

Subject: MCR10180, Update host_table_dcls.incl.pl1
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Multics Ticket: <https://multics-trac.swenson.org/ticket/423>

Problem Description

The >ldd>include>host_table_dcls.incl.pl1 contains incorrect declarations for several entries in host_table_mgr_, including one nonexistent entry. It is also missing several entries and contains declarations for a structure and related variables that are no longer used in Multics.

Specifically, the declarations for host_table_mgr_ entries address, name_given_address, primary_name, and shortest_name, and for nit_ entry get_forwarding_host all declare the returned value as char (40) var instead of char (64) var.

The include file contains a declaration for host_table_mgr_\$host_list, which doesn't exist.

And it is missing declarations for host_table_mgr_ entries all_addresses, find_host_table, forget_host_table, local_host_name, and site_data. The host_table_mgr_.pl1 source code identifies find_host_table and forget_host_table as "internal"—and they have no callers, not even the named programs they are described as being for—and so they will not be added to the include file.

Finally, the include file contains the following structure and variables which are no longer used:

```
dcl host_list_ptr ptr;  
dcl n_hosts fixed bin;  
dcl HOST_LIST_VERSION_2 char (8) aligned static options  
(constant) init ("hostlst2");  
dcl 1 host_list aligned based (host_list_ptr),  
    2 version char (8),  
    2 n_hosts fixed bin,  
    2 host (n_hosts refer (host_list.n_hosts)),  
    3 name varying char (40);
```

The current users of the include file are two programs in >sss: mlsys_psp.pl1 and mlsys_nit_interface.pl1, both in bound_mail_system_2.s.archive, which require no changes, only recompilation; and seven programs in >net: host_table_mgr.pl1 and ip_address.pl1 in bound_net_all_rings_; ip_get_address_given_net.pl1 in bound_ip_tty_net_; mlgp_hostname_util.pl1 in bound_mlgp_daemon_; mlsys_mailer_expand.pl1 in bound_mlsys_mailer_; smtp_deliver.pl1 in bound_smtp_; and supdup.pl1 in bound_supdup_. Of the seven programs using the include file in >net, five need no changes, only recompilation. The other two, ip_address.pl1 and smtp_deliver.pl1, require changes to remove their local declarations of entry points not currently in the include file.

There are an additional ten programs in >net that have local declarations of host_table_mgr_ or nit_ entry points which should use the include file as well: finger.pl1, intermultics_copy.pl1, list_queued_mail.pl1, mlsys_mailer_deliver_.pl1, mlsys_mailer_info_.pl1, mlsys_mailer_deliver_local.pl1, local_host.pl1, dial_stream_.pl1, telnet.pl1, and user_ftp.pl1 (which currently has an incorrect declaration for host_table_mgr_\$site_data). The others have correct local declarations.

