

# Lab 2 – Ad-hoc Commands

## Introduction

In this lab we're going to start by running ad-hoc commands in Ansible. Ad-hoc is a great to become familiar with certain modules prior to adding them into your playbooks (discussed later). We'll be using a variety of modules geared towards Arista, Cisco IOS and Cisco NXOS.

Please refer to the **Ansible-pod-info.docx** file for information on connecting to your Ansible host.

## 1. Ad-hoc setup

**1.1** Let's create a workspace for our Ad-hoc commands. Please note, some of the things we're going to create will be discussed later in this course.

Make sure you are in the **lab2-adhoc folder** for this lab.

```
cd ~/ansible_labs/lab2-ad-hoc
```

**1.2** Now let's create an ansible configuration and Inventory file

**Copy and paste the following to create an Ansible Config file. You can also create this on your own in a file editor like vim.**

```
cat > ansible.cfg <<EOF

[defaults]

hostfile = inventory

host_key_checking = False

deprecation_warnings=False

EOF
```

**Copy and paste the following to create an inventory file. "XX" in the below file needs to be modified based on your Pod number. Also, update the IPs with the information from your Pod sheet.**

```
cat > inventory <<EOF

n9k-standalone-XX.localdomain ansible_ssh_host=10.1.150.13 ansible_ssh_user=admin ansible_ssh_pass=Cisco123

csr1000v-pod-XX.localdomain ansible_ssh_host=172.16.15.218 ansible_ssh_user=admin ansible_ssh_pass=Cisco123

veos-pod-XX.localdomain ansible_ssh_host=172.16.15.209 ansible_ssh_user=admin ansible_ssh_pass=Cisco123

[network]

n9k-standalone-XX.localdomain

csr1000v-pod-XX.localdomain

veos-pod-XX.localdomain

[9k]

n9k-standalone-XX.localdomain

[csr]

csr1000v-pod-XX.localdomain


[arista]

veos-pod-XX.localdomain

[datacenter:children]

network

EOF
```

### Create Group\_vars directory

```
mkdir group_vars && cd group_vars
```

```
cat > network.yml <<EOF
```

```
---
```

```
ansible_connection: network_cli
```

```
EOF
```

```
cat > arista.yml <<EOF
```

```
---
```

```
ansible_become: yes
```

```
ansible_network_os: eos
```

```
ansible_become_method: enable
```

```
ansible_become_pass: "Cisco123"
```

```
EOF
```

```
cat > csr.yml <<EOF
```

```
---
```

```
ansible_become: yes
```

```
ansible_network_os: ios
```

```
ansible_become_method: enable
```

```
ansible_become_pass: "Cisco123"
```

```
EOF
```

```
cat > 9k.yml <<EOF
```

```
---
```

```
ansible_network_os: nxos
```

```
EOF
```

**NOTE:** Since we're connecting to different devices, we are using the group variables file to identify nuances for each. For example, the 9k group we're identifying what OS we are connecting to. For the CSR and Arista devices however, we need to also tell ansible that we need to connect to the device and enter enable mode before running any commands. The Ansible become command is used to accomplish this.

## 2. Ad-hoc Commands on NXOS

**2.1** Now that we have our inventory, config and variables set up, let's start running some ad-hoc commands. Ad-hoc is a great way to test out an ansible module prior to creating a playbook. We have 3 devices in the lab that we'll be running commands against. We have a Cisco Nexus 9K (NXOS), a Cisco CSR (IOS) and a Arista Router (EOS). We'll start by running commands against our NXOS device.

Execute Ad-Hoc commands against NXOS device

```
ansible -m nxos_command -u admin -k -a "commands='show vlan'" 9k
```

