

# Orchestration with Ansible at Fedora Project

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- Challenges faced by a System Administrator
- Why scripts fail to scale
- Ansible to the Rescue!
- Ansible vs Puppet (or Chef)
- Ad-Hoc Stuff
- Scripted Stuff
- No Agent = True Decentralization
- Ansible @ Fedora Infra
- Contribute @ Fedora Infra

# Challenges Faced By A System Administrator



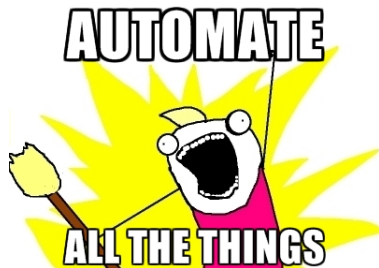
- New servers. New applications. Updates.
- Is it a cloud? Is it a colo? Is it a hybrid?
- Initial Configuration. Management. Replication.
- New joinees. People leaving.

Read Again from first bullet. Essentially "SysAd Loop"

# Why Scripts Fail To Scale



- Looks Dirty, specially when exceed 1000 lines (50 for perl)
- Code repetition multitude of times
- Hard to remember the order of execution
- Do you like to Document?



- YAML awesomeness
- OpenSSH as transport
- Parallel-ordered execution
- No agent required on servers!

# Ansible vs Puppet (or Chef)



- No agent requirement
- Based on Python, can run on minimalistic systems like Xen
- YAML is lot easier to read
- Derived from my experience with Puppet, criticism welcomed

# Ansible Installation And Configuration



- yum, apt, pip
- If you can ssh, you can run Ansible
- Run ad-hoc or scripted commands
- Inventory file: hosts

# Inventory file

```
$ cat /etc/ansible/hosts
[webservers]
web1.example.com
web2.example.com

[databases]
db1.example.com
db2.example.com

[smtp]
web1.example.com
```



# Ad-Hoc Stuff 1

```
$ ansible webservers -m ping
web1.example.com | success >> {
    "changed": false,
    "ping": "pong"
}

web2.example.com | success >> {
    "changed": false,
    "ping": "pong"
}
```

## Ad-Hoc Stuff 2

```
$ ansible all -m command -a 'echo hello'  
web1.example.com | success | rc=0 >>  
hello
```

```
web2.example.com | success | rc=0 >>  
hello
```

```
db1.example.com | success | rc=0 >>  
hello
```

```
db2.example.com | success | rc=0 >>  
hello
```

```
$ cat sample_playbook.yml
- name: that awesome service
  hosts: databases

  tasks:
  - name: put config
    copy: src=config/my.conf dest=/etc/mysql/my.conf
    notify:
    - restart MySQL

  handlers:
  - name: restart MySQL
    command: service mysqld restart
```

# No Agent = True Decentralization



- Anyone with right authorization can execute
- No more "Damn! Orchestration server went down :("
- One less server to manage
- Works from anywhere, anytime



- Creating from scratch = easy-peasy, moving from Puppet = "Kill me now!"
- Focus on idempotent playbooks
- Turbo charged with Accelerate mode
- Learn what not to do



- Fedora = Bleeding Edge, leading by example
- Help us port Puppet modules to Ansible
- Easyfix modules for beginners
- Lots of helpful people on IRC and mailing list.
- Talk to us at #fedora-admin on IRC

# Questions?

Now is your chance :)