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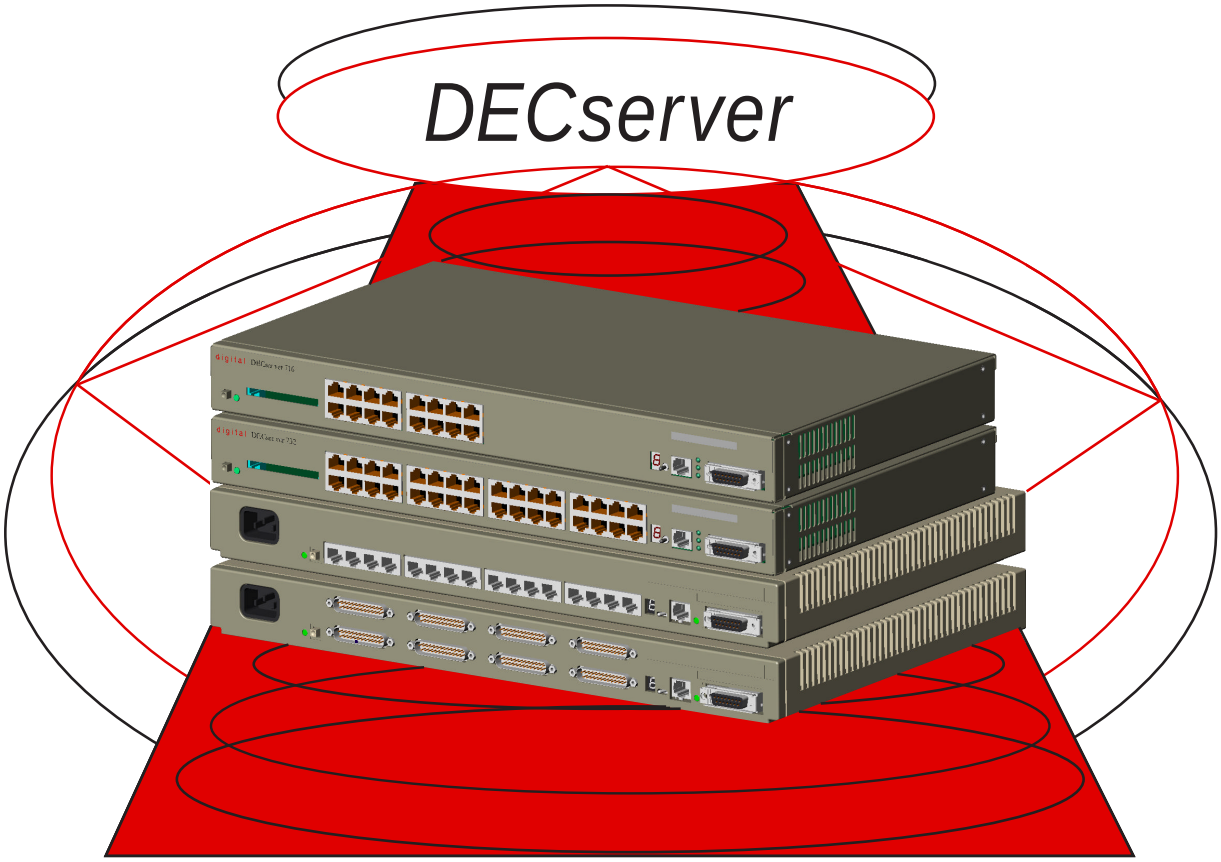
Network Access Software
Problem Solving Guide



PG-DNAS0-00

Network Access Software
Problem Solving Guide

Part Number: PG-DNAS0-00

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This book describes how to solve problems if an error is encountered while using the Network Access Software.

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Preface

Overview

Purpose

This guide describes problem-solving tools and procedures for the various network access servers.

Intended Audience

The *Network Access Server Problem Solving Guide* is written for the person who troubleshoots the network access server.

Conventions Used in This Document

Conventions

Familiarizing yourself with the conventions discussed in this section will help you use this manual effectively.

- The Return key, which executes all commands, is not shown in command line displays.
- The Local> prompt, which appears in most examples, is the default access server prompt. You can change this prompt to something other than Local> with the SET/DEFINE/CHANGE SERVER PROMPT command.
- All numbers are in decimal notation unless otherwise noted.
- All Ethernet addresses are given in hexadecimal notation.

Typographical Conventions

The following typographical conventions are used in this manual:

Convention	Description
`Special type`	Special type in command examples indicates system output or user input.
UPPERCASE	Uppercase letters in command lines indicate keywords that must be entered. You can enter them in either uppercase or lowercase. You can abbreviate command keywords to the first three characters or to the minimum unique abbreviation.
lowercase italics	Lowercase italics in command syntax indicates variables for which either the user or the access server supplies a value.
{ }	Braces in command syntax indicate that you must choose one of the enclosed options. (Do not type the braces.)
[ ]	Brackets in command syntax indicate that the enclosed values are optional. You can enter one or none. (Do not type the brackets.)
BOLD	Bold type in summaries of characteristics indicates default values.
Ctrl/x	Hold down the Ctrl key; then press the key specified by x. (The access server displays this key combination as ^x.)
/	A slash indicates related alternate commands or options. For example, SET/DEFINE/CHANGE PORT refers to the SET PORT, DEFINE PORT, and CHANGE PORT commands. The slash (/) is not part of the command syntax.
n	A lowercase italic n indicates a numeric value.

Associated Documents

Additional Reading

Refer to the following documents for more information:

- Release Notes — Provides the latest information about the access server. The release notes are available with the software distribution kit and are stored in the load host directory with the other software distribution files.
- *Network Access Software Installation Guide (Windows 9x,me,2000 & NT, OpenVMS, UNIX)* — Describes how to install the network access software on your operating system.
- *Network Access Software Commands Reference Guide* — Provides the commands to operate and manage the access server.
- *Network Access Software Management Guide* — Provides the procedures to perform management tasks for the various access servers.

Chapter 1

Software Installation Problems

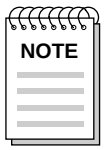
Overview

Introduction

The following table lists the steps and page references to help you solve software installation problems:

Problem	Solution	See Page
Access Server Software does not Load Properly	1. Verify the Network Access Server Hardware	1-2
	2. Verify the Image Name and Flash RAM	1-2
	3. Verify the Load Host	1-3
Downline Load Request Failure	4. Ensure the Logical MO*$LOAD Is Defined Correctly on the OpenVMS Host	1-9
	5. Ensure the Access Server Software Image File Name Is Defined Correctly	1-10

The section *Successful Downline Load Messages* shows examples of a downline load of the software.



*When you see **MO*$LOAD,** enter MOM$LOAD for the DECnet Phase IV software and MOP$LOAD for the DECnet/OSI.*

Access Server Software Does Not Load Properly

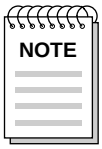
Verify the Network Access Server Hardware

Check the LEDs on the hardware. For information on the LED codes and site preparation information, refer to your access server hardware documentation.

Verify the Image Name and Flash RAM

The load image name should reflect your access server type and appropriate version number.

	DECserver 700	DECserver 90M	DECserver 900
Software	WWENG2	MNENG2	WWENG2
Image(s)		MNENG3	



MNENG3 is a non-compressed image for DS90M platforms. Use of MNENG3 requires that the DS90M is configured with 2 MB Flash RAM.

Your access server may be equipped with Flash RAM. Flash RAM maintains an image of your current software on your access server.

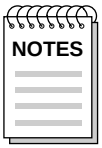
To display the image name and determine if your system is equipped with Flash RAM, enter the following command:

```
Local> SHOW MEMORY CONFIGURATION

Dynamic RAM:          4M bytes

Non-Volatile RAM:     128K bytes

FlashRAM:
Installed:            Yes
  Total size:         2 Mbytes
  Boot block:         Valid
  Load image:
    Name:             WWENG2
    Size:             1756988 bytes
    Version:          Network Access SW Vn.n BLnn-nn
```



If Flash RAM is installed but its boot block is invalid, then the total memory size will appear as zero.

If your system is equipped with Flash RAM, you can use the INITIALIZE command to load from either Flash RAM or the load host. If your system is not equipped with Flash RAM, you can only initialize from the load host. For more information on initialization, refer to the Network Access Server Management Guide.

The default INITIALIZE command loads from Flash RAM only if the load image name displayed with SHOW MEMORY CONFIGURATION matches the software name shown in the LIST SERVER display.

Verify the Load Host

Consult the following information to ensure that your operating system is compatible with the software. If your operating system is compatible, perform the tasks listed in Verify the Software Location and File Name through Verify the Load Host Is Available and Service Is Enabled.

Operating System/Software	Minimum Version Required
DECnet OSI for OpenVMS operating system	Version 5.5
Digital UNIX operating system	Version 1.0
Microsoft Windows 9x,me,2000 operating system	Not applicable
Microsoft Windows NT operating system	Version 3.5.1
OpenVMS VAX operating system	Version 5.0

For UNIX systems:

The following generic operating systems are supported. Complete support cannot be granted on systems where customization has taken place. In addition, some UNIX implementations, other than those in the following list, may operate successfully, but no support is implied.

BOOTP/TFTP - One of the following:

Operating System	Version
SunOS	Release 4.0
Digital UNIX	Version 1.0
IBM AIX	Version 3.1.1
SCO UNIX	System V/386 Release 3.2 V2.0
HP-UX	8.0

Some System V systems, such as HP-UX and SCO, may not support the upline dump of server memory.

OpenVMS Tailoring:

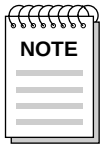
For OpenVMS Version 5.x systems, the following OpenVMS classes are required for full functionality of this layered product:

- OpenVMS required saveset
- Network support
- Utilities

Verify the Software Location and File Name

This section explains how to ensure that the access server software image is located in the correct directory.

At an OpenVMS load host:



In the following instructions, when you see MO$LOAD, enter MOM$LOAD for the DECnet Phase IV software and MOP$LOAD for the DECnet/OSI software.*

Step	Action
1	Check the logical symbol MO*$LOAD to see if it is defined in the DECSERVER directory: $ **SHOW LOGICAL MO*$LOAD** MO*$LOAD must be defined to include SYS$SYSROOT:[DECSERVER]. If MO*$LOAD is not defined correctly, enter the following statement in the system start-up file on the load host, and then execute the command: $ **DEFINE/SYSTEM/EXEC MO*$LOAD SYS$SYSROOT:[DECSERVER],other-definitions** Here, *other-definitions* are any equivalent strings previously defined for MO*$LOAD. The definition of MO*$LOAD is set in the start-up procedure SYS$STARTUP:DSV$STARTUP.COM.
2	Determine if the software image file is in the DECSERVER directory: $ **DIRECTORY MO*$LOAD** The directory should contain the name of the access server software image. If you changed the name of the software image on the access server, be sure MO*$LOAD contains this image file. If you are unsure of the name of the software image on the access server, reset the access server to its factory defaults.

At a UNIX load host, do the following

Verify that all distribution software was installed in the appropriate directory:

cd /tftpboot (UNIX)

ls -l

The directory should contain the name of the access server software image and the file: Release_Notes.txt. If it does not contain the image name, refer to the *Network Access Software Installation Guide* for more information. If you have changed the name of the software image on the access server, be sure the appropriate directory contains this image file. If you are unsure of the name of the software image on the access server, do the following:

Step	Action
1	Ensure /**tftpboot** (UNIX) contains the default software image for your access server. For more information on default settings, refer to the *Network Access Server Management Guide.*
2	Reset the access server to its factory defaults.

Ensure the Access Server Is Defined on the Load Host

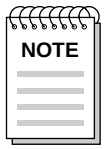
This section explains how to ensure that the access server is defined on the load host.

At an OpenVMS load host:

Ensure your access server is defined in the DSV$CONFIGURE database by entering the following:

$ **@SYS$COMMON:[DECSERVER]DSV$CONFIGURE**

DSV$CONFIGURE's primary function is to configure an access server in the load host database and enable the service circuit. DSV$CONFIGURE supports both the DECnet Phase IV and DECnet/OSI software. DSV$CONFIGURE also supports data created by the procedure DSVCONFIG in earlier versions of the access server software. When you load the current version of the access server software, DSV$CONFIGURE automatically converts any DSVCONFIG data to the format of the current version.



If you are downline loading with BOOTP, do not use DSV$CONFIGURE.

For more information on the DSV$CONFIGURE database, refer to the *Network Access Software Installation Guide*.

At a UNIX load host:

```
# /etc/list_Decserver
```

```
myds: tc=DS.default: ha=08002BFC0176: ip=192.12.79.6: bf=MNENG2:
gw=192.12.79.3: sm=255.255.255.0
```

If your access server is missing or contains incorrect information, refer to the *Network Access Software Installation Guide* for information on adding an access server.

Ensure the Access Server Is Entered in /etc/bootptab

If you are using Internet Bootstrap Protocol (BOOTP) and Trivial File Transfer Protocol (TFTP) to downline load the access server software, ensure the /etc/ bootptab file contains the following information: home directory, Internet address, hardware address, hardware type, and boot file name. Note that some implementations of the BOOTP protocol require more information. For more information on the /etc/bootptab file, refer to the *Network Access Software Installation Guide*.

Verify Using Correct Service Circuit

If your load host has more than one Ethernet controller, be sure that you used the correct service circuit-ID during the DSV$CONFIGURE procedure. If you do not know the load host service circuit-ID, enter the following NCP command to display active circuits.

At DECnet Phase IV load hosts:

```
NCP> SHOW ACTIVE CIRCUIT
Active circuit Volatile Summary as of 29-NOV-2000 11:55:31
Circuit  State  Loopback Adjacent
                 Name    Routing Node

MFA-0      on    x.xxx    (TSTSIT)
```

At DECnet/OSI load hosts:

Step	Action
1	Enter a SHOW SYSTEM command to see if the Net$MOP process exists on the load host. If NET$MOP is not running, enter the following commands from the SYSTEM account: $ **@SYS$SYSTEM:STARTUP NETWORK MOP** $ **@SYS$STARTUP:DSV$STARTUP**
2	If the file is not found, make sure MOP$NAMED_LOAD points to MOP$LOAD and that the definition of MOP$LOAD includes the SYS$SYSROOT:[DECSERVER] directory

Verify the Load Host Is Available and Service Is Enabled

On the load host, verify that the network is up, Ethernet connection is on, and service is enabled on the service circuit. If the service is not enabled, the load host ignores the load request.

At an OpenVMS load host, enter the following:

```
$ MCR NCP

NCP> SHOW ACTIVE CIRCUIT CHARACTERISTICS

Active Circuit Volatile Characteristics as of 29-NOV-2000 11:55:18

Circuit                  = MFA-0
State                    = on
Service                  = enabled
Designated router        = x.xxx (TSTSIT)
Cost                     = 10
Maximum routers allowed  = 33
Router priority          = 64
Hello timer              = 15
Type                     = FDDI
Adjacent node            = x.xxx (TSTSIT)
Listen timer             = 4
```

Verify State is on and Service is enabled.

If the display shows that the service is disabled, enter the following command to check if there are any users or applications using the circuit:

```
NCP> SHOW KNOWN LINKS
```

If there are no known links active, enter the following commands to enable service circuit BNA-0. Enabling the circuit disconnects the active links.

```
NCP> SET CIR BNA-0 STATE OFF
NCP> SET CIR BNA-0 SERVICE ENABLED
NCP> SET CIR BNA-0 STATE ON
NCP> EXIT
$
```

Downline Load Request Failure

Introduction

If you are performing a downline load and you receive an error message on your load host console (OpenVMS) or in the /usr/spool/mqueue/syslog file (ULTRIX), do the following:

- Ensure that the logical MO*$LOAD is defined correctly (on OpenVMS load hosts only).
- Ensure that the access server software image file name is defined correctly.

Ensure the Logical MO*$LOAD Is Defined Correctly on the OpenVMS Host

Problem: The following message appears on the load host console:

```
%%%%%%%%%% OPCOM 29-NOV-2000 11:55:18 %%%%%%%%%%
Message from user DECNET on SATRN
DECnet event 0.7, aborted service request
From node 12.467 (SATRN), 29-NOV-2000 11:55:18
Circuit BNA-0, Line open error, File open error, Load file
%MOM-E-OPENIN, error opening SYS$COMMON:[MOM$SYSTEM]WWENG2.SYS; as input
-RMS-E-FNF, file not found
Node = 13.997 (GEMNI), Ethernet address = 08-00-2B-08-27-57
```

Explanation: The logical MO*$LOAD is pointing to the MO*$SYSTEM directory, not the DECSERVER directory.

Action: Define the MO*$LOAD logical to point to the DECSERVER directory. See the section *Verify the Software Location and File Name* (page 2-4).

Ensure the Access Server Software Image File Name Is Defined Correctly

For an OpenVMS load host:

Problem: The following message appears on the load host console:

```
%%%%%%%%%% OPCOM 29-NOV-2000 11:55:18 %%%%%%%%%%
Message from user DECNET on SATRN
DECnet event 0.7, aborted service request
From node 12.467 (SATRN), 29-NOV-2000 11:55:18
Circuit BNA-0, Line open error, File open error, Load file
%MOM-E-OPENIN, error opening
SYS$COMMON:[DECSERVER]WWENG2.SYS; as input
-RMS-E-FNF, file not found
Node = 13.997 (GEMNI), Ethernet address = 08-00-2B-08-27-57
```

Explanation: The access server software image file does not exist on the load host.

Action: Verify the software location and file specification. See the section *Verify the Software Location and File Name* (page 2-4).

Successful Downline Load Messages

Messages

The following examples show the messages for a successful downline load.

For an OpenVMS load host:

Problem: The following messages appear on the load host console:

```
%%%%%%%%%% OPCOM 29-NOV-2000 11:55:18 %%%%%%%%%%
Message from user DECNET on SATRN
DECnet event 0.3, automatic line service
From node 12.467 (SATRN), 29-NOV-2000 11:55:18
Circuit BNA-0, Load, Requested, Node = 13.997 (MMS1)
File = MOM$SYSTEM_SOFTID:WWENG2, Operating system
Ethernet address = 08-00-2B-08-27-57

%%%%%%%%%% OPCOM 29-NOV-2000 11:55:18 %%%%%%%%%%
Message from user DECNET on SATRN
DECnet event 0.3, automatic line service
From node 12.467 (SATRN), 29-NOV-2000 11:55:18
Circuit BNA-0, Load, Successful, Node = 13.997 (MMS1)
File = MOM$SYSTEM_SOFTID:WWENG2, Operating system
Ethernet address = 08-00-2B-08-27-57
```

Explanation: The access server software is successfully installed. Note that you should enable event logging for events 0.3 and 0.7 on the DECnet load host. Refer to the DECnet load host documentation.

Action: No user action is required.

Chapter 2

LAT Service Connection Problems

Overview

Introduction

The following table lists the steps and page references to help you solve problems that can occur when you attempt to connect to various resources using the LAT protocol.

Problem	Solution	See Page
Connection to resources using the LAT protocol fails	1. Verify the LAT Service Configuration	2-2
	2. Verify the LAT Service Node Software	2-2
	3. Verify LAT Group Codes	2-4
	4. Verify Access Server Memory Usage	2-6
	5. Verify Service Rating	2-9
	6. Verify Nodes That Offer the Service	2-10
	7. Verify the Connection to a Service	2-10
	8. Verify Communications to Another Access Server	2-11

Connection to Resources Using the LAT Protocol Fails

Verify the LAT Service Configuration

This section enables you to determine whether a LAT service is defined and properly configured on your access server.

On the access server that offers the service, enter the following command. Substitute the name of the service for Local_Service.

```
Local> SHOW SERVICE Local_Service CHARACTERISTICS

Service: Local_Service

Identification: Device Connected to a Terminal Server

Ports: 15

Rating: 90

Enabled Characteristics:

Connections, Queuing
```

Verify that the service is set up on the desired ports and connections are enabled. (If enabled, Connections appears in the list under Enabled Characteristics.) For more information on configuring and managing LAT services, refer to the *Network Access Software Management Guide*.

Verify the LAT Service Node Software

This section enables you to determine whether the LAT software is running on your LAT service node. Your service node operating system documentation provides details about the procedure. For OpenVMS systems, refer to the LAT software documentation that comes with your operating system.

At an OpenVMS host (Version 5.4-1 and later):

Ask the system manager of a node that offers the LAT service to invoke the port driver as follows:

```
$ RUN SYS$SYSTEM:LATCP
```

- If you do not receive the LATCP prompt, LAT software is not running on your OpenVMS service node.

  Action: Run LAT$STARTUP using the following command:

  ```
  $ @SYS$STARTUP:LAT$STARTUP.COM
  ```

- If you receive the LATCP prompt, verify the status of the LAT protocol by looking at the Node State and Incoming Connections. Enter the following command at the LATCP prompt:

```
LATCP> SHOW NODE

Node Name: EARTH                  LAT Protocol Version: 5.2
Node State:OFF
Node Ident: A VAX 6250 Cluster Member

Incoming Connections: Disabled Incoming Session Limit: 255
Outgoing Connections:  Enabled Outgoing Session Limit: 255
Circuit Timer (msec):       80 Keepalive Timer (sec)  : 15
Retransmit Limit (msg):      8 Node Limit (nodes):     100
Multicast Timer (sec):      30 CPU Rating:             100

User Groups:             80-89

Service Groups:         60,125

Service Name      Status     Rating     Identification
EARTH             Available  114 D      A VAX 6250 Cluster Member
GALAXY            Available  114 D      A VAX 6250 Cluster Member
------------------------------------------------------------------
LAT Control Program, Version 5.4-1
------------------------------------------------------------------
LATCP>
```

If the Node State is OFF, the service node software is not running.

Action: Run LAT$STARTUP using the following command:

```
$ @SYS$STARTUP:LAT$STARTUP.COM
```

If Incoming Connections are Disabled, connections are not allowed to the service.

Action: Enable connections using the following command:

```
LATCP> SET NODE/CONNECTIONS=INCOMING
```

To allow both incoming and outgoing connections, use the following command:

```
LATCP> SET NODE/CONNECTIONS=BOTH
```

Verify LAT Group Codes

To determine whether a user's access server port has a group code in common with the service, enter the following command. Substitute the port number for 1.

```
Local> SHOW PORT 1

Port 1: Mariellen S.          Server: GEMINI

Character Size:      8        Input Speed:              9600
Flow Control:      XON        Output Speed:             9600
Parity:           None        Signal Control:       Disabled
Stop Bits:     Dynamic        Signal Select: CTS-DSR-RTS-DTR

Access:          Local        Local Switch:               ^^
Backwards Switch: None        Name:                   PORT_1
Break:           Local        Session Limit:               4
Forwards Switch:     '        Type:                    Ansi
Default Protocol:  LAT        Default Menu:            None
Autolink Timer One:10 Two:10  Dialer Script:           None

Preferred Service: GALAXY

Authorized Groups: 60, 70
(Current) Groups: 60

Enabled Characteristics:
Autobaud, Autoconnect, Autoprompt, Broadcast, Input Flow
Control, Loss Notification, Message Codes, Output Flow
Control, Verification
```

If group codes are enabled on the access server port, enter the following command. Substitute the name of the service for service-name.

```
Local> SHOW SERVICE service-name
Local -711- Service service-name not known
```

If the service is not known, verify the group codes that are enabled for the service.

For services offered by the access server that you are on, enter the following command on your access server:

```
Local> SHOW SERVER CHARACTERISTICS

Network Access SW Vn.n for DS716 BLnn ROM Vn.n-n Uptime: 13 16:36:23

Address: 08-00-2B-02-F2-BB Name: MMS1 Number: 65535

Identification: Pubs terminal server

Circuit Timer:    80    Password Limit:         3
Console Port:      1    Prompt:             Local>
Inactivity Timer: 30    Queue Limit:          100
Keepalive Timer:  20    Retransmit Limit:       8
Multicast Timer:  30    Session Limit:        128
Node Limit:      200    Software:           WWENG2
                        TFTP Host:            None

Service Groups: 60, 70, 80

Enabled Characteristics:
Announcements, Broadcast, Dump, Lock
```

In this case, the Service Groups are 60, 70, and 80. Ensure that both the Authorized and Current Groups defined for the port contain at least one of the Service Groups defined on the access server. For more information on group codes, refer to the *Network Access Server Management Guide*.

For services offered by a service node:

At an OpenVMS host, enter the following commands:

```
$ RUN SYS$SYSTEM:LATCP
LATCP> SHOW CHARACTERISTICS

Node Name:  SATRN              LAT Protocol Version: 5.2
Node State: On
Node Ident: A VAX 6250 Cluster Member

Incoming Connections: Enabled Incoming Session Limit: 255
Outgoing Connections: Enabled Outgoing Session Limit: 255

Circuit Timer (msec):  80 Keepalive Timer (sec): 15
Retransmit Limit (msg): 8 Node Limit (nodes):   100
Multicast Timer (sec): 30 CPU Rating:           100

User Groups:    60, 70

Service Groups: 60, 70

Service Name  Status    Rating  Identification
EARTH         Available 114 D   A VAX 6250 Cluster Member
GALAXY        Available 114 D   A VAX 6250 Cluster Member
------------------------------------------------------------------
LAT Control Program, Version 5.4-1
------------------------------------------------------------------
LATCP>
```

In this case, the Service Groups are 60 and 70. Ensure that both the Authorized and Current Groups defined for the port contain at least one of the service node's Service Groups. For more information on group codes, refer to the *Network Access Server Management Guide*.

Verify Access Server Memory Usage

The access server has a limited pool of memory. With large networks or many port sessions, it is possible to run out of memory. When access server memory is filled, the access server database cannot hold additional information about nodes and services. To verify that you have a sufficient pool of available memory, enter the following command:

```
Local> SHOW MEMORY STATUS

High Pool Size:                892943 bytes

High Pool Used:                563516 bytes

Low Pool Size:                 52480 bytes

Low Pool Used:                 1940 bytes
```

```
Command Pool Size:              20480 bytes

Command Pool Used:               8428 bytes

MOP Pool Size:                   4096 bytes

MOP Pool Used:                    148 bytes
```

To display the memory configuration of your system, enter the following command:

```
Local> SHOW MEMORY CONFIGURATION

Dynamic RAM:          4M bytes

Non-Volatile RAM:     128K bytes

FlashRAM:
  Installed:          Yes
  Total size:         2 Mbytes
  Boot block:         Valid
  Load image:
    Name:             WWENG2
    Size:             1756988 bytes
    Version:          Network Access SW Vn.n BLnn-nn
```

Resource errors indicate the number of times an internal data structure could not be created due to the lack of system memory. To look at resource errors, enter the following command:

```
Local> SHOW SERVER STATUS

Network Access SW Vn.n for DS716 BLnn ROM Vn.n-n Uptime: 13 16:36:23
Address: 08-00-2B-02-F2-BB Name: GEMNI Number: 65535

                     Cur High Max
Active Ports:          8   10   16 Minutes to Shutdown: N/A
Active Users:          8   10   16 Discarded Nodes:      15
Queue Entries:         0    1  100 Resource Errors:      57
Available Services: 246 253  N/A Port Framing Errors:   0
Local Services:        1    1   20 Port Parity Errors:    0
Reachable Nodes:     195 195  200 Port Overrun Errors:   0

                                    Boot Device: Ethernet: 0
Active Circuits:       9    9   32 Primary Host:      PEACH
Connected Nodes:       7    9   32 Load Address:AA-00-04-00-46-DC
Connected Sessions:   12   20   64 Dump Address: None Available
% CPU Used:           15   36  100 Console User:AA-00-04-00-D3-71
% Memory Used:        80   80  100 Boot Protocol: MOP

Selftest Status: Normal
Software Status: Normal
```

If the number of Resource Errors is greater than zero, the access server memory might be full. Make the following corrections:

Step	Action
1	Adjust the group codes to restrict the least-used nodes from being stored in the access server database. For information on group codes, refer to the *Network Access Server Management Guide.*
2	Adjust the access server node, session, and queue limits to restrict memory usage. For information on managing an access server, refer to the *Network Access Server Management Guide*. Reducing the node limit immediately lessens the number of service nodes stored in the database and frees some memory. The following command shows how to set the node limit to 100: Local> **CHANGE SERVER NODE LIMIT 100**

3	Verify the ports on the access server for sessions in the Disconnecting or Disconnected state. Enter the following command. Substitute the port number for 5:
	
	`Local>` **`SHOW SESSIONS PORT 5`**
	`Port 5: Jack Local Mode Current Session: 1 - Session 1:`
	`Disconnecting Interactive EARTH`
	
	Then, perform the following:
	
	a. Find the port sessions that have the status Disconnecting or Disconnected.
	
	b. Disconnect these sessions at the port.
	
	c. If there are no other sessions, log out the same ports.

Verify Service Rating

To determine if a LAT service is available, verify the service rating.

For services offered by the access server that you are on, enter the following command on your access server. Substitute the user's service name for MONAHON:

```
Local> SHOW SERVICE MONAHON CHARACTERISTICS

Service: MONAHON

Identification: Internal Production System
Ports: 15
Rating: 0

Enabled Characteristics:

Connections, Queuing
```

If the service rating is zero, all ports that offer the service are in use and queuing is either disabled or the queue is full. If the service rating is 90, all ports are in use, but there is room in the queue. For more information on service ratings and port queuing, refer to the *Network Access Server Management Guide*.

For services offered by a service node, enter the following command on your access server. Substitute the name of the service for GALAXY.

```
Local> SHOW SERVICE GALAXY

Service GALAXY - 2 Connected

Node Name   Status    Rating   Identification
GALAXY      Reachable 0        VAX
```

If the service rating is zero, the service node cannot accept any new connections. For more information on service ratings, refer to the *Network Access Server Management Guide*.

Verify Nodes That Offer the Service

To verify nodes that offer a LAT service, enter the following access server command.

Substitute the user's service name for MONAHON.

```
Local> SHOW SERVICE MONAHON
```

If there are any nodes that offer the service but should not, you need to remove the service. The following shows how to remove a service (in this case, MONAHON), from an access server, an OpenVMS host, and an ULTRIX host:

For services offered by a access server:

```
Local> CLEAR SERVICE MONAHON
Local> PURGE SERVICE MONAHON
```

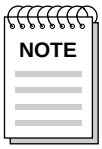
For services offered by an OpenVMS service node:

```
$ RUN SYS$SYSTEM:LATCP
LATCP> DELETE SERVICE MONAHON
```

Verify the Connection to a Service

To test the connection between the user's port and the service, enter the following command at the user's access server port. Substitute the name of the service for service-name:

```
Local> TEST SERVICE service-name LOOPBACK EXTERNAL
```



The Multisessions characteristic must be Disabled on your port before you can enter the TEST SERVICE command.

When the test is completed, the access server displays a report of the test results. If a connection cannot be made to the service, enter the following command to test the ability of the service to accept connections:

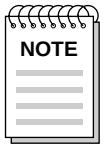
```
Local> TEST SERVICE service-name LOOPBACK INTERNAL
```

For more information on using the TEST SERVICE command, refer to the *Network Access Software Commands Reference Guide*.

Verify Communications to Another Access Server

If you are on a different access server than the one offering the service, verify that the two access servers can communicate. Enter the following command on the user's access server:

```
Local> TEST LOOP 08-2B-66-10-12-61
```



When you use the TEST LOOP command, enter the Ethernet address of the target access server.

For more information on using the TEST LOOP command, refer to the *Network Access Software Commands Reference Guide*.

Chapter 3

Telnet Resource Problems

Overview

Introduction

The following table lists steps and page references to help you solve problems that can occur when you attempt to connect to various resources using the Telnet protocol.

Problem	Solution	See Page
Telnet Resource Connection Problems Steps	1. Verify Internet Address	3-2
	2. Verify Internet Host Name	3-3
	3. Verify Domain Name System (DNS) Parameters	3-3
	4. Verify Communication to Remote Internet Host	3-3
	5. Verify Access Server Memory Usage	3-4
Telnet Client Keyboard Characters Do Not Display Properly		3-5
Telnet Client Characters Do Not Display on Terminal		3-6
Telnet Client Hung		3-8
Telnet Client Hung After Sending AO Character		3-9
Telnet Client Does Not Respond to the Return Key		3-10
Telnet Client Editor Characters Not Functioning Properly		3-12

Telnet Resource Connection Problems

Introduction

If you experience problems connecting to a Telnet resource, verify the following:

- Internet address
- Internet host name
- Domain name system parameters
- Communication to remote Internet host
- Network access server memory usage

Verify Internet Address

If you are unable to connect to a Telnet resource using an Internet address, enter the following command:

```
Local> SHOW INTERNET

State              Enabled
Internet Address:  0.0.0.0 (Learning)
Subnet Mask:       0.0.0.0
DHCP:              Enabled

TCP Keepalive Timer:120
TCP Keepalive Retry:  8
```

For more information on specifying the TCP/IP network characteristics for your access server, refer to the *Network Access Software Management Guide*.

Step	Action
1	Verify that the Internet address and subnet mask are correct.
2	If you are not using the default subnetwork mask, ensure you set the subnet mask before you set the Internet address.
3	If your Internet address is set to 0.0.0.0, then define your Internet address using the following command. Substitute your Internet address for 195.1.1.60: Local> **CHANGE INTERNET ADDRESS 195.1.1.60**

Verify Internet Host Name

If you are unable to connect to a Telnet resource using an Internet host name, enter the following command:

```
Local> SHOW INTERNET HOST ALL

Internet Address  Name

195.1.1.60        SALES.MKTG.FOO.COM
195.1.1.62        ACCT.MKTG.FOO.COM
```

Verify that the Internet host name is defined in the Internet database. For more information on configuring the Internet host name, refer to the *Network Access Software Management Guide*.

