

测试环境

节点名称	主机名称	manage IP	provider IP	安装服务
控制节点	controller	192.168.125.123	10.19.19.23	glance,keystone,nova,neutron
计算节点 1	compute1	192.168.125.125	10.19.19.25	nova,neutron,cinder
计算节点 2	compute2	192.168.125.113	10.19.19.13	nova,neutron
计算节点 3	compute3	192.168.125.119	10.19.19.119	nova,neutron

单台服务器最多可以起多少台虚拟机

openstack默认配置为可以创建10 个实例，可以修改nova.conf配置，设置虚拟机数量限制。

虚拟机之间的网络通信带宽

创建测试实例如下：

名称	所在节点	virsh 名称	网络地址	网络类型	浮动IP
		instance-			

ubuntu2	compute1	00000027	192.168.125.221	provider	none
ubuntu3	compute3	instance-0000002c	192.168.125.217	provider	none
ubuntu1	compute3	instance-0000002d	192.168.125.213	provider	none
ubuntu4	compute3	instance-0000002e	172.16.1.5	self	none
ubuntu5	compute1	instance-0000002f	172.16.2.9	self	none
ubuntu6	compute1	instance-00000030	172.16.1.4	self	192.168.125
ubuntu7	compute1	instance-00000031	172.16.1.8	self	192.168.125

实例配置为：

系统：ubuntu16.04

内存：4G

vcpu:4

1. 同服务器内，同网络云主机之间的

测试ubuntu1与ubuntu3之间的带宽，以ubuntu3作为iperf3服务器

```
ubuntu@ubuntu1:~$ iperf3 -c 192.168.125.217
Connecting to host 192.168.125.217, port 5201
[ 4] local 192.168.125.213 port 39288 connected to 192.168.125.217 port 5201
[ ID] Interval            Transfer          Bandwidth        Retr  Cwnd
[ 4]  0.00-1.00    sec   1.91 GBytes    16.4 Gbits/sec     1   1.50 MBytes
[ 4]  1.00-2.00    sec   1.75 GBytes    15.0 Gbits/sec     0   2.20 MBytes
[ 4]  2.00-3.00    sec   1.74 GBytes    14.9 Gbits/sec     0   2.72 MBytes
[ 4]  3.00-4.00    sec   1.81 GBytes    15.6 Gbits/sec   1132   2.18 MBytes
[ 4]  4.00-5.00    sec   1.95 GBytes    16.8 Gbits/sec     0   2.73 MBytes
[ 4]  5.00-6.00    sec   1.94 GBytes    16.7 Gbits/sec    681   2.52 MBytes
[ 4]  6.00-7.00    sec   1.92 GBytes    16.5 Gbits/sec     0   3.00 MBytes
[ 4]  7.00-8.00    sec   1.92 GBytes    16.5 Gbits/sec   1394   2.18 MBytes
[ 4]  8.00-9.00    sec   1.93 GBytes    16.5 Gbits/sec    641   2.00 MBytes
[ 4]  9.00-10.00   sec   1.94 GBytes    16.7 Gbits/sec     0   2.63 MBytes
- - - - -
[ ID] Interval            Transfer          Bandwidth        Retr
[ 4]  0.00-10.00   sec   18.8 GBytes    16.2 Gbits/sec   3849
[ 4]  0.00-10.00   sec   18.8 GBytes    16.2 Gbits/sec
sender
receiver
```

2. 跨服务器的，同网络云主机之间的

测试ubuntu4与ubuntu3之间带宽，以ubuntu3作为iperf3服务器

```
ubuntu@ubuntu2:~$ iperf3 -c 192.168.125.217
Connecting to host 192.168.125.217, port 5201
[ 4] local 192.168.125.221 port 36476 connected to 192.168.125.217 port 5201
[ ID] Interval            Transfer          Bandwidth        Retr  Cwnd
[ 4]  0.00-1.00    sec   116 MBytes    970 Mbits/sec     1   3.01 MBytes
[ 4]  1.00-2.00    sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
[ 4]  2.00-3.00    sec   111 MBytes    933 Mbits/sec     0   3.01 MBytes
[ 4]  3.00-4.00    sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
[ 4]  4.00-5.00    sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
[ 4]  5.00-6.00    sec   112 MBytes    944 Mbits/sec     1   3.01 MBytes
[ 4]  6.00-7.00    sec   111 MBytes    933 Mbits/sec     0   3.01 MBytes
[ 4]  7.00-8.00    sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
[ 4]  8.00-9.00    sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
[ 4]  9.00-10.00   sec   112 MBytes    944 Mbits/sec     0   3.01 MBytes
- - - - -
[ ID] Interval            Transfer          Bandwidth        Retr
[ 4]  0.00-10.00   sec   1.10 GBytes    944 Mbits/sec     2
[ 4]  0.00-10.00   sec   1.10 GBytes    942 Mbits/sec
sender
receiver
```

