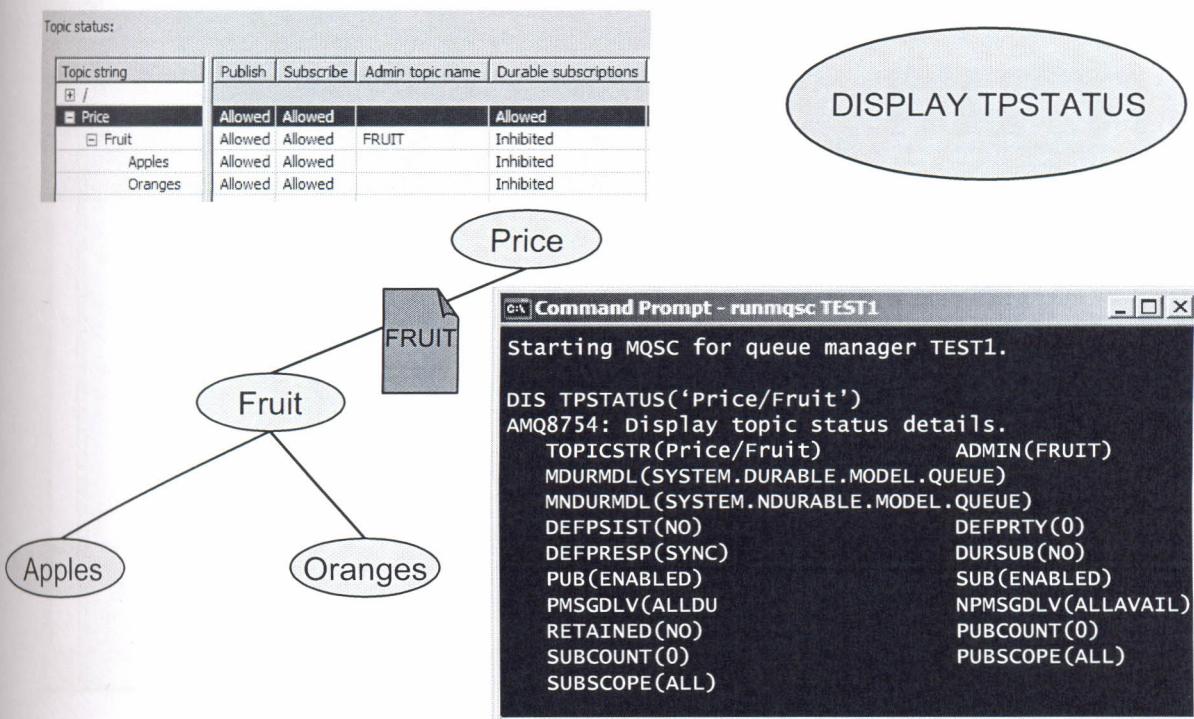


Resolving ASPARENT



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Figure 19-24. Resolving ASPARENT

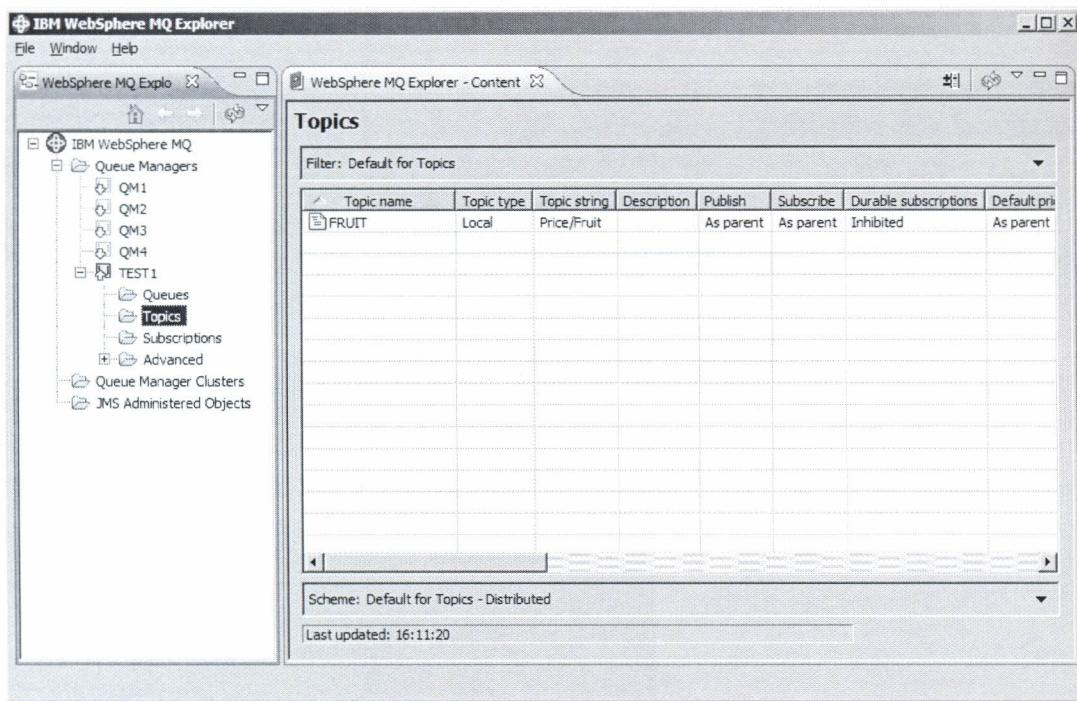
WM203 / VM2032.0

Notes:

The DISPLAY TPSTATUS (DIS TPS) command displays the status of one or more topic nodes in a topic tree, as specified by the parameters supplied, and resolves the ASPARENT attribute to the inherited value.

The DISPLAY TPSTATUS command requires a topic string value to determine which topic nodes the command returns.

Using MQ Explorer for topic status (1 of 5)



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Figure 19-25. Using MQ Explorer for topic status (1 of 5)