Verify Domain Name System (DNS) Parameters

If you are unable to connect to a Telnet resource using an Internet host name, enter the following command:

```
Local> SHOW INTERNET NAME RESOLUTION CHARACTERISTICS

Domain Name: MKTG.FOO.COM

Resolution Host Limit: 32 Resolution Time Limit:  4
Resolution Mode:  Ordered Resolution Retry Limit: 3

Nameservers: (Locally configured)
195.1.1.81         Local NAMED.MKTG.FOO.COM

Nameservers: (Learned)
195.1.1.91    Local    ELF.MKTG.FOO.COM
195.1.1.16    Local    MINE.FOO.COM
195.1.1.82    Local    NAMED.MKTG.FOO.COM
195.1.1.43    Local    WOLF.PERSNL.FOO.COM
```

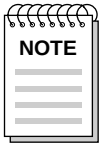
Verify that the DNS parameters are set up correctly. For more information on configuring the access server on a TCP/IP network, refer to the *Network Access Software Management Guide*.

Verify Communication to Remote Internet Host

If you are unable to connect to a Telnet resource, determine if the access server can communicate with the Internet host. Enter the following command. Substitute the Internet address (or host name) for 195.1.1.60:

```
Local> PING 195.1.1.60
```

This command establishes a PING session on the access server port. This session will continue until the PING succeeds (and sends a verification message) or until the timeout period of 30 seconds is exceeded. If this command fails, then the Internet host is unavailable.



The PING command is the same as the TEST INTERNET command. For more information on the PING command, refer to the Network Access Software Commands Reference Guide.

Verify Access Server Memory Usage

If you experience problems connecting to a Telnet resource, verify access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

Telnet Client Keyboard Characters Do Not Display Properly

Solution

If a keyboard character does not display properly during a Telnet session, enter the following command. Substitute the number of the port for 1 and the number of the session for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:      Character
Echo:         Remote      Newline From Term:        <CR>
Toggle Echo:  ^E          Newline From Host:      <CRLF>
Binary:       Disabled    Newline To Term:        <CRLF>
Xmit Size:    8           Newline To Host:        <CRLF>
Rcv Size:     8           Input Flow Control:    Enabled
Signal Req.:  Enabled     Output Flow Control:   Enabled
IP:           +s +f ^Y    Msg. Verification:     Enabled
SYNCH:        +s -f ^X    Switch Characters:     Enabled
AYT:          -s -f ^T    Quote:                    None
AO:           -s +f ^O
EOR:          -s -f None
BRK           -s -f None
```

Verify that the keyboard character is mapped to a Telnet function. For more information on mapping keys to Telnet client functions, refer to the *Network Access Software Management Guide*.

Telnet Client Characters Do Not Display on Terminal

Solution

If characters do not display during a Telnet session, enter the following command. Substitute the number of the port for 1 and the number of the session for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:      Character
Echo:         Locsupr     Newline From Term:       <CR>
Toggle Echo:  ^E          Newline From Host:     <CRLF>
Binary:       Disabled    Newline To Term:       <CRLF>
Xmit Size:    8           Newline To Host:       <CRLF>
Rcv Size:     8           Input Flow Control:   Enabled
Signal Req.:  Enabled     Output Flow Control:  Enabled
IP:           +s +f ^Y    Msg. Verification:    Enabled
SYNCH:        +s -f ^X    Switch Characters:    Enabled
AYT:          -s -f ^T    Quote: None
AO:           -s +f ^O
EOR:          -s -f None
BRK:          -s -f None
```

Procedure

Do the following:

Step	Action
1	Verify that the Echo characteristic is set to Locsupr. (Locsupr causes local echoing to be suppressed.)
2	If Echo is set to Locsupr, verify the Toggle Echo characteristic to determine its setting. (In this case, Toggle Echo is mapped to Ctrl/E.)
3	Press the Toggle Echo character.
4	Enter a command line to see if characters are now displayed. If characters still do not display, see the section *Problems with Interactive Devices* (page 10-3) for information on troubleshooting problems with interactive devices.

More Information

For more information on configuring Telnet client session characteristics, refer to the *Network Access Software Management Guide*.

Telnet Client Hung

Solution

If your Telnet session appears to be hung, the Telnet remote partner could have abnormally disconnected the session. Enter the following commands on your access server port:

```
Local> SEND TELNET AYT
Local> SEND TELNET SYNC
Local> RESUME SESSION
```

If the connection is down, these commands cause retransmissions to the remote partner. If the remote partner does not respond within 7 minutes, the connection aborts with a timeout message.

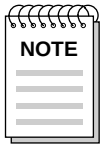
Telnet Client Hung After Sending AO Character

Solution

If your Telnet session appears to be hung and you previously sent an AO (Abort Output) character to the host either directly or indirectly, enter the following command on your access server port to cancel the AO:

```
Local> SEND TELNET RESUME OUTPUT
```

When an AO is sent to the host, the access server also sends a timing mark. The host then returns this timing mark to notify the access server that the AO has been received by the host. The problem occurs when a host does not return the timing mark to the access server.



If the SEND TELNET RESUME OUTPUT command is entered and an AO has not been sent, the Telnet session is not affected.

Telnet Client Does Not Respond to the Return Key

Solution

If the Return key does not function properly during a Telnet session, enter the following command. Substitute the number of the port for 1 and the number of the session for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:      Character
Echo:         Remote      Newline From Term:        <CR>
Toggle Echo:  ^E          Newline From Host:      <CRLF>
Binary:       Disabled    Newline To Term:        <CRLF>
Xmit Size:    8           Newline To Host:        <CRLF>
Rcv Size:     8           Input Flow Control:    Enabled
Signal Req.:  Enabled     Output Flow Control:   Enabled
IP:           +s +f ^Y    Msg. Verification:     Enabled
SYNCH:        +s -f ^X    Switch Characters:     Enabled
AYT:          -s -f ^T    Quote:                    None
AO:           -s +f ^O
EOR:          -s -f None
BRK:          -s -f None
```

Procedure

Some implementations of the Telnet server expect either a <CR> or a <LF> as the Telnet end-of-line terminator. To change the end-of-line terminator, do the following:

Step	Action
1	Verify the Newline to Host characteristic.
2	Set the Newline to Host characteristic to <CR>. Note that you must type the left and right arrows (< >) in the command.
3	Retry the connection to see if the Return key functions properly.
4	If the Return key still does not function properly, set the Newline to Host characteristic to <LF>.
5	Retry the connection to see if the Return key functions as expected.

More Information

For more information on configuring Telnet client session characteristics, refer to the *Network Access Software Management Guide*.

Telnet Client Editor Characters Not Functioning Properly

Solution

If you experience unusual responses to keystrokes when using various editors during a Telnet session, enter the following command. Substitute the number of the port for 1 and the number of the session for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:         Character
Echo:            Remote       Newline From Term:         <CR>
Toggle Echo:     ^E           Newline From Host:       <CRLF>
Binary:          Duplex       Newline To Term:         <CRLF>
Xmit Size:       8            Newline To Host:         <CRLF>
Rcv Size:        8            Input Flow Control:    Disabled
Signal Req.:     Disabled     Output Flow Control:   Disabled
IP:              +s +f ^Y     Msg. Verification:      Enabled
SYNCH:           +s -f ^X     Switch Characters:      Enabled
AYT:             -s -f ^T     Quote:                     None
AO:              -s +f ^O
EOR:             -s -f None
BRK:             -s -f None
```

The port characteristics (Profile, Binary, Signal Req., Input Flow Control, and Output Flow Control) should be set as indicated above. For more information on configuring Telnet client session characteristics, refer to the *Network Access Software Management Guide*.

Chapter 4

SLIP/PPP Problems

Overview

Introduction

This chapter discusses troubleshooting procedures for problems that might occur when you attempt to connect to various resources using the SLIP, SLIP compression (CSLIP), or PPP protocols. For similar conditions, SLIP and PPP share many of the same error messages. As a result, a SLIP message may follow a PPP command.

The following table lists the steps and page references to help you solve problems that can occur when you attempt to connect to various resources using the SLIP/PPP protocols.

Problem	Solution	See Page
SLIP Connection Problems	1. Verify SLIP/CSLIP Enabled	4-3
	2. Verify Access Server Memory Usage	4-3
	3. Verify Internet Address	4-3
	4. Verify SLIP Host Address	4-4
	5. Verify Maximum Transmission Unit (MTU)	4-4
	6. Verify Multisessions - Interactive SLIP Connection Only	4-5
	7. Verify Port Configuration - Dedicated SLIP Connection Only	4-5
SLIP Session Losing Send Packets		4-7
SLIP Session Not Receiving Input		4-8
SLIP Session Will Not Learn the PC Internet Address		4-9

SLIP Connection Problems

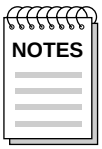
Introduction

You can establish only one datalink session (either SLIP or PPP) on a port at a given time. If you have a session established, another session is not permitted. In addition, SLIP and PPP use the same IP address for a port. You can clear this address only when another datalink session is not using it.

Verify SLIP/CSLIP Enabled

To determine if SLIP is enabled on the access server port, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1
```



Header Compression should be enabled. Use the SHOW PORT SLIP command to verify that it is enabled.

If enabled, SLIP is displayed in the list under Enabled Characteristics. For more information on configuring and managing SLIP ports, refer to the Network Access Software Management Guide.

If you have SLIP/CSLIP enabled, verify that all systems (both ends) have SLIP/CSLIP enabled; otherwise, significant system degradation will occur.

Verify Access Server Memory Usage

If you experience connection problems using the SLIP protocol, verify the access server. See the section *Verify Access Server Memory Usage* (page 2-6).

Verify Internet Address

If you are unable to connect using the SLIP protocol, verify that the Internet address has been set on the access server. See the section *Verify Internet Address* (page 3-2).

Verify SLIP Host Address

If you are unable to connect using the SLIP protocol, enter the following command. Substitute the number of the port for 1:

```
Local> SHOW PORT 1 SLIP

Port 1: Development        Server: MMS

Host Address:       83.62.18.102   MTU:               1006
Header Compression: Disabled       Compression States   16
```

Verify that the SLIP Host Address is defined and valid. The Internet address for the SLIP host must be unique on the subnet and have the same subnet identifier as the access server.

For example, if the access server Internet address is 83.62.18.101 and the subnet mask is 255.255.255.0, the subnet identifier is 83.62.18.0. Therefore, the SLIP host address must be 83.62.18.nn, where nn is any number between 1 and 254, except 101 (access server Internet address).

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

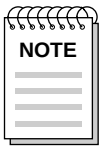
Verify Maximum Transmission Unit (MTU)

To determine the MTU size, enter the following command. Substitute the number of the port for 1:

```
Local> SHOW PORT 1 SLIP

Port 1: Development        Server: MMS

Host Address:       83.62.18.102   MTU:               1006
Header Compression: Disabled       Compression States   16
```



Many implementations use an MTU of 296 with CSLIP.

The MTU characteristic allows access server compatibility with SLIP host implementations that have fixed MTU values other than 1006 bytes. The TCP maximum segment size (MSS) announced by the SLIP host at the time of a TCP connection is normally based on the MTU of the network connection.

If the TCP MSS given by the SLIP host exceeds the MTU on the SLIP line, poor performance, failed connections, and fragmentation occur. Adjust the MTU on the access server. For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Verify Multisessions - Interactive SLIP Connection Only

If you are unable to connect to a SLIP host, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1
```

Verify that Multisessions is Disabled. (If Disabled, Multisessions does not appear in the list under Enabled Characteristics.) For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide.*

Verify Port Configuration - Dedicated SLIP Connection Only

If you are having problems connecting to a device, such as a computer or PC configured as a dedicated SLIP host, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1

Port 1: Development S. Server: GEMINI

Character Size:         8    Input Speed:             9600
Flow Control:        None    Output Speed:            9600
Parity:              None    Signal Control:      Disabled
Stop Bits:        Dynamic    Signal Select:CTS-DSR-RTS-DTR

Access:              Local    Local Switch:            None
Backwards Switch:    None    Name:                  PORT_1
Break:           Disabled    Session Limit:              4
Forwards Switch:         ‘    Type:                    Ansi
Default Protocol:    SLIP    Default Menu:            None
Autolink Timer One:10 Two:10 Dialer Script:           None

Dedicated Service: SLIP
Authorized Groups: 60, 70
(Current) Groups: 60


Enabled Characteristics:
Autoconnect, Broadcast, Failover,
Loss Notification, Message Codes, SLIP, Verification
```

- Verify that Autobaud is Disabled. (If Disabled, Autobaud does not appear in the list under Enabled Characteristics.)
- Verify that Input Speed and Output Speed are consistent with that of the device.
- Verify that Default Protocol is set to SLIP.
- Verify that Dedicated Service is set to SLIP.
- Verify that Access is either Local or Dynamic.

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

SLIP Session Losing Send Packets

Solution

If your SLIP session appears to be dropping send packets, enter the following command. Substitute the number of the port for 1:

```
Local> SHOW PORT 1 SLIP COUNTERS

Port 1: Development Server: MMS

Connect Time:  7 23:00:40
Bytes Received:       106 Bytes Sent:        560
Packets Received:     200 Packets Sent:      150
Receive Packets Lost: 100 Send Packets Lost:  25
                          Send Packets Queued: 0
```

Procedure

Verify the ratio of Send Packets Lost to Packets Sent. If this ratio is high, do the following:

Step	Action
1	Adjust the PC software TCP maximum segment size (MSS) and/or the PC software TCP window size.
2	Increase the baud rate on both the access server and the PC.
3	Increase the MTU on both the access server and the attached device.
4	Verify the MSS on the SLIP host relative to the access server MTU. See the section *Verify Maximum Transmission Unit (MTU)*, on page 4-4.

More Information

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

SLIP Session Not Receiving Input

Solution

If your SLIP session will not transmit or receive, check that the port's speed and the PC's communication port speed match.

If your SLIP session seems to transmit but is not receiving input, enter the following command. Substitute the number of the port for 1:

```
Local> SHOW PORT 1 SLIP

Port 1: Development                Server: MMS

Host Address:       83.62.18.102   MTU:              1006
Header Compression: Disabled       Compression States 16
```

Verify that the access server port's host address and the PC Internet address are the same. For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

SLIP Session Will Not Learn the PC Internet Address

Solution

If the access server port is unable to learn the SLIP host address, verify that the Internet address for the SLIP host has the same subnet identifier as the access server and is unique. See the section *Verify SLIP Host Address* (page 4-4).

SLIP Session Starts, Then Freezes

Solution

If your SLIP session starts, then freezes, do the following:

- Verify that there are no devices between the PC and the access server using XON/XOFF flow control.
- Verify that the PC is not running CSLIP. If you are using CSLIP, both the access server and the attached device must have CSLIP enabled.

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

PPP Connection Problems

Introduction

PPP connection problems can be traced to incomplete PPP negotiations between peers or to network traffic not being passed. The following sections discuss some symptoms and possible solutions.

Attempts to Use Multiple Sessions on a Port

You can establish only one datalink session (either SLIP or PPP) on a port at a given time. If you have a session established, another session is not permitted. In addition, SLIP and PPP use the same IP address for a port. This address can be cleared only when it is not in use by another datalink session.

Verify Access Server Memory Usage

If you experience connection problems using the PPP protocol, verify access server memory usage.

PPP LCP Connections Fail

Check the following:

- Verify that a normal interactive login can be done using the same modems and a terminal emulator running on the client.
- LCP must be in the OPEN state. To determine the state, enter the SHOW PORT LCP STATUS command and check the State field.
- The port characteristic LCP must be enabled on the port. To determine if LCP is enabled, enter the SHOW PORT LCP CHARACTERISTICS command and check the LCP field.
- With LCP Passive Open enabled for a port, the access server never initiates LCP negotiations. The host device must initiate negotiations. Consider setting LCP Passive Open to DISABLED.

- Verify that flow control is functioning properly.

  By default, the low 32 characters of the ASCII set are not sent across an asynchronous line in the clear. They are "byte-stuffed." LCP allows the user to specify that some of these characters are sent in the clear. If this is done, then possibly a character that is being sent in the clear is being acted upon by the underlying hardware or software. For example, XON/XOFF may be sent in the clear as data, when at the same time the hardware is using XON/XOFF flow control.

- If LCP PAP or CHAP authentication is enabled, verify that the PC supports PAP or CHAP and has the correct password. The password must match the server login password. If USERNAME is specified for LCP authentication, the username and password are used for authentication and must match a valid username and password pair at the proper authentication server. Both the username and the password are case-sensitive.

- If the attached device wants the access server to authenticate itself, problems may occur. The access server does not support this. Turn off authentication in the attached device.

PPP IPCP (TCP/IP) Connections Fail

Check the following:

- For IP, IPCP must be in the OPEN state. To determine the state, enter the SHOW PORT IPCP STATUS command and check the State field.

- The port characteristic IPCP must be enabled on the port. To determine if IPCP is enabled, enter the SHOW PORT IPCP CHARACTERISTICS command and check the IPCP field.

- If the IPCP COMPRESSION parameter is enabled for a port, then TCP/IP compression must be in effect on the host system also.

PPP ATCP (AppleTalk) Connections Fail

Check the following:

- For AppleTalk, ATCP must be in the OPEN state. To determine the state, enter the SHOW PORT ATCP STATUS command and check the State field.

- AppleTalk must be enabled on the access server or ATCP does not reach the OPEN state. Refer to Chapter 5 for more information on troubleshooting AppleTalk problems.

- The port characteristic ATCP must be enabled. To determine if ATCP is enabled, enter the SHOW PORT ATCP CHARACTERISTICS command and check the ATCP field.

- ATCP always executes a PASSIVE open, which in effect forces the attached device to initiate negotiations.
- If the access server cannot acquire an AppleTalk address from the AppleTalk cache manager, ATCP cannot reach the OPEN state.
- The peer's MTU may be too low. To determine the size of the MRU, enter the SHOW PORT LCP STATUS command and check the MRU field.

The peer may negotiate the use of an MRU other than the default of 1500 bytes. If this is the case, the access server sets the port's MTU to match. AppleTalk does not support datagram fragmentation. If the peer's MRU is smaller than the size of the AppleTalk packet, the packet is dropped. AppleTalk packets can be up to 600 bytes in size.

PPP IPXCP (Novell) Connections Fail

Check the following:

- For Novell, IPXCP must be in the OPEN state. To determine the state, enter the SHOW PORT IPXCP STATUS command and check the State field.
- Novell NetWare must be enabled on the access server or IPXCP does not reach the OPEN state. Refer to Chapter 14 for more information on troubleshooting IPX problems.
- The port characteristic IPXCP must be enabled. To determine if IPXCP is enabled, enter the SHOW PORT IPXCP CHARACTERISTICS command and check the IPXCP field.

If problems with PPP/IPX negotiations remain after successful dial-in and login, verify the following:

- Check the PC client status messages.
- Check to see if the port is configured for PPP/IPX.
- Monitor the PPP/IPX negotiations.
- Check to see if PPP/PAP password authentication is enabled.

Checking PC Client Status Messages

Check the remote node access software used on the PC client when connecting. It may offer status messages giving some indication as to what part of the process is failing.

Checking the Port's PPP/IPX Configuration

Type SHOW PORT n LCP CHARACTERISTICS and SHOW PORT n IPXCP CHARACTERISTICS to check the current PPP characteristics and verify that both LCP and IPXCP are enabled. Substitute the number of the port for 'n'.

Monitoring PPP/IPX Negotiations for Failure Reason

If possible, you may want to monitor the port as the PPP negotiations occur after modem login. Type MONITOR PORT n LCP STATUS or MONITOR PORT n IPXCP STATUS. If PPP is failing, note the failure reason code in the display. Descriptions of these codes are in the section Failure Reasons.

Checking to See if PPP/PAP Password Authentication is Enabled

Type SHOW PORT n LCP CHARACTERISTICS. If authentication is enabled, make sure the PC client user configures the password for the remote node access software in use. Note that verification of password is case sensitive.

Refer to Chapter 14 for further information on IPX problems.

Failure Reasons

Introduction

When you display status, a failure reason field appears. Table: Failure Reasons describes the possible failure reasons.

Failure Reason	Description
None	No failure reason.
Resources	Insufficient resources. This error condition occurs when setting up an address for a port fails, typically due to insufficient system resources.
Not converging	Option negotiations are not converging. The server and attached client are not currently in agreement as to changing optional values away from their defaults. This error typically occurs when the client has proposed an option the server either wishes to NAK (providing a counter-proposal) or REJect the requested client options.
No peer response	The peer is not responding to protocol negotiations. This can occur due to the client going away or being temporarily stopped. This can also occur if there is a problem with the connection.
Rx invalid data	The server has received what appears to be an invalid packet from the attached device. This may occur if the client is using a proprietary extension (that is, an undefined PPP code) or a new PPP code has been defined.
Unauthenticated	An attached device fails to properly authenticate itself.
IPCP disabled	IPCP is disabled on this port.
ATCP disabled	ATCP is disabled on this port.
ATK disabled	AppleTalk is not enabled on the server. AppleTalk must be defined ENABLED and the server rebooted.
IPXCP disabled	IPXCP is disabled on this port.
LCP disabled	LCP is disabled on this port.
Stopped by peer	The server side of the PPP link has been stopped by the peer. Typically, this is the result of the peer sending a Terminate request.
IPX disabled	IPX is not enabled on the server. IPX must be either SET or DEFINED (with reboot) ENABLED.

Failure Reason	Description
Peer address bad	This occurs if the address negotiated for the peer is invalid. For IPXCP, this error occurs if the address is already in use or if the client agreed to use the server's internal network but did not negotiate a unique node address.
No net address	Indicates the server does not have a net/node address for itself. Verify that the server's internal IPX network has been set.

Chapter 5

AppleTalk Access Problems

Overview

Introduction

The following table lists the steps and page references to help you solve problems that can occur when using the AppleTalk functionality on the access server.

Problem	Solution	See Page
Problems with Hosts Attached to Access Server Ports	1. Verify AppleTalk Is Enabled	5-3
	2. Verify AppleTalk State Is Up	5-3
	3. Verify AppleTalk Address Is Within the Network Range	5-4
	4. Verify Cache Size Is Correct	5-4
	5. Verify Access Server Is Visible on the Network	5-5
	6. Verify Attached Host Software	5-5
	7. Verify PPP and ATCP Are Enabled	5-5
	8. Verify Attached Device Is an End Node	5-6
	9. Verify Port Configuration - Dedicated PPP Connection Only	5-6
Performance Problems	1. Verify Unique AppleTalk Addresses	5-7

	2. Verify Protocol Retransmission Timeouts	5-7
	3. AppleTalk Gateway Route	5-8

Problems with attached host connections running AppleTalk are not discussed here, but are covered in Chapter 4.

Problems with Hosts Attached to Access Server Ports

Introduction

If you experience problems creating an AppleTalk connection from an attached host or polling the access server from a network management station (NMS), verify the following:

- AppleTalk is enabled on the access server.
- AppleTalk state is Up.
- AppleTalk address is within the network range.
- Cache size is nonzero.
- Access server is visible on the network.
- Attached host is running AppleTalk over PPP.
- PPP and ATCP are enabled.
- Attached host is configured as end node.
- Port configuration — dedicated PPP connection only.

Verify AppleTalk Is Enabled

To determine if AppleTalk is enabled on the access server, enter the following command:

```
Local> SHOW APPLETALK
```

If AppleTalk is not enabled, enter the following command:

```
Local> SET APPLETALK ENABLED
```

Verify AppleTalk State Is Up

In order to communicate using AppleTalk, the State field must be Up. To determine the status of the State field, enter the following command:

```
Local> SHOW APPLETALK STATUS
```

If State is Off, the access server could not acquire an AppleTalk address for itself.

Verify AppleTalk Address Is Within the Network Range

It is possible that the AppleTalk address is outside the network range. This situation can occur momentarily while the access server is booting and is considered normal. However, if this situation persists for more than a minute after initialization, then the problem could be caused by one of the following reasons:

- All valid addresses in the network range are in use. To eliminate this problem, increase the AppleTalk network range to make more addresses available, or if there are other access servers on the network using AppleTalk, reduce their defined AppleTalk cache size.
- A rogue AppleTalk router is advertising an incorrect network range. To eliminate this problem, verify the network range advertised by all AppleTalk routers on the network.

Verify Cache Size Is Correct

The access server caches a number of AppleTalk addresses to be given to attached hosts at connection time. This number is specified using the DEFINE APPLETALK CACHE SIZE command. The dynamic cache size is shown in the SHOW APPLETALK STATUS display.

The dynamic cache size is always less than or equal to the defined value and fluctuates as connections are created or torn down. However, in the steady state, the two values should match.

If the dynamic cache size gets too small, or reaches zero, host connection attempts could fail. Therefore, a dynamic cache size that is persistently lower than the defined value is a problem. The following are possible causes and solutions:

- Access server memory usage is too high so cache entries cannot be created. If this occurs, the access server sets the Last Error field in the SHOW APPLETALK STATUS display as follows:

  ```
  Could not create AppleTalk cache entry, insufficient
  resources
  ```

  Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

- Access server could not acquire addresses in the network range. If this occurs, the access server sets the Last Error field in the SHOW APPLETALK STATUS display as follows:

  ```
  Attempt to acquire an AppleTalk address for cache failed
  ```

  Refer to the section Verify AppleTalk Address Is Within the Network Range for reasons why this can occur.

Verify Access Server Is Visible on the Network

When AppleTalk is enabled, the access server attempts to register its Name (specified by Name in SHOW SERVER CHARACTERISTICS display) using the Name Binding Protocol (NBP). This registration occurs when the access server boots or when an AppleTalk router comes up on a network where no router was previously available (for example, all routers went down and then came back up). If the access server Name is in use on the network, the access server falls back to registering its default Name, which is LAT_"ethernet address". The access server sets the Last Error Field in the SHOW APPLETALK STATUS display as follows:

```
Duplicate AppleTalk server name on network - trying
LAT_ethernet
```

If the access server finds a duplicate name while registering its default name, it leaves its name registered anyway and displays the following message in the Last Error Field on the SHOW APPLETALK STATUS display:

```
Registering duplicate AppleTalk server name on network
```

Verify Attached Host Software

To create connections, the attached hosts must be running AppleTalk over PPP (ATCP). Verify this on the attached host.

Verify PPP and ATCP Are Enabled

To determine if PPP is enabled on the access server port, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1
```

If Enabled, PPP is displayed in the list under Enabled Characteristics. For more information on configuring and managing PPP ports, refer to the *Network Access Software Management Guide*.

To determine if ATCP is enabled on the access server port, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1 ATCP
```

The ATCP field should be set to Enabled. For more information on configuring and managing ATCP ports, refer to the *Network Access Software Management Guide*.

Verify Attached Device Is an End Node

The access server provides connections for devices acting as AppleTalk end nodes. Connections to routers or other access servers using asynchronous links are not supported. Verify that the attached host is acting as an AppleTalk end node.

Verify Port Configuration - Dedicated PPP Connection Only

If you are having trouble connecting an attached host that is configured as a dedicated PPP host, enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1
```

- Verify that Autobaud is Disabled (if Disabled, Autobaud does not appear in the list under Enabled Characteristics).
- Verify that Input Speed and Output Speed are consistent with that of the device.
- Verify that Default Protocol is set to PPP.
- Verify that Access is either Local or Dynamic.

For more information on configuring and managing PPP ports, refer to the *Network Access Software Management Guide*.

Performance Problems

Introduction

It is possible that AppleTalk connections can be established, but performance is sluggish or unreliable. Some symptoms of this are long file transfer times or inability to access some services on the network. These problems are usually due to the slower data rates of remote connections. We recommend that remote AppleTalk connections by means of the access server run at rates of 9600 baud or higher. Aside from this solution of running at higher data rates (that is, faster modems and/or modems using compression), factors discussed in the next two sections should be checked.

Verify Unique AppleTalk Addresses

It is essential that all nodes running AppleTalk on the network have unique AppleTalk addresses. If two nodes incorrectly acquire the same AppleTalk address (for example, due to temporary network partition), then many problems can follow, some of which may appear as performance problems. Using a management tool, verify that no other device is using the same address as your connection.

It is also essential that all AppleTalk networks connected into an Internet have unique, nonoverlapping network ranges. If this requirement is broken, traffic will be routed incorrectly. This problem may surface as an inability to access services on another network or as performance degradation. Verify that all AppleTalk networks that are internetworked have unique network ranges.

Verify Protocol Retransmission Timeouts

Verify that the reliable transport protocols on the attached hosts and network servers are estimating round-trip time when determining retransmission timeouts. If the transport protocols use fixed timeouts, then they are likely to retransmit too soon when one link in the connection is slow. This causes redundant retransmission, which wastes buffer space and bandwidth, exacerbating the problem on the slow link. If the retransmission timeout is set using a round-trip time estimate, these redundant retransmissions can be avoided, resulting in much improved performance.

AppleTalk Gateway Route

Solution

If the AppleTalk node to which you wish to connect is outside your local LAN, there may be a problem connecting to a router between the LANs. The access server keeps track of a default AppleTalk router to which it directs all attached host-generated AppleTalk traffic that is destined off the local network. The entry for this router is in the SHOW APPLETALK ROUTING display with the destination field specifying "<default>", as follows:

```
Local> SHOW AppleTalk ROUTES

AppleTalk Routes                    Server:LAT_08002B24F24F

Destination   Next Hop  Status  Interface  Seconds since
                                           Last Validated
12344-12350  12346.132  Up      Ethernet       159
<default>    12347.1    Up      Ethernet        20
12349.223    12345.132  Up      Asynch7         29
12348.144    12345.132  Up      Asynch3        116
```

If a default routing entry does not exist, the following lists possible causes and solutions:

- There is no active AppleTalk router on the network. Check the AppleTalk routers on the network.
- The access server could not create a routing entry for the default router. This occurs if there is a memory usage problem. Check the Error field in the SHOW APPLE TALK STATUS display. Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

If this default routing entry does exist, but attached hosts still cannot send traffic off the local network, the following lists possible causes and solutions:

- The router in question is not functioning. Check the status of the router.
- The attached hosts have acquired addresses in the start-up range and all, or almost all, valid addresses in the network range are being used. See the section *Verify AppleTalk Address Is Within the Network Range* (page 5-4).

Chapter 6

SNMP Access Problems

Overview

Introduction

The following table lists page references to help you solve Simple Network Management Protocol (SNMP) problems.

Problem	Solution	See Page
SNMP Reporting Is Not Consistent with the access server		6-2
SNMP Reporting Is Not Consistent with the MIB		6-3
Problems Accessing the access server	1. Verify SNMP Enabled	6-4
	2. Verify Community Name Access Information	6-5
	3. Verify Operations Enabled for the Community Name	6-5
	4. Verify Network Configuration	6-6
	5. Verify Communication to Remote NMS	6-6
Access server Not Responding with the Requested MIB Information		6-7
Access server Not Sending TRAP Messages		6-9
Authentication Failure TRAP Messages Reported		6-10
Authentication Failure TRAP Messages Not Reported		6-11

SNMP Reporting Is Not Consistent with the Access Server

Solution

If the data reported by SNMP does not appear to be consistent with that reported by the access server user interface, verify that the information in question is correct. For more information, refer to the *Network Access Software Management Guide*, the release notes, and the management information bases (MIBs).

SNMP Reporting Is Not Consistent with the MIB

Solution

If the data reported by SNMP does not appear to be consistent with that reported by the MIB, verify that the information in question is correct. For more information, refer to the *Network Access Software Management Guide* and the release notes.

Problems Accessing the Access Server

Introduction

If you experience problems with your access server responding to SNMP requests from a network management station (NMS), verify the following:

- SNMP enabled
- Community name access information
- Operations enabled for the community name
- Network configuration
- Communication to a remote NMS

Verify SNMP Enabled

To determine if SNMP is enabled on the access server, enter the following command:

```
Local> SHOW SNMP
SNMP State:  Enabled  Authentication Failure: Enabled
Community Name   Address         GET GETNEXT SET TRAP
PUBLIC           ANY             ENA ENA     DIS DIS
```

Verify that SNMP State is Enabled. If it is not, enter the following command:

```
Local> CHANGE SNMP ENABLED
```

If this command fails, do the following:

Step	Action
1	Verify that the Internet address has been set on the access server. See the section *Verify Internet Address* (page 3-2).
2	Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

Verify Community Name Access Information

In order to communicate using SNMP, the user on the NMS must know the community name on the access server. To determine which community names exist on an access server, enter the following command:

```
Local> SHOW SNMP

SNMP State:   Enabled   Authentication Failure:  Enabled

Community Name     Address        GET GETNEXT SET TRAP

PUBLIC             ANY            ENA ENA     DIS DIS
SECRET             60.10.12.61    ENA ENA     ENA ENA
```

Verify that the access server allows either:

- Any NMS to access the community name
- A specific NMS to access the community name

If the Address field is set to ANY, any NMS can access that community name. If the Address field contains an NMS IP address, only that NMS can access that community name. For more information on configuring the access server for SNMP access, refer to the *Network Access Software Management Guide*.

