

# vDicos Troubleshooting Guideline

vDicos

## TROUBLESHOOTING GUIDE

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# 1 Introduction

This document describes how to perform the troubleshooting procedure in the vDicos component.

## 1.1 Prerequisites

This section describes the prerequisites for this document.

It is assumed that users of this document are familiar with performing operations within Operation and Maintenance (O&M) in general.

Only Northbound Interface (NBI) access is required to execute the described troubleshooting processes.

### 1.1.1 Documents

Before starting this procedure, ensure that the NBI usage in COM Management, Reference [5] has been read.

This document refers frequently to LEM Troubleshooting Guideline, Reference [7], which must be read to perform troubleshooting steps.

### 1.1.2 Tools

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].

### 1.1.3 Conditions

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].

Certain troubleshooting activities can have an impact on node performance. For example, trace or log activation can affect traffic throughput and is not recommended without first consulting Ericsson.

## 1.2 Related Information

Definition and explanation of acronyms and terminology, trademark information, and typographic conventions can be found in the following documents:

— Glossary of Terms and Acronyms, Reference [1]



- Trademark Information, Reference [2]
- Typographic Conventions, Reference [3]



## 2 Tools

This section describes the tools that can be used to troubleshoot vDicos.

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].







## 3 Troubleshooting Functions

This section describes the troubleshooting functions.

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].

### 3.1 Alarms

This section describes the alarms.

#### 3.1.1 Alarms of Other Components

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].

#### 3.1.2 vDicos Alarms

The following is a list of the vDicos alarms:

- LPM, Load Regulation Limit Passed. For more information, see LPM, Load Regulation Limit Passed.

### 3.2 Notifications

vDicos notifications are not provided by NBI.

### 3.3 Logging

All vDicos-related logs and crash dumps can be collected by Core Dump and Console Log Collection Service (CDCLSV). For general log information, see LEM Error Dump and Log User Guide, Reference [6].

#### 3.3.1 Application-Specific Logs

The location of vDicos-related log files is described in section “Logging” of LEM Error Dump and Log User Guide, Reference [6].



## 3.4 Diameter

For more information about troubleshooting issues related to the Diameter stack, see C-Diameter Troubleshooting Guideline, Reference [4].

## 3.5 Tracing

vDicos-related trace log files are located in the same place as vDicos-related log files, see Section 3.3.1 on page 5.

## 3.6 Error Dumps and Core Dumps

The location of vDicos-related crash dump files is described in section “Crash Dumps” of LEM Error Dump and Log User Guide, Reference [6].

For more details, see same section in LEM Troubleshooting Guideline, Reference [7].

## 3.7 Counters

Checking performance counters of vDicos is another way to get useful information when troubleshooting a problem.

The performance counter files are generated in 3GPP-compliant XML format and can be transferred outside the system for post-processing.

For more information about file format, see section “Performance Management” in COM Management Guide, Reference [5].

vDicos reports several measurements. These measurements are grouped by the following classes:

<b>VdBT</b>	Blocking Type (BT) level LPM measurement types.
<b>VdKCT</b>	Kernel Call Type (KCT) level LPM measurement types.
<b>VdLF</b>	Licensed Feature (LF) level LPM measurement types.
<b>VdRPCT</b>	Remote Procedure Call Type (RPCT) level LPM measurement types.
<b>VdTunnel</b>	Transparent Inter-Process Communication Protocol (TIPC) tunnel level LPM measurement types.
<b>VdVM</b>	vDicos Virtual Machine (VM) level LPM measurement types.
<b>VdJT</b>	Job Type (JT) level LPM measurement types.



**VdPT** Process Type (PT) level LPM measurement types.

For more information about vDicos measurements, see LPM Managed Object Model PM, Reference [9].

## 3.8 Software Level Checks

Check the software level of vDicos. This information is important for the next level of support.

Example COM CLI command to view package versions:

```
show ManagedElement=1, SystemFunctions=1, SwInventory=1
```

The following packages are contained by vDicos:

- ERIC-Lpm\*
- ERIC-Vd\*
- ERIC-vD\*
- ERIC-vd\*
- ERIC-jim\*

**Note:** Send all package information to the next level of support, not only the vDicos-related information.

## 3.9 Changing Log Level

Changing log level is not supported on NBI for Runtime log streams. By default, vDicos uses Runtime log streams but this can be overridden at build time on application level. This way, vDicos or application log streams can be turned into Configuration streams. Depending on such application decision, selected Configuration log streams can be managed and their log level can be adjusted through the NBI. Those streams are available at the following Distinguished Name (DN):

```
ManagedElement=1, SystemFunctions=1, LogM=1, Log=<stream_name>
```

## 3.10 Restart

Restart is not supported on NBI.



## 3.11 Tracing Core MW Libraries

In some cases, vDicos Helper or VM processes can crash because of Core Middleware (Core MW) libraries. To make it easier to troubleshoot such cases, enable the Core MW traces:

```
vdicos-envdata-create PM_LIB_TRACE_DIR /var/log/opensaf
```

```
vdicos-envdata-create RM_LIB_TRACE_DIR /var/log/opensaf
```



## 4 Troubleshooting Procedure

Troubleshooting procedure of vDicos focuses on information collection. Collected information is processed by next level of maintenance support.

Troubleshooting procedure is same as for LEM, see section “Troubleshooting Procedure” in LEM Troubleshooting Guideline, Reference [7].





## 5 Problem-Solving Procedure

vDicos-related problem-solving procedures are described in the documents listed in Section 3.1.2 on page 5.







## 6 Trouble Reporting

Problems identified that cannot be solved by using this document must be reported to the next level of maintenance support through a Customer Service Report (CSR).

The details of the trouble reporting process is outside the scope of this document.

When collecting information for further support, ensure that all related PM measurements are recorded. See time and date for the report files.

For more information on how to collect information, see LEM Error Dump and Log User Guide, Reference [6].





## Reference List

- [1] Glossary of Terms and Acronyms
- [2] Trademark Information
- [3] Typographic Conventions
- [4] C-Diameter Troubleshooting Guideline, 1/154 51-APR 901 0580/3
- [5] COM Management Guide, 1/1553-CAA 901 2587/5
- [6] LEM Error Dump and Log User Guide, 1/1553-CXP 903 0882
- [7] LEM Troubleshooting Guideline, 1/154 51-CXP 902 5257
- [8] DBS, Memory Limit Reached, 1/1543-CXP 902 5264
- [9] LPM Managed Object Model PM, 190 89-LZN7080731/0