

# License Management, License Key Not Available

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## OPERATING INSTRUCTIONS

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License Management, License Key Not Available



# 1 Introduction

This document describes the License Management, License Key Not Available alarm and provides instructions for fault management.

## 1.1 Alarm Description

License Management, License Key Not Available is raised when the requested licensed features or capacities cannot be used because the corresponding license keys are unavailable.

This primary alarm is issued by the ManagedElement=1, SystemFunctions=1, Lm=1, LicenseId=<licenseId> Managed Object (MO).

Possible alarm causes and fault locations are explained in Table 1.

Table 1 Alarm Causes

Alarm Cause	Description	Fault Reason	Fault Location	Impact
159	License Management, License Key Not Available	<p>A license is about to expire or is unavailable for one of the following reasons:</p> <ul style="list-style-type: none"><li>• The license has expired.</li><li>• The license is not present in the corresponding license key file.</li><li>• The license is not present in Arwa.</li></ul>	License Key File or Arwa	The licensed feature may not be available.

The following consequences are expected if the alarm condition is not resolved:

- The licensed feature may not be available.

The alarm attributes are listed and explained in Table 2.



Table 2 Alarm Attributes

Attribute Name	Attribute Value
activeSeverity	<p>MINOR:</p> <p>The license identified by the <code>FeatureKey.featureKeyId</code> or <code>CapacityKey.capacityKeyId</code> has entered the expiration warning period defined by the <code>Lm.licenseExpirationWarning</code> parameter, but has not yet expired.</p> <p>MAJOR:</p> <p>The license identified by the <code>FeatureKey.featureKeyId</code> or <code>CapacityKey.capacityKeyId</code> has expired, or is not present in the corresponding license key file or Arwa.</p>
additionalInfo	N/A
additionalText	<p>MINOR:</p> <p>"License is about to expire = &lt;licenseId&gt;."</p> <p>MAJOR:</p> <ul style="list-style-type: none"><li>• "License expired = &lt;licenseId&gt;."</li><li>• "License not found = &lt;licenseId&gt;."</li></ul>
eventType	QUALITYOFSERVICEALARM
lastEventTime	A timestamp of the last alarm update, such as an alarm status change or severity change.
majorType	193
minorType	393217
originalAdditionalText	Content of the <code>additionalText</code> field when the alarm was raised.



Table 2 Alarm Attributes

Attribute Name	Attribute Value
originalEventTime	Timestamp when the alarm was raised.
originalSeverity	Value of the <code>activeSeverity</code> level when the alarm was raised.
probableCause	159 (Configuration or Customization Error)
sequenceNumber	The notification identity for this object instance. It is not the same as the <code>fmAlarmId</code> since multiple notifications may be sent for one alarm instance. This value changes for every notification (such as a severity change, alarm clear, and so on).
source	ManagedElement=1, SystemFunctions=1, Lm=1, License=<licenseId>
specificProblem	License Management, License Key Not Available

## 1.2 Prerequisites

This section lists the prerequisite documents, tools, and conditions for the alarm handling procedure.

### 1.2.1 Documents

Review the following documents before starting the procedure:

- *Personal Health and Safety Information* (Reference [1])
- *System Safety Information* (Reference [2])
- The user guide for your LM deployment:
  - "Installing License Key Files" in the *LM User Guide for Sentinel RMS* (Reference [3])
  - "Installing License Key Files" in the *LM User Guide for ELIM* (Reference [4])



- "Obtaining License Key Files" in the *LM User Guide for Arwa* (Reference [5])
- "Configuration Management Using CLI" in the *COM Management Guide* for your version of the product software.

### 1.2.2 Tools

Ensure that the following tools are available before starting the procedure:

- Element Management System (for example: OSS)
- COM CLI

For more information on these tools, refer to the documentation for your version of the product software.

### 1.2.3 Conditions

Ensure that the following conditions are met before starting the procedure:

- Know the IP address of the blade where the active COM CLI is running.
- Have the proper authority to handle configuration management of the network elements.
- Be familiar with basic UNIX commands.

## 2 Procedure

This section describes the alarm handling procedure.

