Natural CICS Interface and IBM Language Environment (LE)

The Natural CICS interface supports LE programs. This document contains information on LE enablement of Natural under CICS.

It covers the following topics:

- CICS Transaction Server for z/OS Version 3.1 or above
- CICS Transaction Server Versions prior to CICS/TS 3.1

CICS Transaction Server for z/OS Version 3.1 or above

Under CICS Transaction Server for z/OS Version 3.1 or above, the Natural CICS interface is LE compliant by itself, that is, a Natural CICS interface task can directly `CALL` (standard linkage conventions, not CICS LINK) LE programs written in languages such as C, COBOL or PL/I, when

- `SET CONTROL 'P=LS'` has been specified,
- `SET CONTROL 'P=S'` has been specified,
- `NCIPARM` parameter `SLCALL=YES` has been specified and the program to be called is *not* a CICS program.

To make the Natural CICS interface LE compliant in CICS/TS 3.1, set the CICS translator option LEASM when installing the Natural CICS interface starter module `NCISTART` and the Natural CICS interface RPC server front-end module `NCISFED` (see *Installing the Natural CICS Interface*); this CICS translator option must not be set for any other Natural CICS interface component or user exit.

CICS Transaction Server Versions prior to CICS/TS 3.1

In CICS Transaction Server versions prior to CICS/TS 3.1 in both z/OS and z/VSE, the Natural CICS interface is not LE compliant (due to missing support for LE enabled assembler in these CICS versions), however, it provides the same LE functionality for the Natural CICS interface when it is invoked by a LE compliant 3GL front-end program (sample programs `XNCIFRCN` (COBOL) , `XNCIFRPN` (PL/I) or `XNCIFRDN` (C)), see also Natural CICS Sample Programs.

Alternatively, LE compliance of the Natural CICS interface nucleus can be achieved by linking one of the three delivered LE compliant front-end stubs `NCILEFC` (COBOL), `NCILEFP` (PL/1) or `NCILEFD` (C) to the Natural CICS interface nucleus; in this case the 3GL front-end stub has to be `INCLUDE`d *before* the `NCISTART` module.

In order to notify the Natural CICS interface about the underlying LE enclave, the LE compliant 3GL front-end program first must call the NCI LE stub program `NCILESTB` by passing the CICS TWA address (see the samples mentioned above); this program checks if it is running LE-enabled, that is, if an LE enclave does exist, and sets up appropriate information for the Natural CICS interface in the CICS TWA. For the Natural CICS Interface to run LE compilant, a front-end caller therefore must not pass front-end parameters in the CICS TWA.

In addition for LE compliance of the Natural CICS interface nucleus, the CICS-supplied `EXEC` interface stub `DFHELII` has to be used for installation (see *Installing the Natural CICS Interface*), rather than the `DFHEAI` stub module.