Verify Operations Enabled for the Community Name

SNMP access to the access server is configured by SNMP communities. To determine what operations are enabled for the community name, enter the following command:

```
Local> SHOW SNMP

SNMP State:  Enabled   Authentication Failure:  Enabled

Community Name     Address        GET GETNEXT SET TRAP

PUBLIC             ANY            DIS DIS     DIS DIS
SECRET             60.10.12.61    ENA ENA     ENA ENA
```

If the required operations are Disabled, enter the following commands. Substitute the community name for Public:

```
Local> CHANGE SNMP COMMUNITY "Public" GET ENABLED
Local> CHANGE SNMP COMMUNITY "Public" GETNEXT ENABLED
Local> CHANGE SNMP COMMUNITY "Public" SET ENABLED
```

For more information on configuring the access server for SNMP access, refer to the *Network Access Software Management Guide*.

Verify Network Configuration

If the access server and network management station (NMS) are on different subnetworks, verify that there are one or more routers connecting the two subnetworks.

If not, reconfigure the network or move either the access server or the NMS so that they are on the same network.

If one or more routers exist between the access server and the NMS, verify that the routers are configured to pass SNMP messages.

Verify Communication to Remote NMS

Determine if the access server can communicate with the NMS by using the PING command. See the section *Verify Communication to Remote Internet Host* (page 3-3).

Access Server Not Responding with the Requested MIB Information

Solution

If your access server is not responding with the correct management information bases (MIBs), verify the MIB version on the network management station (NMS). The current MIB version of the access server fully supports the following specifications:

RFC1158 - Obsoleted MIB II. Supported for backwards compatibility.

RFC1213 - Management Information Base (MIB II) for Internet protocol suite management. (This makes RFC1158 obsolete.)

RFC1243 - Definitions of Managed Objects for AppleTalk.

RFC1284 - Definitions of Managed Objects for Ethernet.

RFC1316 - Definitions of Managed Objects for Character Stream Devices, the Character MIB. The obsolete draft version dated March 19, 1991 is also supported for backwards compatibility.

RFC1317 - Definitions of Managed Objects for RS232-like Hardware Devices.

RS232-like MIB. The obsolete draft version dated March 19, 1991 is also supported for backwards compatibility.

RFC1471 - Definitions of Managed Objects for the Link Control Protocol of the Point-to-Point Protocol.

RFC1473 - Definitions of Managed Objects for the IP Network Control Protocol of the Point-to-Point Protocol.

DEC-DECserver-Accounting - Definitions of Managed Objects for DECserver Accounting.

IPX-MIB - Definitions of managed objects for IPX. A Novell private MIB.

IPXCP-MIB - Definitions of managed objects for Point-to-Point (PPP) protocol IPX Control Protocol (IPXCP). A private MIB.

If the NMS does not associate the correct MIB versions with the access server, do the following:

- If the NMS supports these exact versions of the MIBs, configure the NMS to associate these MIBs with the access server.

- If the NMS does not support these exact versions of the MIBs but does support MIB enrollment, do the following:
  - — Use the MIBs provided in the software installation kit as input for the MIB enrollment process.
  - — Configure the NMS to associate these versions of the MIBs with the access server.

If the NMS supports these exact versions of the MIBs and you still experience problems, refer to the section *Problems Accessing the Access Server* for more information on troubleshooting problems with the access server using SNMP.

Access Server Not Sending TRAP Messages

If the access server is not sending TRAP messages to the Network Management Station (NMS), do the following:

Step	Action
1	Enter the following command on your access server: `Local> SHOW SNMP` SNMP State: Enabled Authentication Failure: Enabled Community Name Address GET GETNEXT SET TRAP PUBLIC ANY ENA ENA DIS DIS SECRET 60.10.12.61 ENA ENA DIS ENA Verify that the access server has a community name defined with your NMS address in the Address field. Verify that TRAP access is Enabled for that community name. If the community name does not have TRAP access Enabled, enter the following command: Local> CHANGE SNMP COMMUNITY "SECRET" TRAP ENABLED If the access server and NMS have a community name with TRAP access Enabled, but the access server still will not send TRAP messages, refer to the section *Problems Accessing the Access Server* for more information on troubleshooting problems with the access server using SNMP.
2	Verify that the NMS is configured to receive TRAP messages.
3	If you are using gateways, verify that the gateways are configured to pass SNMP TRAP messages.

Authentication Failure TRAP Messages Reported

Solution

If an NMS is receiving authentication failure TRAP messages, the problem is that a network management station (NMS) is illegally trying to access the access server.

Verify the following:

- If you are using gateways, configure the gateways between your network and the public network to filter SNMP messages. This will prevent an NMS from accessing the access server.
- Verify that each NMS that is supposed to access the access server knows the community name.
- Verify that every community name with an associated Internet address has the correct Internet address.
- If the access server is properly configured, locate the offending NMS.

Authentication Failure TRAP Messages Not Reported

Solution

If you suspect a network management station (NMS) is not receiving authentication failure TRAP messages from the access server, enter the following command:

```
Local> SHOW SNMP

SNMP State: Enabled  Authentication  Failure: Enabled

Community Name  Address           GET GETNEXT SET TRAP

PUBLIC           ANY              ENA ENA     DIS DIS
SECRET         60.10.12.61        ENA ENA     DIS ENA
```

- Verify that Authentication Failure is Enabled. If it is not, enter the following command:

  ```
  Local> CHANGE SNMP AUTHENTICATION FAILURE ENABLED
  ```

- Verify that SNMP State is Enabled. See the section *Verify SNMP Enabled* (page 6-4).
- Verify that the community is configured with TRAP messages enabled. See the section *Access Server Not Responding with the Requested MIB Information* (page 6-7).

Chapter 7

3270 Terminal Emulation (TN3270) Access Problems

Overview

Introduction

The following table lists steps and page references to help you solve TN3270 terminal emulation problems.

Problem	Solution	See Page
TN3270 Connection Problem	1. Verify Display Station Model Configuration	7-2
	2. Verify ASCII Terminal Configuration	7-3
	3. Verify the TN3270 Session Using the Status Line Function	7-3
	4. Verify TN3270 Keyboard Maps	7-4
Default Keyboard Maps Unsuitable		7-6
Telnet Negotiations Problems		7-7

TN3270 Connection Problems

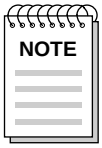
Introduction

If you experience problems with TN3270 connections and keymap functions, verify the following:

- TN3270 model configuration
- ASCII terminal configuration
- TN3270 session status line
- Keyboard mapping
- Telnet negotiations

Verify Display Station Model Configuration

If a connection to an IBM system does not display formatted screens, verify that your display station model is configured properly. The TN3270 software enables an ASCII terminal to emulate either an IBM 3278 Display Station Model 2 or an unformatted screen.



Display Station Models 3, 4, and 5 are not supported.

To determine if the IBM 3278 Display Station model type used for TN3270 emulation is configured properly, enter the following command:

```
Local> SHOW PORT 1 TN3270 CHARACTERISTICS

Port 1: test

Model:              NONE Input Flow Control:  Enabled
Terminal:          VT100 Output Flow Control: Enabled
Keymap Default:    VT100 Verification:        Enabled
Keymap NVRAM Limit:    0 Switch Character:    Enabled
Nulls:              3179
```

If the Model setting does not reflect your configuration, enter the following command (enter Model 2 for an IBM 3278 Display Station Model 2 or NONE for an unformatted screen):

```
Local> CHANGE PORT 1 TN3270 MODEL 2
```

For more information on configuring Display Station models for TN3270 access, refer to the *Network Access Software Management Guide*.

Verify ASCII Terminal Configuration

TN3270 supports the following models of Digital's ASCII terminals:

- VT100 with Advanced Video Option
- VT102
- VT220, 240, 241
- VT320, VT330, VT340, and VT341
- VT420

To determine if the ASCII terminal used for TN3270 emulation is configured properly, enter the following command:

```
Local> SHOW PORT 1 TN3270 CHARACTERISTICS

Port 1: test

Model:                  2 Input Flow Control:  Enabled
Terminal:           VT100 Output Flow Control: Enabled
Keymap Default:     VT100 Verification:        Enabled
Keymap NVRAM Limit:     0 Switch Character:    Enabled
Nulls:               3179
```

If the Terminal setting does not reflect your configuration, enter the following command. Substitute your terminal type for VTnnn:

```
Local> CHANGE PORT 1 TN3270 TERMINAL VTnnn
```

For more information on configuring terminals for TN3270 access, refer to the *Network Access Software Management Guide*.

Verify the TN3270 Session Using the Status Line Function

During TN3270 terminal emulation, a status line displays in reverse video at the bottom of the terminal screen. If the 3270 session status line indicator is set to OFF, toggle it using the TN3270 STATUS function.

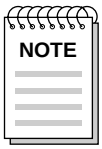
The Table: Messages Appearing in the Status Line Indicator describes the messages that can appear on the TN3270 session status line.

Table: Messages Appearing in the Status Line Indicator

Message	Description
EXTEND	You have pressed the EXT function.
HIDDEN	The status line is covering some screen data that you have not yet seen. This indicator turns off when you enable the status display after viewing the hidden data.
INSERT	The terminal is in insert mode.
INHIB	The application has suspended input from the keyboard. This condition can occur when: • You try to enter data in a protected field. • You try to enter the wrong type of data.
O	You are using the numeric lock override function. This indicator turns off when you enter the NUM OVR function again.
ONLINE	You are successfully communicating with the IBM host.
X	The IBM system is unavailable for input. For example, the message X displays after your use the ENTER function to send data to the IBM host.
7171	You are using 7171 mode to transmit embedded nulls as spaces.

Verify TN3270 Keyboard Maps

A keyboard map assigns the functions on the IBM TN3270 keyboards to keys or key sequences on ASCII terminals. The default TN3270 keyboard maps are sufficient for most applications.



Changing a terminal device or specifying a default keyboard map erases any user-defined key definitions.

Use the VT100 default keyboard map for a VT100 terminal device and the VT220 default keyboard map for all other terminal devices.

To display the default keyboard map assigned to your port, enter the following command:

```
Local> SHOW PORT 1 TN3270 CHARACTERISTICS

Port 1: test

Model:                NONE Input Flow Control:  Enabled
Terminal:            VT100 Output Flow Control: Enabled
Keymap Default:      VT100 Verification:        Enabled
Keymap NVRAM Limit:      0 Switch Character:    Enabled
Nulls:                3179
```

If the Keymap Default setting does not reflect your configuration, enter the following command. Substitute the your keymap for VTnnn:

```
Local> CHANGE PORT 1 TN3270 KEYMAP DEFAULT VTnnn
```

To display the current TN3270 keyboard mappings for the port, which include the customized mappings you assigned with the SET/DEFINE/CHANGE PORT TN3270 KEYMAP command, enter the following command:

```
Local> SHOW PORT 1 TN3270 KEYMAP
```

To display the current keymapping during an IBM session, press the key representing the TN3270 HELP function. You can also enter the following command:

```
Local> SHOW PORT SESSION TN3270 KEYMAP
```

Default Keyboard Maps Unsuitable

Solution

Before connection, you can customize any of the key definitions on the default keyboard map to suit your keyboard. For example, the following command defines the ASCII code for the IBM 3270 NEWLINE function:

```
Local> CHANGE PORT TN3270 KEYMAP NEWLINE Ctrl/J
```

In this example, the ASCII sequence Ctrl/J maps to the NEWLINE function.

For more information on customizing key definitions for TN3270 access, refer to the *Network Access Software Management Guide*.

Telnet Negotiations Problems

Solution

When you are using a TN3270 connection, certain Telnet options must negotiate successfully. Use the following command to verify that Do-Binary, Will-Binary, Do-SGA, Will-SGA, Do-End of Record, and Will-End of Record are enabled:

```
Local> SHOW PORT 1 SESSION ALL STATUS

Port 1, session 1, Protocol TELNET
Do-Binary                Enabled
Will-Binary              Enabled
Do-Echo                  Disabled
Will-Echo                Enabled
Do-SGA                   Enabled
Will-SGA                 Enabled
Do-Status                Enabled
Will-Status              Disabled
Do-End of Record         Enabled
Will-End of Record       Enabled
Do-Remote Flow Control   Disabled
Will-Remote Flow Control Disabled
Will-Terminal Type       Enabled     UNKNOWN
```

For more information on Telnet negotiations for TN3270 access, refer to the *Network Access Software Management Guide*.

Chapter 8

User Authentication Configuration Problems

Overview

Introduction

You can use the following types of security servers:

- Kerberos
- RADIUS
- SecurID™
- Local User Accounts

The following table lists the steps and page references to help you solve security configuration problems.

Problem	Solution	See Page
Security Configuration	1. Verify That Devices Are Connected Properly	8-3
	2. Verify That Authentication Is Enabled	8-5
	3. Verify That Port and Devices Characteristics Match	8-7
	4. Verify the Access Server and Security Configuration	8-8

This chapter discusses troubleshooting procedures for problems using the Kerberos, RADIUS and SecurID security user authentication systems. For information about the Local User Accounts security system, see the *Network Access Software Management Guide*.

Authentication problems fall into one of the following categories:

- Configuration or administration of security information
- Unavailability of the security server
- Network connectivity problems
- Configuration of the network access server

A user may unexpectedly be denied access with an "invalid login" message for one of the following reasons:

- The user incorrectly entered the username or password.
- An incorrect (default) realm is being used.
- The access server is not registered with the required security server.
- The access server does not share the correct secret with the required security server.
- The user's registration has expired.
- The user’s authorization information is incomplete.
- The user’s authorization information is incompatible with the network access server’s port configuration.
- The security server has silently discarded the authentication request because it was inconsistent or illegally formatted.
- A "timed out", "socket error", or "protocol error" message can indicate one of the following network configuration problems:
- The security servers are incorrectly entered into the access server's database.
- The security servers are not responding because they are either down or unreachable.
- The Internet parameters on the access server are not configured properly.
- Some other unexpected event has occurred. Refer to protocol error codes in Message 467.

Verify That Devices Are Connected Properly

Procedure

Problems that appear to be user authentication problems can occur if the devices on your system are not connected properly. For information about connecting device cables, refer to the access server hardware documentation.

Verify That the Device Is Using the Correct Authentication Protocol

Procedure

Be sure that you attached device (terminal, PC, Macintosh, or workstation) is configured with an authentication protocol matching the one enabled on the access server's port. For PPP connections the options are PAP and CHAP. For SLIP or character cell terminal connections, interactive authentication must be used. Refer to the *Network Access Software Management Guide* for additional information.

Verify That Authentication Is Enabled

Procedure

To use the security user authentication system, you must enable authentication for each port. To display the user authentication settings for an interactive user port, use the following command. Substitute your port number for port 1:

```
Local> SHOW PORT 1

Port 1: Test                Server: GEMINI

Character Size:      8      Input Speed:              9600
Flow Control:      XON      Output Speed:             9600
Parity:           None      Signal Control:       Disabled
Stop Bits:     Dynamic      Signal Select: CTS-DSR-RTS-DTR


Access:          Local      Local Switch:               ^^
Backwards Switch: None      Name:                   PORT_1
Break:           Local      Session Limit:               8
Forwards Switch:   None     Type:          Ansi
Default Protocol:   LAT     Default Menu:  None
Autolink Timer One:10 Two:10 Dialer Script: None

Preferred Service: GALAXY
Authorized Groups: 60, 70, 80
(Current) Groups:  60, 70, 80

Enabled Characteristics:
Authentication, Autoconnect, Autoprompt, Broadcast,
Failover, Input Flow Control, Lock, Loss Notification,
Message Codes, Output Flow Control, Lock Notification,
Verification
```

If authentication is not enabled, enter the following command. Substitute your port number for port 2:

```
Local> DEFINE PORT 2 AUTHENTICATION ENABLE
```

To display the user authentication settings for a network access port, use the following command.

Substitute your port number for port 1:

```
Local> SHOW PORT 1 LCP

LCP Characteristics:
LCP:                                 Enabled
Passive Open:                       Disabled
Restart Timer:                             3 seconds
Max Configure:                            10 transmissions
Max Terminate:                             2 transmissions
Max Failure:                              10 transmissions
LCP Options:                  Local:
MRU:                            1500
Character Map:                FFFFFFFF
Authentication:               Disabled
Link Quality:                 Disabled
Magic Number:                 Disabled
PF Compress:                  Disabled
ACF Compress:                 Disabled
FCS Size:                       16 Bit
Callback:                     Disabled
```

If authentication is not enabled, enter one of the following commands. Substitute your port number for port 2:

```
Local> Local DEFINE PORT 2 LCP AUTHENTICATION PAP NOUSERNAME ENABLE
Local> Local DEFINE PORT 2 LCP AUTHENTICATION PAP USERNAME ENABLE
Local> Local DEFINE PORT 2 LCP AUTHENTICATION CHAP NOUSERNAME ENABLE
Local> Local DEFINE PORT 2 LCP AUTHENTICATION PAP USERNAME ENABLE
```

Refer to the *Network Access Software Management Guide* for additional information. Your two basic choices are PAP or CHAP authentication within PPP, and simple password (NO USERNAME) or realm-based authentication (USERNAME).

Verify That Port and Devices Characteristics Match

Procedure

In order for user authentication to function properly, you must ensure that the physical characteristics of the access server port match the physical characteristics of the device. Verify that the following port and device characteristics match:

Autobaud, Character Size, Parity, Speed, Stop Bits, and Type

To display the physical characteristics of the access server port, use the following command. Substitute your port number for port 1:

```
Local> SHOW PORT 1
```

To change any of the port characteristics that do not match the device setting, use the following command. Substitute the port number for port 2 and the port characteristic for port-characteristic.

```
LOCAL> CHANGE PORT 2 port-characteristic value
```

For more information on device and port characteristics, refer to the *Network Access Software Management Guide*.

Verify the Access Server and Security Configuration

Procedure

If the access server is not able to communicate over the network with a Kerberos security server, verify with the security system administrator that the access server is registered with all security servers within the same security realm, if using Kerberos, and that each realm has one master security server that contains a write-enabled database.

For RADIUS and SecurID security servers, verify with the security system administrator that a shared secret is correctly configured on the access server and security server, and that the access server's IP address is registered on the security server.

If the problem persists, verify the following:

- You entered the correct Internet address and subnet mask. See the section *Verify Internet Address* (page 3-2).
- If the security server is not on the access server's subnet, there is an Internet gateway to the security server. See the section *Verify Internet Host Name* (page 3-3).
- If Internet hosts are not explicitly configured on the access server, the DNS parameters are set correctly. See the section *Verify Domain Name System (DNS) Parameters* (page 3-3).
- If all attempts to access to the server using a valid username and password pair are rejected, the security system administrator can check the logs on each authentication host for information about the rejection.

To verify the Internet address, gateway, and DNS parameters, use the SHOW INTERNET commands. For the correct syntax for these commands, refer to the *Network Access Software Commands Reference Guide*.

To change the Internet address, gateway, and DNS parameters, use the CHANGE INTERNET commands. For the correct syntax for these commands, refer to the *Network Access Software Management Guide*.

To verify realm parameters, use the SHOW SECURITY command. Unless you are using the default realm, type username@ realmname at the USERNAME prompt. Passwords are case sensitive. For the correct syntax of these commands, refer to the *Network Access Software Commands Reference Guide*.

Verify the User's Authorization Data

Procedure

Check these conditions:

- If the user's authorization information is incomplete or inconsistent, the user login may fail. If this happens, the security system administrator should verify that the services specified to be delivered to the user are consistent with the services enabled and available on both the individual access server port(s) and on the access server as a system.
- If the user authorization specifies a dedicated network access, either SLIP or PPP, then SLIP or PPP must be specifically enabled on the port on which the user attempts to obtain service.
- If network access is specified, a network address must be available. This address may come from the user's authorization data (RADIUS), from the access server port configuration, DHCP or from the remote device (PC).
- If login access is specified, a protocol (Telnet, Rlogin, or LAT) and a service (IP host or LAT service) must be available. This host information may come from the user's authorization data (RADIUS) or from the access server's port configuration.

Chapter 9

Telnet Remote Console, Connection and Port Problems

Overview

Introduction

The following table lists steps and page references to help you solve problems that can occur when you attempt to establish a Telnet remote console connection. It also provides information on troubleshooting console port problems.

Problem	Solution	See Page
Telnet Remote Console Connection Problems	1. Verify Internet Address	9-2
	2. Verify Telnet Listener Configuration	9-2
	3. Verify Access Server Memory Usage	9-2
	4. Verify Remote Console Port Status	9-3
Console Port Problems		9-4

Telnet Remote Console Connection Problems

Introduction

If you experience problems establishing a remote console connection using Telnet, verify the following:

- Internet address
- Telnet listener configuration
- Access server memory usage
- Remote console port status

Verify Internet Address

If you are unable to establish a Telnet remote console connection, verify that the Internet address has been set on the access server. See the section *Verify Internet Address* (page 3-2).

Verify Telnet Listener Configuration

The Telnet Listener Ports characteristic identifies which Telnet listener accepts Telnet remote console connections. The factory-set default is listener 23. Enter the following command. Substitute the number of the Telnet listener for 23:

```
Local> SHOW TELNET LISTENER 23

Listener TCP-port: 23            Listener Type: TELNET
Identification:    Telnet Console
Ports:             Console
Connections:       Enabled
IP Address         0.0.0.0 (will default to server's IP address)
```

Verify that Connections are Enabled. If Connections are Disabled, enter the following command. Substitute the number of the Telnet listener port for 23:

```
Local> CHANGE TELNET LISTENER 23 CONNECTIONS ENABLED
```

Verify Access Server Memory Usage

If you are unable to establish a Telnet remote console connection, verify the access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

Verify Remote Console Port Status

Only one remote console connection (MOP or Telnet) is allowed at a time. To determine if the remote console port is already in use, enter the following command:

```
Local> SHOW SERVER STATUS
```

If the remote console port is in use, the Console User characteristic displays either the Ethernet address (MOP) or the Internet address (Telnet) of the connected host. If the remote console port is not in use, the Console User characteristic displays None Available. For more information on the remote console port, refer to the *Network Access Software Management Guide*.

Console Port Problems

Solution

When the console port does not display 900-series messages, the problem might be that the port to which the terminal is physically connected is not defined as the console port or the console terminal is faulty.

To determine if the port to which the terminal is physically connected is defined as the console port, enter the following command:

```
Local> SHOW SERVER

Network Access SW Vn.n for DS716 BLnn-nn ROM Vn.n-n Uptime:3
1:50:11

Address: 08-00-2B-01-23-45 Name: GEMINI Number: 0

Identification: UNAUTHORIZED ACCESS PROHIBITED

Circuit Timer:    80  Password Limit:         3
Console Port:      1  Prompt:            Local>
Inactivity Timer: 30  Queue Limit:          100
Keepalive Timer:  20  Retransmit Limit:       8
Multicast Timer:  30  Session Limit:         64
Node Limit:      200  Software:          WWENG2
                      TFTP Host:           None

Service Groups:    0
Enabled Characteristics:
Announcements, Broadcast, Dump, Lock
```

If the desired port is not defined as the console port, enter the following command on your access server. Substitute the number of the port for 1:

```
Local> CHANGE SERVER CONSOLE PORT 1
```

For more information on defining a console port, refer to the *Network Access Software Management Guide*.

The console terminal must operate at 9600 b/s, and the character size must be 8 bits, no parity. For more information on troubleshooting procedures for interactive devices, refer to the section *Problems with Interactive Devices.*

Chapter 10

Terminal and Personal Computer Problems

Overview

Introduction

The following table lists steps and page references to help you solve problems that appear to affect individual access server ports or interactive port devices, such as terminals and personal computers (PCs).

Problem	Solution	See Page
Problems With Interactive Devices	1. Device Does Not Respond or Nonsense Characters Appear	10-3
	2. Characters Not Displayed on the Device	10-4
	3. Command Line Recall Not Working	10-6
	4. Terminal Screen Scrolling When MONITOR Command Is Used	10-7
Verifying a Port for Hardware Failure		10-8
PC File Transfer Fails over a LAT Network		10-10
PC File Transfer Fails over a SLIP or PPP Network		10-11
PC File Transfer Fails over a Telnet Network		10-12

When you have a problem with a device, refer to the Port and Device Problems table. If appropriate, take the corrective actions specified in the table. If the problem persists, go to the section in this chapter that addresses your problem.

Port and Device Problems

Problem	Action
Power	• Ensure that the device is plugged into an active outlet. • Ensure that the power switch is on. • If the device has a fuse, replace it. • If the device has a circuit breaker, reset it.
Cables	• Ensure that the device cable is secure at both ends. • If the cable is spliced, ensure that all junctions are secure. • Verify all device cable connections at couplers, adapters, and cable concentrators (harmonica). • Inspect the cable for cuts and crimps. If necessary, use another cable. • Ensure that the maximum allowable cable length is not exceeded. Refer to the access server hardware documentation.
Speed	Match the access server port speed to that of the device. If Autobaud is enabled, the port and device speed match automatically. If split-speed is set, Autobaud must be disabled.
Parity and character size	Match the access server port parity and the character size to that of the device. The access server supports devices with odd, even, mark, space, and no parity. It supports character sizes of 7 and 8 bits. If Autobaud is enabled, parity and character size for the port and device match automatically.

Problems with Interactive Devices

Solution

An interactive device can be a terminal with a video monitor and keyboard, a printer with a keyboard, or a personal computer in terminal-emulation mode. If you have a problem with an interactive device, use the procedures described in Port and Device Problems table. If the problem persists, find the problem in the following sections.

Device Does Not Respond or Nonsense Characters Appear

If the device does not respond or nonsense characters appear, do the following:

1. Enter the following command. Substitute the number of the port where the problem device is attached for 1:

```
Local> SHOW PORT 1
Port 1: Michael M.            Server: GEMINI
Character Size:      8        Input Speed:              9600
Flow Control:      XON        Output Speed:             9600
Parity:           None        Signal Control:       Disabled
Stop Bits:     Dynamic        Signal Select: CTS-DSR-RTS-DTR
Access:          Local        Local Switch:               ^^
Backwards Switch: None        Name:                   PORT_1
Break:           Local        Session Limit:               8
Forwards Switch:     ‘        Type:                     Ansi
Default Protocol:  LAT        Default Menu:             None
Autolink Timer One:10 Two:10  Dialer Script:            None

Dedicated Service: GALAXY
Authorized Groups: 60, 70, 80
(Current) Groups: 60, 70, 80

Enabled Characteristics:
Autobaud, Autoconnect, Autoprompt, Broadcast, Input Flow
Control, Loss Notification, Message Codes, Multisessions,
Output Flow Control, Verification
```

   a. Verify that Autobaud is Enabled. (Autobaud is enabled if it appears under Enabled Characteristics.) The Autobaud characteristic functions only if the input and output speeds of the port device are the same and the device characteristics are one of the following:

      - Character Size of 8 bits and Parity set to None
      - Character Size of 7 bits and Parity set to Even

b. Verify that the problem port has a Dedicated Service defined. If a dedicated service is defined, verify that the service is available. If the service is available, verify that the problem port and the service have a common group code. See the section *Verify LAT Group* Codes (page 2-4).

c. Verify that Access is set to Local or Dynamic. If Access is set to Dynamic, set the Interrupts characteristic to Enabled.

With Access set to Local, the terminal user can always use the terminal interactively. With Access set to Dynamic and Interrupts Enabled, the terminal user can stop a remote session and then use the terminal interactively. With Access set to Remote or None, the terminal does not respond to user input. For more information on the Access characteristic, refer to the *Network Access Software Management Guide*.

2. Enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1 STATUS

Port 1: Michael                      Server: MMS1

Access:              Local Current Service: GALAXY
Status:          Connected Current Node:    SATURN
Sessions:                2 Current Port:

Input XOFFed:           No Output Signals:     DTR
Output XOFFed:         Yes Input Signals:      DSR
```

Verify the Output XOFFed status field in the display. If this field is Yes, the port has XOFFed communications. Enter a "clear comm" on the device or, using a privileged port, log out the problem port twice (the second logout bypasses any flow control problems). For more information on flow control, refer to the *Network Access Software Management Guide*.

3. If the terminal is not operating, switch the terminal to off-line mode. (Refer to the operator's manual.) If the problem persists when you enter characters, the terminal is probably faulty. Verify the operation of the terminal at another location. Use the same device characteristics when verifying the operation.

4. Verify the port hardware to determine if it is fault. See the section *Verifying a Port for Hardware Failure* (page 10-8).

Characters Not Displayed on the Device

If characters are not displayed on the device, verify that Flow Control is something other than None. Enter the following command. Substitute the port number for 1:

```
Local> SHOW PORT 1

Port 1: Michael                Server: GEMINI

Character Size:  8             Input Speed:      9600
Flow Control:  XON             Output Speed:     9600
Parity:       None             Signal Control:   Disabled
Stop Bits: Dynamic             Signal Select: CTS-DSR-RTS-DTR

Access:          Local         Local Switch:    ^^
Backwards Switch: None         Name:        PORT_1
Break:           Local         Session Limit:    8
Forwards Switch:     ‘         Type:          Ansi
Default Protocol:  LAT         Default Menu:  None
Autolink Timer One:10 Two:10   Dialer Script: None

Preferred Service: GALAXY
Authorized Groups: 60, 70, 80
(Current) Groups: 60, 70, 80

Enabled Characteristics:
Autobaud, Autoconnect, Autoprompt, Broadcast, Input Flow
Control, Loss Notification, Message Codes, Multisessions,
Output Flow Control, Verification
```

Flow Control ensures that characters are not lost because of insufficient buffer space at the access server port or port device. You can set up the XON/XOFF characters as flow control characters. You can also specify that the DSR/DTR or CTS/RTS signals implement flow control. Be sure that the flow control characters or signals you choose for the access server port are also enabled on the terminal. For more information on flow control, refer to the *Network Access Software Management Guide*.

Command Line Recall Not Working

If command line recall is not working, enter the following command. Substitute the number of the port where command line recall is not working for 1:

```
Local> SHOW PORT 1

Port 1: Michael                 Server: GEMINI
Character Size:      8          Input Speed:             9600
Flow Control:      XON          Output Speed:            9600
Parity:           None          Signal Control:      Disabled
Stop Bits:     Dynamic          Signal Select: CTS-DSR-RTS-DTR
Access:          Local          Local Switch:               ^^
Backwards Switch: None          Name:                   PORT_1
Break:           Local          Session Limit:               8
Forwards Switch:     ‘          Type:                    Ansi
Default Protocol:  LAT          Default Menu:            None
Autolink Timer One:10 Two:10    Dialer Script:           None

Preferred Service: GALAXY
Authorized Groups: 60, 70, 80
(Current) Groups: 60, 70, 80

Enabled Characteristics:
Autobaud, Autoconnect, Autoprompt, Broadcast, Input Flow
Control, Loss Notification, Message Codes, Multisessions,
Output Flow Control, Verification
```

Verify the Type characteristic is set to ANSI. The Type characteristic controls device-specific functions. For more information on command line recall, refer to the *Network Access Software Management Guide*.

Terminal Screen Scrolling When MONITOR Command Is Used

If your terminal screen scrolls when you use the MONITOR command, enter the following command. Substitute the number of the port where the screen is scrolling for 1:

```
Local> SHOW PORT 1

Port 1: Michael                Server: GEMINI
Character Size:          8     Input Speed:        9600
Flow Control:          XON     Output Speed:       9600
Parity:               None     Signal Control: Disabled
Stop Bits:         Dynamic

Access:               Local     Local Switch:         ^^
Backwards Switch:      None     Name:              PORT_1
Break:                Local     Session Limit:         8
Forwards Switch:          ‘     Type:                Ansi
Default Protocol:       LAT     Default Menu:        None
Autolink Timer One:10 Two:10    Dialer Script:       None

Preferred Service: GALAXY
Authorized Groups: 60, 70, 80
(Current) Groups: 60, 70, 80

Enabled Characteristics:
Autobaud, Autoconnect, Autoprompt, Broadcast, Input Flow
Control, Loss Notification, Message Codes, Multisessions,
Output Flow Control, Verification
```

Verify the Type characteristic is set to ANSI. The Type characteristic controls device-specific functions. For more information on the MONITOR command, refer to the *Network Access Software Commands Reference Guide.*

Verifying a Port for Hardware Failure

Procedure

To determine if there is a problem with the hardware, do the following:

1 Verify the status of the access server. Enter the following command:

```
Local> SHOW SERVER STATUS

Network Access SW Vn.0 for DS716 BLnn-nn ROM Vn.n-n Uptime:13
16:50:34

Address: 08-00-2B-02-F2-BB Name: GEMNI Number: 65535

                    Cur High Max
Active Ports:         8   10  16 Minutes to Shutdown:       N/A
Active Users:         8   10  16 Discarded Nodes:            15
Queue Entries:        0    1 100 Resource Errors:            57

Available Services:246  253 N/A Port Framing Errors:         0
Local Services:       1    1  20 Port Parity Errors:          0
Reachable Nodes:    195  195 200 Port Overrun Errors:         0

                                 Boot Device:       Ethernet: 0
Active Circuits:      9    9  32 Primary Host:            PEACH
Connected Nodes:      7    9  32 Load Address:AA-00-04-00-46-DC
Connected Sessions: 12   20  64 Dump Address:   None Available
% CPU Used:          15   36 100 Console User:AA-00-04-00-D3-71
% Memory Used:       80   80 100 Boot Protocol:             MOP

Selftest Status: Normal
Software Status: Normal
```

If the Selftest Status field is not Normal, refer to the *Network Access Software Management Guide* for information on managing access server characteristics.

2 Use the TEST PORT command to test the port hardware.

The TEST PORT command causes the access server to send a stream of ASCII data to the specified port. Irregularities in the ASCII pattern indicate possible problems with the port. To use this command, do the following:

a. Disconnect the device from the access server port.

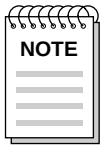
b. Plug a port loopback connector into the port connector.

c. From another port, enter the following command. Substitute the number of the port for 1:

```
Local> TEST PORT 1 LOOPBACK EXTERNAL
```

You can also specify an internal loopback to verify internal port hardware. Use the following command:

```
Local> TEST PORT 1 LOOPBACK INTERNAL
```



When you use the TEST PORT command for loopbacks, the input and the output speeds for the port must be the same. If you do not specify a value for the COUNT option in the TEST PORT command, the default count (23 lines) appears.

If you are using the Remote Console Facility (RCF) or Console Carrier Requestor (CCR), use the local switch character to stop the test. Otherwise, use the Break key.

d. If there are irregularities in the ASCII pattern, the port might be faulty. Refer to Chapter 29 for service information.

For more information on the TEST PORT command, refer to the *Network Access Software Commands Reference Guide*.

PC File Transfer Fails over a LAT Network

Solution

If a PC file transfer fails over a LAT network, do the following:

Step	Action
1	To determine if flow control is required, refer to your file transfer program documentation. For more information on setting up flow control on an access server port, refer to the *Network Access Software Management Guide*.
2	If flow control is required, enter the following command on the PC port of your access server: `Local> SET SESSION PASTHRU`
3	If flow control is not required, enter the following command on the PC port of your access server: `Local> SET SESSION PASSALL`

For more information on setting up a file transfer partner, refer to the *Network Access Software Management Guide*.

PC File Transfer Fails over a SLIP Network

Solution

If a PC file transfer fails over a SLIP or PPP network, do the following:

Step	Action
1	Verify that there are no devices using flow control between the PC and the access server.
2	Verify the file transfer program to determine if it is in the correct mode. Some programs (such as FTP) have one mode for ASCII text files and another mode for binary data. For more information on configuring SLIP ports, refer to the *Network Access Software Management Guide*.

PC File Transfer Fails over a Telnet Network

Solution

If a PC file transfer fails over a TCP/IP network, do the following:

1 Enter the following command on the PC port of your access server. Substitute the port number for 1 and the session number for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:       Binary
Echo:          Remote Newline From Term:   CR
Toggle Echo:       ^E Newline From Host:   CRLF
Binary:        Duplex Newline To Term:     CRLF
Xmit Size:          8 Newline To Host:     CRLF
Rcv Size:           8 Input Flow Control:  Disabled
Signal Req.: Disabled Output Flow Control: Disabled
IP:          +s +f ^Y Msg. Verification:   Disabled
SYNCH:       +s -f ^X Switch Characters:   Disabled
AYT:         -s -f ^T Quote:               None
AO:          -s +f ^O
EOR:            -s -f None
BRK:            -s -f None
```

The port characteristics (Profile, Binary, Xmit Size, Rcv Size, Signal Req., Input Flow Control, Output Flow Control, Msg. Verification, and Switch Characters) should be set as indicated in the previous display. The access server provides profiles that have many characteristics predefined. For file transfer, you should use the Binary profile.