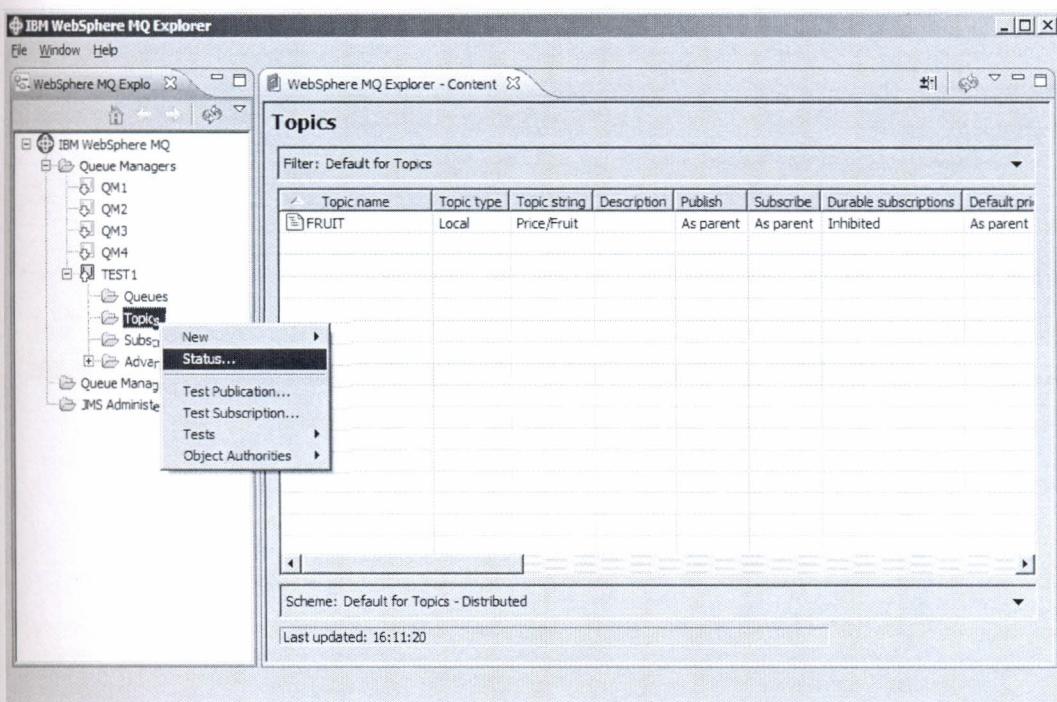
WM203 / VM2032.0

Notes:

In order to see what the real values being used for the attributes that have the value ASPARENT, you can use the DISPLAY TPSTATUS command.

This command takes a topic string, not a topic object as its input. This means you can find the actual values that are going to be used at any point in the topic tree – not just at those points which have defined TOPIC objects.

Using MQ Explorer for topic status (2 of 5)



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Figure 19-26. Using MQ Explorer for topic status (2 of 5)

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Notes:

Using MQ Explorer for topic status (3 of 5)

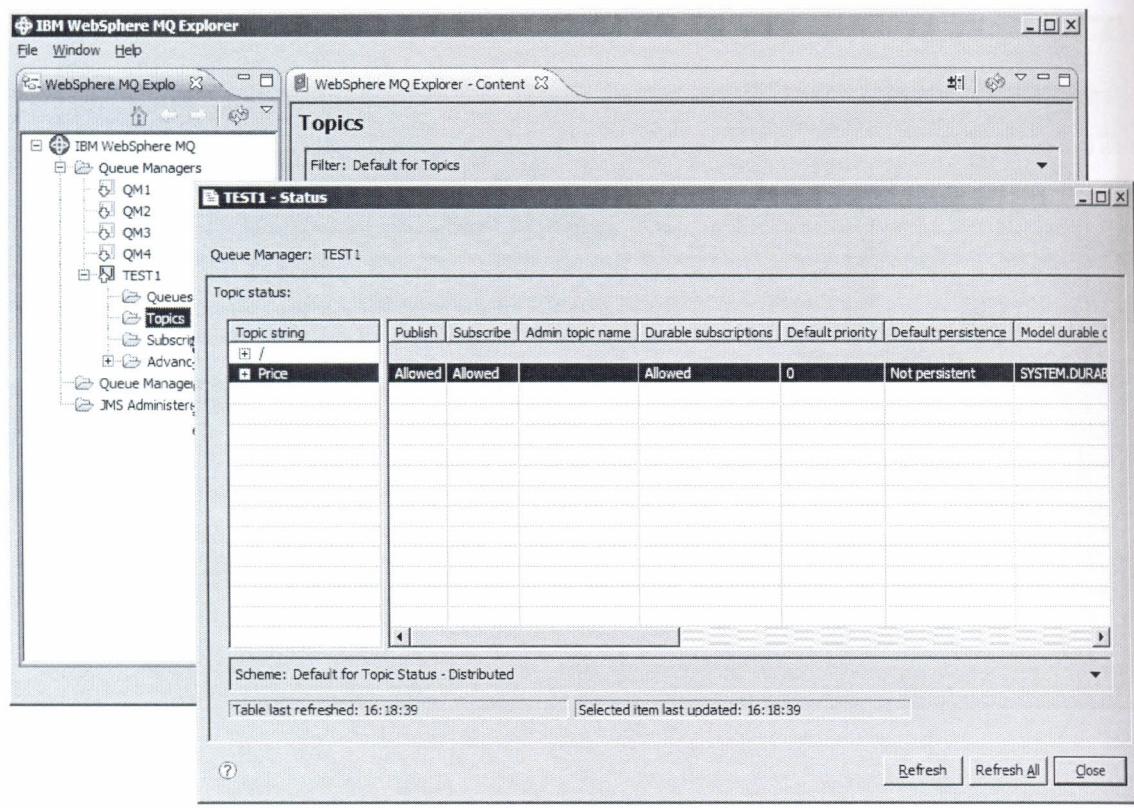
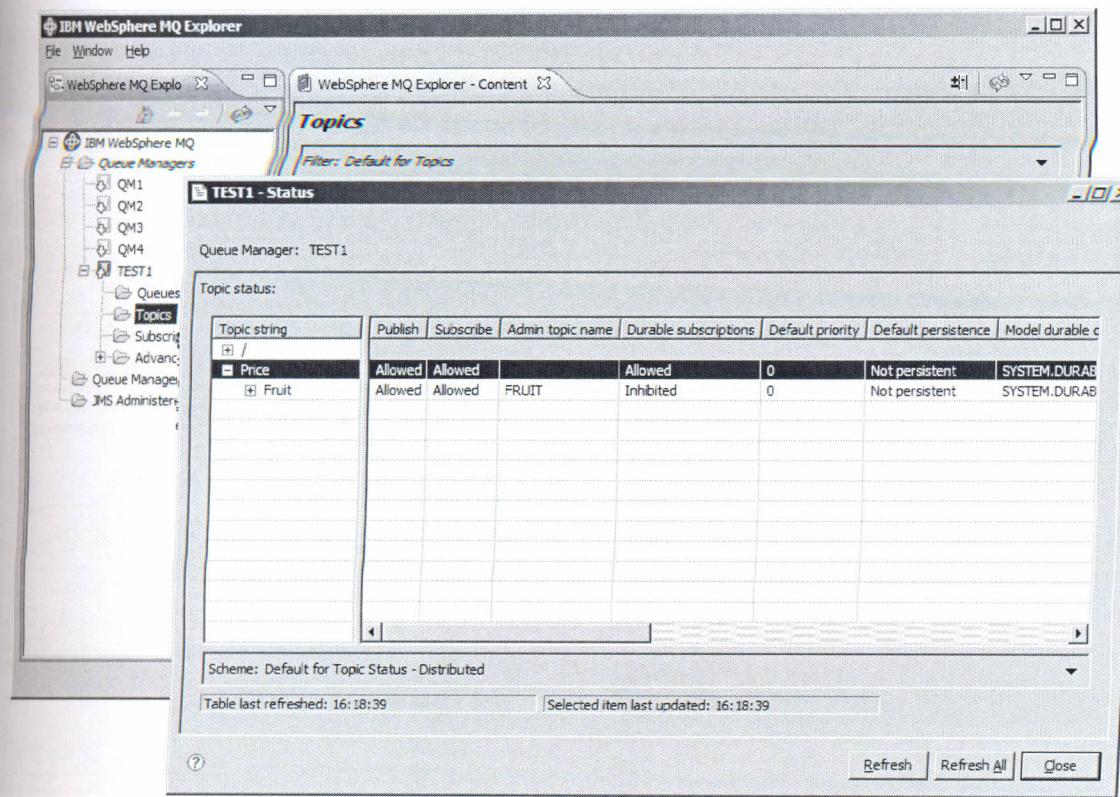


