# Chef

Presenter

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CLOUD ENABLED
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# Chef Foundation Training - Outline

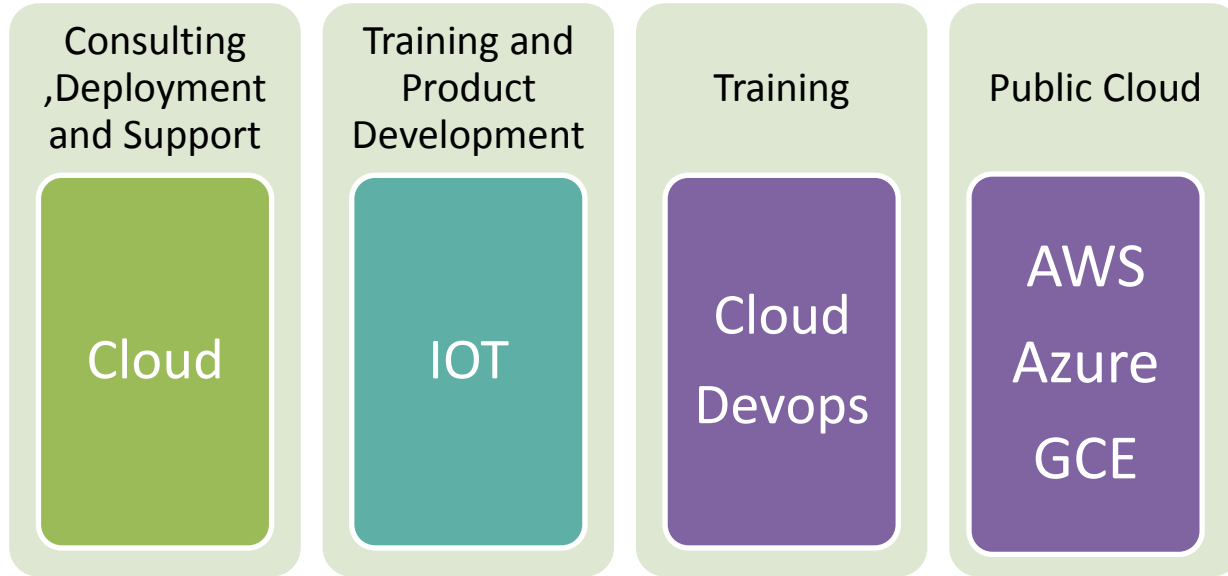| Chef-overview | Ruby basics | Deploy Chef Server | Deploy Chef Workstation | Create cookbook |
|---|---|---|---|---|
| Write and test recipes | Upload cookbooks to chef Server | Bootstrap Node01 ( Ubuntu) | Bootstrap Node02 (Centos) | Bootstrap Node03 ( Win 2012 ) |

# About Us

Cloud Enabled is Cloud Services Company and provides Vendor neutral Cloud Consulting and Cloud Implementation services to deploy Private and Public Clouds powered by OpenStack and Apache CloudStack support capabilities

| Consulting ,Deployment and Support | Training and Product Development | Training | Public Cloud |
|---|---|---|---|
| Cloud | IOT | Cloud Devops | AWS Azure GCE |

Website : http://thecloudenabled.com , Social Media : http://www.facebook.com/thecloudenabled

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# Cloud **Implementation and Migration** Services Offering

## Implementation Services


openstack CLOUD SOFTWARE


cloudstack open source cloud computing

## Migration Services

OpenStack Nova instances migration to Amazon Web Services EC2

VMware ESXI based VM's migration to Amazon Web Services EC2

## Hypervisors Implementation


vmware ESXi


Windows Server 2008 Hyper-V


CITRIX XenServer

**KVM**

# Cloud **Enthusiastic Support** Services Offering



All the implementation service are backed by Cloud Enabled Enthusiastic Support Services. **Comprehensive Support Services**

- OpenStack Cloud Support Service

- Apache CloudStack Support service

- 24×7 Support team backed by Cloud Enabled enthusiastic Support Engineers

- Deployment and Management of  MySQL DB Active/Active Support services

- We also are ware one Size does not fit all and based on business criticality you can choose one of our two support options .

