

NaturalX Trouble Shooting FAQs

This document contains a number of frequently asked questions (FAQs) referring to NaturalX. Where applicable, reference is made to relevant problem descriptions/solutions that are maintained in Software AG's Support Information System SAGSIS.

- How can I check whether an object runs locally or remotely?
- How can I check if my Natural TSO session is connected to COM?
- My Natural TSO session is not connected to COM
- I get "1 mapping of failed, errno=132" at Natural initialization
- I get "1 Error: NTD is not running "
- "NAT0711 The object could not be created - DCOM code 80080005" occurs at CREATE OBJECT immediately.
- "NAT0711 The object could not be created - DCOM code 80080005" occurs at CREATE OBJECT after a few seconds.
- "The server .ste file contains the error "Cannot load COM API NATCOM" or "Cannot load NATURAL Front End "
- "NAT0711 The object could not be created - DCOM code 8000FFFF" occurs at CREATE OBJECT.
- "NAT0711 The object could not be created - DCOM code 80041004" occurs at CREATE OBJECT.
- DCOM code 80041002 Rollout of the Natural session failed. Probably roll file overflow.
- "NAT0711 occurs at CREATE OBJECT. A successive CREATE OBJECT of the same class works.
- NAT0736 at CREATE OBJECT even if the class is registered and a server is launched.
- I have modified my shell environment, e.g. modified the NATX_TRACE variable, but the server is launched with the old value.
- Is it possible to modify the NaturalX environment depending on the SERVID or the launching user?
- DCOM launches a new server process for each client. How can I share one server process for all clients?
- I modified a class method but the server still executes the old method code.
- Is it possible to view the CMPRINT output of a NaturalX server?
- Special characters are not transferred correctly to ASCII platforms.
- Which Natural Security definitions are required if my server runs under control of NSC ?

How can I check whether an object runs locally or remotely ?

Return the system variable *INIT-ID from a method or property. For remote objects, *INIT-ID contains a unique session identifier. With *INIT-ID, it is also possible to check whether two objects are running in different Natural sessions (ExternalSingle) or in the same session (ExternalMultiple).

How can I check if my Natural TSO session is connected to COM ?

At session initialization, you should get the message:

```
NaturalX COMLIB initializing
  NaturalX API version nnnn
  COMLIB API version nnnn
```

Or invoke DCOMPARM utility, enter any Server ID and press ENTER. You get the message Com not available if you are not connected to COM.

Or check for initialization error NAT0750 NATGWCOM, initialization of COM failed, reason nn.

My Natural TSO session is not connected to COM

- Check whether the NXX load library is concatenated to your load libraries. Usually you get a NAT0920 Program NATCOMST cannot be loaded if this is not the case.
- Specify RCA=(NATCOMST) either in natparm or as dynamic session parameter.
- Your NATTSO must be assembled with LE370=POSIX
- Check allocation of DD name NATXENV. Does this file exist with the appropriate permissions for read access ? The TSO clist CONTROL statement must contain the keyword ASIS if the path name of the NATXENV file contains lower case.
- Check the content of the file allocated to NATXENV. It must define at least the environment variables EXXDIR, EXXVERS, PATH, LIBPATH, DCOLIB, NATDIR and NATVERS.
It is not possible to refer to the content of variables, e.g.
EXXDIR=/sag/exx
EXXVERS=v521
PATH=\$EXXDIR/\$EXXVERS/bin
is not possible, you have to specify
PATH=/sag/exx/v521/bin
- You must have execute permissions for the files in the EXX lib directory.

I get "1 mapping of failed, errno=132" at Natural initialization

Increase your region size at TSO logon.

I get "1 Error: NTD is not running "

- The EntireX DCOM environment is not active.
- The environment variable COOL_RPC_ENDPOINT, COOL_NTD_TVTUNER or COOL_TMP_DIR is not set properly in the NATXENV file. If these variables are not set in NATXENV file, the default defined by dcomconfig file in \$EXXDIR/\$EXXVERS/etc. is used.
- No access permissions to the COOL_TMP_DIR directory.

NAT0711 The object could not be created - DCOM code 80080005" occurs at CREATE OBJECT immediately.

EntireX DCOM cannot start the server. This can have various reasons:

- If no "launching user" is defined for the server ID, DCOM launches the server under the client user ID. Determine the launching user ID according the RunAs definition in "dcomcnfg".
- Please check "ntpasswd" entry for the launching user if you use local DCOM security.
- Check password definition for the RunAs setting.
- Check execute permissions for "naturalx" in Natural bin directory for the launching user.
- Check write permissions in Natural trace/server directory for the launching user.
- "ntdstarter" on EXX bin directory must be "Program Controlled" (shell command *extattr*) and must be owned by user *root* .
- The user who started the DCOM environment must be defined in the RACF resource "BPX.DEAMON".

NAT0711 The object could not be created - DCOM code 80080005" occurs at CREATE OBJECT after a few seconds.

