



IBM Software Group

# Installing WebSphere MQ 7.5 to coexist with MQ 7.0.1 and MQ 7.1 in UNIX and Windows

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WebSphere MQ Unix® and Windows Level 2 Support

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# Agenda

- Introduction to MQ 7.1 Multi-version
- Previous WSTEs that provide in depth information
- Installing MQ for first time using 7.1/7.5
- Single-Stage upgrade to 7.1/7.5 - no co-existing
  - ▶ Need to explicitly setup Primary installation
- Coexisting multiple versions
  - ▶ Using setmqenv to setup environment variables



## Highlights of Multi-Version

- Starting with MQ 7.1 it is possible to install multiple versions of MQ on a single system
- MQ 7.1 or 7.5 can be installed on a system which is already running MQ 7.0.1.6 or later
  - ▶ (For short, saying MQ 7.5 to mean also 7.1)
- Multiple copies of MQ 7.5 can be installed on:
  - ▶ AIX, HP-UX, Linux, Solaris and Windows
  - ▶ Multi-version is not available on IBM i or z/OS
- New commands for working with multiple installs



## Previous WSTE on this topic (1)

- WebSphere MQ V7.1 Multi-Version - First Steps (PART 1)
- <http://www.ibm.com/support/docview.wss?uid=swg27024276>
- Discusses the benefits of multi-version installation, packaging changes, platform-specific installation details, and both new and updated commands for working with multiple versions of WebSphere MQ.
- Presenters: Barry Robbins, Justin Fries & Rich Montjoy

## Previous WSTE on this topic (2)

- WebSphere MQ V7.1 Multi-Version - Environment Considerations and Management (PART 2)
- <http://www.ibm.com/support/docview.wss?uid=swg27024340>
- Discusses strategies for applying maintenance and patches, for migrating queue managers between versions, and for managing applications with WebSphere MQ.
- It also covers considerations for multi-instance queue managers, and diagnostics.



## MQ 7.1/7.5 are not fix packs on top of 7.0

- MQ 7.1 is NOT a fix pack for 7.0:
  - ▶ 7.1 is a different version
- Similar comments apply to 7.5:
  - 7.5 is not a fix pack for 7.0 nor 7.1
- There are NO delta packages that will just add the new function added in MQ 7.1 and 7.5 to an MQ 7.0 installation.



## Downloading MQ queue manager 7.1

- For the queue manager, the full code (not just a delta Fix Pack) can be downloaded from IBM Passport Advantage.
- It is faster and easier to search for Part Numbers and they are listed in the following technotes.
- <http://www.ibm.com/support/docview.wss?uid=swg24034214>
- Downloading WebSphere MQ Version 7.1.0.2 from the Passport Advantage Web site
- Base 7.1.0.2 (It is 7.1.0.0 plus 7.1.0.1 and 7.1.0.2)

# Downloading MQ queue manager 7.5

- <http://www.ibm.com/support/docview.wss?uid=swg24032734>
- Downloading WebSphere MQ Version 7.5 from the Passport Advantage Web site
- Base 7.5.0.0





## Downloading MQ Client 7.1 and 7.5

- If you just want to install the MQ Client by itself (most up to date: base + fix packs), you can download from IBM Fix Central:
- <http://www.ibm.com/support/docview.wss?uid=swg24031412>
- MQC71: WebSphere MQ V7.1 Clients
- <http://www.ibm.com/support/docview.wss?uid=swg24032744>
- MQC75: WebSphere MQ V7.5 Clients



## Downloading MQ Explorer 7.1 and 7.5

- You can just install the MQ Explorer by itself, on Windows or Linux Intel.
- <http://www.ibm.com/support/docview.wss?uid=swg24021041>
- MS0T: WebSphere MQ Explorer
- This SupportPac provides the WebSphere MQ Explorer (and the required level of the WebSphere Eclipse Platform, if necessary).
- You can select which set of files to download:
  - ▶ for MQ 7.0.1, MQ 7.1 and MQ 7.5.



