OTN OpenMail Technical Note

B.06.00 Changes To Message IDs

Summary

This short OTN describes the new extended message IDs. Sections cover improved message tracking over networked systems and how the new IDs are handled at the Sendmail Interface, Internet and X.400 gateways.

This OTN will form part of the OM360 (B.06.00 upgrade) course.

Readership

Readers are assumed to be OpenMail support engineers, who have attended an advanced OpenMail course (AE351 or H1805s) or are familiar with the material covered in these courses.

Revision History

July 1999:   First issue

Comments Please!

I would welcome any comments you may have on this document. Please email them to joyce@pwd.hp.com.

Contents

Pre-B.06.00 Message IDs

In previous versions of OpenMail, the form of an OpenMail message ID is:

`H<7 byte hex user id><8 byte hex item number>`

For example:

`H00000720001f8d3`

If the client generates the message ID (rarely), it begins with `C` instead of `H`.

This is certainly unique within the local system but not necessarily on a network, because other systems could generate the same message ID, especially after reinstalling OpenMail.

To understand the effect of the B.06.00 changes, it is worth considering briefly what happens to the message ID at the main OpenMail gateways.

At the Internet Gateway

When the message goes out through the Internet gateway, `unix.out` appends `@MHS` to the ID:

`Message-Id: <H00000720001f8d3@MHS>`

`unix.in` removes this if the message comes back into the Internet gateway; when an acknowledgement is received, for example.
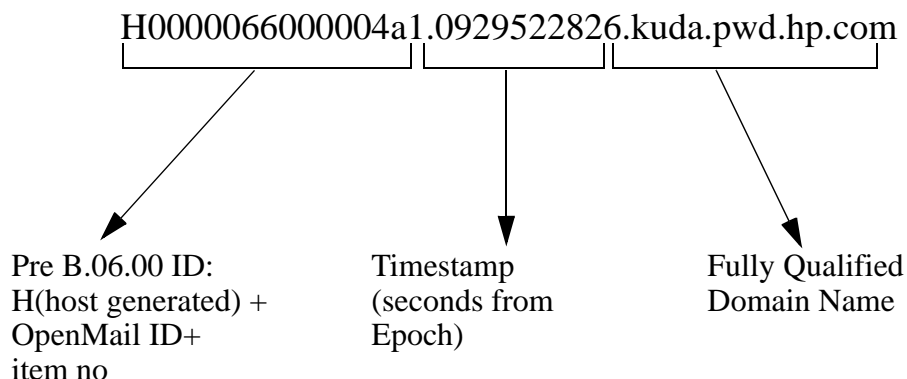
At the Sendmail Interface

The Sendmail Interface, `xport.out`, does not pass the OpenMail message ID to sendmail, so sendmail creates it own for logging, which makes tracking an OpenMail message in the sendmail world complicated.

At The X.400 Gateway

At the X.400 gateway, the OpenMail message ID of a message is stored. When the message leaves OpenMail, X.400 adds to the message ID the ORN of the creator. When an X.400 transport ack returns to the system, the gateway looks up and restores the original stored OpenMail ID.
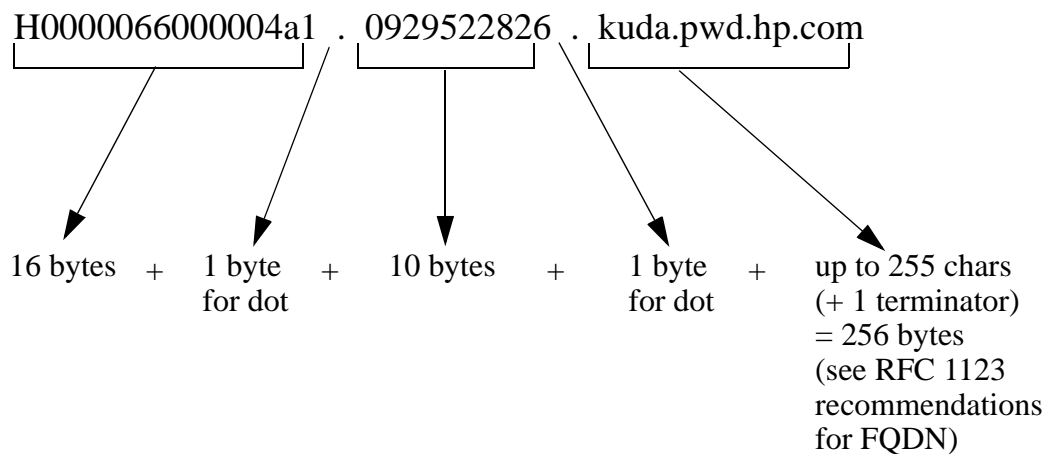
B.06.00 Message IDs

