TEMENOS™

TAFJ-JMS MQInstall v7.5

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Temenos

Amendment History:

Revision	Date Amended	Name	Description
1	9th April 2015	H. Aubert	Initial version

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Errata and Comments

If you have any comments regarding this manual or wish to report any errors in the documentation, please document them and send them to the address below:
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Please include your name, company, address, and telephone and fax numbers, and email address if applicable. TAFJdev@temenos.com

Table of Contents

Prerequisite

You need to have the root access user on the OS.

On an install folder, unpack the tar.gz files.

i.e

Installation file : WS_MQ_FOR_LNX_ON_X86_64_V7.5_EIMG.tar.gz
Fix Pack file : 7.5.0-WS-MQ-LinuxX64-FP0004.tar.gz

Under install folder create a folder MQINST and MQINST_FP

Untar the files:

```
tar -C MQINST -xvf WS_MQ_FOR_LNX_ON_X86_64_V7.5_EIMG.tar.gz
tar -C MQINST_FP -xvf 7.5.0-WS-MQ-LinuxX64-FP0004.tar.gz
```

Setup WebSphere MQ User and Group

With ***root*** user

Create the group mqm

```
groupadd mqm
```

Create a user mqm to the group mqm

```
useradd -g mqm mqm
```

Setup the password to the user mqm

```
passwd mqm
```

Kernel Configuration Parameters

With ***root*** user

Open the file "/etc/sysctl.conf"

```
vi /etc/sysctl.conf
```

Set the following values

```
kernel.shmmni = 4096
kernel.shmall = 2097152
kernel.shmmax = 268435456
kernel.sem = 500 256000 250 1024
net.ipv4.tcp_keepalive_time = 300
```

Activate the new values

```
sysctl -p
```

Open the file "/etc/security/limits.conf"

```
vi /etc/security/limits.conf
```

Set the following values

```
mqm               hard    nofile         10240
mqm               soft    nofile         10240
mqm               hard    nproc          16384
mqm               soft    nproc     16384
```

WebSphere MQ 7.5 installation

With ***root*** user

From the folder install/MQINST

```
./mqlicense.sh -accept
```

```
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5724-H72
 (C) Copyright IBM Corporation 1994, 2012 All rights reserved.
US Government Users Restricted Rights - Use, duplication or disclosure
restricted by GSA ADP Schedule Contract with IBM Corp.

Agreement accepted:  Proceed with install.
```

Install WebSphere MQ Components

With ***root*** user

Install the following component:

- MQSeriesRuntime
- MQSeriesServer
- MQSeriesClient
- MQSeriesSDK
- MQSeriesJava
- MQSeriesMan
- MQSeriesJRE

From the folder install/MQINST

```
rpm -ivh MQSeriesRuntime-7.5.0-2.x86_64.rpm
rpm -ivh MQSeriesServer-7.5.0-0.x86_64.rpm
rpm -ivh MQSeriesClient-7.5.0-0.x86_64.rpm
rpm -ivh MQSeriesSDK-7.5.0-0.x86_64.rpm
rpm -ivh MQSeriesJava-7.5.0-0.x86_64.rpm
rpm -ivh MQSeriesMan-7.5.0-0.x86_64.rpm
rpm -ivh MQSeriesJRE-7.5.0-0.x86_64.rpm
```

Install WebSphere MQ Components Fix patch

With ***root*** user

Update the following component:

MQSeriesRuntime
MQSeriesServer
MQSeriesClient
MQSeriesSDK
MQSeriesJava
MQSeriesMan
MQSeriesJRE

From the folder install/MQINST_FP

```
rpm -ivh MQSeriesRuntime-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesServer-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesClient-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesSDK-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesJava-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesMan-U200491-7.5.0-4.x86_64.rpm
rpm -ivh MQSeriesJRE-U200491-7.5.0-4.x86_64.rpm
```

Post Installations

With ***root*** user

Validates the system confoguration

```
su mqm -c "/opt/mqm/bin/mqconfig"
```

```
mqconfig: Analyzing Red Hat Enterprise Linux Server release 6.6 (Santiago)
          settings for WebSphere MQ V7.5

System V Semaphores
   semmsl       (sem:1)   500  semaphores                          IBM>=500
PASS
   semmns       (sem:2)   1  of  256000  semaphores       (0%)     IBM>=256000
PASS
   semopm       (sem:3)   250  operations                          IBM>=250
PASS
   semmni       (sem:4)   1  of  1024  sets                (0%)     IBM>=1024
PASS

System V Shared Memory
  shmmax                4398046511104 bytes                 IBM>=268435456
PASS
   shmmni                 1  of  4096  sets                (0%)     IBM>=4096
PASS
   shmall                 3  of  4294967296  pages         (0%)     IBM>=2097152
PASS

System Settings
   file-max               736  of  6815744  files         (0%)     IBM>=524288
PASS
   tcp_keepalive_time   300  seconds                               IBM<=300
PASS

Current User Limits (mqm)
   nofile         (-Hn)   10240  files                          IBM>=10240
PASS
   nofile         (-Sn)   10240  files                          IBM>=10240
PASS
   nproc           (-Hu)   9  of  16384  processes          (0%)     IBM>=4096
PASS
   nproc           (-Su)   9  of  16384  processes          (0%)     IBM>=4096
PASS
```