To enable the Binary profile, enter the following command on your access server. Substitute the number of your port for 1:

```
Local> CHANGE PORT 1 TELNET CLIENT PROFILE BINARY
```

For more information on the Telnet client session profile, refer to the *Network Access Software Management Guide*.

2 To determine if flow control is needed, refer to your file transfer program documentation. For file transfers using the Telnet protocol, the Telnet client binary profile disables flow control. For more information on setting up a file transfer partner, refer to the *Network Access Software Management Guide*.

Chapter 11

Printer Configuration Problems

Overview

Introduction

The following table lists steps and page references to help you solve printer configuration problems. Printers can be configured on the access server for access through either a LAT service or a Telnet listener.

Problem	Solution	See Page
Printer Configuration Problems	1. Verify the Physical Port Characteristics	11-2
	2. Verify the Port Configuration	11-3
	3. Test the Printer Port	11-4
	4. Verify Access Server Information	11-5
LAT Printing Problems	1. Determine the Point of Failure	11-7
	2. Verify Access Server and Service Node Port Mappings	11-7
	3. Verify the Print Queue	11-9
	4. Verify LAT Group Codes	11-12
	5. Determine If Service Is Offered	11-13
Telnet Printing Problems Steps	1. Verify Telnet Listener Configuration	11-14
	2. Verify Characteristics on Host System	11-14
	3. Telnet Printer Not Creating a Newline	11-15

Verify the Physical Port Characteristics

Procedure

The table Port and Device Problems lists the first items to verify when you have problems involving a printer (or any other device) and its port. For example, make sure that the Speed, Parity, and Character Size characteristics defined for the port match the printer's settings.

Once you have verified that the port characteristics are configured properly, try printing again. If you cannot print, use the TEST PORT command. See the section *Test the Printer Port* (page 11-4).

Verify the Port Configuration

Procedure

- Verify that the printer port is configured correctly. Enter the following command, substituting the port number for 2:

```
Local> SHOW PORT 2

Port 2: PORT_2                Server: MMS1

Character Size:      8        Input Speed:              9600
Flow Control:      XON        Output Speed:             9600
Parity:           None        Signal Control:       Disabled
Stop Bits:     Dynamic        Signal Select: CTS-DSR-RTS-DTR

Access:          Remote        Local Switch:             None
Backwards Switch: None         Name:                   PORT_2
Break:         Disabled        Session Limit:               4
Forwards Switch:  None         Type:                     Hard
Default Protocol:  LAT         Default Menu:             None
Autolink Timer One:10 Two:10   Dialer Script             None

Preferred Service: None
Authorized Groups: 0
(Current) Groups: 0

Enabled Characteristics:
Inactivity Logout, Input Flow Control, Output Flow Control,
Signal Check
```

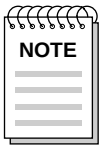
- Verify that the Access characteristic is set to Remote or Dynamic and Break is Disabled. Note that the SHOW PORT display will vary depending on the hardware you are using. For more information on configuring a printer, refer to the *Network Access Software Management Guide*.
- Verify that you are using the correct modem signals and cables. For information on configuring modem signals for your access server hardware, refer to the *Network Access Software Management Guide*.
- Verify whether the printer requires XON Flow Control. For information on configuring printer settings for your access server hardware, refer to the *Network Access Software Management Guide*.

Test the Printer Port

Procedure

To test a printer port, enter the following command on your access server. Substitute the number of the port for 1. Specify COUNT 10 for line printers and COUNT 70 (or greater) for laser printers:

```
Local> TEST PORT 1 COUNT 70
```



The TEST PORT command is valid only when sending data to ANSI devices. However, the Port Type characteristic does not have to be set to ANSI.

The TEST PORT command performs the following functions:

- Verifies the communication settings on the port
- Verifies the cables are working correctly
- Verifies the device (printer) is working properly

Additional Steps

After executing the TEST PORT command, if you do not see any results on the printer, take the following steps:

Step	Action
1	Replace the printer with a terminal
2	Modify the characteristics of the terminal to match that of the port
3	Enter the TEST PORT command again
4	If you receive output on the terminal (test successful), the printer might be faulty or set up incorrectly. If the test fails, the port is faulty. See the section *Verifying a Port for Hardware Failure* (page 10-8).

More Information

For more information on using the TEST PORT command, refer to the *Network Access Software Commands Reference Guide*.

Verify Access Server Information

Procedure

Verify the following information on the access server:

1 Verify the access server local connection queue to see if jobs are being placed in the queue. Enter the following command on your access server. Substitute the number of the port for 2:

```
Local> SHOW QUEUE PORT 2

Position   Entry   Source Node   Service   Port Name

1          128     PIZZA         PRINTER   PORT_2
2          130     CHEEZE        PRINTER   PORT_2
3          131     PEPONI        PRINTER   PORT_2
```

It is normal for jobs to be placed in the queue because the printer is busy.

2 Verify that Output XOFFed characteristic is set to Yes. Enter the following command on your access server. Substitute the number of the port for 2:

```
Local> SHOW PORT 2 STATUS

Port 2: (Remote) Server: DS3A05

Access:      Remote Current Service:    SATURN
Status:   Connected Current Node:       SATURN
Sessions:         1 Current Port:

Input XOFFed:    No Output Signals:     DTR RTS
Output XOFFed:  Yes Input Signals:      DCD CTS DSR RXD
```

If the Output XOFFed characteristic is set to Yes, the printer has sent an XOFF character to stop the port from sending data. The printer sends an XOFF character when:

- The printer is out of paper.
- The access server or the printer has a problem.
- Someone else is using the port.
- It is part of normal flow control.

3 Verify the port for active sessions. Enter the following command on your access server. Substitute the port number for 2:

```
Local> SHOW PORT 2 STATUS

Port 2: (Remote) Server: DS3A05
```

```
Access:     Remote Current Service: SATURN
Status:  Connected Current Node:    SATURN
Sessions:        1 Current Port:

Input XOFFed:   No Output Signals:   DTR
Output XOFFed: Yes Input Signals:    DSR
```

Look at the display to see if the port status is in the Connected state. If the port is in the Connected state, there is an active session on the port.

4 Verify if Signal Check is working properly.

Unplug the cable from the printer and enter the following command on your access server. Substitute the number of the port for 1:

```
LOCAL> MONITOR PORT 1 STATUS
```

The DTR/DSR or DTR/DCD signals should toggle. However, if the printer does not support DSR OR DCD signals, set Signal Check to disabled. Enter the following command:

```
Local> CHANGE PORT 1 SIGNAL CHECK DISABLED
```

When Signal Check is enabled for a printer, the printer waits for the DSR or DCD signal before printing. If Signal Check is enabled and the printer is turned off before a connection is established, the print queue will go into a stalled state. The access server then logs out the port.

Signal Check should only be enabled if DSRlogout is disabled. Note that you cannot use DSR flow control with Signal Check. For more information on the Signal Check characteristic, refer to the *Network Access Software Management Guide*.

LAT Printing Problems

Introduction

If the device characteristics (see the section Verify the Physical Port Characteristics), port configuration (see the section Verify the Port Configuration), printer device and cables (see the section Test the Printer Port), and the access server information (see the section *Verify Access Server Information*) have been verified, do the following:

Determine the Point of Failure

To determine the point of failure, do the following

At an OpenVMS host:

Step	Action
1	Stop the queue. Substitute the name of the queue for queue-name: `$ STOP/QUEUE/RESET_queue-name`
2	Set the LTA: device to /NOSPOOL `$ SET DEVICE LTAn: / NOSPOOL`

3	Copy a file to the LTA: device. Substitute the name of the file for TEST.TXT:
	
	`$ COPY/LOG TEST.TXT LTAn:`
	
	If the following error message appears, verify the mapping of the LTA: port to the access server port. See the section *Verify Access Server and Service Node Port Mappings* (page 11-7).
	
	`%COPY-E-WRITERR, error writing LTAn: [MMS]TEST.TXT;1`
	`-RMS-F-WER, file write error`
	`-SYSTEM-F-HANGUP, data set hang-up`
	`%COPY-W-NOTCOMPLT, USER1$:[MMS]TEST.TXT;1 not completely copied`
	
	If the file copies successfully, the problem is with the print queue or spooling. See the section *Verify the Print Queue* (page 11-9).

Verify Access Server and Service Node Port Mappings

To verify the port mappings, do the following:

On the access server, enter the following command. Substitute the number of the printer port number for 2:

```
Local> SHOW PORT 2

   Port 2: PORT_2                Server: MMS1

   Character Size:      8        Input Speed:              9600
   Flow Control:      XON        Output Speed:             9600
   Parity:           None        Signal Control:       Disabled
   Stop Bits:     Dynamic        Signal Select: CTS-DSR-RTS-DTR

   Access:          Remote       Local Switch:             None
   Backwards Switch: None        Name:                   PORT_2
   Break:         Disabled       Session Limit:               4
   Forwards Switch:  None        Type:                     Hard
   Default Protocol:  LAT        Default Menu:             None
   Autolink Timer One:10 Two:10  Dialer Script:            None

Preferred Service: None
Authorized Groups: 0
(Current) Groups: 0

Enabled Characteristics:
Input Flow Control, Output Flow Control, Signal Check
```

From this display, read the access server name (in this case, MMS1) and the port name (in this case, PORT_2). Verify that the access server and port names match what is defined on the service node.

At an OpenVMS host, enter the following commands. Substitute the number of the LTA: port for 8000:

```
$ RUN SYS$SYSTEM:LATCP
LATCP> SHOW PORT LTA8000

Local Port Name: _LTA8000:   Local Port Type: Application
(Queued) Local Port State:   Inactive Connected Link:

Target Port Name:    PORT_2 Actual Port Name:
Target Node Name:    MMS1   Actual Node Name:
Target Service Name:        Actual Service Name:
------------------------------------------------------------
LAT Control Program, Version 5.4-1
------------------------------------------------------------
LATCP>
```

From this display, read the Target Port Name (in this case, PORT_2) and the Target Node Name (in this case, MMS1). Verify that the access server name and port name map correctly with what is defined on the service node. If the port mappings do not match, refer to your service node documentation or the *Network Access Software Management Guide* for information on configuring a remote print queue. If the port mappings do match, either the access server port or the printer is the source of the problem. See the section *Verify the Physical Port Characteristics* (page 11-2).

Verify the Print Queue

This section explains how to determine if there is a problem with a print queue on your service node. Refer to the documentation on your specific operating system for details about the procedure.

At an OpenVMS host, enter the following command. Substitute the name of the queue for EARTH$LASER:

```
$ SHOW QUEUE/FULL EARTH$LASER

Terminal queue EARTH$LASER, paused, on EARTH::LTA8000:,
mounted form DEFAULT

/BASE_PRIORITY=4 /DEFAULT=(FEED,FORM=DEFAULT) Lowercase
/OWNER=[1,4] /PROCESSOR=LATSYM /PROTECTION=(S:E,O:D,G:R,W:W)
/RETAIN=ERROR
```

It is completely normal for the queue to be in a stalled state. To verify information on the access server, refer to the section *Verify Access Server Information*.

Having the queue in a paused state usually means a hard error. Perform the following to determine why:

Step	Action

1	Verify to see if the wrong queue processor is being used. Enter the following command. Substitute the name of the queue for EARTH$LASER:
	
	`$ SHOW QUE/FULL EARTH$LASER`
	
	`Terminal queue EARTH$LASER, paused,on`
	`EARTH::LTA8000:,mounted form DEFAULT`
	`/BASE_PRIORITY=4 /DEFAULT=(FEED,FORM=DEFAULT) Lowercase`
	`/OWNER=[1,4] /PROCESSOR=LATSYM`
	`/PROTECTION=(S:E,O:D,G:R,W:W)`
	`/RETAIN=ERROR`
	
	If the processor name is not LATSYM, stop the queue and reinitialize it using PROCESSOR=LATSYM.
	Note: Check that the LATSYM processor is used on all OpenVMS nodes that offer LAT print queues.

2	Verify to see if the wrong output device is being used. Enter the following command. Substitute the device number for 8000: `$ SHOW DEVICE LTA8000:/FULL` Verify that the output device type assigned to the LTA: device matches that of the printer.

Step	Action
3	Check the print queue for any LAT error messages. Enter the following command. Substitute the name of the queue for EARTH$LASER:

```
$ SHOW QUE/FULL/ALL EARTH$LASER
EARTH$LASER Terminal queue EARTH$LASER, paused, on
EARTH::LTA8000:, mounted form DEFAULT
/BASE_PRIORITY=4 /DEFAULT=(FEED,FORM=DEFAULT) Lowercase
/OWNER=[1,4] /PROCESSOR=LATSYM
/PROTECTION=(S:E,O:D,G:R,W:W)
/RETAIN=ERROR

Jobname Username Entry Blocks Status
------- -------- ----- ----- -------
LOGIN   MMS1     15    25     Retained on error

%LAT-F-NOMSG, message number 01769FBC
Submitted 9-JAN-1998 14:15 /FORM=DEFAULT /PRIORITY=100
File: _DSA109:[MMS1]LOGIN.COM;73
```

If there are any LAT error messages, get the message number and do the following. Substitute the message number for 01769FBC:

```
$ SET MESSAGE SYS$MESSAGE:NETWRKMSG
$ EXIT %X01769FBC
```

The message text returns as follows:

```
%LAT-F-CONTIMEOUT, connection timed out, server not
available, or incorrect server name specified
```

4 Verify the queue for jobs marked "Retained on error".

This message means that the output started and the job aborted while executing. Reasons include the following:

- The access server port was logged out.
- The access server port is in use.
- The LAT software was shut down on the service node.
- The Ethernet device failed to transmit the job.
- The job was deleted from the queue on the service node.

Verify LAT Group Codes

Verify that the group codes on the service node match that of the access server.

At an OpenVMS host, enter the following commands:

```
$ RUN SYS$SYSTEM:LATCP
LATCP> SHOW CHARACTERISTICS

Node Name:  SATRN LAT                  Protocol Version: 5.2
Node State: On
Node Ident: A VAX 6250 Cluster Member

Incoming Connections: Enabled Incoming Session Limit: 255
Outgoing Connections: Enabled Outgoing Session Limit: 255

Circuit Timer (msec): 80 Keepalive Timer (sec): 15
Retransmit Limit (msg): 8 Node Limit (nodes):  100
LAT Printing Problems

Multicast Timer (sec): 30 CPU Rating:          100

User Groups:    1, 5

Service Groups: 1, 5

Service Name   Status    Rating Identification
EARTH          Available 114    D A VAX 6250 Cluster Member
GALAXY         Available 114    D A VAX 6250 Cluster Member
------------------------------------------------------------
LAT Control Program, Version 5.4-1
------------------------------------------------------------
LATCP>
```

In this case, the service node groups are 1 and 5.

On the access server, enter the following command:

```
Local> SHOW SERVER

Access Server Vn.0 for DSnnn-nn BLnn ROM Vn.n-n Uptime: 9
10:57:42

Address: 08-00-2B-01-23-45 Name: GEMINI
Number: 0

Identification: UNAUTHORIZED ACCESS PROHIBITED

Circuit Timer:    80  Password Limit:        3
Console Port:      1  Prompt:           Local>
Inactivity Timer: 30  Queue Limit:         100
Keepalive Timer:  20  Retransmit Limit:      8
Multicast Timer:  30  Session Limit:        64
Node Limit:      200  Software:         WWENG2
                      TFTP Host:          None

Service Groups: 1,5
Enabled Characteristics:
Announcements, Broadcast, Dump, Lock
```

If the access server port is set up as a service, the access server Service Groups must have at least one group code in common with the service node groups. In this case, the access server Service Groups are 1 and 5. These Service Groups match those of the service node. For more information on specifying group codes for a LAT service, refer to the *Network Access Software Management Guide*.

Determine If Service Is Offered

If printing to a service, determine if the requested printing service is offered. Enter the following command on your access server. Substitute the number of the port that offers the service for 1:

```
LOCAL> SHOW PORT 1 SUMMARY

Port   Access   Status   Services Offered
1      Remote   Idle     Printer_service
```

If port 1 does not offer the requested service, refer to the *Network Access Software Management Guide* for more information on configuring a printer as a LAT service.

Telnet Printing Problems

Introduction

If the device characteristics (see the section *Verify the Physical Port Characteristics*), port configuration (see the section *Verify the Port Configuration*), printer device and cables (see the section *Test the Printer Port*), and access server information (see the section *Verify Access Server Information*) have been verified, perform the procedures in the sections *Verify Telnet Listener Configuration* and *Verify Characteristics on Host System*.

Verify Telnet Listener Configuration

On the access server that offers the Telnet listener, enter the following command. Substitute the number of the Telnet listener for 2014:

```
Local> SHOW TELNET LISTENER 2014

Listener Type:     Telnet
Listener TCP-port: 2014
Identification:    "Telnet Printer"
Ports:             4
Connections:       Enabled
IP Address         0.0.0.0 (will default to server's IP address)
```

If you are using an application that expects a raw TCP connection, verify that Listener Type is set to RAW.

Verify that Connections are Enabled and the Telnet listener is configured on the correct port. For more information on configuring a printer for access through a Telnet listener, refer to the *Network Access Software Management Guide.*

Verify Characteristics on Host System

Verify that the system manager on the host system has the correct TCP port number and Internet address to configure the remote print queue. For information on configuring a remote print queue, refer to the *Network Access Software Management Guide*.

Telnet Printer Not Creating a Newline

Solution

If your printer does not create a newline when printing, enter the following command on your access server. Substitute the port number for 1:

```
Local> SHOW PORT 1 TELNET SERVER
Port: 1
Xmit Char Size:    8 Newline From Term: <LF>
Rcv Char Size:     8 Newline From Host: None
IP:             None Newline To Term:   None
AYT:            None Newline To Host: <CRLF>
AO:             None  EC:               None
EOR:            None  EL:               None
NOP:            None  BRK:             Break
PPP Hot Key:    None  SLIP Hot Key:     None
Echo Negotiate: Initiate
```

Verify the setting for the Newline From Term characteristic. The Telnet Client system that accesses the printer might not be sending the same character to create a newline as the Newline From Term characteristic. Determine what the Telnet Client sends as the newline character. If these characters are different, enter the following command on your access server. Substitute your port number for 1 and your newline character for newline-char:

```
Local> CHANGE PORT 1 TELNET CLIENT NEWLINE FROM TERMINAL newline-char
```

For more information on specifying the Telnet server newline characteristics, refer to the *Network Access Software Management Guide*.

Chapter 12

Computer Configuration Problems

Overview

Introduction

The following table lists page references to help you solve problems that can occur when you attempt to access computers directly connected to access server ports. These connected devices are offered for access through either a LAT service or a Telnet listener.

Unable to Connect to a Computer Offered as a LAT Service

Solution

If you are unable to connect to a computer offered as a LAT service, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

Computer Does Not Respond to LAT Service Connection

Solution

If you can connect to the LAT service but the computer does not respond, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that you have configured the DTRWAIT port characteristic to be compatible with the port device. Normally, DTRWAIT should be enabled for remote access ports. When DTRWAIT is enabled, the access server can delay the assertion of DTR until the access server receives a connection to the port from the network.
5	If your computer requires the RI signal and your access server supports data signal rate select (DSRS), verify that RING is enabled on the access server port and that you are using the BC22R or equivalent cable.

Step	Action

6	Monitor the port status to determine which modem signals are being asserted. Enter the following command on your access server. Substitute the port number for 2:
	
	`Local> MONITOR PORT 2 STATUS`
	
	`Port 2: (Remote)  Server: DS700_08`
	`Access:  Remote Current Service:`
	`Status:  Connected Current Node:`
	`Sessions:  1 Current Port:`
	
	`Input XOFFed:  No Output Signals: DTR RTS`
	`Output XOFFed:  No Input Signals: DCD CTS DSR RXD`
	
	For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.

7	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

For more information on LAT service connection problems, refer to Chapter 2.

Unable to Access a Computer Through a Telnet Listener

Solution

If you are unable to access a computer through a Telnet listener, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

For more information on Telnet resource connection problems, refer to Chapter 3.

Connected to Telnet Listener but Computer Does Not Respond

Solution

If you can connect to the Telnet listener but the computer does not respond, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that you have configured the DTRWAIT port characteristic to be compatible with the port device. Normally, DTRWAIT should be enabled for remote access ports. When DTRWAIT is enabled, the access server can delay the assertion of DTR until the access server receives a connection to the port from the network.
5	If your computer requires the RI signal and your access server supports data signal rate select (DSRS), verify that RING is enabled on the access server port and that you are using the BC22R or equivalent cable.

Step	Action

6	Monitor the port status to determine which modem signals are being asserted. Enter the following command on your access server. Substitute the port number for 2:
	
	`Local> MONITOR PORT 2 STATUS`
	
	`Port 2: (Remote)  Server: DS700_08`
	
	`Access:  Remote Current Service:`
	`Status:  Connected Current Node:`
	`Sessions:  1 Current Port:`
	`Input XOFFed:  No Output Signals: DTR RTS`
	`Output XOFFed:  No Input Signals:  DCD CTS DSR RXD`
	
	For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.

7	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

8	Verify that the Telnet listener is configured correctly. On the access server that offers the Telnet listener, enter the following command.
	Substitute the number of the Telnet listener for 2014:
	
	`Local> SHOW TELNET LISTENER 2014`
	
	`Listener TCP-port:  2014  Listener Type: TELNET`
	`Identification:  "Telnet Printer"`
	`Ports:  4`
	`Connections:  Enabled`
	`IP Address  0.0.0.0 (will default to server's IP address)`
	
	Verify that Connections are Enabled and the Telnet listener is configured on the correct port. For more information on configuring a computer for access through a Telnet listener, refer to the *Network Access Software Management Guide*.

For more information on Telnet resource connection problems, refer to Chapter 3.

Connection to a Telnet Listener Results in Double Echoes or Double Lines

Solution

If you are experiencing problems with double echoes or double lines after connecting to a Telnet listener, the problem might be that the attached Telnet listener host system and the Telnet client are both performing echoing. This is because the Telnet listener on the access server does not explicitly negotiate echoing when establishing a Telnet connection. Therefore, the Telnet client performs local echoing.

After the connection is established, use the vendor's Telnet client user interface to change from Local Echo to Remote Echo (if double echoes) or from Line Mode to Character Mode (if double lines).

Chapter 13

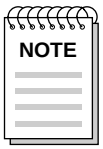
Modem Configuration Problems

Overview

Introduction

The following table lists page references to help you solve problems that can occur when you try to connect to a modem. Modems may be offered for dial-in access, dial-out access, or both.

Problem		**See Page**
General Modem Problems	Dial-In Modem Does Not Answer the Telephone	13-3
	Dial-In Modem Answers but Carrier Detect Light Is Off	13-5
	Dial-in Modem Is Unable to Communicate with the Access Server	13-6
	Dial-In Modem Disconnects from the Server	13-8
Modems Offered as a LAT Service	Cannot Connect to Dial-Out Modem Offered as a LAT Service	13-9
	Connected to LAT Service but Dial-Out Modem Does Not Respond	13-10
Modems Offered as a Telnet Service	Cannot Connect to Dial-Out Modem Through a Telnet Listener	13-12
	Connected to Telnet Listener but Dial- Out Modem Does Not Respond	13-13
Modems Offered as a Dialer Service	Cannot Complete Dial-Out to Remote Modem	13-15
	Cannot Complete a Dialback Request Using a Dialer Service	13-16



Configure DSR so that it complies with ITU (CCITT) recommendations.

Dial-In Modem Does Not Answer the Telephone

Solution

If the dial-in modem does not answer the phone, follow the dial-in user and access server manager procedures.

Dial-In User Procedure

Dial-in user should do the following:

Step	Action
1	Verify that the dial-in telephone number is correct.
2	Connect a telephone to the telephone line port on the modem (if provided) and put the modem into Talk mode (usually by pushing a button). Listen for a dial tone. If you do not hear a dial tone, your modem is not connected correctly. Refer to your modem documentation.
3	If you hear a dial tone, dial the telephone number directly. A successful modem connection will result in a loud, continuous, high-pitched tone after a few rings. If you hear a busy signal, the modem is in use. If someone answers, you have the wrong number. If there is no answer, contact the person responsible for the dial-in modem port.

Access Server Manager Procedure

Access server manager should do the following:

Step	Action
1	If the dial-in modem does not answer, verify that the port is configured correctly. Enter the following command. Substitute the number of the dial-in modem port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
2	Verify that you are using the correct cables to connect the modem to the access server port. For information on supported cables, refer to your hardware documentation.

Step	Action
3	When the access server receives the call, verify that the dial-in modem is detecting data terminal ready (DTR). Usually, there is a light on the modem marked DTR or TD. Most modems will not answer without this signal.
4	If the modem is not detecting DTR, the modem cable might be faulty. Replace the cable and retry.
5	If the modem is detecting DTR, but it is not answering the telephone, then either the modem is not functioning correctly or it is not configured for autoanswer. For more information, refer to the modem documentation.
6	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

Dial-In Modem Answers but Carrier Detect Light Is Off

Solution

If the modem answers the telephone, but the carrier detect (CD or CAR) light is not on, the dial-in user should do the following:

Step	Action
1	Verify that the speed of your modem and that of the dial-in modem are the same. Contact the person responsible for the dial-in modem to determine its speed.
2	It is possible that a poor telephone connection might have occurred and the modems are not able to establish a quality connection. Hang up and retry. If the problem persists, your telephone network might not be able to support communication at your modem speed. Contact the person responsible for the dial-in modem to request a dial-in modem at a lower speed.

Dial-in Modem Is Unable to Communicate with the Access Server

Solution

If the modem answers the telephone and the CD (or CAR) light comes on, but you cannot communicate with the access server, follow the dial-in user and access server manager procedures.

Dial-in User Procedure

Dial-in user should do the following:

Step	Action
1	If your modem has alternate speed (or fallback) capability, it is possible your modem might be using the alternate speed. Set your terminal to the alternate speed while the connection is up and perform your normal login sequence. If you are not successful, return the terminal to the original dial-in speed. Contact the person responsible for the dial-in modem port.
2	If you see a # symbol when you connect to the access server, you are being prompted for a password. If you do not know the password, contact the person responsible for the dial-in modem port.
3	If you type the correct password but you are logged out for entering the wrong password, you might have a problem with line noise. Type the password quickly or contact the person responsible for the dial-in modem port and request that the value for the PASSWORD LIMIT characteristic be increased.

Access Server Manager Procedure

Access server manager should do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the dial-in modem port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the modem to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that you have configured the DTRWAIT port characteristic to be compatible with the port device. Normally, DTRWAIT should be enabled for remote access ports. When DTRWAIT is enabled, the access server can delay the assertion of DTR until a connection is detected from a modem when an interactive user logs in.

5	Monitor the port status to determine which modem signals are being asserted. Enter the following command on your access server. Substitute the port number for 2:
	
	`Local> MONITOR PORT 2 STATUS`
	
	`Port 2: (Remote)  Server: DS716`
	
	`Access:  Remote Current Service:`
	`Status:  Connected Current Node:`
	`Sessions:  1 Current Port:`
	
	`Input XOFFed:  No Output Signals: DTR RTS`
	`Output XOFFed:  No Input Signals: DCD CTS DSR RXD`
	
	For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.

6	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).
7	If your modem is configured as a LAT service, refer to Chapter 2 for more information on LAT service connection problems. If your modem is configured as a Telnet listener, refer to Chapter 3 for more information on Telnet resource connection problems.

Dial-In Modem Disconnects from the Server

Solution

If the dial-in modem disconnects from the server, the problem can be the result of one of the following conditions:

- Noise on the line caused either your modem or the server modem to react as if the phone were hung up. Try the following:

  — Use a different phone jack

  or

  — Set the modem to a slower speed

- The server is configured to call you back before granting you access.

  Ask the server manager to verify that your entry in the server's authorization database is correct.

- The user name/password combination you offered to the server was not valid. Specify a valid user name and password. User name and password are case sensitive.

Cannot Connect to Dial-Out Modem Offered as a LAT Service

Solution

If you cannot connect to the dial-out modem offered as a LAT service, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the dial-out modem port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the modem to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).
5	For more information on LAT service connection problems, refer to Chapter 2.

Connected to LAT Service but Dial-Out Modem Does Not Respond

Solution

If you can connect to the LAT service but you cannot communicate with the dial-out modem, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the modem port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the modem to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that you have configured the DTRWAIT port characteristic to be compatible with the port device. Normally, DTRWAIT should be enabled for remote access ports. When DTRWAIT is enabled, the access server can delay the assertion of DTR until a connection is detected from a modem when an interactive user logs in.
5	If your access server supports alternate speed and your modem has alternate speed (or fallback) capability, it is possible your modem might be using the alternate speed. Set the access server modem port to the alternate speed while the connection is up and perform your normal login sequence. If you are not successful, return the access server modem port to the original speed.
6	Verify that the local switch characters for the port are not defined to be the same as special characters required by the modem, such as Ctrl/B. Verify that the Break characteristic is also compatible with the modem.
7	Verify that the modem is configured correctly. Ensure that the Data/Talk button is in the Data position. For more information, refer to the modem documentation.

Step	Action

8	Monitor the port status to determine which modem signals are being asserted. Enter the following command on your access server. Substitute the port number for 2:
	
	`Local> MONITOR PORT 2 STATUS`
	
	`Port 2: (Remote)  Server: DS700_08`
	
	`Access:  Remote Current Service:`
	`Status:  Connected Current Node:`
	`Sessions:  1 Current Port:`
	`Input XOFFed:  No Output Signals: DTR RTS`
	`Output XOFFed:  No Input Signals: DCD CTS DSR RXD`
	
	For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.

9	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).
10	For more information on LAT service connection problems, refer to Chapter 2.

Cannot Connect to Dial-Out Modem Through a Telnet Listener

Solution

If you are unable to connect to a dial-out modem through a Telnet listener, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
4	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).
5	For more information on Telnet resource connection problems, refer to Chapter 3.

