

DEFINE TELNETD

The DEFINE TELNETD command defines and initializes one or more Telnet Daemons (servers). Each Daemon provides one TN3270 or TN3270E session.

Syntax: `DEFine TELnetd ID=id ,TARget=name8 ,TERMname=luname [,COunt=num]
[,BASE=1] [,TN3270E={Listener|Effector}] [,PORT=23]
[,MENU=name16] [,LOGMode= S3270] [,LOGMODE3= D4B32783]
[,LOGMODE4= D4B32784] [,LOGMODE5= D4B32785]
[,IPaddr=0.0.0.0] [,BUFFersize=num]
[,CLOSE={Always|Seldom}] [,GENeric=name16] [,GRoup=name16]
[,POOL={Yes|No}] [,DRIVer=TELNETD]`

- Arguments:
- BASE=** - When used in conjunction with the COUNT= parameter, BASE= specifies the first two-digit suffix to assign. The default is 1. Allowable values are 0 through 99.
-
- BUFFersize=** - When POOL=NO is in effect, each Daemon allocates its own static buffers. When appropriate, you may use the BUFFERSIZE= parameter to control the size of each buffer. If not specified, then the value established by the SET TELNETD_BUFSSIZE= command is used. Valid values are 8,192 through 65,535.
- Reducing the default value may result in session failure or data loss. Increasing the default value should only in cases where very large and complex screens are incorrectly displayed.
-
- CLose=** - This parameter controls the method by which the Telnet Daemon will end its session with the application. The following values may be coded:
- Always - The Telnet Daemon will close and re-open its VTAM ACB each time a session is completed. This is the default.
- Seldom - The Telnet Daemon will close and re-open its VTAM ACB only if the previous session ended with an error.
-
- COunt=** - Specifying any value for COUNT= causes 1 to 100 Telnet Daemons to be defined, using the other DEFINE TELNETD parameters as a pattern. A two-digit suffix, 00 - 99, is added the ID= and TERMNAME= values. The starting value for this two-digit suffix is specified via the BASE= parameter. The default is to define a single Daemon without use of numeric suffixes.
-
- DRIVer=** - The name of the phase that will be loaded to provide Telnet Daemon support. The default to TELNETD. Specifying any other value may void your warranty.
-
- ID=** - This is a unique identifier assigned to the Telnet Daemon. This identifier can be used in later commands to single-out a specific Daemon. If COUNT= is also specified, then a two-digit suffix will be added to each ID= value.
-
- IPaddr=** - If specified, this Daemon will only connect with requests issued from a remote host whose IP address matches the supplied pattern. If a full IP-address is specified, the match must be exact. If the address specifies network and subnetwork (host portion of the address is zero), then a "generic" match is performed.
- Selection of an available Daemon can be either "first-fit" or "best-fit". This is controlled by the CONNECT_SEQUENCE command.
-

DEFINE TELNETD *(continued)*

LOGMode= - This is the VTAM logmode that will be used to negotiate VTAM sessions for a model 2 terminal. This logmode must be non-SNA. The default and recommended value is S3270.

LOGMODEn= - Where "n" is 3 through 5 to provide the ability to specify logmodes for 3270 models 3 through 5. The logmode must be non-SNA. The default and recommended values are: D4B32783, D4B32784, and D4B32785, respectively.

GENERIC= - A 1 to 16-character name. Not case sensitive.

This parameter has meaning only when accompanied by TYPE=LISTENER.

This parameter has effect when a TN3270E client requests a session, but does NOT specify an LUName preference. In this case, the first available Effector Daemon whose GROUP name matches the Listener Daemon's GENERIC name will be assigned. If GENERIC is NOT specified, then all Effector Daemons are eligible.

The default is a null value. If you do not want "generic" sessions, specify a value that does not match any GROUP name.

GRoup= - A 1 to 16-character name. Not case sensitive.

This parameter has meaning only when accompanied by TN3270E=LISTENER or TN3270E=EFFECTOR.

When specified for a Listener Daemon, the user's request for an LUName will be honored only if the required Effector Daemon has the same GROUP name.

The default for this value is null. If no value is specified on a Listener Daemon, there is no group restriction on which Effector Daemons can be used.

MENu= - 1- to 16-character name.

This refers to a menu previously defined by a DEFINE MENU command. If specified, the menu contents are displayed to the user upon initial connection with the Daemon.

If specified, this value overrides any specification by TARGET= (except that the TARGET= value is passed to the menu as the default application).

Following termination of a Telnet session, the connection with the remote client is always closed. The Daemon does NOT return to the menu until a new connection is requested.

POOL= - This parameter determines the location of the Daemon's data buffers.

Yes - This Telnet Daemon will share a pool of buffers with other Daemons specifying POOL=YES. Use of a buffer is required to pass data through the Daemon in either direction. The number of available buffers is controlled by the Set Telnetd_Buffers command. Buffer usage can be displayed with the Query Stats command.

No - This is the default. When NO is in effect, each Daemon acquires its own buffers (31-bit). Although this can result in considerable storage use, less CPU is required to process the data. The BUFFERSIZE= parameter can be used to control the size of individual buffers.

