**CouchDB**

**Introduction:**

* CouchDB is a NoSQL DB
* JSON document-oriented database
* It is an AP system based on Peer to Peer replication model.
* It allows applications to store JSON documents via its **RESTful interface.**
* It makes use of map/reduce to index and query the database.

**REST APIs:**

* POST - creates a new record
* GET - reads records
* PUT - updates a record
* DELETE - deletes a record

**Basic queries:**

Create a DB

$ curl -X PUT <http://127.0.0.1:5984/database_name>

Verify if DB is created using: $ curl -X GET <http://127.0.0.1:5984/_all_dbs>

Deleting a DB

$ curl -X DELETE <http://127.0.0.1:5984/database_name>

Creating a document

$ curl -X PUT http://127.0.0.1:5984/database name/"id" -d ' { document} '

Retrieving a document:

$ curl -X GET http://127.0.0.1:5984/my\_database/001

Updating a document:

curl -X PUT http://127.0.0.1:5984/database\_name/document\_id/ -d '{ "field" : "value", "\_rev" : "revision id" }'

Deleting a Document:

curl -X DELETE <http://127.0.0.1:5984/database_name/database_id?_rev>

**Installing CouchDB 1.5.1 on Amazon Linux AMI**

1. Enable the EPEL Repo by editing the file /etc/yum.repos.d/epel.repo and setting it to enabled.
2. Next install the deps and tools.

sudo yum install gcc gcc-c++ libtool libicu-devel openssl-devel autoconf-archive erlang python27 python-sphinx help2man

**Get the SpiderMonkey JS Engine and build it.**

wget http://ftp.mozilla.org/pub/mozilla.org/js/js185-1.0.0.tar.gz

tar xvfz js185-1.0.0.tar.gz

cd js-1.8.5/js/src

./configure

make

sudo make install

You should see it installed under /usr/local/lib

**Build CouchDB.**

Download the source package for CouchDB, unpack it and cd in.

Point it to the required libs and configure.

./configure --with-erlang=/usr/lib64/erlang/usr/include --with-js-lib=/usr/local/lib/ --with-js-include=/usr/local/include/js/

make

sudo make install

**Prepare the CouchDB installation.**

1. Make a couchdb user.

sudo useradd -r -d /usr/local/var/lib/couchdb -M -s /bin/bash couchdb

1. Set the file ownerships.

sudo chown -R couchdb:couchdb /usr/local/etc/couchdb

sudo chown -R couchdb:couchdb /usr/local/var/lib/couchdb

sudo chown -R couchdb:couchdb /usr/local/var/log/couchdb

sudo chown -R couchdb:couchdb /usr/local/var/run/couchdb

sudo chmod 0775 /usr/local/etc/couchdb

sudo chmod 0775 /usr/local/var/lib/couchdb

sudo chmod 0775 /usr/local/var/log/couchdb

sudo chmod 0775 /usr/local/var/run/couchdb

**Prepare the init scripts.**

1. Link the init script and copy the log rotate script to /etc.

sudo cp /usr/local/etc/logrotate.d/couchdb /etc/logrotate.d

sudo ln -s /usr/local/etc/rc.d/couchdb /etc/init.d/couchdb

1. This and most other linux distros don’t include /usr/local/lib in ld, so CouchDB will have problems finding the SpiderMonkey libs we installed there earlier. One way to solve this is to add the following line to the top of the /etc/init.d/couchdb startup script.

export LD\_LIBRARY\_PATH=/usr/local/lib

See man page for ldconfig for more info and tweet back with a better solution.

1. You may want to edit /usr/local/etc/default/couchdb to turn off the auto respawn.
2. To get it to autostart, just use the standard linux setup tools for running service scripts.

sudo chkconfig --add couchdb

It should pick up the default run levels needed from the script, but in case it doesn’t, you can do it manually like this...

sudo chkconfig --level 3 couchdb on

sudo chkconfig --level 4 couchdb on

sudo chkconfig --level 5 couchdb on

You can sudo chkconfig —list to confirm it’s there. See man chkconfig for more details.

**Finally reboot (or just start couchdb from the script) and confirm its running with curl http://127.0.0.1:5984/**

**How to replicate a CouchDB database**

<https://wiki.apache.org/couchdb/How_to_replicate_a_database>