Ansible

Deploy a DotNet Service with Ansible

The following shell command will deploy the binaries and appropriate configuration for a service, to an inventoried host:

```
ansible-playbook deploy-service.yml \
-e "var_host=blissdev" \
-e "var_binrepo=oga-built-dev" \
-e "var_servicename=OGA.HostControl.Service" \
-e "var_description=OGA.HostControl.Service" \
-e "var_company=bliss" \
-e "var_envname=dev" \
-e "var_hasnotification=true" \
-e "var_ipaddress=192.168.1.201" \
-e "var_port=4180" \
--ask-vault-pass
```

NOTE: The hasnotification variable is only required for the service that needs a firebase configuration.
Currently, this is the cloud service test.

NOTE: Set the Jenkins user password in the “userpass” argument.

Set the service name argument to the name of the service to deploy:

`Bliss.SignupService.API`
`cloudservice_test1`

Set the var_host to the inventoried host that will receive the service install.
These are listed in the host inventory file in Ansible.

Set the environment name to specify which set of configuration data will be included with the service.
This can be set to dev or prod.

Ansible Generic Commands

To list hosts in inventory:

`ansible-inventory --list -y`

To ping all hosts:

`ansible all -m ping -u glwhite`

To scan a playbook for tasks without making changes:

`ansible-playbook myplaybook.yml --list-tasks`

To get a list of hosts affected by a playbook:

`ansible-playbook myplaybook.yml --list-hosts --ask-vault-pass`

To run a playbook:

`ansible-playbook playbook.yml --ask-vault-pass`

Adding the “`--ask-become-pass`" argument, tells Ansible to ask for the user password for the account it uses.

Adding the “`--ask-vault-pass`" argument, tells Ansible to ask for the vault password that it can use to decrypt the vars file that contains the become sudo password.

Ad-hoc command t list NFS shares:

`ansible testservers -m shell -a 'df -h -T|grep -i nfs' -i ansible_hosts`

Ansible Command References

Here’s a large list of possible ansible commands:

Ansible AD HOC Command Examples - Ansible Cheat Sheet | Devops Junction

Introduction to ad hoc commands — Ansible Community Documentation

Ansible Playbook Examples - Sample Ansible Playbooks | Devops Junction

Ansible apt module Examples - install packages with apt | Devops Junction

Ansible Playbook Examples - Sample Ansible Playbooks | Devops Junction

Debugging Ansible Playbook

Here are command line switches to enable debug logging of an ansible playbook:

#Specify the location for the log file

export ANSIBLE_LOG_PATH=~/ansible.log

#Enable Debug

export ANSIBLE_DEBUG=True

#Run with 4*v for connection level verbosity

ansible-playbook -vvvv ...

Ansible Commands Cheat Sheet

Here’s a list of common ansible commands...

Read through this DevOps book pdf for getting Docker and Ansible to work together:

https://bjpcjp.github.io/pdfs/devops/ansible-docker.pdf

Host Setup

Host Setup Playbook

This playbook will do basic setup of common packages and config that each host requires, such as ssl certs, permissions, and base packages.

It is run for each host by specifying the hostname in arguments.

```
ansible-playbook host-setup.yml -e "variable_host=wshost1" --ask-vault-pass
```

Local Build Server Setup

These are playbook calls to set up the build server VM.

```
ansible-playbook buildserver.yml --ask-vault-pass
```

Local Dev Host Setup

These are playbook calls to set up each development host with their particular build of services and config.

```
ansible-playbook dev-host1.yml --ask-vault-pass
ansible-playbook dev-host2.yml --ask-vault-pass
ansible-playbook dev-host3.yml --ask-vault-pass
```

Cloud Dev Host Setup

These are playbook calls to set up each cloud development host with their particular build of services and config.

```
ansible-playbook dev-cldev1.yml --ask-vault-pass
ansible-playbook dev-cldev2.yml --ask-vault-pass
```

Prod Host Setup

These are playbook calls to set up each production host with their particular build of services and config.

```
ansible-playbook prod-host1.yml --ask-vault-pass
ansible-playbook prod-host2.yml --ask-vault-pass
ansible-playbook prod-host3.yml --ask-vault-pass
ansible-playbook prod-host4.yml --ask-vault-pass
ansible-playbook prod-host5.yml --ask-vault-pass
ansible-playbook prod-host6.yml --ask-vault-pass
```

