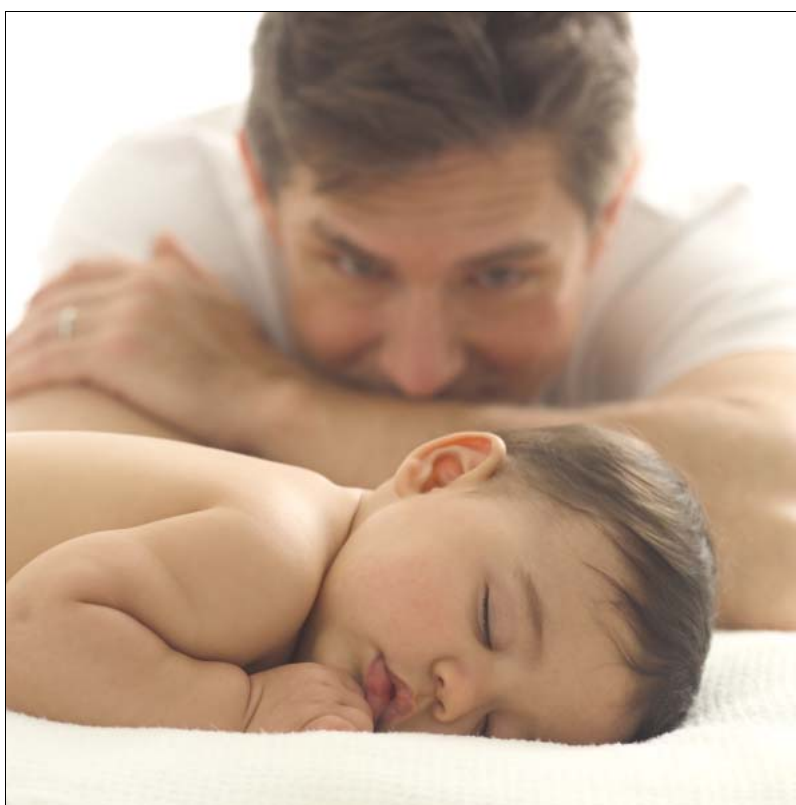


ESA Upgrade Instruction

Ericsson SNMP Agent 18.0.1 ICP 18-01

UPGRADE INSTRUCTION



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1 About This Document

1.1 Purpose

The purpose of this document is to describe the upgrade installation procedure of the Ericsson SNMP Agent (ESA).

The supported upgrade paths are the following:

- From ESA 4 to ESA 18
- From ESA 16 to ESA 18
- From ESA 17 to ESA 18

1.2 Target Group

The target group for this document is Ericsson personnel responsible for the upgrade installation of the ESA.

1.3 Prerequisites

It is assumed that the user of this document fulfils the following prerequisites.

- The user has system administrator authority to the server, in which the ESA is installed.
- The system has already an ESA 4, ESA 16, or ESA 17 installed.

1.4 Typographic Conventions

The typographic conventions used in this document are described in Reference [1].





2 Introduction

The document contains brief instructions about the steps to take for executing the upgrade process. For detailed information about ESA configuration files and configuration parameters, see Reference [3].

This document is divided in the following main parts:

- Upgrade from ESA 4 to ESA 18

The installation procedure is automated, which means the newer version replaces existing ESA 4 installation is automatically migrated.

Attention!

If ESA cluster mode is used, a manual migration of configuration from the previous `clusterCfg.xml` to the new `cluster.conf` is needed because of the new cluster solution in ESA 18. Also, one additional tag is added to the `mainCfg.xml` which need to be configured if the ESA Master Agent cluster should be used. The boot counter file path must be configured during installation which by default is `{esa_basedir}/bin`. There are optional configurations for configuring engine ID and customized calculation of delta value in ESA PM agent. For more information see Reference [3].

For instructions on upgrading ESA 4 to ESA16/ESA17, refer to Section 5 on page 19.

