1.5 For the adventuresome

We can prove that our Cirros VM is available from the internet.

# What you will need:

The IP address assigned to your Cirros VM on 172.16.10.

You can get this from doing ip a on your Cirros system. Or you can find it by looking at the row in Compute > Instances in the Cloudstack web UI.

# Create a file to be served (index.html)

Use an editor to create an index.html web page -- to serve back. Here is the content for index.html (feel free to change it up).

<!DOCTYPE html>

<html>

<head>

</head>

<body>

<h1>Welcome</h1>

<p>To my world</p>

</body>

</html>

# Create a script to serve the web page

And you will need a script called webserver. This will behave (a bit) like a web server. It uses the nc (netcat) command to listen on a port:

#! /bin/ash

while true; do { \

echo -ne "HTTP/1.0 200 OK\r\nContent-Length: $(wc -c <index.html)\r\n\r\n"

cat index.html; } | nc -l -p 8888 ; \

done

Things to note. There is no "bash" shell on Cirros, but there is an "ash" shell that is very much like "bash." Thus you have #! /bin/ash.

All this script does is echo the content of the index.html file and a bit of HTTP header information when it is hit.

It is listening on port 8888.

Use chmod u+x webserver to make it executable, and then run it.

# Exposing port 8888

On **cloudstackmgr1** issue the following command (as root user)

iptables -t nat -A PREROUTING -i cloudbr0 -p tcp -m tcp --dport 8888 -j DNAT --to-destination **<172.16 IP address of your cirros VM>**:8888

This will route things received at port 8888 to your Cirros VM at port 8888.

You might also need to do iptables -F to flush the forwarding rules.

On **outernetwork1** issue the following command (as root user)

iptables -t nat -A PREROUTING -i ens4 -p tcp -m tcp --dport 8888 -j DNAT --to-destination 172.16.10.2:8888

This will route things received at port 8888 to cloudstackmgr1 at port 8888.

On **Google Cloud Platform**

VPC network > Firewall > Create Firewall Rule

The rule will permit packets to enter that are addressed with port 8888 using a tcp protocol.

# To Test It

http://<outernetwork1 external IP address>:8888

It should return a web page that looks like:

# **Welcome**

To my world

(or however you might have modified index.html)