DEFINE TELNETD *(continued)*

- PORT= - This is the "well-known" port where remote clients will use to connect with a waiting Telnet Daemon. The default --and standard-- port is 23. Reasons for selecting other ports would be to create "pools" of Telnet Daemons.
-
- TARget= - This is the VTAM Application name of the application with which this Daemon will. If MENU= is also supplied, then TARGET= is ignored. Either TARGET= or MENU= is required for all TN3270 Daemons and TN3270E Effector Daemons.
-
- TERMname= - This is the VTAM Application name (ACB) that the Telnet Daemon will use to connect with VTAM. Put another way, this value will be the LUName of the Telnet session. If COUNT= is also specified, then a two-digit suffix will be appended to the TERMNAME= value. TERMNAME= is required for all TN3270 Daemons and TN3270E Effector Daemons.
-
- TN3270e= - TN3270E is a newer version of the TN3270 protocol that allows for more "advanced" support for 3270-type devices. One feature of TN3270E is client-specification of LUName.

To provide TN3270E support, you must define two types of Daemons: Listeners and Effectors. A Listener Daemon opens a "listen" connection and waits for a client to request a session. Once a client is connected, the Listener negotiates a TN3270E session (including LUName) and then passes the session to the appropriate Effector Daemon. The Effector Daemon owns the LUName and conducts the actual session. Once a session is negotiated, the Listener Daemon opens another "listen" connection and awaits further connection requests.

A frequent reason given for TN3270E is "security". The idea is to assign a specific LUName to a particular user. Unfortunately, this scheme relies heavily on the "honor system".

To provide some control over LUName assignment, you can assign an IP address (or subnet or network) to a Listener Daemon. Once an address (or pattern) is assigned, only those clients whose IP address matches that of the Listener can obtain a connection to that particular Listener.

Listener Daemons can be limited in their choice of Effector Daemons. If the Listener has a value specified for GROUP=, it can only pass sessions to Effectors with an identical GROUP= specification.

Another Listener Daemon parameter, GENERIC=, provides for situations where the client does NOT specify an LUName preference. In this case, a random Effector Daemon is selected from the GROUP identified by the Listener's GENERIC= parameter.

One of the following two values may be specified to cause definition of a TN3270E Daemon:

Listener - This Daemon will "listen" for a Telnet client to request a session and will then negotiate a TN3270E session. Following successful negotiation, the session will be passed to the appropriate Effector Daemon and the Listener Daemon will return to "listen" mode.

Effector - This Daemon will have no capability to initiate a Telnet session. It will accept a pre-negotiated session from a Listener Daemon and then continue the TN3270E session between the client and VTAM application, using its predefined LUName.

Example:

DEFINE TELNETD *(continued)*

```
IPN237I define telnetd,id=tln,target=dbdcics,termname=tcp, base=0, count=5
TEL900I Daemon Startup Telnet Termname: TCP00 Port: 23
TEL900I Daemon Startup Telnet Termname: TCP01 Port: 23
TEL900I Daemon Startup Telnet Termname: TCP02 Port: 23
TEL900I Daemon Startup Telnet Termname: TCP03 Port: 23
TEL900I Daemon Startup Telnet Termname: TCP04 Port: 23
```

- Notes:
- One Telnet Daemon is required for each concurrent Telnet terminal session requested by a remote user. Outbound Telnet sessions (such as those initiated from a CICS transaction to another platform) use Daemons provided at the remote end. Do not consider outbound sessions when determining the number of Daemons you need.
 - If Telnet Daemons refuse to start or connect, check your VTAM storage and buffer values and your VSE/ESA dataspace values. Remember that the JCL-specified DSPACE parameter sets a maximum value. The actual amount of DSPACE available for all requests is set at IPL time.
 - When setting up VTAM APPL IDs for telnet terminals, be sure to specify EAS=1. This reduces the amount of storage required to support each session.
 - The TN3270 protocols are EBCDIC-based. No ASCII translation is performed.

Controlling LUNames

When a TN3270 client opens a connection with one of our TN3270 Daemons, the connection is established and the Daemon assigned prior to any negotiations with the client. Since each Daemon has a preassigned LUName, each telnet session obtains its LUName in a random fashion. If you must control LUName assignment, you can use one of the following methods:

- You can define multiple pools of telnet daemons. Each pool monitors a different port number. The downside is that the end user must know and specify the appropriate port when connecting.
- You can specify an IP address when you define an individual telnet Daemon. Depending on the value set by CONNECT_SEQUENCE, you can precisely control the assignment of telnet Daemons based on the IP address of the requester.
- You should not mix TN3270 and TN3270E Daemons using the same port number. You can use both Daemon types if you assign different port numbers.

Related Commands:	CONNECT_SEQUENCE	- Control how connection requests are allocated by IP address pattern-checking.
	DEFINE MENU	- Load a menu file and make it available for use by Telnet Daemons.
	DELETE TELNETD	- Terminate a TN3270 or TN3270E Daemon
	DIAGNOSE	- Control diagnostic display options.
	FLUSH	- Terminate all processing with a specific remote host.
	QUERY ACTIVE	- Displays the status of active Daemons.
	QUERY STATISTICS	- Displays a summary of stack-related information.
	QUERY TELNETDS	- Displays TN3270 and TN3270E Daemons.
	SET PULSE_TIME	- Controls the default setting for the interval between probes of inactive connections.
	SET TELNETD_BUFFERS	- Determines the size of the pool of buffers shared by TN3270 Daemons.
SET TELNETD_BUFSIZE	- Determines the size of individual TN3270 buffers.	