EntireX DCOM launched the server, but the server did not initialize correctly. This can have various reasons. Examine the server trace output.

The server .ste file contains the error "Cannot load COM API NATCOM" or "Cannot load NATURAL Front End "

Check the definition of environment variable STEPLIB. It should refer to the load data set containing the NaturalX modules NATCOMST/NATCOM and the load data set containing your batch front specified by NATX_NUCNAME.

Both data sets must be defined in the OS/390 sanction list.

NAT0711 The object could not be created - DCOM code 8000FFFF" occurs at CREATE OBJECT.

A Natural error occurred at the server site during create object. Examine the server trace output for the primary Natural error code.

NAT0711 The object could not be created - DCOM code 80041004" occurs at CREATE OBJECT.

Error during Natural session initialization at the server site. Examine the server trace output for the primary Natural error code. If the trace output contains a "NAT9987 NATURAL SESSION TERMINATED ABNORMALLY", examine the server CMPRINT output for additional error information. One reason for this situation could be an database response code at session initialization. Specify ETID=' ' for the NaturalX server.

DCOM code 80041002 Rollout of the Natural session failed. Probably roll file overflow.

The standard roll server dispatch algorithm does not allow you to use multiple roll files for NaturalX sessions.

NAT0711 occurs at CREATE OBJECT. A successive CREATE OBJECT of the same class works.

This may happen if many classes are registered for the desired server and your CREATE OBJECT causes DCOM to initialize the server. Increase the NATX_INITTOUT value.

NAT0736 at CREATE OBJECT even if the class is registered and a server is launched.

The class is registered but the launched server can not load the class object. Examine the trace file. At server initialization, NaturalX traces all available classnames. Probably the Natural class object is deleted or the server runs with an invalid FUSER.

I have modified my shell environment, e.g. modified the NATX_TRACE variable, but the server is launched with the old value.

A server launched by DCOM will inherit the environment from the DCOM process, and to change the DCOM environment it is required to restart DCOM with the appropriate environment modifications.

A bypass to avoid the DCOM restart is to start the server manually from a shell session which contains the appropriate environment modifications.

A more comfortable way is to "insert" a shellscrip between DCOM and NaturalX which is explained in the following topic.

Is it possible to modify the NaturalX environment depending on the SERVID or the launching user ?

Yes, just rename the naturalx binary (on NAT bin directory) to e.g. natural_x. Replace the naturalx by an executable shell script with the desired functionality.

You may examine the \$* parameters for parameter DCOM=(SERVID=...) to get the server ID. And with "test \$(whoami) = ..." you may find out the user ID of the launching user. At the end of the script, just call "natural_x \$*"

DCOM launches a new server process for each client. How can I share one server process for all clients?

The EntireX DCOM default is to start a server exclusively for each client. To share a NaturalX server with multiple clients, you are required to assign a "launching user" to the SERVID. This can be done with the EntireX "dcomcnfg" utility.

For example, `dcomcnfg {the_servid_guid} RunAs=SAG` causes the server to be launched under the userid SAG, independent of the client userid. And all clients requesting this serverid are connected to this single process.

`the_servid_guid` can be retrieved with the "dcomcnfg" utility as well. Just enter dcomcnfg without parameters and you get a list of all registered SERVIDs and their `the_servid_guid`.

I modified a class method but the server still executes the old method code.

Does the server use the same Natural Buffer Pool and the same FUSER?

How can I pass DD definitions (e.g. SYSUDUMP) to a NaturalX server ?

With Natural for Mainframes Version 3.1.2, this is only possible if you prestart the server manually in batch. With Version 3.1.3, DD names can be specified with the environment variable NATX_DYNALLOC.

Is it possible to view the CMPRINT output of a NaturalX server?

Yes, using the environment variable NATX_FEPRM, the CMPRINT output can be assigned to any JES output class. The output is routed to the JES output queue under the launching userid suffixed by a numeric value.

Special characters are not transferred correctly to ASCII platforms.

The following session parameters are required for the NaturalX server:

PM=C

TAB1=(4F, 5A, 7C, B5, 75, C0, 80, D0, 41, AD, 42, BD, BA, E0, 48, 7C, 78, 4F)

TAB1=(4A, 63, E0, EC, 5A, FC, C0, 43, 6A, CC, D0, DC, 7D, 7F)

TAB2=(5A, 4F, B5, 7C, C0, 75, D0, 80, AD, 41, BD, 42, E0, BA, 7C, 48, 4F, 78)

TAB2=(63, 4A, EC, E0, FC, 5A, 43, C0, CC, 6A, DC, D0, 7F, 7D)

See SAGSIS P188229.

Which Natural Security definitions are required if my server runs under control of NSC ?

In general the same as if you had use the classes locally. Each client user ID must be defined in Natural Security (NSC) and must have access to the library where the class resides.

Additionally, the user ID of the "launching user" defined in the DCOM RunAs value must be defined in NSC. NaturalX Version 3.1.3 requires the *Transition Period Logon = Y*.