



EUROPEAN SOUTHERN OBSERVATORY

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RPM-based pipeline installations in QC

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1 Scope

The current document describes briefly the steps to take in order to have a smooth transition to RPM-based pipeline installations. The document applies to the installation of the QC DFS workstations. The intended audience is IT-Garching.

The document contains several sections with procedures. The following table summarises when to apply a procedure and the section of this document with the required information.

Task	When	Instructions
Upgrade to new DFS 2016	Only March 2016	Section 2
Installation/Upgrade of pipelines	Change of period/Individual pipeline installation	Section 3
Roll-back to ipip-based installations	March 2016 if problems occur	Section 4

2 Upgrading DFS workstations to pipeline RPM-based installations in March 2016

The following instructions describe how to transition from ipip to RPM-based pipeline installations in the DFS workstations. It points to the instructions on the DFS upgrade itself as well as pipeline specific instructions.

The commands found here rename several directories currently used to store the pipeline configuration. These should be renamed and not removed since their content will need to be restored in case RPM-based installation needs to be rolled back.

It remains a task of IT to remove all the directories with the `.obsolete` suffix once the transition has been certified to be successful. We recommend to wait a couple of weeks after the start of period to remove the obsolete directories. If a particular directory does not exist for a specific workstation, skip that step.

All the commands are assumed to be run with root privileges.

1. Follow the general instructions on upgrading to DFS 2016. This includes setting up the proper DFS repository. As of March 2016, the pipelines reside in the same repository as the DFS. See instructions at <https://websqa.hq.eso.org/sdd/bin/view/SEG/Dfs76InstallationPlanDMO>

2. Move away the dictionary where the pipelines were previously installed by ipip:

```
# mv /home/quality/pipelines /home/quality/pipelines.obsolete
```

3. Move away the dictionary where the pipelines were transferred before the installation:

```
# mv /home/quality/pipeline-deliveries \
    /home/quality/pipeline-deliveries.obsolete
```

4. Move away the directory where the instrument DO configuration is installed:

```
# mv /home/quality/DO/instruments \
    /home/quality/DO/instruments.obsolete
```

5. Move away the directory where the instrument RBS configuration is installed:

```
# mv /home/quality/RBS/instruments \
    /home/quality/RBS/instruments.obsolete
```

6. Move away the directory where the instrument RBS scripts are installed:

```
# mv /home/quality/RBS/bin /home/quality/RBS/bin.obsolete
```

7. Move away the directory where the instrument gasgano configuration is installed:

```
# mv /home/quality/gasgano /home/quality/gasgano.obsolete
```

8. Move away the current installed instrument dictionaries

```
# mv /home/quality/qcl/Dictionary \
    /home/quality/qcl/Dictionary.obsolete
```

9. Move away the directories which contain the current OCA rules and pkd rules. This can be done manually by looking at the directories under /cal or with the following bash snippet:

```
# find /cal -maxdepth 1 -mindepth 1 -type d -exec sh -c \
  'if [ -e '{}' /rul ] ; then mv '{}' /rul '{}' /rul.obsolete ; fi' \;
```

Note that in the above command the quotes are simple quotes. Copy and paste from the pdf directly might produce the wrong quote character.

The command simply searches for directories under /cal which are not links and moves the rul directory underneath¹.

¹At least in the case of gravity there is a link *gravi* which points to *gravity*

3 RPM-based pipeline installations

The following instructions are for the installation of pipelines in the DFS workstations. The delivery and deployment process is detailed in appendix A as a reference. The instructions here contain only the system administration part.

All the commands are assumed to be run with root privileges. The command `yum` is chosen as the tool for package management, but other tools like `spacewalk` might be used.

3.1 RPM-based installations of a new pipeline or static data in QC

1. IT is informed via the proper ticketing system that a pipeline or set of pipelines need to be installed in the QC workstations. The ticket information will contain the exact name of the package(s) to install.