**Example of output:**

```
n9k-standalone-01.localdomain | SUCCESS => {
```

```
  "changed": false,
```

```
  "stdout": [
```

```
      "VLAN Name                                Status   Ports\n-----\nVLAN10001  active   Eth1/4, Eth1/5, Eth1/6, Eth1/7\nVLAN10002  active   Eth1/8, Eth1/9, Eth1/10, Eth1/11\nVLAN10003  active   Eth1/12, Eth1/13, Eth1/14\nVLAN10004  active   Eth1/15, Eth1/16, Eth1/17\nVLAN10005  active   Eth1/18, Eth1/19, Eth1/20\nVLAN10006  active   Eth1/21, Eth1/22, Eth1/23\nVLAN10007  active   Eth1/24, Eth1/25, Eth1/26\nVLAN10008  active   Eth1/27, Eth1/28, Eth1/29\nVLAN10009  active   Eth1/30, Eth1/31, Eth1/32\nVLAN10010  active   Eth1/33, Eth1/34, Eth1/35\nVLAN10011  active   Eth1/36, Eth1/37, Eth1/38\nVLAN10012  active   Eth1/39, Eth1/40, Eth1/41\nVLAN10013  active   Eth1/42, Eth1/43, Eth1/44\nVLAN10014  active   Eth1/45, Eth1/46, Eth1/47\nVLAN10015  active   Eth1/48, Eth1/49, Eth1/50\nVLAN10016  active   Eth1/51, Eth1/52, Eth1/53\nVLAN10017  active   Eth1/54, Eth1/55, Eth1/56\nVLAN10018  active   Eth1/57, Eth1/58, Eth1/59\nVLAN10019  active   Eth1/60, Eth1/61, Eth1/62\nVLAN10020  active   Eth1/63, Eth1/64, Eth1/65\nVLAN10021  active   Eth1/66, Eth1/67, Eth1/68\nVLAN10022  active   Eth1/69, Eth1/70, Eth1/71\nVLAN10023  active   Eth1/72, Eth1/73, Eth1/74\nVLAN10024  active   Eth1/75, Eth1/76, Eth1/77\nVLAN10025  active   Eth1/78, Eth1/79, Eth1/80\nVLAN10026  active   Eth1/81, Eth1/82, Eth1/83\nVLAN10027  active   Eth1/84, Eth1/85, Eth1/86\nVLAN10028  active   Eth1/87, Eth1/88, Eth1/89\nVLAN10029  active   Eth1/90, Eth1/91, Eth1/92\nVLAN10030  active   Eth1/93, Eth1/94, Eth1/95\nVLAN10031  active   Eth1/96, Eth1/97, Eth1/98\nVLAN10032  active   Eth1/99, Eth1/100, Eth1/101\nVLAN10033  active   Eth1/102, Eth1/103, Eth1/104\nVLAN10034  active   Eth1/105, Eth1/106, Eth1/107\nVLAN10035  active   Eth1/108, Eth1/109, Eth1/110\nVLAN10036  active   Eth1/111, Eth1/112, Eth1/113\nVLAN10037  active   Eth1/114, Eth1/115, Eth1/116\nVLAN10038  active   Eth1/117, Eth1/118, Eth1/119\nVLAN10039  active   Eth1/120, Eth1/121, Eth1/122\nVLAN10040  active   Eth1/123, Eth1/124, Eth1/125\nVLAN10041  active   Eth1/126, Eth1/127, Eth1/128\nVLAN10042  active   Eth1/129, Eth1/130, Eth1/131\nVLAN10043  active   Eth1/132, Eth1/133, Eth1/134\nVLAN10044  active   Eth1/135, Eth1/136, Eth1/137\nVLAN10045  active   Eth1/138, Eth1/139, Eth1/140\nVLAN10046  active   Eth1/141, Eth1/142, Eth1/143\nVLAN10047  active   Eth1/144, Eth1/145, Eth1/146\nVLAN10048  active   Eth1/147, Eth1/148, Eth1/149\nVLAN10049  active   Eth1/150, Eth1/151, Eth1/152\nVLAN10050  active   Eth1/153, Eth1/154, Eth1/155\nVLAN10051  active   Eth1/156, Eth1/157, Eth1/158\nVLAN10052  active   Eth1/159, Eth1/160, Eth1/161\nVLAN10053  active   Eth1/162, Eth1/163, Eth1/164\nVLAN10054  active   Eth1/165, Eth1/166, Eth1/167\nVLAN10055  active   Eth1/168, Eth1/169, Eth1/170\nVLAN10056  active   Eth1/171, Eth1/172, Eth1/173\nVLAN10057  active   Eth1/174, Eth1/175, Eth1/176\nVLAN10058  active   Eth1/177, Eth1/178, Eth1/179\nVLAN10059  active   Eth1/180, Eth1/181, Eth1/182\nVLAN10060  active   Eth1/183, Eth1/184, Eth1/185\nVLAN10061  active   Eth1/186, Eth1/187, Eth1/188\nVLAN10062  active   Eth1/189, Eth1/190, Eth1/191\nVLAN10063  active   Eth1/192, Eth1/193, Eth1/194\nVLAN10064  