Installing Preview ReDBox 2.0

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This guide is for installing a preview version of ReDBox 2.0 on a Linux VM. It was originally written for the Open Repositories 2018 Introducing ReDBox workshop.

- This install works for running on a NeCTAR VM with Ubuntu 16.04 Xenial
- This is a straight forward source install.
- Assumes commands are entered in the VM shell using Putty or similar.
- Also assumes you are not logged in as root but have sudo access.
- Get your VM's IP or address (e.g. `hostname -I`) or assigned URL.

1. Install the environment

1.1. Install Node.js

Info can be found at https://Node.js.org/en/download/package-manager/#debian-and-ubuntu-based-linux-distributions

```
curl -sL https://deb.nodesource.com/setup_8.x | sudo -E bash -
sudo apt-get install -y Node.js
```

1.2. Reload local package database.

Issue the following command to reload the local package database:

```
sudo apt-get update
```

1.3. Install Java

```
sudo apt-get install openjdk-8-jre-headless
```

1.4. MongoDB

Info can be found at https://docs.mongodb.com/manual/tutorial/install-mongodb-on-ubuntu/ Warning, the instructions change fast. Refer to the instructions on the mongodb docs website over these.

Import the public key used by the package management system.

The Ubuntu package management tools (i.e. `dpkg` and `apt`) ensure package consistency and authenticity by requiring that distributors sign packages with GPG keys. The key changes frequently, so you need the latest command. Go to the docs listed above and look for the command to import the MongoDB public GPG Key, it will look like this:

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv
2930ADAE8CAF5059EE73BB4B58712A2291FA4AD5
```

Create a list file for MongoDB.

Create the `/etc/apt/sources.list.d/mongodb-org-3.6.list` list file using the command appropriate for your version of Ubuntu:

```
echo "deb [ arch=amd64,arm64 ] https://repo.mongodb.org/apt/ubuntu
xenial/mongodb-org/3.6 multiverse" | sudo tee
/etc/apt/sources.list.d/mongodb-org-3.6.list
```

Reload the local package database

```
sudo apt-get update
```

Install the MongoDB packages.

To install the latest stable version of MongoDB, issue the following command:

```
sudo apt-get install -y mongodb-org
```

Start MongoDB.

Issue the following command to start mongod:

```
sudo service mongod start
```

Verify that MongoDB has started successfully

Verify that the mongod process has started successfully by checking the contents of the log file at /var/log/mongodb/mongod.log for a line reading: [initandlisten] waiting for connections on port 27017

1.5. Install nginx

More details on installing the NGINX web server can be found at
https://www.nginx.com/resources/wiki/start/topics/tutorials/install/

```
sudo apt-get install nginx
```

```
Update the config file for reverse proxy configuration
```

```
sudo su
```

Create the httpd.conf file. Substitute your name or suitably meaningful name in the following

```
cat <<'EOF' >> /etc/nginx/conf.d/default.conf
server {
listen 80;
server_name  [yourname].redboxresearchdata.com.au;

#charset koi8-r;
#access_log  /var/log/nginx/log/host.access.log  main;

# redirect server error pages to the static page /50x.html
#
error_page   500 502 503 504  /50x.html;
location = /50x.html {
root   /usr/share/nginx/html;
}
```

```
add_header   Strict-Transport-Security "max-age=31536000;
includeSubdomains";
add_header   X-Content-Type-Options nosniff;
add_header   X-Frame-Options DENY;

location / {
proxy_pass http://localhost:1337;
proxy_set_header Host $host;
proxy_set_header X-Real-IP $remote_addr;
proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
proxy_set_header X-Forwarded-Proto http;


}

location /mint {
proxy_pass http://localhost:9001/mint;
proxy_set_header Host $host;
proxy_set_header X-Real-IP $remote_addr;
proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
proxy_set_header X-Forwarded-Proto http;


}


}
EOF
```

Then

```
exit (ctrl-d)
```

```
sudo cp /etc/nginx/sites-available/default /etc/nginx/sites-
available/default.old
```

```
sudo cp /etc/nginx/conf.d/default.conf /etc/nginx/sites-
available/default
```

```
sudo service nginx restart
```

Note if things aren't working (pages not loading, etc) the nginx logs are at /var/log/nginx/error.log

1.6. Install GIT

```
sudo apt-get install git-core
```

1.7. Install Yarn and PM2

Once you have a Node.js environment installed install the following dependencies globally using the `npm install -g <dependency>` command:

- yarn
- pm2

so:

```
sudo npm install -g yarn
```

```
sudo npm install -g pm2
```

2. Install ReDBox

2.1. Install Mint

Install Mint