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Proposed Changes

There is an mbuild file at >udd>m>jjl>dev>MCR10180>MCR10180.mb

The following compare_ascii output shows the required changes.

```
----- host_table_dcls.incl.pll

compare_ascii >ldd>include>host_table_dcls.incl.pll ==

Inserted in B:
B11      2) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B12      Correct char(40) varying return values to char(64) varying; remove
B13      obsolete host_list structure and related variables, add missing
B14      host_table_mgr_entries.
Preceding:
A11                                           END HISTORY COMMENTS */

A15      dcl host_table_mgr_$address entry (char (*) var, char (*) var) returns
(char (40) var);
A16      dcl host_table_mgr_$host_list entry (char (*) var) returns (ptr);
A17      dcl host_table_mgr_$name_given_address entry (char (*) var, char (*) var)
returns (char (40) var);
A18      dcl host_table_mgr_$net_list entry (char (*) var) returns (ptr);
A19      dcl host_table_mgr_$primary_name entry (char (*) var) returns (char (40)
var);
A20      dcl host_table_mgr_$shortest_name entry (char (*) var) returns (char (40)
var);
A21
A22      dcl nit_$get_forwarding_host entry (varying char (*), varying char (*))
returns (varying char (40));
Changed by B to:
B19      dcl host_table_mgr_$address entry (char (*) var, char (*) var) returns
(char (64) var);
B20      dcl host_table_mgr_$all_addresses entry (char (*) var, char (*) var)
returns (ptr);
B21      dcl host_table_mgr_$local_host_name entry () returns (char (64) var);
B22      dcl host_table_mgr_$name_given_address entry (char (*) var, char (*) var)
returns (char (64) var);
B23      dcl host_table_mgr_$net_list entry (char (*) var) returns (ptr);
B24      dcl host_table_mgr_$primary_name entry (char (*) var) returns (char (64)
var);
B25      dcl host_table_mgr_$shortest_name entry (char (*) var) returns (char (64)
var);
B26      dcl host_table_mgr_$site_data entry (char (*) var, char (*) var, char (*)
var);
B27
B28      dcl nit_$get_forwarding_host entry (varying char (*), varying char (*))
returns (char (64) var);

A36      dcl host_list_ptr ptr;
A37      dcl n_hosts fixed bin;
A38      dcl HOST_LIST_VERSION_2 char (8) aligned static options (constant) init
("hostlst2");
A39      dcl 1 host_list aligned based (host_list_ptr),
A40          2 version char (8),
A41          2 n_hosts fixed bin,
A42          2 host (n_hosts refer (host_list.n_hosts)),
A43          3 name varying char (40);
A44
```

```
A45      /* End include file host_table_dcls.incl.pl1 */
Changed by B to:
B42      /* End include file host_table_dcls.incl.pl1 */
```

Comparison finished: 3 differences, 33 lines.

----- finger.pl1

```
compare_ascii >ldd>network>source>bound_finger_.s.archive::finger.pl1 ==
```

Inserted in B:

```
B24      5) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B25      Use host_table_dcls.incl.pl1 instead of local declarations.
```

Preceding:

```
A24                                           END HISTORY COMMENTS */
```

```
A83      host_table_mgr_$primary_name entry (char (*) varying) returns
(char (64) varying),
```

Deleted by B, preceding:

```
B85      ioa_                                entry options (variable),
```

```
A96      nit_$get_service_list              entry (char (*) varying, char (*)
varying) returns (ptr),
```

Deleted by B, preceding:

```
B97      requote_string_                    entry (char (*) returns (char (*)),
```

```
A301      end finger;
```

Changed by B to:

```
B301      %include host_table_dcls;
```

```
B302
```

```
B303      end finger;
```

Comparison finished: 4 differences, 8 lines.

----- intermultics_copy.pl1

```
compare_ascii >ldd>network>source>bound_imc_.s.archive::intermultics_copy.pl1 ==
```

Inserted in B:

```
B24      4) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B25      Use host_table_dcls.incl.pl1 instead of local declarations.
```

Preceding:

```
A24                                           END HISTORY COMMENTS */
```

```
A134      dcl host_table_mgr_$primary_name entry (character (*) varying) returns
(character (64) varying);
```

Deleted by B, preceding:

```
B136      dcl network_local_info_$get_host_name entry (fixed binary (35)) returns
(character (256) varying);
```

Inserted in B:

```
B1008      %include host_table_dcls;
```

```
B1009      %page;
```

Preceding:

```
A1007      %include imc_data;
```

Comparison finished: 3 differences, 5 lines.

----- list_queued_mail.pl1

```
compare_ascii >ldd>network>source>bound_mlsys_mailer_.s.archive::list_queued_mail.pl1
==
```

Inserted in B:

```
B14      3) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B15      Use host_table_dcls.incl.pl1 instead of local declarations.
```

Preceding:

```
A14                                          END HISTORY COMMENTS */
```

```
A192      host_table_mgr_$all_addresses entry (char (*) varying, char (*)
varying) returns (ptr),
A193      host_table_mgr_$local_host_name
A194      entry () returns (char (64)
varying),
A195      host_table_mgr_$primary_name entry (char (*) varying) returns
(char (64) varying),
Deleted by B, preceding:
B194      ioa_                               entry options (variable),
```