active   Eth1/195, Eth1/196, Eth1/197\nVLAN10065  active   Eth1/198, Eth1/199, Eth1/200\nVLAN10066  active   Eth1/201, Eth1/202, Eth1/203\nVLAN10067  active   Eth1/204, Eth1/205, Eth1/206\nVLAN10068  active   Eth1/207, Eth1/208, Eth1/209\nVLAN10069  active   Eth1/210, Eth1/211, Eth1/212\nVLAN10070  active   Eth1/213, Eth1/214, Eth1/215\nVLAN10071  active   Eth1/216, Eth1/217, Eth1/218\nVLAN10072  active   Eth1/219, Eth1/220, Eth1/221\nVLAN10073  active   Eth1/222, Eth1/223, Eth1/224\nVLAN10074  active   Eth1/225, Eth1/226, Eth1/227\nVLAN10075  active   Eth1/228, Eth1/229, Eth1/230\nVLAN10076  active   Eth1/231, Eth1/232, Eth1/233\nVLAN10077  active   Eth1/234, Eth1/235, Eth1/236\nVLAN10078  active   Eth1/237, Eth1/238, Eth1/239\nVLAN10079  active   Eth1/240, Eth1/241, Eth1/242\nVLAN10080  active   Eth1/243, Eth1/244, Eth1/245\nVLAN10081  active   Eth1/246, Eth1/247, Eth1/248\nVLAN10082  active   Eth1/249, Eth1/250, Eth1/251\nVLAN10083  active   Eth1/252, Eth1/253, Eth1/254\nVLAN10084  active   Eth1/255, Eth1/256, Eth1/257\nVLAN10085  active   Eth1/258, Eth1/259, Eth1/260\nVLAN10086  active   Eth1/261, Eth1/262, Eth1/263\nVLAN10087  active   Eth1/264, Eth1/265, Eth1/266\nVLAN10088  active   Eth1/267, Eth1/268, Eth1/269\nVLAN10089  active   Eth1/270, Eth1/271, Eth1/272\nVLAN10090  active   Eth1/273, Eth1/274, Eth1/275\nVLAN10091  active   Eth1/276, Eth1/277, Eth1/278\nVLAN10092  active   Eth1/279, Eth1/280, Eth1/281\nVLAN10093  active   Eth1/282, Eth1/283, Eth1/284\nVLAN10094  active   Eth1/285, Eth1/286, Eth1/287\nVLAN10095  active   Eth1/288, Eth1/289, Eth1/290\nVLAN10096  active   Eth1/291, Eth1/292, Eth1/293\nVLAN10097  active   Eth1/294, Eth1/295, Eth1/296\nVLAN10098  active   Eth1/297, Eth1/298, Eth1/299\nVLAN10099  active   Eth1/300, Eth1/301, Eth1/302\nVLAN10100  active   Eth1/303, Eth1/304, Eth1/305\nVLAN10101  active   Eth1/306, Eth1/307, Eth1/308\nVLAN10102  active   Eth1/309, Eth1/310, Eth1/311\nVLAN10103  active   Eth1/312, Eth1/313, Eth1/314\nVLAN10104  active   Eth1/315, Eth1/316, Eth1/317\nVLAN10105  active   Eth1/318, Eth1/319, Eth1/320\nVLAN10106  active   Eth1/321, Eth1/322, Eth1/323\nVLAN10107  active   Eth1/324, Eth1/325, Eth1/326\nVLAN10108  active   Eth1/327, Eth1/328, Eth1/329\nVLAN10109  active   Eth1/330, Eth1/331, Eth1/332\nVLAN10110  active   Eth1/333, Eth1/334, Eth1/335\nVLAN10111  active   Eth1/336, Eth1/337, Eth1/338\nVLAN10112  active   Eth1/339, Eth1/340, Eth1/341\nVLAN10113  active   Eth1/342, Eth1/343, Eth1/344\nVLAN10114  active   Eth1/345, Eth1/346, Eth1/347\nVLAN10115  active   Eth1/348, Eth1/349, Eth1/350\nVLAN10116  active   Eth1/351, Eth1/352, Eth1/353\nVLAN10117  active   Eth1/354, Eth1/355, Eth1/356\nVLAN10118  active   Eth1/357, Eth1/358, Eth1/359\nVLAN10119  active   Eth1/360, Eth1/361, Eth1/362\nVLAN10120  active   Eth1/363, Eth1/364, Eth1/365\nVLAN10121  active   Eth1/366, Eth1/367, Eth1/368\nVLAN10122  active   Eth1/369, Eth1/370, Eth1/371\nVLAN10123  active   Eth1/372, Eth1/373, Eth1/374\nVLAN10124  active   Eth1/375, Eth1/376, Eth1/377\nVLAN10125  active   Eth1/378, Eth1/379, Eth1/380\nVLAN10126  active   Eth1/381, Eth1/382, Eth1/383\nVLAN10127  active   Eth1/384, Eth1/385, Eth1/386\nVLAN10128  active   Eth1/387, Eth1/388, Eth1/389\nVLAN10129  active   