Connected to Telnet Listener but Dial-Out Modem Does Not Respond

Solution

If you can connect to the Telnet listener but the modem does not respond, do the following:

Step	Action
1	Verify that the physical port characteristics are configured correctly (Port and Device Problems).
2	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
3	Verify that you are using the correct cables to connect the computer to the access server port. Refer to your hardware documentation for information on supported cables.
4	Verify that you have configured the DTRWAIT port characteristic to be compatible with the port device. Normally, DTRWAIT should be enabled for remote access ports. When DTRWAIT is enabled, the access server can delay the assertion of DTR until a connection is detected from a modem when an interactive user logs in.
5	If your access server supports alternate speed and your modem has alternate speed (or fallback) capability, it is possible your modem might be using the alternate speed. Set the access server modem port to the alternate speed while the connection is up and perform your normal login sequence. If you are not successful, return the access server modem port to the original speed.
6	Verify that the local switch characters for the port are not defined to be the same as special characters required by the modem, such as Ctrl/B. Verify that the Break characteristic is also compatible with the modem.
7	Verify that the modem is configured correctly. Ensure that the Data/ Talk button is in the Data position. Refer to the modem documentation for more information.

Step	Action

8	Monitor the port status to determine which modem signals are being asserted. Enter the following command on your access server.
	Substitute the port number for 2:
	
	`Local> MONITOR PORT 2 STATUS`
	
	`Port 2: (Remote)  Server: DS700_08`
	
	`Access:  Remote Current Service:`
	`Status:  Connected Current Node:`
	`Sessions:  1 Current Port:`
	`Input XOFFed:  No Output Signals: DTR RTS`
	`Output XOFFed:  No Input Signals: DCD CTS DSR RXD`
	
	For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.

9	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).

10	Verify that the Telnet listener is configured correctly. On the access server that offers the Telnet listener, enter the following command. Substitute the number of the Telnet listener for 2014:
	
	`Local> SHOW TELNET LISTENER 2014`
	`Listener TCP-port: 2014  Listener Type: TELNET`
	`Identification:`
	`Ports:  None`
	`Connections:  Disabled`
	`IP Address: 0.0.0.0 (will default to server's IP address)`
	
	Verify that Connections are Enabled and the Telnet listener is configured on the correct port. For more information on configuring a modem for access through a Telnet listener, refer to the *Network Access Software Management Guide*.

11	For more information on Telnet resource connection problems, refer to Chapter 3.

Cannot Complete Dial-Out to Remote Modem

Solution

If you can communicate with the modem but cannot complete the dial-out to the remote modem, verify the following:

Step	Action
1	If your access server supports alternate speed and your modem has alternate speed (or fallback) capability, it is possible your modem might be using the alternate speed. Set the access server modem port to the alternate speed while the connection is up and perform your normal login sequence. If you are not successful, return the access server modem port to the original speed.
2	Verify that the modem is correctly configured for dial-out access. For more information, refer to your modem documentation.
3	Verify that the modem is correctly connected to the telephone network. Connect a telephone to the modem line and verify that you hear a dial tone.
4	If you hear a dial tone, the problem might be with the remote dial-in modem or with the device to which it is connected. For more information on troubleshooting dial-in modems, refer to the sections *Dial-In Modem Does Not Answer the Telephone, Dial-In Modem Answers but Carrier Detect Light Is Off,* and *Dial-in Modem Is Unable to Communicate with the Access Server,* or contact the person responsible for the modem at the remote location.

Cannot Complete a Dialback Request Using a Dialer Service

Solution

If you requested a callback but the server did not call you back, do the following:

Step	Action
1	Verify that the port is configured correctly. Enter the following command. Substitute the number of the port for 1: `Local> SHOW PORT 1` The SHOW PORT display will vary depending on the hardware you are using. For information on configuring your access server for modem signals, refer to the *Network Access Software Management Guide*.
2	Verify that you are using the correct cables to connect the computer to the access server port. For information on supported cables, refer to your hardware documentation.
3	Verify that the access server port hardware is working correctly. See the section *Verifying a Port for Hardware Failure* (page 10-8).
4	Verify that your phone is not busy and is ready to receive the callback from the server. a. Queue the callback request on the server. b. Disconnect from the server, and hang up the local phone.
5	Enter the dialer request again to make sure that the dialer service was not disabled or deleted on the server after your request was queued.
6	Verify that you have permission to use the mode that you did when you requested the server to call you back. See your server manager for help.
7	For information on why the dialer request could not be completed, see the accounting log.

Chapter 14

IPX Problems

Overview

Introduction

The following table lists steps and page references to help you solve problems that can occur when using the IPX protocol on the access server.

Problem	Solution	See Page
Problems with Dialing In to Access Server Ports	1. Checking PC Client Status Messages	14-2
	2. Checking Cabling Between Port and Modem or Device	14-2
	3. Checking Configuration of Attached Device	14-2
	4. Checking Configuration for Login Method	14-2
	5. Monitoring Active Dial-In and Login Attempt	14-3
	6. Verifying That PC Client User Knows Login Procedure	14-3
Problems With PPP/IPX Negotiations on the Access Server Port		14-4
Problems with Attaching to a Novell File Server	1. Checking PC Client Status Messages	14-2
	2. Checking the Frame Type and Network Address	14-5
	3. Checking that SAP Services are Available	14-5
Problems with Relatively Slow File Transfer		14-6

Problems with Dialing In to Access Server Ports

Introduction

If you experience problems with your PC client when dialing and logging in to access server ports, verify the following on the access server:

- PC client status messages
- Correct cabling between port and modem or device
- Port configured correctly for attached device
- Port configured correctly for login method
- Active dial-in and login attempts function properly
- PC client user understands login procedure

Checking PC Client Status Messages

Check the remote node access software used on the PC client when connecting. It can offer status messages that give some indication regarding what part of the process is failing.

Checking Cabling Between Port and Modem or Device

For guidelines on the correct cabling of modems and devices, refer to Appendix A of the *Network Access Software Management Guide*.

Checking Configuration of Attached Device

Type SHOW PORT to check the current characteristics and verify that the characteristics are correctly configured using the commands in the Managing IPX section of the *Network Access Software Management Guide*.

Checking Configuration for Login Method

Type SHOW PORT to check the current characteristics and verify that the correct characteristics are configured using the commands in the Managing IPX section of the *Network Access Software Management Guide*. If login password authentication is enabled, make sure you have set the password correctly. Make sure you have configured the login method based on whether the user will log in to the user interface or directly to PPP/IPX.

Monitoring Active Dial-In and Login Attempt

You may want to monitor the port as the modem dial-in and login attempt is being made by the PC client. Type MONITOR PORT n STATUS and verify that:

- Output signals DTR/RTS are present
- Input signals CTS, DSR, and RXD are present and status goes from "idle" to "local mode" when the dial-in modem makes its connection and the PC user logs in. Status goes to "Connected" and service goes to "PPP" when PPP is negotiated.

Verifying That PC Client User Knows Login Procedure

The PC client user must know what login method is used for the port. The port may be configured to log in to the user interface or dedicated to PPP. Type SHOW PORT n to see whether the port is dedicated to PPP. Substitute the number of the port for ‘n’.

If login is the user interface, a terminal emulation must be used with the PC client's remote node access software. Refer to the Managing IPX section of the *Network Access Software Management Guide* for general Novell client/server dial-in procedures.

Problems With PPP/IPX Negotiations on the Access Server Port

Solution

If problems with PPP/IPX negotiations remain after successful dial-in and login, refer to Chapter 4.

Problems with Attaching to a Novell File Server

Introduction

If problems with connecting to a NetWare file server occur after successful dial-in, login, and PPP negotiations, verify the following:

- Check the PC client status messages.
- Check that the IPX frame type has a network address.
- Check that SAP services are available.

Checking PC Client Status Messages

Check the remote node access software used on the PC client when connecting. It can offer status messages that give some indication regarding what part of the process is failing.

Checking the Frame Type and Network Address

Type SHOW IPX and make sure that at least one FRAME type in the STATUS section has a network address associated with it.

If no FRAMES have network addresses and are learning, verify that the Novell NetWare file server frames on your LAN are enabled.

If a network address is configured explicitly for FRAMES on the access server, check that it is the same address that Novell NetWare file servers/routers are using on the LAN.

Checking that SAP Services are Available

Type SHOW IPX COUNTERS and verify that SAP requests are being received and transmitted, and SAP responses are being received and transmitted. If requests are being received and transmitted but responses are not, verify that services are enabled and available on the NetWare file servers and routers.

Problems with Relatively Slow File Transfer

Solution

If file transfer to or from Novell file servers seem unusually slow, type SHOW PORT n COUNTERS. Substitute the number of the port for ‘n’. If Send Packets Lost or Receive Packets Lost is high, check if the PC client user has NetWare Packet Burst enabled for the NetWare connection. Ask the PC client user to disable Packet Burst and try the file transfer again.

Chapter 15

Accounting Problems

Overview

Introduction

The following table lists steps and page references to help you solve problems that can occur when using the accounting component on the access server.

Problem	Solution	See Page
Problems with Accounting Log Steps	1. Verify the Log Size	15-2
	2. Verify That the Threshold is Appropriate	15-3
Problems with Accounting Console Logging	1. Verify Console Logging Is Enabled	15-4
	2. Verify Server Console Port	15-5

Problems with Accounting Log

Introduction

If you experience problems creating an Accounting log file, verify the following:

- The access server has enough memory to accommodate the LOG SIZE requirements of the accounting component.
- The LOG SIZE specification is a valid value.
- The THRESHOLD specification is appropriate.

Verify the Log Size

To verify that the access server is storing Accounting events, enter the following command:

```
Local> SHOW ACCOUNTING

Accounting Characteristics:

Threshold:           None
Log Size:            128K
Console Logging: Disabled
```

If the Log Size is zero, Accounting events are not being stored. This can occur for two reasons:

- Insufficient memory. If the defined Log Size is nonzero, the access server could not allocate the requested memory during initialization. During initialization, the accounting component is the last component to boot. If the remaining memory is insufficient to accommodate the DEFINEd Log Size, there will be no accounting log and the dynamic log size will be set to zero. Choose a smaller specification for Log Size and reboot the access server with the following commands (substituting your desired log size for 128):

  ```
  Local> DEFINE ACCOUNTING LOGSIZE 128
  Local> INITIALIZE
  ```

- DEFINED LOGSIZE 0: If the accounting log size is DEFINEd to zero (LIST ACCOUNTING), the access server did not attempt to allocate an accounting log during initialization. Enter the following commands (substituting your desired log size for 128):

  ```
  Local> DEFINE ACCOUNTING LOGSIZE 128
  Local> INITIALIZE
  ```

Verify That the Threshold is Appropriate

To verify that the logging threshold is appropriate, enter the following command:

```
Local> SHOW ACCOUNTING CHARACTERISTICS

Accounting Characteristics:

Threshold:          None
Log Size:           128K
Console Logging: Enabled
```

To change the threshold parameter, enter the following commands (substituting your desired threshold for QUARTER):

```
Local> CHANGE ACCOUNTING THRESHOLD QUARTER
```

Problems with Accounting Console Logging

Introduction

If you experience problems getting the accounting component to display events to the server console port as they occur, verify the following:

- Console logging is enabled.
- Server console port is enabled.

Verify Console Logging Is Enabled

To verify that console logging is enabled, enter the following command:

```
Local> SHOW ACCOUNTING CHARACTERISTICS

Accounting Characteristics:

Threshold:           None
Log Size:            128K
Console Logging: Disabled
```

If Console Logging is Disabled, enable it by entering the following command:

```
Local> CHANGE ACCOUNTING CONSOLE LOGGING ENABLED
```

Verify Server Console Port

To verify that the server console port is enabled, enter the following command:

```
Local> SHOW SERVER

Network Access SW Vx.x for DS716 BLxx-xx ROM Vx.x-x Uptime:0
00:16

Address: 08-00-2B-26-AA-99 Name: WWDOCMC Number: 0

Identification:

Circuit Timer:    80   Password Limit:     3
Console Port:      1   Prompt:        Local>
Inactivity Timer: 30   Queue Limit:      100
Keepalive Timer:  20   Retransmit Limit:   8
Multicast Timer: 30    Session Limit: 64
Node Limit:     200    Software:      WWENG2
                       TFTP Host:         None

Service Groups: 42, 46, 66

Enabled Characteristics:
Announcements, Broadcast, Dump, Lock
```

If the console port is set to NONE or is not the port on which you want logging to occur, enter the following command. (n is the port number to which you want to log accounting events. Substitute the number of the port for n.)

```
Local> CHANGE SERVER CONSOLE n
```

Chapter 16

Remote Login Problems

Overview

The information in this chapter describes some of the problems you may encounter when managing the Rlogin feature of the access server software.

In This Chapter

This chapter provides the following topics for solving Rlogin problems:

- Rlogin connection problems
- Rlogin client characters do not display on a terminal
- Rlogin client hung
- Rlogin client hung after entering a suspend sequence
- Rlogin editor characters not functioning properly
- Rlogin terminal type unknown; insufficient for some applications
- Rlogin error codes including explanations and actions to use for solving problems

Rlogin Connection Problems

If you experience problems connecting to a Rlogin resource, verify the following:

- Internet address
- Internet host name
- Domain name system parameters
- Communication to remote Internet host
- Access server memory usage
- Rlogin server username

Verify Internet Address

If you are unable to connect to a Rlogin resource using an Internet address, enter the following command:

```
Local> SHOW INTERNET

State:                Enabled
Internet Address:     0.0.0.0 (Learning)
Subnet Mask:          0.0.0.0
DHCP:                 Enabled

TCP Keepalive Timer:  120
TCP Keepalive Retry:  8
```

Step	Action
1	Verify that the Internet address and subnet mask are correct.
2	If you are not using the default subnetwork mask, ensure you set the subnet mask before you set the Internet address.
3	If your Internet address is set to 0.0.0.0, then define your Internet address using the following command. Substitute your Internet address for 195.1.1.60: `Local> CHANGE INTERNET ADDRESS 195.1.1.60`

For more information on specifying the TCP/IP network characteristics for your access server, refer to the *Network Access Software Management Guide*.

Verify Internet Host Name

If you are unable to connect to a Rlogin resource using an Internet host name, enter the following command:

```
Local> SHOW INTERNET HOST ALL

Internet Address      Name

195.1.1.60            SALES.MKTG.FOO.COM

195.1.1.62            ACCT.MKTG.FOO.COM
```

Verify that the Internet host name is defined in the Internet database. For more information on configuring the Internet host name, refer to the *Network Access Software Management Guide*.

Verify Domain Name System (DNS) Parameters

If you are unable to connect to a Rlogin resource using an Internet host name, enter the following command:

```
Local> SHOW INTERNET NAME RESOLUTION CHARACTERISTICS

Domain Name:           MKTG.FOO.COM
Resolution Host Limit: 32       Resolution Time Limit: 4
Resolution Mode:       Ordered Resolution Retry Limit: 3
Nameservers:          (Locally configured)
195.1.1.81 Local NAMED.MKTG.FOO.COM
Nameservers: (Learned)
195.1.1.91 Local ELF.MKTG.FOO.COM
195.1.1.16 Local MINE.FOO.COM
195.1.1.82 Local NAMED.MKTG.FOO.COM
195.1.1.43 Local WOLF.PERSNL.FOO.COM
```

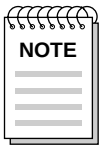
Verify that the DNS parameters are set up correctly. For more information on configuring the access server on a TCP/IP network, refer to the *Network Access Software Management Guide*.

Verify Communication to Remote Internet Host

If you are unable to connect to a Rlogin resource, determine if the access server can communicate with the Internet host. Enter the following command. Substitute the Internet address (or host name) for 195.1.1.60:

```
Local> PING 195.1.1.60
```

This command establishes a PING session on the access server port. This session will continue until the PING succeeds (and sends a verification message) or until the timeout period of 30 seconds is exceeded. If this command fails, then the Internet host is unavailable.



The PING command is the same as the TEST INTERNET command. For more information on the PING command, refer to the *Network Access Software Commands Reference Guide*.

Verify Access Server Memory Usage

The access server has a limited pool of memory. With large networks or many port sessions, it is possible to run out of memory. When access server memory is filled, the access server cannot start additional Rlogin sessions. To verify that you have a sufficient pool of available memory, enter the following command:

```
Local> SHOW MEMORY STATUS

High Pool Size:    982943 bytes
High Pool Used:    563516 bytes
Low Pool Size:     52480 bytes
Low Pool Used:      1940 bytes
Command Pool Size: 20480 bytes
Command Pool Used:  8428 bytes
MOP Pool Size:      4096 bytes
MOP Pool Used:       148 bytes
```

To display the memory configuration of your system, enter the following command:

```
Local> SHOW MEMORY CONFIGURATION

Dynamic RAM:          4M bytes

Non-Volatile RAM:     128K bytes

FlashRAM:
Installed:            Yes
  Total size:         2 Mbytes
  Boot block:         Valid
  Load image:
    Name:             WWENG2
    Size:             1756988 bytes
    Version:          Network Access SW Vn.n BLnn-nn
```

Resource errors indicate the number of times an internal data structure could not be created due to the lack of system memory. To look at resource errors, enter the following command:

```
Local> SHOW SERVER STATUS

Network Access SW Vn.n for DS716 BLnn ROM Vn.n-n Uptime:13 16:36:23
Address:08-00-2B-02-F2-BB   Name:GEMNI   Number:65535
                     Cur   High  Max
Active Ports:          8    10   16 Minutes to Shutdown: N/A
Active Users:          8    10   16 Discarded Nodes: 15
Queue Entries:         0     1  100 Resource Errors: 57
Available Services:  246   253  N/A Port Framing Errors: 0
Local Services:        1     1   20 Port Parity Errors: 0
Reachable Nodes:     195   195  200 Port Overrun Errors: 0

                                    Boot Device: Ethernet: 0
Active Circuits:       9     9   32 Primary Host: PEACH
Connected Nodes:       7     9   32 Load Address:AA-00-04-00-46-DC
Connected Sessions:   12    20   64 Dump Address: None Available
% CPU Used:           15    36  100 Console User:AA-00-04-00-D3-71
% Memory Used:        80    80  100 Boot Protocol: MOP

Selftest Status:      Normal
Software Status:      Normal
```

If the number of Resource Errors is greater than zero, the access server memory might be full. Make the following corrections:

Step	Action
1	Adjust the Internet Name Resolution Host Limit to store fewer nameservers, which further restricts memory usage. For information on managing an access server, refer to the *Network Access Software Management Guide*. Reducing the node limit can immediately reduce the number of service nodes stored in the database. This will free some memory, if the access server makes use of LAT. The following command shows how to set the node limit to 100: `Local> CHANGE SERVER NODE LIMIT 100`
2	Verify the ports on the access server for sessions in the Disconnecting or Disconnected state. Enter the following command. Substitute the port number for 5: Local> SHOW SESSIONS PORT 5 Port 5: Jack Local Mode Current Session: 1 - Session 1: Disconnecting Interactive EARTH Then, perform the following: • Find the port sessions that have the status Disconnecting or Disconnected. • Disconnect these sessions at the port. If there are no other sessions, log out the same ports.

Verify Rlogin Server Username

Rlogin prompts for a password and returns a "login incorrect" error when the correct password is entered. This occurs because the server username is not the expected value. The server username specifies the desired account to connect to on the remote system.

If specifying the username on the command line, remember that case is only maintained if the username is enclosed in quotation marks. Otherwise, the username will be sent to the Rlogin server in uppercase.

If the username is not specified on the command line, the port username is usually the name used. The following are exceptions to this situation:

- If you have changed your port's username since logging in, the username used to authenticate to the access server is the username used by Rlogin. The name given by SHOW PORT AUTHORIZATION is in the form "name@realm." Rlogin uses the name from "name@realm."
- If the port username is in the form of "name@realm", then Rlogin only uses the name portion.

The Rlogin characteristic, username, referred to in this solution is described in more detail in the Rlogin chapter in the *Network Access Software Management Guide*.

If the client username is not the same as the server username, use the following command to connect to the remote system. It is necessary to use quotation marks to preserve lowercase.

```
Local> RLOGIN remote-host USERNAME "server-username"
```

Rlogin Client Characters Do Not Display on Terminal

Solution

If characters do not display during a Rlogin session, enter the following command. Substitute the number of the port for 1.

```
Local> SHOW PORT 1 RLOGIN CHARACTERISTICS

Rlogin Characteristics Port 1:
Terminal type: Unknown
Escape character: ~
Suspend input to server: ^y
Suspend server I/O: ^z
```

Procedure

Do the following:

Step	Action
1	Use Ctrl/] to get a Local> prompt.
2	Use the SHOW PORT 1 RLOGIN CHARACTERISTICS command to determine the suspend input and suspend I/O characters.
3	Resume the session.
4	Enter the suspend input character, then try typing again. If unsuccessful, enter the suspend I/O character, then try typing again.

More Information

If the procedure in this section did not solve the problem, the Rlogin client may have hung. Alternatively, it is possible that the Rlogin characteristics have changed on the port since the session began. If you do not know the previous values, log out the port.

Rlogin Client Hung

Solution

If your Rlogin session appears to be hung, the Rlogin remote partner could have abnormally disconnected the session, but you might have suspended input and output to the server. Verify that this is not the case by following the steps in Rlogin Client Characters Do Not Display on Terminal in this chapter.

Unlike Telnet, there is no mechanism to recover an abnormally disconnected Rlogin session. To delete your Rlogin connection, enter the following commands (even if you do not have a prompt from the remote host):

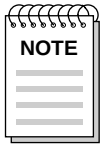
```
[Return key] ~ [Ctrl/D]
```

Replace the tilde (~) with the port Rlogin escape character.

Rlogin Client Hung After Entering Suspend Input or Suspend IO Sequence

Solution

If your Rlogin session appears to be hung and you previously entered either the suspend input or suspend IO sequence, you must enter the suspend input character or suspend IO character again, to toggle the effects off.



Entering either of the suspend characters without first entering the Rlogin escape character will not cause the Rlogin client to suspend any communication.

Rlogin Client Editor Characters Not Functioning Properly

Solution

If you experience unusual responses to Ctrl/S or Ctrl/Q keystrokes when using various editors during a Rlogin session, the terminal or terminal emulator settings must be adjusted. Reset your terminal so that it does not use XON/XOFF flow control.

Rlogin Terminal Type "Unknown" Insufficient for Some Applications

Solution

Change the Rlogin terminal setting using the following command:

SET/DEFINE/CHANGE PORT RLOGIN TERMINAL VTxxx

Only terminal types of VTxxx, where xxx is some integer, are permitted.

If VTxxx does not sufficiently describe your terminal type, then start a Rlogin session normally and modify your environment variable that controls the terminal type. You can also modify your login script on the remote system to specify the terminal type. For either of these options, the Rlogin terminal setting is overridden so the default or any other setting is acceptable.

More Information

For more information on how to configure Rlogin client session characteristics, refer to Managing Remote Login in the *Network Access Software Management Guide*.

Chapter 17

Directed TFTP Problems

Overview

This chapter describes some of the problems you may encounter after configuring your access server for Directed TFTP.

In This Chapter

This chapter includes the following topics:

- Missing access server IP address
- Missing default gateway IP address
- Incorrect filename
- No or poor network connectivity
- Improperly configured TFTP server
- A list of Directed TFTP error codes including explanations and actions to take for solving problems

Missing Access Server IP Address

The access server must have a local IP address at the time TFTP load requests are issued. This address may come from the access server's NVRAM, for example, a DEFINE INTERNET ADDRESS command, from the Mini-Monitor, for example, a set IP address command (>>> s ip), or from a BOOTP reply packet. In the case of Directed TFTP, the latter option does not apply.

Missing Default Gateway IP Address

If the TFTP server is not located in the same IP LAN subnet (i.e. reachable using ARP), then the access server must have a default gateway IP address configured. This address may come from the access server's NVRAM, i.e. a DEFINE INTERNET GATEWAY command, from the Mini-Monitor, for example, the set gateway command (>>> s gw), or from a BOOTP reply packet. In the case of Directed TFTP, the latter option does not apply.

Incorrect Filename

The access server must have the load image file name configured to perform a TFTP load. Typically the access server stores only the filename without any path information or file extension. The fully qualified pathname is typically specified by the BOOTP reply packet. In the case of Directed TFTP, the filename may come from the access server's NVRAM, for example, the DEFINE SERVER SOFTWARE command, or from the Mini-Monitor, for example, the >>> b eth:<filename> command. It is recommended that the TFTP server be configured with a default directory that immediately contains the access server load image files.

No or Poor Network Connectivity

You may receive a timeout status message on the access server physical console port. If network connectivity is poor, the firmware will continue to retry, but the download may not ever complete successfully. There is nothing that the user can do at the access server to solve this kind of problem, other than to select an alternate load protocol and/or alternate load host if such is available.

Improperly Configured TFTP Server

If your TFTP server host operating system uses case-sensitive file names, be sure that the filenames of the access server load images match the name the access server requests via TFTP. Note that the access server will typically request a file by name only, with no path or file extension information.

Use the restricted mode of TFTP daemon on UNIX systems with the restricted file system pointing to the directory in which the access server load images exist. In the access server ROM Mini-Monitor, you may specify a long pathname for the load image (e.g. /usr/tftpboot/MNENG2). When you define the load image name in access server NVRAM, you are restricted to 9 characters. While it is possible to use a quoted string to provide a path name, the length is restrictive (e.g., /u/t/MNENG2 is too long.)

Directed TFTP Error and Status Messages

Local -903- [DTFTP] Loading from host nnn.nnn.nnn.nnn [ETHERNET]

Explanation: Indicates that a particular host is now loading from DTFTP. The

BOOTP form of this message remains the same as before, for example:

```
Local -903- [IP] Loading from host nnn.nnn.nnn.nnn [ETHERNET]
```

Action: None.

Local -912- [IP] Load failure, timeout.

Explanation: The access server did not receive a completed image load within the allotted timeout period. If Directed TFTP is being used, it might be that the IP address of the TFTP server is incorrect, the host may not be running the TFTP server process, or the network connectivity to the TFTP server may be faulty.

Action: Follow these steps to solve the load failure timeout problem:

1. Verify that the TFTP server is reachable on the network. Try a PING to the host.
2. Verify that the TFTP server is running the TFTP process. Consult your operating system documentation.
3. Verify that the access server has a local IP address.
4. Verify that the access server has a default gateway IP address if it needs one.

Local -915- [DTFTP] Access Server local IP address not specified.

Explanation: The access server ROM firmware is attempting to perform a Directed TFTP image load. The access server does not a have a source (or local) IP address, which it must have to initiate TFTP.

Action: Invoke the access server ROM firmware Mini-Monitor by entering Ctrl/B twice, at the access server physical console. At the >>> prompt, temporarily configure an IP address for the access server. For example:

```
>>> s ip=192.10.444.3
```

Enter the boot command to resume. For example:

```
>>> b eth:mneng2
```

Local -962- [IP] TFTP Error message received, code: 01 File "FOO" not found.

Explanation: The access server is attempting to load image FOO from a TFTP server. The file was not found at the specified TFTP server. The TFTP server address is obtained either from a BOOTP server response message, or from the Directed TFTP server configuration.

Action: The problem could be one of the following:

- an incorrect image name is defined in access server NVRAM
- an incorrect image name was entered as operand of an “init” command or a Mini-Monitor “b” command
- the filename or pathname are incorrect at the TFTP server

In any case, the first action to take is to invoke the access server ROM firmware Mini-Monitor by entering Ctrl/B twice on the access server’s physical console. At the >>> prompt, specify an alternate image name. For example:

```
>>> b eth:mneng2
```

Chapter 18

Messages 000 – 099

Overview

Introduction

This chapter provides information on messages 000 – 099.

Messages

Local -008- Ping session currently active

Explanation: User tried to execute a TEST INTERNET or PING command while another TEST INTERNET or PING command was active on the same port.

Action: No action is required, try again later.

Local -009- Session session_number to host_name established.

Explanation: This message is displayed when a session was established to a host.

Action: No action is required.

Local -011- Session session_number disconnected from host_name.

Explanation: This message is displayed when an interactive session to a host is terminated.

Action: No action is required.

Local -019- Dial request queued, call will be attempted in s seconds

Explanation: The access server accepted a call back request. After the given time delay, the request is removed from the queue and the callback is initiated.

Action: Hang up the local modem by logging out of the access server. If necessary, prepare the local modem to receive the incoming callback from the access server.

Local -020- Logged out port port_number on server server_name.

Explanation: This message is displayed on the local terminal when the port is logged out.

Action: No action is required.

Local -040- Software initialization complete

Explanation: This informational message indicates that the network access server is ready to use. It is displayed on the console port (if a console port is enabled) after the server is initialized.

Action: No action is required.

Local -041- Flash RAM update complete

Explanation: An update to the image loaded in Flash RAM was requested during the reinitialization and has been successfully completed.

Action: No action is required.

Local -042- Flash RAM update failed

Explanation: An update to the image loaded in Flash RAM was requested during the reinitialization and the update has failed. Additional error messages will give the specific reason for the failure.

Action: Refer to the specific error messages for the course of action.

Chapter 19

Messages 200 – 299

Overview

Introduction

This chapter provides information on messages 200 – 299.

Messages

Local -201- Connection to service-name not established
No response within timeout period

Explanation: The connection request failed or the existing connection was terminated because the retransmit limit on the circuit has been reached. When the retransmit limit is reached, the circuit between the access server and the service node is terminated.

Action: Verify the LAT service configuration (Chapter 2).

Local -202- Connection to service-name not established
Communication protocol error

Explanation: The access server is receiving messages that violate the LAT protocol.

Step	Action
1	Try to reconnect to the service.
2	If the connection fails, reinitialize the access server to downline load the software.
3	Verify that the access server is running the latest software.
4	Try to reconnect to the service.
5	If the error messages reappear, you might have a software problem.

Local -203- Connection to service-name not established
Service node retransmission limit exceeded

Explanation: The connection request failed or the existing connection was terminated because the retransmit limit on the circuit has been reached. When the retransmit limit is reached, the circuit between the access server and the service node is terminated.

Action: Verify the LAT service configuration (Chapter 2).

Local-204- Autoconnect retry limit exceeded.

Explanation: Autoconnect failed to establish a connection within the maximum number of allotted retries. This service may be incorrectly spelled or may not be available.

Action: Verify the service name. Try again later. Contact your system administrator.

Local -205- Connection to service-name not established.
No response to solicit information request.

Explanation: The access server's database did not contain the service and node information required to establish a connection to the specified service. As a result, the access server attempted to solicit the information from other nodes on the network and did not receive a response.

Step	Action
1	Verify that the service name was entered correctly.
2	If you specified a node as part of the connection request, verify that you entered the name correctly and that the node offers the service.
3	Verify that the port's group codes allow access to the service.
4	Enable autoconnect and retry the request. Be sure to allow several minutes for the connection to be established.
5	Increase the access server's node limit.

Local -206- Connection to service-name terminated
No response within timeout period

Explanation: The connection request failed or the existing connection was terminated because the retransmit limit on the circuit has been reached. When the retransmit limit is reached, the circuit between the access server and the service node is terminated.

Action: Verify the LAT service configuration (Chapter 2).

Local -207- Connection to service-name terminated
Communication protocol error

Explanation: The access server is receiving messages that violate the LAT protocol.

Step	Action
1	Try to reconnect to the service.
2	If the connection fails, reinitialize the access server to downline load the software.
3	Verify that the access server is running the latest software.
4	Try to reconnect to the service.
5	If the error messages reappear, you might have a software problem.

Local -208- Connection to service-name terminated
Service node retransmission limit exceeded

Explanation: The connection request failed or the existing connection was terminated because the retransmit limit on the circuit has been reached. When the retransmit limit is reached, the circuit between the access server and the service node is terminated.

Action: Verify the LAT service configuration (Chapter 2).

Local -210- Connection not established, queued access timeout

Explanation: A connection request failed from a port with QUEUING enabled to a service. This could happen if queuing is disabled for the service or if the queue limit has been reached.

Action: Use the SHOW SERVICE CHARACTERISTICS command to determine if queuing is disabled. For more information on configuring and managing the LAT connection queue, refer to the *Network Access Software Management Guide*.

Local -211- Connection to service-name not established
Protocol error: illegal circuit

or

Local -212- Connection to service-name not established
Protocol error: credits

or

Local -213- Connection to service-name not established
Protocol error: start/run

or

Local -214- Connection to service-name not established
Protocol error: maximum < current

Explanation: The access server is receiving messages that violate the LAT protocol.

Step	Action
1	Try to reconnect to the service.
2	If the connection fails, reinitialize the access server to downline load the software.
3	Verify that the access server is running the latest software.
4	Try to reconnect to the service.
5	If the error messages reappear, you might have a software problem.

Local -215- Connection to service-name not established
Logic error: duplicate queue entry

Explanation: The connection request failed or the existing connection was terminated because the queue entry id already exists in the queue.

Action: Try to reconnect to the service.

Local -216- Connection to service-name not established
No other users on this virtual circuit

Explanation: The connection request failed or the existing connection was terminated and the virtual circuit is now inactive.

Action: Try to reconnect to the service.

Local -217- Connection to service-name not established
Insufficient service resources

Explanation: The connection request failed or the existing connection was terminated due to insufficient memory.

Action: Verify access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

Local -218- Connection to service-name not established
Service user disconnect request

Explanation: The connection request failed or the existing connection was terminated because the host disconnected the session.

