Network Working Group Request for Comments: 751

NIC: nnnnn

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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.

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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

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

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```
PARC-MAXC2
               450 No such mailbox at this site.
               450 User Unknown
RADC-XPER
               450 Cannot locate mailbox for \Fzorkness\
RADC-MULTICS
RADC-TOPS20
               450 No such mailbox at this site.
               450 User Unknown
RAND-UNIX
               450 No such mailbox at this site.
RUTGERS
SDAC-UNIX
              450 User Unknown
              450 No such mailbox at this site.
SRI-KA
              450 No such mailbox at this site.
SRI-KL
               450 I don't know anybody named Fzorkness
SU-AI
               450 No such mailbox at this site.
SUMEX-AIM
UCLA-ATS
               450 User Unknown
UCLA-SECURITY 450 User Unknown
               450 User Unknown
UTEXAS
CCA-TENEX
              451 No such mailbox at this site.
               501 MA<?>IL Fzorkness
               501 MA<?>IL Fzorkness
CCA-SPEECH
               501 MA<?>IL Fzorkness
EGLIN
               501 MA<?>IL Fzorkness
WPAFB
AMES-67 503 COMMAND \MAIL FZORKNESS\ IGNORED: UNKNOWN USER
LBL
               506 Command not implemented.
               507 % USER NOT FOUND: FZORKNESS
CMU-10A
               507 % USER NOT FOUND: FZORKNESS
CMU-10B
               507 % USER NOT FOUND: FZORKNESS
CMU-10D
HARV-10
               507 No such user as FZORKNESS
               507 No such user as FZORKNESS
LLL-MFE
               507 No such user as FZORKNESS
NBS-10
               507 No such user as FZORKN
WHARTON
               507 No such user as FZORKNESS
WPAFB-AFAL
```

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-11NUSC-NPT DEC-MARLBORO LLL-COMP NWC DTI LONDON-VDH NYU DTNSRDC MOFFETT-ARC SRI-UNIX SU-ISL FNWC NADC GUNTER-UNIX NDRE