# Installing MQ for first time using 7.5

- This is the simplest scenario:
- The desired host does NOT have MQ installed.
- This is going to be the first installation of MQ in the host.
- Same process as installing MQ V6 and 7.0
  
- CAVEAT!
- You must use setmqinst to setup this installation as the PRIMARY installation
  - ▶ Even if there are no other installations



# Symbolic links are no longer setup

- Starting with MQ 7.1, the installer does NOT create symbolic links in /usr/bin and other system directories for the MQ commands under /opt/mqm/bin or /usr/mqm/bin
- If you login as the MQ administrator and try to run MQ commands such as dspmq or crtmqm you will get errors like this one:
  - ▶ dspmq: command not found
- This is the expected behavior!



# Notes: Common pitfall after installation (1)

## notes

- You have installed MQ 7.1 or 7.5.
- You login as an MQ Administrator and you try to run an MQ command, such as:
  - **dspmq**
- You expect the list of queue managers, but instead, you get an error message!
- If 'dspmq' is not a typo you can run the following command to lookup the package that contains the binary:
  - `command-not-found dspmq`
  - `-bash: dspmq: command not found`
- You try another command:
  - **dspmqver**
- And instead of getting the version of MQ, you get another error message:
  - `AMQ8594: WebSphere MQ commands are no longer available in /usr/bin.`
- In order to run MQ commands you must manage your path configuration as described in the WebSphere MQ product documentation. In particular review the topic on "Choosing a primary installation".

# Use setmqinst to set Primary install (1)

- Because you may decide later on to install another version of MQ 7.1 or 7.5 in the same host, the installer code cannot make the automatic decision of making a particular installation the PRIMARY one.
- You need to manually designate an installation to be the Primary, even if there is ONLY one installation.



## Use setmqinst to set Primary install (2)

- By designating a particular installation to be the primary one, then the symbolic links in /usr/bin will be created to the proper MQ executables.
- For this simplest scenario, do as user “root”:
- UNIX: `/opt/mqm/bin/setmqinst -i -p /opt/mqm`
- AIX: `/usr/mqm/bin/setmqinst -i -p /usr/mqm`
- Flags: `-i` sets this installation as primary
- `-p` the path of the installation to modify.



# Notes: Common pitfall after installation (2)

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- Let's illustrate some symbolic links that are automatically created when installing MQ V6 or 7.0.x in a UNIX host: `/opt/mqm` (This is the location of the MQ code)
- There are many symbolic links in `/usr/bin` for most of the MQ commands, such as:
  - `lrwxrwxrwx 1 root root /usr/bin/crtmqm -> /opt/mqm/bin/crtmqm`
  - `lrwxrwxrwx 1 root root /usr/bin/dspmq -> /opt/mqm/bin/dspmq`
- If you uninstall MQ V6 or V7.0, those symbolic links are deleted.
- When installing MQ 7.1, the above symbolic links are NOT created.
- After you run as root the MQ 7.1 “setmqinst” command, then the corresponding symbolic links will be created:
  - `lrwxrwxrwx 1 root root /usr/bin/crtmqm -> /opt/mqm/bin/crtmqm`
  - `lrwxrwxrwx 1 root root /usr/bin/dspmq -> /opt/mqm/bin/dspmq`
- For illustration, if MQ 7.5 is installed in `/usr/mqm75` and it is made primary, then the symbolic links would be:
  - `lrwxrwxrwx 1 root root /usr/bin/crtmqm -> /opt/mqm75/bin/crtmqm`
  - `lrwxrwxrwx 1 root root /usr/bin/dspmq -> /opt/mqm75/bin/dspmq`



# MQ Admin cannot remotely connect (1)

- Due to the new feature in 7.1 called ...
- **channel authentication records**
- ... the DEFAULT behavior for a new queue manager is to NOT allow the remote connection by an MQ administrator
- They will get:
  - ▶ RC 2035 MQRC\_NOT\_AUTHORIZED
- Queue managers created prior to 7.1 have the old behavior (MQ admin can remotely connect)



## MQ Admin cannot remotely connect (2)

- For more details on how to alter the queue manager to allow the remote connections by MQ administrators, consult the technote:
- <http://www.ibm.com/support/docview.wss?uid=swg21577137>
- WMQ 7.1 or 7.5 queue manager - RC 2035  
MQRC\_NOT\_AUTHORIZED when using client connection as an MQ Administrator