- Upgrade ESA 16/ ESA17 to ESA 18

The upgrade procedure is automated, which means ESA 16/ESA 17 upgrade and the configuration files are automatically migrated. The boot counter file path must be configured during installation which by default is `{esa_basedir}/bin`. There are optional configurations for configuring engine ID and customized calculation of delta value in ESA PM agent. For more information see Reference [3].





3 ESA Software

3.1 Overview

The ESA software consist of software packages for the **ESA Basic Package** and software packages for the optional ESA Monitoring Package; **IBM Netcool SSM**.

The IBM Netcool SSM package is only installed if purchased.

3.2 ESA Basic Package

The following software packages are for the ESA Basic Package.

— Linux: `esa-<version>.rpm`

This package is deployed on the Linux platforms RHEL and SLES.

— Unix: `esa-<version>.sh`

This package is deployed on all Unix variants, which means RHEL and SLES.

3.3 IBM Netcool SSM

The IBM Netcool SSM is an option to the ESA Basic Package. If the SSM option has been purchased, one or several of the following packages are also to be considered during installation.

The following software packages are used for upgrading the IBM Netcool SSM option. They shall be deployed in the order of appearance.

Please not that if available fix packs and/or patches for the IBM Netcool SSM component, they need to be installed separately.

— Linux x86/x64:

These packages are deployed on RHEL and SLES running on the x86/x64 platform.

- `netcool-ssm-<version>-linux-x86.installer`

or

`netcool-ssm-<version>-linux-x86_64.installer`





4 Upgrade of ESA

4.1 Introduction

For ESA4 to ESA18:

An existing ESA deployment ESA 4 can be upgraded to a newer ESA version using an automated upgrade procedure **with** a manual migration of the cluster configuration file, if cluster mode is activated.

For ESA16/ ESA17 to ESA18:

An existing ESA deployment (ESA 4 or later) can be upgraded to a newer ESA version using an automated upgrade procedure **with** an automatic migration of the cluster configuration file, if cluster mode is activated.

The installer application can run in three different modes; GUI, Console and Silent.

— **GUI**

The manual and interactive Graphical User Interface (GUI) mode supports an upgrade process through Wizard Panels and Dialog Boxes.

Go to Section 4.2 on page 8.

— **Console**

The manual and interactive Console or Command Line Interface (CLI) mode is primarily used for remote upgrades, or on systems without a graphical window environment.

Go to Section 4.3 on page 11.

— **Silent**

The silent mode do not interact with the user at all. An additional parameter is given to achieve a silent upgrade.

Go to Section 4.4 on page 12.

— **Linux RPM**

The Linux RPM upgrade is only supported for ESA 16 and later.

Go to Section 4.5 on page 13.



Caution!

Please note that the logging configurations are set to default logging configuration during the upgrade procedure, which means the existing log4j configurations are overwritten. The logging configuration used in the ESA prior to the upgrade is however stored in backup directory `{esa_basedir}/.backup`. If needed, the logging configuration can be manually copied to restore the logging configuration to what it was prior to the upgrade.

Note that fix packs and/or patches for the IBM Netcool SSM component can be included. See Section 4.6 on page 13 for further information.