Figure 19-27. Using MQ Explorer for topic status (3 of 5)

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Notes:

Using MQ Explorer for topic status (4 of 5)



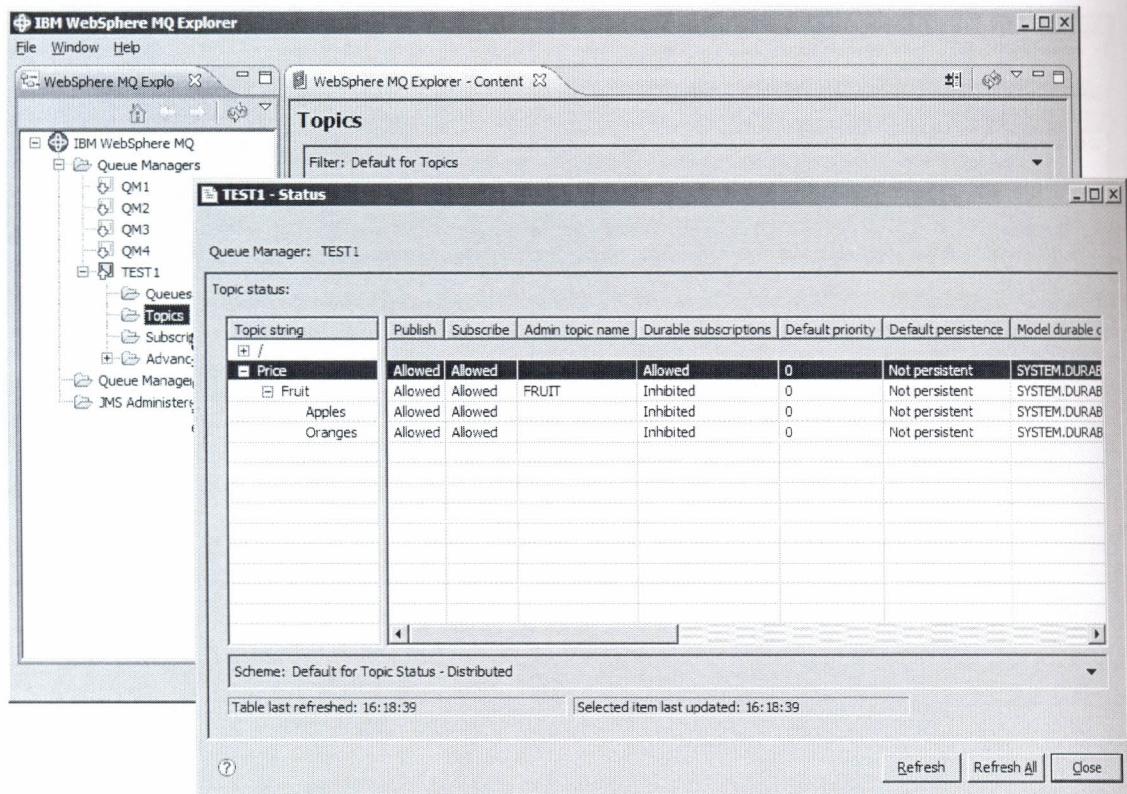
© Copyright IBM Corporation 2008

Figure 19-28. Using MQ Explorer for topic status (4 of 5)

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Notes:

Using MQ Explorer for topic status (5 of 5)



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Figure 19-29. Using MQ Explorer for topic status (5 of 5)

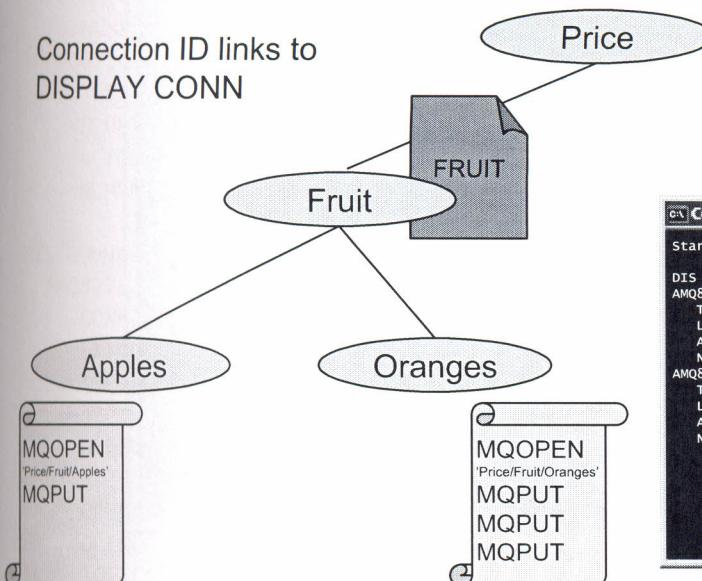
WM203 / VM2032.0

Notes:

Administration for publishers (1 of 2)

Topic string	Date of last publication	Time of last publication	Publish count	Connection ID
Price/Fruit/Oranges	26-Feb-2008	16:50:44	3	414D51435...

Connection ID links to
DISPLAY CONN



TOPIC attributes

DEFPRTY
DEFPSIST
DEFPRESP
PUB
PUBSCOPE
PMSGDLV
NPMSGDLV

```

Command Prompt - runmqsc TEST1
Starting MQSC for queue manager TEST1.

DIS TPSTATUS('Price/Fruit/+') TYPE(PUB) all
AMQ8754: Display topic status details.
TOPICSTR(Price/Fruit/Oranges)          LPUBDATE(2008-02-26)
LPUBTIME(16:50:44)
ACTCONN(414D514354455354312020202020832AC44720005E02)
NUMPUBS(3)
AMQ8754: Display topic status details.
TOPICSTR(Price/Fruit/Apples)          LPUBDATE(2008-02-26)
LPUBTIME(16:50:37)
ACTCONN(414D514354455354312020202020832AC44720007601)
NUMPUBS(1)
  
```

Note: the next screen provides a closer view of this command prompt.