### 2.1 Analyzing the Alarm

`License Management, License Key Not Available` is a persistent alarm that remains on the alarm list until the associated license is replaced or all application instances release the license. The alarm is raised when a license is about to expire, has expired, or is not present in the corresponding license key file or Arwa. The exact cause is printed in the alarm `additionalText` field. If `License Management, License Key Not Available` relates to license expiration, you can verify the license status by checking the license





expiration date. For more information on obtaining license information, refer to "License Information" in the user guide for your LM deployment.

- *LM User Guide for Sentinel RMS* (Reference [3])
- *LM User Guide for ELIM* (Reference [4])
- *LM User Guide for Arwa* (Reference [5])

**Note:** Missing or expired licenses require new license keys, or an application procedure to release the affected licenses. Application procedures are outside the scope of this instruction.

## 2.2 Actions to Order and Install a New License Key File

**Note:** This procedure only applies to Sentinel RMS, ELIM, and Arwa No Connection deployments.

To order and install a new license key file:

1. If required, contact your Ericsson supplier to order a new license key file.
2. Install the new license key file.

For more information on installing a new license key file, refer to "Installing License Key Files" in the user guide for your LM deployment.

- *LM User Guide for Sentinel RMS* (Reference [3])
- *LM User Guide for ELIM* (Reference [4])

**Note:** For Arwa No Connection, refer to the ELIM documentation.

3. After installing the new license, use ssh to connect to the COM CLI Management System server port (default 22) on the blade where the active COM CLI is running:

```
ssh <username>@<blade_IP_address> -p 22 -t -s cli
```

The COM CLI opens after supplying your password.

4. Check the alarm status.
5. If the alarm is still active, trigger an additional refresh of the license inventory to ensure that the license changes are applied:

```
ManagedElement=1, SystemFunctions=1, Lm=1, refreshLicenseInventory
```

The system returns `true` if the action was executed successfully.

6. Verify that the license inventory has been synchronized with the new license key file by checking the `lastLicenseInventoryRefresh` timestamp:



```
show ManagedElement=1, SystemFunctions=1, Lm=1,  
lastLicenseInventoryRefresh
```

A recent timestamp indicates a successful update.

7. Check the alarm status.

If the alarm is still active, consult the next level of maintenance support.  
Further actions are outside the scope of this instruction.

## 2.3 Actions to Obtain New License Keys for Arwa

**Note:** This procedure is not applicable to LM deployments using Arwa No Connection. When deployed in Arwa No Connection mode, LM uses ELIM formatted license key files to store license information locally. For more information on ordering and installing a new license key file, refer to Section 2.2 on page 5.

To obtain new license keys for Arwa:

1. If required, contact your Ericsson supplier to order an entitlement containing the necessary licenses.
2. After the new license keys have been provisioned in Arwa, use ssh to connect to the COM CLI Management System server port (default 22) on the blade where the active COM CLI is running:

```
ssh <username>@<blade_IP_address> -p 22 -t -s cli
```

The COM CLI opens after supplying your password.

3. Check the alarm status.
4. If the alarm is still active, trigger an additional refresh of the license inventory to ensure that the license changes are applied:

```
ManagedElement=1, SystemFunctions=1, Lm=1, refreshLicenseInventory
```

The system returns `true` if the action was executed successfully.

5. Verify that the license inventory has been synchronized with Arwa by checking the `lastLicenseInventoryRefresh` timestamp:

```
show ManagedElement=1, SystemFunctions=1, Lm=1,  
lastLicenseInventoryRefresh
```

A recent timestamp indicates a successful update.

6. Check the alarm status.

If the alarm is still active, consult the next level of maintenance support.  
Further actions are outside the scope of this instruction.



## Reference List

- [1] *Personal Health and Safety Information*, 12446-2885 Uen
- [2] *System Safety Information*, 12446-2886 Uen
- [3] *LM User Guide for Sentinel RMS*, 1/1553-APR 901 0503/5 Uen
- [4] *LM User Guide for ELIM*, 2/1553-APR 901 0503/5 Uen
- [5] *LM User Guide for Arwa*, 3/1553-APR 901 0503/5 Uen