

# DEVOPS

**Module – Tool Comparison**  
**Comparing the various tool sets**

# Disclaimer

→ ALL TOOLS ARE CONFIGURATION MANAGEMENT (CM)

- » Puppet

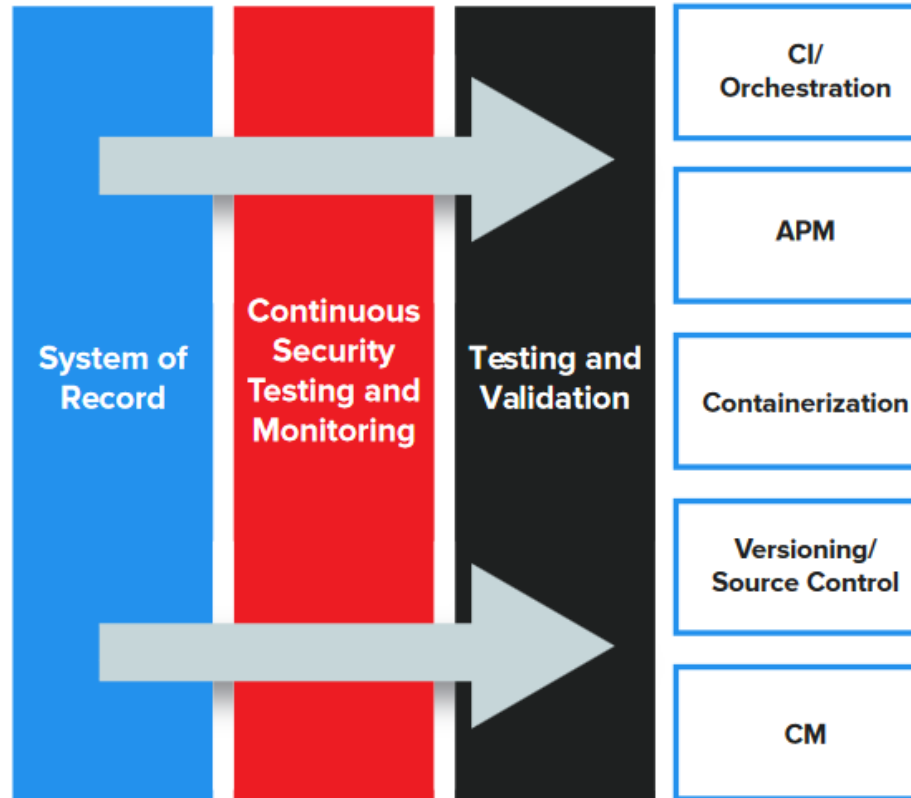
- » Salt

- » Ansible

- » Chef

→ All of these have +/- . JUDGE FOR YOURSELF !

# The Devops Tool Set



# Puppet vs Salt



or



# Puppet vs Salt

→Puppet has been

» around for the longest time,

» it has the largest user base and market share.

→Developed in 2005 by Luke Kanies,

→Open-source product that also has a commercial version developed and supported by Puppetlabs.



# Puppet vs Salt

## →Puppet

- » Ruby Based DSL
- » Weak web UI (mostly CLI based)
- » SSL Communication

## →Salt

- » Python Based
- » Developed by Tom Hatch because
  - he felt Puppet and Chef were too slow and ov
- » Open Source in 2011 with at least one big name:
- » Now Supports Enterprise Edition
- » Leverages ZeroMQ Message Bus for Concurrency
- » Persistent TCP Connections



# Puppet vs Salt

→Puppet has

- » Larger community base
- » Growing Minority of dissenters for various reasons (political, economical and technical)

→Salt

- » Growing community based

**Nuff Said! Let's get the details**

# Puppet vs Salt

→Puppet

- » V3.0 (Q2 2013) added speed performance
- » Allows finer-grained filtering to select subsets of systems to modify or directly control
- » Batching functions to permit a gradual rather than all-together rollout of changes.
- » Better support of Windows servers.
- » better gui support (Live Management)
- » Downsides

Ruby makes execution order undependable

New Puppet releases are still not as bug-free as its size and maturity would suggest



# Puppet vs Salt

→Salt

- » Relatively New
- » Poor GUI support (HALITE)
- » Difficult to debug issues ☹️
- » Highly scalable and resilient

Multiple levels of masters

Load distribution

increased Redudancy

# Puppet vs Salt



or



# Puppet vs Ansible



or



# Puppet vs Ansible

## → Ansible

- » Released 2012
- » Parent Company AnsibleWorks
- » Open Sourced
- » Python Based
- » Lightweight and quick Deployment
- » Agentless work – everything done via SSH
- » Ansible commands can be written in almost any programming language
- » Poor GUI
- » Does not run on Windows/Network Devices
- » Mostly useful for quick and temporary deployments

# Puppet Vs Ansible

## Puppet

### Pros

- Mature solution
- Good GUI
- Support for all major OS's
- Easy install

### Cons

- Slow-ish to respond and address customer concerns
- Ruby-based, performance questionable compared to Python-based CM tools
- Soon all customers must learn the Puppet DSL

## Ansible

- Excellent performance, agent-less install and deploy
- Low overhead, playbook based
- Based on ubiquitous Python language
- CLI accepts commands in almost any language

- Still very new; not yet tried and tested by many
- No support for Windows
- GUI a work in progress

# Puppet vs Ansible



or



# Puppet vs Chef



or



# Puppet vs Chef

→At the basic level, Chef is a tool for automation, provisioning and configuration management. The platform is made up of the following components:

- » **Chef Server** - the main hub where Chef propagates and stores system configuration information and policies (i.e., recipes and cookbooks). The Chef management console is the web user interface for Chef Server.
- » **Chef Client** - installed on every node being managed, the Chef Client performs configuration tasks on the local machine.
- » **Workstation** - allows designated workstations to author/test/maintain cookbooks and upload them to Chef Server. Workstations are also used when utilizing the Chef development kit package.
- » **Chef Analytics** - a platform that provides actions and run history, real-time reporting, and notifications around Chef automation activities.
- » **Chef Supermarket** - an open source directory of community-contributed cookbooks



# Puppet vs Chef

→ Chef is considered more developer friendly

- » ChefDK

- » Knife plugin

- » Chef Delivery

yet more developer-friendly features like

comprehensive codebase change histories,

metrics, and

permissions management to the platform

# Puppet vs Chef

→Chef Delivery's automated testing and continuous integration/delivery tools augment the platform with new features such as

- » a shared workflow pipeline,
- » collaboration capabilities, and
- » enhanced analytics—as well as
- » new ecosystem integrations with AWS, Azure, and Docker, to name a few

→Better Pipeline Management ??

→Improved Security with Chef Vault

- » Done via Data bags and can be very tedious and error prone

# Puppet vs Chef

- Puppet is considered a more operations and sysadmin-oriented solution when compared to Chef,
  - » These role-based distinctions are becoming less relevant with each release.
- Currently on version 4.3, Puppet is commonly deployed in a client/server configuration with managed nodes periodically synchronizing their configurations with the server.
- Reporting (e.g., results from automation runs, errors/exceptions) and other information is sent by the clients back to the server for aggregate analysis and processing.
- and more technical differences !!!

**TOTALLY DIFFERENT ARCHITECTURE, FLOW, PROCESSES !**

# Puppet vs Chef

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or



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