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SURVEY OF FTP MAIL AND MLFL

Two surveys of Arpanet Server hosts were run between September 20, 1978
and December 11, 1978. The intent was to determine the response of the
host's Server FTP program to:

(a) An attempt to mail to an unknown recipient at that host. The
purpose of this survey was two-fold. First, to determine whether the
host accepts mail for unknown recipients at all, and second, what
response the host gives if it does not accept such mail.

(b) An attempt to mail to a known recipient using the MLFL command
rather than the usual MAIL command. This survey was undertaken to
determine the extent of support for the MLFL command among Server hosts,
and the sort of reply received if the Server does not support MLFL. MLFL
is potentially a 'better' form of communication than mail as the message
is sent over a data connection rather than the command connection.
Using the data connection eliminates the 'end-of-mail' marker and
'command reader' problems sometimes encountered over the command
connection.

The ground rules of the survey were that all sites listed as Servers in
the MIT/SAIL Host table were surveyed. In many cases, a host listed as
a Server would not respond to an ICP at any time during the period of
the survey. Once a host responded with what seemed to me to be a
'definitive' answer, I marked it as such and stopped surveying it.

MLFL Survey

The algorithm used was to ICP to socket 3 of the server (the standard
old-FTP socket). Once a 300 response was received, I sent the MLFL
command. Where I had the name of a real mailbox at a site (a
Header-person, for example) I used that, otherwise the name "**". If a
site asked for a password (response 504) after the MLFL command I gave
"USER NETML" "PASS NETML" and retried the MLFL. If the server replied
with a 255 SOCK command, I listened for the data-connection to be
established. When it was, I transferred the mail file. Interestingly
enough, most sites implement an RFC queueing algorithm that will allow
the user site to attempt to establish the data-connection from its end.

Complete FTP scripts may be found, if you are interested, on MIT-DM,
file NETDOC;MLFL SURVEY.

Sites are grouped by the general result they gave.

-site-   -last ftp reply if lost-   -when-

1) Sites that lost for various reasons:

BNL   530 NOT LOGGED IN.   after MLFL
HARV-10   431 INVALID ENTRY - Try again   after USER
LLL-MFE   454 Login please   after SOCK
LONDON   000 INDRA FTP Version 2.00 ...   after ICP
NBS-10   454 Login please   after SOCK
WHARTON   454 DATA Connection error ...   after SOCK
WPAFB-AFAL   454 Login please   after SOCK

Note: "when" describes the last action performed by the surveyer before
the indicated anomalous response.

    after ICP --   surveyer had done ICP to socket 3
    after MLFL --   surveyer had sent MLFL command
    after USER --   surveyer had sent USER NETML in response to
                        "504 Login please"
    after SOCK --   surveyer had attempted to connect to specified
                        data socket

2) Sites that don't support MLFL and say so:

AFWL   501 ML<?>FL **
CCA-SPEECH   501 ML<?>FL **
EGLIN   501 ML<?>FL **
LBL   506 Command not implemented.
LONDON-VDH   500 Command unrecognized
UCLA-CCN   500 COMMAND UNRECOGNIZED
WPAFB   501 ML<?>FL **

3) Sites that support MLFL (or at least go through all the right
motions):

AMES-67   MIT-AI   SRI-KL
BBN-TENEX   MIT-DMS   SU-AI
BBN-TENEXA   MIT-MC   SUMEX-AIM
BBN-TENEXD   MIT-ML   UCLA-ATS
BBN-TENEXE   MIT-XX   UCLA-SECURITY
BBN-UNIX   NBS-UNIX   USC-ECL
CCA-TENEX   OFFICE-1   USC-ISI
CMU-10A   PARC-MAXC   USC-ISIB
CMU-10B   PARC-MAXC2   USC-ISIC

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DEC-MARLBORO     RADC-TOPS20      USC-ISIE
I4-TENEX         RAND-RCC         UTEXAS
ILL-UNIX         RAND-UNIX
LL               RUTGERS
LL-ASG           SRI-KA
```

4) Sites that support MLFL but require "USER NETML" "PASS NETML"
(Multics):

```
MIT-MULTICS
RADC-MULTICS
```

5) Others:

a) Sites that might support it if I could mail to a real user (some of
these run operating systems that are "known to work", e.g. TENEX):

```
BBN-TENEXB       450 No such mailbox at this site.
CCA-SDMS         450 User Unknown
CCTC             451 User Not Recognized
CMU-10D          507  USER NOT FOUND: **
DTI              451 User Not Recognized
LL-11            450 User Unknown
LL-XN            450 User Unknown
NCSC             451 User Not Recognized
NOSC-CC          451 User Not Recognized
NOSC-SDL         451 User Not Recognized
NTIA-ITS         451 User Not Recognized
OFFICE-2         450 No such mailbox at this site.
RADC-XPER        451 User Not Recognized
SDAC-44          431 User name invalid
SDAC-UNIX        451 User Not Recognized
SRI-UNIX         451 User Not Recognized
```

b) Sites that either never responded to an ICP to socket 3, or were not
accepting FTP users:

