# Chef

101
Demo

# Recipe

Overview

Architecture

Installation / Configurations

Use Case Samples [Redis, NGINX, MongoDB, Cassandra]

Other Notes [Cloud, DevOps, Lifecycle, Enterprises, Et Al]

# Recipe

**Overview**

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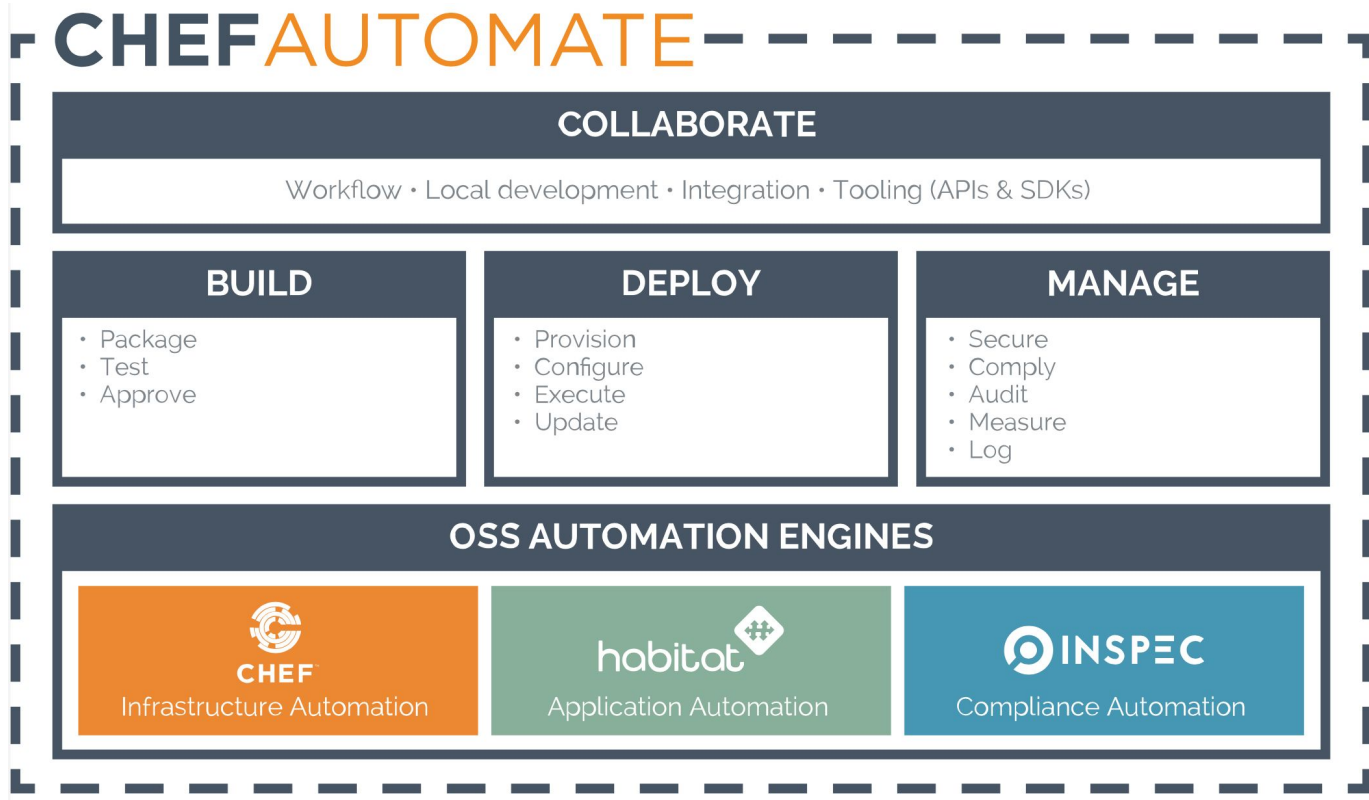Other Notes [Cloud, DevOps, Lifecycle, Enterprises, Et Al]

# Overview



Chef is a powerful automation platform that transforms infrastructure into code.

Chef automates how infrastructure is configured, deployed, and managed across your network, no matter its size.