The new, extended form of the message ID at B.06.00 is shown below.

H0000066000004a1.0929522826.kuda.pwd.hp.com

Pre B.06.00 ID:
H(host generated) +
OpenMail ID+
item no

Timestamp
(seconds from
Epoch)

Fully Qualified
Domain Name

To make the ID globally unique, it contains:

- local element - this is the pre-B.06.00 message ID.

- network element - this is the host's Fully Qualified Domain Name.

- time element - seconds since EPOCH (00:00:00 1st Jan 1970).

The maximum potential size of the new message ID is 284bytes:

H00000660000004a1 . 0929522826 . kuda.pwd.hp.com

16 bytes + 1 byte
for dot + 10 bytes + 1 byte
for dot + up to 255 chars
(+ 1 terminator)
= 256 bytes
(see RFC 1123
recommendations
for FQDN)

Container extension files are used to accommodate this much longer ID.

Client generated message IDs are not changed or replaced.

The New Message ID With Previous Releases

As previous releases can handle longer message IDs, you do not need to do anything to enable older versions of OpenMail to work with the longer message ID.

By turning on audit logging on a B.05.10 system and a B.06.00 system (level 9 for sr, ld, rci) and tail the ~openmail/logs/audit file, you can see the message IDs that are used when messages are sent between the two.

If, for example, a message is sent from a B.05.10 system to a B.06.00 system, the 16 byte message ID will be the ID used throughout the processing of that message. If an ack is requested, the ack message ID will also be 16 byte.

If you then send a message from the B.06.00 system to the B.05.10 system, the new long ID is used. If an ack is requested, the ack message ID will also be the new, long format ID.

Switching Off New Format

It is very unlikely that you will ever need to revert to the old style message ID. As explained above, backwards compatibility is not a problem. However, should you want to want to revert to using 16 byte message IDs, you can set the following tweak in `general.cfg`:

`IM_MAKE_MSG_ID_GLOBAL_UNIQUE=FALSE`

You will then need to restart OpenMail for this to take effect.

New Message Ids At The Sendmail Interface

Probably the most significant change is at the Sendmail Interface. The new form of message ID is passed by `xport.out` to sendmail when an OpenMail message gets processed by the SMINTFC queue. This means that the same message ID appears in both the OpenMail audit log file and sendmail log file, making tracking messages across servers much easier.

New Message Ids At The Internet Gateway

The Internet gateway handles the new longer message ID in the same way as before:

`Message-Id: <H000037508585d95.0933350156.hpopd.pwd.hp.com@MHS>`

The longer message IDs in ack responses are also supported by `unix.in` as before.

New Message Ids At The X.400 Gateway

The X.400 gateway stores the new long message ID. However, X.400 continues to use the original 16 byte part of the ID. This means that local delivery performs some additional mapping to match the truncated message ID to the stored, long ID.

New Message Ids And Bulletin Board Synchronization

Bulletin Board synchronization code expects a message ID of 16 bytes, to which it appends its own information. Therefore, for Bulletin Board synchronization, you will see the new message ID truncated to the old, 16 byte message ID.

Lab - Tracking Messages

Across Sendmail

1. Use omconfaud to set audit levels for the Service Router, Local Delivery and the Internet Gateway to 9.

2. Send a message to a user on another OpenMail server.

3. Check the audit log (`~openmail/logs/audit`) and sendmail log (`~/var/adm/syslog/mail.log`) on both machines.

   You should see the same message ID in both logs on both machines.