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Figure 19-30. Administration for publishers (1 of 2)

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Notes:

The DISPLAY TPSTATUS command by default uses a TYPE of TOPIC. If **TYPE(PUB)** is specified, then the command displays status information relating to applications that have topic nodes open for publish.

Using DISPLAY TPSTATUS TYPE(PUB) you can see the details of the current publishers on this topic string. One of the attributes returned is the Active Connection ID (ACTCONN) which links to DISPLAY CONN which shows you the details about that specific application.

Administration for publishers (2 of 2)

```
D:\newqdev\q\Debug>runmqsc TEST1
Starting MQSC for queue manager TEST1.

DIS TPSTATUS('Price/Fruit/+') TYPE(PUB) all
AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Oranges)          LPUBDATE(2008-02-26)
    LPUBTIME(16:50:44)
    ACTCONN(414D51435445535431202020202020832AC44720005E02)
    NUMPUBS(3)
AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Apples)          LPUBDATE(2008-02-26)
    LPUBTIME(16:50:37)
    ACTCONN(414D5143544553543120202020202020832AC44720007601)
    NUMPUBS(1)
```

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Figure 19-31. Administration for publishers (2 of 2)

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Notes:

Topic status display for publishers

```

DIS TPSTATUS('Price/Fruit/+') TYPE(PUB) all
AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Oranges)          LPUBDATE(2008-02-26)
    LPUBTIME(16:50:44)
    ACTCONN(414D51435445535431202020202020832AC44720005E02)
    NUMPUBS(3)
AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Apples)          LPUBDATE(2008-02-26)
    LPUBTIME(16:50:37)
    ACTCONN(414D5143544553543120202020202020832AC44720007601)
    NUMPUBS(1)

DIS CONN(832AC44720007601) TYPE(ALL)
AMQ8276: Display Connection details.
    CONN(832AC44720007601)
    EXTCNN(414D5143544553543120202020202020)
    TYPE(CONN)
    APPLTAG(D:\q.exe)                  APPLTYPE(USER)
    USERID(hughson)

    OBJNAME( )                         OBJTYPE(TOPIC)
    OPENOPTS(MQOO_OUTPUT,MQOO_FAIL_IF_QUIESCING)
    TOPICSTR(Price/Fruit/Apples)

```

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Figure 19-32. Topic status display for publishers

WM203 / VM2032.0

Notes:

The DISPLAY TOPIC STATUS for TYPE(PUB) shows information for each associated topic string. The parameters of interest are:

- **ACTCONN** The currently active ConnectionId (CONNID) associated with the handle that has this topic node open for publish.
- **NUMPUBS** - number of publishes by this publisher. This value records the actual number of publishes, not the total number of messages published to all subscribers.

Further connection details can then be displayed using the DISPLAY CONN command using the handle specified in the ACTCONN attribute of the topic status details.

Displaying publisher topic status using MQ Explorer (1 of 3)

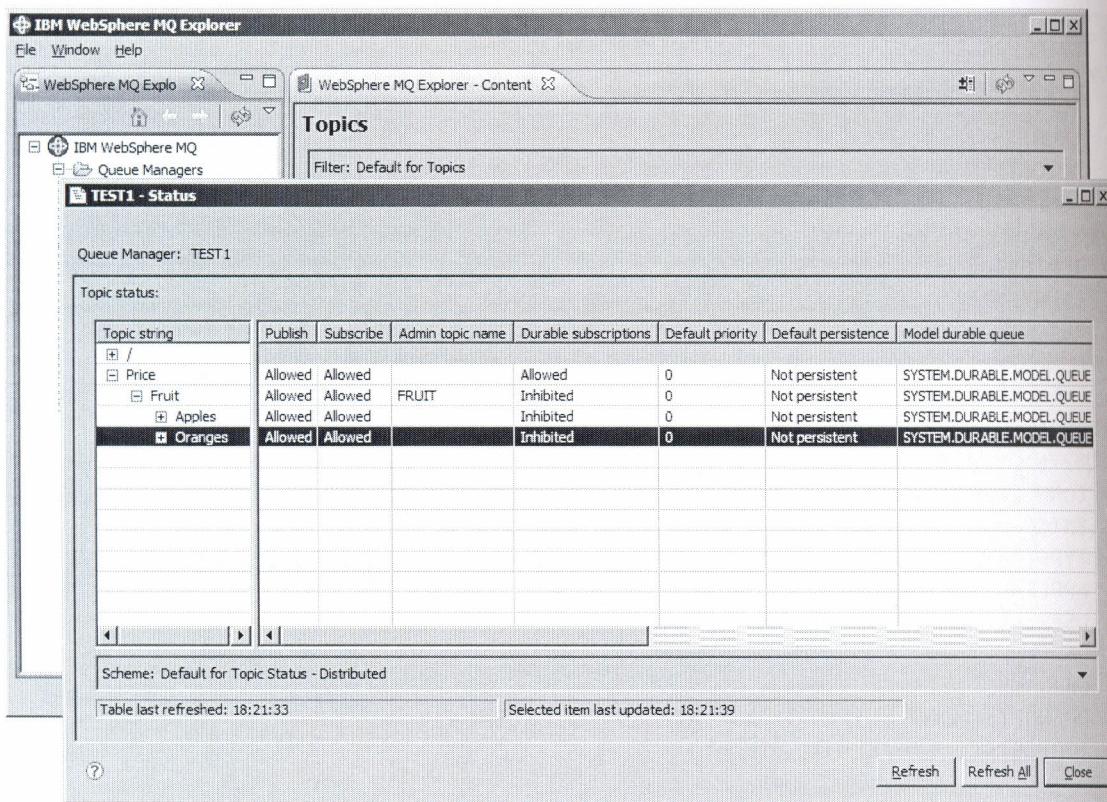


Figure 19-33. Displaying publisher topic status using MQ Explorer (1 of 3)

WM203 / VM2032.0

Notes:

As already discussed, with the resolution of ASPARENT values, the object that finally resolved the value may be further up the topic tree than the point at which you are publishing.