# Overview



**CHEF**AUTOMATE

## COLLABORATE
Workflow · Local development · Integration · Tooling (APIs & SDKs)

### BUILD
- Package
- Test
- Approve

### DEPLOY
- Provision
- Configure
- Execute
- Update

### MANAGE
- Secure
- Comply
- Audit
- Measure
- Log

## OSS AUTOMATION ENGINES

**CHEF** Infrastructure Automation

**habitat** Application Automation

**INSPEC** Compliance Automation

# Overview

This diagram shows how you develop, test, and deploy your Chef code.
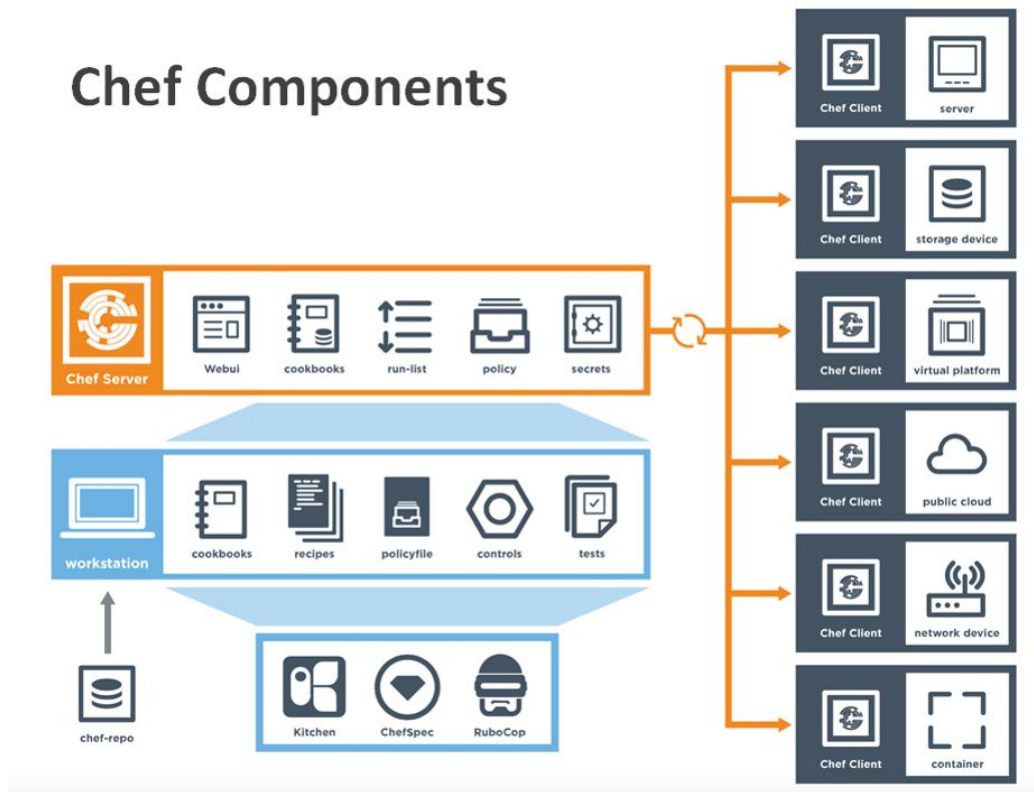
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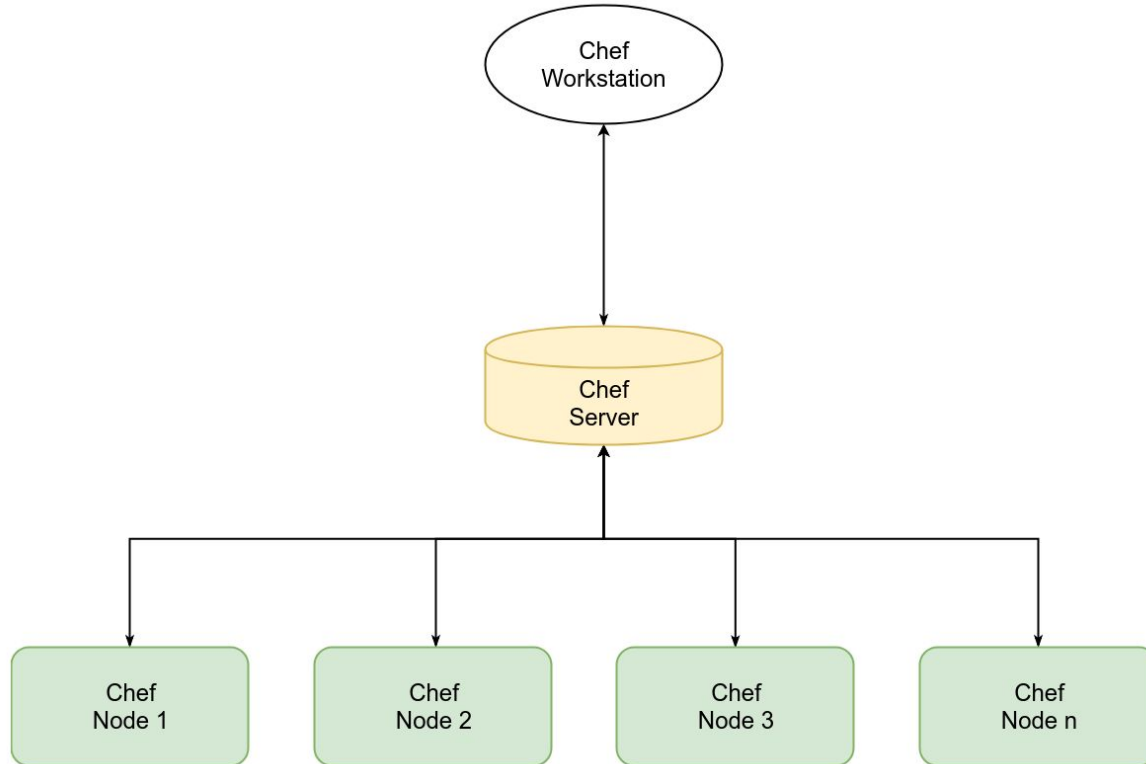Use Case Samples [Redis, NGINX, MongoDB, Cassandra]