Action: Try to reconnect to the service.

Local -219- Connection to service-name not established
Service not available

Explanation: The connection request failed or the existing connection was terminated because the service is not available.

Action: Verify the LAT service configuration (Chapter 2).

Local -220- Connection to service-name not established
Server user disconnect request

Explanation: The connection request failed or the existing connection was terminated because the access server disconnected the session.

Action: Try to reconnect to the service.

Local -221- Connection to service-name not established
Insufficient node resources

Explanation: The connection request failed or the existing connection was terminated due to insufficient memory.

Action: Verify access server memory usage. See the section *Verify Access Server Memory Usage* (page 2-6).

Local -222- Connection to service-name not established
Access server shutdown in progress

Explanation: The connection request failed or the existing connection was terminated due to access server shutdown.

Action: Retry later.

Local -223- Connection to service-name not established
Node user disconnect

Explanation: The connection request failed or the existing connection was terminated because the remote node intentionally aborted the connection. This message might occur as a result of a user-written application running on the host.

Action: Contact the remote node's system manager.

Local -224- Connection to service-name not established
Circuit timer out of range

Explanation: The access server circuit timer value is out of range.

Action: The circuit timer must be set in the range of 30 to 200 milliseconds. The circuit timer is factory set to 80 milliseconds, which is the recommended setting for normal interactive functions. This provides a good balance between response time and service node performance. For more information on setting the circuit timer, refer to the *Network Access Software Management Guide*.

Local -225- Connection to service-name not established
Invalid service class

or

Local -226- Connection to service-name not established
Invalid message or slot received

Explanation: The access server is receiving messages that violate the LAT protocol.

Step	Action
1	Try to reconnect to the service.
2	If the connection fails, reinitialize the access server to downline load the software.
3	Verify that the access server is running the latest software.
4	Try to reconnect to the service.
5	If the error messages reappear, you might have a software problem.

Local -227- Connection to service-name not established
Time limit expired

Explanation: The connection request failed or the existing connection was terminated because the retransmit limit on the circuit has been reached. When the retransmit limit is reached, the circuit between the access server and the service node is terminated.

Action: Verify the LAT service configuration (Chapter 2).

Local -228- Connection to service-name not established
No progress being made

Explanation: The connection request failed or the existing connection was terminated because the access server determined that no progress is being made on the current circuit.

Action: Verify the LAT service configuration (Chapter 2).

Local -229- Connection to service-name not established
Service not offered on requested port

or

Local -230- Connection to service-name not established
Object port name not known

Explanation: The connection request failed or the existing connection was terminated because the service is not offered on the requested port.

Action: Verify the service configuration. See the section *Verify the LAT Service Configuration* (Chapter 2).

Local -231- Connection to service-name not established
Invalid password

Explanation: The connection request failed or the existing connection was terminated because you specified an invalid password.

Action: Specify the correct password.

Local -232- Connection to service-name not established
Service in use

Explanation: The connection request failed or the existing connection was terminated because the service is already in use.

Action: Try again later or enable queuing on the ports that offer the service. For more information on configuring and managing the LAT connection queue, refer to the *Network Access Software Management Guide*.

Local -233- Connection to service-name not established
No such service

Explanation: The connection request failed or the existing connection was terminated because the requested service is not offered on your access server.

Action: Use the SHOW SERVICES command to verify services offered on your access server. For more information on LAT service connection problems, refer to Chapter 2.

Local -234- Connection to service-name not established
Service disabled

Explanation: The connection request failed or the existing connection was terminated because the service is disabled.

Action: Verify the service configuration. See the section *Verify the LAT Service Configuration* (Chapter 2).

Local -235- Connection to service-name not established
Requested entry is not in queue

Explanation: The connection request failed or the existing connection was terminated because it was not queued. A user cannot cause this error to occur.

Action: Contact the system manager.

Local -236- Connection to service-name not established
Immediate access rejected

Explanation: The connection request failed or the existing connection was terminated because you attempted to connect to a busy service that is not configured for queued access.

Action: Try again later or enable queuing on the ports that offer the service. For more information on configuring and managing the LAT connection queue, refer to the *Network Access Software Management Guide*.

Local -237- Connection to service-name not established
Access denied

Explanation: The connection request failed or the existing connection was terminated due to an access violation.

Action: Verify the LAT service configuration (Chapter 2).

Local -238- Connection to service-name not established
Corrupted solicit request

Explanation: The access server is receiving messages that violate the LAT protocol.

Step	Action
1	Try to reconnect to the service.
2	If the connection fails, reinitialize the access server to downline load the software.
3	Verify that the access server is running the latest software.
4	Try to reconnect to the service.
5	If the error messages reappear, you might have a software problem.

Chapter 20

Messages 300 – 399

Overview

Introduction

This chapter provides information on messages 300 – 399.

Messages

Local -301- Telnet option negotiation in progress

Explanation: The option requested in the current command is being negotiated; therefore, the command was not accepted.

Action: No user action is required.

Local -302- Telnet session disconnected

Explanation: The Telnet connection has received a remote request to close the connection.

Action: Verify access to the remote Internet host. See the section *Verify Communication to Remote Internet Host* (Chapter 3).

Local -303- Insufficient resources to complete Telnet connection

Explanation: The access server could not complete the Telnet connection due to memory problems.

Step	Action
1	If every port on your access server is intended only for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1
2	This command will prevent the access server memory from being filled with LAT service node information.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -304- Telnet option negotiation in progress, please try again

Explanation: A Telnet command was entered that affects a Telnet option currently being negotiated.

Action: Wait until the option completes negotiation and try again. Enter the MONITOR PORT STATUS command to monitor the option negotiation.

Local -305- Telnet session was not established

Explanation: A Telnet command was entered for a connection that is not established. The command entered is valid only for established connections.

Action: Establish a Telnet connection and retry the command.

Local -306- Insufficient resources to complete Telnet operation

Explanation: The command failed due to insufficient memory.

Step	Action
1	Clear the line to the peer with the SEND SYNCH command.
2	If every port on your access server is intended only for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1 This command will prevent the access server memory from being filled with LAT service node information.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -307- Invalid operation on a Telnet server session

Explanation: A command that is valid for a Telnet client connection was entered on a Telnet server connection.

Action: For more information on valid commands, refer to the *Network Access Software Commands Reference Guide*.

Local -308- Invalid operation on a Telnet client session

Explanation: A command that is valid for a Telnet server connection was entered on a Telnet client connection.

Action: For more information on valid commands, refer to the *Network Access Software Commands Reference Guide*.

Local -309- Type-ahead not yet processed, please try again

Explanation: A Telnet command was entered for a connection on which type-ahead is queued, and this command is valid only when there is no type-ahead.

Action: Clear the line to the peer with a SEND SYNCH command or enter the command again.

Local -310- Character already in use

Explanation: A Telnet command was entered that maps a character to a Telnet function, and the character is already mapped to a Telnet function.

Action: Enter the following command. Substitute the number of the port for 1 and the number of the session for 2:

```
Local> SHOW PORT 1 SESSION 2 CHARACTERISTICS

Port 1, Session 2, Protocol TELNET
Profile:   Character
Echo:          Remote Newline From Term:      <CR>
Toggle Echo:      ^E Newline From Host:    <CRLF>
Binary:     Disabled Newline To Term:      <CRLF>
Xmit Size:         8 Newline To Host:      <CRLF>
Rcv Size:          8 Input Flow Control:  Enabled
Signal Req.: Enabled Output Flow Control: Enabled
IP:         +s +f ^Y Msg. Verification:   Enabled
SYNCH:      +s -f ^X Switch Characters:   Enabled
AYT:        -s -f ^T Quote:                  None
AO:         -s +f ^O Terminal Type:       Unknown
EOR:       -s -f None
BRK:       -s -f None
```

Verify that the keyboard character is mapped to a Telnet function. For more information on mapping keys to Telnet client and Telnet server functions, refer to the *Network Access Software Management Guide*.

Local -311- Telnet option not supported by peer

Explanation: This command requires that an option be supported by the peer (remote host).

Action: Verify operations supported by peer.

Local -312- Telnet operation invalid in current mode

Explanation: A valid Telnet command was entered, but the request cannot be honored in the current mode. For example, you suppressed echoing while in remote echoing mode.

Action: Retry later.

Local -316- Not a Telnet function

Explanation: This error is displayed if a user tries to modify an unsupported or unknown Telnet attribute on an existing telnet session.

Action: Refer to the section *Configuring and Managing Interactive Devices* in the *Network Access Software Management Guide*.

Local -319- Illegal argument

Explanation: An input argument to a Telnet command was invalid.

Action: For more information on valid commands, refer to the *Network Access Software Commands Reference Guide*.

Local -320- Telnet function not implemented

Explanation: The Telnet function is not implemented yet.

Action: No user action is required.

Local -321- Telnet option not implemented

Explanation: The Telnet command entered is valid, but the option specified is unsupported. For example, SET SESSION TELNET BRK SIGNAL generates this error message because the SIGNAL option is unsupported. Conversely, SET SESSION TELNET BRK NONE is supported and does not generate this error message.

Action: For more information on valid commands, refer to the *Network Access Software Commands Reference Guide*.

Local -323- Telnet listener failed to get a socket

Explanation: The access server was unable to enable the Telnet listener due to memory problems.

Step	Action
1	If every port on your access server is only intended for Telnet use, enter the following command: `Local> CHANGE SERVER NODE LIMIT 1`
2	This command prevents the access server memory from being filled with LAT service node information.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -324- Telnet listener failed to bind socket

Explanation: The software could not bind the socket (in a TCP system call) for one of the following reasons:

- The access server does not have an Internet address defined. This message is always generated for listener 23 upon factory initialization.
- You attempted to SET TELNET LISTENER CONNECTION ENABLE or CLEAR TELNET LISTENER within several minutes of the listener having been in use and disconnected. A timer on the listener prevents reenabling for several minutes following a disconnection.

Step	Action
1	If this message is generated after initialization, you should use the DEFINE/SET/CHANGE command with the Internet address, DISABLE the listener, and ENABLE the listener.
2	You should wait for several minutes and attempt to ENABLE the listener.

Local -325- Telnet listener failed to listen on socket

Explanation: The access server was unable to enable the Telnet listener because the access server Internet address has not been set.

Action: Set the Internet address. See the section *Verify Internet Address* (Chapter 3).

Local -326- Must first enable ports on this listener

Explanation: A listener cannot be enabled because it has no physical ports associated with it.

Action: Enter the following command on the access server that offers the Telnet listener. Substitute the number of the Telnet listener for 2014:

```
Local> SHOW TELNET LISTENER 2014

Listener TCP-port: 2014             Listener Type: TELNET
Identification:    "Telnet Printer"
Ports:             4
Connections:       Enabled
IP Address         0.0.0.0 (will default to server's IP address)
```

Verify that Connections are Enabled and the Telnet listener is configured on the correct port. For more information on configuring a printer for access through a Telnet listener, refer to the *Network Access Software Management Guide*.

Local -328- Cannot do this while listener has active server connections

Explanation: A listener cannot be disabled because it has active connections to physical ports.

Action: You must log out these ports or terminate those jobs before the listener can be disabled.

Local -329- ID too long

Explanation: You tried to use the SET/DEFINE/CHANGE command with an ID for a Telnet listener that exceeded the maximum supported ID length (40 characters).

Action: Reenter the ID with a length between 1 and 40 characters.

Local -330- Cannot do this while listener is enabled

Explanation: You attempted to change a port list of an enabled Telnet listener.

Action: Disable the listener before modifying the port list.

Local -331- Invalid TCP port number

Explanation: You entered a Telnet listener command specifying an invalid TCP port number.

Action: Reenter the command specifying a valid TCP port number. For more information on configuring a Telnet listener, refer to the *Network Access Software Management Guide*.

Local -333- Invalid terminal type specified

Explanation: The terminal type you specified is invalid.

Action: Enter a valid terminal type: ANSI, UNKNOWN, or VTnnn where nnn is a number between 10 and 999. For more information, refer to the *Network Access Software Management Guide*.

Local -345- Listener 23 cannot be type RAW TCP

Explanation: Listener 23 cannot be used as a RAW TCP connection.

Action: Use another TCP port. For more information, refer to the *Network Access Software Management Guide*.

Local -346- Remote Console cannot be type RAW TCP

Explanation: A RAW TCP listener cannot have Console as one of its ports.

Action: Use another port. For more information, refer to the *Network Access Software Management Guide*.

Local -347- Listener is not type RAW TCP.

Explanation: The listener port numbers specified are not of the type RAW.

Action: Recheck the listener port numbers.

Local -350- Invalid Internet address

Explanation: The Internet address is not valid.

Step	Action
1	Enter the following command on your access server to change the Internet address. Substitute the Internet address for 195.1.1.78: `Local> DEFINE INTERNET ADDRESS 195.1.1.78` Note: Use the SET INTERNET ADDRESS command only if there is no defined Internet address; otherwise, the access server rejects the command.
2	Initialize the access server. For more information on the INITIALIZE command, refer to the *Network Access Software Commands Reference Guide*.

Local -351- Invalid subnet mask

Explanation: The subnetwork address specified is not valid.

Action: Enter a valid subnetwork mask. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -352- Invalid gateway address

Explanation: The gateway address specified is not valid.

Action: Enter a valid gateway address. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -353- Invalid gateway address, gateway not on our Internet subnet

Explanation: The gateway specified is not on the local network.

Action: Enter a valid gateway address. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -354- Invalid network address

Explanation: The network address specified is not valid.

Action: Enter a valid network address. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -355- Invalid Ethernet address

Explanation: The Ethernet address specified is not valid.

Action: Enter a valid Ethernet address. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -356- Invalid ARP entry, Internet address not on our Internet subnet

Explanation: The ARP entry specified is not on the local network.

Action: Enter a valid ARP entry. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -357- ARP entry limit reached

Explanation: The access server limit for ARP entries has been reached.

Action: Remove an ARP entry to add another. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -358- Server Internet address already set

Explanation: You set an Internet address and then tried to set a subnet mask. When you set an Internet address, the access server automatically sets the subnet mask to a default value.

Step	Action
1	If you are not using the default subnetwork mask, define your subnet mask using the following command. Substitute the value of your subnetwork mask for 255.255.0.0: `Local> DEFINE INTERNET SUBNET MASK 255.255.0.0`
2	Initialize the access server. For more information on the INITIALIZE command, refer to the *Network Access Software Commands Reference Guide*.

Local -359- Error deleting ARP entry, entry not known

Explanation: You attempted to delete (CLEAR or PURGE) an ARP entry that is not currently in the access server Address Resolution Protocol's (ARP) database.

Action: Use the SHOW INTERNET ARP ENTRY command to display the Internet ARP entries. For more information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.

Local -360- Gateway entry already exists

Explanation: You attempted to enter a gateway that already exists in the access server database.

Action: Use the SHOW INTERNET GATEWAY command to display existing gateways. For more information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.

Local -361- Error deleting gateway entry, entry not known

Explanation: You attempted to delete (CLEAR or PURGE) a gateway that is not in the access server database.

Action: Use the SHOW INTERNET GATEWAY command to display existing gateways. For more information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.

Local -362- Gateway entry limit reached

Explanation: The access server limit for gateway entries has been reached. The permanent database allows 16 gateways; the operational database allows 32 gateways.

Action: Remove a gateway entry to add another. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -363- Operation requires Internet address to be set

Explanation: You entered a command that cannot be performed until you set the access server's Internet address.

Action: Set the Internet address. See the section *Verify Internet Address* (Chapter 3).

Local -364- Internet checksum failure, parameters not loaded

Explanation: When the access server initialized or rebooted, it detected an Internet address checksum error. This means that the Internet address has been corrupted in the access server memory.

Action: Enter the Internet address again and reboot the access server. If this action fails to correct the problem, the access server memory that stores the server characteristics is faulty. Refer to Chapter 29 for service information.

Local -365- ARP entry checksum error

Explanation: When the access server initialized or rebooted, it detected an Address Resolution Protocol (ARP) entry checksum error. This means that at least one of the ARP entries in the access server permanent database has been corrupted.

Action: Enter the ARP entries again. If this action fails to correct the problem, the access server memory that stores the server characteristics is faulty. Refer to Chapter 29 for service information.

Local -366- Gateway entry checksum error

Explanation: When the access server initialized or rebooted, it detected a gateway entry checksum error. This means that at least one of the gateway entries in the access server's permanent database has been corrupted.

Action: Enter the gateway entries again. If this action fails to correct the problem, the access server memory that stores the server characteristics is faulty. Refer to Chapter 29 for service information.

Local -367- Conflict between subnet mask and network address

Explanation: The addresses you specified for the subnetwork mask and network address are invalid together.

Action: Reenter the subnet mask and the Internet address. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -368- Network is down

Explanation: The Internet network interface has not been initialized because the access server's Internet address has not been set.

Action: Set the Internet address. See the section *Verify Internet Address* (Chapter 3).

Local -369- Network is unreachable

Explanation: You attempted to connect to a remote host that is not on your subnetwork and the gateway to the remote host has not been entered in the access server database.

Action: Use the SET/DEFINE/CHANGE INTERNET GATEWAY command to add the gateway address for the remote host. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -371- Software caused connection abort

Explanation: The access server disconnected the session to the remote host.

Action: Wait and try again later.

Local -372- Connection reset by peer

Explanation: The remote host disconnected the access server session.

Step	Action
1	Verify the Internet counters. Enter the following command on your access server: `Local> SHOW INTERNET COUNTERS` Verify the TCP Segments - Data Retransmitted counter. This counter reflects the number of segments that contained retransmitted data. If this counter is high (in relation to the number of TCP Segments transmitted), then there is a problem transmitting the data to the remote host.
2	Try to reconnect to the Telnet resource.

Local -373- Insufficient resources to perform operation

Explanation: The access server could not complete the operation due to memory problems.

Step	Action
1	If every port on your access server is only intended for Telnet use, enter the following command: `Local> CHANGE SERVER NODE LIMIT 1` This command prevents the access server memory from being filled with LAT service node information.

2	Verify the amount of memory used by the gateway database. Enter the following command:
	
	`Local> SHOW INTERNET GATEWAY`
	
	Delete gateways without active connections from the access server's operational database. Enter the following command:
	
	`Local> CLEAR INTERNET GATEWAY ALL`
	
	For more information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.

3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -374- Connection timed out

Explanation: The access server could not make the requested connection in the allotted time.

Action: Try again later.

Local -375- Connection refused

Explanation: The access server user tried to connect to a Telnet listener, but the connection was refused.

Step	Action
1	On the access server that offers the Telnet listener, enter the following command. Substitute the number of the Telnet listener for 2014: `Local> SHOW TELNET LISTENER 2014` Listener TCP-port: 2014 Listener Type: TELNET Identification: "Telnet Printer" Ports: 4 Connections: Enabled IP Address: 0.0.0.0 (will default to server's IP address)
2	Verify if Connections are Enabled. If Connections are Disabled, enter the following command. Substitute the number of the Telnet listener for 2014: `Local> CHANGE TELNET LISTENER 2014 CONNECTIONS ENABLED`

Step	Action

3	Verify the status of the access server port (in this case, port 4). Enter the following command:
	
	`Local> SHOW SESSIONS PORT 4`
	
	If there are any invalid remote sessions on the port, enter the following command. Substitute the session number for 2:
	
	`Local> DISCONNECT SESSION 2`

4	Verify the Output XOFFed characteristic on the access server port. Enter the following command. Substitute the port number for 4:
	
	`Local> SHOW PORT 4 STATUS`
	
	`Port 4:  Listener Server: MMS1`
	
	`Access:  Remote Current Service:  GALAXY`
	`Status:  Connected Current Node:  SATURN`
	`Sessions:  1 Current Port:`
	
	`Input XOFFed:  No Output Signals:  DTR`
	`Output XOFFed: Yes Input Signals:  DSR`
	
	If the Output XOFFed characteristic is Yes, the access server port has XOFFed communications. Log out the port twice. The second logout bypasses any flow control problems.
	
	`Local> LOGOUT PORT 4`
	`Local> LOGOUT PORT 4`
	
	For more information on configuring a device to be accessed through a Telnet listener, refer to the *Network Access Software Management Guide*.

Local -376- Host is down

Explanation: The access server has determined that the requested remote host is unreachable.

Action: Enter the PING command to verify that the host is down. See the section *Verify Communication to Remote Internet Host* (Chapter 3).

Local -377- No route to host

Explanation: The Internet network interface has not been initialized because the access server Internet address has not been set or the Internet address cannot be reached by way of the known gateways.

Action: Set the Internet address. See the section Verify Internet Address or Verify Communication to Remote Internet Host (Chapter 3).

Local -380- Warning: address and mask incompatible

Explanation: This error is displayed if a user tries to modify an unsupported or unknown telnet attribute on an existing telnet session.

Action: Check the values used for the internet address and mask. Change the values if appropriate and reinitialize the access server.

Local -381- Internet address is already in use on another port or interface

Explanation: The internet address you are trying to set for an interface is already defined for another port or interface.

Action: Select another internet address to use with the current interface or remove the internet address from the defined interface.

Local -386- Timer must between 1 and 1440

Explanation: The value for the Internet TCP Keepalive Timer was out of range.

Action: Specify a value within the range of 1 and 1440.

Local -387- Number of retries must be between 1 and 60

Explanation: The value for the Internet TCP Keepalive Retry was out of range.

Action: Specify a value within the range of 1 and 60.

Local -388- Maximum WINS server name length is 80 characters

Explanation: The internet host name of the WINS server can be a maximum of 80 characters in length.

Action: Specify a value within the limit of 80 characters.

Chapter 21

Messages 400 – 499

Overview

Introduction

This chapter provides information on messages 400 – 499.

Messages

Local -400- Insufficient resources to perform operation

Explanation: The access server could not complete the operation due to memory problems.

Step	Action
1	If every port on your access server is only intended for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1 This prevents the access server memory from being filled with service node information.
2	Verify the number of Internet hosts defined locally in the access server's operational database. Enter the following command: Local> SHOW INTERNET HOST LOCAL If a lot of Internet hosts are defined locally, this might cause memory problems. To delete locally defined Internet hosts, enter the following command: Local> CLEAR INTERNET HOST LOCAL For information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -401- Unsupported function

Explanation: The command was not recognized.

Action: To ensure that you are specifying all of the required command characteristics, refer to the *Network Access Software Commands Reference Guide*.

Local -403- Warning - too many characters; input truncated

Explanation: The name you entered for a system contact or system location has been truncated to the 32-character limit.

Action: Use the SHOW/LIST SYSTEM command to view the truncated name or reenter the name with fewer characters.

Local -411- PING successful: host reachable

Explanation: A PING or TEST TELNET command was successful in reaching the specified host.

Action: No action is required.

Local -413- Insufficient resources: PING disallowed

Explanation: The PING command cannot be executed due to insufficient resources.

Local -414- PING timed out

Explanation: The 30-second timer expired when the access server did not receive a reply from the target host.

Action: Retry the PING command. If this command fails again, the target host is unavailable or unable to accept Telnet connections.

Step	Action
1	Use the SHOW SESSIONS command to determine if a PING session is already active on the port. Only one PING session is allowed per port.
2	If every port on your access server is intended only for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1 This command will prevent the access server memory from being filled with LAT service node information.
3	Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -425- Internet host not known

Explanation: The name server does not recognize the host name or Internet address. Either you did not include the host name in the command, the host name is not in the access server database, or the host name syntax is incorrect.

Action: Verify the Internet host name. See the section *Verify Internet Host Name* (Chapter 3).

Local -426- Host name lookup failure

Explanation: The access server cannot find the host name in its database. This error message is generated for one of the following reasons: Retry Limit reached, Time Limit expired, or no name server stored in the local cache. DNS cannot send out a query.

Action: Verify Domain Name System (DNS) parameters. See the section *Verify Domain Name System (DNS) Parameters* (Chapter 3).

Local -427- No address associated with name

Explanation: The access server could not locate the host name.

Step	Action
1	If you are trying to connect to a LAT service, set the Default Protocol characteristic on your port to LAT or ANY. Enter the following command. Substitute the port number for 1: Local> CHANGE PORT 1 DEFAULT PROTOCOL LAT For information on using the SET/DEFINE/CHANGE PORT DEFAULT PROTOCOL command, refer to the *Network Access Software Commands Reference Guide*.
2	If you are trying to connect to a Telnet resource, verify that your host name or Internet address exists.
3	If you are trying to connect to a Telnet resource and you are using a valid host name or Internet address, the problem might be that the access server cannot communicate with the name server.

Local -428- No buffer available to resolve name

or

Local -429- Add to database failure

Explanation: The access server could not complete the operation due to memory problems.

Step	Action
1	Try to reconnect to the Telnet resource.
2	If every port on your access server is only intended for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1 This prevents the access server memory from being filled with service node information.
3	Verify the number of Internet hosts defined locally in the access server's operational database. Enter the following command: Local> SHOW INTERNET HOST LOCAL Memory problems can occur if a lot of Internet hosts are defined locally. To delete locally defined Internet hosts, enter the following command: Local> CLEAR INTERNET HOST LOCAL For information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.
4	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -430- Illegal domain name

Explanation: You specified a domain name that is not valid or does not match the format requirements for domain names.

Action: For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -431- Illegal Internet address

Explanation: You specified an illegal Internet address.

Action: Verify the correct Internet address. See the section *Verify Internet Address* (Chapter 3).

Local -432- Request in process

Explanation: The access server is processing your request.

Action: Wait for completion.

Local -433- Maximum queries exceeded

Explanation: The limit for concurrent user requests for resolving DNS name queries has been reached.

Action: Try again later.

Local -434- Request in pending queue

Explanation: The access server has placed your request in a holding queue. It will be processed as soon as memory is available.

Action: No user action is required.

Local -435- Resolution domain is not set

Explanation: You tried to enter (using the SET, DEFINE, or CHANGE command) a local name server in the access server database, but the command was rejected because you did not set the default for the local name.

Action: Set the access server default domain value before adding name servers or Internet hosts. For more information on specifying TCP/IP network characteristics, refer to the *Network Access Software Management Guide*.

Local -436- Unknown server error

Explanation: The access server did not recognize the information it received.

Action: Verify the remote server name. See the section *Verify Communication to Remote Internet Host* (Chapter 3).

Local -437- Unsupported function

Explanation: Your request was not recognized.

Action: To ensure that you are specifying all of the required command characteristics, refer to the *Network Access Software Commands Reference Guide*.

Local -438- DNS entry limit exceeded

Explanation: You attempted to enter (using the SET, DEFINE, or CHANGE command) a DNS-related entry that exceeded the database storage limit for that entry class.

Action: Delete or clear some of the entries. For information on managing your access server. See the section *Telnet Resource Connection Problems* (Chapter 3).

Local -439- DNS parameter out of range

Explanation: You attempted to enter (using the SET, DEFINE, or CHANGE command) a DNS-related parameter that was outside the range for that parameter.

Action: To determine the allowable range, refer to the *Network Access Software Commands Reference Guide*.

Local -450-Attempting to authenticate user: user-name

Explanation: This is a system status message.

Action: No user action is required.

Local -451-Authentication successful

Explanation: This is a system status message.

Action: No user action is required.

Local -452-Authentication failed, invalid login

Explanation: The login name or password entered is not valid. If the realm is configured with a value for SECRET, this error can indicate improper registration of the access server in the realm or a wrong value of the SECRET.

Action: Enter the correct login name and password. If the problem persists, verify the registration of the user and the access server.

Local -453-Authentication aborted

Explanation: While attempting an authentication, a user entered a Break or Local

Switch character.

Action: No user action is required.

Local -454-Authentication failed, timed out

Explanation: The system timed out before receiving a response from the Kerberos security server.

Action: Reenter the correct login name and password. If the problem persists, verify that the Kerberos characteristics are correct and that the security servers for the realm in question can be reached over the network. The security servers for the realm must have correct Internet addresses or domain names. If domain names are used, DNS must be working properly, and Internet connectivity is a basic requirement.

Local -455-Realm not found

Explanation: This message can be in response to a SET/DEFINE/CHANGE command or a user authentication attempt. It means the access server is not configured properly for authentication in the realm you are using. A realm refers to a group of hosts that share a common administrative domain for purposes of user authentication. Either the realm name entered is invalid or not defined on the access server as a realm.

Action: Reenter the correct realm name. If the problem persists, verify that the access server is configured with the realm in question and at least one security server within the same realm.

Local -456- Security server host not found

Explanation: Either the security server host name entered is invalid or not defined on the access server as a security server host.

Action: Reenter the correct host name as a security server for the realm in question. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -457-Host not found

Explanation: Either the domain name entered is invalid or not defined on the access server as a Kerberos Security Server Host domain.

Action: Reenter the correct host name. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -458-Duplicate realm name

Explanation: The realm name entered is already in use.

Action: Reenter the correct realm name or select another realm name. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -459-Duplicate security server host name

Explanation: The security server host name entered is already in use.

Action: Reenter the correct host name or select another host name. If the problem persists, refer to the *Network Access Software Management Guide.*

Local -460-Duplicate domain name

Explanation: The security server domain name entered is already in use.

Action: Reenter the correct domain name or select another domain name. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -461-Only one master security server host allowed

Explanation: You attempted to configure more than one master security server host. You can configure only one master security server host per configuration.

Action: Verify the master security server host name using the SECURITY command.

Local -462-Only one primary security server host allowed

Explanation: You attempted to configure more than one primary security server host. You can configure only one primary security server host per configuration.

Action: Verify the primary security server host name using the SHOW SECURITY command.

Local -463-Only one default security server realm allowed

Explanation: You attempted to configure more than one default security server realm. You can configure only one default security server realm per configuration.

Action: Verify the default security server realm name using the SHOW SECURITY command.

Local -464-Failed to open security server socket

Explanation: There is either a memory or network configuration problem.

Action: Verify the Internet parameters. See the section *Verify Internet Address* (Chapter 3).

Local -465-Security server entry limit exceeded

Explanation: NVRAM memory is full for the security server component.

Action: For more information on reducing security server use of NVRAM memory, refer to the *Network Access Software Management Guide*.

Local -466-Security parameter out of range

Explanation: The numeric value of the parameter is not allowed.

Action: Reenter the value within the legal range. To verify the legal range of values, refer to the *Network Access Software Commands Reference Guide*.

Local -467-Authentication failed, protocol error: error-code

Explanation: There is a network or access server internal problem.

Action: To determine the type of error condition, refer to the following list of error codes:

2006 -User authentication application name format error
2007 - User authentication application socket error
2008 - User authentication application unknown request type
2100, **2102**, **2103**, **2104** - User authentication application memory allocation failure
3002 - Kerberos ticket service name format error
3003 - Kerberos ticket service socket error
3004 - Kerberos ticket service unknown request type
3007 - Kerberos ticket service unable to build request
3008 - Kerberos ticket service send to KDC failure
300A - Kerberos ticket service no internal context data for request
300B - Kerberos ticket service KDC version mismatch
300D - Kerberos ticket service unknown reply type
300E - Kerberos ticket service error in reply packet
3010 - Kerberos ticket service internal context data for request corrupt
4002, **4003**, **4004** - Kerberos credentials application memory allocation failure
6006 - Kerberos password application name format error
6007 - Kerberos password application socket error
6008 - Kerberos password application unknown request type
6100, **6102**, **6103**, **6104** - Kerberos password application memory allocation failure
7000, **7001** - Kerberos password service unexpected error
7004 - Kerberos password service unknown request type
7007 - Kerberos password service unable to build request
7008 - Kerberos password service send to KDC failure
7010 - Kerberos password service socket error
7012 - Kerberos password service connection failure
7013 - Kerberos password service lost packet
7014 - Kerberos password service unknown error
8000 - No space for SecurID process - try again later
8001 - No space for SecurID client data - try again later
8002 - Bad value found during SecurID authentication
8003 - No socket available for SecurID - try again later
8004 - Bad selector for SecurID
8005 - No session record for SecurID
8006 - Wrong state for SecurID
8007 - Failed to get packet from SecurID Server

8008 - No SecurID server found
A701 - Kerberos password service cannot fetch local realm
A702 - Kerberos password service unable to fetch credentials
A703 - Kerberos password service bad key supplied
A704 - Kerberos password service cannot encrypt data
A705 - Kerberos password service cannot encode/decode authentication info
A706 - Kerberos password service principal attempting change is in wrong realm
A707 - Kerberos password service packet is too large
A708 - Kerberos password service version number is incorrect
A709 - Kerberos password service checksum does not match
A70A - Kerberos password service unsealing private data failed
A70B - Kerberos password service unsupported operation
A70C - Kerberos password service could not find administrating host
A70D - Kerberos password service administrating hostname is unknown
A70E - Kerberos password service could not find service name in services database
A70F - Kerberos password service could not create socket
A710 - Kerberos password service could not connect to server
A711 - Kerberos password service could not fetch local socket address
A712 - Kerberos password service could not fetch master key
A713 - Kerberos password service could not verify master key
A715 - Kerberos password service database store error
A716 - Kerberos password service database read error
A717 - Kerberos password service insufficient access to perform requested operation
A718 - Kerberos password service data is available for return to client
A719 - Kerberos password service no such entry in the database
A71A - Kerberos password service memory exhausted
A71B - Kerberos password service could not fetch system hostname
A71C - Kerberos password service could not bind port
A71D - Kerberos password service length mismatch problem
A71E - Kerberos password service illegal use of wildcard
A721 - Kerberos password service cleartext password and DES key did not match
A722 - Kerberos password service invalid principal for change srvtab request

Local -468-Attempting to change security server password for user: user-name

Explanation: This is a system status message.

Action: No user action is required.

Local -469-Security server password has been changed

Explanation: This is a system status message.

Action: No user action is required.

Local -470-Security server password remains unchanged

Explanation: This system status message confirms that the password change transaction was not completed.

Action: If you do not want to change the password, then no user action is required. If you want to change the Kerberos password, use either the KPASSWD or the KERBEROS PASSWORD command.

Local -475-Realm name too long

Explanation: The security server realm name entered is too long.

Action: Reenter the correct realm name or select another realm name. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -476-Domain name too long

Explanation: The security server domain name entered is too long.

Action: Reenter the correct domain name or select another domain name. If the problem persists, refer to the *Network Access Software Management* Guide.

Local -477-Security server host name too long

Explanation: The security server host name entered is too long.

Action: Reenter the correct host name or select another host name. If the problem persists, refer to the *Network Access Software Management Guide.*

Local -478-Secret too long

Explanation: The security server secret password is too long.

Action: Reenter the correct secret password. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -479-Authentication failed, security server host connection error

Explanation: The TCP connection to the security server password service did not complete due to an error. This message usually indicates that there is either a problem with the password service daemon on the security server host or network connectivity problems.

Action: Check both the Internet counters for errors and the operation of the security server host. For more information on security server host connectivity, refer to the *Network Access Software Management Guide*.

Local -480-Security server host rejected new password as insecure

Explanation: The new password chosen was deemed unacceptable to the security policy enforcement mechanism of the Kerberos security server host.

Action: Choose a more secure password; one that is longer and does not contain part of the principal name.

Local -481-Security server host database in use or locked

Explanation: Password updates to the security server host's database are not presently possible.

Action: Retry later or contact the system administrator.

Local -482-Security client failed to send a packet; no network buffers

Explanation: The buffers used to send and receive network data were all in use. A memory leak may exist in the software. It is also possible that the access server is momentarily overloaded.

Action: If the error persists, reboot the access server. If the error returns, contact your authorized service representative.

Local -483-Security client failed to send a packet; transmission error

Explanation: The security client incurred a socket transmission error.

Action: This problem can have many causes. Check the network parameters on the access server. For example, check that the other protocols are not affected and that the access server can successfully issue a PING command.

Local -484-Security client failed to receive a packet; receive error

Explanation: The access server socket layer returned a receive error.

Action: This problem can have many causes. Check the network parameters on the access server. For example, check that the other protocols are not affected and that the access server can successfully issue a PING command.

Local -486-Security server (host) not specified

Explanation: Either the security server host name entered is invalid or not defined on the access server as a security server host.

Action: Reenter the correct host name as a security server for the realm in question. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -487-User Account account-name does not exist

Explanation: A user account with the specified name was not found in the database.

Action: Enter a valid user account name, or contact the system administrator.

Local -488-Insufficient resources to complete security operation

Explanation: The access server could not complete the operation due to memory problems.

Step	Action
1	If every port on your access server is only intended for Telnet use, enter the following command: Local> CHANGE SERVER NODE LIMIT 1 This prevents the access server memory from being filled with service node information.
2	Verify the number of Internet hosts defined locally in the access server's operational database. Enter the following command: Local> SHOW INTERNET HOST LOCAL If a lot of Internet hosts are defined locally, this might cause memory problems. To delete locally defined Internet hosts, enter the following command: Local> CLEAR INTERNET HOST LOCAL For information on managing your access server as part of the TCP/IP network, refer to the *Network Access Software Management Guide*.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -489-Dialback number too long

Explanation: The dial out number string is too long.

Action: Use a shorter string.

Local -490-Dialout number too long

Explanation: The dial out number string is too long.

Action: Use a shorter string.

Local -491-Service name too long

Explanation: The dial service name string is too long.

Action: Use a shorter string.

Local -492-Prompt too long

Explanation: The security password prompt string is too long.

Action: Use a shorter string.

Local -495-Final warning nnn minutes left to forced logout

Explanation: The allowed connect time, based on your authorization data, will expire in nnn minutes. Plan your work accordingly.

Action: No action required.

Local -496-Final warning n minutes left to forced logout

Explanation: The allowed connect time, based on your authorization data, will expire in n minutes. This is the final warning before your port is logged out. Plan your work accordingly.

Action: No action required.

Local -498-No authentication server hosts for the realm

Explanation: Either the authentication server host name entered is invalid or not defined on the access server as an authentication server host.

Action: Reenter the correct host name as an authentication server for the realm in question. If the problem persists, refer to the *Network Access Software Management Guide*.

Local -499-No authentication host could be resolved by the domain name server

Explanation: An authentication host was found, but its domain name could not be resolved.

Action: Verify the correct configuration of DNS servers on the access server.

Chapter 22

Messages 500 – 599

Overview

Introduction

This chapter provides information on messages 500 – 599.

Messages

Local -520- Could not acquire AppleTalk address for server, AppleTalk disabled

Explanation: An unsuccessful attempt was made to acquire an AppleTalk address for the access server. The access server cannot run AppleTalk without an address.

Action: Verify that AppleTalk is enabled. See the section *Verify AppleTalk Is Enabled* (Chapter 5).

Local -521- Could not acquire AppleTalk address in network range

Explanation: The access server could not acquire an AppleTalk address in the network range. This limits AppleTalk functionality.

Action: Check the network range. See the section *Verify AppleTalk Address Is Within the Network Range* (Chapter 5).

Local -522- Could not create AppleTalk gateway route, insufficient resources

Explanation: The access server could not create a routing entry for any AppleTalk router present on the network. This limits AppleTalk traffic to the local network.

Action: Verify AppleTalk gateway route. See the section *AppleTalk Gateway Route* (Chapter 5).

Local -523- Could not create AppleTalk cache entry, insufficient resources

Explanation: The access server could not create a cache entry to cache AppleTalk addresses for potential attached host connections. Attempted connections may fail.

Action: Verify cache size is correct. See the section *Verify Cache Size Is Correct* (Chapter 5).

Local -524- Attempt to acquire an AppleTalk address for cache failed

Explanation: An unsuccessful attempt was made to acquire an AppleTalk address cache for potential attached host connections. Attempted connections may fail.

Action: Verify that the cache size is correct. See the section *Verify Cache Size Is Correct* (Chapter 5).

Local -525- Duplicate AppleTalk server name on network - trying LAT_ethernet

Explanation: An unsuccessful attempt was made to register the access server defined name using the AppleTalk Name Binding Protocol.

Action: Verify that the AppleTalk name matches the access server name. See the section *Verify Access Server Is Visible on the Network* (Chapter 5).

Local -526- Registering duplicate AppleTalk server name on network

Explanation: The access server attempted to register its default name using the AppleTalk Name Binding Protocol. Another device on the network claims this name is in use.

Action: Determine which AppleTalk device on the network is incorrectly using the access server default name and reconfigure it to have a unique name. See the section *Verify Access Server Is Visible on the Network* (Chapter 5).

Local -527- AppleTalk is not enabled, no show displays allowed

Explanation: AppleTalk functionality is disabled on the access server.

Action: Enable AppleTalk on the access server. See the section *Verify AppleTalk Is Enabled* (Chapter 5).

Local -540- Could not create Accounting log due to insufficient resources

Explanation: The Accounting component could not allocate the defined amount of memory for its log.

Action: Define a smaller amount of memory for the accounting log. The following commands substitute a smaller amount than the previously defined value:

```
Local> DEFINE ACCOUNTING LOGSIZE x
Local> INITIALIZE
```

As an alternative, you could add more memory if the access server has user-installable RAM.

Local -550- SLIP not enabled on that port

Explanation: The SLIP characteristic has not been enabled on the access server port.

Action: Enable SLIP on the access server port. Enter the following command. Substitute the number of the port for 1:

```
Local> CHANGE PORT 1 SLIP ENABLED
```

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -554- SLIP address conflicts with address of another interface

Explanation: Another port or network has the same address as the one you are trying to set.

Action: Use another address or remove the conflicting address from the other port or network.

Local -555- SLIP address not contained in address of LAN interface

Explanation: The access server does not have an Internet address set or the SLIP address is not contained in the LAN's Internet address.

Step	Action
1	Verify that the Internet address has been set on the access server. See the *Verify Internet Address* (Chapter 3).
2	If the Internet address is set, modify your SLIP address to have the same subnet identifier as the access server Internet address. For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -556- Console messages are not output during SLIP sessions

Explanation: You set up a SLIP session on the designated console port; therefore, console messages are not displayed.

Action: If you would like to have console messages displayed, assign the console to another port or configure your SLIP session on another port. For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -557- Cannot enable SLIP on MULTISESSIONS port

Explanation: The Multisessions characteristic must be Disabled on SLIP ports.

Action: Disable Multisessions on the access server port. Enter the following command. Substitute the number of the port for 1:

```
Local> CHANGE PORT 1 MULTISESSIONS DISABLED
```

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -558- Port already has SLIP HOST ADDRESS

Explanation: The access server port already has a SLIP host address assigned.

Action: Clear the SLIP host address on the access server port. Enter the following commands. Substitute the number of the port for 1:

```
Local> CLEAR PORT 1 SLIP HOST ADDRESS
Local> PURGE PORT 1 SLIP HOST ADDRESS
```

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -559- Port does not have a SLIP HOST ADDRESS

Explanation: You tried to clear the SLIP host address on a port that does not have a SLIP host address assigned.

Action: Verify that you are clearing the SLIP host address on the correct access server port. For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -560- Cannot have two SLIP sessions on port

Explanation: The access server port already has a SLIP session established.

Action: Verify the access server port for a SLIP session. Enter the following command. Substitute the port number for 1:

```
Local> SHOW SESSIONS PORT 1

Port 1: BJS         Local Mode      Current Session: 2

- Session 2: Connected  Interactive        SLIP
```

To disconnect the SLIP session, enter the following command. Substitute the session number for 2.

```
Local> DISCONNECT SESSION 2
```

For more information on configuring and managing SLIP ports, refer to the *Network Access Software Management Guide*.

Local -561- Starting SLIP or PPP datalink session

Explanation: This message is displayed to the local terminal when the CONNECT "datalink" command is entered.

Action: No action is required.

Local -562- Invalid SLIP or PPP argument

Explanation: You have attempted to modify a SLIP or PPP characteristic to an incorrect or out-of-range value.

Action: For more information on the SET/DEFINE/CHANGE SLIP command, refer to the *Network Access Software Commands Reference Guide*.

Local -564- Console messages are not output during PPP sessions

Explanation: This message is displayed on the port defined as the access server console when the PPP enabled command is entered..

Action: No action is required.

Local -565- Max Configures must be between 1 and 15

Explanation: The value for the PORT PPP LCP/IPCP/ATCP/IPXCP MAXCONFIGURE was out of range.

Action: Configure with a value within the range of 1 and 15.

Local -566- Max Failures must be between 1 and 15

Explanation: The value for the PORT PPP LCP/IPCP/ATCP/IPXCP MAXFAILURE was out of range.

Action: Configure with a value within the range of 1 and 15.

Local -567- Max Terminate must be between 1 and 15

Explanation: The value for the PORT PPP LCP/IPCP/ATCP/IPXCP MAXTERMINATE was out of range.

Action: Configure with a value within the range of 1 and 15.

Local -569- Host address may be applied to one port only

Explanation: Host addresses may not be applied to multiple ports. The SET/DEFINE/CHANGE PORT IPCP HOST ADDRESS may not contain a port_list as a parameter.

Action: Re-enter the command specifying a single port.

Local -570- Port already has IPCP HOST ADDRESS

Explanation: Port already has IPCP HOST ADDRESS.

Action: If you wish to modify the port's IPCP HOST address, DEFINE the port's IPCP HOST address then logout the port.

Chapter 23

Messages 600 – 699

Overview

Introduction

This chapter provides information on messages 600 – 699.

Messages

Local -600- Mandatory callback enabled, port will be logged out

Explanation: The security or port attributes dictate that the user be called back to gain access to the LAN.

Action: No action required.

Local -601- Internal memory error in port parameters
Access server defaults in effect

Explanation: Parameters in the access server port's permanent database are corrupt and factory-set defaults were used during port login.

Step	Action
1	Use the CHANGE PORT command to reset the port characteristics to values of your choice.
2	If the error message appears again, reset the port characteristics using the software reset switch on the access server. a. Remove power from the access server. b. Press and hold the reset switch while you turn on the power to the access server. c. Continue to hold the reset switch until the system o.k. LED starts to flash. d. Use the CHANGE PORT command to reset the port characteristics to values of your choice.
3	If this action fails to correct the problem, the access server memory that stores the port characteristics is faulty. Refer to Chapter 29 for service information.

Local -602- Internal memory error in server parameters
Access server defaults in effect

Explanation: Parameters in the access server permanent database are corrupt and factory-set defaults were used during port login.

Action: Reset the server characteristic values.

Step	Action
1	Use the CHANGE SERVER command to reset the server characteristics to values of your choice.
2	If the error message appears again, reset the server characteristics using the software reset switch on the access server. a. Remove power from the access server. b. Press and hold the reset switch while you turn on the power to the access server. c. Continue to hold the reset switch until the system o.k. LED starts to flash. d. Use the CHANGE SERVER command to reset the server characteristics to values of your choice.
3	If this action fails to correct the problem, the access server memory that stores the server characteristics is faulty. Refer to Chapter 29 for service information.

Local -603- Communications server defaults in effect

Explanation: There was an issue with the attributes stored in the access server's NVRAM. Default values for attributes will be used.

Action: Try a factory reset of the server and restore previously saved attributes. Contact your authorized service representative if the problem persists.

Local -610- Unknown Flash RAM device ID detected

Explanation: For network access servers with user-installable Flash RAM cards, this indicates that the card installed is not a supported device for the version of Network Access software loaded on the device.

Action: Contact your authorized service representative to verify what software supports the installed Flash RAM device.

Local -611- Flash RAM write failure

Explanation: The Flash RAM failed verification of one or more write cycles.

Action: Retry the update. If it fails again, replace the defective Flash RAM card.

Local -612- Flash RAM write protected

Explanation: For network access servers with user-installable Flash RAM cards, this message indicates that the card installed has its write-protect switch in the protected position.

Action: Set the switch to the write-enabled position.

Local -613- Flash RAM erase failure

Explanation: The Flash RAM failed verification of one or more erase cycles.

Action: Retry the update. If it fails again, replace the defective Flash RAM card.

Local -614- Flash RAM illegal address used

Explanation: An internal software error has occurred.

Action: Contact your authorized service representative.

Local -615- Flash RAM invalid boot block detected

Explanation: The Flash RAM card either was not previously programmed or was left in an inconsistent state of programming. The access server software has attempted to format the Flash RAM by writing a valid but empty boot block.

Action: This action does not require that a Flash RAM update command has been issued. If this message is accompanied by other Flash RAM error messages, the Flash RAM device may be defective.

Local -616- Load image too large for Flash RAM free space

Explanation: The network access server load image obtained over the network is too large to fit in the Flash RAM.

Action: Make sure the image is the correct one for the hardware platform and that if a compressed version of the load image is available, you have specified it. Refer to the Network Access Software Release Notes for information regarding compressed images.

Local -651- Community name not specified

Explanation: You specified a community name containing only spaces.

Action: Reenter a valid community name. A valid community name may contain any combination of printable (nonspace) ASCII characters, maximum length of 32 characters, enclosed within double quotes.

Local -652- Community names must consist only of printable characters

Explanation: You specified a community name containing nonprintable characters, such as a Tab or Esc (Escape) key.

Action: Reenter a valid community name. A valid community name contains up to 32 printable ASCII characters, enclosed within double quotes.

Local -653- Specified address is not a valid community address

Explanation: You specified an invalid community address. The community address must be in the Internet address form nn.nn.nn.nn.

Action: Use SHOW INTERNET to view an Internet address in the correct form, then reenter an address in this form. Note that you should not use the addresses 0.0.0.0 or 255.255.255.255.

Local -654- Insufficient space: total unused community characters left is n

Explanation: The community name you specified causes the total number of characters for all defined community names to exceed 80 characters. The total number of characters used to store a community name is broken down as follows:

```
Overhead   Community Name     Internet Address (if defined)
    2    + (Number of Characters) +    4
```

Action:

- Remove any unused community names. Enter the following commands. Substitute the community name for "HOST-NAME":

  ```
  Local> CLEAR SNMP COMMUNITY NAME "HOST-NAME"
  Local> PURGE SNMP COMMUNITY NAME "HOST-NAME"
  ```

  For more information on configuring SNMP community names, refer to the *Network Access Software Management Guide*.

- Since the Internet address takes up an additional 4 characters, you can remove the Internet address from a community name by entering the following command. Note that if TRAP access is Enabled, the access server rejects this command.

  ```
  Local> CHANGE SNMP COMMUNITY "HOST-NAME" ADDRESS ANY
  ```

  For more information on the SET/DEFINE/CHANGE SNMP command, refer to the *Network Access Software Commands Reference Guide.*

Local -655- Disable TRAPs before setting Internet address to ANY

Explanation: You attempted to use the SET, DEFINE, or CHANGE command with an SNMP COMMUNITY ADDRESS of ANY without first disabling traps.

Action: You must disable TRAPs before changing the ADDRESS to ANY.

Local -656- Assign a specific Internet address before enabling TRAPs

Explanation: Traps cannot be enabled with a COMMUNITY ADDRESS of ANY.

Action: Specify your NMS address in the Address field for the community name. Then, enable TRAPs for the community name. For more information on the SET/DEFINE/CHANGE SNMP COMMUNITY command, refer to the *Network Access Software Commands Reference Guide*.

Local -657- Permanent database inaccessible at this moment

Explanation: You attempted to use the DEFINE or CHANGE command with an SNMP characteristic, but the permanent database could not be accessed due to conflicting access requests.

Action: Try again later.

Local -658- No resources available at this moment

Explanation: The access server could not complete the SNMP operation due to inadequate memory availability.

Action: Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -659- Community name does not exist

Explanation: You attempted to use the CLEAR or PURGE command with a community name that has not been previously set or defined.

Action: Use the SHOW/MONITOR/LIST SNMP command to view the currently specified community names.

Local -660- Community data lost, SNMP reset to factory defaults

Explanation: SNMP information has been reset to factory defaults and SNMP information you have modified has been lost. This can occur if you pressed the reset button while installing new software or if the SNMP portion of the permanent database is corrupted (hardware error).

Action: Reset and/or redefine your SNMP community data. If this action fails to correct the problem, the access server memory that stores the SNMP characteristics is faulty. Refer to Chapter 29 for service information.

Local -662- No resources - SNMP not enabled

Explanation: The access server could not enable SNMP on the access server due to inadequate memory availability.

Action: Verify the access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -663- No Internet address - SNMP not enabled

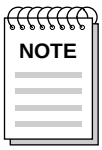
Explanation: You entered a command that cannot be performed until you set the access server’s Internet address.

Action: Set the Internet address. See the section *Verify Internet Address* (Chapter 3).

Local -664- Community name truncated

Explanation: The community name you entered has been truncated to the 32-character limit.

Action: Use the SHOW/LIST SNMP command to view the truncated name or reenter the name with fewer characters.



The total number of characters for all defined community names cannot exceed 80 characters.

Chapter 24

Messages 700 – 799

Overview

Introduction

This chapter provides information on messages 700 – 799.

Messages

Local -701- Command syntax error

or

Local -702- Keyword “keyword” not known or ambiguous

Explanation: You entered a command or keyword incorrectly.

Action: For the appropriate command syntax, refer to the *Network Access Software Commands Reference Guide*.

Local -703- Value invalid or out of range, “n”

Explanation: A value specified by n is either out of range (maximum=16) or invalid under the current circumstances.

Action: For the correct range, refer to the *Network Access Software Commands Reference Guide*.

Local -704- Operation requires privilege

Explanation: You entered a command that is not available from a nonprivileged or secure port.

Action: Use the SET PRIVILEGED command to enable privileges on the port. You must also enter the privileged password.

Local -705- Entry entry-id not in queue

Explanation: You specified a nonexistent queue entry in a REMOVE QUEUE or SHOW/MONITOR QUEUE command.

Action: Use the SHOW QUEUE ALL command to check the queue entries. For more information on configuring and managing the LAT connection queue, refer to the *Network Access Software Management Guide*.

Local -706- Secure operation requires privilege

Explanation: You entered a command that is not available from a nonprivileged or secure port.

Action: Use the SET PRIVILEGED command to enable privileges on the port. You must also enter the privileged password.

Local -707- Existing or queued connections prevent operation

Explanation: You entered the CLEAR SERVICE command while there were existing or queued connections to the service.

Action: Before entering this command, you must disable both queuing and connections to the service. For more information on configuring and managing LAT services, refer to the *Network Access Software Management Guide*.

Local -709- Service service-name not offered by node node-name

or

Local -710- Node node-name not known

Explanation: The service or node name you specified is either unreachable or unknown to the access server.

Action: Check the LAT service configuration. See the section *Verify the LAT Service Configuration* (Chapter 2).

Local -711- Service service-name not known

Explanation: The problem might be caused by one of the following:

- The Default Protocol for the port is set incorrectly.
- The LAT service node software is not running on any service node offering the service.

- The access server node limit has been reached.
- Group codes are not enabled.
- The access server has used up its memory.

Step	Action
1	If you are trying to connect to a Telnet resource, set the Default Protocol characteristic on your port to TELNET or ANY. The following command shows how to configure the default protocol for port 1 to TELNET: `Local> CHANGE PORT 1 DEFAULT PROTOCOL TELNET` For more information on the Default Protocol characteristic, refer to the *Network Access Software Management Guide*.
2	Verify the LAT service node software. See the section *Verify the LAT Service Node Software* (Chapter 2).
3	Increase the access server node limit and try reconnecting. For information on managing an access server, refer to the *Network Access Software Management Guide.*
4	Verify the LAT group codes. See the section *Verify LAT Group Codes* (Chapter 2).
5	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -712- No connection established

Explanation: You entered a DISCONNECT, RESUME, FORWARDS, or BACKWARDS command when there was no established connection.

Action: Use the CONNECT, OPEN, or TELNET command to start a session.

Local -713- Connection already established

Explanation: You attempted to modify a characteristic on a port that already has an active session. For example, you used the SET PORT MULTISESSIONS ENABLED command on a port that already has an active session.

Action: For more information on configuring and managing interactive devices, refer to the *Network Access Software Management Guide*.

Local -714- Preferred service/host has not been defined

Explanation: You entered the CONNECT command without a service name and the PREFERRED SERVICE characteristic is set to None.

Action: Use the SET/DEFINE/CHANGE PORT PREFERRED command to configure a preferred service or reenter the CONNECT command with a service name.

Local -715- Service service-name not currently available

Explanation: The problem might be caused by one of the following:

- The Default Protocol for the port is set incorrectly.
- The LAT service node software is not running on any service node offering the service.
- The access server node limit has been reached.
- Group codes are not enabled.
- The access server has used up its memory.

Step	Action
1	If you are trying to connect to a Telnet resource, set the Default Protocol characteristic on your port to TELNET or ANY. The following command shows how to configure the default protocol for port 1 to TELNET: `Local> CHANGE PORT 1 DEFAULT PROTOCOL TELNET` For information on the Default Protocol characteristic, refer to the *Network Access Software Management Guide*.
2	Verify the LAT service node software. See the section *Verify the LAT Service Node Software* (Chapter 2).
3	Increase the access server node limit and try reconnecting. For information on managing an access server, refer to the *Network Access Software Management Guide.*
4	Verify the LAT group codes. See the section *Verify LAT Group Codes* (Chapter 2).
5	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -716- Access to service service-name denied

Explanation: The problem might be caused by one of the following:

- The port and service nodes do not have a LAT group code in common or the access server has the correct authorized groups, but not current groups.
- The access server node limit has been reached.
- The access server has used up its memory.

Step	Action
1	Verify the LAT group codes. See the section *Verify LAT Group Codes* (Chapter 2).
2	Increase the access server node limit and try reconnecting. For information on managing an access server, refer to the *Network Access Software Management Guide.*
3	Verify access server memory usage. See the *sectionVerify Access Server Memory Usage* (Chapter 2).

Local -717- Session n not established

Explanation: You attempted to use the DISCONNECT or RESUME command for a session that does not exist.

Action: Use the SHOW SESSIONS command to view active sessions.

Local -718- Session limit reached

Explanation: You entered the CONNECT command for a port that already has the maximum number of active sessions allowed (as specified by the SESSION LIMIT port characteristic).

Action: Increase the SESSION LIMIT characteristic on the port or disconnect one of the active sessions before establishing a new one.

Local -719- Insufficient resources to complete operation

Explanation: The access server could not complete the operation due to memory problems.

Action: Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -720- Protocol does not support operation

Explanation: You entered a SET SESSION TELNET or SET SESSION TN3270 command when the current session does not use the referenced protocol.

Action: Resume the session that uses the referenced protocol, returning to the Local> prompt. Reenter the SET SESSION command.

Local -721- No dedicated service on port n

Explanation: You entered the CONNECT PORT n or a DISCONNECT PORT n command to a port that does not have a dedicated service defined. These commands apply only to ports with a dedicated service.

Action: Specify the service name in the CONNECT command or set up a dedicated port. For more information on configuring and managing interactive devices, refer to the *Network Access Software Management Guide*.

Local -722- Server disabled

Explanation: Your CONNECT request does not work because the access server has been disabled by the INITIALIZE DISABLE command.

Action: Reinitialize the access server and omit DISABLE from the INITIALIZE command line.

Local -723- AUTOCONNECT and protocol ANY cannot coexist

Explanation: You cannot have AUTOCONNECT ENABLED and PROTOCOL ANY at the same time.

Action: Use the SET/DEFINE/CHANGE PORT command to specify either AUTOCONNECT ENABLED or PROTOCOL ANY. Note that AUTOCONNECT is ENABLED when a dedicated service is specified for a port.

Local -724- Service node connection limit reached

Explanation: You entered the CONNECT or TEST SERVICE command, which caused the maximum number of virtual circuits allowed on the access server to be exceeded.

Action: CLOSE or DISCONNECT one of your sessions and try again. For more information on managing your access server as part of the LAT network, refer to the *Network Access Software Management Guide*.

Local -725- Access to node node-name denied

Explanation: The problem might be caused by one of the following:

- The port and service nodes do not have a LAT group code in common or the access server has the correct authorized groups, but not current groups.
- The access server node limit has been reached.
- The access server has used up its memory.

Step	Action
1	Verify the LAT group codes. See the section *Verify LAT Group Codes* (Chapter 2).
2	Increase the access server node limit and try reconnecting. For information on managing an access server, refer to the *Network Access Software Management Guide*.
3	Verify access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2).

Local -726- Node node-name not reachable

Explanation: Your CONNECT request specifies a node that is currently unreachable.
Action: Use the SHOW NODES ALL command to see which nodes have the status

Reachable. Then, verify the LAT service configuration (Chapter 2).

Local-728- Parameter cannot be modified with connection established/pending

Explanation: The SET/CHANGE SERVER commands specify characteristics that cannot be changed while connections exist at any port.

Action: Wait until all port users end their sessions or use the DEFINE command.

Local -729- Parameter cannot be modified by a SET or CHANGE command

Explanation: You tried to use the SET or CHANGE command to modify a characteristic that cannot be modified in the operational database.

Action: Use the DEFINE command to modify the characteristic.

Local -730- Temporary resource conflict - please try again

Explanation: An internal resource conflict temporarily prevents execution of a command.

Action: Retry the command.

Local -731- Port not configured for loopback test

Explanation: The problem might be caused by one of the following:

- You did not specify a port number (you cannot loop back to your own port).
- You specified a port that is under session management control.
- The two ports are operating at different input and output speeds.

Step	Action
1	Ensure that you have specified a port number other than your own.
2	Disable session management on the port or use another port.
3	If the two ports are operating at different speeds, change them to be consistent with each other. For more information on the TEST PORT LOOPBACK command, refer to the *Network Access Software Commands Reference Guide*.

Local -733- Port n already under test

Explanation: You entered the TEST PORT command for a port that is already being tested. Only one port test can be active at a time.

Action: Wait until the test has finished or use another port.

Local -734- Invalid operation from a remote management console

Explanation: You entered an invalid command from the remote console port.

Action: Specify a port number when entering the SET and SHOW commands from the remote console port.

Local -735- Service service-name does not support requested test

Explanation: The service or service node that you requested in a TEST SERVICE command does not support the specified test.

Action: No user action is required.

Local -736- Parameter cannot be modified by a DEFINE or CHANGE com-mand

Explanation: You tried to use the DEFINE or CHANGE command to modify a characteristic that cannot be modified in the permanent database.

Action: Use the SET command to modify the characteristic.

Local -737- Flash RAM is not installed or not supported

Explanation: You entered a flash RAM command on a system that either does not support flash RAM or flash RAM is not installed. If flash RAM is installed, it may be malfunctioning.

Action: If the flash RAM is user installable, ensure that it is installed properly. If you do not have flash RAM, you cannot use the flash RAM command.

Local -738- Flash RAM is write protected

Explanation: You tried to write to flash RAM that is write-protected.

Action: Set flash RAM to write-enabled.

Local -739- Flash RAM does not contain correct load image

Explanation: You entered a command that requires the access server to reload a specified image from the flash RAM that was unavailable.

Action: Verify image name.

Local -740- Options FROM, IMAGE, UPDATE not supported

Explanation: These features are not supported by the firmware in your hardware platform.

Action: None, these options cannot be used for your particular hardware.

Local -741- Invalid password

Explanation: The password must have from 1 to 16 ASCII characters.

Action: Reenter the password.

Local -742- Password verification failed

Explanation: The verification password on a LOCK command did not match the specified password.

Action: Reenter the command and password.

Local -743- Illegal port name in effect, remote access denied

Explanation: You specified an invalid port name on an attempt to SET PORT ACCESS to REMOTE or DYNAMIC. Remote service nodes cannot connect to the port using an illegal port name.

Action: Use the SHOW PORT command to determine the port name. Then, use the SET/DEFINE/CHANGE PORT NAME command to change the port name.

Local -746- Monitor currently in use

Explanation: You entered the MONITOR command when another MONITOR command is still in effect.

Action: You must halt the first monitor display before the access server can begin a second one.

Local -747- No entries removed

or

Local -748- No entries in local system queue

Explanation: You specified a nonexistent queue entry in a REMOVE QUEUE or SHOW/MONITOR QUEUE command.

Action: Use the SHOW QUEUE ALL command to check the queue entries. For more information on configuring and managing the LAT connection queue, refer to the *Network Access Software Management Guide*.

Local -750- Another port has this name

Explanation: You specified a name that is already assigned to another port.

Action: Use the SHOW PORT ALL CHARACTERISTICS command to check the names of other ports. Then, use the SET/DEFINE/CHANGE PORT NAME command to change the port name.

Local -751- Broadcast command disabled

Explanation: You entered the BROADCAST command on an access server that has disabled the broadcast facility.

Action: Use the SET/DEFINE/CHANGE SERVER BROADCAST ENABLED command to enable BROADCAST on the access server.

Local -752- Service limit reached

Explanation: You exceeded the limit (maximum = 20) for the number of services defined on the access server.

Action: Enter the CLEAR/PURGE SERVICE service-name command to delete unused services.

Local -753- Lock command disabled

Explanation: You entered the LOCK command on an access server that has disabled the lock facility.

Action: Use the SET/DEFINE/CHANGE SERVER LOCK ENABLED command to enable locking on the access server.

Local -756- Specified server name already in use

Explanation: You entered the SET/DEFINE/CHANGE SERVER NAME command specifying a name that already exists in the database.

Action: Reenter the command and specify another name.

Local -761- Unsupported by port hardware

Explanation: You tried to enable a function that is not supported on your device.

Action: For information on supported features, refer to your access server hardware documentation.

Local -762- Conflict of parameters on (some) port(s)

Explanation: You cannot have SLIP and MULTISESSIONS ENABLED on the same port at the same time.

Action: Use the SET/DEFINE/CHANGE PORT command to specify either SLIP or MULTISESSIONS ENABLED.

Local -770- Invalid operation with multisessions enabled

Explanation: You entered a command that cannot be used with session management.

Action: Use the SET/DEFINE/CHANGE PORT MULTISESSIONS DISABLED to turn off multisessions.

Local -771- Invalid or no response from attached device

Explanation: Session management was terminated for one of the following reasons:

- An attempt by the access server to initiate session management failed when the device did not respond to session management commands.
- An irrecoverable error occurred during a session management dialogue.
- The terminal and access server versions of session management do not match.

Step	Action
1	Verify that the terminal is configured correctly for session management.
2	Ensure the terminal is configured correctly. Then, initiate another session.
3	If the session management software is not compatible between the terminal and the access server, you cannot use session management. For more information on configuring a session management (TD/ SMP) terminal, refer to the *Network Access Software Management Guide*.

Local -772- Queued access failed, error or no response from service

Explanation: A queued request was accepted by the service node, but access to the node failed before the connection was completed for one of the following reasons:

- The service node crashed.
- Queuing is not enabled on the service or service node.
- There is insufficient memory on the access server.
- The requesting port and the service node do not share at least one group code.