set the default installation

With ***root*** user

```
/opt/mqm/bin/setmqinst -i -p /opt/mqm/

118 of 118 tasks have been completed successfuly.
'Installation1' (/opt/mqm) set as the Primary Installation.
```

Works with MQ

With ***mqm*** user

Set the environment

```
. /opt/mqm/bin/setmqenv -s
```

Display the status of MQ

```
Dspmqver

Name:        WebSphere MQ
Version:     7.5.0.4
Level:       p750-004-140807
BuildType:   IKAP - (Production)
Platform:    WebSphere MQ for Linux (x86-64 platform)
Mode:        64-bit
O/S:         Linux 3.8.13-55.1.2.el6uek.x86_64
InstName:    Installation1
InstDesc:
Primary:     Yes
InstPath:    /opt/mqm
DataPath:    /var/mqm
MaxCmdLevel: 750
LicenseType: Production
```

Set User to access in remote to WebSPhere MQ

Add user to mqm

```
useradd -G mqm <user_name_in lower_case>
```

Install single instance MQ

With the user ***mqm*** on the MQ Server

Create Listener, Channel and Queues

From <TAFJ_HOME>/AppServer/MQ/

Execute MQCommand to create the Queue Manager MQT24, the Channel and the queues

```
. ./MQCommand
```

```
WebSphere MQ queue manager created.
Directory '/var/mqm/qmgrs/MQT24' created.
The queue manager is associated with installation 'Installation1'.
Creating or replacing default objects for queue manager 'MQT24'.
Default objects statistics : 74 created. 0 replaced. 0 failed.
Completing setup.
Setup completed.
WebSphere MQ queue manager 'MQT24' starting.
The queue manager is associated with installation 'Installation1'.
5 log records accessed on queue manager 'MQT24' during the log replay phase.
Log replay for queue manager 'MQT24' complete.
Transaction manager state recovered for queue manager 'MQT24'.
WebSphere MQ queue manager 'MQT24' started using V7.5.0.4.
5724-H72 (C) Copyright IBM Corp. 1994, 2011.  ALL RIGHTS RESERVED.
Starting MQSC for queue manager MQT24.


     1 : DEFINE LISTENER('LISTENER.TCP') TRPTYPE(TCP) PORT(1414) CONTROL(QMGR)
AMQ8626: WebSphere MQ listener created.
     2 : START LISTENER('LISTENER.TCP')
AMQ8021: Request to start WebSphere MQ listener accepted.
     3 : DEFINE CHANNEL('SYSTEM.ADMIN.SVRCONN') CHLTYPE(SVRCONN)
AMQ8014: WebSphere MQ channel created.
     4 : DEFINE CHANNEL('T24_CHANNEL') CHLTYPE(SVRCONN)
AMQ8014: WebSphere MQ channel created.
     5 : ALTER QMGR CHLAUTH(DISABLED)
AMQ8005: WebSphere MQ queue manager changed.
       :
     6 : DEFINE QLOCAL('T24.OFS.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
     7 : DEFINE QLOCAL('T24.OFS.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
     8 : DEFINE QLOCAL('T24.BROWSER.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
     9 : DEFINE QLOCAL('T24.BROWSER.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
```

```
        :
    10 : DEFINE QLOCAL('T24.ARC.MOBILE.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    11 : DEFINE QLOCAL('T24.ARC.MOBILE.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    12 : DEFINE QLOCAL('T24.TWS.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    13 : DEFINE QLOCAL('T24.TWS.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    14 : DEFINE QLOCAL('T24.TCIB.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    15 : DEFINE QLOCAL('T24.TCIB.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    16 : DEFINE QLOCAL('T24.TCIB.CORP.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    17 : DEFINE QLOCAL('T24.TCIB.CORP.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    18 : DEFINE QLOCAL('T24.TCIB.WEALTH.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    19 : DEFINE QLOCAL('T24.TCIB.WEALTH.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    20 : DEFINE QLOCAL('T24.CALLAT.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    21 : DEFINE QLOCAL('T24.CALLAT.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    22 : DEFINE QLOCAL('T24.SEAT.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    23 : DEFINE QLOCAL('T24.SEAT.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    24 : DEFINE QLOCAL('T24.IF.OUTBOUND.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    25 : DEFINE QLOCAL('T24.IF.INBOUND.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
        :
    26 : DEFINE TOPIC('T24.EVENTS.TOPIC') TOPICSTR('/')
AMQ8690: WebSphere MQ topic created.
        :
26 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Create JMS Bindings

You need to create bindings for Application server (except WebSphere Application Server) to connect to WebSPhere MQ.Create a simple file-based JNDI context and configure the JMS objects in that JNDI namespace. These JNDI objects are used by Application Server to connect to the WebSphere MQ queue manager. **The bindinds file has to be copied on each Server running the Application Server.**

With the user ***mqm*** on the MQ Server

Set up the PROVIDER_URL

Edit the file <TAFJ_HOME>/AppServer/MQ/JMSAdmin.config

Set up the PROVIDER_URL and replace the value :

i.e
Windows:

```
INITIAL_CONTEXT_FACTORY=com.sun.jndi.fscontext.RefFSContextFactory
PROVIDER_URL=file:/C:/Temenos/MQ-JNDI
SECURITY_AUTHENTICATION=none
```

Linux/UNIX:

```
INITIAL_CONTEXT_FACTORY=com.sun.jndi.fscontext.RefFSContextFactory
PROVIDER_URL=file:///Temenos/MQ-JNDI
SECURITY_AUTHENTICATION=none
```

Setup the java path of MQ

Edit the file <TAFJ_HOME>/AppServer/MQ/MQBinding

Setup the java path of MQ in the value [path_to java_MQ]

```
MQ_JAVA_INSTALL_PATH=[path_to java_MQ]
```

Windows:

```
MQ_JAVA_INSTALL_PATH=”C:\Program Files\IBM\WebSphere MQ\java”
```

Linux/UNIX:

```
MQ_JAVA_INSTALL_PATH=/opt/mqm/java
```

Set the correct IP Address in t24Bind

Edit the file <TAFJ_HOME>/AppServer/MQ/t24Bind

Modify the [ip] with the IP Adress of the MQ Server

```
def         xaqcf(MQConnectionFactory)         transport(CLIENT)
channel(T24_CHANNEL) host([ip]) port(1414) qmgr(MQT24)
```

i.e

```
def         xaqcf(MQConnectionFactory)         transport(CLIENT)
channel(T24_CHANNEL) host(10.9.237.185) port(1414) qmgr(MQT24)
```

Generate the binding with the command

```
./MQBindings
```

```
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(c) Copyright IBM Corp. 2008, 2011 All Rights Reserved.
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disclosure restricted by GSA ADP Schedule Contract with
IBM Corp.
Starting WebSphere MQ classes for Java(tm) Message Service Administration

InitCtx>
InitCtx>
InitCtx>
InitCtx>
InitCtx>
InitCtx>
InitCtx>
…
InitCtx>
InitCtx>
InitCtx>
InitCtx>
Stopping WebSphere MQ classes for Java(tm) Message Service Administration
```

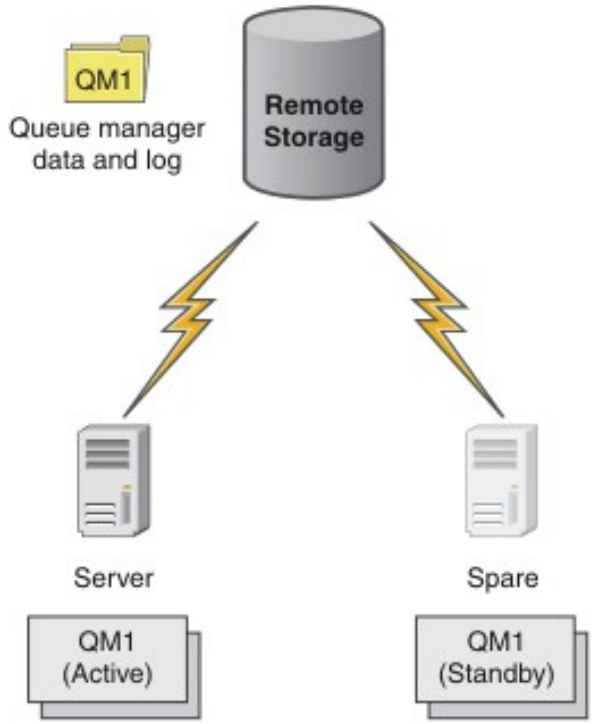
Check PROVIDER_URL folder

You have a file .bindings

Install multiple-instances MQ

Install the MQ instance in both the servers in which multi instance queue manager need to be created.

Figure 1. Multi-instance queue manager



With the user mqm.

Create the structure on a NFS share:

On a common NFS share.