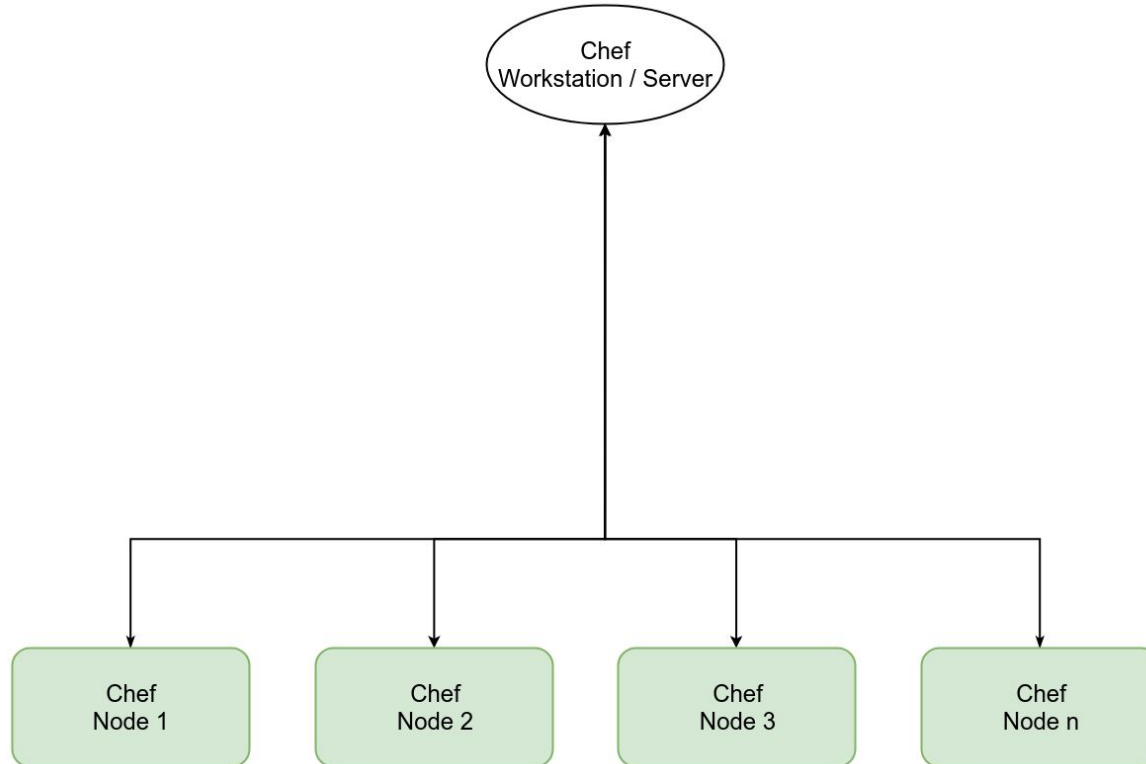Other Notes [Cloud, DevOps, Lifecycle, Enterprises, Et Al]

