

Introduction

Before using the *TCP/IP for VSE Command Reference*, you should familiarize yourself with the conventions and syntax being used. At the start of each section, the command will be listed, along with a brief summary of its function.

Following this description will be a syntax diagram, as follows.

```
Syntax: COMMAND REQuired=value
        , {KEY1|KEY2|KEY3}
        [ ,OPTParm={Yes|No|number} ]
        [ ,VALue=87 ]
        [ ,BIGVal=4K ]
        [ ,TIME=30s ]
```

Arguments: COMMAND - Although the “command” will not normally be included in the “Arguments” section, it is included here to demonstrate the use of upper- and lower-case letters. The portion of the command shown in upper case must always be used. The remainder of the command (lower-case) may be included, in part or in whole, as desired, for clarity. Whatever is included will be syntax checked and must be accurate. This same convention applies to arguments and keyword values as well.

REQuired= - Required parameters will be shown outside of brackets. Use of upper/lower-case characters is as explained above. Generic placeholders for values are italicized. An explanation of what a value may consist of will be found here.

KEY - When a keyword may be specified, it will be shown without an equal sign. In the example, you must choose one of the values shown in braces. Since the list is not enclosed in brackets, the parameter is required. If it were optional, it might appear as:

[KEY1 | KEY2 | KEY3]

With “KEY2” being the default value.

OPTParm= - An optional parameter will be shown within brackets. In the example, your choice of value is limited to the choices shown. Keywords are shown non-italicized, with the capital letters indicating the minimum abbreviation. Values shown in italics indicate a generic place-holder, in this case a numeric value. The default value is underscored.

VALue= - When an optional value may be specified, the default value will be shown as non-italicized text.

BIGVal= - Frequently, large numeric values need to be specified. These can be entered as normal numeric, or with a “multiplier suffix”. Same examples of how suffixes can be used are:

4K = 4,096

4k = 4,000

1M = 1,048,576

4M = 4,194,304

4m = 4,000,000

Introduction *(continued)*

TIME= - Values that provide a time interval occur frequently. Often, these are specified in 300ths of a second. This unit of measure is, apparently, what sets a VSE programmer apart from the rest of the computing world.

Because it is cumbersome to code hours, minutes, or seconds in 300ths, you can use a suffix of “s”, “m”, or “h” to cause the appropriate conversion. Note that capital letters are the same as lower-case for time values.

2s = 600/300ths

2m = 36,000/300ths

1h = 1,080,000/300ths

Example:

```
IPN237I comm req=sysa,key3,optp=2K
IPI000I Your wish is my command
```

- Notes:
- If multiple values may be supplied for a keyword, they are generally separated by commas and enclosed in parentheses:
UNIT=040
UNIT=(040,041)
 - If a range of values is supplied, it is generally done by enclosing the values in parentheses and separating them with a hyphen:
UNIT=(040-044)
 - “Names” used by the *TCP/IP for VSE* stack are generally 16 characters long. The first character is alphabetic, with the remainder being alphabetic or numeric.
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Argument Placeholders

Each argument in a command has specific format requirements. Some formats are used repeatedly throughout the product. To eliminate redundant explanations of formats, “standard” types will be represented by reserved names in the syntax diagrams. These types follow.

- name16* - This represents an internal TCP/IP name. They are not case sensitive and will be stored in upper-case. Each *name16* consists of from 1 to 16 alphabetic characters (A-Z), digits (0-9), or special characters (._\$@#&¢). The first character must be alphabetic (A-Z).
- name8* - A 1- to 8-character name, case insensitive. It consists of alphabetic characters (A-Z), digits (0-9), or special characters (._\$@#). The first character must be alphabetic (A-Z)
- id* - This is a special use of a *name16* field. When called for, the value must be unique within the TCP/IP stack. It is used to identify Daemons, table entries, and other items that must be identified individually.
- pubname* - Public names are not case sensitive. Each *pubname* consists of from 1 to 6 segments of from 1 to 8 characters each. The segments are separated by periods (.), forward slashes (/), or backward slashes (\). Each segment must begin with a letter (A-Z). The remainder of the characters can be letters, digits, or the special characters: _-\$@#
- member* - This represents a member in a VSE library. It is not case sensitive and runs from 1 to 8 characters in length. Unless otherwise specified, library members are located via the partition’s search chain and not the TCP/IP file system.
- ext* - The *ext* parameter indicates a VSE library member name’s extension. It is case insensitive and can be from 1 to 16 characters in length.
- port* - A TCP/IP port number. The UDP and TCP protocols use port numbers to establish communications with specific remote clients and servers. Port numbers range between 1 and 65,635. When “0” is specified, the stack will automatically substitute an appropriate, unused port number

When specifying a port number as a parameter, do not use commas. Depending on the application, commas may have a special meaning. For example, in the FTP “PORT” command, the port number is specified as two decimal numbers (0-255), separated by a comma. To obtain the actual port number, these two fields are converted to one hexadecimal byte each, concatenated into a two-byte field, and then converted back to a single decimal number. This is what happens when design is left to non-programmers.

- ip4addr* - IPv4 addresses consist of four decimal numbers separated by periods. Each numeric field ranges between 0 and 255. You may include leading zeros in each field, if desired.
 - ip6addr* - IPv6 addresses consist of a series of two-byte hexadecimal numbers, separated by colons (:). Leading zeros may be added or removed, as desired. The last two terms (four bytes) may be coded in IPv4 format.
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Introduction *(continued)*

- ipaddr* - Can be either an IPv4 or IPv6 address.
 - host* - A *host* name can be either a name that conforms to DNS standards or an IP address.
 - num* - A numeric value.
 - sec* - Time, in seconds.
 - sec300* - Time, in 300th seconds.
 - msec* - Time, in milliseconds.
 - min* - Time, in minutes.
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