

## Introduction

Two CDRoms are needed to set up the class:

- 1) WebSphere MQ 6.0 90 Day Trial CD
- 2) Supplemental CD supplied by WebAge Solutions

The course presumes:

- At least 1 Linux server
- 1 or more Windows workstation that connect to the Linux server(s)

It is preferable to have at least 1 Windows workstation for each student or each pair of students.

## Setting up the Linux WMQ server

WebSphere MQ for Linux, Version 6.0 (x86 platform) has been tested with the following distributions:

- Red Hat Enterprise Linux V3.0 plus Update 2
- Red Hat Enterprise Linux V4.0
- SuSE Linux Enterprise Server (SLES) V8 plus Service Pack 3
- SuSE Linux Enterprise Server (SLES) V9

The following information will suffice to install WMQ 6.0 Red Hat Enterprise Linux V4.0. Your distribution or release of Linux may require additional step. See *WebSphere MQ for Linux V6.0 Quick Beginnings* for details specific to your situation. This manual is distributed on the Supplemental CD from WebAge Solutions.

1. Enable an ssh client on to a Window workstation:
  - If you don't have an ssh client installed on each Windows workstation you can install a freeware product call Putty on one workstation, at this time. A copy of the install program for Putty is on the Supplemental CD.
  - Run the ssh client and sign on to the Linux server. This verifies that port 22 is open through any firewalls that may be between the workstations and the Linux server.

## 2. Install WMQ 6.0 product:

- Insert the Supplemental CD from WebAge Solutions in to the Linux servers CDROM drive.
- Logon the Linux server using the ssh client you used to check connectivity in the previous step.
- Switch to root account:

```
su - root
```

- Make your cdrom or cd-writer the default directory:

```
cd /media/cdrom  
or  
cd /media/cdrecorder
```

- Switch the the sh shell. This is not strictly necessary, but the installation programs need to be able to access the sh shell, and this step serves to verify that the sh shell is installed.

```
sh
```

## 3. Run the mqlicense.sh script:

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

If this command does not work for you (and it sometime does not work), there is a quick work around.

```
cd /tmp  
mkdir mq_license  
cd mq_license  
mkdir license  
cd license  
touch status.dat  
cd /media/cdrom  
or  
cd /media/cdrecorder
```

#### 4. Load the WMQ:

```
rpm -i IBMJava2-SDK-1.4.2-0.0.i386.rpm
rpm -i MQSeriesRuntime-6.0.0-0.i386.rpm
rpm -i MQSeriesSDK-6.0.0-0.i386.rpm
rpm -i MQSeriesServer-6.0.0-0.i386.rpm
rpm -i MQSeriesClient-6.0.0-0.i386.rpm
rpm -i MQSeriesSamples-6.0.0-0.i386.rpm
rpm -i MQSeriesJava-6.0.0-0.i386.rpm
rpm -i MQSeriesMan-6.0.0-0.i386.rpm
```

#### 5. Create accounts for class:

- Create an account for the instructor and each student. It will be simpler if you use uppercase for these user names because they will also be used as queue manager name. These user names will also have to be created (one per computer) on the Windows workstations. This fact may affect how you should choose your passwords. The student accounts have the port number of there queue manager encoded a the end of the user name:

```
useradd INSTRUCTOR -g mqm -n -p <password>
useradd STUDENT1421 -g mqm -n -p <password>
useradd STUDENT1422 -g mqm -n -p <password>
useradd STUDENT1423 -g mqm -n -p <password>
useradd STUDENT1424 -g mqm -n -p <password>
...
```

#### 6. Switch to the INSTRUCTOR sign-on:

```
su - INSTRUCTOR
```

#### 7. Create class queue managers:

- One queue manager should be created for each class account and named the same as that account:

```
crtmqm -q INSTRUCTOR
crtmqm -q STUDENT1421
crtmqm -q STUDENT1422
crtmqm -q STUDENT1423
crtmqm -q STUDENT1424
...
```

8. Start the queue managers:

- Each queue manager created above should be started:

```
strmqm -q INSTRUCTOR
strmqm -q STUDENT1421
strmqm -q STUDENT1422
strmqm -q STUDENT1423
strmqm -q STUDENT1424
...
```

9. Start the listeners for each queue manager:

```
runmqclsr -t tcp -m INSTRUCTOR -p 1415 &
runmqclsr -t tcp -m STUDENT1421 -p 1421 &
runmqclsr -t tcp -m STUDENT1422 -p 1422 &
runmqclsr -t tcp -m STUDENT1423 -p 1423 &
runmqclst -t tcp -m STUDENT1524 -p 1424 &
...
```

Note: Each other the ports you use above need to be opened at any firewall between the Linux server and the Windows workstations.