# Architecture



**Chef Components**

# Architecture - Ideal

# Architecture - Demo

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# Installation / Configuration

**VirtualBox**

https://www.virtualbox.org/wiki/Downloads

**Vagrant**

https://www.vagrantup.com/downloads.html

**Git**

https://git-scm.com/download/linux

**Chef Development Kit**

https://downloads.chef.io/chefdk

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Other Notes [Cloud, DevOps, Lifecycle, Enterprises, Et Al]

# Use Case Samples [Redis, NGINX, MongoDB, Cassandra]

**Redis**

Is an in-memory data structure store

**NGINX**

Is a web server for hosting web applications

**MongoDB**
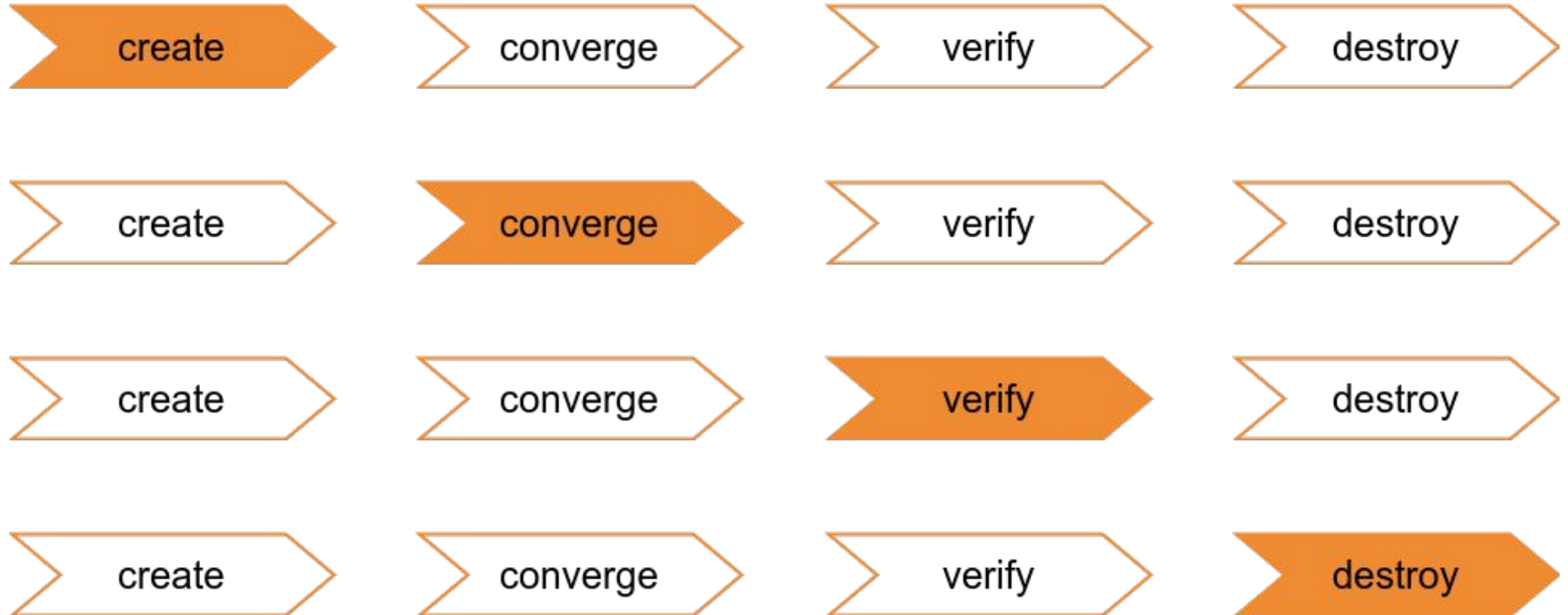
Is a document-oriented database

**Cassandra**

Is a is a highly scalable, high-performance distributed database

# Use Case Samples : Redis - Kitchen on Vagrant

# Use Case Samples : Redis - Kitchen on Vagrant

| create | converge | verify | destroy |
|--------|----------|--------|---------|
| **create** | converge | verify | destroy |
| create | **converge** | verify | destroy |
| create | converge | **verify** | destroy |
| create | converge | verify | **destroy** |

