

What is the purpose of the IBM MQ file "amqprobe.amq"?
(strmqm errors AMQ6286E, AMQ6245E, AMQ7001E)

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+++ Question:

What is the purpose of the IBM MQ file "amqprobe.amq"?

When starting a queue manager, you see an error that looks like this:

AMQ6286E: The filesystem at location '/MQHA/qmgrs/QM92TLS/amqprobe.amq' is read-only.

AMQ7001E: The location specified for the queue manager is not valid.

Or like this:

AMQ6245E: Error executing system call 'open' on file
'/MQHA/qmgrs/QM92TLS/amqprobe.amq' error '28'.

AMQ7001E: The location specified for the queue manager is not valid.

If you try to list this file, it does not exist:

```
$ cd /MQHA/qmgrs/QM92TLS/  
$ ls -l amqprobe.amq  
amqprobe.amq: No such file or directory
```

+++ Answer:

As the name indicates it is a "probe file".
This file is transient/ephemeral and does not contain MQ data.

It is created and deleted by the queue manager during the startup.
During the startup, queue manager tries to test if it can create/write/delete files in the data directory, and amqprobe.amq is handled solely for the purpose of testing.

The errors AMQ6286E or AMQ6245E are issued when the file system for the MQ data does not have the proper file permissions for the user "mqm" and group "mqm".

They are also issued if the file permissions are fine, but if the file system is full or has Input/Output problems which prevent the queue manager from creating the amqprobe.amq file.

By the way, the reason code 28 from the Operating System is:

```
ENOSPC 28 /* No space left on device */
```

This error is typically found when the underlying file system for the MQ data is stored in a mounted file system, such as NFS V4.

The presence of these errors does not indicate a problem with the MQ code, but with the underlying File System.

ACTION:

You need to review the configuration of the File System and if needed, to contact your Help Desk for your File System, in order to ensure that the user “mqm” and group “mqm” have full file/directory permissions to create, read, write, and delete files.

+ When taking the trace of the startup of the queue manager, this file is shown.

```
| Program Name    :- strmqm
11:23:42.625204 24261.1      :  --{ zutEnsureDirectory
11:23:42.625207 24261.1      :      Directory(/var/mqm/qmgrs/QM92TLS) UID/GID(501/501)
Permissions(2775) Flags(0x00000043)
11:23:42.625213 24261.1      :  ---{ zutEnsureFile
11:23:42.625216 24261.1      :      Filename(/var/mqm/qmgrs/QM92TLS/amqprobe.amq)
UID/GID(501/501) Permissions(660) Flags(0x00000043) ccsid(0)
11:23:42.625221 24261.1      :  ----{ xcsCreateFile
11:23:42.625223 24261.1      :      File: '/var/mqm/qmgrs/QM92TLS/amqprobe.amq', openopts: 524353,
flags: 0, permissions: 0660, ccsid: 0, ffstOnError: TRUE
11:23:42.625274 24261.1      :      Data: 0x00080041 0x000001b0 0x00000002 0x00000006
11:23:42.625278 24261.1      :      fd: 6, error: 0
11:23:42.625279 24261.1      :  ----} xcsCreateFile rc=OK FunctionTime=58
11:23:42.625287 24261.1      :      Data: 0x00000006 0x00000000
11:23:42.625321 24261.1      :  ---} zutEnsureFile rc=OK FunctionTime=108
```

Note: In the Linux server for this test, notice the userid and groupid:

```
mqm@aztlan1.fyre.ibm.com: /var/mqm/qmgrs/QM92TLS
$ id
uid=501(mqm) gid=501(mqm) groups=501(mqm)
```

+++ end