```
cd /opt
```

```
sudo wget
"http://dev.redboxresearchdata.com.au/nexus/service/local/arti
fact/maven/redirect?r=snapshots&g=com.googlecode.redbox-
mint&a=mint-distro&v=LATEST&c=build&e=tar.gz" -O "mint.tar.gz"
```

```
sudo tar -xvzf mint.tar.gz
```

```
sudo chown -R $USER:$(id -gn $USER) /opt/mint/
```

```
sudo rm mint.tar.gz
```

Edit the environment variables and change line 6 "http://localhost:9001/mint/" replacing localhost:9001 with your server ip or domain name address.

Start Mint

```
cd /opt/mint/server/
```

```
./tf.sh start
```

Checking it is working properly

View `/opt/mint/home/logs/main.log` and check that it finishes with a message about all Queues Starting Successfully. If not check `/opt/mint/home/logs/stdout.out` and `/opt/mint/home/logs/spring.log`

2.2. Install ReDBox

Install ReDBox

```
cd /opt
```

```
sudo wget
"http://dev.redboxresearchdata.com.au/nexus/service/local/artifact/ma
ven/redirect?r=snapshots&g=com.googlecode.redbox-mint&a=redbox-
distro&v=2.0-SNAPSHOT&c=build&e=tar.gz" -O "redbox.tar.gz"
```

```
sudo tar -xvzf redbox.tar.gz
```

```
sudo chown -R $USER:$(id -gn $USER) /opt/redbox/
```

```
sudo rm redbox.tar.gz
```

Edit the environment variables if required in /opt/redbox/server/tf_env.sh (shouldn't need to).

Start ReDBox

```
cd /opt/redbox/server/
```

```
./tf.sh start
```

Checking it is working properly

View `/opt/redbox/home/logs/main.log` and check that it finishes with a message about all Queues Starting Successfully. If not check `/opt/redbox/home/logs/stdout.out` and `/opt/redbox/home/logs/spring.log`

2.3. Install RedBox-Portal

Install ReDBox Portal

Currently the portal is installed using git clone, but the release will use NPM.

Make sure git clones with https.

```
sudo git config --global url."https://".insteadOf git://
```

```
git config --global url."https://".insteadOf git://
```

Clone the repo.

```
cd /opt
```

```
sudo git clone -b dev_build https://github.com/redbox-mint/redbox-portal.git
```

Overlay any specialised configuration files

Populate the dependencies

```
cd /opt/redbox-portal
```

```
sudo yarn
```

Set Permissions

```
sudo chown -R $USER:$(id -gn $USER) /opt/redbox-portal/
```

```
sudo chown -R $USER:$(id -gn $USER) /home/ubuntu/.config
```

Run the ReDBox configuration script

```
node configureInstall.js
```

When the configuration script asks you which apikey to use, let it default as it will generate the apikey and place it both into the ReDBox Storage `/opt/redbox/data/security/apiKeys.json` and `/opt/redbox-portal/ecosystem.json`

When the configuration script asks you which URL the application will be accessed from, enter the IP address of the VM you are installing to (e.g. http://203.101.226.157) or its domain name.

Restart ReDBox Storage

```
cd /opt/redbox/server/
```

```
./tf.sh restart
```

(check logs)

Start ReDBox Portal

```
cd /opt/redbox-portal/
```

Setup PM2 (Process Manager for Node.JS) to run on init

```
pm2 startup systemd
```

```
and follow the instructions (if any) for pasting startup commands,
e.g: sudo env PATH=$PATH:/usr/bin /usr/lib/node_modules/pm2/bin/pm2
startup systemd -u ubuntu --hp /home/ubuntu
```

Start the application

```
pm2 start ecosystem.json
```

Save the PM2 configuration

```
pm2 save
```

Check for errors

```
pm2 logs
```

should say "App lifted successfully".

Check the application

Go to http://[youripaddress]/default/rdmp/home eg
http://203.101.226.208/default/rdmp/home

Login as Admin using l/p: admin/rbadmin

Also check Mint

Go to the IP address or domain in your browser and add mint/default/home, e.g.
http://203.101.226.157/mint/default/home

Login as Admin using l/p: admin/admin

Trouble with Mint?

If Mint is not loading in the browser or rendering correctly then go to `/opt/redbox-portal/config/env/development.js` and copy the Mint api key and insert it into `/opt/mint/data/security/apiKeys.json` in the following format:

```
{
    "api": {
        "clients": [
            {
                "username": "Portal User",
                "apiKey": "thisisthekeythatyoucopiedfromapikeys"
            }
        ]
    }
}
```

Then restart Mint

```
cd /opt/mint/server/
./tf.sh restart
```

(check logs)