# Use Case Samples : Redis - Kitchen on Vagrant

```
1.   cd ~/ws/chef
2.   git clone https://{{ repo-root-path }}/chef-redis-kitchen-vagrant
3.   cd chef-redis-kitchen-vagrant
4.   kitchen create
5.   kitchen list
6.   kitchen converge
7.   kitchen verify
8.   kitchen login
9.   redis-cli PING
10.  exit
11.  kitchen destroy
```

# Use Case Samples : NGINX - Chef Client on Cloud

chef-client setup_nginx.rb

chef-client remove_nginx.rb

chef-client setup_nginx.rb

chef-client remove_nginx.rb

# Use Case Samples : NGINX - Chef Client on Cloud

```
1.   ssh-add ~/ws/keys/devops-lightsail-key-01.pem
2.   ssh ubuntu@52.74.176.197
3.   cd ~/ws/chef
4.   git clone https://{{ repo-root-path }}/chef-nginx-chef-client-cloud
5.   cd chef-nginx-chef-client-cloud
6.   sudo chef-client --local-mode setup_nginx.rb
7.   curl localhost
8.   Check using browser, access 52.74.176.197
9.   sudo chef-client --local-mode remove_nginx.rb
```

# Use Case Samples : NGINX - Kitchen on Vagrant

# Use Case Samples : NGINX - Kitchen on Vagrant

create     converge     verify     destroy

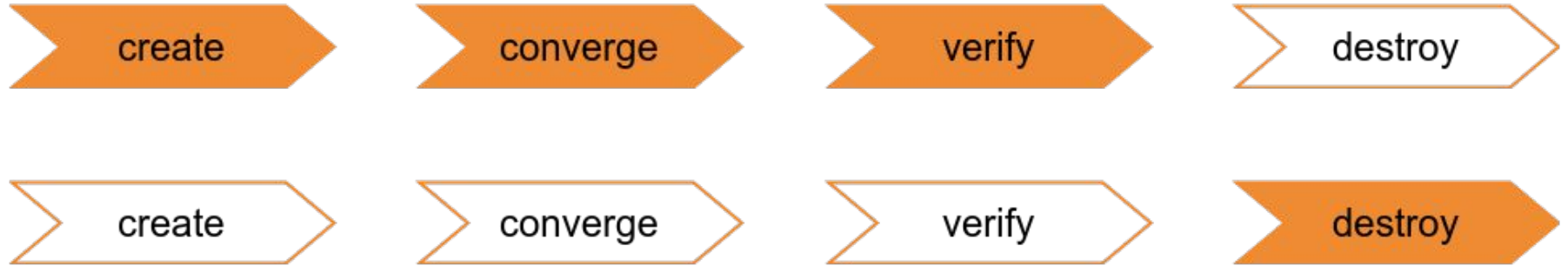create     converge     verify     destroy
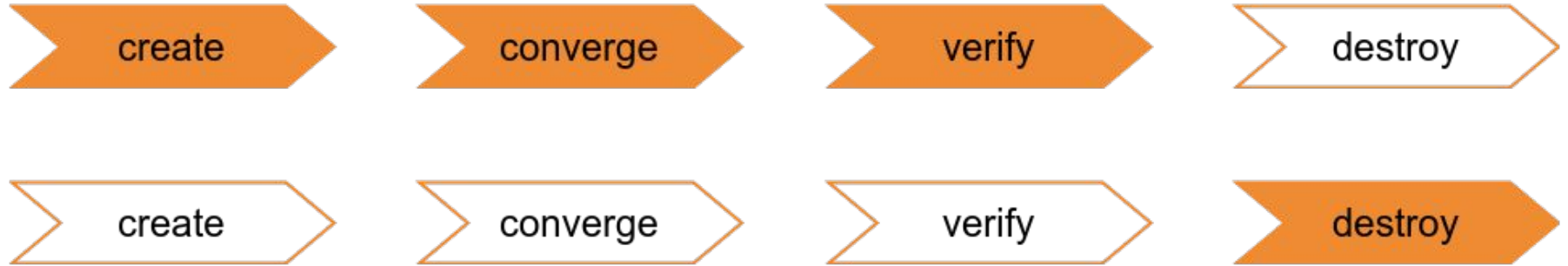
# Use Case Samples : NGINX - Kitchen on Vagrant

