3 Deliverables

The AWS ec2 commands are documented at:

<https://docs.aws.amazon.com/cli/latest/reference/ec2/index.html>

The Cloudstack api documentation is at:

<https://cloudstack.apache.org/api/apidocs-4.17/>

Prep:

Make sure you have your multicloud1 VM is running and your Cloudstack instance is operational.

Make sure you have at least ONE VM available in Cloudstack (and one VM in AWS if you are using your own AWS).

If you are using the instructor's AWS, s/he will have created a VM for you.

NOTE:

1 Be logged into your Cloudstack system web UI as admin user.

(being logged in takes care of the problem with authentication to the API)

In the Cloudstack API documentation (link above) **find the command for creating a list of**

**all your Virtual Machines** -- the command is the API name you find in the "Virtual Machine"   
 column.

In another **browser (tab)** issue the command.

The syntax is:

http://<external IP address>:8080/client/api?command=<nameofAPI>

In the resulting XML grab everything down through the <state> tag in a screen capture.

**Paste your screen capture here.**

2 Find the comparable command in AWS ec2 documentation (link above).

HINT: Amazon uses the verb "describe" where Cloudstack uses list. And Amazon calls a VM an "instance" where Cloudstack calls it a "Virtual Machine".

On the **multicloud1** system command line issue:

aws ec2 <the command you found> --endpoint=http://localhost:5000 --profile cloudstack

This reports the same thing as the command at #1, but now in AWS format.

In the resulting JSON, get a screen capture of everything returned down through the "State"

values.

**Paste your screen capture here.**

3 Change the endpoint and profile in the command above to point the query at AWS

HINT: AWS:

endpoint is: https://ec2.us-west-2.amazonaws.com

profile: amazon

In the resulting JSON, get a screen capture of everything returned down through the "State"

values.

**Paste your screen capture here.**

4 Change the state of a **Cloudstack** VM using the aws ec2 command

On the **multicloud1** system command line do the following --

Using AWS form of the command, you will need the "InstanceId" value you found in the

"Describe" output.

Find the AWS command to start and to stop an instance. HINT: they put instance in the plural,   
 and then you specify the ID of the instance on the command line.

You will need to insert the correct command, and then follow the command with

--instance-ids <instance ID here>

You are to get the output from a stop command and from a start command

**If running, cause it to stop:**

Get a screen capture of the **stop** output and paste it here:  
 (this can take a few minutes to complete)

**If stopped, cause it to start**

Get a screen capture of the **start** output and paste it here:

5 Change the state of an **Amazon** VM using the aws ec2 command

On the **multicloud1** system command line do the following --

The syntax is the same as you figured out for #4, just change the endpoint, the profile, and the

instance ID.

**If running, cause it to stop:**

Get a screen capture of the **stop** output and paste it here:  
 (this can take a few minutes to complete)

**If stopped, cause it to start**

Get a screen capture of the **start** output and paste it here:

NOTE: between 4 and 5 you might see that, if you were writing code to manage machines,

you could write one routine to get the instance ID from the output and put that in an aws

command.

You have shown you can report on items in your cloud, and change the state of items in your cloud. If you explore the list of APIs (either cloudstack or AWS) you will see the functionality is very extensive. This permits you to do most functions from the command line, or from inside code.

Upload this document, with your screen captures, in fulfillment of this lab.