

SSHave your Puppets!

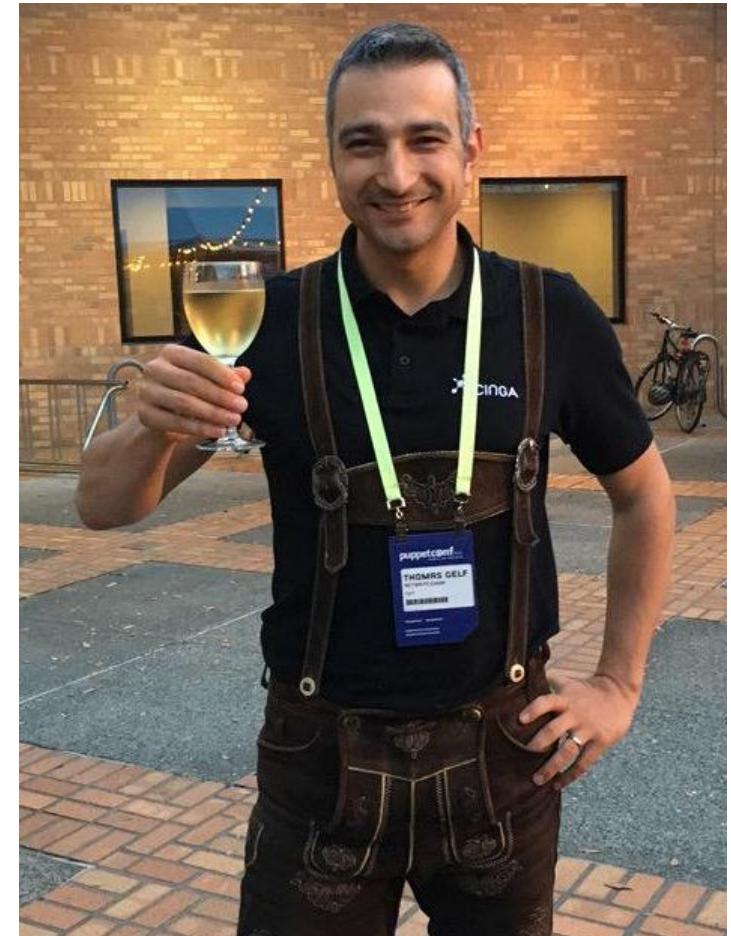


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Replace a bunch of Shell scripts

The right way!



Puppet Infrastructure setup sucks.

Scaling OSS Puppet is easy.
Ever tried to scale PuppetDB or PE?
Driven by Puppet?



KICK IT!

puppet kick

mco

pcp, pxp



Not every biz is a startup



Not all the people have their heads in the clouds
CfgMgmt should work **for you**, not vice versa

DevOps: Don't forget about OPS!

SSH - why not?

Seems to work fine somehow for everybody else



SALTSTACK

ANSIBLE

CHEF

SSHo why not Puppet?

Asking the web for Puppet & SSH:

~~ssh 'git clone && puppet apply'~~



This is not what I want :-(

It sucks. I still love my Puppets!

DISCLAIMER: Depending on where you're from this image could contain sexual content that might possibly embarrass you. Please note that the author really tried hard to respect diversity. One far day the he will become a better human being. In the meantime of course he strictly follows the code of conduct of the day.



But it works!

```
ssh <node> -c 'facter -j'  
puppet master --compile > catalog.json  
ssh <node> -c 'puppet apply -catalog -' \  
< catalog.json
```



Problem: file server

```
file { '/tmp/test':  
    source => 'puppet:///mod.../a-file',  
}  
}
```

How to ship this over SSH?



Shipping files with SSH?

Trivial joke!

There is SCP or rsync over SSH

```
file { '/tmp/test':  
    source => '/tmp/.sshave-tmp/a-file',  
}  
Fix the catalog on the fly :-)
```



Next problem: plugin sync

Custom facts

Needed on the agent

Before fetching facts



Reports, exported resources?

They will just work.



One node one catalog

WHY??? I want:
partial catalogs
different schedules
different user accounts



Tasks on demand?

```
sshuttle <node> run "service {  
    'apache': ensure => stopped  
}"
```

```
sshuttle <node> apply manifests/stop_app.pp
```



How this could look like

```
run_upgrade { 'my-app-name':  
  nodes          => ['app5', 'app6' ],  
  load_balancer => 'lb',  
}  
-> run_upgrade { 'my-app-name':  
  nodes          => ['app3', 'app4' ],  
  load_balancer => 'lb',  
}  
-> run_upgrade { 'my-app-name':  
  nodes          => ['app1', 'app2' ],  
  load_balancer => 'lb',  
}
```

```
define run_upgrade($nodes, $load_balancer) {  
  
  $app = $title  
  $names = join(', ', $nodes)  
  
  run { "Remove $names from load balancer":  
    node => $load_balancer,  
    params => {  
      action => 'remove',  
      node   => $nodes,  
    },  
  }  
  
  -> run { "Stop application $app on $names":  
    node => $nodes,  
  }  
  
  -> run { "Upgrade application $app on $names":  
    node => $test_nodes,  
  }  
  
  -> run { "Run smoke tests for $app on $names":  
    node => $test_nodes,  
  }  
  
  -> run { "Re-add $names to load balancer":  
    node => $load_balancer,  
    params => {  
      action => 'add',  
      node   => $nodes,  
    },  
  }  
}
```

TooSmall;Don'tRead (tm)

Think about testing

Catalog diff



Catalog diff



Resources differing in chosen catalogs

Differences Resource type

3 Class

4 Exec

1 File

1 Pe_ini_setting

Resources of type "exec" differing in chosen catalogs

Variants Resource type

2 Exec [extract puppet-agent-ubuntu-14.04-amd64.tar.gz]

2 Exec [pe_concat_ /etc/puppetlabs/console-services/bootstrap.cfg]

2 Exec [pe_concat_ /etc/puppetlabs/puppetserver/bootstrap.cfg]

2 Exec [pe_concat_ /opt/puppetlabs/server/data/console-services/certs /pe2015.example.com.cert.pem]

Catalog diff



Diff for Exec [extract puppet-agent-ubuntu-14.04-amd64.tar.gz]

```
3 creates => "/opt/puppetlabs/server  
/data/packages/public/2015.2.1/ubuntu-14.04-  
amd64/conf",  
4 cwd => "/opt/puppetlabs/server/data/packages  
/public/2015.2.1/ubuntu-14.04-amd64",  
5 logoutput => "on_failure",  
6 path => "/usr/local/sbin:/usr/local/bin:/usr  
/sbin:/usr/bin:/sbin:/bin",  
7 }
```

```
3 creates => "/opt/puppetlabs/server  
/data/packages/public/2015.2.1/ubuntu-14.04-  
amd64/conf",  
4 cwd => "/opt/puppetlabs/server/data/packages  
/public/2015.2.1/ubuntu-14.04-amd64",  
5 logoutput => "on_failure",  
6 path => "/opt/puppetlabs/puppet/bin:/usr/local  
/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:  
/usr/bin",  
7 }
```

Dockerdockerdocker!

No need for a Puppet or SSHd
SSH to the host
ro-mount catalog & puppet
nsexec



Want more?

- Gin is great, beer might help
- You could also book me @netways

**Thanks for listening,
own your tools &
SSHave your Puppets!**



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