1. `cd ~/ws/chef`
2. `git clone https://{{ repo-root-path }}/chef-nginx-kitchen-vagrant`
3. `cd chef-nginx-kitchen-vagrant`
4. `kitchen verify`
5. `kitchen login`
6. `curl localhost`
7. `Check using browser on local network, access 192.168.99.99`
8. `exit`
9. `kitchen destroy`

# Use Case Samples : MongoDB - Kitchen on Vagrant

# Use Case Samples : MongoDB - Kitchen on Vagrant

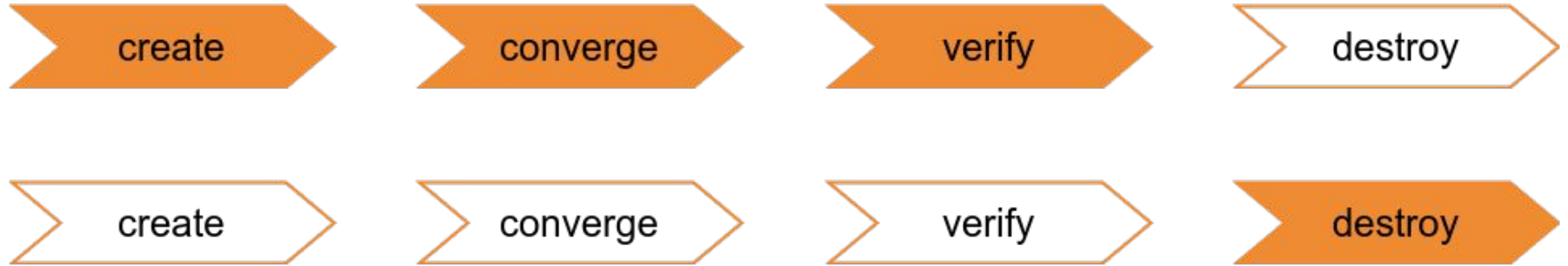create converge verify destroy

create converge verify destroy

# Use Case Samples : MongoDB - Kitchen on Vagrant

```
1.  cd ~/ws/chef
2.  git clone https://{{ repo-root-path }}/chef-mongo-debian-kitchen-vagrant
3.  cd chef-mongo-debian-kitchen-vagrant
4.  kitchen verify
5.  kitchen login
6.  mongo
7.  show databases
8.  db.chef_mongo.insert({'message' : 'Hi Chef!'});
9.  db.chef_mongo.find();
10. exit
11. exit
12. kitchen destroy
```
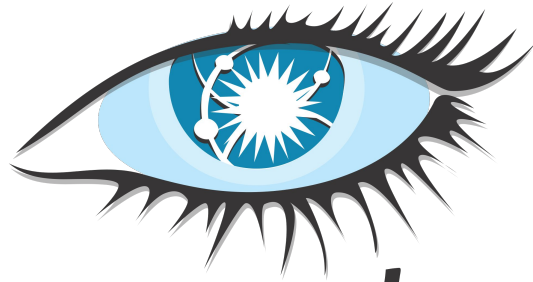
Use Case Samples : MongoDB - APT - Kitchen on Vagrant

# Use Case Samples : MongoDB - APT - Kitchen on Vagrant

create  converge  verify  destroy

create  converge  verify  destroy

# Use Case Samples : MongoDB - APT - Kitchen on Vagrant

```
1.  cd ~/ws/chef
2.  git clone https://{{ repo-root-path }}/chef-mongo-kitchen-vagrant
3.  cd chef-mongo-kitchen-vagrant
4.  kitchen verify
5.  kitchen login
6.  mongo
7.  show databases
8.  db.chef_mongo.insert({'message' : 'Hi Chef!'});
9.  db.chef_mongo.find();
10. exit
11. exit
12. kitchen destroy
```

