

Installing xerces-c Library

The information in this document is targeted primarily towards the RFPK Software Team and associates and is specific to the computer systems and network installed in the RFPK Laboratory of the Department of Bioengineering of the University of Washington. RFPK is the Resource for Population Kinetics. Its work is supported, in part, by grant P41 EB-001975 of the National Institutes of Health (NIH) of the U.S. Department of Health and Human Services.

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Preparation (for update)

If this is a virgin installation, skip this section. Follow the following instructions if you are going to update the library.

1. Locate the old installation (libraries and headers).

```
locate xerces-c
```

It will list xerces-c libraries (i.e. libxerces-XXX) and xerces header files if there is any, as well as source code files if you had built xerces-c in the past. On my machine I found:

```
/usr/local/lib/libxerces-c.so
/usr/local/lib/libxerces-c.so.26
/usr/local/lib/libxerces-c.so.26.0
/usr/local/lib/libxerces-depdom.so
/usr/local/lib/libxerces-depdom.so.26
/usr/local/lib/libxerces-depdom.so.26.0
/usr/local/include/xercesc/
```

and previous built remenants:

```
/usr/src/redhat/BUILD/xerces-c-src_2_6_0/...
```

2. If you had the previous built remenants, you may be able to run "make uninstall". Go `/usr/local/readhat/BUILD/xerces-c-src_2_6_0/src/xercesc` and run "make uninstall" as root. If not, delete (or rename/backup, whichever you prefer) the old libraries and headers.

Deletion of the previous built remenants is optional. I personally prefer keeping the build remenants as long as HD space is not the issue but you can eliminate them if you like.

Download a new version

We want a source distribution so that we can install the same version of libraries for both 32-bit and 64-bit machines for sure.

1. Obtain Xerces-C version 2.7.0.

```
cd /tmp
scp whitechuck:/opt/download/xerces-c-src_2_7_0.tar.gz .
```

2. Make a directory, `/usr/src/redhat/BUILD/` as root. The following command will make parent directories as needed and make no fuss even if the directory already exists.

```
su
mkdir -p /usr/src/redhat/BUILD
```

3. Move the downloaded tar archive to the directly and extract it there as root:

```
mv xerces-c-src_2_7_0.tar.gz /usr/src/redhat/BUILD/
cd /usr/src/redhat/BUILD
tar xvzf xerces-c-src_2_7_0.tar.gz
exit
```

It will create a subdirectory `xerces-c-2_7_0`.

4. Open `~/.bash_profile` with your favorite editor as an ordinary user. Insert the following entries.

```
export LD_LIBRARY_PATH=/usr/local/lib

# This variable is needed only for xerces-c build and installation.
export XERCESCROOT=/usr/src/redhat/BUILD/xerces-c-src_2_7_0
```

`XERCESCROOT` is only needed during the build and installation process.

5. Load the new `~/.bash_profile`.

```
cd
source ~/.bash_profile
```

6. Run the following as root to build and install the xerces-c package.

```
su
cd $XERCESCROOT/src/xercesc
autoconf
./runConfigure -plinux -P/usr/local
make
make install
```

This should have installed 6 libraries in `/usr/local/lib`. In my case:

```
ls /usr/local/lib | grep xerces

libxerces-c.so
libxerces-c.so.27
libxerces-c.so.27.0
libxerces-depdom.so
libxerces-depdom.so.27
libxerces-depdom.so.27.0
```

In `/usr/local/include`, I found:

```
ls -al /usr/local/include/xercesc
```

```
lrwxrwxrwx    1 root  root   56 Dec  7  2004 /usr/local/include/xercesc -> /usr/src
```

!!! The soft link is point to the old distribution's include directory!
/usr/local/include/xerces must be point the new one! I'll manually link it.

```
cd /usr/local/include  
rm xercesc  
ln -s $XERCESROOT/include/xercesc xercesc
```

7. Finally, you must fresh-build (and install if necessarilly) SPK components in the following order:
 - a. spkopt Library
 - b. spk Library
 - c. spkpred Library
 - d. spkcompiler
- 8.

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Notes

1. <http://www.opencontent.org/openpub/>