Eth1/390, Eth1/391, Eth1/392\nVLAN10130  active   Eth1/393, Eth1/394, Eth1/395\nVLAN10131  active   Eth1/396, Eth1/397, Eth1/398\nVLAN10132  active   Eth1/399, Eth1/400, Eth1/401\nVLAN10133  active   Eth1/402, Eth1/403, Eth1/404\nVLAN10134  active   Eth1/405, Eth1/406, Eth1/407\nVLAN10135  active   Eth1/408, Eth1/409, Eth1/410\nVLAN10136  active   Eth1/411, Eth1/412, Eth1/413\nVLAN10137  active   Eth1/414, Eth1/415, Eth1/416\nVLAN10138  active   Eth1/417, Eth1/418, Eth1/419\nVLAN10139  active   Eth1/420, Eth1/421, Eth1/422\nVLAN10140  active   Eth1/423, Eth1/424, Eth1/425\nVLAN10141  active   Eth1/426, Eth1/427, Eth1/428\nVLAN10142  active   Eth1/429, Eth1/430, Eth1/431\nVLAN10143  active   Eth1/432, Eth1/433, Eth1/434\nVLAN10144  active   Eth1/435, Eth1/436, Eth1/437\nVLAN10145  active   Eth1/438, Eth1/439, Eth1/440\nVLAN10146  active   Eth1/441, Eth1/442, Eth1/443\nVLAN10147  active   Eth1/444, Eth1/445, Eth1/446\nVLAN10148  active   Eth1/447, Eth1/448, Eth1/449\nVLAN10149  active   Eth1/450, Eth1/451, Eth1/452\nVLAN10150  active   Eth1/453, Eth1/454, Eth1/455\nVLAN10151  active   Eth1/456, Eth1/457, Eth1/458\nVLAN10152  active   Eth1/459, Eth1/460, Eth1/461\nVLAN10153  active   Eth1/462, Eth1/463, Eth1/464\nVLAN10154  active   Eth1/465, Eth1/466, Eth1/467\nVLAN10155  active   Eth1/468, Eth1/469, Eth1/470\nVLAN10156  active   Eth1/471, Eth1/472, Eth1/473\nVLAN10157  active   Eth1/474, Eth1/475, Eth1/476\nVLAN10158  active   Eth1/477, Eth1/478, Eth1/479\nVLAN10159  active   Eth1/480, Eth1/481, Eth1/482\nVLAN10160  active   Eth1/483, Eth1/484, Eth1/485\nVLAN10161  active   Eth1/486, Eth1/487, Eth1/488\nVLAN10162  active   Eth1/489, Eth1/490, Eth1/491\nVLAN10163  active   Eth1/492, Eth1/493, Eth1/494\nVLAN10164  active   Eth1/495, Eth1/496, Eth1/497\nVLAN10165  active   Eth1/498, Eth1/499, Eth1/500\nVLAN10166  active   Eth1/501, Eth1/502, Eth1/503\nVLAN10167  active   Eth1/504, Eth1/505, Eth1/506\nVLAN10168  active   Eth1/507, Eth1/508, Eth1/509\nVLAN10169  active   Eth1/510, Eth1/511, Eth1/512\nVLAN10170  active   Eth1/513, Eth1/514, Eth1/515\nVLAN10171  active   Eth1/516, Eth1/517, Eth1/518\nVLAN10172  active   Eth1/519, Eth1/520, Eth1/521\nVLAN10173  active   Eth1/522, Eth1/523, Eth1/524\nVLAN10174  active   Eth1/525, Eth1/526, Eth1/527\nVLAN10175  active   Eth1/528, Eth1/529, Eth1/530\nVLAN10176  active   Eth1/531, Eth1/532, Eth1/533\nVLAN10177  active   Eth1/534, Eth1/535, Eth1/536\nVLAN10178  active   Eth1/537, Eth1/538, Eth1/539\nVLAN10179  active   Eth1/540, Eth1/541, Eth1/542\nVLAN10180  active   Eth1/543, Eth1/544, Eth1/545\nVLAN10181  active   Eth1/546, Eth1/547, Eth1/548\nVLAN10182  active   Eth1/549, Eth1/550, Eth1/551\nVLAN10183  active   Eth1/552, Eth1/553, Eth1/554\nVLAN10184  active   Eth1/555, Eth1/556, Eth1/557\nVLAN10185  active   Eth1/558, Eth1/559, Eth1/560\nVLAN10186  active   Eth1/561, Eth1/562, Eth1/563\nVLAN10187  active   Eth1/564, Eth1/565, Eth1/566\nVLAN10188  active   Eth1/567, Eth1/568, Eth1/569\nVLAN10189  active   Eth1/570, Eth1/571, Eth1/572\nVLAN10190  active   Eth1/573, Eth1/574, Eth1/575\nVLAN10191  active   Eth1/576, Eth1/577, Eth1/578\nVLAN10192  active   Eth1/579, Eth1/580, Eth1/581\nVLAN10193  active   Eth1/582, Eth1/583, Eth1/584\nVLAN10194  active   Eth1/585, Eth1/586, Eth1/587\nVLAN10195  