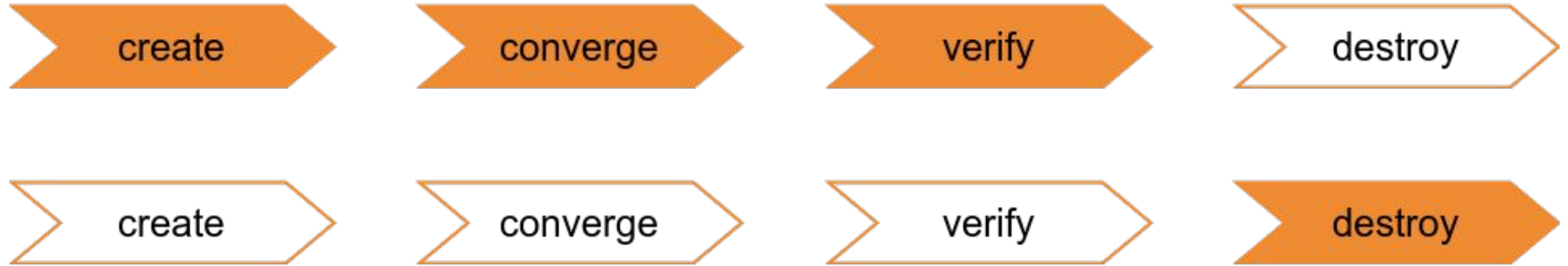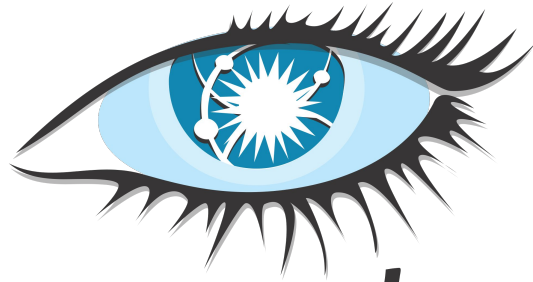# Use Case Samples : Cassandra - Kitchen on Vagrant

# Use Case Samples : Cassandra - Kitchen on Vagrant

create     converge     verify     destroy

create     converge     verify     destroy

# Use Case Samples : Cassandra - Kitchen on Vagrant

```
1.  cd ~/ws/chef
2.  git clone https://{{ repo-root-path
    }}/chef-cassandra-debian-kitchen-vagrant
3.  cd chef-cassandra-debian-kitchen-vagrant
4.  kitchen verify
5.  kitchen login
6.  cqlsh
7.  exit
8.  exit
9.  kitchen destroy
```

# Use Case Samples : Cassandra - APT - Kitchen on Vagrant

# Use Case Samples : Cassandra - APT - Kitchen on Vagrant

create

converge

verify

destroy

create

converge

verify

destroy

# Use Case Samples : Cassandra - APT - Kitchen on Vagrant

1. `cd ~/ws/chef`
2. `git clone https://{{ repo-root-path }}/chef-cassandra-kitchen-vagrant`
3. `cd chef-cassandra-kitchen-vagrant`
4. `kitchen verify`
5. `kitchen login`
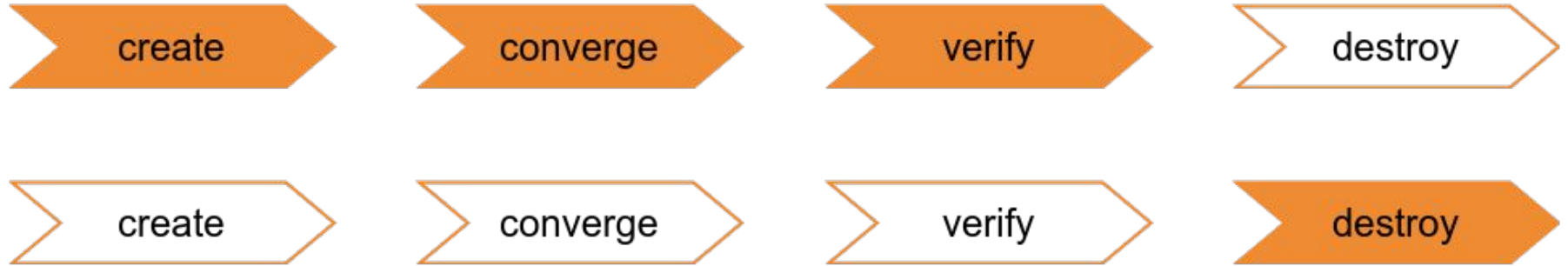6. `cqlsh`
7. `exit`
8. `exit`
9. `kitchen destroy`

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# Other Notes [Cloud, DevOps, Lifecycle, Enterprises, Et Al]

Multi-Cloud

Environment Planning: Development, Testing, Staging and Production

Application Deployments

Infrastructure Versioning through Chef

Chef-Supported Platforms/Drivers [Linux, Windows]

Online/Offline

A

# Thank

You