Displaying publisher topic status using MQ Explorer (2 of 3)

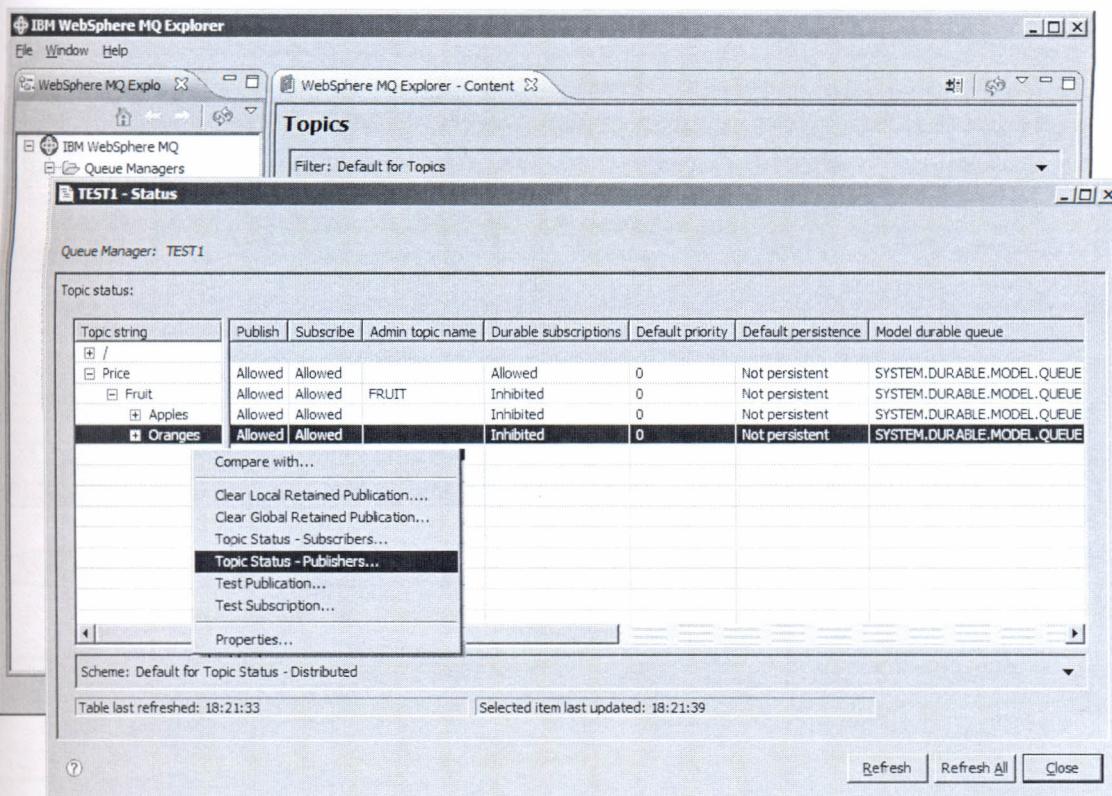


Figure 19-34. Displaying publisher topic status using MQ Explorer (2 of 3)

WM203 / VM2032.0

Notes:

Displaying publisher topic status using MQ Explorer (3 of 3)

