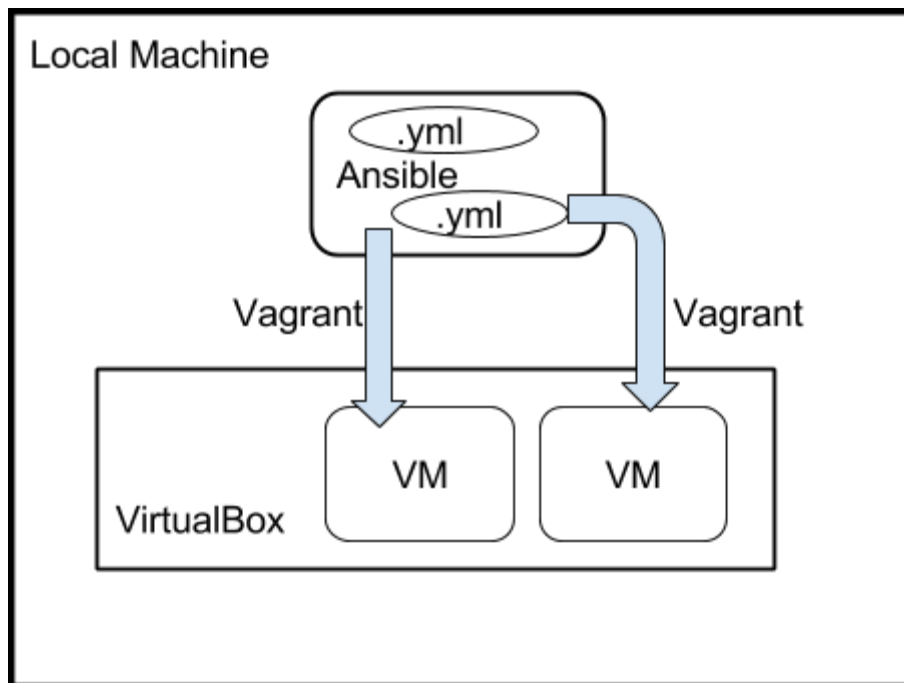# Ansible / Vagrant Runbook

Short Description

Using Ansible to create web and database playbooks and Vagrant to quickly spin up and destroy VMs.

Required Software

Some terminal software (if not Mac or Linux), Ansible, Vagrant, Virtualbox, vagrantfile (if not downloaded yet)

Architecture Diagram

Deployment

Download Ansible:
    http://docs.ansible.com/ansible/intro_installation.html
Download Vagrant:
    https://www.vagrantup.com/downloads.html
Download Virtualbox:
    https://www.virtualbox.org/wiki/Downloads

Make sure you have a vagrantfile (with iso)
If not:
       vagrant init
Spin up vm:
       vagrant up
            In case of authentication error: https://github.com/mitchellh/vagrant/issues/7610
Edit local ssh-config file:
       vagrant ssh-config
           Copy output
       sudo vi /etc/ssh/ssh_config
           Paste output
Command ssh hostname should immediately log into vm
Once ansible playbooks are finished and debugged, run command to run playbooks:
       ansible-playbook -i hosts.ini playbook.yml
To shut in vault:
       Ansible-vault create secrets.yml
Input vault password
List passwords and keys in opened file. Save file.
       If file needs to be edited: ansible-vault edit secrets.yml
Return to other playbooks and remove those passwords and keys
Now run playbooks with command:
       ansible-playbook -i hosts.ini playbook.yml --ask-vault-pass

That's all folks!

Issues

Title: *Storage Full*
Description: *Logs fill up all the storage.*
Remediation Steps: *Automate logs to be copied to another location. Delete logs. Repeat every week or so.*

Title: *Service Process Dies*
Description: When a service process stops working on a vm.
Remediation Steps: *Vagrant destroy, vagrant up, run ansible playbook on vm.*

Title: *Blackout*
Description: *When the power is going down and service must stay up.*

Remediation Steps: *Back up server / vms. Cloud computing like AWS is recommended. Safely shut down servers before intentional blackout and point IPs to backup service. Start servers back up and resume service on them.*

Title: Memory Overload
Description: *When a process(es) try to use too much memory and freeze vm.*
Remediation Steps: *Ctrl - C or open a new terminal and vagrant destroy. Use vagrant up to spin up a new vm. Run ansible to reload information back on server.*