

Subject: MCR10196, Return error code in correct variable in mlsys_transmit_.pl1
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Multics Ticket: <https://multics-trac.swenson.org/ticket/425>

Problem Description

It's possible for send_mail to fail to send to a recipient with no reason given:

```
sdm Lippard lippard -at discord.org -via 10.1.0.3
```

```
Subject: test message
```

```
...
```

```
.
```

```
Mail delivered to Lippard.
```

```
send_mail (send): The message was sent to some but not all of the specified recipients.
```

Or, with the foreign recipient alone:

```
sdm lippard -at discord.org -via 10.1.0.3
```

```
...
```

```
send_mail (send): The message was not sent to any of the specified recipients.
```

The first case prints the successful delivery but not why it wasn't sent to all recipients; the second case says it wasn't sent but doesn't say why.

Both cases are caused by the following lines in the invoke_ism entry of mlsys_transmit_, with the specific problem in red text:

```
else if ism_recipient.fatal_error then do;  
  recipient.fatal_error = "1"b;  
  n_failed_recipients = n_failed_recipients + 1;
```

```
if ism_recipient.code = error_table_$action_not_performed then
    /** ... mlsys_mailer_ gave no specific reason: check the result text */
    if ism_recipient.result = "No known path" then code =
mlsys_et_$cant_compute_route;
    else if ism_recipient.result = "Unable to deliver mail." then do;
        ...
        recipient.code = mlsys_et_$route_out_of_service;
    ...
    else do;
        recipient.code = mlsys_et_$rejected_by_foreign_system;
        recipient.explanation = ism_recipient.result;
    end;
    else recipient.code = ism_recipient.code;
end;
```

The “code” variable should be “recipient.code” as in the other cases. This is the only assignment in this module that uses the incorrect variable.

Proposed Changes

An mbuild script is at >udd>m>jjl>dev>MCR10196>MCR10196.mb.

The following change fixes the error:

```
----- mlsys_transmit_.pl1

compare_ascii >ldd>sss>source>bound_mail_system_.2.s.archive::mlsys_transmit_.pl1 ==

Inserted in B:
B30      6) change(2026-10-13,Lippard), approve(2026-10-13,MCR10196):
B31      Set recipient.code, not the local variable code, when the mailer
B32      reports no known path.
Preceding:
A30                                           END HISTORY COMMENTS */

A3087                                           /** ... mlsys_mailer_ gave no specific reason:
check the result text */
A3088                                           if ism_recipient.result = "No known path" then code
= mlsys_et_$cant_compute_route;
Changed by B to:
B3090                                           /** ... mlsys_mailer_ gave no specific reason:
check the result text. */
B3091                                           if ism_recipient.result = "No known path" then
recipient.code = mlsys_et_$cant_compute_route;

Comparison finished: 2 differences, 7 lines.
```

Testing

The original error path described above (where “-via” was used with an IP address of the local host) no longer will produce the error since other bugs in >net were fixed (NET089) so that “-via” with the local host is caught immediately. This closes the most obvious test path, though this fix can be tested on GHM-Test before NET089 is installed. With NET089 installed, this becomes a latent bug awaiting the implementation of host_name_ (which doesn’t currently exist, but is referenced in mlsys_psp_ for a future implementation of DNS), where it will materialize for any syntactically valid domain name that has no mail service. It will also surface in the case of a network_local_info_ update that occurs between the address’s validation (e.g., on the send_mall command line) and the time of delivery (after the mail is sent).

Documentation

No documentation changes required.

Version History

INSTRUCTIONS: End with a version table including details shown below.

Date	Revision	Author	Comment
2026-10-13	0.1	Jim Lippard	Pre-release versions of document
2026-10-13	1.0	Author Name here	Version released for initial review/ comment.