

# NAF - Verification Procedures under CICS

This chapter covers the following topics:

- System Testing
  - NATSPOOL Reason Codes
  - NATSPOOL Initialization Console Messages
  - NATSPOOL Print Server Messages
  - NATSPOOL Abend Codes
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## System Testing

Several tests may be conducted following the installation of Natural Advanced Facilities, to determine whether the system functions correctly.

The programs NTEST and SPPTTEST are contained in the SYSPPOOL application. These programs contain WRITE (1) statements. Run the program NTEST or SPPTTEST. In the appropriate logical printer, the `Disposition` should be set to K for testing.

Instead of using NTEST or SPPTTEST, you can also create test reports with Function 42.

If the report cannot be printed, take the following steps:

1. Check that the CICS printer status is `IN SERVICE`.
2. Use the CICS message switching transaction CMSG to route a message to the specified printer:

```
CMSG 'message',ROUTE=termid,SEND
```

where `termid` is the terminal identification of the CICS printer as specified in the TCT.

3. If Natural Security is installed, check whether logon error records (of the NATSPOOL spool server NATP) have been written to the Natural Security system file. The maintenance system for these error records can be invoked by entering `ERROR` in the Command line of Natural Security.
4. Check that the standard Natural LOGON module has been modified. Since the NATSPOOL spool server NATP executes module `SVPCIC01` in library `SYSPRINT`, the LOGON module must *not* be modified by the user.

Also check whether the LOGON user exit causes the LOGON of the spool server to `SYSPRINT` to terminate.

5. Check that the catalog dates of the modules in `SYSPRINT` and `SYSPPOOL` are identical to one another.
6. Check that the parameters for the spool server match the Natural Advanced Facilities environment. To do so, invoke `MENU` in library `SYSPPOOL` and check the CICS options defined with Function 30.5.

7. Check that neither external security (EXTSEC operand of CICS PCT) nor security levels (TRANSEC operand of CICS PCT) are defined for the spool server NATP. This ensures that NATP can be initiated without security violations.
8. Check the TCT and VTAM definitions (see Step 9, Step 13 and Step 14 in the section *Installing NAF under CICS*).
9. Allocate a screen device instead of a printer device to the Destination/Form pairing of the first logical printer, run NTEST in library SYSPPOOL, and check for error messages on the screen.

On certain devices the CICS abend ATNI may occur.

Since the Natural Security logon processing checks whether the device is a printer, this test is only possible if Natural Security is *not* installed.

10. Start transaction CEDF for your terminal device and check whether the command EXEC CICS START (to start the spool server) is executed.
11. Start transaction CEDF for your printer device (CEDF terminal ID of printer) and check which commands are executed.
12. Check the Natural Advanced Facilities messages on the system operator console and/or in the log file (the destination of messages is defined with Function 30.5).

Console messages sent by the spool server start with:

```
'NAF SP-SERV:'
```

Console messages sent by the terminal task start with:

```
'NAF-'
```

13. Obtain a NATSPPOOL trace and check which Natural Advanced Facilities modules are called, which Adabas commands are executed, and which return codes are encountered.

## NATSPPOOL Trace using SYSRDC Utility

To obtain an online NATSPPOOL trace by using the SYSRDC utility, perform the following steps:

- Start a Natural session with the following dynamic parameters:
 

```
RDCSIZE=100, TRACE=(CMAM08), ITRACE=ON
```
- Log on to library SYSRDC.
- Execute the following command to select internal trace type: RDCSET N
- Execute the following command to start the trace: RDCSTART
- Execute a program which creates a report, for example, NTEST in library SYSPPOOL.
- Log on to library SYSRDC.

- Execute the following command to display the trace entries: RDCDISP

You will now see when a NATSPPOOL nucleus module begins (marked as BEG) and ends (marked as END) as well as its return code in decimal representation.

After the execution of an Adabas call (marked as ADA), you will see the command code, the first byte of the command ID and the return code in decimal representation.

## NATSPPOOL Reason Codes

Errors that may occur during the check of printer availability:

Error	Description
INV REQU	Invalid request
INV ID	Invalid ID
INV ADDR	Invalid address
INV DEVC	Invalid logical device code for page status
ATI REQU	ATI required on NON-ATI terminal
RESO PRO	Resource problem for interpartition session
INV PROG	Invalid program name
UNAB PER	Unable to perform request
INV TYPE	Type is not LUC
RESO QUI	Resource quiesced by TMP
LOCATERR	Any error different from those listed above

Errors that may occur during the start of the spool server:

Error	Description
TERMIDER	Terminal ID error
TRANIDER	Transaction ID error
SYSIDERR	SYSID error
INVREQ	Invalid request
IOERR	I/O error
LENGERR	Length error
ISCINVRE	ISC invalid request
NOTAUTH	Not authorized
STARTERR	Any error different from those listed above

## NATSPPOOL Initialization Console Messages

Messages that may occur during the initialization of NATSPPOOL:

Message	Description
NAF-01C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT OPEN
NAF-02C	Not used
NAF-03C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT READ REPORT
NAF-04C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT READ PRINTER
NAF-05C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT CLOSE
NAF-06C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT UPDATE REPORT
NAF-07C	ADABAS RCxxx, DBIDxxx, FNRxxx, AT UPDATE PRINTER
NAF-08I	REPORT xxxxxxxxxxxx, JOBxx.xxx, SET -TO BE PRINTED-
NAF-09I	PRINTER xxxx SET -FREE-
NAF-10I	PRINTER xxxx RESTARTS IN 20 SECONDS, DEST=xxxxxxxxx, FORM=x
NAF-11C	RESTART ERROR NAT xxxx ON PRINTER xxxx

## NATSPPOOL Print Server Messages

See the online help for descriptions of the NATSPPOOL print server messages. To invoke online, proceed as follows:

- On the NATSPPOOL menu, press PF1.
- Enter function code 99 (miscellaneous information).
- Enter function code 4 (NAF SP-SERV messages from spool server).

## NATSPPOOL Abend Codes

### NAF1 - INVALID LENGTH

Reason:	Action:
The length of the data to be printed is not positive.	Obtain the dump and contact Software AG Support.

**NAF2 - INVALID LENGTH**

<b>Reason:</b>	<b>Action:</b>
The length of the data to be printed is greater than the maximum length of the terminal I/O buffer (TIOBM).	Obtain the dump and contact Software AG Support.

**NAF3 - INVALID RETURN CODE**

<b>Reason:</b>	<b>Action:</b>
The return code of the task-end routine CMTSKND is not zero.	Obtain the dump and contact Software AG Support.

**NAF4 - INVALID RETURN CODE**

<b>Reason:</b>	<b>Action:</b>
The return code of the print routine CMWTERM is not zero.	Obtain the dump and contact Software AG Support.