4.2 GUI Mode Upgrade

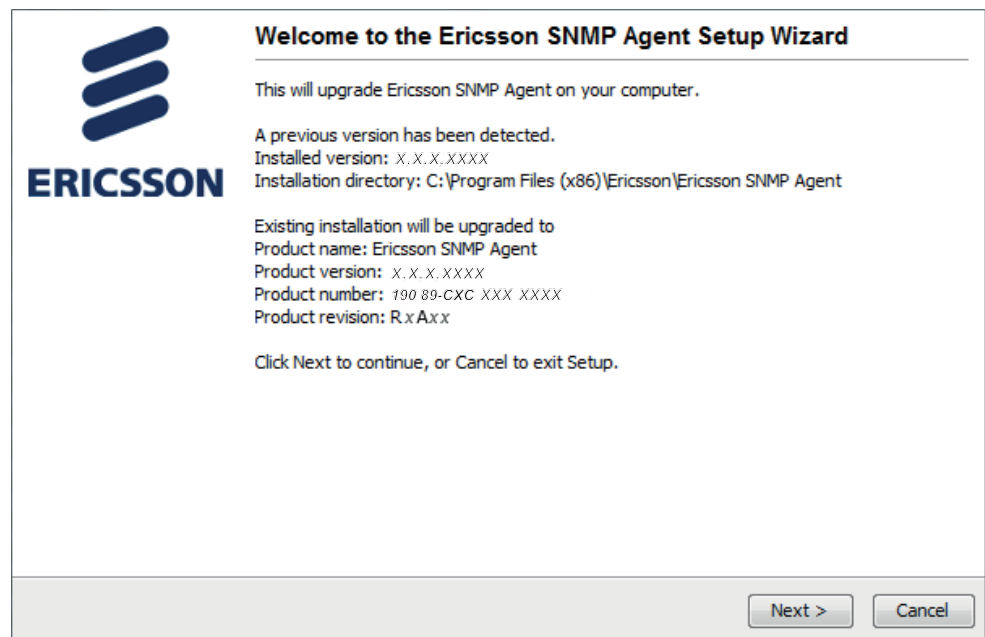
The GUI mode upgrade procedure:

1. Login to the server where the ESA is to be upgraded.
2. Prepare the ESA software package(s) to install. See Section 3.2 on page 5.
3. Start the installer application in GUI mode.

Unix `# sh esa-<version>.sh`

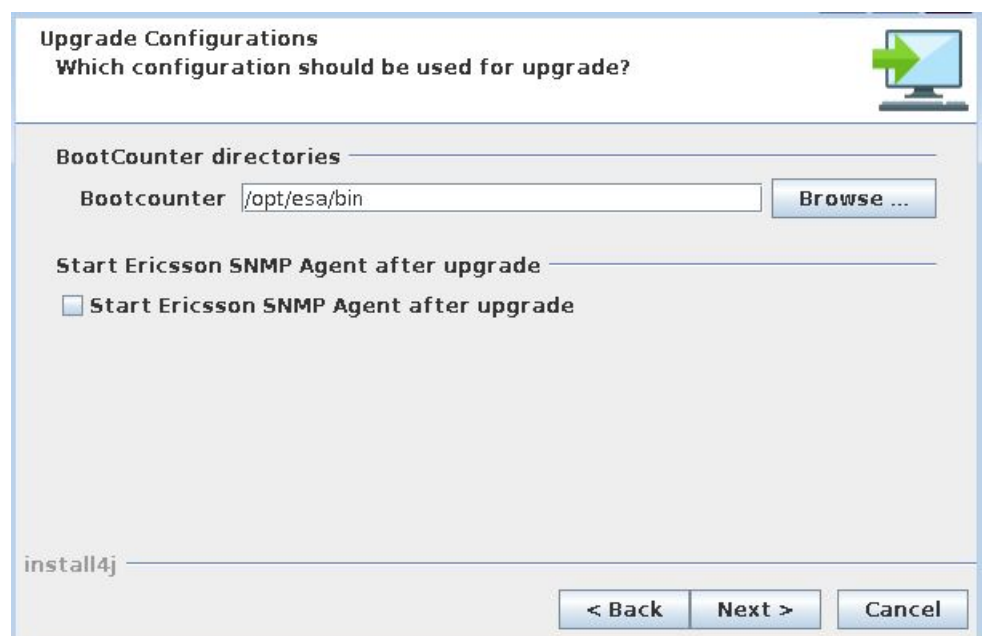
Please note that the upgrade file is the same as the installation file. The installation will detect an existing ESA installation.

4. The installation detects an existing ESA installation and presents an overview of the upgrade scenario.



Click **Next** to continue the upgrade process.