3. 不同网络，同服务器，经过路由器的

ubuntu5与ubuntu6之间，以ubuntu5作为iperf3服务器

```

ubuntu@ubuntu6:~$ iperf3 -c 172.16.2.9
Connecting to host 172.16.2.9, port 5201
[ 4] local 172.16.1.4 port 36764 connected to 172.16.2.9 port 5201
[ ID] Interval           Transfer     Bandwidth       Retr   Cwnd
[ 4]  0.00-1.00      sec    232 MBytes  1.94 Gbits/sec    3     569 KBytes
[ 4]  1.00-2.00      sec    249 MBytes  2.09 Gbits/sec    0     836 KBytes
[ 4]  2.00-3.00      sec    231 MBytes  1.94 Gbits/sec    0    1023 KBytes
[ 4]  3.00-4.00      sec    256 MBytes  2.15 Gbits/sec    0    1.16 MBytes
[ 4]  4.00-5.00      sec    251 MBytes  2.11 Gbits/sec    0    1.31 MBytes
[ 4]  5.00-6.00      sec    269 MBytes  2.25 Gbits/sec    0    1.45 MBytes
[ 4]  6.00-7.00      sec    258 MBytes  2.16 Gbits/sec    0    1.57 MBytes
[ 4]  7.00-8.00      sec    254 MBytes  2.13 Gbits/sec    0    1.68 MBytes
[ 4]  8.00-9.00      sec    266 MBytes  2.23 Gbits/sec    0    1.79 MBytes
[ 4]  9.00-10.00     sec    266 MBytes  2.23 Gbits/sec   13    1.89 MBytes
- - - - -
[ ID] Interval           Transfer     Bandwidth       Retr
[ 4]  0.00-10.00     sec   2.47 GBytes  2.12 Gbits/sec   16
[ 4]  0.00-10.00     sec   2.47 GBytes  2.12 Gbits/sec
sender
receiver

```

4. 不同网络，不同服务器，经过路由器的

测试Ubuntu4和Ubuntu5之间的带宽，以ubuntu4作为iperf3服务器

```

ubuntu@ubuntu5:~$ iperf3 -c 172.16.1.5
Connecting to host 172.16.1.5, port 5201
[ 4] local 172.16.2.9 port 43406 connected to 172.16.1.5 port 5201
[ ID] Interval           Transfer     Bandwidth       Retr   Cwnd
[ 4]  0.00-1.00      sec    111 MBytes  932 Mbits/sec    3     2.30 MBytes
[ 4]  1.00-2.00      sec    109 MBytes  912 Mbits/sec    0     2.34 MBytes
[ 4]  2.00-3.00      sec    108 MBytes  902 Mbits/sec    1     2.37 MBytes
[ 4]  3.00-4.00      sec    109 MBytes  912 Mbits/sec    0     2.40 MBytes
[ 4]  4.00-5.00      sec    109 MBytes  912 Mbits/sec    0     2.43 MBytes
[ 4]  5.00-6.00      sec    108 MBytes  902 Mbits/sec    0     2.46 MBytes
[ 4]  6.00-7.00      sec    109 MBytes  912 Mbits/sec    0     2.49 MBytes
[ 4]  7.00-8.00      sec    109 MBytes  912 Mbits/sec    0     2.53 MBytes
[ 4]  8.00-9.00      sec    108 MBytes  902 Mbits/sec    0     2.55 MBytes
[ 4]  9.00-10.00     sec    109 MBytes  912 Mbits/sec    0     2.59 MBytes
- - - - -
[ ID] Interval           Transfer     Bandwidth       Retr
[ 4]  0.00-10.00     sec   1.06 GBytes  911 Mbits/sec    4
[ 4]  0.00-10.00     sec   1.06 GBytes  911 Mbits/sec
sender
receiver

```

5. 通过浮动IP，个人电脑与云主机之间的

测试Ubuntu6的浮动IP与本地192.168.122.146之间的带宽

以Ubuntu6作为iperf3服务器

6. 物理云主机与云主机之间的

测试Ubuntu6与Ubuntu7 虚拟机之间的网络通信带宽

创建云主机时间

查看nova日志，创建实例时间为47秒

```
2018-09-27 10:48:44.149 1957 INFO nova.compute.manager [req-cf20f1f3-99a8-4181-8689-9eb06277eba3 b810ebda67804940b9c759a9
b1a6ba24 d90e4e290b624ab4975bf1d5e39be9f4 - default default] [instance: f6a44ef3-296c-4bd1-82dc-cff08a8d0d54] Took 47.35
seconds to build instance.
```