10. Create a server connection channel for each queue manager:

- For each queue manager, perform the following tasks

a) Start a command processor

```
runmqsc <queue manager name>
```

For example:

```
runmqsc INSTRUCTOR
```

b) Enter command to create server connection channel (on 1 line)

```
define channel(<queue manager name>)
chltype(srvconn) trptype(tcp)
```

For example:

```
define channel (INSTRUCTOR) chltype (srvconn)
trptyp (tcp)
```

c) Create a test queue

```
define qlocal (TEST)
```

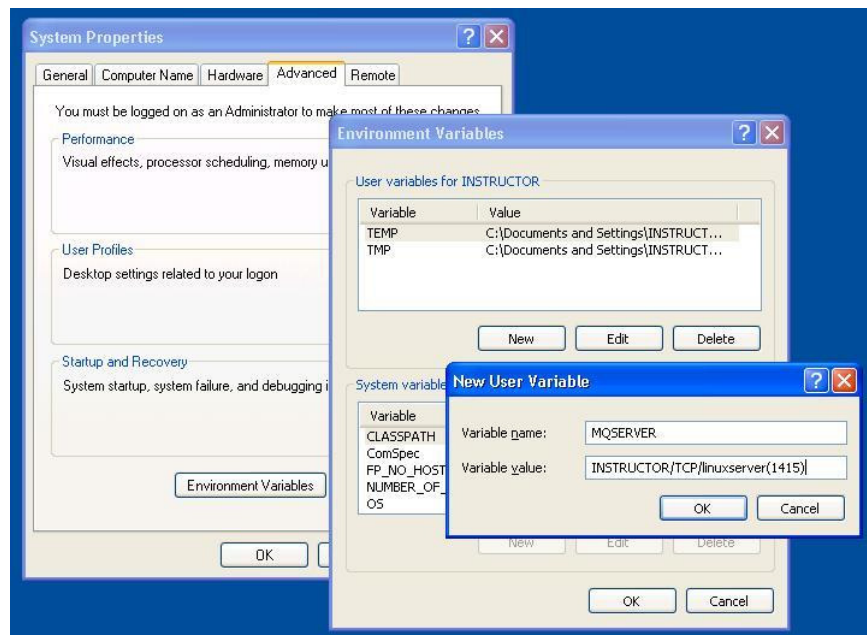
d) Exit the MQSC command processor

```
end
```

## Setting up the Windows workstations

- 1) Copy the Supplemental CD to C:\WMQJMS
- 2) If an ssh client is not installed on the workstation, install ssh client located on the Supplemental CD:
  - Run C:\WMQJMS\putty-0.58-installer.exe.
- 3) Run you ssh client now to test connection to your linux server
- 4) Install the WMQ 6.0 Client for Windows:
  - Signon to the Windows workstation with and administrative account
  - Run C:\WMQJMS\MQ Client\Setup.exe
    - a) At the first dialog box make sure English is selected and click OK
    - b) At the next dialog box Click Next
    - c) Accept the terms of the license and click Next.
    - d) Select a Typical install and click Next.
    - e) Click Install
    - f) Click Finish
- 5) Logoff the administrative account you have been using on the Windows workstation and sign on to the user account you just created.
- 6) Install the rfutilc.exe
  - Copy C:\WMQJMS\rfutilc.exe to the user's desktop
- 7) Set the MQSERVER environmental variable
  - Open the Control Panel
  - Double-Click on the System icon
  - Select the Advanced tab

- Click on the Environmental Variables button
- Click on the New button in the User Variables control group
- Create a variable named MQSERVER. The value of this variable will be:
  - userid for the student assigned to this workstation
  - a slash (/)
  - tcp
  - another slash
  - the hostname of the linux server
  - an open parenthesis
  - a 4 digit port number
  - a close parenthesis
- See below:



## 6. Workstation System Test

- Double-click on the desktop icon for 'rfutile'
- Make sure you can connect to the students queue manager
- Place a message in the queue 'test'
- Read the message back