5. Make the selection to start the ESA after upgrade or not.



Check the box if the ESA shall start up immediately after upgrade.




Note: For ESA4 to ESA18: Do not check the box to automatically start ESA after the upgrade if ESA cluster mode is used. Manual migration of the clusterCfg.xml and the mainCfg.xml is needed **prior** to ESA processes are started. Please see Section 4.7 Configuration files Migration on page 15 how to do the migration.

For ESA16/ ESA17 to ESA18: Check the box to automatically start ESA after the upgrade if ESA cluster mode is used. Please see Section 4.7 Configuration files Migration on page 15 how to do the migration.

Click **Next** to continue the upgrade process.

6. The upgrade summary is presented, including selected options.



Upgrade Summary
Ericsson SNMP Agent is upgraded to the following version.

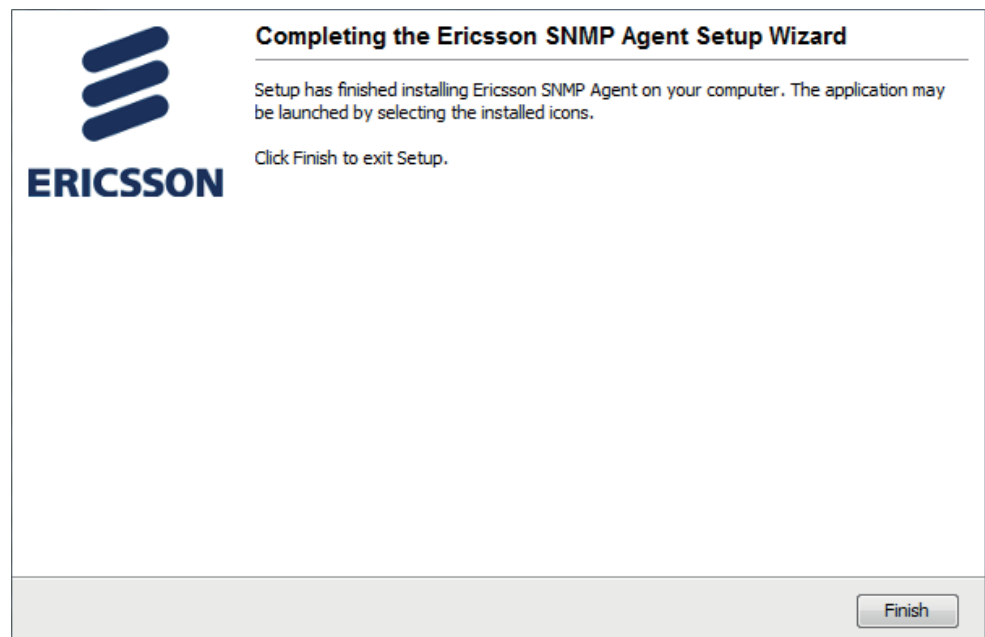
Installed version:	17.0.0.110
Installation directory:	/opt/esa
Product name:	Ericsson SNMP Agent
Product version:	18.0.0.SNAPSHOT
Product number:	CXC 173 8126
Product revision:	
Boot counter directory:	/opt/esa/bin
Start ESA after upgrade:	no

install4j

< Back Next > Cancel

Click **Next** to continue the upgrade process.

7. The ESA upgrade is finished.



Click **Finish** to end the upgrade process.

8. If logging configurations are backed up during the upgrade, they can be found in `{esa_basedir}/.backup`. If needed, manually copy the missing logging configuration from the backed up files to the newly upgraded logging configuration files.

4.3 Console Mode Upgrade

The console mode upgrade procedure:

1. Login to the server where the ESA is to be installed.
2. Prepare the ESA software package(s) to install. See Section 3.2 on page 5.
3. Start the installer application in console mode.

```
Unix          # sh esa-<version>.sh -c
```

The installation can at any time be stopped by using the operating environment key combination for stop process, such as using key combination CTRL+C.

