Automatic deployment with ansible

Instructions for Automatic installation Airship+Tungsten Fabric

AWS environment: With these playbooks you can deploy the same environment as used for CICD validation. Playbooks can be used for full deployment or partially. For example you can deploy the AWS environment and Regional Controler and then manually deploy TF blueprint following manual Installation.

- AWS spot instance (t2.medium) for Regional Controller
- AWS spot instance (m5.4xlarge) for Airship-in-a-bottle with TungstenFabric
- security group
- keypair for authorization

Requirements:

- Ubuntu 18.04
- ansible 2.5.1
- python3
- boto (2.49.0)
- boto3 (1.4.2)
- botocore (1.8.48)
- AWS authorization must be setup on the host. (check aws credentials in ~/.aws/credentials). See https://docs.aws.amazon.com/cli/latest/userguide/install-cliv1.html for details
- File ~/.boto must contain:

```
[Boto]
use_endpoint_heuristics = True
```

Step by step guide for deployment Akraino Network Cloud with Tungsten Fabric in AWS

Clone the git repository

```
git clone https://github.com/progmaticlab/akraino-ansible.git
cd akraino-ansible
```

Creating keypair, security group and AWS EC2 spot instances

```
ansible-playbook 00-create-environment.yaml
```

This playbook creates security group, keypair and 2 AWS spot instances which are available by ssh with the ssh identity **akraino-aws-private-key.pem** and user **ubuntu.**

You can login on them with the command

```
ssh -i akraino-aws-private-key.pem ubuntu@<ip_address>
```

IP addresses can be found in the files *inventory/akraino* and *group_vars/all*

Deploying Regional Controller

```
ansible-playbook -i inventory/akraino 01-deploy-regional-controller.yaml
```

After this step Regional controller is available by HTTPS.

You can see ip address of RC in file inventory/akraino or group_vars/all.

Also you can login on Regional Controller by ssh with the command

```
ssh -i akraino-aws-private-key.pem ubuntu@<ip_address>
```

Deploying TF blueprint on Regional Controller

```
ansible-playbook -i inventory/akraino 02-deploy-tf-blueprint.yaml
```

After this step Tall yaml files are generated and EdgeSite, Blueptint and POD are created on Regional Controller.

It starts local web-server and put ssh key and deploy.sh script on it.

Then Regional controller creates Airflow DAG and initiate the process of deployment Blueprint.

Process of deployment usually takes 5-6 hours.

Cleanup the environment

```
ansible-playbook -i inventory/akraino akraino-playbook-cleanup.yaml
```

As the result keypair, security group and AWS spot instances would be deleted.