# Notes: Channel Authentication Records

## notes

- From the “Answer” section of the technote mentioned in the previous slide:
- 1) If this is a production queue manager, then you could stop trying to use a userid that is an MQ Administrator and instead, use a non-admin userid.
- 2) If you really want the MQ Administrator to be able to access the queue manager via client channels, you could do one of the following actions.
  - a) You can add the following two Channel Authentication Records:
    - `$ runmqsc QmgrName`
    - `SET CHLAUTH(*) TYPE(BLOCKUSER) USERLIST('nobody','*MQADMIN')`
    - `SET CHLAUTH(SYSTEM.ADMIN.*) TYPE(BLOCKUSER) USERLIST('nobody')`
  - b) You can disable the Channel Authentication Records feature:
    - `$ runmqsc QmgrName`
    - `ALTER QMGR CHLAUTH(DISABLED)`
    - WARNING: Disabling this new feature is not recommended for MQ 7.1 / 7.5 production queue managers due to security implications.

# Single-Stage upgrade, no co-existing

- This scenario is called “Single-Stage Upgrade” or “Single-Stage Migration”
- You have MQ 6 or 7.0 and you want to replace it with MQ 7.1 or 7.5.
  - ▶ That is, you are NOT going to exploit the multi-version capability.
- For more details, consult the techdoc:
- <http://www.ibm.com/support/docview.wss?uid=swg27036692>
- Upgrading WebSphere MQ 7.0.1 to MQ 7.5 in Linux



## Single-Stage upgrade prior to MQ 7.1

- Before MQ 7.1, upgrading was very linear
- 1. Stop all queue managers and their applications
- 2. Uninstall the old WebSphere MQ version
- 3. Install the new WebSphere MQ version
- 4. Start the queue managers to migrate them:
  - ▶ The first time the “strmqm” was used on a queue manager, the irreversible process to upgrade the queue manager took place.



## Single-Stage upgrade after MQ 7.1

- After MQ 7.1, Single-Stage upgrades require more:
- 1. Stop all queue managers and their applications
- 2. Uninstall the old WebSphere MQ version
- 3. Install the new WebSphere MQ version
- 4. **Specify new installation to be the Primary**
- 5. Start the queue managers to migrate them.
- 6. **Decide if you want MQ administrators to remotely connect to each queue manager**
  - ▶ See mentioned technote 1577137 (slide 18)



# Installation Paths for multiple installs

- The MQ installation path for binaries is no longer fixed on AIX, UNIX® and Linux systems
- MQ 7.0: the only choice is:
  - /usr/mqm in AIX
  - /opt/mqm in Linux, HP-UX, Solaris
- MQ 7.1 example: /opt/mqm71
- MQ 7.5 example: /opt/mqm75
- MQ in Windows had already the ability to be installed in a user-specified location.



# Data Paths

- The data path is shared between all installations
- AIX, UNIX and Linux:
  - ▶ /var/mqm
- Windows:
  - ▶ Chosen by the first installation,
  - ▶ Then fixed for all subsequent installations





## Details on the installations

- Details about installations are held in a central location:
  - ▶ UNIX and Linux: `/etc/opt/mqm/mqinst.ini`
  - ▶ Windows: The Registry
- The command “`dspmqinst`” lists the details.



# Installation names

- Starting with MQ 7.1, every installation has a name
- On AIX, UNIX and Linux systems, the first MQ version 7.1 installation is automatically given an installation name of **Installation1**.
- On Windows systems, you can choose the installation name during the installation process.
- The installation name **Installation0** is reserved for an installation of MQ version 7.0.1.6+



# Adding another installation in Windows

- This techdoc shows all the steps.
- <http://www.ibm.com/support/docview.wss?uid=swg27036780>
- Installing WebSphere MQ 7.5 to coexist with MQ 7.0.1 and MQ 7.1 in Windows
- After running the test scenario, the directories are:
  - MQ 7.0.1.9 installed in:
    - C:\Program Files\IBM\WebSphere MQ
  - MQ 7.1.0.2 installed in:
    - C:\Program Files\IBM\WebSphere MQ\_1
  - MQ 7.5.0.0 installed in:
    - C:\Program Files\IBM\WebSphere MQ\_2



## dspmqinst shows installed versions (1)

- New MQ command **dspmqinst** displays the different versions installed in the system
- In test scenario the output shows for each version:
  - **InstName: Installation0**
  - **InstDesc: IBM WebSphere MQ Installation**
  - **Identifier: 0**
  - **InstPath: C:\Program Files\IBM\WebSphere MQ**
  - **Version: 7.0.1.9**
  - **Primary: Yes**
  - **State: Available**



