

Upgrade Using One-Step Activation

OPERATING INSTRUCTIONS

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1 Introduction

This document describes how to perform the execution phase of a software upgrade.

A software upgrade has a limited time window during which some planned service impact is allowed. The execution phase of the software upgrade can have service impact and must be executed only within the upgrade time window and not during normal “traffic hours”.

The procedure in this document covers the following:

- How to activate (that is, apply) the upgrade package on the Managed Element (ME)

In this document, ME represents IPWorks.

- How to commit the upgrade

This document describes how to upgrade using a one-step activation. One-step activation is applicable to upgrade packages designed for one-step or step-by-step activations. It is, however, not recommended to apply it to an upgrade package designed for multiple steps, since it implies reduced user interaction and increases the upgrade failure probability.

The procedure is illustrated by an example where a software version with product name `ERIC-IPWAAA_RUNTIME`, product number `CXC1740180`, and product revision `R1A01` is running in the system. A software upgrade package `ERIC-IPW-CXC1740180-R6A01`, which is designed to upgrade this software version to product revision `R6A01`, has already been prepared and is going through the activation phase.

1.1 Prerequisites

This section describes the prerequisites, which must be fulfilled before using the procedure.

1.1.1 Conditions

The following conditions must apply:

- The ME has passed a health check routine.
- The upgrade package is prepared.
- The fallback capability is NOT supported by the ME. DO NOT to execute "cancel" operation during upgrade activation.



- An Ericsson Common Command-Line Interface (ECLI) session in Exec mode is in progress.



2 Procedure

To upgrade using one-step activation:

1. Navigate to the upgrade package, for example:

```
>dn ManagedElement=<Node Name>,SystemFunctions=1,SwM=1,U
pgradePackage=ERIC-IPW-CXC1740180-R6A01
```

2. Activate the upgrade package:

```
(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >activate
```

The system returns output `true` for a successfully triggered activation or `false` otherwise.

3. Verify the result for a successfully triggered operation:

```
(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >show -v
```

In the following example output, `state=RUNNING` and `progressPercentage=10`. It shows that 10% of the activation is completed.

```
UpgradePackage=ERIC-IPW-CXC1740180-R6A01
[...]
state=ACTIVATION_IN_PROGRESS <read-only>
[...]
reportProgress <read-only>
[...]
actionName="Activate" <read-only>
[...]
progressInfo="Activate UpgradePackage" <read-only>
progressPercentage=10 <read-only>
[...]
state=RUNNING <read-only>
[...]
```

When upgrade activation fails, the state goes to `ACTIVATION_IN_PROGRESS` or `DEACTIVATION_IN_PROGRESS` state with `FAILURE` result, you need to perform rollback. For more information, refer to the section *Rollback Activities* in IPWorks Upgrade Instruction.

For more information about the upgrade package activation state machine, refer to *Software Management*.

Note: During the upgrade procedure, ECLI session will be lost, this is because upgrade package activation reboots the SC and PL one by one for rolling upgrade. To commit the upgrade activation, you should re-login to ECLI after SC becomes available. ECLI instance is available in only one of the SCs.

The log files are generated in `/var/log/SC-1/messages` and `/var/log/SC-2/messages`, you can use `tailf` to check these two files for more detailed information during this phase.



4. Continue to check the progress of the activation until it is completed:

(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >**show -v**

The following example output shows the final result with `state=FINISHED` and `progressPercentage=100`:

```
UpgradePackage=ERIC-IPW-CXC1740180-R6A01
[...]
state=WAITING_FOR_COMMIT <read-only>
[...]
```

```
reportProgress <read-only>
  actionId=1 <read-only>
  actionName="Activate" <read-only>
[...]
```

```
progressInfo="Activate UpgradePackage" <read-only>
progressPercentage=100 <read-only>
result=SUCCESS <read-only>
resultInfo="Campaign execution successfully completed" <read-only>
state=FINISHED <read-only>
[...]
```

```
stepProgressPercentage=100 <read-only>
timeActionCompleted="2013-12-18T05:24:31" <read-only>
timeActionStarted="2013-12-18T04:43:50" <read-only>
timeOfLastStatusUpdate="2013-12-18T05:24:31" <read-only>
```

5. Navigate to the *SwM* MO:

(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >**up**

6. Verify that the ME behaves properly. This includes, but is not necessarily limited to, passing a health check routine.
7. Is the ME behaving properly?

Yes: Proceed with the next step.

No: Refer to the section *Rollback Activities* in IPWorks Upgrade Instruction.

8. Navigate to the upgrade package:

(SwM=1)>**UpgradePackage=ERIC-IPW-CXC1740180-R6A01**

9. Commit the upgrade by using action `commit` in the `Upgradepackage` MO:

(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >**commit**

The system returns output `true` or `false`.



Note:

- A software management upgrade is confirmed/committed by executing the software management action `commit` in Exec mode. This is different from ECLI command `commit` used to apply configuration changes in Config mode.
- Since the default value of the attribute `fallbackTimer` is 1200 seconds, therefore the action `commit` can be executed within 20 mins after the upgrade activation is finished. For more information about the attribute, refer to the attribute `fallbackTimer` in MOM class `SwM`.

10. Check the progress of action `commit`:

```
(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >show -v
```

The following is an example output shows the upgrade state goes to `COMMIT_COMPLETED`, which means the commit operation is completed successfully:

```
[...]
state=COMMIT_COMPLETED <read-only>
[...]
reportProgress <read-only>
  actionId=2 <read-only>
  actionName="Commit" <read-only>
[...]
progressPercentage=100 <read-only>
result=SUCCESS <read-only>
resultInfo="Campaign committed successfully. Updated model successfully." <read-only>
state=FINISHED <read-only>
[...]
```

11. Navigate to the `SwM` MO:

```
(UpgradePackage=ERIC-IPW-CXC1740180-R6A01) >up
```

12. Verify that the active software state is the expected one:

```
(SwM=1) >show -v
```

The following is an example output. The active software version corresponds to the activated software upgrade scope. A software version with product name `ERIC-IPW`, product number `CXC1740180`, and product revision `R6A01` is running in the system.

```
SwM=1
actionCapable=CAPABLE <default> <read-only>
actionCapableInfo=[] <empty> <read-only>
activeSwVersion <read-only> <deprecated>
  "ManagedElement=1, SystemFunctions=1, SwM=1, SwVersionMain=COM@ERIC-COM_RUNTIME-cxp902849
  "ManagedElement=1, SystemFunctions=1, SwM=1, SwVersionMain=IPWAAA@ERIC_IPWAAA_RUNTIME-cxp
UpgradePackage=ERIC-IPW-CXC1740180-R6A01
```

A software version with product name `ERIC-IPWAAA_RUNTIME`, product number `CXC1740180`, and product revision `R6A01` is now committed and running in the system.



13. If necessary, remove the folder `/cluster/UP/` to save disk.



Reference List

- [1] *IPWorks Upgrade Instruction*, 1/153 72-AVA 901 33/3 Uen