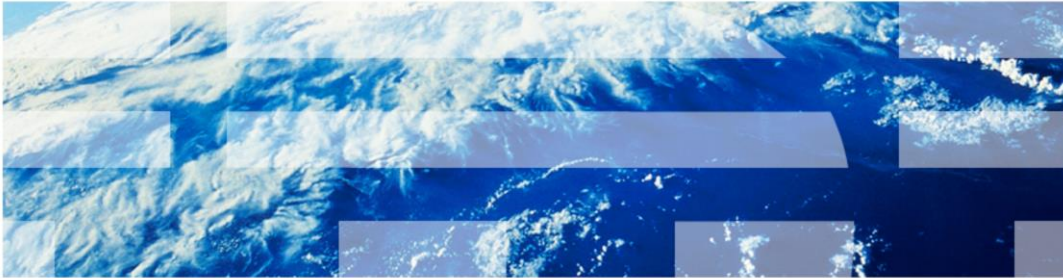


IBM Tivoli NetView for z/OS V5.4

Systems Network Architecture (SNA) Topology Manager debugging



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This lesson is an overview of Systems Network Architecture (SNA) Topology Manager debugging in Tivoli® NetView® for z/OS®.

Objectives

When you complete this module, you can perform basic Systems Network Architecture (SNA) Topology Manager debugging

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SNA Topology Manager basic information

- Systems Network Architecture (SNA) Topology Manager resides in the NetView address space identifier (ASID)
- The initialization file is FLBSYSD
- FLBOSIDS maps OSI status values to DisplayStatus values
- Check for any customization changes in either FLBSYSD or FLBOSIDS

SNA Topology Manager resides in the NetView address space identifier (ASID). The initialization file is FLBSYSD. FLBOSIDS maps OSI status values to *DisplayStatus* values. Check for any customization changes in either FLBSYSD or FLBOSIDS.

SNA Topology Manager documentation

The Systems Network Architecture (SNA) Topology Manager information that you most likely need is in these locations:

- The NetView log, or netlog
- The SNA Topology Manager (FLBTOPO) abend dump
- The z/OS system log

The SNA Topology Manager information that you most likely need for debugging is in the NetView log (or netlog), the SNA Topology Manager (FLBTOPO) abend dump, and the z/OS system log. The SNA Topology Manager major and minor codes are written to the netlog.

SNA Topology Manager probes

- The FLBTOPO task writes probes to the netlog for analysis
- Importance of the first probes
- Systems Network Architecture (SNA) Topology Manager examination

The FLBTOPO task writes probes to the netlog for analysis. The first few probes are almost always the most important. The IBM Support staff examines the SNA Topology Manager probes in detail to examine the relevant source code.

SNA Topology Manager probe example

From the netlog:

```
FLB600E PROBEID 0B520244 MAJOR CODE 78 MINOR CODE 31 LOG DATA SIZE: 10
```

```
FLB604I PROBEID 0B520244 DATA 0000: 00000007000CEF900000
```

The slide shows an example of a SNA Topology Manager probe that VTAM® CMIP services wrote to the NetView log. In-depth analysis by IBM Support determined that a high VSAM record queue caused the problem indicated by the SNA Topology Manager symptoms. They discovered this information with the command **IPCS VERBEXIT CNMIPCS 'NLDM'**.

The user solved the problem by filtering some of the sessions to prevent the record queue backup. There are hundreds of such SNA Topology Manager probes possible; but not all of them are documented in the Troubleshooting Guide.

SNA Topology Manager abends

- If Systems Network Architecture (SNA) Topology Manager abends, perform these steps:
 - Check the netlog for FLB600E-604E PROBEID messages that precede the abend
 - Paste the probe, complete with hex data, in a PMR opened with IBM Support, or send in the netlog
- If the major and minor codes of the FLB600E messages indicate that the problem is from a Resource Object Data Manager (RODM) error, examine the RODM log
- Submit JCL EKGRLOG, which invokes sample EKGLG000, to print the RODM log

If SNA Topology Manager abends, check the netlog for FLB600E-604E PROBEID messages that precede the abend. Paste the probe, complete with hex data, into a PMR opened with IBM Support, or send the netlog log.

If the major and minor codes from the FLB600E messages indicate that the problem is from a RODM error, such as 22-47, 78-47, 78-76 or 78-78, examine the RODM log for corresponding RODM errors.

Submit JCL EKGRLOG, which invokes sample EKGLG000, to print the RODM log.

SNA Topology Manager storage problems

- To examine the storage usage for the topology manager, run these commands:
 - TOPOSNA LISTSTOR
 - TOPOSNA LISTRODM
- Include the output from these commands with other information associated with this log entry when you report the problem to IBM Software Support
- The storage estimates for the topology manager are described in the [IBM Tivoli NetView for z/OS SNA Topology Manager Implementation Guide](#)
<http://publibfi.dhe.ibm.com/cgi-bin/bookmgr/DOCNUM/SC31-8868/CCONTENTS?>

Use the TOPOSNA LISTSTOR and TOPOSNA LISTRODM commands to examine storage usage for the topology manager. Include the output of these commands with any other information associated with this log entry when reporting the problem to IBM Software Support.

The storage estimates for the topology manager are described in the *IBM Tivoli NetView for z/OS SNA Topology Manager Implementation Guide*.

(1 of 2) SNA Topology Manager abends

- x'185' occurs when Systems Network Architecture (SNA) Topology Manager detects a severe problem with Resource Object Data Manager (RODM)
- x'186' occurs when SNA Topology Manager detects a storage overlay
- x'187' occurs when SNA Topology Manager detects an internal error

The following list describes typical SNA Topology Manager abend codes.

Abend hex 185' occurs when SNA Topology Manager detects a severe problem with RODM.

Abend hex 186' occurs when SNA Topology Manager detects a storage overlay.

Abend hex 187' occurs when SNA Topology Manager detects an internal error.

(2 of 2) SNA Topology Manager abends

- You can initiate a user abend (X'185') to dump the FLBTOPO autotask for diagnostic purposes
- Whether this user abend is taken depends on the setting of the ABEND_AND_DUMP parameter in the FLBSYSD initialization file
- The default setting in the FLBSYSD initialization file is YES

For enhanced serviceability of the SNA topology manager, you can initiate a user abend (X'185') to dump the FLBTOPO autotask for diagnostic purposes. Whether this user abend is taken depends on the setting of the ABEND_AND_DUMP parameter in the FLBSYSD initialization file. The default setting is YES.

More debugging documentation

For more assistance, see **Part 5. "Diagnosing SNA Topology Manager Problems"** of the **NetView Troubleshooting Guide**

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Summary

Now that you completed this module, you can perform basic Systems Network Architecture (SNA) Topology Manager debugging

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