

# Termination

This section provides information about termination in an Adabas cluster environment.

This chapter covers the following topics:

- Normal Termination
  - Abnormal Termination
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## Normal Termination

### Entire Net-Work

Entire Net-Work may be stopped while ADACOM and/or cluster nuclei are active.

If the local Entire Net-Work stops while remote nuclei are still active, the remote nuclei are effectively no longer active. That is, users in the local operating system image will receive response code 148 for commands that are to be routed to any of the remote nuclei.

When Entire Net-Work is restarted, the environment is reset by the ADACOM module on operating system images that have users but no cluster nuclei. If on such an image

- the ADACOM module remained operational after initialization, it automatically resets the environment
- the ADACOM was quiesced after initialization, you must rerun it to reset the environment.

In lieu of ADACOM, the environment is reset on operating system images that have one or more active nuclei when the first user issues a command.

### ADACOM

If ADACOM is used only to initialize a sysplex cluster environment, it can subsequently be stopped ("quiesced") for batch operation or retained in operation as a command manager. ADACOM can be restarted at any time.

On operating system images that have users but no cluster nuclei, Software AG recommends that you keep ADACOM in operation as well so that it is available to reset the environment if Entire Net-Work goes down for any reason and comes back up.

### Adabas Cluster Nuclei

If the Adabas operator command ADAEND or HALT is issued, the nucleus will stop with no pending autorestart. The other active nuclei in the cluster continue processing normally.

```
ADAN51 00006 2001-02-13 23:05:54 OPERATOR TYPE-IN: ADAEND
ADAN42 00006 2001-02-13 23:05:54 FUNCTION ACCEPTED
```

The operating system issues the following lock structure statistics:

```
IXL030I CONNECTOR STATISTICS FOR LOCK STRUCTURE ADA_LOCK11,
CONNECTOR DB00006P00132N02:
    00010019
    00000000 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
    00000001 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
    00000002 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
IXL031I CONNECTOR CLEANUP FOR LOCK STRUCTURE ADA_LOCK11,
CONNECTOR DB00006P00132N02, HAS COMPLETED.
INFO: 00010019 00000000 00000000 00000000 00000000 00000000
```

Adabas Cluster Services follows the operating system messages with

```
ADAX28 00161 IXCLEAVE XCFTT    RET 00000000 RSN 00000000
ADAM97 00132 THIS ASCB/INITIATOR WILL BE TERMINATED BY MVS AT EOJ
```

## Abnormal Termination

### Entire Net-Work

The description for Entire Net-Work normal termination in section *Normal Termination* also applies to an Entire Net-Work abnormal termination. Adabas Cluster Services makes no distinction.

### ADACOM

If ADACOM terminates abnormally, a *PLInnn* error message is produced to explain the problem.

### Adabas Cluster Nuclei

When an Adabas sysplex cluster nucleus terminates abnormally, each surviving peer nucleus performs "online recovery". See the section *Restart/Recovery Processing* for more information.

The online recovery process synchronizes with a normal shut-down process that is already in progress for a failed peer nucleus. If the normal shut-down process has just begun, it is interrupted and canceled and the online recovery process replaces it. If the normal shut-down process is well underway, it proceeds and finishes; the online recovery process is not issued for the failed nucleus. The online recovery process

- synchronizes online recovery with a newly starting nucleus;
- waits three seconds for open transactions to complete before interrupting all open transactions;
- waits 0.3 seconds for active commands to complete before interrupting all active user commands;
- interrupts all activity going on in the nucleus;
- cleans up;

- disconnects from the lock and cache structures;
- performs session autorestart or waits for another nucleus to do it;
- reconnects to the lock and cache structures;
- prints messages when an online save, ADAEND, or HALT process is canceled; and
- resumes normal processing.