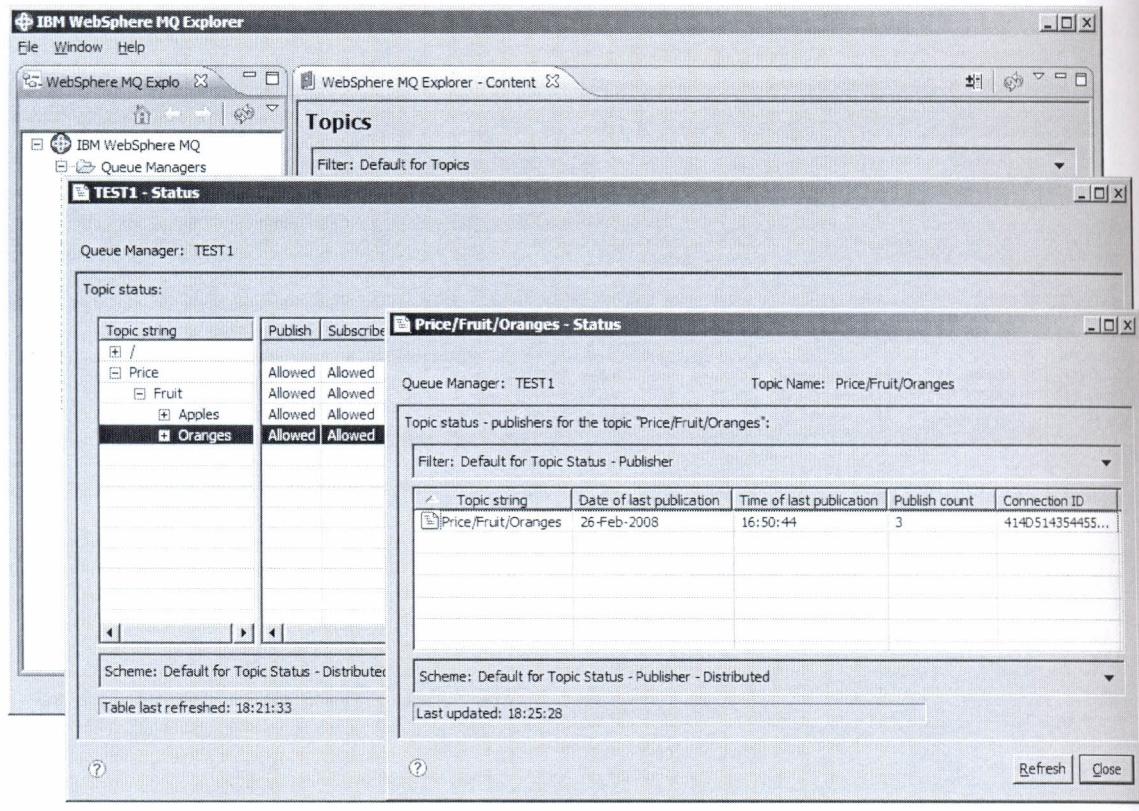


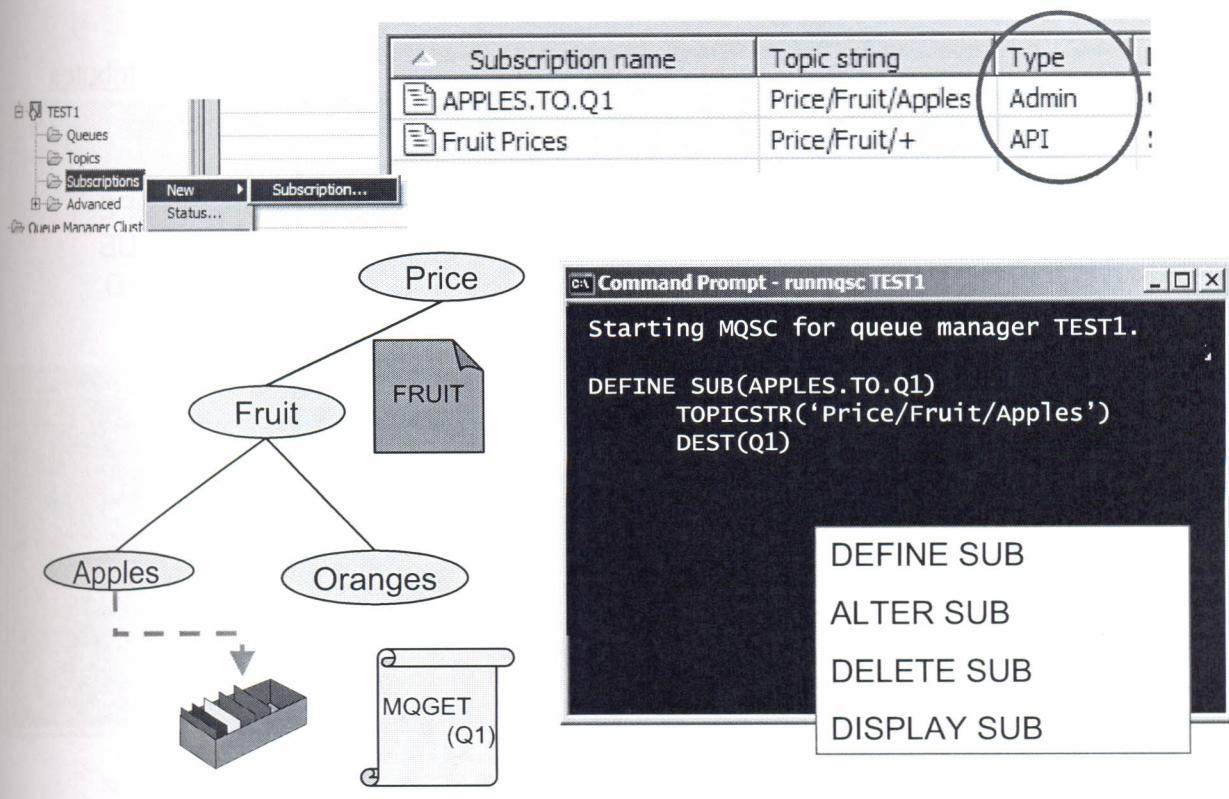
Figure 19-35. Displaying publisher topic status using MQ Explorer (3 of 3)

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Notes:

(3)

Creating administrative subscriptions



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Figure 19-36. Creating administrative subscriptions

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Notes:

- You do not have to create subscriptions by coding applications to use MQSUB, you can create them administratively. This means that you can take an application that is coded to MQGET from a specific queue and have it consume publications by creating an administrative subscription that sends publications to the queue it is getting from.
- There are DEFINE, ALTER, DELETE, and DISPLAY commands for SUB. DELETE SUB may be useful in tidying up durable subscriptions that applications have made and forgotten about – such as not called MQCLOSE for them when they were finished with them.
- One thing to note about subscriptions is the SUBTYPE field. If the subscription was created from an application issued MQSUB it is SUBTYPE(API) but if it were created through an administrative command it is SUBTYPE(ADMIN).

Monitoring application subscriptions (1 of 2)

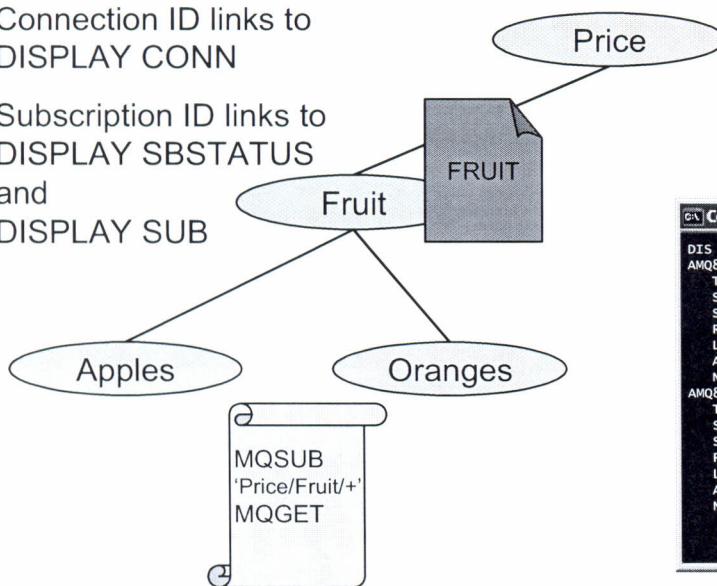
Topic string	Subscription ID	User	Message count	Durable	Type	Connection ID	Resume date	Resume time
Price/Fruit/Oran...	414D5120544...	hughson	0	No	API	414D51435...	26-Feb-2008	19:54:33

TOPIC attributes

DURSUB
SUB
SUBSCOPE
PROXYSUB
WILDCARD

Connection ID links to
DISPLAY CONN

Subscription ID links to
DISPLAY SBSTATUS
and
DISPLAY SUB



```

C:\ Command Prompt - runmqsc TEST1
DIS TPSSTATUS('Price/Fruit/+') TYPE(SUB) ALL
AMQ8754: Display topic status details.
TOPICSSTR(Price/Fruit/Oranges)
SUBID(414D5120544553543120202020202020832AC44720013D07)
SUBUSER(hughson)
RESMTIME(18:53:35) LMSGDATE(2008-02-26)
LMSGTIME(18:53:41) DURABLE(NO)
ACTCONN(414D5143544553543120202020202020832AC44720013D05)
NUMMSGS(2) SUBTYPE(API)

AMQ8754: Display topic status details.
TOPICSSTR(Price/Fruit/Apples)
SUBID(414D5120544553543120202020202020832AC44720013D07)
SUBUSER(hughson)
RESMTIME(18:53:35) LMSGDATE(2008-02-26)
LMSGTIME(18:53:41) DURABLE(NO)
ACTCONN(414D5143544553543120202020202020832AC44720013D05)
NUMMSGS(2) SUBTYPE(API)
  
```

Note: the next screen provides a closer view of this command prompt.

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Figure 19-37. Monitoring application subscriptions (1 of 2)

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Mon

Notes:

If **TYPE(SUB)** is specified, then the command displays status information relating to applications that have topic nodes open for subscribe. The command displays status information relating to applications that subscribe to the topic node or nodes. The subscribers that the command returns are not necessarily the subscribers that would receive a message published to this topic node.