## dspmqinst shows installed versions (2)

- In this test scenario, these are the values for the Installation name (InstName)
- "Installation0" refers to MQ 7.0.1.9
- "Installation1" refers to MQ 7.1.0.2
- "Installation2" refers to MQ 7.5.0.0



## Default is to use Primary (MQ 7.0)

- In this scenario, if you open a Windows command prompt and enter “dspmqver”, you will see:
  - Name: WebSphere MQ
  - Version: 7.0.1.9
- Notice that it is the older version (7.0.1.9), which is located in the primary installation.
- Question: what should be done to use the dspmqver from another installation?



## Use setmqenv to specify installation (1)

- Answer: You need to run the new **"setmqenv"** command and specify the proper installation.
- 
- In this example MQ 7.5 is in Installation2.
- Attempt 1: INCORRECT (full path not provided)
- Notice that setmqenv it is not in the PATH, because it did not exist in MQ 7.0 and the default PATH points to MQ 7.0.
- C:\> setmqenv -n Installation2
- 'setmqenv' is not recognized as an internal or external command, operable program or batch file.



## Use setmqenv to specify installation (2)

- Attempt 2: CORRECT (full path for MQ 7.5)
- "C:\Program Files\IBM\WebSphere MQ\_2\bin\setmqenv" -n Installation2
- Now let's try again to display the version (trimming output)
- C:\> dspmqver
- Name: WebSphere MQ
- Version: 7.5.0.0
- ... Platform: WebSphere MQ for Windows
- Mode: 32-bit
- O/S: Windows XP, Build 2600: SP3
- InstName: Installation2
- InstPath: C:\Program Files\IBM\WebSphere MQ\_2
- ...





# Notes: creating customized batch files

## notes

- You can create a batch file that will run the setmqenv command with the specified syntax. Ensure to have this batch file in a directory in your PATH.
- For example, the batch file **set-mq-75.bat** can be created with the contents:
  - ===== begin batch file
  - REM Setup the environment to run MQ 7.5
  - CALL "C:\Program Files\IBM\WebSphere MQ\_2\bin\setmqenv" -n Installation2
  - REM Adding Samples to the path
  - SET PATH=%PATH%;%MQ\_FILE\_PATH%\tools\c\Samples\Bin
  - ===== end batch file
- Similarly for MQ 7.1: **set-mq-71.bat**
  - REM Setup the environment to run MQ 7.1
  - CALL "C:\Program Files\IBM\WebSphere MQ\_2\bin\setmqenv" -n Installation1
  - SET PATH=%PATH%;%MQ\_FILE\_PATH%\tools\c\Samples\Bin
- Similarly for MQ 7.0: **set-mq-70.bat**
  - REM Setup the environment to run MQ 7.0
  - CALL "C:\Program Files\IBM\WebSphere MQ\_2\bin\setmqenv" -n Installation0
  - SET PATH=%PATH%;%MQ\_FILE\_PATH%\tools\c\Samples\Bin

## Cannot use 7.5 admin cmds with 7.1 qmgrs

- You cannot use MQ 7.5 administrative commands to run an MQ 7.0 or 7.1 queue manager
- ... and vice versa
- For example, setting env to 7.5 and then trying to start a queue manager that runs under 7.0 will result in a runtime error:
- C:> strmqm QM\_MIG
- AMQ5691: Queue manager 'QM\_MIG' is associated with a different installation ('Installation0').



## Upgrading a queue manager to 7.5 (a)

- Previous slide showed that we cannot use the 7.5 `strmqm` command to upgrade a queue manager that was created in 7.0
- Question: What is the next step to upgrade the queue manager?
- Answer: When there are multiple installations, it is necessary to explicitly associate a queue manager to the desired MQ installation by using:
  - **`setmqm -m QMGR -n InstallationX`**



## Upgrading a queue manager to 7.5 (b)

- For example, QM\_MIG was created at MQ 7.0.
- For this test scenario, to associate it with 7.5, we need to issue:
  - **setmqm -m QM\_MIG -n Installation2**
- Is there a command that shows the association? Yes.
- Use **dspmq** to show the new associated installation for this queue manager:
  - C:\> dspmq -o installation -m QM\_MIG
  - QMNAME(QM\_MIG) INSTNAME(Installation2)
  - INSTPATH(C:\Program Files\IBM\WebSphere MQ\_2) INSTVER(7.5.0.0)

