puppet full tutorial>>

Puppet installation and manifest

@ Puppet installation

*******************************SERVER-SIDE*******************************

server-side {puppet-master configuation}

remove all puppet and its dependencies

apt-get purge puppet puppet-common

update system

apt-get update && apt-get -y upgrade && apt-get install -y nano wget

change hostname and /etc/hosts so that change the FQDN

install ntp for accurate time to sync with puppet-agents

sudo apt-get -y install ntp

service ntp restart

update the repository for get latest puppet

wget https://apt.puppetlabs.com/puppetlabs-release-trusty.deb

dpkg -i puppetlabs-release-trusty.deb

apt-get update

apt-get install puppetmaster

edit the configuration {/etc/puppet/puppet.conf}
(cert and dns... for used if puppet is integrated with apache, because apache take puppet master name as puppet not our FQDN,we do this for resolve that issue)

nano /etc/puppet/puppet.conf

#templatedir=$confdir/templates
cert=puppet
dns_alt_names=puppet,puppetmaster.biz.com

edit the configuration {/etc/default/puppetmaster}

nano /etc/default/puppetmaster

START=yes

service puppetmaster start

check the version

puppet -V

edit the configuration file /etc/puppet/fileserver.conf
(indeed for adding some files from master to agent)

nano /etc/puppet/fileserver.conf

#[Extra-files]
#path /etc/puppet/files
*#allow **

change this to

[files]
path /etc/puppet/files
*allow **

1) mkdir -p [puppet-home]/files   # create a dir "files" under [puppet-home] eg :
/etc/puppet

2) add the files need to copy to agents in "files" dir

3) source => 'puppet:///files/added-item'

*****************************AGENT-SIDE*******************************

agent configuration {puppet-agent configuration}

remove all puppet and its dependencies

apt-get purge puppet puppet-common

update system

apt-get update && apt-get -y upgrade && apt-get install -y nano wget

change hostname and /etc/hosts so that change the FQDN

install ntp for accurate time to sync with puppet-agents

sudo apt-get -y install ntp

service ntp restart

update the repository for get latest puppet

wget https://apt.puppetlabs.com/puppetlabs-release-trusty.deb

dpkg -i puppetlabs-release-trusty.deb

apt-get update

apt-get install puppet

check the time of server and agent are same or not

date

edit the configuration {/etc/puppet/puppet.conf}
(cert and dns... for used if puppet is integrated with apache, because apache take puppet master name as puppet not our FQDN,we do this for resolve that issue)

nano /etc/puppet/puppet.conf

#templatedir=$confdir/templates

#[master]
These are needed when the puppetmaster is run by passenger
and can safely be removed if webrick is used.
#ssl_client_header = SSL_CLIENT_S_DN
#ssl_client_verify_header = SSL_CLIENT_VERIFY

[agent]
server=puppetmaster.biz.com

edit the configuration {/etc/default/puppetmaster}

nano /etc/default/puppet

START=yes

add the master's FQDN in /etc/hosts and try to ping

nano /etc/hosts

ping puppetmaster.biz.com

establish the connection from client side by sending ssl key

puppet agent -t

******************************SERVER-SIDE********************************

list all certificates

puppet cert list –all

it will shows some certs but accepted certificates have "+" sign in the first line.

puppet cert sign puppet-agent-name

to remove a cert of agent from master:

puppet cert clean puppet-agent-name

*****************************AGENT-SIDE********************************

check from the client side

puppet agent --fingerprint

*****************************SERVER-SIDE********************************

configure the manifest

nano /etc/puppet/manifests/site.pp

*****************************AGENT-SIDE********************************

after creating manifest, run the agent for testing
/etc/init.d/puppet restart

puppet agent -t

agent fetch manifest from master each 30min by default, to change this

nano /etc/puppet/puppet.conf

runinterval=xxx

How often puppet agent applies the catalog. Note that a runinterval of 0 means "run continuously" rather than "never run." If you want puppet agent to never run, you should start it with the --no-client option. This setting can be a time interval in seconds (30 or 30s), minutes (30m), hours (6h), days (2d), or years (5y).