```
\---mqshared
     +---qmgrs
     +---logs
```

Commands:

```
mkdir mqshared
cd mqshared
mkdir qmgrs
mkdir logs
chown -R mqm:mqm  mqshared
chmod -R ug+rwx mqshared
```

Create the Queue Manager MQT24

On server 1

```
crtmqm -ld …/mqshared/logs -md …/mqshared/qmgrs MQT24
```

```
WebSphere MQ queue manager created.
Directory '/mnt/noroelshr01/mqshared/qmgrs/MQT24' created.
The queue manager is associated with installation 'Installation1'.
Creating or replacing default objects for queue manager 'MQT24'.
Default objects statistics : 74 created. 0 replaced. 0 failed.
Completing setup.
Setup completed.
```

Display the information of the Queue Manager MQT24

On server 1

```
dspmqinf -o command MQT24
```

```
addmqinf -s QueueManager -v Name= MQT24-v Directory= MQT24-v
Prefix=/var/mqm -v DataPath=/pocdata/mqshared/qmgrs/ MQT24
```

On server 2

Create the queue manager base on the info from the server 1

```
addmqinf -s QueueManager -v Name= MQT24-v Directory= MQT24-v
Prefix=/var/mqm -v DataPath=/pocdata/mqshared/qmgrs/ MQT24

WebSphere MQ configuration information added.
```

Start MQT24

On server 1

```
strmqm -x MQT24
```

```
WebSphere MQ queue manager 'MQT24' starting.
The queue manager is associated with installation 'Installation1'.
5 log records accessed on queue manager 'MQT24' during the log replay
phase.
Log replay for queue manager 'MQT24' complete.
Transaction manager state recovered for queue manager 'MQT24'.
WebSphere MQ queue manager 'MQT24' started using V7.5.0.4.
```

On server 2

```
strmqm -x MQT24
```

```
WebSphere MQ queue manager 'MQT24' starting.
The queue manager is associated with installation 'Installation1'.
A standby instance of queue manager 'MQT24' has been started. The active
instance is running elsewhere.
```

Verify the Cluster

On Server 1

```
amqmfsck …/mqshared/qmgrs

The tests on the directory completed successfully.
```

On Server 2

```
amqmfsck …/mqshared/qmgrs

The tests on the directory completed successfully.
```

On Server 1

```
amqmfsck –w …/mqshared/qmgrs

Start a second copy of this program with the same parameters
on another server.
File lock acquired.
Press Enter or terminate this process to release the lock.

File lock released.
The tests on the directory completed successfully.
```

On Server 2

```
amqmfsck –w …/mqshared/qmgrs

Waiting for the file lock.
Waiting for the file lock.
Waiting for the file lock.
Waiting for the file lock.
Waiting for the file lock.
Waiting for the file lock.
Waiting for the file lock.
File lock acquired.
Press Enter or terminate this process to release the lock.

File lock released.
The tests on the directory completed successfully.
```

Create Listener, Channel and Queues

On Server 1

With the user mqm on the MQ Server

From <TAFJ_HOME>/AppServer/MQ/

Execute MQCommand to create the Queue Manager MQT24, the Channel and the queues

```
. ./MQCommand
```

```
AMQ8110: WebSphere MQ queue manager already exists.
WebSphere MQ queue manager running.
5724-H72 (C) Copyright IBM Corp. 1994, 2011.  ALL RIGHTS RESERVED.
Starting MQSC for queue manager MQT24.

     1 : DEFINE LISTENER('LISTENER.TCP') TRPTYPE(TCP) PORT(1414) CONTROL(QMGR)
AMQ8626: WebSphere MQ listener created.
     2 : START LISTENER('LISTENER.TCP')
AMQ8021: Request to start WebSphere MQ listener accepted.
     3 : DEFINE CHANNEL('SYSTEM.ADMIN.SVRCONN') CHLTYPE(SVRCONN)
AMQ8014: WebSphere MQ channel created.
     4 : DEFINE CHANNEL('T24_CHANNEL') CHLTYPE(SVRCONN)
AMQ8014: WebSphere MQ channel created.
     5 : ALTER QMGR CHLAUTH(DISABLED)
AMQ8005: WebSphere MQ queue manager changed.
       :
     6 : DEFINE QLOCAL('T24.OFS.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
     7 : DEFINE QLOCAL('T24.OFS.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
     8 : DEFINE QLOCAL('T24.BROWSER.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
     9 : DEFINE QLOCAL('T24.BROWSER.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    10 : DEFINE QLOCAL('T24.ARC.MOBILE.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    11 : DEFINE QLOCAL('T24.ARC.MOBILE.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    12 : DEFINE QLOCAL('T24.TWS.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    13 : DEFINE QLOCAL('T24.TWS.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    14 : DEFINE QLOCAL('T24.TCIB.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    15 : DEFINE QLOCAL('T24.TCIB.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    16 : DEFINE QLOCAL('T24.TCIB.CORP.QUEUE') DEFPSIST(YES) SHARE
```

