Installation Instructions (LINUX)

for Materials Data Curation System

**For Operating System:**

Linux

**Prerequisites**

Python 2.7.2 (brew install python)

pip ([http://pip.readthedocs.org/en/latest](http://pip.readthedocs.org/en/latest/))

Java 1.7 or higher

Install Python:

cd ~/

curl -L [http://www.python.org/ftp/python/2.7.2/Python-2.7.2.tgz > Python-2.7.2.tgz](http://www.python.org/ftp/python/2.7.2/Python-2.7.2.tgz)

tar xzf Python-2.7.2.tgz

cd python-2.7.2

./configure (if Mac pop-up prompts for gcc Mac package, click on Install, and run again)

make altinstall prefix=~/usr/local exec-prefix=~/usr/local

alias python='~/usr/local/bin/python2.7'

Install pip:

curl<https://bootstrap.pypa.io/get-pip.py> > get-pip.py

python get-pip.py

alias pip=~/usr/local/bin/pip

Any installed package via pip will now go under your '~/usr/local/lib/python2.7/site-packages' directory.

Install Java:

Make sure Java JDK 1.7 or higher is installed (<http://www.oracle.com/technetwork/java/javase/downloads/index.html>)

Debian, Ubuntu, etc.:

sudo apt-get install openjdk-7-jdk

Fedora, Oracle Linux, Red Hat Enterprise Linux, etc.:

su -c "yum install java-1.7.0-openjdk-devel"

**Setup:**

We need pip to do the installation of the required dependencies. pip requires setuptools and it has to be installed first, before pip can run: <http://www.pip-installer.org/en/latest/installing.html>

Checkout MGI repository into ~/Develop/Workspaces

cd ~/Develop

mkdir Env

pip install virtualenvwrapper (<http://virtualenvwrapper.readthedocs.org/en/latest/>)

export WORKON\_HOME=~/Develop/Envs

mkdir -p $WORKON\_HOME

source ~/usr/local/bin/virtualenvwrapper.sh

mkvirtualenv mgi

source ~/usr/local/bin/virtualenvwrapper.sh

workon mgi

**Configure MongoDB:**

Please follow general instructions provided in the file called MongoDB Configuration.

**For Apache Jena (in a new terminal):**

There are two options, depending on if you have the Java jar file or source code:

Option 1: Compile the source code and run the jar

cd <PROJECT PATH>/mdcs/rdf

javac -classpath "lib/\*" RdfServer.java SparqlServer.java JenaServers.java

java -cp ".:lib/\*" JenaServers -rdfserver\_endpoint 'tcp://127.0.0.1:5555' -sparqlserver\_endpoint 'tcp://127.0.0.1:5556' -tdb\_directory '/path/to/mdcs/data/ts' -project\_uri 'http://www.example.com/'

Option 2: Run the jar

cd <PROJECT PATH>/mdcs/rdf

java -cp ".:lib/\*" JenaServers -rdfserver\_endpoint 'tcp://127.0.0.1:5555' -sparqlserver\_endpoint 'tcp://127.0.0.1:5556' -tdb\_directory '/path/to/mdcs/data/ts' -project\_uri '<http://www.example.com/>'

To query the RDF DB:

sh fuseki-server --loc=/path/to/mdcs/data/ts /ts

**Install all required python packages (in a new terminal):**

Use the file called Required Python Packages to install them in their good version. If you are using a virtual environment, make sure it is activated before starting the installation. Instructions specific to Linux platform can be found below.

**For lxml:**

If you get the error “clang error: linker command failed”, then run the following command instead:

STATIC\_DEPS=true pip install lxml (<http://lxml.de/installation.html>)

**Running the MDCS for the first time:**

1. Run mongodb (if not already running). In a command prompt :

mongod --config /path/to/mdcs/conf/mongodb.conf

1. python manage.py syncdb

Answer yes to:

You just installed Django's auth system, which means you don't have any superusers defined.

Would you like to create one now? (yes/no):yes

**To Run the software:**

1. Run mongodb (if not already running). In a command prompt :

mongod --config /path/to/mdcs/conf/mongodb.conf

1. Run Jena. In a command prompt :

java -cp “lib/\*;.” JenaServers -rdfserver\_endpoint “tcp://127.0.0.1:5555” -sparqlserver\_endpoint “tcp://127.0.0.1:5556” -tdb\_directory <path/to/mdcs/data/ts> -project\_uri <”http://www.example.com”>

1. Run the MDCS. In a command prompt :

workon mgi

cd path/to/mdcs

python manage.py runserver

To be able to access the system **remotely**, instead of using python manage.py runserver, use: python manage.py runserver 0.0.0.0:<port>

**Access:**

For Materials Data Curation System, Go to: <http://127.0.0.1:8000/>

For Materials Data Curation Administration, Go to: <http://127.0.0.1:8000/admin/>