setup screen appears. Enter your TPS IP and ports on this screen. You can access this screen any time from the “Administration” menu in myROAM5.

Uninstalling

To uninstall a WAR application, see the Tomcat documentation.

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