Recover from Upgrade Failures

This section describes what you need to do while recovering from upgrade failures.

The upgrade software performs some validations. If upgrade fails, follow the instructions provided on screen to recover and successfully upgrade to Release 1.3.

At times, upgrade fails because of not following the order in which the nodes have to be upgraded, such as upgrading the secondary Administration node first. If you encounter this error, you can upgrade the deployment again following the order of upgrade specified in this guide.

In rare cases, you might have to reimage, perform a fresh install, and restore data. So it is important that you have a backup of Cisco ISE configuration and monitoring data before you start the upgrade. It is important that you back up the configuration and monitoring data even though we automatically try to roll back the changes in case of configuration database failures.

Note

Upgrade failures that happen because of issues in the monitoring database are not rolled back automatically. You have to manually reimage your system, install Cisco ISE, Release 1.3, and restore the configuration and monitoring data on it.

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Upgrade Failures

This section describes some of the known upgrade errors and what you must do to recover from them.
You can check the upgrade logs from the CLI or the status of the upgrade from the console. Log in to the CLI or view the console of the Cisco ISE node to view the progress of upgrade. You can use the `show logging application` command from the Cisco ISE CLI to view the following logs (example filenames are given in parenthesis):

- DB Data Upgrade Log (`dbupgrade-data-global-20160308-154724.log`)
- DB Schema Log (`dbupgrade-schema-20160308-151626.log`)
- Post OS Upgrade Log (`upgrade-postosupgrade-20160308-170605.log`)

**Configuration and Data Upgrade Errors**

During upgrade, the configuration database schema and data upgrade failures are rolled back automatically. Your system returns to the last known good state. If this is encountered, the following message appears on the console and in the logs:

```
% Warning: The node has been reverted back to its pre-upgrade state.
error: %post(CSCOcpm-os-1.2.0-899.i386) scriptlet failed, exit status 1
% Application upgrade failed. Please check logs for more details or contact Cisco Technical Assistance Center for support.
```

**Remediation Errors**

If you need to remediate an upgrade failure to get the node back to the original state, the following message appears on the console. Check the logs for more information:

```
% Warning: Do the following steps to revert node to its pre-upgrade state.
error: %post(CSCOcpm-os-1.2.0-899.i386) scriptlet failed, exit status 1
% Application upgrade failed. Please check logs for more details or contact Cisco Technical Assistance Center for support.
```

**Validation Errors**

If there are any validation errors, which is not an actual upgrade failure, the following message appears. For example, you might see this error if you attempt to upgrade a PSN before the secondary PAN is upgraded or if the system does not meet the specified requirements. The system returns to the last known good state. If you encounter this error, ensure that you perform the upgrade as described in this document.

```
STEP 1: Stopping ISE application...
% Warning: Cannot upgrade this node until the standby PAP node is upgraded and running. If standbyPAP is already upgraded and reachable ensure that this node is in SYNC from current Primary UI.
Starting application after rollback...
% Warning: The node has been reverted back to its pre-upgrade state.
error: %post(CSCOcpm-os-1.2.0-899.i386) scriptlet failed, exit status 1
% Application upgrade failed. Please check logs for more details or contact Cisco Technical Assistance Center for support.
```

**Application Binary Upgrade Errors**

If the ADE-OS or application binary upgrade fails, the following message appears when you run the `show application status ise` command from the CLI following a reboot. You should reimage and restore the configuration and operational backups.

```
% WARNING: An Identity Services Engine upgrade had failed. Please consult logs. You have to reimage and restore to previous version.
```
Other Types of Errors

For any other types of failures (including cancellation of the upgrade, disconnection of the console session, power failure, and so on), you must reimage and restore the configuration and operational backup depending on the personas enabled on the node originally.

Reimage

The term, reimage, refers to a fresh installation of Cisco ISE. For Monitoring database upgrade (schema + data) errors, you must reimage and restore the configuration and operational backups. Before you reimage, ensure that you generate a support bundle by running the `backup-logs` CLI command and place the support bundle in a remote repository in order to help ascertain the cause of failure. You must reimage to the old or new version based on the node personas:

- **Secondary Administration Node**—Reimage to the old version and restore the configuration and operational backup.
- **Monitoring Nodes**—If the nodes are deregistered from the existing deployment, reimage to the new version, register with the new deployment, and enable the Monitoring persona.
- **All Other Nodes**—If there are upgrade failures on the other nodes, the system usually returns to the last known good state. If the system does not roll back to the old version, you can reimage to the new version, register with the new deployment, and enable the personas as done in the old deployment.

Upgrade After Failure

In case of upgrade failures, before you try to upgrade again:

- Analyze the logs. Check the support bundle for errors.
- Identify and resolve the problem by submitting the support bundle that you generated to the Cisco Technical Assistance Center (TAC).

Upgrade Progress

You can view the progress of the upgrade by logging in via SSH and using the `show application status ise` command. The following message appears: % NOTICE: Identity Services Engine upgrade is in progress...

Upgrade Fails During Binary Install

**Problem** An application binary upgrade occurs after the database upgrade. If a binary upgrade failure happens, the following message appears on the console and ADE.log:

```
% Application install/upgrade failed with system removing the corrupted install
```

**Solution** Before you attempt any roll back or recovery, generate a support bundle by using the `backup-logs` command and place the support bundle in a remote repository.

To roll back, reimage the Cisco ISE appliance by using the previous ISO image and restore the data from the backup file. You need a new upgrade bundle each time you retry an upgrade.
- Analyze the logs. Check the support bundle for errors.
- Identify and resolve the problem by submitting the support bundle that you generated to the Cisco Technical Assistance Center (TAC).