active   Eth1/588, Eth1/589, Eth1/590\nVLAN10196  active   Eth1/591, Eth1/592, Eth1/593\nVLAN10197  active   Eth1/594, Eth1/595, Eth1/596\nVLAN10198  active   Eth1/597, Eth1/598, Eth1/599\nVLAN10199  active   Eth1/600, Eth1/601, Eth1/602\nVLAN10200  active   Eth1/603, Eth1/604, Eth1/605\nVLAN10201  active   Eth1/606, Eth1/607, Eth1/608\nVLAN10202  active   Eth1/609, Eth1/610, Eth1/611\nVLAN10203  active   Eth1/612, Eth1/613, Eth1/614\nVLAN10204  active   Eth1/615, Eth1/616, Eth1/617\nVLAN10205  active   Eth1/618, Eth1/619, Eth1/620\nVLAN10206  active   Eth1/621, Eth1/622, Eth1/623\nVLAN10207  active   Eth1/624, Eth1/625, Eth1/626\nVLAN10208  active   Eth1/627, Eth1/628, Eth1/629\nVLAN10209  active   Eth1/630, Eth1/631, Eth1/632\nVLAN10210  active   Eth1/633, Eth1/634, Eth1/635\nVLAN10211  active   Eth1/636, Eth1/637, Eth1/638\nVLAN10212  active   Eth1/639, Eth1/640, Eth1/641\nVLAN10213  active   Eth1/642, Eth1/643, Eth1/644\nVLAN10214  active   Eth1/645, Eth1/646, Eth1/647\nVLAN10215  active   Eth1/648, Eth1/649, Eth1/650\nVLAN10216  active   Eth1/651, Eth1/652, Eth1/653\nVLAN10217  active   Eth1/654, Eth1/655, Eth1/656\nVLAN10218  active   Eth1/657, Eth1/658, Eth1/659\nVLAN10219  active   Eth1/660, Eth1/661, Eth1/662\nVLAN10220  active   Eth1/663, Eth1/664, Eth1/665\nVLAN10221  active   Eth1/666, Eth1/667, Eth1/668\nVLAN10222  active   Eth1/669, Eth1/670, Eth1/671\nVLAN10223  active   Eth1/672, Eth1/673, Eth1/674\nVLAN10224  active   Eth1/675, Eth1/676, Eth1/677\nVLAN10225  active   Eth1/678, Eth1/679, Eth1/680\nVLAN10226  active   Eth1/681, Eth1/682, Eth1/683\nVLAN10227  active   Eth1/684, Eth1/685, Eth1/686\nVLAN10228  active   Eth1/687, Eth1/688, Eth1/689\nVLAN10229  active   Eth1/690, Eth1/691, Eth1/692\nVLAN10230  active   Eth1/693, Eth1/694, Eth1/695\nVLAN10231  active   Eth1/696, Eth1/697, Eth1/698\nVLAN10232  active   Eth1/699, Eth1/700, Eth1/701\nVLAN10233  active   Eth1/702, Eth1/703, Eth1/704\nVLAN10234  active   Eth1/705, Eth1/706, Eth1/707\nVLAN10235  active   Eth1/708, Eth1/709, Eth1/710\nVLAN10236  active   Eth1/711, Eth1/712, Eth1/713\nVLAN10237  active   Eth1/714, Eth1/715, Eth1/716\nVLAN10238  active   Eth1/717, Eth1/718, Eth1/719\nVLAN10239  active   Eth1/720, Eth1/721, Eth1/722\nVLAN10240  active   Eth1/723, Eth1/724, Eth1/725\nVLAN10241  active   Eth1/726, Eth1/727, Eth1/728\nVLAN10242  active   Eth1/729, Eth1/730, Eth1/731\nVLAN10243  active   Eth1/732, Eth1/733, Eth1/734\nVLAN10244  active   Eth1/735, Eth1/736, Eth1/737\nVLAN10245  active   Eth1/738, Eth1/739, Eth1/740\nVLAN10246  active   Eth1/741, Eth1/742, Eth1/743\nVLAN10247  active   Eth1/744, Eth1/745, Eth1/746\nVLAN10248  active   Eth1/747, Eth1/748, Eth1/749\nVLAN10249  active   Eth1/750, Eth1/751, Eth1/752\nVLAN10250  active   Eth1/753, Eth1/754, Eth1/755\nVLAN10251  active   Eth1/756, Eth1/757, Eth1/758\nVLAN10252  active   Eth1/759, Eth1/760, Eth1/761\nVLAN10253  active   Eth1/762, Eth1/763, Eth1/764\nVLAN10254  active   Eth1/765, Eth1/766, Eth1/767\nVLAN10255  active   Eth1/768, Eth1/769, Eth1/770\nVLAN10256  active   Eth1/771, Eth1/772, Eth1/773\nVLAN10257  active   Eth1/774, Eth1/775, Eth1/776\nVLAN10258  active   Eth1/777, Eth1/778, Eth1/779\nVLAN10259  active   Eth1/780, Eth1/781, Eth1/782\nVLAN10260  active   Eth1/783, Eth1/784, Eth1/785\nVLAN10261  