

# Configuring the Natural SQL Gateway Server

This document describes how to configure a Natural SQL Gateway server.

The following topics are covered:

- Configuration Requirements
- Natural SQL Gateway Server Configuration File
- Natural SQL Gateway Server Configuration Parameters
- Natural SQL Gateway Server Configuration File Example
- Natural SQL Gateway Server Datasets

## Configuration Requirements

A Natural SQL Gateway server requires the following z/OS language environment parameter configuration:

Parameter	Definition
POSIX(ON)	<p>Enables a Natural SQL Gateway server to access the POSIX functionality of z/OS. If you start a Natural SQL Gateway server server with POSIX(OFF), it terminates immediately with a user abend U4093 and the system message EDC5167.</p> <p>IBM supplies the default value OFF.</p>
TERMTHDACT(UADUMP)	<p>Defines the level of information that is produced in case of an abend. The option UADUMP generates a Language Environment CEEDUMP and system dump of the user address space. The CEEDUMP does not contain the Natural relevant storage areas.</p> <p>IBM supplies the default value TRACE.</p>
ENVAR(TZ=...)	<p>The ENVAR option enables you to set UNIX environment variables. The only environment variable applicable for the Natural SQL Gateway server is TZ (time zone). This variable allows you to adjust the timestamp within the Natural SQL Gateway server's trace file to your local time.</p> <p>Example:</p> <pre>ENVAR(TZ=CET-1DST) CET</pre> <p>- 1 hour daylight saving time</p>

To set the z/OS language environment parameters, you have the following options:

- Use the `PARM` parameter specified in the `EXEC` card of the Natural SQL Gateway server startup job. The length of the options is limited by the maximum length of the `PARM` parameter.
- Assemble an LE/370 runtime option module `CEEUOPT` and link it to the Natural SQL Gateway server load module.
- As of z/OS Version 1.8, you can define the `DD` card for `CEEOPTS` to specify your LE options in a dataset.

## Natural SQL Gateway Server Configuration File

A configuration file is allocated to the name `<serverid>C` (for example, `NSBS1C`) or `STGCONFIG` alternatively.

The configuration file contains the server configuration parameters in the form of a `keyword=value` syntax. In addition, it may contain comments whose beginning is marked with a hash symbol (`#`).

See also the *Natural SQL Gateway Server Configuration File Example* shown below.

## Natural SQL Gateway Server Configuration Parameters

The following Natural SQL Gateway server configuration parameters are available:

- `FRONTEND_NAME`
- `HANDLE_ABEND`
- `HOST_NAME`
- `HTPMON_ADMIN_PSW`
- `HTPMON_PORT`
- `PORT_NUMBER`
- `TRACE_FILTER`
- `TRACE_LEVEL`

### FRONTEND\_NAME

This configuration parameter specifies the name of the CXX server front-end to be used to communicate with the JDBC server. The front-end resides on the CXX load library.

Value	Explanation
<i>frontend-name</i>	Name of the CXX front-end to be used. Maximum length: 8 characters. The default value is <code>CXXNSERV</code> .

Example:

```
FRONTEND_NAME=CXXNSERV
```

## HANDLE\_ABEND

It is recommended that you leave this parameter on its default value in order to limit the impact of an abend to a single user. If you set the value of this parameter to NO, any abend in the server processing terminates the complete server processing. That is, it affects all users running on that server.

Value	Explanation
YES	Trap abends in the server processing, write a snap dump and abort the affected user.  This is the default value.
NO	Suspend the server abend handling.

Example:

```
HANDLE_ABEND=NO
```

or

```
HANDLE_ABEND=NO
```

## HOST\_NAME

This optional configuration parameter is necessary only if the server host supports multiple TCP/IP stacks.

Value	Explanation
<i>host-name</i>	If HOST_NAME is specified, the server listens on the particular stack specified by HOST_NAME, otherwise the server listens on all stacks.  No default value is provided.

Example:

```
HOST_NAME=node1
```

or

```
HOST_NAME=157.189.160.55
```

## HTPMON\_ADMIN\_PSW

This configuration parameter defines the password required for some monitor activities (for example, Terminate Server) performed by the HTML Monitor Client.

Value	Explanation
<i>character-string</i>	The password (any character string) to be entered at the HTML Monitor Client for some monitor activities.  No default value is provided.

Example:

```
HTPMON_ADMIN_PSW=GHAU129B
```

## HTPMON\_PORT

A Natural SQL Gateway server can be configured to host an HTTP monitor task which serves the HTML Monitor Client running in a web browser. It is not required to run this monitor task on each server. A single task allows you to monitor all servers running at one node.

This configuration parameter defines the TCP/IP port number under which the server monitor task can be connected from a web browser.

Value	Explanation
1 - 65535	The password to be entered at the HTML Monitor Client for some monitor activities.  No default value is provided.

Example:

```
HTPMON_PORT=3141
```

## PORT\_NUMBER

This configuration parameter defines the TCP/IP port number under which the server can be connected.

Value	Explanation
1 - 65535	TCP/IP port number.  No default value is provided.

Example:

```
PORT_NUMBER=3140
```

## TRACE\_FILTER

This optional configuration parameter enables you to restrict the trace by a logical filter in order to reduce the volume of the server trace output, for example:

```
TRACE_FILTER="Client=(XYZ P*)"
```

Each request of the user ID XYZ and each request of the user IDs starting with a P are traced.

See *Trace Filter* in the section *Operating the Natural Gateway Server*.

## TRACE\_LEVEL

Value	Explanation
<i>trace-level</i>	See <i>Trace Level</i> in the section <i>Operating the Natural Gateway Server</i> .
0	This is the default value.

Example:

```
TRACE_LEVEL=0x00000011
```

or alternatively

```
TRACE_LEVEL=31+27
```

The setting in the example switches on the TSW bits 31 and 27; see *Trace Level* in the section *Operating the Natural Gateway Server*.

## Natural SQL Gateway Server Configuration File Example

For z/OS:

```
# This is a comment
FRONTEND_NAME=CXXNSERV      # and another comment
PORT_NUMBER=4811
TRACE_LEVEL=31+27
```

## Natural SQL Gateway Server Datasets

The Natural SQL Gateway server requires the following datasets:

Dataset Name	Purpose
STGCONFIG	Defines the server configuration file.
STGTRACE	The server trace output.
STGSTDO	The <i>stdo</i> dataset.
STGSTDE	The <i>stde</i> error output.

Alternatively, you can qualify each dataset name by the server ID.

<b>Dataset Name</b>	<b>Purpose</b>
NSBS1C	Defines the server configuration file for the server NSBS1.
NSBS1T	The server trace output for the server NSBS1.
NSBS1O	The stdo dataset for the server NSBS1.
NSBS1E	The stde error output for the server NSBS1.