Personal Host Cluster Setup

Here is how to run commands on the PHC.

```
ansible-playbook phc-admin01-rundk-admin-webui.yml --extra-vars "ansible_become_pass=password" --extra-vars "jenkins_password=password"
ansible-playbook phc-backups01-rundk-backups-webui.yml --extra-vars "ansible_become_pass=password" --extra-vars "jenkins_password=password"
```

Target Host Errors

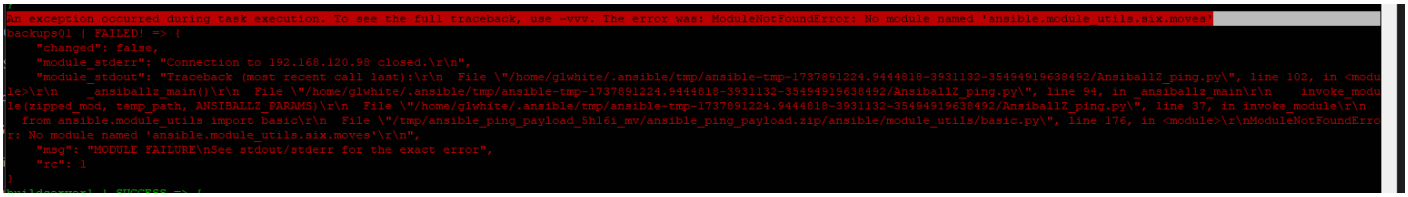
Missing Python Libraries

If you have an Ansible playbook that is failing on a target host, it's likely that the Python libraries on the target host, are incompatible with the version of Ansible.

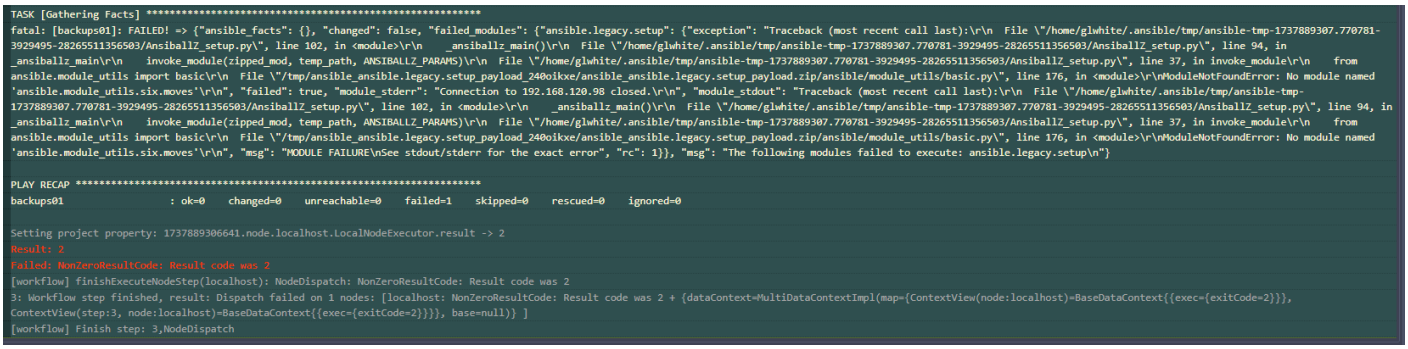
This would present with an error message starting with:

> An exception occurred during task execution. To see the full traceback, use -vvv. The error was:
>
> ModuleNotFoundError: No module named 'ansible.module_utils.six.moves'

Here's what it would look like when running the playbook from the command line:



Here's what it would look like when running from RunDeck:



You can either downgrade the python library to a compatible version.
Or, upgrade Ansible to a version that is compatible with the Python library on the target host.

See this page for the Python version range that each version of Ansible supports:

https://docs.ansible.com/ansible/latest/reference_appendices/release_and_maintenance.html

Cleaning up Ansible Temp Folders

As Ansible playbooks run, some will fail to cleanup temp folders on the Ansible server.

Since the temp folder for most Ansible jobs is configured as '/home/glwhite/Desktop', this will cause an accumulation of folders in that user's Desktop.

The folders are named with a unix timestamp.
So, the following command will delete them:

```
find ~/Desktop -maxdepth 1 -type d -name '[0-9]*' -exec rm -r {} +
```

You can preview the list of files to delete with this:

```
find ~/Desktop -maxdepth 1 -type d -name '[0-9]*'
```