## Upgrading a queue manager to 7.5 (c)

- Start the queue manager. Because this is the first time that the strmqm 7.5 is being issued on a queue manager that was used with an older release (7.0.1.9), then strmqm will do a migration:
- **C:\> strmqm QM\_MIG**
  - WebSphere MQ queue manager 'QM\_MIG' starting.
  - The queue manager is associated with installation 'Installation2'.
  - 5 log records accessed on queue manager 'QM\_MIG' during the log replay phase.
  - Log replay for queue manager 'QM\_MIG' complete.
  - Transaction manager state recovered for queue manager 'QM\_MIG'.
  - **Migrating objects for queue manager 'QM\_MIG'.**
  - Default objects statistics: 9 created. 0 replaced. 0 failed.
  - **WebSphere MQ queue manager 'QM\_MIG' started using V7.5.0.0.**

# Notes: New objects, queues, attributes

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- The following technotes provide specific information on what new objects, SYSTEM queues and objects were introduced in 7.1 and in 7.5:
- <http://www.ibm.com/support/docview.wss?uid=swg21620936>
- New attributes for objects in WebSphere MQ 7.1 and 7.5
- <http://www.ibm.com/support/docview.wss?uid=swg21608033>
- New SYSTEM queues added in WebSphere MQ 7.1 and 7.5
- <http://www.ibm.com/support/docview.wss?rs=171&uid=swg21578742>
- New WebSphere MQ 7.1 and 7.5 attributes in DISPLAY QMGR for new or migrated queue managers
- The following web link has a list of the MQ 7.5 processes and their names:
- [http://pic.dhe.ibm.com/infocenter/wmqv7/v7r5/topic/com.ibm.mq.doc/fa22310\\_.htm](http://pic.dhe.ibm.com/infocenter/wmqv7/v7r5/topic/com.ibm.mq.doc/fa22310_.htm)
- WebSphere MQ > Administering > Administering local WebSphere MQ objects > Stopping queue managers manually

# Notes: MQ Windows Services

## notes

- In this test scenario there are 3 entries for the MQ Windows Service
- Start > Control Panel > Administrative Tools > Services
- MQ (7.0.x)
  - Name: IBM MQSeries
  - Description: Provides startup and maintenance services for WebSphere MQ
  - Status: Started      Startup: Automatic      Log On As: Local System
- MQ (7.1)
  - Name: IBM WebSphere MQ (Installation1)
  - Description: Provides startup and maintenance services for WebSphere MQ installation 'Installation1'
  - Status: Started      Startup: Automatic      Log On As: .\MUSR\_MQADMIN1
- MQ (7.5)
  - Name: IBM WebSphere MQ (Installation2)
  - Description: Provides startup and maintenance services for WebSphere MQ installation 'Installation2'
  - Status: Started      Startup: Automatic      Log On As: .\MUSR\_MQADMIN1

# Adding another install to existing one (Linux)

- <http://www.ibm.com/support/docview.wss?uid=swg27036779>
- Installing WebSphere MQ 7.5 to coexist with MQ 7.0.1 and MQ 7.1 in Linux
- Only Chapter 1 (actual install) is specific to Linux.
- Other chapters apply to AIX and UNIX too.
- 2: Need to run setmqenv to use MQ 7.5 commands
- 3: Creating a queue manager under 7.5
- 4: Remote access
- 5: Using MQ Explorer 7.5
- 6: Migrating an MQ 7.0 queue manager to MQ 7.5





# Each platform has specific install procedure

- Due to the differences in the native installers in AIX, HP-UX, Solaris and Linux, each platform has its own procedure for installing MQ on a non-default location.
- For Linux, see Chapter 1 of techdoc 7036779 (slide 40)
- For the rest, see technote: 7024276 (slide 4)
- WebSphere MQ V7.1 Multi-Version - First Steps
- AIX: User Specified Installation Location (USIL)
- Pages 13-15
- HP-UX: Pages 16-18
- Solaris: Page 20 – using **crtmqpkg**
- NOTE: To install fix packs, use **crtmqfp** in Linux/Solaris