As an example, the package names for pipelines follow the convention `esopipe-<pipename>-<version>-recipes`, where `<pipename>` is the name of the pipeline and `<version>` the version. For static data, the package names follow the convention `esopipe-<pipename>-<version>-datastatic`. Those packages names are displayed here just for completeness since the package name will be given by the pipeline developers in the ticket.

As a reference, the currently delivered pipeline names to QC are **amber, crire, detmon, fors, giraf, gravity, hawki, kmoss, muse, naco, omega, pioni, sinfo, spheer, uves, vcam, vimos, visir, xshoo**.

2. Run the following command if this is the **first time** such package is installed.

```
# yum install <package1> <package2>
```

where `<packageX>` refers to the packages mentioned in the ticket.

3. Run the following command if the **packages have been previously installed** in the system.

```
# yum upgrade <package1> <package2>
```

4 Roll back to ipip-based installations

The RPM-based installation will be performed in March 2016. In case something goes fundamentally wrong with the new installation scheme, this rollback procedure will have to be performed in order to be able to install pipeline kits via ipip.

1. Remove all pipeline RPMs already installed (if any):

```
# yum remove esopipe\* esoreflex
```

2. Roll back to a specific DFS release that still supports ipip installations. This DFS release undoes some of the changes in the infrastructure needed for RPM-installations but it keeps other changes relevant for DFS 2016.

The <https://websqa.hq.eso.org/sdd/bin/view/SEG/Dfs76InstallationPlanDMO> page contains instructions on how to perform the rollback.

3. Move back all the directories backed up during the RPM-based transition:

```
# mv /home/quality/pipelines.obsolete /home/quality/pipelines

# mv /home/quality/pipeline-deliveries.obsolete \
    /home/quality/pipeline-deliveries

# mv /home/quality/DO/instruments.obsolete \
    /home/quality/DO/instruments

# mv /home/quality/RBS/instruments.obsolete \
    /home/quality/RBS/instruments

# mv /home/quality/RBS/bin.obsolete /home/quality/RBS/bin

# mv /home/quality/gasgano.obsolete /home/quality/gasgano

# mv /home/quality/qc1/Dictionary.obsolete \
    /home/quality/qc1/Dictionary

# find /cal -maxdepth 1 -mindepth 1 -type d -exec sh -c \
    'if [ -e '{}' /rul.obsolete ] ; then mv '{}' /rul.obsolete '{}' /rul ; fi' \;
```

Note that in the last command the quotes are simple quotes. Copy and paste from the pdf directly might produce the wrong quote character.

4. Install the new pipeline kits with ipip as it has been done before.

A Process to delivery RPM pipeline packages to QC

The following steps describe the process to delivery a new pipeline to QC. This document should apply to all people involved in the process that starts with a "request to install a new pipeline" and ends with "the pipeline is installed and running". Typically the people involved in such process are: QC scientist (QCS), pipeline developer (DEV), IT-Garching (IT).

This delivery process assumes that JIRA refers to <http://jira.eso.org>.

The following are the steps to take to have a new pipeline installation in QC.

1. QCS requests a new pipeline installation through a JIRA ticket.
 - (a) set Project to PIPE.
 - (b) set Component to the specific pipeline.
 - (c) set Issue-Type to Deployment.
 - (d) describe which pipeline version and which machine to install.
2. DEV updates the JIRA ticket: implementation/testing completed.
3. DEV requests package creation.
4. DEV resolves the JIRA ticket: new pipeline version is available for installation.
 - (a) DEV gives the exact name of the RPM package(s) to be installed.
5. QCS assigns the JIRA ticket to IT to go ahead with the installation.
6. IT perform the RPM installation.
7. IT resolve the JIRA ticket.
8. QCS verifies the installation.
9. QCS closes the JIRA ticket (assuming a successful delivery).

If for some reason, the pipeline installation does not work, QCS should update the JIRA ticket so that IT or DEV can verify the failure.