4. Make the selection to start the ESA after upgrade or not.

```
Welcome to the Ericsson SNMP Agent Setup Wizard
Do you want to start Ericsson SNMP Agent after upgrade?
Start Ericsson SNMP Agent after upgrade?
Yes [y], No [n, Enter]
```

Enter **y** and press **Enter** to continue the upgrade process.



Note: Upgrading from ESA4 to ESA18: Do not choose to automatically start ESA after the upgrade if ESA cluster mode is used. Manual migration of the clusterCfg.xml and the mainCfg.xml is needed **prior** to ESA processes are started. Please see Section 4.7 Configuration files Migration on page 15 how to do the migration.

5. An upgrade summary is presented and the upgrade procedure is initiated and finalized.

```
Ericsson SNMP Agent is updated to the following version.  
Installed version <current version>  
Installation directory <directory>  
Product name: Ericsson SNMP Agent  
Product version: <new version>  
Product number: 190 89-CXC <product number>  
Product revision: R<revision>  
Start ESA after upgrade: yes  
Stopping services  
Stopping Services  
Extracting files ...
```

```
Starting services  
Setup has finished installing Ericsson SNMP Agent on  
your computer.  
Finishing installation ...
```

6. The upgrade is finished.
7. If logging configurations are backed up during the upgrade, they can be found in {esa_basedir}/.backup. If needed, manually copy the missing logging configuration from the backed up files to the newly upgraded logging configuration files.

4.4 Silent Mode Upgrade

The silent mode upgrade procedure:

1. Login to the server where the ESA is to be upgraded.
2. Prepare the ESA software package(s) to install. See Section 3.2 on page 5.
3. Start the installer application in silent mode.

```
Unix # sh esa-<version>.sh -q
```

Please note that the upgrade file is the same as the installation file. The installation will detect an existing ESA installation.

4. After the silent mode upgrade has finished, the ESA processes are **not** running.
5. If cluster mode is used in the ESA installation, please follow the steps in Section 4.7 Configuration files Migration on page 15 to migrate ESA cluster



and main configuration files to ESA 18 format. If cluster mode is not used, please ignore this step and proceed to the next step.

6. If logging configurations are backed up during the upgrade, they can be found in `{esa_basedir}/.backup`. If needed, manually copy the missing logging configuration from the backed up files to the newly upgraded logging configuration files.

4.5 Linux RPM Upgrade

The Linux RPM upgrade is not supported for the ESA 4 RPM package. In case of an ESA 4 to ESA 18 upgrade, the existing installation must be uninstalled and the new version installed.

Please note that using the backup command on the existing installation and then restore command on the new installation is **not** recommended. There are changes in the configuration files that will make the new installation to not start properly.

Instead, please use the silent installation method with a response file in order to mimic the installation to upgrade.

The Linux RPM upgrade procedure for ESA 16 and later:

The ESA 16 RPM and above is upgradeable, meaning that RPM upgrade from ESA 16 or above to the current version is supported.

1. Login to the server where the ESA is to be installed.
2. Upgrade the ESA Linux RPM package.

```
# rpm -Uvh esa-<version>.rpm
```

3. The Linux RPM package is upgraded.

Note: RPM Upgrades to ESA18:

ESA18 supports configurable boot counter files path.

After upgrading to ESA 18 the boot counter files used in earlier ESA version are retained in `{esa_basedir}/bin` directory by default.

Follow the below steps to configure the new location in ESA 18,

1. Verify if the ESA services are stopped.
2. Move the boot counter files of earlier ESA from `{esa_basedir}/bin` to the destination folder.
3. Update the `{esa_basedir}/conf/mainCfg.xml` configuration file with the directory of the boot counter files.
4. Start the ESA services.



4.6 IBM Netcool SSM Upgrade

4.6.1 Introduction

The IBM Netcool SSM in the ESA product package is installed separately from the ESA Basic Package, which means the SSM binaries, configuration files and log files are not found in the ESA directories.

