**GDAL installation on Linux RedHat 7.5:**

To install GDAL using command line first we need to enable EPEL:

What is EPEL?

EPEL (Extra Packages for Enterprise Linux) is open source and free community-based repository project from Fedora team which provides 100% high quality add-on software packages for Linux distribution including RHEL (Red Hat Enterprise Linux), CentOS, and Scientific Linux.

1. Enable EPEL repository:

source: <https://www.tecmint.com/how-to-enable-epel-repository-for-rhel-centos-6-5/>

For RHEL/CentOS 7 64 Bit,

Type the following commands in the terminal:

wget <http://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm>

rpm -ivh epel-release-latest-7.noarch.rpm

1. Verify EPEL repository,

Command line,

yum repolist

1. Now EPEL is ready for installing packages. Run the following command in the terminal to make sure that EPEL is installed and enabled:

yum install epel-release

1. Then install the GDAL package by using the following command line:

yum install gdal

1. Also, to have development packages we can run the following command in the terminal:

yum install gdal gdal-devel

The other alternative for installing GDAL is the following steps:

Source: <https://gist.github.com/simondobner/f859b2db15ad65090c3c316d3c224f45>

cd /tmp

wget http://download.osgeo.org/gdal/2.2.1/gdal-2.2.1.tar.gz

tar zxvf gdal-2.2.1.tar.gz

cd gdal-2.2.1/

./configure --prefix=/usr/ --with-sfcgal=no

# (if you get missing dependencites, try ./configure --help to see if you can turn off that function, like with sfcgal)

make -j4

sudo make install

**GIS installation on Linux RedHat 7.5:**

Source: <https://postgis.net/docs/postgis_installation.html#install_requirements>

**Required**

* PostgreSQL 9.3 or higher. A complete installation of PostgreSQL (including server headers) is required. PostgreSQL is available from <http://www.postgresql.org>.

For a full PostgreSQL / PostGIS support matrix and PostGIS/GEOS support matrix refer to <http://trac.osgeo.org/postgis/wiki/UsersWikiPostgreSQLPostGIS>

* GNU C compiler (gcc). Some other ANSI C compilers can be used to compile PostGIS, but we find far fewer problems when compiling with gcc.
* GNU Make (gmake or make). For many systems, GNU make is the default version of make. Check the version by invoking make -v. Other versions of make may not process the PostGIS Makefileproperly.
* Proj4 reprojection library, version 4.6.0 or greater. Proj4 4.9 or above is needed to take advantage of improved geodetic. The Proj4 library is used to provide coordinate reprojection support within PostGIS. Proj4 is available for download from <http://trac.osgeo.org/proj/>.
* GEOS geometry library, version 3.4 or greater, but GEOS 3.7+ is recommended to take full advantage of all the new functions and features. You should have at least GEOS 3.5, without which you will be missing some major enhancements such as [ST\_ClipByBox2D](https://postgis.net/docs/ST_ClipByBox2D.html) and [ST\_Subdivide](https://postgis.net/docs/ST_Subdivide.html). GEOS is available for download from <http://trac.osgeo.org/geos/>and 3.5+ is backward-compatible with older versions so fairly safe to upgrade.
* LibXML2, version 2.5.x or higher. LibXML2 is currently used in some imports functions (ST\_GeomFromGML and ST\_GeomFromKML). LibXML2 is available for download from<http://xmlsoft.org/downloads.html>.
* JSON-C, version 0.9 or higher. JSON-C is currently used to import GeoJSON via the function ST\_GeomFromGeoJson. JSON-C is available for download from [https://github.com/json-c/json-c/releases/](https://github.com/json-c/json-c/releases).
* GDAL, version 1.8 or higher (1.9 or higher is strongly recommended since some things will not work well or behavior differently with lower versions). This is required for raster support and to be able to install with CREATE EXTENSION postgis so highly recommended for those running 9.1+. <http://trac.osgeo.org/gdal/wiki/DownloadSource>.

**Possible Errors**

Error:

configure: error: could not find geos-config within the current path. You may need to try re-running configure with a --with-geosconfig parameter.

Solution:

Install GEOS by using the following command line:

sudo yum install geos geos-devel

Or go to this link (https://trac.osgeo.org/geos/) and download the latest version of GEOS and install it from command line terminal.

Error:

configure: error: could not find proj\_api.h - you may need to specify the directory of a PROJ.4 installation using --with-projdir

Solution:

If PROJ.4 is not installed, the install the PROJ.4 by using the following command line or go to the <http://trac.osgeo.org/proj/> to download that and install it manually,

sudo yum install proj

If it is installed then we need to find its directory and specify that in the ./configure process by using the following commands,

Which proj # gives us the path of proj, then specify it in the following command

./configure --with-projdir=/bin/proj

If we are still getting error for PROJ.4, then we need to install the latest version by the following steps in using terminal:

mkdir proj4

cd proj4

curl -O <http://download.osgeo.org/proj/proj-4.9.1.tar.gz>

gunzip proj-4.9.1.tar.gz

tar xf proj-4.9.1.tar

cd proj-4.9.1

./configure

make

make check

make install