Inserted in B:

```
B214      %include host_table_dcls;
B215      %page;
Preceding:
A216      %include mlsys_mailer_data;
```

Comparison finished: 3 differences, 8 lines.

```
----- mlsys_mailer_deliver_.pl1
```

```
compare_ascii
>ldd>network>source>bound_mlsys_mailer_.s.archive::mlsys_mailer_deliver_.pl1 ==
```

Inserted in B:

```
B20      4) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B21      Use host_table_dcls.incl.pl1 instead of local declarations.
```

Preceding:

```
A20                                          END HISTORY COMMENTS */
```

```
A58      dcl nit_$get_service_list entry (char(*) varying, char(*) varying) returns
(ptr);
Deleted by B, preceding:
B60
B61      dcl error_table_$not_privileged fixed bin (35) external;
```

Inserted in B:

```
B165      %include host_table_dcls;
Preceding:
A164      %include network_service_list;
```

Comparison finished: 3 differences, 4 lines.

```
----- mlsys_mailer_deliver_local_.pl1
```

```
compare_ascii
>ldd>network>source>bound_mlsys_mailer_.s.archive::mlsys_mailer_deliver_local_.pl1 ==
```

Inserted in B:

```
B33      6) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):
B34      Use host_table_dcls.incl.pl1 instead of local declarations.
```

```

Preceding:
A33                                     END HISTORY COMMENTS */

```

```

A91      dcl  host_table_mgr_$shortest_name entry (char (*) var) returns (char (64)
var);

```

Deleted by B, preceding:

```

B93      dcl  mlsys_mailer_info_$local_host_name entry () returns (char (64) var);

```

Inserted in B:

```

B450      %include host_table_dcls;

```

```

B451      %page;

```

Preceding:

```

A449      %include mlsys_mailer_data;

```

Comparison finished: 3 differences, 5 lines.

```

----- mlsys_mailer_info_.pl1

```

```

compare_ascii

```

```

>ldd>network>source>bound_mlsys_mailer_.s.archive::mlsys_mailer_info_.pl1 ==

```

Inserted in B:

```

B8

```

```

B9      /***** HISTORY COMMENTS:

```

```

B10      1) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

```

```

B11      Use host_table_dcls.incl.pl1 instead of local declarations.

```

```

B12                                     END HISTORY COMMENTS */

```

```

B13

```

Preceding:

```

A8      /* Modified: 24 September 1986 by J. Spencer Love for new host table. */

```

```

A13      dcl  host_table_mgr_$local_host_name entry () returns (char (64) varying);

```

```

A14

```

Deleted by B, preceding:

```

B19      /* * * * * * * * * LOCAL_HOST_NAME * * * * * * * * */

```

```

A22      end mlsys_mailer_info_;

```

Changed by B to:

```

B26      %include host_table_dcls;

```

```

B27

```

```

B28      end mlsys_mailer_info_;

```

Comparison finished: 3 differences, 12 lines.

```

----- ip_address_.pl1

```

```

compare_ascii >ldd>network>source>bound_net_all_rings_.s.archive::ip_address_.pl1 ==

```

Inserted in B:

```

B34      4) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

```

```

B35      Use host_table_dcls.incl.pl1 instead of local declarations.

```

```

B36

```

Preceding:

```

A34                                     END HISTORY COMMENTS */

```

```

A132      host_table_mgr_$all_addresses entry (char (*) varying, char (*)
varying) returns (ptr),

```

Deleted by B, preceding:

```

B135      network_local_info_$get_host_name

```

Comparison finished: 2 differences, 4 lines.

----- local_host.pl1

compare_ascii >ldd>network>source>bound_net_all_rings_.s.archive::local_host.pl1 ==

A23 in all three, not introduced here.

Changed by B to:

B23 in all three, not introduced here.

B24 4) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

B25 Use host_table_dcls.incl.pl1 instead of local declarations.

A67 host_table_mgr_\$local_host_name

A68 entry () returns (char (64)

varying),

Deleted by B, preceding:

B69 ip_address_\$display_number entry (fixed bin (32)) returns (char (64) varying),

A156 end local_host;

Changed by B to:

B156 %include host_table_dcls;

B157

B158 end local_host;

Comparison finished: 3 differences, 10 lines.