******************************SERVER-SIDE******************************

to make multiple manifest file other than site.pp

eg: agent1.pp , agent2.pp ...etc

1) create the sub manifest like agent1.pp and note the whole classes inside that manifest

2) go to site.pp and import agent1.pp by using command "import agent1.pp"

3) under the particular agent node provide the classes of agent1.pp by using command "include class"
note >> dont give same class name in agent1.pp and site.pp, confioguration may be conflict

links::
https://www.howtoforge.com/puppet-ubuntu-14.04

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********************************MANIFEST**********************************
****

@ manifest

****
code writing

```
resource_type { 'resource_name'
  attribute => value
  ...
}
```

****

```
class name
{
..code..
}
```

****

single node

node 'node-name'
{
..code..
or
include class
}

****

multiple nodes

node 'node-name-1', 'node-name-2', 'node-name-3'
{
..code..
or
include class
}

****

multiple nodes ending with digits
(eg: www1,www32,www645)
node /^name\d+$/

node /^www\d+$/
{
..code..
or
include class
}

****

multiple nodes having some common name
(eg: www.example,zzz.example)
node /^(node-1|node-2|...node-n).name$/

node /^(www|zzz)\.example$/
{
..code..
or
include class
}

```
****************************apache********************command completed

useradding

user {'name',
ensure => 'present',
uid => '1500',
gid => '1500',
shell => '/bin/bash',
home => '/home/name'
require => group['name'],      # require that group adding before executing
require => class['class-name'],

******************************************************************************


create file or directory

file {'/path/name':
ensure => 'directory',          # change directory to file if need file
content => 'hai',               #this will append to that file
owner => 'name',
group => 'name',
mode => '0777',
}

******************************************************************************

to create a group

group {'name':
ensure => present,
gid => '1500',
}

******************************************************************************


to updating or do some command


exec { 'apt-update':            # exec resource named 'apt-update'
command => '/bin/apt-get update',   # command this resource will run
}

******************************************************************************


to depend on previous or next process

require => Package["apache2],        # require apache2  command completed
```

before => Package["apache2],   # do this command before apache2 command executed

note ::: need to use capital letter instead of small letter, eg >> "P" instad of "p" for package,

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notify the service

notify => Service ["apache2],

note ::: need to use capital letter instead of small letter, eg >> "S" instad of "s" for package,

****

using scripts we can make it more confort


```
class mysql
{
file {'/home/mysql.sh':
ensure => 'file',
source => 'puppet:///files/mysql.sh',
mode => 0777
}


exec {'mysql':
command => '/home/mysql.sh',
}
}

node 'puppet-1'
{
include mysql
}
```

****
****

configure manifest with modules

1) puppet module search name   # eg : puppet module search apache

2) puppet module install anyone-of-module   # eg : puppet module install puppetlabs-apache

3) puppet module list

after that , configure manifest for your convenience

eg : for apache2

```
class { 'apache':
  default_vhost => false,
}

apache::vhost { 'www.bizruntime.com':
  port    => '80',
  docroot => '/var/www/bizruntime',
}

apache::vhost { 'www.bizruntime2.com non-ssl':
  servername     => 'www.bizruntime2.com',
  port           => '80',
  docroot        => '/var/www/bizruntime2',
  redirect_status => 'permanent',
  redirect_dest   => 'https://www.bizruntime2.com/'
}

apache::vhost { 'www.bizruntime2.com ssl':
  servername => 'www.bizruntime2.com',
  port       => '443',
  docroot    => '/var/www/bizruntime2',
  ssl        => true,
}
```

links:

https://docs.puppet.com/puppet/latest/reference/lang_node_definitions.html

source command >>>
http://askubuntu.com/questions/90015/how-to-copy-files-to-all-machines-using-puppet-master

full resource info >>
https://docs.puppet.com/puppet/3.8/reference/type.html

some basic manifest commands >>
https://www.digitalocean.com/community/tutorials/configuration-management-101-writing-puppet-manifests

apache2-module >>
https://forge.puppet.com/puppetlabs/apache