```
AMQ8006: WebSphere MQ queue created.
    17 : DEFINE QLOCAL('T24.TCIB.CORP.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    18 : DEFINE QLOCAL('T24.TCIB.WEALTH.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    19 : DEFINE QLOCAL('T24.TCIB.WEALTH.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    20 : DEFINE QLOCAL('T24.CALLAT.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    21 : DEFINE QLOCAL('T24.CALLAT.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    22 : DEFINE QLOCAL('T24.SEAT.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    23 : DEFINE QLOCAL('T24.SEAT.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    24 : DEFINE QLOCAL('T24.IF.OUTBOUND.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
    25 : DEFINE QLOCAL('T24.IF.INBOUND.REPLY.QUEUE') DEFPSIST(YES) SHARE
AMQ8006: WebSphere MQ queue created.
       :
    26 : DEFINE TOPIC('T24.EVENTS.TOPIC') TOPICSTR('/')
AMQ8690: WebSphere MQ topic created.
       :
26 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Create connexion name

On Server 1

With the user mqm on the MQ Server

Command to create the connection name:

```
DEFINE CHANNEL('T24_CHANNEL') CHLTYPE(CLNTCONN)
CONNAME('IP(port),IP(port)') QMNAME(MQT24) replace
```

```
runmqsc MQT24
```

```
DEFINE CHANNEL('T24_CHANNEL') CHLTYPE(CLNTCONN)
CONNAME('10.9.237.185(1414), 10.9.237.186(1414)')
QMNAME(MQT24) replace
START CHANNEL(T24_CHANNEL)
DISPLAY CHANNEL(T24_CHANNEL)
```

Create JMS Bindings

You need to create bindings for Application server (except WebSphere Application Server) to connect to WebSPhere MQ.Create a simple file-based JNDI context and configure the JMS objects in that JNDI namespace. These JNDI objects are used by Application Server to connect to the WebSphere MQ queue manager. **The bindinds file has to be copied on each Server running the Application Server.**

On Server 1

With the user mqm on the MQ Server

Set up the PROVIDER_URL

Edit the file <TAFJ_HOME>/AppServer/MQ/JMSAdmin.config

Set up the PROVIDER_URL and replace the value :

i.e
Windows:

```
INITIAL_CONTEXT_FACTORY=com.sun.jndi.fscontext.RefFSContextFactory
PROVIDER_URL=file:/C:/Temenos/MQ-JNDI
SECURITY_AUTHENTICATION=none
```

Linux/UNIX:

```
INITIAL_CONTEXT_FACTORY=com.sun.jndi.fscontext.RefFSContextFactory
PROVIDER_URL=file:///Temenos/MQ-JNDI
SECURITY_AUTHENTICATION=none
```

Setup the java path of MQ

Edit the file <TAFJ_HOME>/AppServer/MQ/MQBinding

Setup the java path of MQ in the value [path_to java_MQ]

```
MQ_JAVA_INSTALL_PATH=[path_to java_MQ]
```

Windows:

```
MQ_JAVA_INSTALL_PATH=”C:\Program Files\IBM\WebSphere MQ\java”
```

Linux/UNIX:

```
MQ_JAVA_INSTALL_PATH=/opt/mqm/java
```

Set the correct IP Address in t24Bind

Edit the file <TAFJ_HOME>/AppServer/MQ/t24Bind

Modify the connection of t24Bind

```
With the option : CLIENTRECONNECTOPTIONS(QMGR)
CONNECTIONNAMELIST(IP(port),IP(port))

def xaqcf(MQConnectionFactory) transport(CLIENT)
channel(T24_CHANNEL) host([ip]) port(1414) qmgr(MQT24)
```

i.e

```
def xaqcf(MQConnectionFactory) transport(CLIENT)
channel(T24_CHANNEL) qmgr(MQT24)
CONNECTIONNAMELIST(10.9.237.185(1414), 10.9.237.186(1414))
```

Generate the binding with the command

```
./MQBindings
```

```
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disclosure restricted by GSA ADP Schedule Contract with
IBM Corp.
Starting WebSphere MQ classes for Java(tm) Message Service Administration

InitCtx>
InitCtx>
InitCtx>
InitCtx>
InitCtx>
…
InitCtx>
InitCtx>
InitCtx>
InitCtx>
Stopping WebSphere MQ classes for Java(tm) Message Service Administration
```

