Installing the R CausalImpact Package on CentOS 7

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To install the `CausalImpact` package for R on CentOS 7 requires gcc 4.9 or later to build the dependency packages *bsts* and *Boom*.

Download the latest 4.x branch of gcc by browsing to https://gcc.gnu.org/releases.html, This page will direct you to a mirror repository. At the time time of this writing, gcc-4.9.3 is the current 4.x branch.Use the following as an example to get the latest release:

```
mkdir -p src/gcc && cd src/gcc
wget http://mirrors-usa.go-parts.com/gcc/releases/gcc-4.9.3/gcc-4.9.3.tar.bz2
tar xfv gcc-4.9.3.tar.bz2
cd gcc-4.9.3
```

Next, run the build:

```
sudo yum groupinstall "Development Tools"
sudo yum install gcc libmpc-devel mpfr-devel gmp-devel git openssl-devel libcurl-devel

./configure --disable-multilib --enable-languages=c,c++,fortran
make -j 8
sudo make install
```

Troubleshooting the build is out of scope for this document but common errors include missing libraries or compiler tools and low disk space.

Then, let the dynamic linker know about your new build:

```
echo "/usr/local/lib64" | sudo tee /etc/ld.so.conf.d/gcc-4.9.3.conf
sudo /sbin/ldconfig
```

Configuring R
Once your compilers are installed, we adjust our PATH environment variable to pick up the newest gcc. Add the following line to your ~/.bash_profile:

```
export PATH=/usr/local/bin:$PATH
```

Logout then log back in to apply the change (or set your PATH variable manually).

At this you should be able to install CausalImpact. Start R then build the packages:

```
sudo yum install git openssl-devel libcurl-devel

R
> install.packages(c("RCurl","httr","devtools"))
> install.packages("bsts")
> devtools::install_github("google/CausalImpact")
```

Note that building these libraries take quite a chunk of disk space. At least 2G free in /tmp is recommended and 1G in the library installation location. If you are installing libraries to your user's home directory, this will default to ~/R.

https://google.github.io/CausalImpact/CausalImpact.html