Module-6: Docker Enterprise Edition

Demo Document - 1

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DEMO-1: Setting up Docker Enterprise Edition

Note: All commands are executed as root. You need three GCP instances for this to work.

Instance-1: Launchpad instance

Instance-2: UCP Master Instance. 2CPU and 8GB RAM required

Instance-3: Worker Node

Pre-Requisite

1. Create a new user for docker with all the required privileges. To do this download the following shell-script: https://github.com/edurekacontent/dockerContent/blob/master/usersetup.sh make it executable. Do this on all three of the instances

```
$ chmod +x usersetup.sh
```

And run the script

```
$ ./usersetup.sh
```

Username: docker

Group: docker

Password: edureka

2. Switch to the docker user

```
$ su docker
```

3. Create an ssh connection from the Launchpad instance to the other two instances. Generate ssh key

```
$ ssh-keygen
```

```
docker@docker-ee:~/docker-ee$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/docker/.ssh/id_rsa):
Created directory '/home/docker/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/docker/.ssh/id_rsa.
Your public key has been saved in /home/docker/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:gp5/WbNXC8bvntsS+WUZZqvDoFB++DGKogUugQuURO0 docker@docker-ee
The key's randomart image is:
+---[RSA 2048]----+
|.o.              |
|. ..             |
| o.              |
|o E .    .     + |
|o. .. . S .. o.+|
|..o... o oo=+ +oo|
|.. .o.  oo=+=+.=.|
|  . .o .oo...++o.|
|    .. o.   .o*o.|
+----[SHA256]-----+
```

4. Copy the generated keys to the other instances

```
$ ssh-copy-id <instanceIP>
```

```
docker@docker-ee:~/docker-ee$ ssh-copy-id 34.72.19.183
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/docker/.ssh/id_rsa.pub"
The authenticity of host '34.72.19.183 (34.72.19.183)' can't be established.
ECDSA key fingerprint is SHA256:vd7dm0JAagdsG1o+644LQmQfztsb12hAwFcpH5o/Bt8.
Are you sure you want to continue connecting (yes/no)? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
docker@34.72.19.183's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh '34.72.19.183'"
and check to make sure that only the key(s) you wanted were added.
```

To confirm the connection log into the other account using SSH command

```
$ ssh <instanceIP>
```

```
docker@docker-ee:~/docker-ee$ ssh 35.188.52.248
Welcome to Ubuntu 18.04.4 LTS (GNU/Linux 5.3.0-1030-gcp x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
```

Setting Mirantis Launchpad for Docker Enterprise

1. Go to https://www.mirantis.com/software/docker/docker-enterprise/ and click on Try Docker Enterprise. This will take you to Mirantis launchpad page. Enter your details and press download now button

Note: The installer is currently beta software and the Docker Enterprise clusters it deploys are for evaluation only.

| First Name | | Last Name |

| Email | | Phone |

| Company | | Job Title |

| Country ▼ |

☑ I agree to the Mirantis Launchpad Software License Evaluation Agreement and Terms of Use.
By checking this box and/or submitting this form you acknowledge that Mirantis will process your personal data according to this Privacy Policy

DOWNLOAD NOW

You can download the Mirantis Launchpad for the required platform

Mirantis
Launchpad for
Windows

DOWNLOAD NOW

*Note: You should download the
Launchpad binary to the computer you
will use to deploy and manage your
evaluation cluster.*

