

Introducing the Natural Web I/O Interface Server CICS Adapter

This chapter describes the purpose and the functions of the Natural Web I/O Interface Server CICS Adapter.

The following topics are covered:

- Purpose of the Natural Web I/O Interface Server CICS Adapter
 - CICS Support
 - Product Interaction
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Purpose of the Natural Web I/O Interface Server CICS Adapter

The Natural Web I/O Interface Server CICS Adapter is designed for a mainframe Natural context where it enables the use of a Natural Web I/O Interface server, running under z/OS in batch mode or under SMARTS on z/VSE within a CICS TP monitor environment.

CICS Support

The CICS support is not implemented within the front-end stub NATRNWO. For dispatching the Natural sessions in CICS, the Web I/O Interface server continues to run in batch mode or under SMARTS. But it uses the remote front-end NATCSRFE that is delivered with the Natural Web I/O Interface server to dispatch the Natural sessions in CICS. That is, depending on the installed front-end, a server dispatches the sessions locally (NCFNUC for SMARTS, NATMVS for batch mode) or remotely (NATCSRFE for CICS).

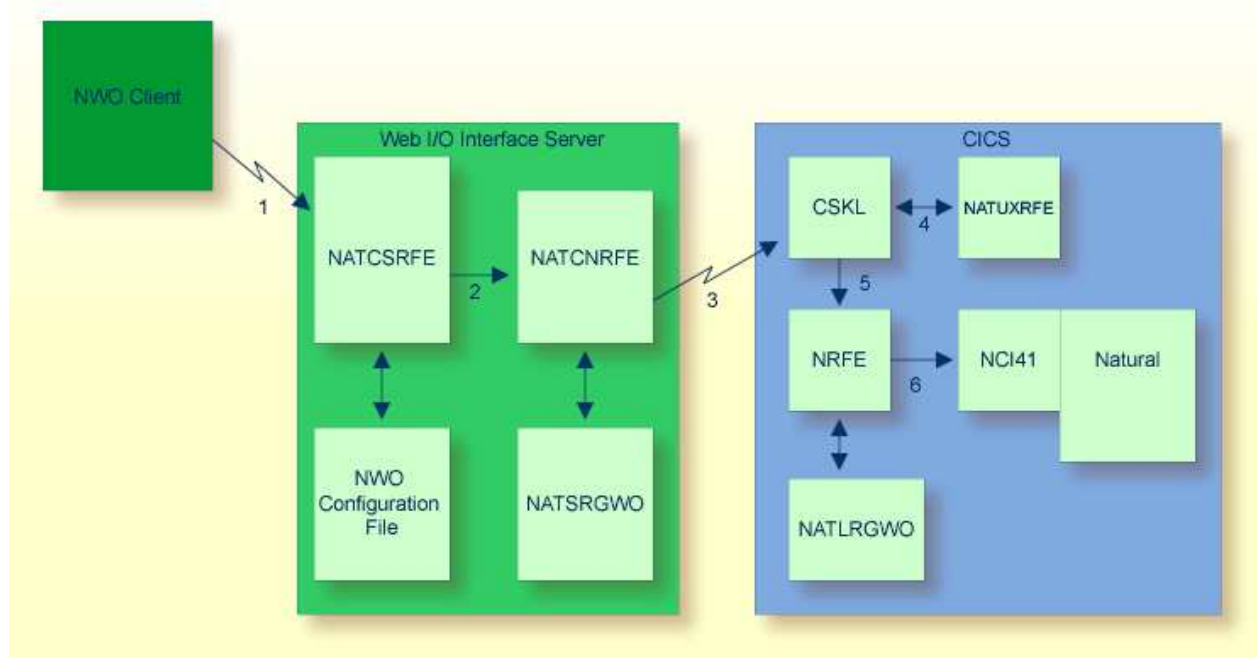
NATCSRFE in turn accepts the Natural request from NATRNWO and transfers it to a configured CICS environment using the CICS Socket Interface. Within the CICS environment, a CICS Natural transaction is launched that processes the Natural request and returns the result. Thus it is not necessary to execute the entire Web I/O Interface server under CICS. Only if Natural is requested to run the Natural application, control is transferred to CICS for execution.

The Natural Web I/O Interface Server CICS Adapter comprises the following components:

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| NATCSRFE | The remote front-end called by the Natural Web I/O Interface server to dispatch a Natural request. It is loaded into the Web I/O Interface server's address space. |
| NATCNRFE | The counterpart of NATCSRFE. NATCNRFE runs in the CICS address space. It is started by the IBM-provided standard listener of the CICS Socket Interface (refer also to <i>TCP/IP V3R1 for MVS: CICS TCP/IP Socket Interface Guide</i> and <i>TCP/IP for z/VSE V1R5 IBM Program Setup and Supplementary Information</i>). |
| NATSRGWO/NATLRGWO | Transmits the data relevant for Natural Web I/O Interface server between Natural Web I/O Interface server and the Natural session running in CICS. NATSRGWO must be loaded into the Natural Web I/O Interface server's address space and NATLRGWO into the CICS address space. |
| NATUXRFE | This user exit obtains the client credentials from the Natural Web I/O Interface server and authenticates then with a CICS VERIFY PASSWORD request. If the request succeeds, the CICS listener launches the NWO transaction under the client account (impersonation). |

Product Interaction

The following figure illustrates the interaction between the Natural Web I/O Interface server and the CICS environment involved.



1. The Web I/O Interface (NWO) client sends a request to the Natural Web I/O Interface server using the port number specified with the Natural Web I/O Interface server configuration variable PORT_NUMBER.

2. The Natural Web I/O Interface server dispatches the Natural session using the Natural front-end you have specified with the Natural Web I/O Interface server configuration variable `FRONTEND_NAME`. Specify `NATCSRFE` in order to use the Natural Web I/O Interface Server CICS Adapter.
3. `NATCSRFE` transmits the request to the host/port specified with the Natural Web I/O Interface server configuration variable `RFE_CICS_TA_HOST / RFE_CICS_TA_PORT`. You must configure the CICS-supplied standard listener `CSKL (z/OS)` or `EZAL (z/VSE)` to listen at this port.
4. If the Natural Web I/O Interface server is configured to perform remote impersonation (`SECURITY_MODE=IMPERSONATE / IMPERSONATE_REMOTE`), `NATUXRFE` is called to authenticate the client. If the authentication succeeds, `CSKL` launches the CICS transaction `NRFE` under the account of the client (impersonated).
5. `CSKL` launches the CICS transaction you have specified with the Natural Web I/O Interface server configuration parameter `RFE_CICS_TA_NAME` (`NRFE` in this example). This transaction must be defined to use the program `NATCNRFE`.
6. `NATCNRFE` finally dispatches the Natural session using the Natural CICS front-end you have specified with the Natural Web I/O Interface server configuration parameter `RFE_CICS_FE_NAME`.