active   Eth1/786, Eth1/787, Eth1/788\nVLAN10262  active   Eth1/789, Eth1/790, Eth1/791\nVLAN10263  active   Eth1/792, Eth1/793, Eth1/794\nVLAN10264  active   Eth1/795, Eth1/796, Eth1/797\nVLAN10265  active   Eth1/798, Eth1/799, Eth1/800\nVLAN10266  active   Eth1/801, Eth1/802, Eth1/803\nVLAN10267  active   Eth1/804, Eth1/805, Eth1/806\nVLAN10268  active   Eth1/807, Eth1/808, Eth1/809\nVLAN10269  active   Eth1/810, Eth1/811, Eth1/812\nVLAN10270  active   Eth1/813, Eth1/814, Eth1/815\nVLAN10271  active   Eth1/816, Eth1/817, Eth1/818\nVLAN10272  active   Eth1/819, Eth1/820, Eth1/821\nVLAN10273  active   Eth1/822, Eth1/823, Eth1/824\nVLAN10274  active   Eth1/825, Eth1/826, Eth1/827\nVLAN10275  active   Eth1/828, Eth1/829, Eth1/830\nVLAN10276  active   Eth1/831, Eth1/832, Eth1/833\nVLAN10277  active   Eth1/834, Eth1/835, Eth1/836\nVLAN10278  active   Eth1/837, Eth1/838, Eth1/839\nVLAN10279  active   Eth1/840, Eth1/841, Eth1/842\nVLAN10280  active   Eth1/843, Eth1/844, Eth1/845\nVLAN10281  active   Eth1/846, Eth1/847, Eth1/848\nVLAN10282  active   Eth1/849, Eth1/850, Eth1/851\nVLAN10283  active   Eth1/852, Eth1/853, Eth1/854\nVLAN10284  active   Eth1/855, Eth1/856, Eth1/857\nVLAN10285  active   Eth1/858, Eth1/859, Eth1/860\nVLAN10286  active   Eth1/861, Eth1/862, Eth1/863\nVLAN10287  active   Eth1/864, Eth1/865, Eth1/866\nVLAN10288  active   Eth1/867, Eth1/868, Eth1/869\nVLAN10289  active   Eth1/870, Eth1/871, Eth1/872\nVLAN10290  active   Eth1/873, Eth1/874, Eth1/875\nVLAN10291  active   Eth1/876, Eth1/877, Eth1/878\nVLAN10292  active   Eth1/879, Eth1/880, Eth1/881\nVLAN10293  active   Eth1/882, Eth1/883, Eth1/884\nVLAN10294  active   Eth1/885, Eth1/886, Eth1/887\nVLAN10295  active   Eth1/888, Eth1/889, Eth1/890\nVLAN10296  active   Eth1/891, Eth1/892, Eth1/893\nVLAN10297  active   Eth1/894, Eth1/895, Eth1/896\nVLAN10298  active   Eth1/897, Eth1/898, Eth1/899\nVLAN10299  active   Eth1/900, Eth1/901, Eth1/902\nVLAN10300  active   Eth1/903, Eth1/904, Eth1/905\nVLAN10301  active   Eth1/906, Eth1/907, Eth1/908\nVLAN10302  active   Eth1/909, Eth1/910, Eth1/911\nVLAN10303  active   Eth1/912, Eth1/913, Eth1/914\nVLAN10304  active   Eth1/915, Eth1/916, Eth1/917\nVLAN10305  active   Eth1/918, Eth1/919, Eth1/920\nVLAN10306  active   Eth1/921, Eth1/922, Eth1/923\nVLAN10307  active   Eth1/924, Eth1/925, Eth1/926\nVLAN10308  active   Eth1/927, Eth1/928, Eth1/929\nVLAN10309  active   Eth1/930, Eth1/931, Eth1/932\nVLAN10310  active   Eth1/933, Eth1/934, Eth1/935\nVLAN10311  active   Eth1/936, Eth1/937, Eth1/938\nVLAN10312  active   Eth1/939, Eth1/940, Eth1/941\nVLAN10313  active   Eth1/942, Eth1/943, Eth1/944\nVLAN10314  active   Eth1/945, Eth1/946, Eth1/947\nVLAN10315  active   Eth1/948, Eth1/949, Eth1/950\nVLAN10316  active   Eth1/951, Eth1/952, Eth1/953\nVLAN10317  active   Eth1/954, Eth1/955, Eth1/956\nVLAN10318  active   Eth1/957, Eth1/958, Eth1/959\nVLAN10319  active   Eth1/960, Eth1/961, Eth1/962\nVLAN10320  active   Eth1/963, Eth1/964, Eth1/965\nVLAN10321  active   Eth1/966, Eth1/967, Eth1/968\nVLAN10322  active   Eth1/969, Eth1/970, Eth1/971\nVLAN10323  active   Eth1/972, Eth1/973, Eth1/974\nVLAN10324  active   Eth1/975, Eth1/976, Eth1/977\nVLAN10325  active   Eth1/978, Eth1/979, Eth1/980\nVLAN10326  active   