Check PROVIDER_URL folder

You have a file .bindings

Display the status of the Queue Manager

On Server 1

```
runmqsc MQT24
```

```
DISPLAY QMSTATUS ALL
     1 : DISPLAY QMSTATUS ALL
AMQ8705: Display Queue Manager Status Details.
   QMNAME(T24QM1)                          STATUS(RUNNING)
   CONNS(21)                               CMDSERV(RUNNING)
   CHINIT(RUNNING)                         INSTNAME(Installation1)
   INSTPATH(/t24app1/mqpoc)                INSTDESC( )
   STANDBY(PERMIT)                         STARTDA(2015-02-12)
   STARTTI(09.58.18)
```

On Server 1

```
dspmq -x -o standby -o status

QMNAME(MQT24)                             STATUS(Running)
STANDBY(Permitted)
    INSTANCE(Host1) MODE(Active)
    INSTANCE(Host2) MODE(Standby
```

On Server2

```
dspmq -x -o standby -o status

QMNAME(MQT24)                 STATUS(Running as standby)
STANDBY(Permitted)
   INSTANCE(Host1) MODE(Active)
   INSTANCE(Host2) MODE(Standby
```

Test failover

On Server 1

```
dspmq -x -o standby

QMNAME(MQT24)                             STANDBY(Permitted)
    INSTANCE(Host1) MODE(Active)
    INSTANCE(Host2) MODE(Standby
```

On Server 2

```
dspmq -x -o standby

QMNAME(MQT24)                             STANDBY(Permitted)
    INSTANCE(Host1) MODE(Active)
    INSTANCE(Host2) MODE(Standby
```

On Server 1

```
endmqm  -is MQT24


Waiting for queue manager 'MQT24' to end.
WebSphere MQ queue manager 'MQT24' ending.
WebSphere MQ queue manager 'MQT24' ended, permitting
switchover to a standby
instance.


dspmq -x -o standby

QMNAME(MQT24)
STANDBY(Permitted)
    INSTANCE(Host2) MODE(Active)
```

On Server 1

```
dspmq -x -o standby
QMNAME(MQT24)
STANDBY(Permitted)
    INSTANCE(Host2) MODE(Active)
```

On Server 1

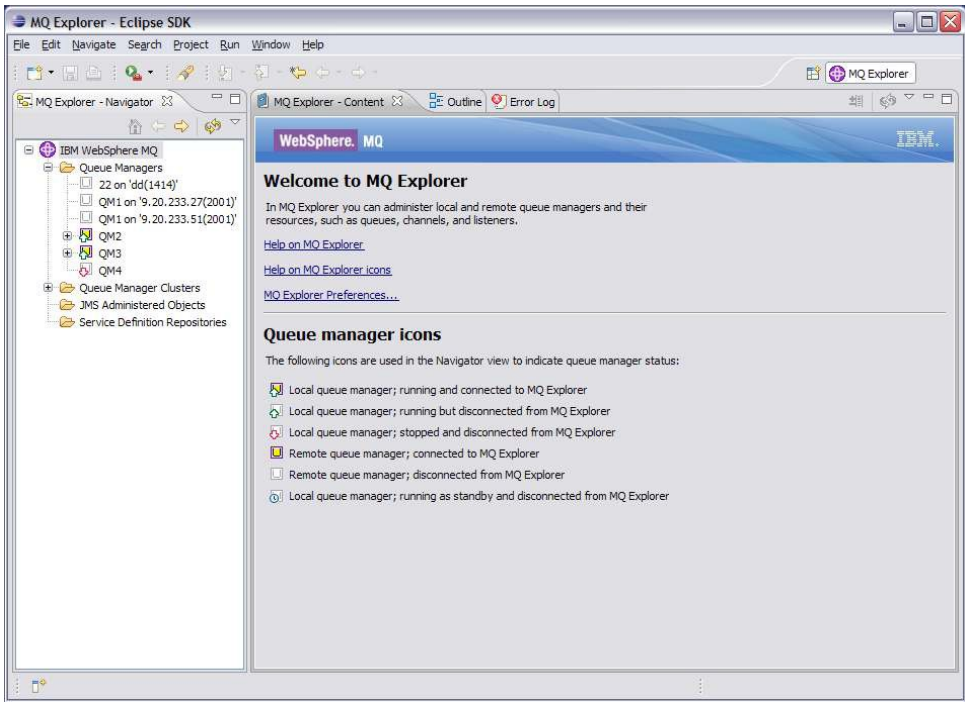
```
strmqm -x MQT24
WebSphere MQ queue manager 'T24QM1' starting.
The queue manager is associated with installation
'Installation1'.
A standby instance of queue manager 'T24QM1' has been started.
The active
instance is running elsewhere.


dspmq -x -o standby
QMNAME(MQT24)                             STANDBY(Permitted)
    INSTANCE(Host2) MODE(Active)
    INSTANCE(Host1) MODE(Standby
```