The SSM installer application can run in two different modes; Console and Silent.

4.6.2 Upgrade SSM

The upgrade procedure:

1. Login to the server where the SSM is to be upgraded.

Linux/Unix Login as user root.

Note: The reason for installing as user root is that the SSM requires access to system resources for efficient and proper system monitoring.

2. Prepare the SSM software package(s) to use in the upgrade process. See Section 3.3 on page 5.
3. First, execute the installer file.

The following command line format is used for Unix/Linux.

```
./netcool-ssm-<version>-<platform>-<arch>.installer  
[install|upgrade] [silent|record] [<param>=<value> ...]
```

The following is an example command line showing the use of command option upgrade.

```
./netcool-ssm-<version>-<platform>-<arch>.installer upgrade  
silent
```

4. Second, execute the Fix Pack run installer.

See SSM documentation Reference [6] for further details and options about installing the SSM Fix Pack.

5. Third, execute additional patch package run installers that applies to the platform you are using.

See SSM documentation Reference [6] for further details and options about installing the patches.

6. Upgrade is finished.



4.7 Configuration files Migration

Upgrade from ESA4 to ESA18: After the upgrade is performed, one additional tag is added to the mainCfg.xml: `<ma active="data">`. If the Master Agent cluster should be used, set this tag to yes and if not, leave it as no. The Master Agent cluster is only used if SNMPv3 and VIP is to be used. Please see Reference [3] for more information about the Master Agent cluster.

The following shows the different formats between ESA 4 and ESA 18:

Configuration format ESA 4:

```
<cluster active="data" master="data">
  <fm active="data">
    <alarmPersistency>data</alarmPersistency>
  </fm>
</cluster>
```

Configuration format ESA 18:

```
<cluster active="data" master="data">
  <ma active="data">
  <fm active="data">
    <alarmPersistency>data</alarmPersistency>
  </fm>
</cluster>
```

A new configuration file called `cluster.conf` is created in directory `{esa basedir}/conf`. This file will replace the old `clusterCfg.xml` file used in the ESA 4 cluster solution.

Consider the following tags in the `clusterCfg.xml`:

— `bind_addr`

This parameter holds the IP address of the node where the ESA being configured is running. The same IP address should be used in the `hostname` tag in the `cluster.conf`.

— `initial_hosts`

This attribute lists all the cluster members, using IP address and port number. Copy all IP addresses and use them in the `seed_ip_address` in the seed-nodes list(s) in the `cluster.conf`

The following formats are the expected:

**Configuration example ESA 4:**

```
<TCP bind_addr="10.1.1.1" bind_port="2551"
  singleton_name="esa-cluster" />
<TCPPING initial_hosts="10.1.1.1[2551], 10.1.1.2[2551],
  10.1.1.3[2551]" port_range="0" />
```

The configuration below is a mapped JGroups configuration for TCP-ping to an Akka TCP configuration where both the FM and the Master clusters are activated:



Configuration example ESA 18:

```
FmAgent{
  ...
  cluster {
    seed-nodes = [
      "akka.tcp://FMCluster@10.1.1.1:2551",
      "akka.tcp://FMCluster@10.1.1.2:2551",
      "akka.tcp://FMCluster@10.1.1.3:2551"
    ]
  }
  remote {
    enabled-transport = ["akka.remote.netty.tcp"]
    netty {
      tcp {
        hostname = "10.1.1.1"
        port = 2551
      }
    }
  }
  ...
}

MasterAgent{
  ...
  cluster {
    seed-nodes = [
      "akka.tcp://MACluster@10.1.1.1:2552",
      "akka.tcp://MACluster@10.1.1.2:2552",
      "akka.tcp://MACluster@10.1.1.3:2552"
    ]
  }
  remote {
    enabled-transport = ["akka.remote.netty.tcp"]
    netty {
      tcp {
        hostname = "10.1.1.1"
        port = 2552
      }
    }
  }
  ...
}
```

Note: Please see Reference [3] for more information about the ESA 17 cluster setup and configuration.

