Foswiki > FLAO Web > SoftwareDevelopment > OsIssues > OsConfiguration > CentOS67Installation

(25 Sep 2015, AoAdmin)

Installation of FLAO Supervisor on CentOS 6/7 - x86_64

Note: For the general procedure see: OsConfiguration

OS installation

OS installation and configuration, following the steps described in the following paragraphs, must be done with root privileges. The corresponding paragraphs are marked with: **[OS]**

Install selecting the "software development workstation" setting. This will install most required packages automatically. After the installation from a distribution media, a full update is suggested.

The list of RPMs after OS installation + upgrade is in rpmlist-centos6.txt

[OS] Add non-default repositories

Some packages (mainly related to Qt version 3) are not available in the default CentOS6.x repository, You must add the **epel** repository it to the yum list as shown in the following example:

```
wget http://dl.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
rpm -Uvh epel-release-6-8.noarch.rpm
```

NOTE: the exact download URL will be usually different due to new versions of the epel repository, and depends on the target architecture. At the moment of writing we have:

CentOS 6	http://dl.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
CentOS 7	http://dl.fedoraproject.org/pub/epel/7/e/epel-release-7-5.noarch.rpm

[OS] Add Zeroc-ice repository

Note: Ice 3.6 which is the lates available at the momento of this writing seems not to provide RPMs for python support. Thjere is a python package available from PYPI, but only for python 3. We currently choose to develop against Ice 3.5

The easiest way is to add the file: `/etc/yum.repos.d/zeroc-ice.repo` with the following content:

- For Ice 3.4

```
[zeroc-ice]
name=Ice 3.4 for RHEL $releasever - $basearch
baseurl=http://www.zeroc.com/download/Ice/3.4/rhel$releasever/$basearch
enabled=1
gpgcheck=1
gpgkey=http://www.zeroc.com/download/RPM-GPG-KEY-zeroc-release
```

- For Ice 3.5

```
[zeroc-ice]
name=Ice 3.5 for RHEL $releasever - $basearch
baseurl=http://www.zeroc.com/download/Ice/3.5/rhel$releasever/$basearch
enabled=1
gpgcheck=1
gpgkey=http://www.zeroc.com/download/RPM-GPG-KEY-zeroc-release
```

[OS] Install additional packages

The following are required packages from the CentOS distribution:

```
yum install PyQt gmp-devel pyfits designer qt3-config kdelibs3-devel libXpm-devel cfitsio-devel
```

Note: designer is not available in CentOS 6.7 but is not requried for building the FLAO Supervisor.

Then we need the ICE packages:

```
yum install ice ice-libs ice-c++-devel ice-python ice-python-devel
```

Note: the FLAO supervisor build procedure requires that a "version independent" link is created:

```
 ln -s /usr/share/Ice-3.4.2 /usr/share/Ice
```

[OS] Install IDL

You must follows directions provided by IDL vendor. Current tested version is IDL 7.1, but other releases may work also.

[OS] IDL related notes

Note 1: do not forget to install/configure the licence

Note 2: Under CentOS 6.x the **idlrpc**server can only be started with root privileges. As an alternative Exelis suggests to also specify the port as follows:

```
idlrpc -port=0x20001000
```

This seems not to work in all circumstances. We found more stable a different solution:

- Change to **root** the ownership of the `idlrpc` executable and declare the same file **setuid**:

```
chown root <idl_rpc_executable>
chmod -s <idl_rpc_executable>
```

The location of the executable file depends on the IDL release. The FLAO installation procedure has a tool to find where IDL is installed, so you can delay this step after the preparation of the installation environment described below.

[OS] Add shared libraries to the runtime path

Create library path files as follows:

```
echo /usr/local/qwt-5.1.2/lib > /etc/ld.so.conf.d/qwt.conf
echo /usr/local/exelis/idl84/bin/bin.linux.x86_64 > /etc/ld.so.conf.d/idl.conf
```

Then refresh the path:

```
/sbin/ldconfig -v
```

Bulding a test version of FLAO Supervisor

The FLAO Supervisor can (and must) be built and tested from any convenient account which will not be used for the production installation. The account needs (and must have) only normal user privileges. Here follows the description of main steps.

Checkout FLAO Supervisor source tree and prepare for building

You must checkout from the proper SVN repository to get the FLAO version you want to install into any convenient directory. The following example gets the source tree from the SVN trunk and checks it out onto `./source` (You have to specify an authorized username and you'll be prompted for a password):

```
svn checkout
"svn+ssh://username@adopt.arcetri.astro.it/aogroup/svn/AOSupervisor/trunk
source"
cd source
```

Then you must set up the environment to allow compilation:

```
python prepare.py make
source flao_environment.sh
```

The prepare procedure creates some working directories on your HOME checks the availability of IDL and creates the file **`flao_environment.sh`** with the environment definition required for the compilation of FLAO Supervisor.

You may want to add the source command to your environment setup procedure at login (usually **`.bashrc`**) to have it executed at every login.

Note: If the prepare.pyprocedure has executed correctly, you now can find the location of IDL executable files as follows:

```
echo $IDLLIBDIR
```

And you can modify **`idlrpc`** properties as directed above (see paragraph on IDL)

Building and installing

NOTE: please be sure you have sourced the environment definition procedure **`flao_environment.sh`** before attempting to build the Supervisor.

The FLAO Supervisor build process is in four steps:

1. Build the contributed software

   ```
   cd $ADOPT_SOURCE/contrib
   make (see note below)
   sudo make install
   ```

2. Compile and install the Supervisor

```
cd $ADOPT_SOURCE
make
make install
```

3. Install configuration and calibration files

```
cd $ADOPT_SOURCE
make install_conf
make install_calib
```

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Attachments (1)

Attach files Show options

rpmlist-centos6.txt (51.88K)

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