Eth1/981, Eth1/982, Eth1/983\nVLAN10327  active   Eth1/984, Eth1/985, Eth1/986\nVLAN10328  active   Eth1/987, Eth1/988, Eth1/989\nVLAN10329  active   Eth1/990, Eth1/991, Eth1/992\nVLAN10330  active   Eth1/993, Eth1/994, Eth1/995\nVLAN10331  active   Eth1/996, Eth1/997, Eth1/998\nVLAN10332  active   Eth1/999, Eth1/1000, Eth1/1001\nVLAN10333  active   Eth1/1002, Eth1/1003, Eth1/1004\nVLAN10334  active   Eth1/1005, Eth1/1006, Eth1/1007\nVLAN10335  active   Eth1/1008, Eth1/1009, Eth1/1010\nVLAN10336  active   Eth1/1011, Eth1/1012, Eth1/1013\nVLAN10337  active   Eth1/1014, Eth1/1015, Eth1/1016\nVLAN10338  active   Eth1/1017, Eth1/1018, Eth1/1019\nVLAN10339  active   Eth1/1020, Eth1/1021, Eth1/1022\nVLAN10340  active   Eth1/1023, Eth1/1024, Eth1/1025\nVLAN10341  active   Eth1/1026, Eth1/1027, Eth1/1028\nVLAN10342  active   Eth1/1029, Eth1/1030, Eth1/1031\nVLAN10343  active   Eth1/1032, Eth1/1033, Eth1/1034\nVLAN10344  active   Eth1/1035, Eth1/1036, Eth1/1037\nVLAN10345  active   Eth1/1038, Eth1/1039, Eth1/1040\nVLAN10346  active   Eth1/1041, Eth1/1042, Eth1/1043\nVLAN10347  active   Eth1/1044, Eth1/1045, Eth1/1046\nVLAN10348  active   Eth1/1047, Eth1/1048, Eth1/1049\nVLAN10349  active   Eth1/1050, Eth1/1051, Eth1/1052\nVLAN10350  active   Eth1/1053, Eth1/1054, Eth1/1055\nVLAN10351  active   Eth1/1056, Eth1/1057, Eth1/1058\nVLAN10352  active   Eth1/1059, Eth1/1060, Eth1/1061\nVLAN10353  active   Eth1/1062, Eth1/1063, Eth1/1064\nVLAN10354  active   Eth1/1065, Eth1/1066, Eth1/1067\nVLAN10355  active   Eth1/1068, Eth1/1069, Eth1/1070\nVLAN10356  active   Eth1/1071, Eth1/1072, Eth1/1073\nVLAN10357  active   Eth1/1074, Eth1/1075, Eth1/1076\nVLAN10358  active   Eth1/1077, Eth1/1078, Eth1/1079\nVLAN10359  active   Eth1/1080, Eth1/1081, Eth1/1082\nVLAN10360  active   Eth1/1083, Eth1/1084, Eth1/1085\nVLAN10361  active   Eth1/1086, Eth1/1087, Eth1/1088\nVLAN10362  active   Eth1/1089, Eth1/1090, Eth1/1091\nVLAN10363  active   Eth1/1092, Eth1/1093, Eth1/1094\nVLAN10364  active   Eth1/1095, Eth1/1096, Eth1/1097\nVLAN10365  active   Eth1/1098, Eth1/1099, Eth1/1100\nVLAN10366  active   Eth1/1101, Eth1/1102, Eth1/1103\nVLAN10367  active   Eth1/1104, Eth1/1105, Eth1/1106\nVLAN10368  active   Eth1/1107, Eth1/1108, Eth1/1109\nVLAN10369  active   Eth1/1110, Eth1/1111, Eth1/1112\nVLAN10370  active   Eth1/1113, Eth1/1114, Eth1/1115\nVLAN10371  active   Eth1/1116, Eth1/1117, Eth1/1118\nVLAN10372  active   Eth1/1119, Eth1/1120, Eth1/1121\nVLAN10373  active   Eth1/1122, Eth1/1123, Eth1/1124\nVLAN10374  active   Eth1/1125, Eth1/1126, Eth1/1127\nVLAN10375  active   Eth1/1128, Eth1/1129, Eth1/1130\nVLAN103
```

```

h1/28, Eth1/29\n
/34, Eth1/35\n
7, Eth1/38\n
Eth1/41\n
h1/44\n
/47\n
0\n
active   Eth1/30\n101  app
02 storage
active   \n2000 VLAN2000
Vlan-mode\n-----
CE      \n101  enet      CE      \n102  enet      CE      \n1001 enet
CE      \n2000 enet      CE      \n\nRemote SPAN VLANs\n-----
-----\n\nPrimary  Secon
dary  Type          Ports\n-----
-----"

],

"stdout_lines": [

    [

        "VLAN Name",

        "Status",

        "Ports",

        "-----",

        "1",

        "default",

        "active",

        "Eth1/4, Eth1/5, Eth1/6, Eth1/7",

        "Eth1/8, Eth1/9, Eth1/10, Eth1/11",

        "Eth1/12, Eth1/13, Eth1/14",

    ],

],

]

