Compass Web Development
Compass Web Development

› Introduction
  › Name: Alisha Aneja
  › Location: Melbourne, Australia
  › University: University of Melbourne
  › Mentor: Harry Huang
  › OPNFV Project: Compass Web Development
Compass Web Development

› Project Overview
  To improve existing web UI (compass-web) for Compass

› Frameworks/Tools/Languages Used
  Python, Docker, Coffeescript, AngularJS, HTML, CSS
Compass Web Development

› Project Objectives: The project had 5 major components-
  › Obj 1: Porting the compass-web to use AngularJS instead of Coffeescript.
  › Obj 2: Implementing the functionality of discovering servers without switch.
  › Obj 3: Implementing the the support of using multiple MAC addresses.
  › Obj 4: Modification of Network Tabs (Physical N/W and Virtual N/W).
  › Obj 5: Support for Openstack and Kubernetes flavor.
Compass Web Development

› Project Deliverables
  › Deliverable 1: Porting the codebase to AngularJS
  › Deliverable 2: Adding support for multiple MAC addresses, improving the display and error handling
  › Deliverable 3: New page design for Physical Network page and modification for Virtual Network page
Compass Web Development

› Project Execution & Accomplishments
  › All 3 objectives completed with code committed.

  › The v2.5 version of compass-web completed!
Single MAC address
Compass Web (New version)

Adding multiple MAC addresses

Multiple MAC address display
Compass Web (Old version)

Please provide 3 subnets. Check one as OS install network and use Autofill to assign ip's. This is used to install OS. The other 2 subnets are used in the next step to configure openstack network.

**Autofill IP Address for All Interfaces**

<table>
<thead>
<tr>
<th>Action</th>
<th>Interface</th>
<th>Is OS Install Network</th>
<th>Promisc Mode</th>
<th>Subnet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interface</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Search**

<table>
<thead>
<tr>
<th>Host MAC Addr</th>
<th>Switch IP</th>
<th>Port</th>
<th>Hostname</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:00:00:00:00:00</td>
<td>1.1.1.1</td>
<td>0</td>
<td>Hostname</td>
</tr>
</tbody>
</table>
Compass Web (New version)

Provider Network Settings

<table>
<thead>
<tr>
<th>Name</th>
<th>Network</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>br-provider</td>
<td>physnet</td>
<td>eth1</td>
</tr>
</tbody>
</table>

Tenant Network Settings

- **Type**: vxlan
- **Range**: 1:1000
- **Provider Network**: None

All Subnets

<table>
<thead>
<tr>
<th>Name</th>
<th>Subnet</th>
<th>Reserved Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>mgmt</td>
<td>1.2.3.4</td>
<td></td>
</tr>
</tbody>
</table>

Save

Physical Network Page
## Virtual Network

Bind openstack management and storage network to a physical interface.

Two virtual networks will be created on the NIC based on the configurations.

Just choose network interface. Use the default values for the remaining configurations.

### Internal Network Interface

<table>
<thead>
<tr>
<th>Network</th>
<th>NIC</th>
<th>CIDR</th>
<th>Start IP</th>
<th>End IP</th>
<th>Vlan Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mgmt</td>
<td></td>
<td>172.16.1.0/24</td>
<td>172.16.1.1</td>
<td>172.16.1.254</td>
<td>Vlan Tag 101</td>
</tr>
<tr>
<td>Storage</td>
<td></td>
<td>172.16.2.0/24</td>
<td>172.16.2.1</td>
<td>172.16.2.254</td>
<td>Vlan Tag 102</td>
</tr>
</tbody>
</table>

**Management Network Virtual IP**: 172.16.1.222

The external network interface need to connect to internet.
Set external virtual ip for HA mode.

### External Network Interface

<table>
<thead>
<tr>
<th>Network</th>
<th>NIC</th>
<th>CIDR</th>
<th>Start IP</th>
<th>End IP</th>
<th>Gateway IP</th>
</tr>
</thead>
</table>

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Virtual Network page

THE LINUX FOUNDATION
## Internal Network Interface

<table>
<thead>
<tr>
<th>Network</th>
<th>NIC</th>
<th>CIDR</th>
<th>Reserved Range</th>
<th>Start IP</th>
<th>End IP</th>
<th>Vlan Configuration</th>
<th>Gateway IP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mgmt</td>
<td>eth0</td>
<td>1.2.3.4</td>
<td>1.3.4.5-1.3.4.9</td>
<td>1.2.3.4</td>
<td>1.2.3.7</td>
<td>Vlan Tag 101</td>
<td>gateway</td>
</tr>
</tbody>
</table>

Management Network Virtual IP: 172.16.1.12

External Network Virtual IP: 172.16.1.10

<table>
<thead>
<tr>
<th>Host MAC Addr</th>
<th>Hostname</th>
<th>Clusters</th>
<th>State</th>
<th>mgmt</th>
</tr>
</thead>
<tbody>
<tr>
<td>eth0- AA:AA:AA:AA:AA:AA</td>
<td>host0</td>
<td></td>
<td></td>
<td>1.2.3.4</td>
</tr>
<tr>
<td>eth0- BB:BB:BB:BB:BB:BB</td>
<td>host1</td>
<td></td>
<td></td>
<td>1.2.3.5</td>
</tr>
<tr>
<td>eth0- 11:12:33:33:55:55</td>
<td>host2</td>
<td></td>
<td></td>
<td>1.2.3.6</td>
</tr>
</tbody>
</table>

Virtual Network page

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› Recommendations for future work
  › Error handling to be improved.
  › Discover servers functionality can be improved.
  › Detailed documentation to be written for compass-web.
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› Questions?