Manual for OpenSCADA building from sources

Introduction

This manual made for help on OpenSCADA building from sources. In process of accumulation of experience of building for different OS Linux distributions and others platforms generally, this document will be complement for tips and details of building for different environments.

The document also contain information about preset configuration of built system of OpenSCADA, for complete start with using of present, included to sources, demo DB (model "AGLKS").

System OpenSCADA building

Build system must be executed from normal system user name. Thus described variants of installing and execution how global and local, to user directory. Get what user login is - "user".

Before building enter as common user and change user login to your, get sources (from ftp/http-server or SVN-repository), select install method (global or local) and follow instruction:

Steps of preparation of the source tree to build:

1. Make directory for project building:
```
$ mkdir ~/projects; cd ~/projects
```
2. Download sources package. It may be made from two ways:
   - download tar archive from ftp-server ftp://ftp.oscada.org/OpenSCADA/ and unpacked it, for example:
```
$ wget ftp://ftp.oscada.org/OpenSCADA/0.7.1/openscada-0.7.1.tar.lzma
$ wget ftp://ftp.oscada.org/OpenSCADA/0.7.1/openscada-res-0.7.1.tar.lzma
$ tar --lzma -xvf openscada-0.7.1.tar.lzma
$ cd openscada-0.7.1
$ tar --lzma -xvf ../openscada-res-0.7.1.tar.lzma
```
   - get project's source tree from SVN-repository:
```
$ svn co svn://oscada.org/trunk/OpenSCADA $ cd OpenSCADA
```
3. Resolve OpenSCADA dependents for build, on according demands. Exclude dependents in case of inability its by help of option --disable-{ModName} into comman "configure" below, for example --disable-SoundCard.
4. Generate of build system, when download from the SVN-repository:
```
$ autoreconf -ivf
```

Steps of global building:

1. Configuring building system of OpenSCADA:
```
$ ./configure CFLAGS="-O2" CXXFLAGS="-O2"
```
2. Make OpenSCADA project:
```
$ make
```
3. Install OpenSCADA:
```
$ su; make install
```
4. Copy start script and configuration file of demonstration:
```
$ cp data/ModelsDB/AGLKS/openscada_demo /usr/bin
$ cp data/ModelsDB/AGLKS/oscada_AGLKS.xml /etc
```
5. Make data directory and fill it:
```
$ mkdir /var/spool/openscada
$ mkdir /var/spool/openscada/{DATA,icons,LibsDB,AGLKS}
```

```
$ cp data/LibsDB/*.db /var/spool/openscada/LibsDB
$ cp data/ModelsDB/AGLKS/*.db /var/spool/openscada/AGLKS
$ cp data/icons/* /var/spool/openscada/icons
$ install -m 777 -d /var/spool/openscada/ARCHIVES/{MESS,VAL}
```

6. System ready to start:

```
$ exit; openscada_demo
```

Steps of local building:

1. Configuring building system of OpenSCADA:

```
$ mkdir ~/OScadaW; ./configure CFLAGS="-O2" CXXFLAGS="-O2"
--prefix=/home/user/OScadaW
```

2. Make OpenSCADA project:

```
$ make
```

3. Install OpenSCADA:

```
$ make install
```

4. Copy start script and configuration file of demonstration:

```
$ cp data/ModelsDB/AGLKS/openscada_demo_local ~/OScadaW/bin/openscada_demo
$ mkdir ~/OScadaW/etc
$ cp data/ModelsDB/AGLKS/oscada_demo_local.xml ~/OScadaW/etc/oscada_demo.xml
```

5. Make data directory and fill it:

```
$ mkdir ~/OScadaW/share/openscada
$ mkdir ~/OScadaW/share/openscada/{DATA,icons,LibsDB,AGLKS}
$ cp data/LibsDB/*.db ~/OScadaW/share/openscada/LibsDB
$ cp data/ModelsDB/AGLKS/*.db ~/OScadaW/share/openscada/AGLKS
$ cp data/icons/* ~/OScadaW/share/openscada/icons
$ install -m 777 -d ~/OScadaW/share/openscada/ARCHIVES/{MESS,VAL}
```

6. System ready to start:

```
$ cd ~/OScadaW/bin; ./openscada_demo
```