## dspmqinst shows installed versions

- In this test scenario for Linux, after the installation of all the versions of MQ, these are the values for the Installation name (InstName)
- "Installation0" refers to 7.0.1.9 = /opt/mqm
- "Installation1" refers to 7.1.0.2 = /opt/mqm71
- "Installation2" refers to 7.5.0.0 = /opt/mqm75



# Notes: Example of dspmqinst

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Output of dspmqinst in a system that has both MQ 7.0 (in /usr/mqm) and MQ 7.1 (in /usr/mqm71)

Notice that Installation0 is for the first version installed in the system, in this case it is MQ 7.0.

- **\$ /opt/mqm71/dspmqinst**
- InstName: Installation0
- InstDesc: IBM WebSphere MQ Installation
- Identifier: 0
- InstPath: /opt/mqm
- Version: 7.0.1.9
- Primary: Yes
- State: Available
  
- InstName: Installation1
- InstDesc:
- Identifier: 1
- InstPath: /opt/mqm71
- Version: 7.1.0.2
- Primary: No
- State: Available

## Setting the desired MQ environment (a)

- You can add the setmqenv in your profile
- Or you can execute it from the command line.
- You will need to specify the full path of the command and you need to “source” it (to run “in-line”) by specifying a leading . (dot) and a blank:
  - `. /opt/mqm75/bin/setmqenv -n Installation2`
  - `| |`
  - `| +--- blank`
  - `+--- dot`

# Notes: creating customized shell scripts

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- Installing WebSphere MQ 7.5 to coexist with MQ 7.0.1 and MQ 7.1 in Linux
- IBM Techdoc: 7036779 (slide 40)
- .
- Create a script \$HOME/bin/set-mq-75.ksh:
- Notice that the installation name is: installation2
- ===== begin script
- `#!/usr/bin/ksh`
- `# Name: set-mq-75.ksh`
- `# Purpose: to setup the environment to run MQ 7.5`
- `. /opt/mqm75/bin/setmqenv -n Installation2`
- `# Additional MQ 7 directories for the PATH`
- `export PATH=$PATH:$MQ_INSTALLATION_PATH/bin:$MQ_INSTALLATION_PATH/java/bin:`  
`$MQ_INSTALLATION_PATH/samp/bin:$MQ_INSTALLATION_PATH/samp/jms/samples:`
- `# Add local directory for running Java/JMS programs`
- `export CLASSPATH=$CLASSPATH:.`
- `# end`
- ===== end of script
- NOTE: You will need to invoke the script with the leading dot!
- `$ . set-mq-75.ksh`

## Common pitfalls when using setmqenv (1)

- Attempt 1: INCORRECT (the full path was not provided)
- Notice that setmqenv does not have a symbolic link in /usr/bin and at this moment it is not in our PATH.
- \$ setmqenv -n Installation2
- If 'setmqenv' is not a typo you can run the following command to lookup the package that contains the binary:
- command-not-found setmqenv
- -bash: setmqenv: command not found

## Common pitfalls when using setmqenv (2)

- Attempt 2: INCORRECT (the leading dot and space were not used)
- From the error message in Attempt 1, we specify the full path for setmqenv:
- `$ /opt/mqm75/bin/setmqenv -n Installation2`
- AMQ8595: The setmqenv command was not preceded by the source command.
- The above is not an error, just an info message.
- What is the “source” command? See next slides.

## Common pitfalls when using setmqenv (3)

- In our scenario, 7.0.1.9 is the Primary install.
- `$ dspmqver => Version: 7.0.1.9`
- Then we run `setmqenv` without 'sourcing' it:
- `$ /opt/mqm75/bin/setmqenv -n Installation2`
- AMQ8595: The `setmqenv` command was ...
- If we run `dspmqver` again, we STILL get:
- `$ dspmqver => Version: 7.0.1.9`
- It seems that nothing happened because we still see the old version! What is going on?

