

License Management, Autonomous Mode Activated

OPERATING INSTRUCTIONS

Copyright

© Ericsson AB 2015–2017. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Introduction	1
1.1	Alarm Description	1
1.2	Prerequisites	2
2	Procedure	3



License Management, Autonomous Mode Activated



1 Introduction

This instruction concerns alarm handling.

1.1 Alarm Description

The alarm is raised when an installed license cannot be reached.

In a deployment with multiple license key files, the alarm is raised in response to a single missing or corrupted license key file.

The possible alarm causes and fault locations are explained in Table 1.

Table 1 Alarm Causes

Alarm Cause	Description	Fault Reason	Fault Location	Impact
Failing to reach an installed license	The configured license servers do not respond to the Managed Element (ME) attempt to refresh its license inventory. License information remains unreachable. The ME enters Autonomous mode.	A missing or corrupted license key file	License servers	This fault leads to no service impact during the first 24 hours. If the fault duration exceeds 24 hours, the licensed services are affected (no availability or limited capacity) and alarm <i>License Management, Key File Fault</i> is raised.
			Possible IP network issue	
			Domain Name System (DNS) server	
			Network interface	

Note: The alarm can be raised as a result of maintenance activities.

The alarm attributes are listed and explained in Table 2.

Table 2 Alarm Attributes

Attribute Name	Attribute Value
Major Type	193
Minor Type	393218
Managed Object Class	<i>Lm</i>
Managed Object Instance	ManagedElement=<node_name>, SystemFunctions=1, Lm=1
Specific Problem	License Management, Autonomous Mode Activated



Table 2 Alarm Attributes

Attribute Name	Attribute Value
Event Type	qualityOfServiceAlarm (3)
Probable Cause	x733CommunicationsSubsystemFailure (306)
Additional Text	Autonomous Mode has been activated
Perceived Severity	minor (5)

1.2 Prerequisites

This section provides information on the documents, tools, and conditions that apply to the procedure.

1.2.1 Documents

This instruction references the following documents:

- *Activate Emergency Unlock Mode*
- *Data Collection Guideline*
- *Install License Key File*
- *License Management*
- *License Management, Key File Fault*

1.2.2 Tools

No tools are required.

1.2.3 Conditions

Before starting this procedure, ensure that the following conditions are met:

- A License Management, Autonomous Mode Activated alarm is raised.
- No ongoing maintenance activities are affecting the network or network elements.
- The user has proper authority to handle configuration management of the network elements.
- Linux® shell access to the System Controllers (SCs).
- Access to an Ericsson Command-Line Interface (ECLI).



2 Procedure

Do the following:

1. If there are any network-related alarms on the ME, act on them first.
2. Log on to the SC to access a Linux shell, for example:

```
ssh <user>@<hostname> -p 7022
```

3. Check connectivity with the persistent storage path, for example:

```
ls -l /storage/system/software/lm-apr9010503
```

4. Is the persistent storage path accessible?

Yes: Continue with the next step.

No: Consult the next level of maintenance support. Further actions are outside the scope of this instruction.

5. Exit the Linux shell:

```
exit
```

6. Start the ECLI, for example:

```
ssh <user>@<hostname> -p 22
```

7. Navigate to the *KeyFileManagement* Managed Object (MO), for example:

```
>dn ManagedElement=NODE06ST, SystemFunctions=1, Lm=1, KeyFileManagement=1
```

8. View the key file information:

```
(KeyFileManagement=1) >show -r
```

The following is an example output:



```
KeyFileManagement=1
  reportProgress
    actionId=0
    actionName="loadLicKeyFile"
    progressInfo=""
    progressPercentage=100
    result=SUCCESS
    resultInfo="Successfully loaded the new LKF"
    state=FINISHED
    timeActionCompleted="2014-05-13T14:12:34"
    timeActionStarted="2014-05-13T14:12:34"
    timeOfLastStatusUpdate="2014-05-13T14:12:34"
  KeyFileInformation=1
    installationTime="2014-05-13T14:12:34"
    locatable=true
    productType="SSR 8000"
  KeyFileInformation=2
    installationTime="2014-05-13T14:11:35"
    locatable=false
    productType="SASN"
  KeyFileInformation=3
    installationTime="2014-05-13T14:12:15"
    locatable=true
    productType="EDA 1500"
```

If `locatable=false`, then the corresponding license key file is missing or corrupted.

9. Change directory to the location where the license key file is stored on the SC, for example:

```
cd /storage/system/software/lm-apr9010503/SSR\8000/8887
563311a276a54cba15d6359a7f8c
```

Note: Each license key file is stored in a hashed subdirectory. The path to the hashed directory contains `productType` of the license key file, for example:

```
/storage/system/software/lm-apr9010503/SSR\
8000/8887563311a276a54cba15d6359a7f8c
```

The SC detects the restored file within one minute.

For each license key file where `locatable=false`, transfer the backup license key file to the SC from the backup location.

10. Open an SFTP session, for example:

```
>sftp <user>@<hostname>
```

Enter remote host password if necessary.



password:

11. Navigate to the directory where the backup license key files are located, for example:

```
sftp>cd /cluster/licenses
```

12. Copy the backup license key files, for example:

```
sftp>get license.xml
```

Note: If backup files are unavailable, order replacement license key files from the Ericsson software supply organization and install the files, refer to *Install License Key File*.

If resolving the issue is expected to take more than 24 hours, Emergency Unlock can be used to prevent the system from entering Locked mode, refer to *Activate Emergency Unlock Mode*.

The following is an example output when copying a backup license key file from the `/cluster/licenses/` folder:

```
Fetching license.xml
```

13. Exit the SFTP session:

```
sftp>exit
```

14. Is the alarm cleared?

Yes: Proceed with Step 17.

No: Continue with the next step.

15. Perform data collection, refer to *Data Collection Guideline*.
16. Consult the next level of maintenance support. Further actions are outside the scope of this instruction.
17. Job is completed.