Figure 1

Notes:

Monitoring application subscriptions (2 of 2)

```
c:\ Command Prompt - runmqsc TEST1
DIS TPSTATUS('Price/Fruit/+') TYPE(SUB) ALL
AMQ8754: Display topic status details.
TOPICSTR(Price/Fruit/Oranges)
SUBID(414D51205445535431202020202020832AC44720013D07)
SUBUSER(hughson) RESMDATE(2008-02-26)
RESMTIME(18:53:35) LMSGDATE(2008-02-26)
LMSGTIME(18:53:41) DURABLE(NO)
ACTCONN(414D5143544553543120202020202020832AC44720013D05)
NUMMSGS(2) SUBTYPE(API)

AMQ8754: Display topic status details.
TOPICSTR(Price/Fruit/Apples)
SUBID(414D5120544553543120202020202020832AC44720013D07)
SUBUSER(hughson) RESMDATE(2008-02-26)
RESMTIME(18:53:35) LMSGDATE(2008-02-26)
LMSGTIME(18:53:41) DURABLE(NO)
ACTCONN(414D5143544553543120202020202020832AC44720013D05)
NUMMSGS(2) SUBTYPE(API)
```

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Figure 19-38. Monitoring application subscriptions (2 of 2)

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Notes:

Display subscriber topic status (1 of 3)

```

DIS TPSTATUS('Price/Fruit/+') TYPE(SUB) ALL
AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Oranges)
    SUBID(414D51205445535431202020202020832AC44720013D07)
    SUBUSER(hughson)                      RESMDATE(2008-02-26)
    RESMTIME(18:53:35)                     LMSGDATE(2008-02-26)
    LMSGTIME(18:53:41)                     DURABLE(NO)
    ACTCONN(414D5143544553543120202020202020832AC44720013D05)
    NUMMSGS(2)                            SUBTYPE(API)

AMQ8754: Display topic status details.
    TOPICSTR(Price/Fruit/Apples)
    SUBID(414D5120544553543120202020202020832AC44720013D07)
    SUBUSER(hughson)                      RESMDATE(2008-02-26)
    RESMTIME(18:53:35)                     LMSGDATE(2008-02-26)
    LMSGTIME(18:53:41)                     DURABLE(NO)
    ACTCONN(414D5143544553543120202020202020832AC44720013D05)
    NUMMSGS(2)                            SUBTYPE(API)

```

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Figure 19-39. Display subscriber topic status (1 of 3)

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Notes:

The DISPLAY TOPIC STATUS for **TYPE(SUB)** shows information for each associated topic string. The parameters of interest are:

- **ACTCONN** - Detects local publications, returning the currently active ConnectionId (CONNID) that opened this subscription.
- **LMSGDATE** - The date on which an MQPUT call last sent a message to this subscription.
- **LMSGTIME** - The time at which an MQPUT call last sent a message to this subscription.
- **SUBID** - An all time unique identifier for this subscription, assigned by the queue manager. The format of SUBID matches that of a CorrelId. For durable subscriptions, the command returns the SUBID even if the subscriber is not currently connected to the queue manager.
- **NUMMSGS** - Number of messages put to the destination specified by this subscription

Display subscriber topic status (2 of 3)

```

DIS CONN(832AC44720013D05) TYPE(ALL)
AMQ8276: Display Connection details.
CONN(832AC44720016401)
EXTCONN(414D5143544553543120202020202020)
TYPE(CONN)
APPLTAG(D:\q.exe) APPLTYPE(USER)
USERID(hughson)

OBJNAME(Q1) OBJTYPE(QUEUE)
OPENOPTS(MQOO_INPUT_SHARED,MQOO_FAIL_IF_QUIESCING)

OBJNAME( ) OBJTYPE(TOPIC)
DEST(Q1) DESTQMGR(TEST1)
SUBNAME(Fruit Prices)
SUBID(414D51205445535431202020202020832AC44720016403)
TOPICSTR(Price/Fruit/+)

```

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Figure 19-40. Display subscriber topic status (2 of 3)

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Notes:

OBJNAME

The name of an object that the connection has open.

OBJTYPE

The type of the object that the connection has open. If this handle is that of a subscription to a topic, then the SUBID parameter identifies the subscription. You can then use the DISPLAY SUB command to find all the details about the subscription.

OPENOPTS

The open options currently in force for the connection for the object.

Display subscriber topic status (3 of 3)

```
DIS SBSTATUS SUBID(414D5120544553543120202020202020832AC44720013D07)
AMQ8099: WebSphere MQ subscription status inquired.
SUB(Fruit Prices)
SUBID(414D512054455354312020202020202020832AC44720013D07)
SUBUSER(hughson) RESMDATE(2008-02-26)
RESMTIME(19:10:07) LMSGDATE(2008-02-26)
LMSGTIME(19:10:28)
ACTCONN(414D514354455354312020202020202020832AC44720013D05)
DURABLE(NO) NUMMSGS(5)
SUBTYPE(API)
```

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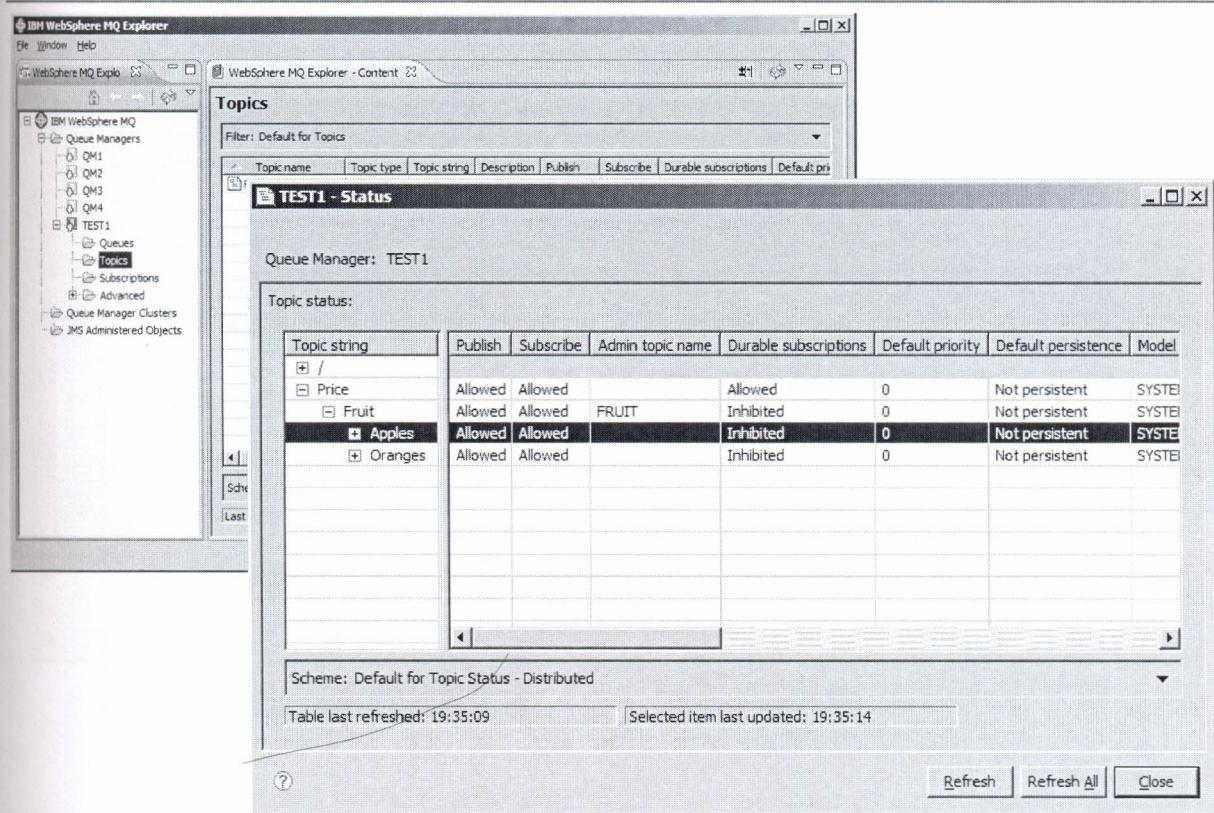
Figure 19-41. Display subscriber topic status (3 of 3)

WM203 / VM2032.0

Notes:

DISPLAY SBSTATUS which shows the runtime status of a subscription. DISPLAY SUB is slightly different – it shows the more static attributes of the subscription, whether it was created using a DEFINE SUB command or an MQSUB call in an application.