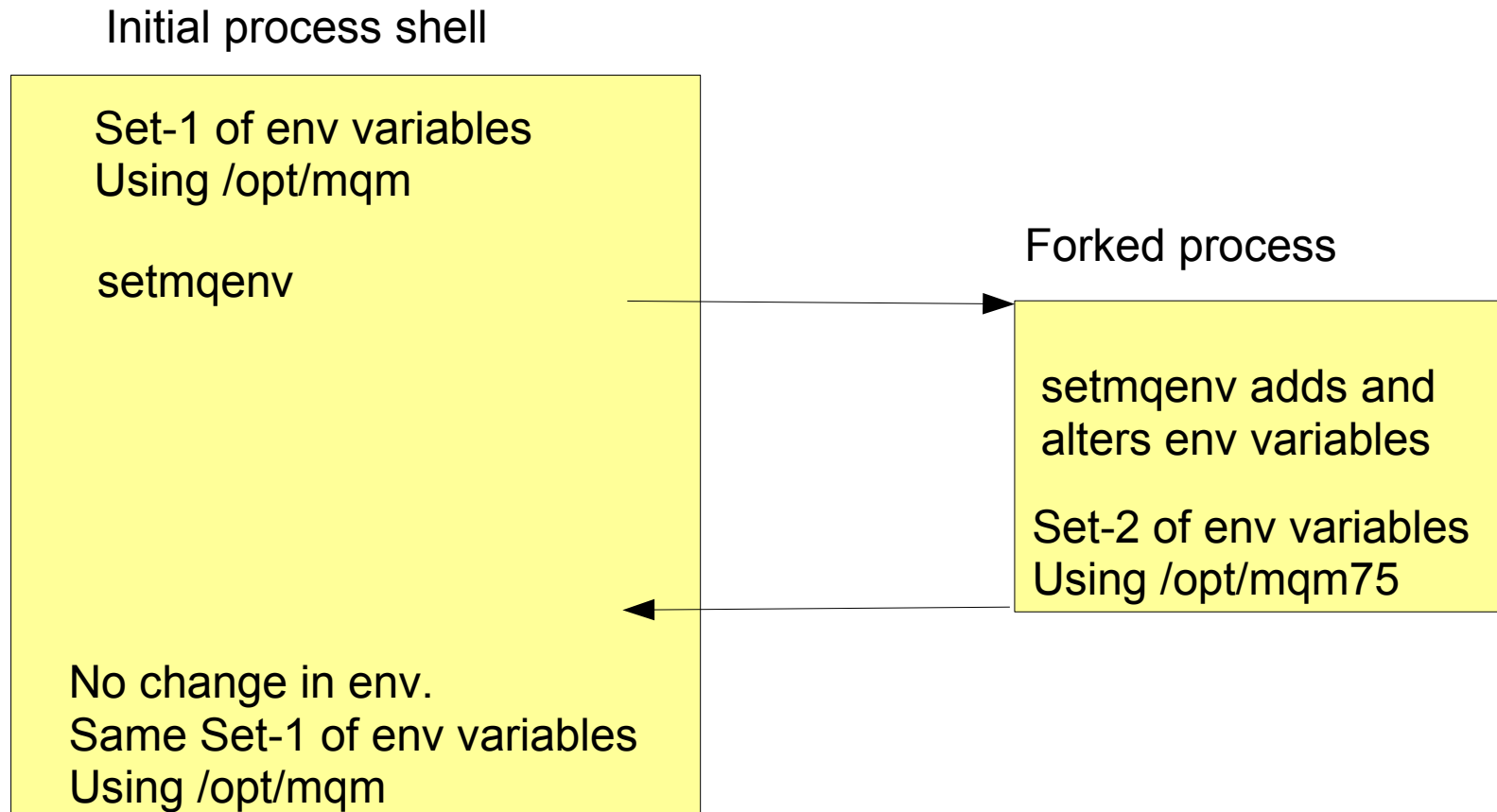




## Common pitfalls when using setmqenv (4)

- You will need to specify the full path of the command and you need to “source” it (to run “in-line”) by specifying a leading . (dot) and a blank:
  - `. /opt/mqm75/bin/setmqenv -n Installation2`
  - `| |`
  - `| +--- blank`
  - `+--- dot`
- Note, in Linux you can also use the command “source”:
  - `source /opt/mqm75/bin/setmqenv -n Installation2`
- If we run dspmqver again, we will get the new version:
  - `$ dspmqver => Version: 7.5.0.0`

# Environment is NOT set when not 'sourcing'



# Need to source (in-line) setmqenv

Initial process shell

Set-1 of env variables  
Using /opt/mqm

`. setmqenv`

In-line execution

setmqenv adds and  
alters env variables

Set-2 of env variables  
Using /opt/mqm75

Using Set-2 of env variables  
Using /opt/mqm75

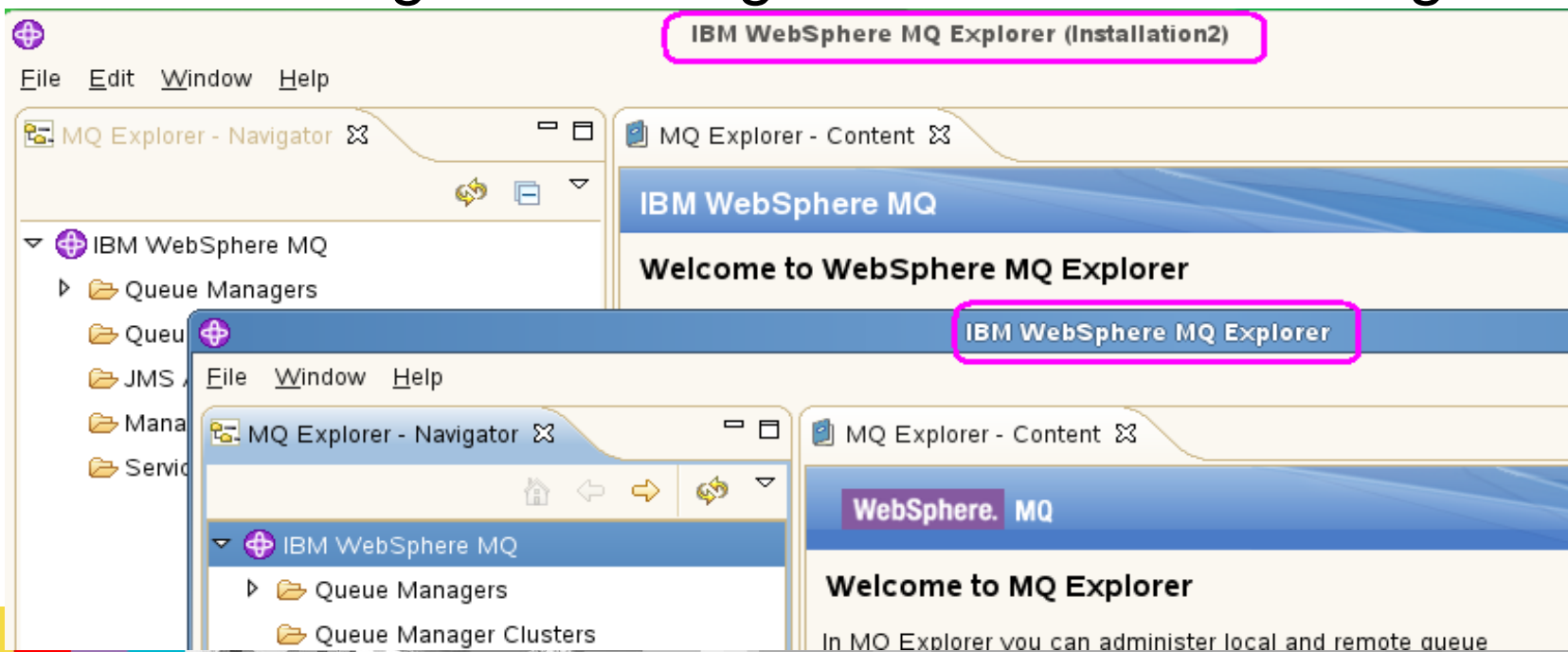
## Setting the desired MQ environment (b)

- You can use “wmqprofile”:
- <http://www.ibm.com/support/docview.wss?uid=swg21587504>
- MQ Profile for UNIX & Linux systems:  
wmqprofile
- It is an optional alternative to the setmqenv command shipped with MQ V7.5 on UNIX. It provides several conveniences for users and for systems administrators over the standard setmqenv command.



# You can use multiple MQ Explorers

- In Windows and in Linux Intel, you can use multiple MQ Explorers at the same time
- Showing 7.0 in foreground and 7.5 in backgrnd



# Additional WebSphere Product Resources

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# Questions and Answers