Questions? Contact us.
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To run it on a GCP instance we will copy the link and run a wget command to download it to the instance

```
$ wget <downloadLink>
```

```
docker@docker-ee:~/docker-ee$ wget https://github.com/Mirantis/launchpad/releases/latest/download/launchpad-linux-x64
--2020-07-17 06:54:10--  https://github.com/Mirantis/launchpad/releases/latest/download/launchpad-linux-x64
Resolving github.com (github.com)... 140.82.113.3
Connecting to github.com (github.com)|140.82.113.3|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://github.com/Mirantis/launchpad/releases/download/0.12.0/launchpad-linux-x64 [following]
--2020-07-17 06:54:11--  https://github.com/Mirantis/launchpad/releases/download/0.12.0/launchpad-linux-x64
Reusing existing connection to github.com:443.
HTTP request sent, awaiting response... 302 Found
Location: https://github-production-release-asset-2e65be.s3.amazonaws.com/266059369/bc18f800-bb67-11ea-852a-f4f44d9a3f02?X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20200717%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20200717T065411Z&X-Amz-Expires=300&X-Amz-Signature=f14d28996
3d4737ed582ccfd94a1d78b2c245a0eb32de9af0641b1a97f4f4de5&X-Amz-SignedHeaders=host&actor_id=0&repo_id=266059369&response-content-disposition=attachment%3B%
20filename%3Dlaunchpad-linux-x64&response-content-type=application%2Foctet-stream [following]
--2020-07-17 06:54:11--  https://github-production-release-asset-2e65be.s3.amazonaws.com/266059369/bc18f800-bb67-11ea-852a-f4f44d9a3f02?X-Amz-Algorithm=A
WS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20200717%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20200717T065411Z&X-Amz-Expires=300&X-Amz-Sign
ature=f14d289963d4737ed582ccfd94a1d78b2c245a0eb32de9af0641b1a97f4f4de5&X-Amz-SignedHeaders=host&actor_id=0&repo_id=266059369&response-content-disposition
=attachment%3B%20filename%3Dlaunchpad-linux-x64&response-content-type=application%2Foctet-stream
Resolving github-production-release-asset-2e65be.s3.amazonaws.com (github-production-release-asset-2e65be.s3.amazonaws.com)... 52.216.171.179
Connecting to github-production-release-asset-2e65be.s3.amazonaws.com (github-production-release-asset-2e65be.s3.amazonaws.com)|52.216.171.179|:443... co
nnected.
HTTP request sent, awaiting response... 200 OK
Length: 12793154 (12M) [application/octet-stream]
Saving to: 'launchpad-linux-x64'

launchpad-linux-x64          100%[===================================================================================>]  12.20M  40.6MB/s    in 0.3s

2020-07-17 06:54:11 (40.6 MB/s) - 'launchpad-linux-x64' saved [12793154/12793154]
```

2. Now rename the downloaded file, make it executable and move it inside the /usr/bin directory

```
$ chmod +x launchpad-linux-x64

$ mv launchpad-linux-x64 /usr/bin/launchpad
```

Check the command is working by running the version command

```
$ launchpad version
```

```
docker@docker-ee:~/docker-ee$ launchpad version
version: 0.12.0
commit: 4492884
```

3. Now register yourself for the evaluation period to the launchpad

```
$ launchpad register
```

```
docker@docker-ee:~/docker-ee$ launchpad register
> Name
> Email
> Company edureka
> I agree to Mirantis Launchpad Software Evaluation License Agreement https://github.com/Mirantis/launchpad/blob/master/LICENSE Yes
INFO[0027] Registration completed!
```

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4. Now, to configure the cluster, create a new YAML file with cluster configuration

```
$ vi cluster.yaml
```

```
piVersion: launchpad.mirantis.com/v1beta2
kind: UCP
metadata:
  name: ucp-kube
spec:
  ucp:
    installFlags:
    - --admin-username=edureka
    - --admin-password=edureka123
    - --default-node-orchestrator=kubernetes
  hosts:
  - address: <managerIP>
    role: manager
    ssh:
      keyPath: /home/docker/.ssh/id_rsa
      user: docker
    privateInterface: ens4
  - address: <workerIP>
    role: worker
    ssh:
      keyPath: /home/docker/.ssh/id_rsa
      user: docker
    privateInterface: ens4
```

5. You can access the UCP from the link given in the output of the launchpad apply command

Enter the credentials mentioned in the YAML configuration file

If it is the first try, you can apply for a trial license and contact the Mirantis Sales team for it. Otherwise you can skip and choose to use the evaluation copy