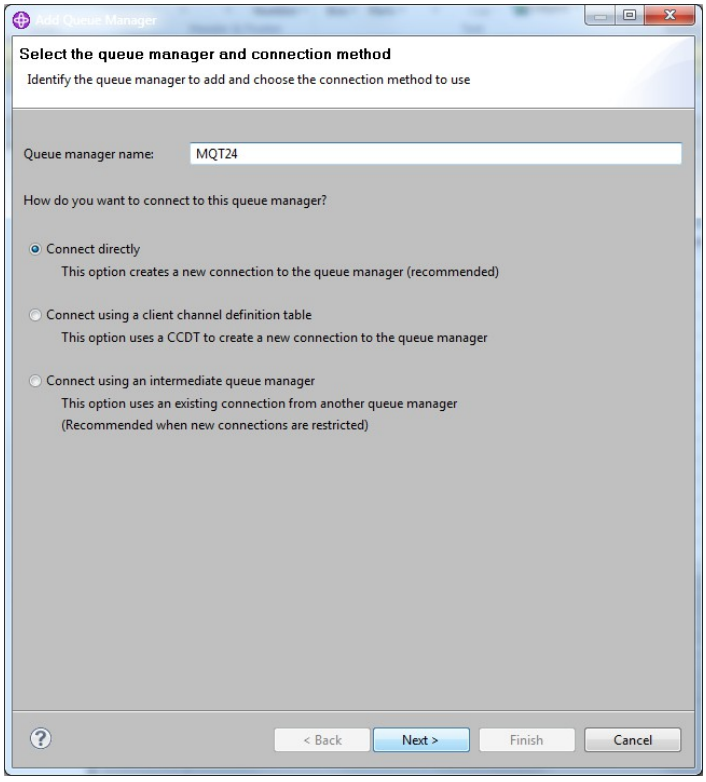
On Server 2

```
dspmq -x -o standby
QMNAME(MQT24)                             STANDBY(Permitted)
    INSTANCE(Host2) MODE(Active)
    INSTANCE(Host1) MODE(Standby
```