Subscription information using MQ Explorer (1 of 3)



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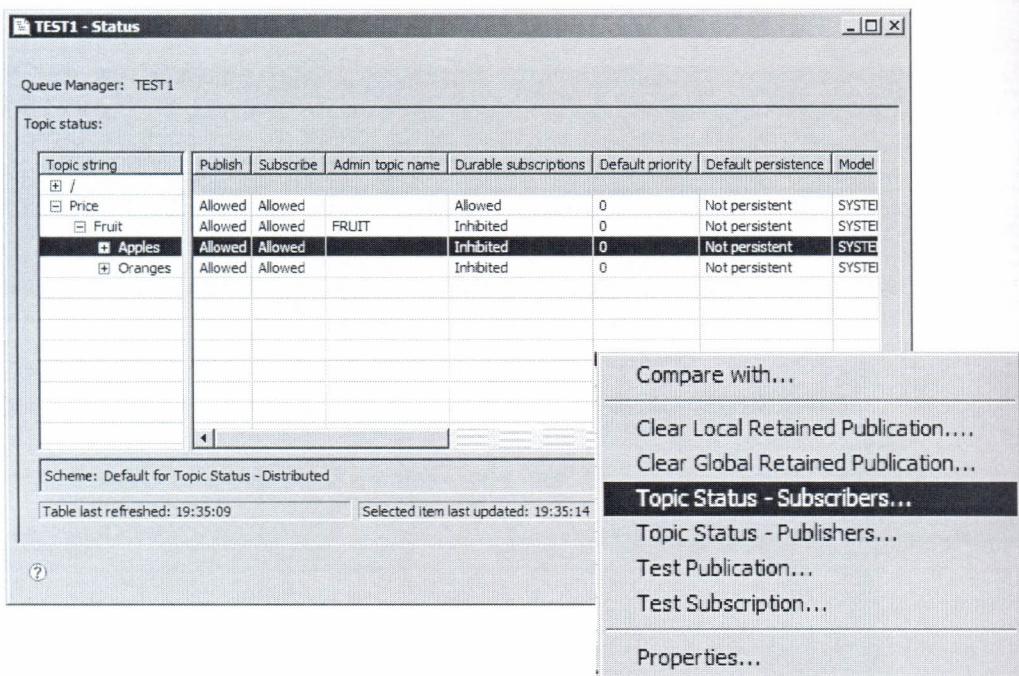
Figure 19-42. Subscription information using MQ Explorer (1 of 3)

WM203 / VM2032.0

Notes:

JB is
as

Subscription information using MQ Explorer (2 of 3)



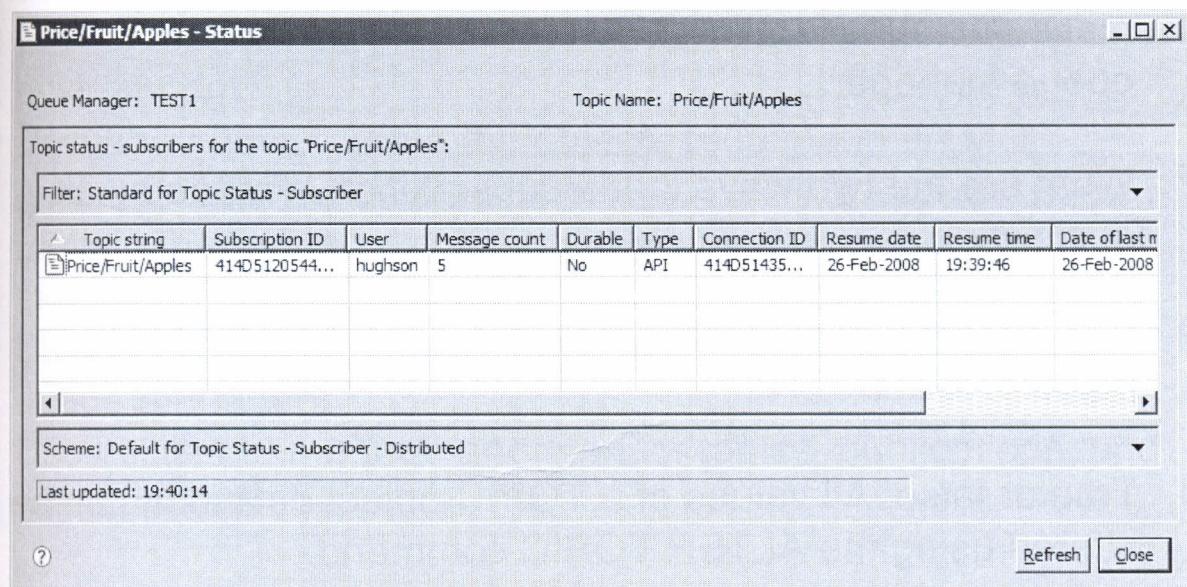
© Copyright IBM Corporation 2008

Figure 19-43. Subscription information using MQ Explorer (2 of 3)

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Notes:

Subscription information using MQ Explorer (3 of 3)



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Figure 19-44. Subscription information using MQ Explorer (3 of 3)

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Notes:

Checkpoint questions

1. True or false: A subscriber is an application that can only make one subscription at a time to a topic on a particular queue manager.
2. What are the two ways that a subscription is made by an application?
3. In a TOPIC definition, what does the value ASPARENT mean?
4. True or false: All values of a TOPIC object definition can be altered using the ALTER TOPIC command.
5. What is the command used to show details of the current publishers on a topic string?

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Figure 19-45. Checkpoint questions

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Notes:

Unit summary

Having completed this unit, you should be able to:

- Explain how WebSphere MQ supports a publish/subscribe environment
- Describe how to create the objects required in an MQ publish/subscribe environment
- Explain the merits of publish/subscribe versus point-to-point messaging
- Design a publish/subscribe system incorporating multiple queue managers
- Use utilities to manage and monitor topics, publications, and subscriptions

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Figure 19-46. Unit summary

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Notes: