Until the configuration is properly specified, it can be difficult to establish communications within an SNA network, especially for a host subarea peripheral node. To simplify troubleshooting, SAS/CONNECT uses a convention for error handling that passes information to you to help you debug your configuration. This information includes operation codes, return codes, and sense data, which is framed within the context of the function the software is trying to perform. SAS/CONNECT does not attempt to interpret this information. Use this information to work with network systems and SAS support personnel at your site to resolve the problem.

Each message has the following format:

```plaintext
ERROR: APPC communication failure:
transaction program = program-name
opcode = operation-code  prc = primary-rc
src = secondary-rc
```

where

```plaintext
opcode
```

is the failing verb operation code.
prc

is the primary return code.

src

is the secondary return code. When an allocation error occurs (prc=0003), the src field contains the necessary SNA sense data.

For more information about these fields, see “References” on page 205.

Note: Most failures are caused by configuration or network setup errors, or they occur because the application that you are attempting to communicate with is not currently running, or it has rejected your connection request.

The following messages document some common failures:

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 1A00 prc = F012 src = 00000000.

A CONVERT request (opcode = 1A00) has failed for the reason COMMUNICATION_SUBSYSTEM_NOT_LOADED (prc = F012). Communications Manager must be started on the local workstation before any services can be utilized.

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 0100 prc = 0001 src = 00000018.

An ALLOCATE request (opcode = 0100) has failed with a PARAMETER_CHECK (prc = 0001) because of an UNKNOWN PARTNER LU condition (src = 00000018). The user-supplied partner LU alias (the value for the REMOTE= option) is not defined to the local node or to the designated network node directory server. Verify the DEFINE_PARTNER_LU definition in the NDF file.

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 0100 prc = 0003 src = 08570003.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 08570003, which indicates that the SSCP-SLU session is inactive. An attempt to communicate with a VTAM-owned logical unit has failed because the application does not have an active control session with VTAM (the host APPL/ACB is not OPEN). Ask your systems administrator why the partner LU (the value for the REMOTE= option) is not active.

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 0100 prc = 0003 src = 081C0103.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 081C0103, which indicates that the function cannot be executed because the receiver has an error condition. The last four digits, 0103, indicate that the remote node is not responding to polling requests, perhaps because it is turned off or because the hardware is not functioning correctly.

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 0D00 prc = 0003 src = 080F6051.
A RECEIVE_AND_POST (opcode = 0D00) request has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 080F6051, which indicates that the receiver does not accept the Access Security Information field. For example, the supplied userid and password combination may be invalid or one or both of the fields may have been omitted and the remote partner requires them. Find out if your system is case sensitive; if so, use the appropriate case and enclose both the userid and password in quotation marks.

ERROR: APPC communication failure:
  transaction program = SASRMT
  opcode = 0D00   prc = 0003   src = 10086021.

A RECEIVE_AND_POST (opcode = 0D00) request has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 10086021, which indicates that the transaction program name specified by the FMH-5 Attach command was not recognized by the receiver. This may occur if the SASRMT transaction program is not properly defined at the remote system, or there was a failure in the initialization of the environment within which the transaction program was to run. It might aid="OS2APPCREFS".

Note: Most failures are caused by configuration or network setup errors, or they occur because the application that you are attempting to communicate with is not currently running, or it has rejected your connection request.

The following messages document some common failures:

ERROR: APPC communication failure:
  transaction program = SASRMT (or SASVQEL)
  opcode = 1A00   prc = F012   src = 00000000.

A CONVERT request (opcode = 1A00) has failed for the reason COMMUNICATION_SUBSYSTEM_NOT_LOADED (prc = F012). Communications Manager must be started on the local workstation before any services can be utilized.

ERROR: APPC communication failure:
  transaction program = SASRMT (or SASVQEL)
  opcode = 0100   prc = 0001   src = 00000018.

An ALLOCATE request (opcode = 0100) has failed with a PARAMETER_CHECK (prc = 0001) because of an UNKNOWN PARTNER LU condition (src = 00000018). The user-supplied partner LU alias (the value for the REMOTE= option) is not defined to the local node or to the designated network node directory server. Verify the DEFINE_PARTNER_LU definition in the NDF file.

ERROR: APPC communication failure:
  transaction program = SASRMT (or SASVQEL)
  opcode = 0100   prc = 0003   src = 08570003.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 08570003, which indicates that the SSCP-SLU session is inactive. An attempt to communicate with a VTAM-owned logical unit has failed because the application does not have an active control session with VTAM (the host APPL/ACB is not OPEN). Ask your systems administrator why the partner LU (the value for the REMOTE= option) is not active.

ERROR: APPC communication failure:
  transaction program = SASRMT (or SASVQEL)
  opcode = 0100   prc = 0003   src = 081C0103.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by
sense data 081C0103, which indicates that the function cannot be executed because the receiver has an error condition. The last four digits, 0103, indicate that the remote node is not responding to polling requests, perhaps because it is turned off or because the hardware is not functioning correctly.

ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 0D00  prc = 0003  src = 080F6051.

A RECEIVE_AND_POST (opcode = 0D00) request has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 080F6051, which indicates that the receiver does not accept the Access Security Information field. For example, the supplied userid and password combination may be invalid or one or both of the fields may have been omitted and the remote partner requires them. Find out if your system is case sensitive; if so, use the appropriate case and enclose both the userid and password in quotation marks.

ERROR: APPC communication failure:
transaction program = SASRMT
opcode = 0D00  prc = 0003  src = 10086021.

A RECEIVE_AND_POST (opcode = 0D00) request has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 10086021, which indicates that the transaction program name specified by the FMH-5 Attach command was not recognized by the receiver. This may occur if the SASRMT transaction program is not properly defined at the remote system, or there was a failure in the initialization of the environment within which the transaction program was to run. It might also occur because you failed to supply an uppercase userid when you tried to perform a SAS/CONNECT signon to a CMS host.

ERROR: APPC communication failure:
transaction program = SASRMT
opcode = 0100  prc = 0003  src = 08970015.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 08970015, which indicates that a session initiation request has been received for an independent LU that has not been defined to the destination VTAM. If appl.luname is not specified, SAS/CONNECT uses CP_ALIAS by default. To avoid this problem, use the APPC_LUNAME environment variable to specify a local LU alias that is also defined to the destination VTAM.

ERROR: APPC communication failure:
transaction program = SASRMT
opcode = 0100  prc = 0003  src = 00821002.

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 00821002, which indicates that the mode name that was specified to present session parameters to the remote LU is not defined to the remote LU. The OS/2 to remote-host-connection communications mode defaults to SASAPPC. To circumvent the problem, use the APPC_LU62MODE environment variable to specify a correctly defined mode name that is known to both the local and remote LUs.

ERROR: APPC communication failure:
transaction program = SASRMT
opcode = 0100  prc = 0003  src = 08970015.
ERROR: Remote SIGNON cancelled.
This error occurs when OS/2 is the local host. Use the APPC_LUNAME environment variable to specify the local LU alias.

```
ERROR: APPC communication failure:
transaction program = SASVQEL
opcode = 0D00  prc = 0003  src = 084C0000
```

This error occurs when SIGNON is attempted between two OS/2 hosts. To circumvent the problem, verify that the SASRMT and SASTP62 transaction programs have been configured on the remote host.

```
ERROR: APPC communication failure:
transaction program = SASRMT (or SASVQEL)
opcode = 1A00  prc = 0001  src = 00000406
```

A CONVERT request (opcode=1A00) has failed with a PARAMETER_CHECK (prc=0001) because a conversion error occurred (src=00000406). This failure typically occurs when an invalid character is present in a user-supplied string, such as APPC_USER or APPC_SECURE. Verify that the values that you have specified contain only uppercase letters A through Z, lowercase letters a through z, numerics 0 through 9, and special characters $, #, and @.

If you cannot resolve a problem from the explanations given here and by using the cited resources, call SAS Technical Support for assistance. You will probably be asked to generate traces that document the problem, so be sure that you or your site support personnel are familiar with the tracing services available through OS/2 Extended Services and VTAM.

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**SAS/SHARE**

Until the configuration is properly specified, it can be difficult to establish communications within the SNA network, especially for a host subarea peripheral node. SAS/SHARE passes error handling information to you to help you debug your configuration. This information includes operation codes, return codes, and sense data that relate to the function that the software is performing. Although SAS/SHARE does not interpret the information, you can use the information to work with network systems and SAS support personnel at your site to resolve any problems.

The following error messages are produced by the OS/2 APPC access method. Error reports for the APPC access method include the failing verb operation code (opcode), the primary return code (prc), secondary return code (src), and, in some cases, the sense data.

For more information that will help you with troubleshooting, see “References” on page 205.

```
APPC communication failure:
transaction program = SASVQEL
opcode = 1A00  prc = F012  src = 00000000
```

A CONVERT request (opcode = 1A00) has failed for the reason COMMUNICATION_SUBSYSTEM_NOT_LOADED (prc = F012). Communications Manager must be started on the local workstation before any services can be utilized.

```
APPC communication failure:
transaction program = SASVQEL
opcode = 0100  prc = 0003  src = 08210002
```
An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 08210002, which means "Invalid Mode Name at CP: The specified mode name was not recognized by the CP." The mode name presented by the local workstation must be defined at the destination control point.

APPC communication failure:
  transaction program = SASVQEL
  opcode = 1A00  prc = F012  src = 00000000

A CONVERT request (opcode = 1A00) has failed for the reason COMMUNICATION_SUBSYSTEM_NOT_LOADED (prc = F012). Communications Manager must be started on the local workstation before any services can be utilized.

APPC communication failure:
  transaction program = SASVQEL
  opcode = 0100  prc = 0003  src = 00000000

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 08210002, which means "Invalid Mode Name at CP: The specified mode name was not recognized by the CP." The mode name presented by the local workstation must be defined at the destination control point.

APPC communication failure:
  transaction program = SASVQEL
  opcode = 0100  prc = 0001  src = 00000018

An ALLOCATE request (opcode = 0100) has failed with a PARAMETER_CHECK (prc = 0001) because of an UNKNOWN PARTNER LU condition (src = 00000018). The server-id that is specified by SERVER= is not defined to the local node or to the designated network node directory server as a partner LU alias.

APPC communication failure:
  transaction program = SASVQEL
  opcode = 0100  prc = 0003  src = 80040000

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 80040000, which means "Unrecognized Destination: A node in the path has no routing information for the destination that is specified by the SLU name in the BIND request". The server-id that is specified by SERVER= is defined to the local node as a partner LU alias but the partner LU cannot be located.

APPC communication failure:
  transaction program = SASVQEL
  opcode = 0100  prc = 0003  src = 081C0103

An ALLOCATE request (opcode = 0100) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 081C0103, which means "The requested function cannot be executed, because of a permanent error condition in the receiver. X'0103' indicates that the remote node is not responding to polling requests. The remote node may be powered off or the hardware may be functioning incorrectly."

APPC communication failure:
  transaction program = SASVQEL
  opcode = 0F00  prc = 0003  src = 084B6031
A SEND_DATA request (opcode = 0F00) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 084B6031, which means "Transaction Program Not Available - Retry Allowed: The FMH-5 ATTACH command specifies a transaction program that the receiver is unable to start". The (internal) transaction program SASVQEL (encapsulated in SASTP62), which is configured as QUEUED_OPERATOR_PRELOADED, is unavailable because a process has not issued a RECEIVE_ALLOCATE to signify the transaction program's availability to the Attach Manager component. That is, the specified server is not running.

APPC communication failure:
transaction program = SASVQEL
opcode = 0D00 prc = 0003 src = 080F6051

A RECEIVE_AND_POST request (opcode = 0D00) has failed with an ALLOCATION_ERROR (prc = 0003). The src in this case has been overridden by sense data 080F6051 indicating "The request specifies an Access Security Information field that is unacceptable to the receiver. The partner rejected the userid or the password received on an incoming ATTACH." That is, the server is running secured but the userid and password combination was missing or invalid (possibly because of case-sensitivity).

APPC communication failure:
transaction program = SASVQEL
opcode = 1A00 prc = 0001 src = 00000406

A CONVERT request (opcode=1A00) has failed with a PARAMETER_CHECK (prc = 0001) because of a conversion error (src = 00000406). This is probably attributable to an invalid character being present in a user-supplied string, such as APPC_USER or APPC_SECURE. Verify that the values that you have specified contain only uppercase letters A through Z, lowercase letters a through z, numerics 0 through 9, and special characters $, #, and @.

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**OS/2: EHLLAPI Access Method**

**SAS/CONNECT**

If you encounter difficulties in establishing a session, SAS/CONNECT provides the following messages to help you troubleshoot the problem.

ERROR: No available HLLAPI session.

The wrong value for the REMOTE= option has been specified. The value for REMOTE= should match the remote host session name.

NOTE: (11320k) badly formatted SAS remote screen
WARNING: - message received from Host
ERROR: user-requested abort encountered.
SASHOST ENDED DUE TO ERROR.

The NOTE and WARNING messages appear on the PC. The ERROR message appears on the remote host. These messages occur after the SIGNON statement if the 3174 controller does not set the file transfer aid byte correctly. Option 125 (file transfer aid) must have the digit 6 set to 1 to allow packets to be sent to complete the SIGNON. This
problem also occurs with other controllers. The option is typically identified on other controllers by a name similar to file transfer aid.

Bad 3270 status. Please reset keyboard.

A problem exists in either the software that you are using (other than SAS/CONNECT) or in VTAM. Add a WAITFOR statement that waits for at least 1 second before issuing the TYPE statement that caused the message to occur.

OS/2: NetBIOS and MNetBIOS Access Methods

SAS/CONNECT

Various errors may occur when you initially try to establish a connection over a network with the NetBIOS access method. Many of these problems are related to the network. SAS/CONNECT attempts to present an error message that indicates the cause of the error. The following list explains the most common problems in establishing NetBIOS communications.

ERROR: Network Request Failed rc=38.
Requested resource(s) not available.

There are not enough system resources available to satisfy either the VQMLINKS= or the VQMCONVS= request. This error can be caused by either of the following situations:

- The default value of either VQMLINKS= or VQMCONVS= requests more resources than are available. The default value for both options is 0, which implies 16 NetBIOS sessions and 16 commands with most implementations.
- You have specified a value for either VQMLINKS= or VQMCONVS=, and there are not enough resources to satisfy the request.

To correct this error, specify a new value for either VQMLINKS= or VQMCONVS= on either the local or the remote session, as appropriate.

ERROR: Network Request Failed rc=22.
Too many commands outstanding.

The number of simultaneous sessions that are requested is greater than the allocated commands allow, and the request has failed. You are using too many resources.

To correct this problem, either increase the number of sessions that are allowed or decrease the number of simultaneous sessions. To increase the number of sessions that are allowed, increase the value of the VQMCONVS= option on either the local or remote session, as appropriate. This assumes that sufficient system resources are available. In general, one session is required for each concurrent SAS/CONNECT session as well as for each remote libname.

ERROR: Network request failed (rc 0x14) - Cannot find name called.

The SAS/CONNECT spawner program cannot be found. Verify the following:

- you have the proper network selected
- you have specified the correct name for the spawner program
- the spawner program is started.
ERROR: Network request failed (rc 0xA7) - Unknown NETBIOS return code.

NetBIOS is not set up to run in the Windows environment.

ERROR: File not found loading
\sas\core\sasexe\sasvnnet.dll;
File contributing to error: ACSNETB
ERROR: File not found loading
\sas\core\sasexe\sasvnmne.dll;
File contributing to error: NETAPI

The NetBIOS or the MNetBIOS access method was loaded but the supporting vendor software was not found. You must specify the correct path location in the LIBPATH statement for one of the following:

- ACSNETB.DLL, for IBM NetBIOS 3.0 compatible interfaces
- NETAPI.DLL, for LAN Manager 1.0 NetBIOS Submit compatible interfaces.

ERROR: Network request failed (rc 0x05) - Command timed out.

During a NetBIOS SIGNON, SAS.EXE could not be executed from the directory that the spawner program is executing from. To resolve this problem, add the SAS Release 6.08 or later directory to the OS/2 PATH= statement in the OS/2 CONFIG.SYS file. Ensure that SAS.EXE is located in either the OS/2 PATH variable or in the spawner’s current directory.

SAS/SHARE

SAS/SHARE users and administrators can communicate with a server on the same system or on a different system by using the NetBIOS access methods.

If you have IBM Extended Services, specify COMAMID=NETBIOS to use the IBM NetBIOS 3.0 Interface access method.

If you have Novell NetWare Requestor for OS/2 2.0, specify COMAMID=MNETBIOS to use the NetBIOS Submit Interface access method.

The NetBIOS access methods that are used by SAS/SHARE sometimes issue generalized messages to identify problems. All of these messages are produced by the IBM NetBIOS 3.0 Interface and the NetBIOS Submit Interface access methods.

Network request failed (rc 0x30) - name defined by another environment.

Another server that has the same name is already running on the network, or another NetBIOS application is using the name. Choose another name.

Network request failed (rc 0x38) - requested resource(s) not available.

Insufficient resources are available. Either use the VQMLINKS and VQMCONVS variables to cause SAS to ask for less resources, or reconfigure NetBIOS so that there are more resources available to NetBIOS applications. Reconfiguring NetBIOS is system and vendor specific.

Network request failed (rc 0x14) - cannot find name called.

The server that is specified by the SERVER= option cannot be located on the network.
CAUTION:
Version 6 Only  Version 7 does not support the SPX Access Method. However, information about SPX is included here for Version 6 users.

SAS/CONNECT

Various errors may occur when you initially try to establish a connection over a network with the Sequenced Packet Exchange (SPX) access method. Many of these problems are related to the network. The following messages are a few of the more common errors you may encounter:

ERROR: Network partner xxxx not found.
The network name that you specified as the value for the REMOTE= option is invalid. The partner application is not running, is on a different network, or is using a different packet type. Ask your system administrator for valid names at your site.

ERROR: Communication request rejected by partner:
security verification failure
Permission to access the remote host was denied. Verify that you specified both a valid userid and password for the remote system.

ERROR: Supporting access method initialization failure.
There is a configuration problem. Contact your systems personnel.

ERROR: Target application partner could not be located.
The remote SAS session could not be started by the spawner program. There is a configuration problem.

ERROR: File not found loading \sas\core\sasexe\sasvnspx.dll;
File contributing to error: SPXCALLS
The SPX access method was loaded but the supporting SPX software was not found. Make sure that the directory that contains the SPXCALLS.DLL file is in the LIBPATH. (This message applies only to the OS/2 environment.)

ERROR: File not found loading \sas\core\sasexe\sasvnspx.dll; File contributing to error: IPXCALLS
The SPX access method was loaded but the supporting IPX software was not found. Make sure that the directory that contains the IPXCALLS.DLL file is in the LIBPATH.

Besides network errors, you should also be aware of operating system-dependent considerations, which are described in the next two sections. If you cannot resolve a problem based on the information provided in the error message and this document, contact SAS Technical Support for assistance.
OS/2 Considerations

For the SPX access method to work properly, it must be configured so that it does not violate the buffer size limitations of the Novell Requestor. The OS/2 requestor defaults to a buffer size of 1514 bytes, and the SPX access method also defaults to a buffer size of 1514 bytes. Because the size of the buffer is limited to 576 bytes when using a bridge, if using SPX over a bridge, you must explicitly define a 576 buffer size for SPX and the Novell Requestor.

- To inform SAS of the buffer size that you want, set the environment variable SPXMSGSIZE to a value of 576.
- To indicate the buffer size to the Novell Requestor, put a `buffers` statement under the link support attribute in the net.cfg file. For example:

```
link support
buffers 30 576
```

In this statement, 30 is the number of buffers and 576 is the size of the buffers. The product of these numbers cannot exceed 64K.

The maximum buffer size for Ethernet is 1514 bytes, and the maximum buffer size for Token Ring is 4202 bytes. If you are using a Token Ring network, you may want to change the `buffers` statement in your `net.cfg` to use 4202 byte buffers and set SPXMSGSIZE to 4202.

SAS/SHARE

SAS/SHARE users and administrators can use the Novell Sequenced Packet Exchange (SPX) access method to communicate with a server that is running on the OS/2, the Windows NT, or the Windows 95 platform on the same network. You must have at least version 2.10 of the Novell Netware Requestor for OS/2. Specify SPX as the value for the COMAMID=, the COMAUX1=, or the COMAUX2= system option.

The SPX access method used by SAS/SHARE sometimes issues generalized messages to identify problems. Some of the most frequently encountered messages are described in this section.

Supporting access method initialization failure

There is a configuration problem. The Netware Requestor is not installed, or it is not installed properly. Contact your system administrator.

Network name server-id already in use

The server that is specified by the SERVERID= option is already being used by another application on your network.

Network partner server-id not found

The server that is specified in the SERVERID= option was not found. The server was not started, or it is on a different network, or it is using a different packet type.
SAS/CONNECT

For TELNET, the WAITFOR statement in the script looks for all possibilities. If no condition is met, the number of seconds that are specified to wait should be less than the amount of time allowed by the connection itself before it drops because there is no activity. If the WAITFOR statement is not set properly, the following message will appear during an asynchronous SIGNON:

   ERROR: Read Error

For TELNET, if the SIGNON statement appears to hang during a SIGNON, change the EOPCHAR in the SIGNON script to LF. The default EOPCHAR is CR. CR is not recognized by some remote systems.

For TCP/IP, SAS/CONNECT may be unable to connect to the TCP/IP port. The following system message appears:

   connection refused

The connection may fail at SIGNON for the following reasons:
- The remote side is not listening.
- The packet sequence is out of order, which can indicate that the routers are not working properly.
- The maximum number of connections has been reached.
- There is a flow problem, which indicates that too many packets are being sent to the remote side at once.

SAS/SHARE

The TCP/IP access method used by SAS/SHARE sometimes issues generalized messages to identify problems. Some of the most frequently encountered messages are described in this section.

No TCP service ‘server-id’ on this host

The service that is specified in the SERVERID= option is not one of the SAS/SHARE TCP/IP service names that are defined in the TCP services file.

Cannot bind TCP socket. System message is ‘address already in use’

Another server that has the same name is already running on this node, or another TCP/IP application is using the predefined port numbers that the TCP/IP access method is trying to use. If another server that has the same name is running, choose one of the other predefined server names. If there is no other server running that has the same name, there may be a conflict with another software package. Please contact your SAS Site Representative.

Cannot connect to TCP socket. System message is ‘connection refused’

The server that is specified by the SERVER= option cannot be located on the specified node.
Cannot locate TCP host ‘node’

The node that is specified in a two-level name is not known to the TCP/IP software.