```

## Create a loopback interface and bring it up

```

ansible -m nxos_interface -u admin -a "name='loopback100',admin_state='up'" 9
k

```

**Example output:**

```
n9k-standalone-01.localdomain | SUCCESS => {  
  "changed": true,  
  "commands": [  
    "interface loopback100",  
    "no shutdown"  
  ]  
}
```

**Configure OSPF on NXOS**

```
ansible -m nxos_ospf -u admin -c nxapi -a "ospf='10'" 9k
```

**Example Output:**

```
n9k-standalone-01.localdomain | SUCCESS => {  
  "changed": false,  
  "commands": []  
}
```

## 3. Ad-hoc Commands on IOS

**3.1** Now let's run a few commands on an IOS device. In this case, this will be the Cisco CSR in our lab.

Execute Ad-Hoc commands against IOS device

## Show Version command on IOS

```
ansible -m ios_command -u admin -a "commands='show version'" csr
```

### Example Output:

```
csr1000v-pod-00.localdomain | SUCCESS => {
```

```
    "changed": false,
```

```
    "stdout": [
```

```
        "Cisco IOS XE Software, Version 03.16.06b.S - Extended Support Release\nCisco IOS Software, CSR1000V Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version 15.5(3)S6b, RELEASE SOFTWARE (fc4)\nTechnical Support: http://www.cisco.com/techsupport\nCopyright (c) 1986-2017 by Cisco Systems, Inc.\nCompiled Thu 02-Nov-17 10:49 by mcpre\n\nCisco IOS-XE software, Copyright (c) 2005-2017 by Cisco Systems, Inc.\nAll rights reserved. Certain components of Cisco IOS-XE software are\nlicensed under the GNU General Public License (\"GPL\") Version 2.0. The\nsoftware code licensed under GPL Version 2.0 is free software that comes\nwith ABSOLUTELY NO WARRANTY. You can redistribute and/or modify such\nGPL code under the terms of GPL Version 2.0. For more details, see the\ndocumentation or \"License Notice\" file accompanying the IOS-XE software,\nor the applicable URL provided on the flyer accompanying the IOS-XE\nsoftware.\n\nROM: IOS-XE ROMMON\n\nCSR1000v-Pod-00 uptime is 2 hours, 14 minutes\nUptime for this control processor is 2 hours, 15 minutes\nSystem returned to ROM by reload\nSystem image file is \"bootflash:packages.conf\"\nLast reload reason: <NULL>\n\nThis product contains cryptographic features and is subject to United\nStates and local country laws governing import, export, transfer and\nuse. Delivery of Cisco cryptographic products does not imply\nthird-party authority to import, export, distribute or use encryption.\nImporters, exporters, distributors and users are responsible for\ncompliance with U.S. and local country laws. By using this product you\nagree to comply with applicable laws and regulations. If you are unable\nto comply with U.S. and local laws, return this product immediately.\n\nA summary of U.S. laws governing Cisco cryptographic products may be found at:\nhttp://www.cisco.com/wwl/export/crypto/tool/stqrg.html\n\nIf you require further assistance please contact us by sending email to\nexport@cisco.com.\n\nLicense Level: ax\nLicense Type: Default. No valid license found.\nNext reload license Level: ax\n\nCisco CSR1000V (VXE) processor (revision VXE) with 2055936K/6147K bytes of memory.\nProcessor board ID 96NCEYKC3PH\n3 Gigabit Ethernet interfaces\n32768K bytes of non-volatile configuration memory.\n3988292K bytes of physical memory.\n7774207K bytes of virtual hard disk at bootflash:.\n\nConfiguration register is 0x2102"
```





```
pbits 1\nline vty 0\n login local\n transport input ssh\nline vty 1 4\n login local\n length 0\n transport input ssh\n!\nntp server pool.ntp.org\n!\nend",
```

```
"ansible_net_filesystems": [  
  
    "bootflash:"  
  
],
```

### Perform Basic Ping Test

```
ansible -m ios_ping -u admin -a "dest='10.1.1.1'" csr
```

### Example Output:

```
csr1000v-pod-00.localdomain | SUCCESS => {  
  
    "changed": false,  
  
    "commands": [  
  
        "ping 10.1.1.1"  
  
    ],  
  
    "packet_loss": "20%",  
  
    "packets_rx": 4,  
  
    "packets_tx": 5,  
  
    "rtt": {  
  
        "avg": 1,  
  
        "max": 2,  
  
        "min": 1  
  
    }  
}
```

```
}
```

## 4. Ad-hoc Commands on EOS

### 4.1 Now we'll run a few commands on an Arista EOS device

Execute Ad-Hoc commands against EOS device

#### Show Version command on EOS

```
ansible -m ios_command -u admin -a "commands='show version'" arista
```

#### Example Output:

```
veos-pod-00.localdomain | SUCCESS => {
  "changed": false,
  "stdout": [
    "Arista vEOS\nHardware version:      \nSerial number:      \nSystem MAC address: 000c.29dd.cd6b\n\nSoftware image version: 4.20.7M\nArchitecture: i386\nInternal build version: 4.20.7M-8944203.4207M\nInternal build ID: d28d91e2-20a0-4846-91c7-f3c2158211e9\n\nUptime: 6 weeks, 4 days, 17 hours and 27 minutes\nTotal memory: 4010988 kB\nFree memory: 3137020 kB"
  ],
  "stdout_lines": [
    "Arista vEOS",
    "Hardware version: ",
    "Serial number: "
  ]
}
```

```

        "System MAC address: 000c.29dd.cd6b",
        "",
        "Software image version: 4.20.7M",
        "Architecture: i386",
        "Internal build version: 4.20.7M-8944203.4207M",
        "Internal build ID: d28d91e2-20a0-4846-91c7-f3c2158211e9",
        "",
        "Uptime: 6 weeks, 4 days, 17 hours and 27 minutes",
        "Total memory: 4010988 kB",
        "Free memory: 3137020 kB"
    ]
]

```

### Create Loopback interface on EOS Device

```
ansible -m eos_interface -a "name='loopback 100'" arista
```

### Example Output:

```

veos-pod-00.localdomain | SUCCESS => {
    "changed": true,
    "commands": [
        "interface loopback 100"
    ],

```

```
"session_name": "ansible_1536097252"  
  
}
```

Now commit your files to your repo. Reference the Git lab if you are unsure on the process for this.

More information on help with parameters that can be used with specific modules can be found using the below.

```
ansible-doc <module_name>
```

### Challenge question:

Go to Ansible documentation (<https://docs.ansible.com>) find the modules eos\_vlan.