Step	Action
1	Verify the service node. See the section *Verify Nodes That Offer the Service* (Chapter 2).
2	Use the SET/DEFINE/CHANGE SERVICE QUEUE ENABLED command to enable queuing on the service.
3	Verify the access server memory usage. See the section *Verify Service Rating* (Chapter 2).
4	Verify the LAT group codes. See the section *Verify LAT Group Codes* (Chapter 2).

Local -773- Keyword keyword not known

or

Local -774- Keyword keyword ambiguous

Explanation: You entered a command or keyword incorrectly.

Action: For the correct command syntax, refer to the *Network Access Software Commands Reference Guide*.

Local -780- Parameter inappropriate for the console port

Explanation: You tried to set a characteristic on the console port that is not applicable (for example, SET PORT 0 AUTOBAUD ENABLED).

Action: Use the SET/DEFINE/CHANGE SERVER CONSOLE NONE command to disable the console port.

Local -781- Port(s) in autobaud state not changed

Explanation: You tried to change the port characteristic CHARACTER SIZE, SPEED, or PARITY for a port that has AUTOBAUD enabled.

Action: Disable AUTOBAUD on the port and reenter the command.

Local -782- Invalid speed

Explanation: You tried to set a speed that the access server does not support.

Action: Refer to your access server hardware documentation for information on supported port speeds.

Local -783- No services will be seen from port

Explanation: You entered the SET GROUPS command that disabled all current groups.

Action: Verify the group codes. See the section *Verify LAT Group Codes* (Chapter 2).

Local -785- Name contains blanks or illegal characters

Explanation: You entered a command containing an illegal service name or an illegal node name.

Action: Reenter the command with a valid service or node name. For more information on configuring and managing LAT services, refer to the *Network Access Software Management Guide*.

Local -788- Port has dedicated service status

Explanation: You entered a command that cannot be executed because the target port has a dedicated service.

Action: For more information on configuring security for interactive ports, refer to the *Network Access Software Management Guide*.

Local -789- Still disconnecting

Explanation: You attempted an operation that cannot be performed until a previous DISCONNECT command finishes processing.

Action: Wait and try again.

Local -794- Type only one character or control sequence

Explanation: You tried to specify more than one character as a switch character.

Action: Reenter the command using only one character or control sequence.

Local -795- Logged in ports not changed

Explanation: You attempted to use the SET or CHANGE command to modify a port characteristic that cannot be changed while the target port is logged in. For example, you cannot set a port to a dedicated service unless the port is logged out.

Action: Use the DEFINE command or reenter the command when the port is logged out.

Local -796- One or more ports not in correct state for operation

Explanation: The command you entered did not take effect on one or more ports for one of the following reasons:

- A port was in AUTOBAUD or TEST state.
- A port was in help mode.
- A port was displaying local output.

Action: Reenter the command.

Local -798- No services are known to the local system

Explanation: You entered the SHOW SERVICES command when there were no services in the access server database.

Action: No user action is required.

Chapter 25

Messages 800 – 899

Overview

Introduction

This chapter provides information on messages 800 – 899.

Messages

Local -800- TN3270: operator terminated session

Explanation: You entered the EXIT TN3270 command.

Action: No user action is required.

Local -801- TN3270: Command 'xxx' from host not supported

or

Local -802- TN3270: Order 'xxx' from host not supported

Explanation: The access server received an unsupported TN3270 command/order from the host/peer.

Action: Restart the session. If this action fails to correct the problem, contact your IBM support staff to determine the appropriate action to prevent the application from sending the unsupported command or order. The mainframe configuration should have a terminal setting of model 2, without extended fields or write-structured field support.

Local -803- TN3270: initialization failed setting port

Explanation: The TN3270 session failed to be initialized due to a temporary resource condition at the port.

Action: Restart the session. If this action fails to correct the problem, refer to Chapter 29 for service information.

Local -804- TN3270: initialization failed; insufficient memory

Explanation: A TN3270 session could not be started due to insufficient memory.

Action: Enter the SHOW SERVER STATUS command. To free memory space, verify the access server memory usage. See the section *Verify Access Server Memory Usage* (Chapter 2), and disconnect any unused sessions, then restart the session.

Local -805- TN3270: screen output buffer exceeded

Explanation: An internal output buffer could not accommodate output data destined for the port device.

Action: Restart the session. If this action fails to correct the problem, contact your IBM support staff to determine the appropriate action to prevent the application from sending a buffer address outside the limit for a 3278 Model 2.

Local -806- TN3270: invalid TN3270 buffer address from host

Explanation: The host requested operation in an area of terminal screen emulation that is out of bounds.

Action: Restart the session. If this action fails to correct the problem, refer to Chapter 29 for service information.

Local -807- TN3270: escape sequence from keyboard too long

Explanation: An internal software error was detected when the TN3270 session attempted to initialize keymaps.

Action: Change the keymap definition that caused the error and restart the session.

Local -808- TN3270: inconsistent Telnet protocol event received

Explanation: The access server received a Telnet protocol event from the host that is inconsistent with the Telnet protocol state needed to maintain a TN3270 session.

Action: Inform your IBM host system manager.

Local -809- TN3270: invalid operation

Explanation: A command was entered that is not allowed while a TN3270 session is active.

Action: No user action is required.

Local -810- TN3270: invalid function

Explanation: The TN3270 function name in the SET/DEFINE/CHANGE PORT TN3270 KEYMAP command is not a valid function name.

Action: For a list of TN3270 functions, refer to the *Network Access Software Commands Reference Guide*.

Local -811- TN3270: invalid keymap

Explanation: The keymapping sequence in the SET/DEFINE/CHANGE PORT TN3270 KEYMAP command is not a valid keymap sequence.

Action: For a list of TN3270 keymap sequences and the rules governing their use, refer to the *Network Access Software Commands Reference Guide*.

Local -812- TN3270: duplicate keymap: remapping xxx to NONE

Explanation: The keymapping sequence in the SET/DEFINE/CHANGE PORT TN3270 KEYMAP command is being used by another TN3270 function. The command was executed, but the function that used to be mapped to the same sequence was remapped to NONE.

Action: No user action is required.

Local -813- TN3270: invalid description

Explanation: The description field in the SET/DEFINE/CHANGE PORT TN3270 KEYMAP command is not a valid description.

Action: Enter a string of the maximum (or fewer) allowable ASCII characters.

Local -814- TN3270: NVRAM keymap limit exceeded

Explanation: You exceeded the port's NVRAM keymap limit when you attempted to use the DEFINE or CHANGE command on a keymap.

Action: Increase the port's NVRAM KEYMAP LIMIT. For guidelines on increasing a port's NVRAM keymap limit, refer to the *Network Access Software Management Guide*.

Local -815- TN3270: Your keymap assignment conflicts with existing keymap function

Explanation: The keymap assignment you tried to make in a SET PORT TN3270 KEYMAP command is ambiguous with an existing keymap. The keymap sequence you entered is either a subset of another or the other keymap is a subset of yours. In either case, the keymap assignment is not allowed.

Action: You can either remap the other function named in the error message and reenter the command, or choose a new, nonambiguous keymap for this function.

Local -816- TN3270: Not enough NVRAM

Explanation: NVRAM space for keymaps is exhausted.

Action: To free NVRAM space, purge any unused keymaps, then restart the session. If NVRAM space remains unavailable, see the section *Verify Access Server Memory Usage* (Chapter 2).

Local -817- TN3270: customized terminal type - no modifications

Explanation: You tried to customize a keymap assignment on a port that is currently using a customized access serverwide terminal type.

Action: To customize keymap assignments on a port, configure the port to use a fixed terminal type with the SET PORT TN3270 TERMINAL command.

Local -818- TN3270: fixed terminal type - no modifications

Explanation: You tried to change the terminal type/keymap type pairing for one of the fixed terminal types.

Action: If you need a new terminal type/keymap pairing, create a new terminal type using the SET TN3270 TERMINAL TYPE command. Then, assign the terminal type to whatever keymap type you want.

Local -819- TN3270: fixed keymap - no modifications

Explanation: You tried to customize a keymap assignment in a fixed keymap type.

Action: To customize an access serverwide keymap type, you must create a new keymap type, associated with a customized terminal type, with the SET TN3270 TERMINAL term_name KEYMAP key_name command. Then, you can customize individual keymap assignments in keymap key_name.

Local -820- TN3270: terminal type does not exist

Explanation: You referred to a terminal type name that does not exist.

Action: Check the available terminal type names using the SHOW TN3270 TERMINAL command.

Local -821- TN3270: keymap does not exist

Explanation: You referred to a keymap type name that does not exist.

Action: Check the available keymap type names using the SHOW TN3270 TERMINAL command.

Local -822- TN3270: invalid name

Explanation: You entered an invalid terminal or keymap name. This means the name is too long (maximum of 12 characters) or contains illegal characters.

Action: Choose a name containing 12 or fewer legal characters.

Local -823- TN3270: keymap limit exceeded

Explanation: You tried to create a new keymap type after the maximum number of customized keymap types (6) had already been reached.

Action: Try to find a terminal/keymap type pairing that you do not need. Delete the pair using the CLEAR TN3270 TERMINAL command.

Local -824- TN3270: terminal type limit exceeded

Explanation: You tried to create a new terminal type after the maximum number of customized terminal types (6) had already been reached.

Action: Try to find a terminal/keymap type pairing that you do not need. Delete the pair using the CLEAR TN3270 TERMINAL command.

Local -825- TN3270: terminal already defined

Explanation: You tried to create a new terminal with a name that is already in use.

Action: Choose a new terminal type name.

Local -826- TN3270: Must use command SET PORT TN3270 KEYMAP ALL DEFAULT

Explanation: You tried to use the obsolete SET PORT TN3270 KEYMAP DEFAULT keymap_name command.

Action: Use the SET PORT TN3270 KEYMAP ALL DEFAULT command to return all the port's keymaps to the default state.

Local -827- TN3270: Cannot CLEAR terminal while a port uses it

Explanation: You tried to CLEAR a particular terminal type while one or more ports were using it.

Action: Use the SHOW PORT TN3270 command to find the ports that use the particular terminal type. Then, use the SET PORT TN3270 TERMINAL command to reassign those ports with a new terminal type. Try the CLEAR command again.

Local -828- TN3270: Cannot PURGE terminal while a port uses it in NVRAM

Explanation: You tried to PURGE a terminal type while one or more ports were using it.

Action: Use the LIST PORT TN3270 command to find the ports that use the particular terminal type. Then, use the DEFINE PORT TN3270 TERMINAL command to reassign those ports with a new terminal type. Try the PURGE command again.

Local -860- Close quote needed

Explanation: An end quotation mark was not included in your command syntax.

Action: Add an end quotation mark to your command.

Local -866- Invalid Realm Name

Explanation: The realm that you entered is invalid. A realm name cannot be longer than 40 characters. A realm name must contain at least one alphabetic character. It can also include numeric characters, hyphens (-), and periods (.).

Action: Enter a valid realm name.

Local -870- Number must be between xxx and xxx

Explanation: The number you entered is not within the valid range of values.

Action: Enter the correct range of values.

Local -871- Number must be xxx or yyy

Explanation: The number you entered in a command is not a valid number (for example, TN3270 NULLS value).

Action: Enter a valid number.

Local -884- Command Group and Menu NVRAM entry limit exceeded

Explanation: There is a finite amount of NVRAM allocated for storing command groups and this limit has been reached.

Action: Purge unused command groups.

Local -885- Command Group group_name not found

Explanation: The Command Group names "group_name" doesn't exist.

Action: Check your spelling and that the command group does exist, SHOW/LIST COMMAND GROUP.

Local -886- Command Group contains no line line_number

Explanation: The line number does not exist in a command group for a CLEAR or PURGE COMMAND GROUP LINE command.

Action: Check your spelling and that the command group does exist, SHOW/LIST COMMAND GROUP command_group.

Local -887- Command Group not enabled on this port

Explanation: The port is not enabled for the command group specified.

Action: Check that the port is enabled in the specified command group, SHOW/LIST COMMAND GROUP command_group.

Local -890- Null string not allowed

Explanation: A NULL parameter can not be used.

Action: Reenter command using a non-NULL parameter.

Chapter 26

Messages 900 – 999

Overview

Introduction

This chapter provides information on messages 900 – 999. These messages appear only on the console port and under the following circumstances:

- When the access server is initialized.
- When the access server crashes.

Messages

Local -901- Initializing DECserver *ppppp address* FW *Vx.x-x* HW x.x

or

Local -901- Initializing Access Server *ppp address* FW *Vx.x-x* HW x.x

Explanation: In message 901, *ppppp* or *ppp* is the platform code of the access server device. The number of ports is encoded in the last two digits of the platform code, with the exception of the 900 series. The *address* field is the Ethernet address. This message is generated approximately 10 seconds after powering up the access server or after executing the INITIALIZE command. Message 901 displays the following information:

- Ethernet address of the access server
- Base level of the internal ROM firmware
- Current hardware revision level

Action: No user action is required.

Local -903- [protocol] Loading from host address

Explanation: This message indicates that the load host is downline loading the access server software. This message is displayed during the initialization process.

Action: No user action is required.

Local -904- Image load complete

Explanation: The software has been successfully downline loaded.

Action: No user action is required.

Local -906- [protocol] Dumping to host address

Explanation: The access server hardware detected an internal fatal error, called a fatal bugcheck error. This error is caused by either the software or the hardware:

- If the fatal error is a software problem, it is likely to cause only intermittent fatal bugcheck errors. Your unit might operate again for a period of time, then fail again. If there is more than one access server on the Ethernet, the problem could affect all the units.
- If the fatal error is a hardware problem, it is probably isolated to one access server. The hardware problem may be intermittent and only affect the unit occasionally. There is no corrective procedure for this problem. Refer to Chapter 29 for service information.

When a fatal bugcheck error occurs, the access server attempts an upline dump of its memory to a load host on the Ethernet. If several load hosts are defined, the address of the one that accepted the upline dump can be determined using the SHOW SERVER STATUS command. The Ethernet address of the dump host is displayed along with crash information from the fatal bugcheck error message.

Action: Record the values of the five parameters displayed in message 913, and forward this information and the access server upline dump file to your supplier. Refer to Chapter 29 for service information.

Local -907- Image dump complete

Explanation: The access server has terminated abnormally. It has completed an upline dump and the self-test code is taking control of the access server.

Action: Forward the access server upline dump file to your supplier. Refer to Chapter 29 for service information.

Local -909- Requesting software update of Flash RAM

Explanation: This is a firmware status message indicating a pending update of Flash RAM. System initialization will take longer than normal.

Action: No user action is required.

Local -912- [protocol] Load failure, timeout

Explanation: A downline load sequence was interrupted because a load message was not received. The load sequence is restarted.

Action: For information on software installation failure, refer to Chapter 1 .

Local -913- Fatal Bugcheck, PC = n SP = n SR = n M = n C = n

Explanation: The access server hardware detected an internal fatal error, called a fatal bugcheck error. This error can be caused by either the software or the hardware:

- If the fatal error is a software problem, it is likely to cause only intermittent fatal bugcheck errors. Your unit might operate again for a period of time, then fail again. If there is more than one access server on the Ethernet, the problem could affect all the units.
- If the fatal error is a hardware problem, it is probably isolated to one access server. The hardware problem may be intermittent and only affect the unit occasionally. There is no corrective procedure for this problem. Refer to Chapter 29 for service information.

When a fatal bugcheck error occurs, the access server attempts an upline dump of its memory to a load host on the Ethernet. If several load hosts are defined, the address of the one that accepted the upline dump can be determined using the SHOW SERVER STATUS command. The Ethernet address of the dump host is displayed along with the crash information from the fatal bugcheck error message.

Action: Record the values of the five parameters in message 913, and forward this information and the access server upline dump file to supplier. Refer to Chapter 29 for service information.

Local -914- [protocol] Dump failure, timeout

- **Explanation:** The access server was unable to send an upline dump file to the load host. This failure can be caused by either incorrect information on the load host or a hardware error on the access server..

Step	Action
1	If you are using the MOP protocol to downline load the software, do the following: a. Verify that the information in the NCP database is correct. At an OpenVMS load host, enter the following command. Substitute the DECnet node name of the access server for CRC1: NCP> **SHOW NODE CRC1 CHARACTERISTICS** b. Ensure that the DECnet load host for the access server is available and service is enabled. See the section *Verify the Load Host Is Available and Service Is Enabled* (Chapter 1).
2	If you are using the BOOTP and TFTP protocols to downline load the software, do the following: a. Ensure that the access server is entered in /etc/bootptab. See the section *Ensure the Access Server Is Entered in /etc/bootptab* (Chapter 1). b. Verify that the BOOTP and TFTP daemons are configured properly.
3	Use the INITIALIZE DIAGNOSE FULL command to verify a hardware error. For more information on the INITIALIZE command, refer to the *Network Access Software Commands Reference Guide*.

Local -916- [MOP] Illegal load image - load aborted

Explanation: The problem might be caused by one of the following:

- The access server does not have enough memory to accept the software image.
- The software image is invalid or corrupt.

Step	Action
1	For information on adding memory to your access server, refer to your access server hardware documentation.
2	Install a new copy of the software image on the load host.

Local -917- Load failure, invalid boot block CRC

Explanation: Flash RAM contains a corrupted boot block.

Action: No user action is required, the software will automatically reformat the Flash RAM

Local -919- Load failure, invalid load image CRC

Explanation: Flash RAM contains a corrupted load image.

Action: Reset the Flash RAM using the INITIALIZE FROM ETHERNET UPDATE FLASH command.

Local -922- Port hardware error on port n

Explanation: There is a port hardware error.

Action: The identified port is disabled. The other ports on your access server remain functional. Refer to Chapter 29 for service information.

Local -941- Transceiver loopback error

Explanation: The Ethernet external loopback test has failed. This might occur when:

- There is a fault in the external Ethernet cabling.
- The access server is not connected properly to its transceiver.
- The transceiver is faulty.
- If you are using a fiber-optic transceiver, the remote end of the connection is not operational. For more hardware information, refer to your access server hardware documentation.

Step	Action
1	Verify that the transceiver cable is connected securely at both ends. Also, inspect the cable for any signs of damage. If the cable appears damaged, replace it and run the self-test again.
2	Verify the Ethernet connector selected for the Ethernet loopback test.
3	If you are using standard Ethernet, inspect the transceiver cabling between the access server and the coaxial cable.
4	If you are using ThinWire Ethernet cable, verify that the access server, ThinWire cabling, or ThinWire are terminated.

Local -951- Server will retry operation in n seconds

Explanation: The access server is unable to find the load host or the host system failed to complete the downline load to the access server. The access server will automatically try to downline load again.

Step	Action
1	If you are using the MOP protocol to downline load the software, do the following: a. Verify the information on the load host. See the section *Ensure the Access Server Is Defined on the Load Host* (Chapter 1). b. Ensure that the DECnet load host for the access server is available and service is enabled. See the section *Verify the Load Host Is Available and Service Is Enabled* (Chapter 1).
2	If you are using the BOOTP and TFTP protocols to downline load the software, do the following: a. Ensure that the access server is entered in /etc/bootptab. See the section *Ensure the Access Server Is Entered in /etc/bootptab* (Chapter 1). b. Verify that the BOOTP and TFTP daemons are configured properly.
3	Ensure that the load host is on the same Ethernet as the access server.
4	Check for problems with transmissions between the access server and the load host on the Ethernet.

Ask the system manager to perform the following command. Substitute the DECnet node name of the access server for server-node-name:

At an OpenVMS load host, enter the following:

```
NCP> LOOP CIRCUIT server-node-name
```

The Network Control Program (NCP) shows the results of the loopback test at the DECnet node.

Local -952- Enter ^P to repeat selftest

Explanation: This message appears after an Ethernet loopback failure.

Action: To restart the self-test, press Ctrl/P on the console terminal.

Local -953- [protocol] Attempting to locate load host [datalink]

Explanation: The access server is unable to find the load host or the host system failed to complete the downline load to the access server. The access server will automatically try to downline load again.

Step	Action
1	If you are using the MOP protocol to downline load the software, do the following: a. Verify the information on the load host. See the section *Ensure the Access Server Is Defined on the Load Host* (Chapter 1). b. Ensure that the DECnet load host for the access server is available and service is enabled. See the section *Verify the Load Host Is Available and Service Is Enabled* (Chapter 1).
2	If you are using the BOOTP and TFTP protocols to downline load the software, do the following: a. Ensure that the access server is entered in /etc/bootptab. See the section *Ensure the Access Server Is Entered in /etc/bootptab* (Chapter 1). b. Verify that the BOOTP and TFTP daemons are configured properly.
3	Ensure that the load host is on the same Ethernet as the access server.
4	Check for problems with transmissions between the access server and the load host on the Ethernet.

Ask the system manager to perform the following command. Substitute the DECnet node name of the access server for server-node-name:

At an OpenVMS load host, enter the following:

```
NCP> LOOP CIRCUIT server-node-name
```

The Network Control Program (NCP) shows the results of the loopback test at the DECnet node.

Local -954- [protocol] Attempting to locate dump host [datalink]

Explanation: The access server has terminated abnormally. It is searching for a host that will accept an upline dump file.

Action: No user action is required.

Local -955- [protocol] Host address located [datalink]

or

Local -956- [MOP] Requesting load from host address

Explanation: The host system failed to complete the downline load to the access server. The access server will automatically try to downline load again.

Action: For information on software installation failure, refer to Chapter 1 .

Local -957- [protocol] Requesting dump to host address

Explanation: The access server has terminated abnormally. It has requested an upline dump to the specified host.

Action: No user action is required.

Local -958- [MOP] Boot request received from address

Explanation: The access server received a valid request from the specified host to initiate a downline load of the access server software.

Action: No user action is required.

Local -959- [FLASH] Attempting to locate load image [FLASHRAM]

Explanation: The access server is attempting to locate the load image in Flash RAM.

Action: No user action is required.

Local -960- Available memory n Mbytes

Explanation: In message 960, n is the number of megabytes of memory. This messages is generated approximately 10 seconds after powering up the access server or after executing the INITIALIZE command.

Action: No user action is required.

Local -961- [IP] ARP request failed

Explanation: The access server transmits an Address Resolution Protocol (ARP) request when attempting to load or dump using the TFTP protocol. The access server is trying to discover the hardware address of the load server and expects an ARP reply from the load server. If it fails to get a reply after five attempts, the access server generates this message and restarts the process.

Action: No user action is required. The access server generates this message and restarts the process.

Local -962- [IP] TFTP Error message received, code: n

or

Local -963- [IP] Illegal BOOTP reply, code: n

Explanation: An error message was received by TFTP or BOOTP.

Action: The following defines the cause of the error as specified by code n:

```
1=File field too long 5=Bad xid field

2=Bad Giaddr field    6=Bad op field

3=Bad Siaddr field    7=Bad packet length

4=Bad Yiaddr          8=Bad dest port
```

Local -964- [MOP] Illegal Dump message - Dump aborted

Explanation: The access server has received an illegal dump message from the dump host. There is a problem with the packet it has received.

Action: Refer to message 914 for more information.

Local -965- Dump failed

Explanation: The access server has not been successful in performing a dump. It will try to perform a dump a number of times before generating this message.

Action: Refer to message 914 for more information.

Local -966- Transmission failure on NI

Explanation: The transmission of a packet has failed on the network interface (NI) due to a physical layer problem.

Action: Press Ctrl/P on the console terminal to perform a self-test.

- If a fault is detected, messages 941 and 952 are generated. Refer to those messages for additional information.
- If a fault is not detected, wait for message 953. If message 966 accompanies message 953, forward message 966, together with the sequence of events following self-test, to your system manager. Otherwise, refer to message 953 for additional information.

Local -967- Parameter checksum error detected in NVRAM

Explanation: The self-test has detected a checksum error in nonvolatile random-access memory (NVRAM).

Action: Reset the access server to its factory settings. If this fails to correct the problem, refer to Chapter 29 for service information.

Local -969- Requesting type Software - software-id

Explanation: The access server is requesting software for a downline load. If type is specified, the software requested is identified by software-id. If type is not specified, the load host chooses the software, and software-id is not displayed.

Action: No user action is required.

Local -970- Specified load failed, retrying with default parameters

Explanation: The load device or image you specified was not found.

Action: No user action is required. The access server will fall back to the normal boot sequence.

Local -991- LOAD channel set to ThinWire

Explanation: The software load channel was set to ThinWire.

Action: No action is required

Local -992- LOAD channel set to an IMB

Explanation: Software load channel set to an IMB channel.

Action: No action is required

Local -998- Bad LOAD channel set, defaulting to ThinWire

Explanation: The initial load channel set was deemed bad, firmware reset the load channel to ThinWire

Action: No action is required

Chapter 27

Messages 1000 – 1099

Overview

Introduction

This chapter provides information on messages 1000 – 1099. These messages appear when you are using IPX or a dialer service.

Messages

Local -1000- Active IPXCP port connection; request denied

Explanation: You attempted to use the SET command to change the IPX internal network number while an active serial line IPX connection existed.

Action: You can use the SET command only when there are no active serial line IPX connections. Use the CHANGE command at other times.

Local -1001- FRAME currently enabled; request denied

Explanation: You attempted to configure a network for a FRAME that already has a network number.

Action: You can define the network number and reboot the server.

Local -1050-CHANGE PORT n DIALER SCRIPT

Explanation: A dial request failed because the port used to make the call does not specify a dialer script.

Action: Specify a dialer script for this port using the SET PORT n DIALER SCRIPT name command, or correct the dialer service definition by associating one or more ports that specify a dialer script with it. Then, resubmit the dial request.

Local -1051- Port's default protocol is not DIAL

Explanation: A request to dial a phone number was made, but the current port's default protocol is not DIAL.

Action: Specify a dialer service name instead of simply a phone number, or define a preferred dialer service name and change the port's default protocol to DIAL.

Local -1052- No ports associated with dialer service

Explanation: A request to use a particular dialer service cannot be accepted because the named service does not currently specify any ports to use in making the call.

Action: Associate one or more ports with the named dialer service, or select another dialer service.

Local -1053- Insufficient Dial NVRAM

Explanation: The dialer request or definition failed due to insufficient memory resources.

Action: For more information on reducing Dial NVRAM use, refer to the *Network Access Software Management Guide*.

Local -1054- No such dialer service

Explanation: A dial request was made using a dialer service that is not defined.

Action: Define the desired dialer service, or specify the name of a dialer service that is already defined.

Local -1055- Invalid dialer name

Explanation: An invalid or unknown dialer name was specified.

Action: Specify the name of an existing dialer service, or use only a maximum of 16 alphanumeric characters when naming a new dialer service.

Local -1056- No such dialer script

Explanation: A request was made to associate an unknown dialer script with one or more ports.

Action: Name an existing dialer script, or define the unknown script.

Chapter 28

Messages 1100 – 1208

Overview

Introduction

This chapter provides information on messages 1100 – 1208.

Messages

Local -1100- Authorization failure - login protocol not specified

Explanation: The authorization information calls for a login session to be established, but the protocol (LAT or Telnet) was not specified.

Action: Specify a login protocol. This can be done on the access server with the CHANGE PORT n DEFAULT PROTOCOL command or on a security server host. See the *Network Access Software Management Guide* for more information.

Local -1101- Authorization failure - login host not specified

Explanation: The authorization information calls for a login session to be established, but the target host was not specified.

Action: Specify a login host. This can be done on the access server with the CHANGE PORT n PREFERRED | DEDICATED SERVICE command or on a security server host. See the *Network Access Software Management Guide* for more information.

Local -1102-Authorization failure - network address not specified

Explanation: The authorization information calls for a framed session to be established, but the network address was not specified.

Action: Specify a network address. This can be done on the access server with the CHANGE PROT n SLIP HOST ADDRESS n.n.n.n command or on a security server host. See the *Network Access Software Management Guide* for more information.

Local -1103-Authorization failure - could not set network address

Explanation: The authorization information calls for a framed session to be established, but the software was unable to assign the network address to the port.

Action: Verify that the network address specified on the security server host is valid and that no other port on the access server already uses the address.

Local -1104- Authorization failure - no dial service

Explanation: The authorization information calls for a dialback session to be established, but a dial service was not specified.

Action: Specify a dial service. This can be done in one of three ways:

- On the access server with the CHANGE PORT n PREFERRED | DEDICATED SERVICE command
- On the access server by changing the dialback service on the target realm
- On a security server host. See the *Network Access Software Management Guide* for more information.

Local -1105- Authorization failure - dial service not offered for this port

Explanation: The authorization information calls for a dialback session to be established, but the dial service specified is not offered on this port.

Action: Use another dial service which is offered on this port, or use another port which does offer this service.

Local -1106- Authorization failure - unsupported service

Explanation: The authorization information calls for a type of service not supported by the access server.

Action: Change the type of service on the security server host.

Local-1111- Authorization failure - host name > 16 char

Explanation: The name of the host is too long.

Action: Use a name no longer than 16 characters.

Local-1112- Authorization failure - dest. port name > 16 char

Explanation: The name of the destination port is too long.

Action: Use a name no longer than 16 characters.

Local-1113- Authorization failure - LAT service name > 16 char

Explanation: The name of the LAT service is too long.

Action: Use a name no longer than 16 characters.

Local-1114- Authorization failure - TLN node name > 16 char

Explanation: The name of the Telnet node is too long

Action: Use a name no longer than 16 characters

Local-1115- Authorization failure - LAT port name > 16 char

Explanation: The name of the LAT port is too long.

Action: Use a name no longer than 16 characters

Local-1116- Authorization failure - Rlogin host name too long

Explanation: The name of the Rlogin host is too long.

Action: Use a name no longer than 16 characters.

Local -1117- Authorization failure - Rlogin port name too long

Explanation: The tcp-port specification was greater than 16 characters.

Action: Use a name no longer than 16 characters.

Local -1200- Internal software error - no Rlogin connection

Explanation: A memory error occurred.

Action: Logout the port and try to Rlogin again. If this does not solve the problem, reboot the access server. If the problem persists, contact your authorized service representative.

Local -1201- Insufficient resources to complete Rlogin connection

Explanation: A memory error occurred.

Action: Logout other sessions on the port, and try again. If the problem persists, log out the port, and try to Rlogin again.

Local -1202- Illegal tcp-port specification

Explanation: The TCP-port number specified was not valid.

Action: Specify a valid TCP-port number. If you did not specify one on the command line, then an internal software error has occurred. Logout the port, and try again. If the problem persists, reboot the access server, and contact your authorized service representative.

Local -1203- Illegal username specification

Explanation: The username specified on the command line was more than 16 characters.

Action: Specify a valid username. If you did not specify one on the command line, then an internal software error has occurred. Logout the port, and try again. If the problem persists, reboot the access server, and contact your authorized service representative.

Local -1204- Illegal Rlogin host specification

Explanation: The Rlogin host name was more than 255 characters.

Action: Specify a valid host name or address. If you did not specify one on the command line, or on the port settings for default or preferred service, then an internal software error has occurred. Log out the port, and try again. If the problem persists, reboot the access server, and contact your authorized service representative.

Local -1205- Rlogin escape sequence too long

Explanation: Escape sequence may only be a single ASCII character.

Action: Use a single character.

Local -1206- Rlogin escape character invalid

If command was SET/DEFINE/CHANGE PORT RLOGIN ESCAPE:

Explanation: Rlogin escape character may not be a lowercase or uppercase letter, or a single numeral.

Action: Use a control character (for example, Ctrl/A or Ctrl/B) or non-alphanumeric character (for example, ~, !, @, or #). May only be one character.

If command was SET/DEFINE/CHANGE PORT RLOGIN INPUT/IO:

Explanation: The Suspend Input and Suspend IO characters may not be the same, on a particular port. They may not be more than one character. Ctrl/D and "." are not valid.

Action: Use different single characters for these Suspend characters.

Local -1207- Rlogin terminal type invalid

Explanation: The way the terminal was specified was not recognized.

Action: Designate the terminal as "VTxxx", where xxx is a number.

Examples: VT100, VT220, VT420

If you have an incompatible terminal, use the default setting of "unknown." Set up your environment at the remote host to specify the terminal type.

Local -1208- Rlogin suspend sequence too long

Explanation: The Rlogin Suspend sequence may only be a single ASCII character.

Action: Chose a character which is only a single character.

Chapter 29

Service Guidelines

Overview

Introduction

This chapter provides guidelines to follow when you experience a problem with your access server. It also has instructions for returning your access server hardware and tells you what to return if you have a problem with your access server software.

Contact your access server supplier for more information about the available hardware and software service options.

Before You Contact Your Supplier

First Steps

Before you contact your access server supplier:

- Verify that the software is correctly installed.
- Be sure you have used the procedures described in this guide.
- Determine your access server's serial number, software version (Vn.n), and software base level (BLnn-nn).

- If possible, record the symptoms when the access server failed, the troubleshooting steps you took, and the results of those steps.
- If you are reporting a software problem, use the privileged CRASH command to produce a dump file of the access server memory. The dump file is used to find internal logic errors in the software. For details on how to send dump files to your supplier, see the section Formatting and Sending the Dump File (page 29-2.).

Repackaging the Access Server for Shipping

What To Do

If you decide to return your access server to your supplier for repair or replacement, pack the unit carefully. If possible, use the original shipping carton and packaging material.

Formatting and Sending the Dump File

Procedure

If you received a fatal bugcheck error, message 913, or you used the CRASH command to create a dump file, do the following:

Step	Action
1	Use WinZIP or OpenVMS BACKUP to create a compressed version of the dump.
2	Send the compressed dump file to your Authorized service representative.

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