- After all nodes are migrated and all ESA services are running, run the `# esacclusterstatus` command on all nodes and make sure that all of them has joined the cluster. Please see Reference [3] for information about the Cluster Status command.



- When all nodes are upgraded and has joined the new Akka cluster, the old clusterCfg.xml can be removed from the {esa basedir}/conf.

Upgrade from ESA16 to ESA18: All changes made in configuration files will be retained except log4j file changes.



5 Appendix: Manual Upgrade from ESA 4

This section provides the steps for manually upgrading from ESA 4 for Unix.

1. Backup of Configuration Files

Use the configuration backup tool to take the backup of the current configuration files. For instructions, refer to [ESA Setup and Configuration](#).

Example:

```
# sh esabackup -b /opt/
```

2. Migrating the Configuration Files

- a. Navigate to the backup location and edit the `mainCfg.xml` file. If ESA is not running in cluster mode, cluster configuration is not available. Add the following default setting:

```
<mainCfg xmlns=
"http://www.ericsson.com/esa" xmlns:xsi=
"http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation=
"http://www.ericsson.com/esa mainCfg.xsd">
  ...
  <cluster active="no" master="no" seedNodes="dynamic">
    <ma active="no"/>
    <fm active="no">
      <alarmPersistency>off</alarmPersistency>
    </fm>
  </cluster>
  ...
</mainCfg>
```

- b. If cluster configuration is present, add a new attribute to cluster called **seedNodes** and set the value to **dynamic**.

```
<cluster active
="no" master="no" seedNodes="dynamic">

A new element for Master Agent cluster setting is also required.
Add the default <ma active="no"/> to the configuration.
Example:
<mainCfg xmlns=
"http://www.ericsson.com/esa" xmlns:xsi=
"http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation=
"http://www.ericsson.com/esa mainCfg.xsd">
  ...
  <cluster active="no" master="no" seedNodes="dynamic">
    ...
    <ma active="no"/>
  </cluster>
  ...
</mainCfg>
```

For instructions on other necessary configurations in the `mainCfg.xml`, refer to section **Feature Configuration** [ESA Setup and Configuration](#).



3. Uninstall ESA 4.
4. Install a fresh copy of ESA 16 or later version.
5. After a fresh installation, replace the `mainCfg.xml` file with the modified file. Copy all other configuration files such as counter definition, alarm definition to their respective folders.

Note: RPM Upgrades to ESA18:

ESA18 supports configurable boot counter files path.

After upgrading to ESA 18 the boot counter files used in earlier ESA version are retained in `{esa_basedir}/bin` directory by default.

Follow the below steps to configure the new location in ESA 18,

1. Verify if the ESA services are stopped.
2. Move the boot counter files of earlier ESA from `{esa_basedir}/bin` to the destination folder.
3. Update the `{esa_basedir}/conf/mainCfg.xml` configuration file with the directory of the boot counter files.
4. Start the ESA services.



Glossary

Glossary

ESA Glossary of Terms and Acronyms,
0033-CSH 109 654





Reference List

ESA Documentation

- [1] ESA Library Overview
DIRECTIONS FOR USE, 1/1553-CSH 109 654
- [2] ESA Installation Instruction
INSTALLATION INSTRUCTIONS, 1531-CSH 109 654
- [3] ESA Setup and Configuration
SYSTEM ADMINISTRATION GUIDE, 1/1543-CSH 109 654

SSM Documentation

- [4] IBM Netcool/System Service Monitors Version 4.0.1, Administration Guide
- [5] IBM Netcool/System Service Monitors Version 4.0.1, Reference Guide
- [6] IBM Netcool/System Service Monitors Version 4.0.1, Patch Installation Guide