----- dial_stream_.pl1

compare_ascii >ldd>network>source>bound_smtp_.s.archive::dial_stream_.pl1 ==

Inserted in B:

B20 3) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

B21 Use host_table_dcls.incl.pl1 instead of local declarations.

Preceding:

A20 END HISTORY COMMENTS */

A69 dcl host_table_mgr_\$all_addresses entry (char (*) varying, char (*) varying) returns (ptr);

A70 dcl host_table_mgr_\$site_data entry (char (*) varying, char (*) varying, char (*) varying);

Deleted by B, preceding:

B71 dcl sub_err_entry options (variable);

Inserted in B:

B75 %include host_table_dcls;

B76 %page;

Preceding:

A75 %include iox_dcls;

Comparison finished: 3 differences, 6 lines.

----- smtp_deliver_.pl1

compare_ascii >ldd>network>source>bound_smtp_.s.archive::smtp_deliver_.pl1 ==

Inserted in B:

B24 4) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

B25 Use host_table_dcls.incl.pl1 instead of local declarations.

Preceding:

A24

END HISTORY COMMENTS */

A60 dcl host_table_mgr_\$site_data entry (char (*) varying, char (*) varying,
char (*) varying);

Deleted by B, preceding:

B62 dcl ioa_entry () options (variable);

Comparison finished: 2 differences, 3 lines.

----- telnet.pl1

compare_ascii >ldd>network>source>bound_telnet_.s.archive::telnet.pl1 ==

Inserted in B:

B17 3) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

B18 Use host_table_dcls.incl.pl1 instead of local declarations.

Preceding:

A17

END HISTORY COMMENTS */

A88 dcl host_table_mgr_\$local_host_name entry () returns (char (64) varying);

A89 dcl host_table_mgr_\$primary_name entry (char (*) varying) returns (char
(64) varying);

Deleted by B, preceding:

B90 dcl ioa_entry options (variable);

A92 dcl nit_\$get_service_list entry (char (*) varying, char (*) varying)
returns (ptr);

Deleted by B, preceding:

B92 dcl requote_string_entry (char (*) returns (char (*));

A349 end telnet;

Changed by B to:

B348 %include host_table_dcls;

B349

B350 end telnet;

Comparison finished: 4 differences, 9 lines.

----- user_ftp.pl1

compare_ascii >ldd>network>source>bound_user_ftp_.s.archive::user_ftp.pl1 ==

Inserted in B:

B8

B9 /****^ HISTORY COMMENTS:

B10 1) change(2026-10-09,Lippard), approve(2026-10-09,MCR10180):

B11 Use host_table_dcls.incl.pl1 instead of local declarations.

B12 END HISTORY COMMENTS */

B13

Preceding:

A8 /* format: style3,ifthenstmt,indcomtxt,indproc,idind30 */

A42 host_table_mgr_\$primary_name entry (char (*) varying) returns
(char (64) varying),

A43 host_table_mgr_\$site_data entry (char (64) varying, char (64)
varying, char (64) varying),

Deleted by B, preceding:

B48 ioa_\$rsnnl entry () options (variable),

```

Inserted in B:
B60      %include host_table_dcls;
B61      %page;
Preceding:
A56      %include iox_dcls;

Comparison finished: 3 differences, 10 lines.

```

Testing

Testing steps are to verify all programs compile without error and, once installed, verify that a host table entry with more than 40 characters can be added to a test host table in a test directory.

Testing can verify mail delivery to and from a foreign host, supdup and map host lookups, ip_call and tcp_call name lookups (which use ip_address_ and host_table_mgr_).

The absence of the nonexistent host_table_mgr_\$host_list will produce a failure to compile instead of an error-free compile and subsequent linkage error.

Documentation

There are no required documentation changes.

Version History

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

Date	Revision	Author	Comment
2026-10-09	0.1	Jim Lippard	Pre-release versions of document
2026-10-09	1.0	Jim Lippard	Version released for initial review/ comment.