MQ Explorer

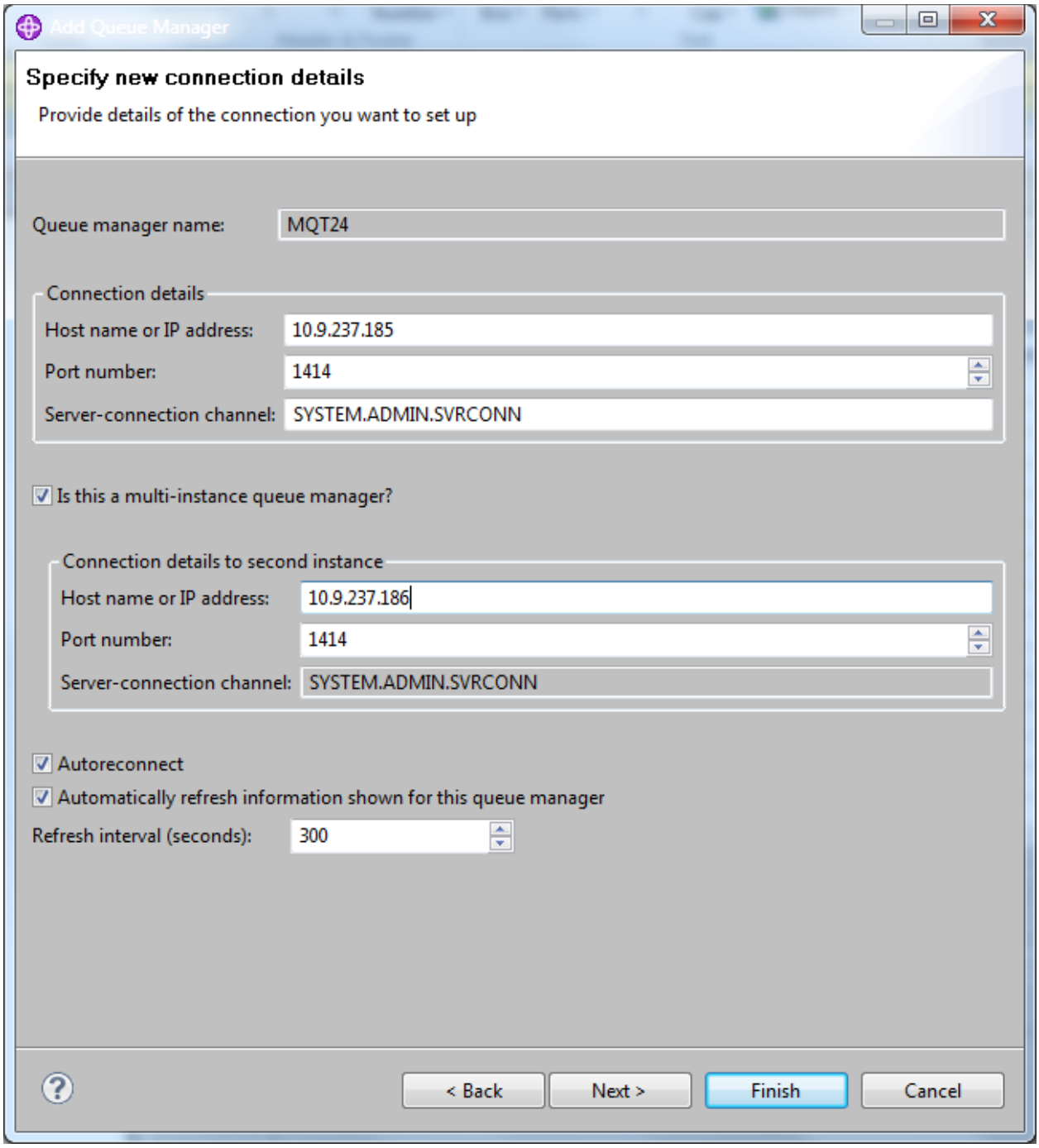


Queue manager -> Add remote Queue manager

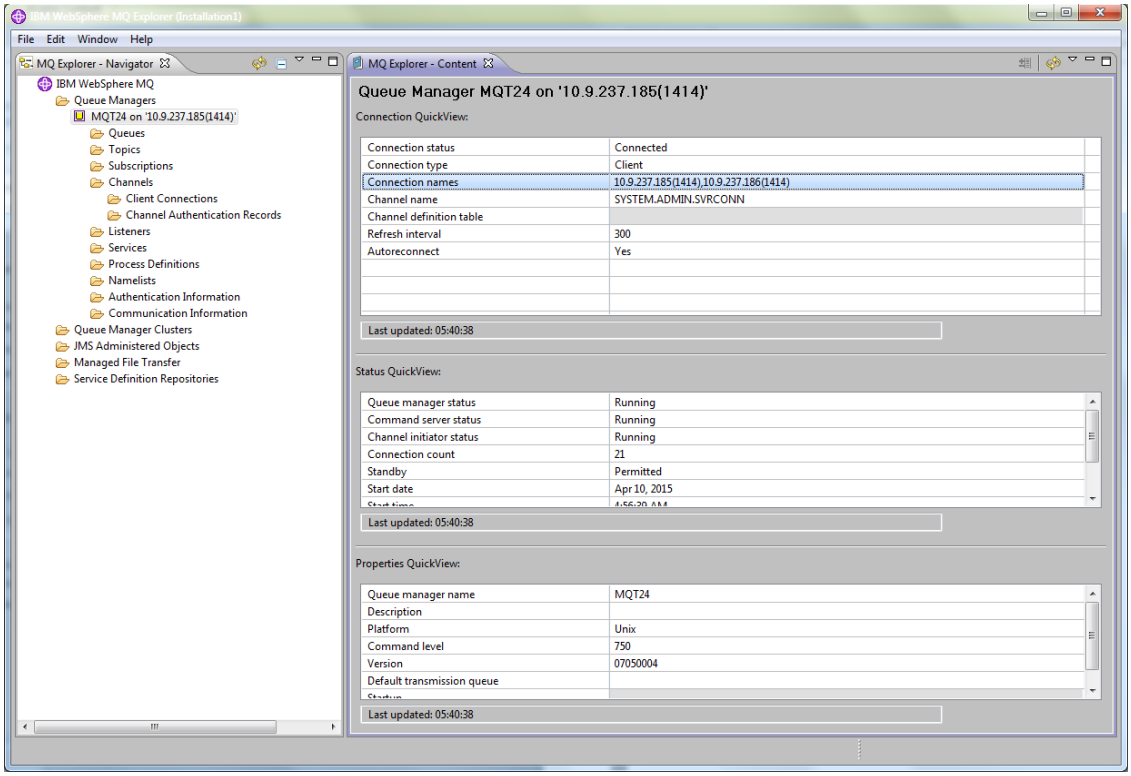


Next…

Select Is this a multi-instance queue manager ?
Give the Ip Adress of the Server 1 and 2



Press Finish…



Select Queues