

Using Symbols

This subsection covers the following topics:

- Symbol Tables
 - Symbol Replacement
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Symbol Tables

Symbol tables are user-defined and contain a list of variables and their current values to be used in normal JCL and Dynamic JCL Generation. The name of the required symbol table must be specified when defining an Entire Operations job of the MAC type, and, if it contains the escape character denoting a variable, also when defining a JOB-type job.

You can maintain symbol tables manually within Entire Operations. Alternatively, they can be modified by programs or user routines by a predefined Natural subroutine (API) delivered with Entire Operations. This allows modification of symbol tables during job network processing.

For an explanation of how to use symbol tables, see the immediately following subsection Symbol Replacement and the subsection Dynamic JCL Generation. Further information can also be found in the section Symbols.

Symbols can also be used within included text modules. For more information, please see the subsection Inserting Text Modules into the JCL of the section Dynamic JCL Generation.

Symbol Replacement

- Active Symbol Table
- Symbol Escape Characters

Entire Operations enables the text substitution of symbols (variables), regardless of which physical JCL location you use. Symbols are usually replaced during the activation of a job network or job, that is, during the loading of the active JCL to the active data base.

Symbols to be replaced are detected by a preceding **escape character** anywhere in the JCL. The symbol name is limited by a text delimiter, like a blank, a comma (,), a semicolon (;), a period (.), etc. A single period (.) after a symbol is removed during replacement. But two consecutive periods (..) are converted to one period (.). This is important for the dynamic creation of file names. Recursive symbol replacement (symbols within symbols) is also possible.

Entire Operations first searches for a symbol in the active user-specific table. After this, it searches in the master user-defined table, in the network default table, and finally in the system-wide table. If it searches for the symbol in a sub-network, the symbol tables of the calling job of type NET as well as the symbol tables of the superior job networks are searched (in ascending order), if necessary. If the symbol cannot be found anywhere, the job is set to error status.

In certain cases, symbol replacement can even be used in file names, messages texts, etc.

Active Symbol Table

During activation, an active copy of a symbol table is created by copying it to the active data base. This is then called the **active symbol table**. Symbols to be replaced are taken from the active symbol table. This enables different values of the same symbols to be generated for different runs of the network or job.

For a scheduled network activation you can select, in the network definition, the time to activate the symbol table. This can be either:

- directly after the schedule extraction; this allows enough time for manual symbol replacement;
- or during the network activation. In this case, however, manual symbol replacement is **not** possible.

Symbol Escape Characters

There are two kinds of escape characters:

- **activation escape character**

Enables symbol replacement at activation time. This is the usual escape character.

- **submission escape character**

To enable symbol replacement just before job submission, a second escape character, called the **submission escape**, is supported. This enables the replacement of symbols which can be changed by predecessors during network execution, for example, a volume serial number.

Both activation escape and submission escape characters can be defined as system-wide defaults in the Entire Operations default settings. However, different escape characters can be used for each job, if necessary.

Note:

If you change escape character definitions for existing JCL, symbols to be replaced can no longer be detected. You should never define escape characters already used by other (operating system) JCL features (for example: parameters for DO-Procedures and SUBDTA characters in BS2000/OSD). Do not use the dollar sign \$ in BS2000/OSD or UNIX, because it has a special meaning in these operating systems.

Recommended escape characters:

Operating System	Escape Characters
OS/390, etc.	§ and \$
VSE/ESA	§ and #
BS2000/OSD	^ and ' (accent grave)
UNIX, Windows	no recommendation