

# Configuring the Natural Web I/O Interface Server CICS Adapter

This chapter describes how to configure the CICS connection for a Natural Web I/O Interface server (product code NWO) running on z/OS or under SMARTS on z/VSE.

The following topics are covered:

- Configuration File
  - Configuration Parameters
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## Configuration File

After the installation of the Natural Web I/O Interface Server CICS Adapter is complete, the configuration of the Natural Web I/O Interface Server CICS Adapter has to be done in the configuration file of the corresponding Natural Web I/O Interface server.

To enable the CICS Adapter, specify the remote front-end module in the NWO configuration parameter `FRONTEND_NAME` (`FRONTEND_NAME=NATCSRFE`).

## Configuration Parameters

The following CICS-relevant configuration parameters exist:

- `RFE_CICS_TA_NAME`
- `RFE_CICS_FE_NAME`
- `RFE_CICS_TA_HOST`
- `RFE_CICS_TA_PORT`
- `RFE_CICS_TA_INIT_TOUT`
- `RFE_CICS_KEEP_TA`
- `RFE_CICS_TRACE`

### **RFE\_CICS\_TA\_NAME**

This configuration parameter specifies the CICS transaction to be used for starting the remote front-end in CICS. This transaction must be defined in CICS and must refer to the program `NATCNRFE`. See also *Installing the Natural Web I/O Interface Server CICS Adapter under z/OS* or *Installing the Natural Web I/O Interface Server CICS Adapter under SMARTS on z/VSE*.

<b>Default Value</b>	none
<b>Example</b>	RFE_CICS_TA_NAME=NRFE

## RFE\_CICS\_FE\_NAME

This configuration parameter specifies the Natural CICS nucleus you have installed with the applicable Natural for Mainframes installation under CICS. This program must be defined in CICS.

<b>Default Value</b>	none
<b>Example</b>	RFE_CICS_FE_NAME=NCIvrNUC

where *vr* stands for the relevant version and release numbers.

See also the Natural *Installation for Mainframes* documentation, *Installing the Natural CICS Interface, Customize CICS*.

## RFE\_CICS\_TA\_HOST

This configuration parameter specifies the TCP/IP address of the host the desired CICS is running. This parameter can be omitted if the Web I/O Interface server and CICS are running on the same TCP/IP node.

<b>Default Value</b>	The host address of the server.
<b>Example</b>	RFE_CICS_TA_HOST=node1 or RFE_CICS_TA_HOST=157.189.160.55

## RFE\_CICS\_TA\_PORT

This configuration parameter specifies the TCP/IP port of the CICS supplied listener.

You can acquire this port number using the CICS supplied transaction EZAC. The CICS command EZAC DISPLAY LISTENER shows the definitions of the CICS standard listener.

### Note:

This port number is not used in the Web I/O Interface client to connect to a Web I/O Interface server. This port number (and the RFE\_CICS\_TA\_HOST definition) is used internally by the Web I/O Interface server to communicate with the CICS region.

<b>Possible Values</b>	1 - 65535
<b>Default Value</b>	none
<b>Example</b>	RFE_CICS_TA_PORT=3010

## RFE\_CICS\_TA\_INIT\_TOUT

If the Web I/O Interface client sends a request to a Natural Web I/O Interface server that is configured to use the CICS remote front-end, the remote front-end launches a CICS transaction (NRFE) for processing the request. The CICS transaction in turn listens to the TCP/IP to receive the data from the Web I/O Interface server required for processing the request.

This configuration parameter specifies the timeout value (in seconds) a launched transaction waits until the expected request data arrive from the server. If this timeout expires, the request aborts with a NAT9940 error.

<b>Default Value</b>	5
<b>Example</b>	RFE_CICS_TA_INIT_TOUT=20

### Note:

Do not define a value below 5.

## RFE\_CICS\_KEEP\_TA

For each request sent by Natural, the Natural Web I/O Interface server opens a TCP/IP connection to the CICS region and launches a CICS transaction (NRFE) for processing the request. With RFE\_CICS\_KEEP\_TA=YES, the CICS transaction remains active for processing further requests of the same client. This saves the overhead for creating the TCP/IP connection and transaction initialization for successive requests, but consumes more resources within the CICS region due to waiting transactions.

The transaction wait time (for successive requests) is limited by RFE\_CICS\_TA\_INIT\_TOUT. That is, if the time slice between two successive requests exceeds the time specified by RFE\_CICS\_TA\_INIT\_TOUT, the CICS transaction and the TCP/IP connection is terminated independent of the RFE\_CICS\_KEEP\_TA definition.

RFE\_CICS\_TA\_INIT\_TOUT=5 is a reasonable value to reuse transactions for multiple requests initiated by a single action in Natural Studio and to save CICS resources if Natural Studio waits for the next action of the user.

<b>Default Value</b>	NO
<b>Example</b>	RFE_CICS_KEEP_TA=YES

## RFE\_CICS\_TRACE

This configuration parameter specifies the trace level for the remote front-end.

The trace level is similar to the trace implemented for the Web I/O Interface server. It is a bit string where each bit is responsible for a certain trace information:

Bit 31	Trace main events (transaction initialization/termination, request processing).
Bit 30	Detailed functions.
Bit 29	Dump internal storage areas.
Bit 27	Dump buffer header exchanged between Web I/O Interface server and CICS.
Bit 26	Dump entire buffer exchanged between Web I/O Interface server and CICS.
Bit 25	Dump the Natural Web I/O Interface server relevant buffer only (remote gateway buffer).
Bit 23	Trace error situations only.
Bit 07	Activate trace in the Web I/O Interface server region.
Bit 06	Activate trace in the CICS region.
Bit 00	Reserved for trace-level extension.

The trace destination is the data set defined for STDOUT.

<b>Default Value</b>	0
<b>Example</b>	RFE_CICS_TRACE=0x02000011 Dump main events and buffer header in the CICS region (Bits 31 + 27 + 07).

The following is a sample server configuration file using the Natural Web I/O Interface Server CICS Adapter:

```
# the Web I/O Interface Server parameter
SESSION_PARAMETER=PROFILE=(NWO,10,930)
FRONTEND_NAME=NATCSRFE           # use the CICS Adapter front-end
PORT_NUMBER=4711                 # the port number used by the Web I/O Interface Client

# the CICS Adapter parameter
RFE_CICS_TA_NAME=NRFE           # the CICS transaction for remote front-end
RFE_CICS_TA_PORT=3010           # the port of the CICS listener
                                # no RFE_CICS_TA_HOST is defined. This requires
                                # that CICS runs on the same node as the
                                # server.
RFE_CICS_FE_NAME=NCIvrNUC       # the name of the installed Natural CICS nucleus
RFE_CICS_TA_INIT_TOUT=20        # transaction timeout is 20 seconds
```

where *vr* stands for the relevant version and release numbers.

**Note:**

The server parameters `THREAD_NUMBER` and `THREAD_SIZE` are obsolete when the Natural Web I/O Interface Server CICS Adapter is used.