```
ANL              I4B-TENEX        NOSC-SECURE1
ARPA-DMS         ISI-SPEECH11     NSWC-WO
CMU-CMMP         LBL-UNIX         NUSC
CTO-DDS          LLL-COMP         NUSC-NPT
DTNSRDC          MOFFET-ARC       NWC
FNWC             NADC             NYU
GUNTER-UNIX      NDRE             PENT-UNIX
```

                        MAIL Survey

The mechanics of the MAIL survey were similar to those of the MLFL
survey. The command was "MAIL Fzorkness" (an account unlikely to exist
on any host). The responses are grouped into a few general categories.

Complete FTP results may be found on MIT-DM, file NETDOC;MAIL SURVEY.

-site-   -last response-

1) Sites that lost completely.

LONDON   000 INDRA FTP Version <>.00 ...

2) Sites that accept mail to an unknown recipient.

BNL   MIT-ML   USC-ISI
MIT-AI   RAND-RCC   USC-ISIB
MIT-DMS   UCLA-CCN   USC-ISIC
MIT-MC   USC-ECL   USC-ISIE

3) Sites that refuse mail to an unknown recipient (grouped by response).

SDAC-44   431 User name invalid

BBN-TENEX   450 No such mailbox at this site.
BBN-TENEXA   450 No such mailbox at this site.
BBN-TENEXB   450 No such mailbox at this site.
BBN-TENEXD   450 No such mailbox at this site.
BBN-TENEXE   450 No such mailbox at this site.
BBN-UNIX   450 User Unknown
CCA-SDMS   450 User Unknown
CCTC   451 User Unknown
EDN-UNIX   450 User Unknown
I4-TENEX   450 No such mailbox at this site.
ILL-UNIX   450 User unknown
LL   450 No such mailbox at LL
LL-ASG   450 User unknown
LL-XN   450 User unknown
MIT-MULTICS   450 Cannot locate mailbox for \Fzorkness\
MIT-XX   450 No such mailbox at this site.
NBS-UNIX   450 User Unknown
NCSC   450 User Unknown
NOSC-CC   450 User Unknown
NOSC-SDL   450 User Unknown
NTIA-ITS   450 User Unknown
OFFICE-1   450 No such mailbox at this site.
OFFICE-2   450 No such mailbox at this site.
PARC-MAXC   450 No such mailbox at this site.

```
PARC-MAXC2         450 No such mailbox at this site.
RADC-XPER          450 User Unknown
RADC-MULTICS       450  Cannot locate mailbox for \Fzorkness\
RADC-TOPS20        450 No such mailbox at this site.
RAND-UNIX          450 User Unknown
RUTGERS            450 No such mailbox at this site.
SDAC-UNIX          450 User Unknown
SRI-KA             450 No such mailbox at this site.
SRI-KL             450 No such mailbox at this site.
SU-AI              450 I don't know anybody named Fzorkness
SUMEX-AIM          450 No such mailbox at this site.
UCLA-ATS           450 User Unknown
UCLA-SECURITY      450 User Unknown
UTEXAS             450 User Unknown


CCA-TENEX          451 No such mailbox at this site.


AFWL               501 MA<?>IL Fzorkness
CCA-SPEECH         501 MA<?>IL Fzorkness
EGLIN              501 MA<?>IL Fzorkness
WPAFB              501 MA<?>IL Fzorkness


AMES-67            503 COMMAND \MAIL FZORKNESS\ IGNORED: UNKNOWN USER


LBL                506 Command not implemented.


CMU-10A            507 % USER NOT FOUND: FZORKNESS
CMU-10B            507 % USER NOT FOUND: FZORKNESS
CMU-10D            507 % USER NOT FOUND: FZORKNESS
HARV-10            507  No such user as FZORKNESS
LLL-MFE            507  No such user as FZORKNESS
NBS-10             507  No such user as FZORKNESS
WHARTON            507  No such user as FZORKN
WPAFB-AFAL         507  No such user as FZORKNESS
```

4) Sites to which I was never able to connect, or which were not
accepting users.

```
ANL              I4B-TENEX        NOSC-SECURE1
ARPA-DMS         ISI-SPEECH11     NSWC-WO
CMU-CMMP         LBL-UNIX         NUSC
CTO-DDS          LL-11            NUSC-NPT
DEC-MARLBORO     LLL-COMP         NWC
DTI              LONDON-VDH       NYU
DTNSRDC          MOFFETT-ARC      SRI-UNIX
FNWC             NADC             SU-ISL
GUNTER-UNIX      NDRE
```