

DEPARTMENT OF INFORMATION TECHNOLOGY

Semester	B.E. Semester VIII – Information Technology Engineering
Subject	DevOps Lab
Subject Professor	Prof. Rohit Barve
In-charge	
Laboratory	

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Grade and Subject Teacher's Signature		

Experiment Number	6		
Experiment Title	To perform Software Configuration Management using Puppet.		
Resources / Apparatus Required	 Hardware: Intel Core i3/i5/i7 Processor with Intel VT-X support. 4 GB RAM 500 GB Hard disk 	Software: Operating systems: Linux Desktop OS for Client machines.	
Theory/ Procedure/ Algorithm	Puppet Slave Send Mast Request for : Send Slave Request	s through a secure encrypted channel	

- Puppet Slave asks for Puppet Master certificate.
- After receiving Puppet Master certificate, Master requests for Slave certificate. Once Master has signed the Slave certificate, Slave requests for configuration/data.
- Finally, Puppet Master will send the configuration to Puppet Slave.

Output:

Puppet Slave

cd etc

apt install nano

nano hosts

```
root@fee3da376acf:/# cd etc
root@fee3da376acf:/etc# apt install nano
Reading package lists... Done
Building dependency tree
Reading state information ... Done
Suggested packages:
  The following NEW packages will be installed:
    upgraded, 1 newly installed, 0 to remove and 2 not upgraded.
 o upgraded, I heavy Instacted, but remove and 2 not upgraded.
Need to get 159 kB of archives.
After this operation, 868 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu focal/main amd64 nano amd64 4.8-lubuntu1 [269 kB]
Fetched 269 kB in 2s (153 kB/s)
debconf: delaying package configuration, since apt—utils is not installed
debconf: delaying package configuration, since apt-utils is not installed 
Selecting previously unselected package nano. 
(Reading database ... 11292 files and directories currently installed.) 
Preparing to unpack .../nano 4.8-lubuntul_amd64.deb ... 
Unpacking nano (4.8-lubuntul) ... 
Setting up nano (4.8-lubuntul) ... 
update-alternatives: using /bin/nano to provide /usr/bin/editor (editor) in auto mode 
update-alternatives: warning: skip creation of /usr/share/man/man1/editor.1.gz because associated file /usr/share/man/man1/nano.1.gz (of link gro 
up editor) doesn't exist 
update-alternatives: using /bin/nano to provide /usr/bin/pico (pico) in auto mode 
update-alternatives: warning: skip creation of /usr/share/man/man1/pico.1.gz because associated file /usr/share/man/man1/nano.1.gz (of link group 
pico) doesn't exist 
rootaFee3da376acf:/etcf nano hosts
```

Add 172.17.0.2 puppet in last line

```
::0:0.1 localhost

::1 localhost ip6-localhost ip6-loopback

fe00::0 ip6-localnet

ff00::0 ip6-mcastprefix

ff02::1 ip6-allnodes

ff02::2 ip6-allrouse
```

puppet agent -t --debug

```
puppet agent -t --debug

rotofkee3da37&af:/*etc# puppet agent -t -debug

//ssr/llb/ruby/vendor_ruby/puppet/vitl.rb:461: warning: URI.escape is obsolete

Debug: Applying settings catalog for sections main, agent, ssl

//ssr/llb/ruby/vendor_ruby/puppet/vitl.rb:461: warning: URI.escape is obsolete

Debug: Cathing evinoment 'production' (ttl - 0 sec)

Debug: Evicting cache entry for environment 'production'

Debug: Sevirong environment 'production' (ttl - 0 sec)

Debug: Sevirong environment 'production' (ttl - 0 sec)

Debug: Using settings: adding file resource 'confdir': 'file[/etc/puppet/code]{:path⇒*/etc/puppet/code*, :ensure->:directory, :loglevel->:debug, :links>->:follow, :backup=false}'

Debug: Using settings: adding file resource 'condedir': 'file[/etc/puppet/code]{:path⇒*/etc/puppet/code*, :ensure->:directory, :loglevel->:debug, :links>->:Debug: Evicting cache entry for environment 'production'

Debug: Puppet::Type::User::ProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProviderProv
```

Puppet Master

systemctl start puppet-master.service

```
root@09e4408aeae4:/# systemctl start puppet-master.service
root@09e4408aeae4:/# cd etc
root@09e4408aeae4:/etc# cd hosts
bash: cd: hosts: Not a directory
root@09e4408aeae4:/etc# cat hosts
127.0.0.1 localhost
::1 localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allnodes
ff02::2 ip6-allrouters
172.17.0.2 09e4408aeae4
root@09e4408aeae4:/etc#
```

Puppet cert list

```
roota0984488aea4:/ett# puppet cert list
//wsr/lib/ruby/vendor_ruby/puppet/util.rb:461: warning: URI.escape is obsolete
//wsr/lib/ruby/vendor_ruby/puppet/application.rb:370:in `run')
**S24941e49907** (SHA256) 6A:56:05:46:38:86:16:16:126:166:E1:06:24:DF:(64:5A:20:09:B3:04:D7:E7:AF:90:06:CA:C6:8E:81:B8:F3:D5:A7
**Tee3da376acf** (SHA256) A8:53:39:48:F2:D5:38:B4:B4:C1:17:C0:5F:DC:33:98:85:EA:E0:14:AF:F8:F1:DA:AC:A4:BF:35:95:91:49:D5
roota009e4408aeae4:/ett#
```

puppet cert sign **fee3da376acf** puppet cert sign **524941e49907**

```
root@09e4408aeae4:/etcf puppet cert sign fee3da376acf
/usr/lib/ruby/vendor_ruby/puppet/util.rb:461: warning: URI.escape is obsolete
/usr/lib/ruby/vendor_ruby/puppet/sphication.rb:370:in `run')
// Signing certificate request for:
/*Ge3da376acf' (SHA256) A8:53:39:48:F2:05:38:84:B4:C1:17:C0:5F:DC:33:98:85:EA:E0:14:AF:F8:F1:DA:AC:A4:8F:35:95:91:49:05
// Notice: Signed certificate request for fee3da376acf at '/var/lib/puppet/ssl/ca/requests/fee3da376acf.pem'
// root@09e4408aeae4:/etc# puppet cert sign 529491e49907
// vsr/lib/ruby/vendor_ruby/puppet/util.rb:461: warning: URI.escape is obsolete
// vsr/lib/ruby/vendor_ruby/puppe
```

Conclusion

We come to know about how to perform software configuration management using puppet.