CLOUD ENABLED

**On-site courses**   **Contact us**   **Free courses**

Register for course   Log In
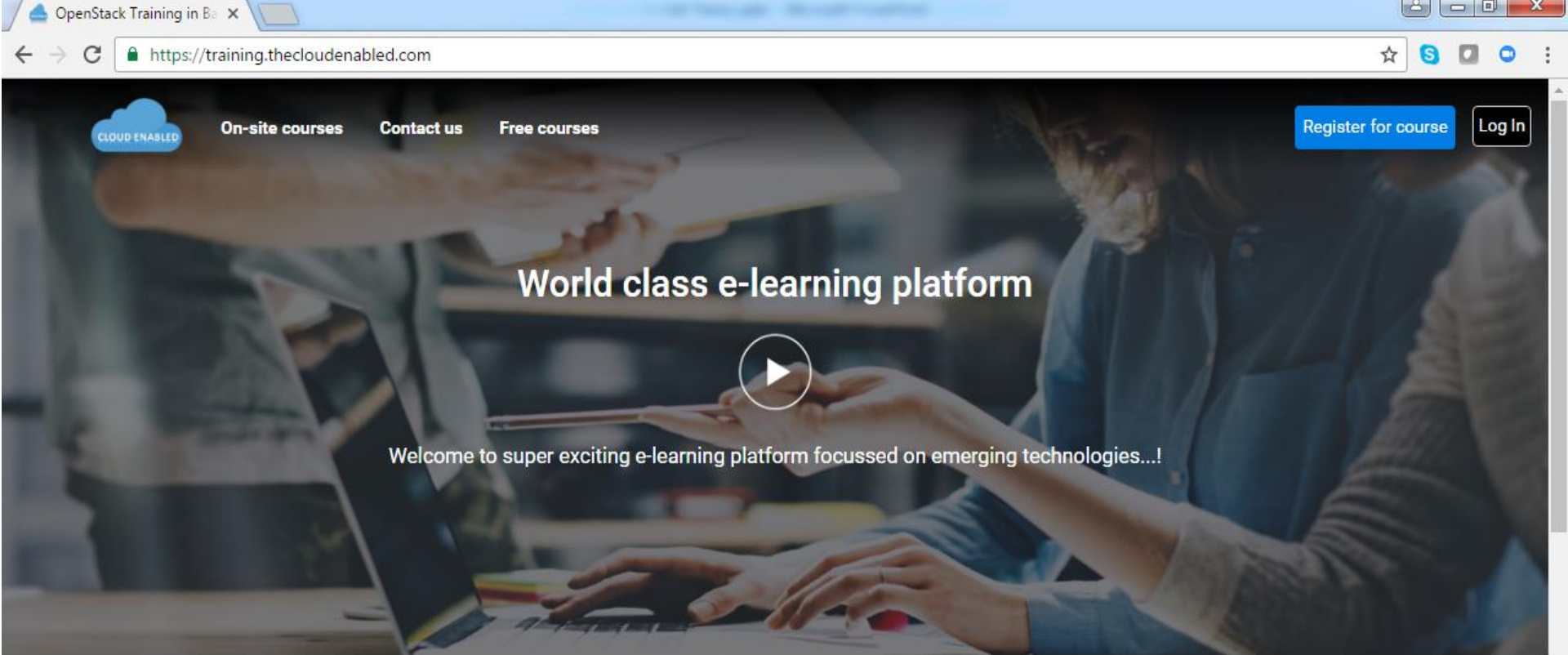
# World class e-learning platform

▶

Welcome to super exciting e-learning platform focussed on emerging technologies...!

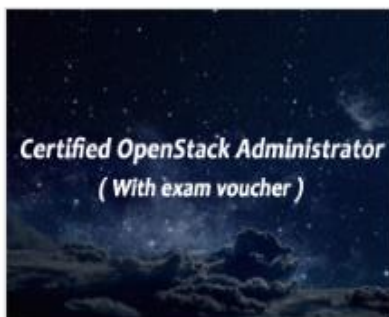## Courses we offer

<OpenStack>   <DevOps>   <Public Cloud>   <SDN>

# OpenStack Courses

Available courses



Certified OpenStack Administrator
( With exam voucher )

07hours 25min

$499



OpenStack Multi Node

KVM

Integration

06hours 22min

$199



Certified OpenStack Administrator

Exam Voucher

00min

$300



Certified OpenStack Administrator

Practice Exam Voucher

00min

$100

# Devops Upcoming

| | | | |
|---|---|---|---|
| Notify Me<br>**Docker Advanced** | Notify Me<br>**Docker on AWS** | Notify Me<br>**Docker on Azure** | Notify Me<br>**Docker on Google Cloud Platform** |
| Notify Me<br>**Chef Advanced** | Notify Me<br>**Github Essentials** | Notify Me<br>**Jenkins Advanced** | Notify Me<br>**Jenkins Essentials** |
| Notify Me<br>**Nexus storage Artifact** | Notify Me<br>**Puppet Essentials** | Notify Me<br>**Sonar Cube Essentials** | |

# Public Cloud Upcoming



Amazon Cloud



Azure Cloud



Google Cloud Platform

# SDN Upcoming

**Upcoming courses**



OpenStack Neutron -Cisco Nexus 1000v Integration — Notify Me

OpenStack Neutron Specialist — Notify Me

SDN Essentials — Notify Me

OpenStack Neutron OpenDaylight Integration — Notify Me

# Chef Essentials

# What is Chef

Infrastructure-As-A- Code

# What do we manage today IT infrastructure operations

| User and group managment | Push files ( config or static fiels) | Install Packages ( apache2,mysql) | Service management ( start | stop| restart) | OS Management ( Update and upgrade) |
|---|---|---|---|---|

# Why Chef

- Use Chef server as your foundation to create and manage flexible, dynamic infrastructure whether you manage 50 or 500,000 nodes, across multiple datacenters, public and private clouds, and in heterogeneous environments.

- Chef is a powerful automation platform that transforms complex infrastructure into code, bringing your servers and services to life

- Chef automates how applications are configured, deployed, and managed across your network, no matter its size.

- Chef is built around simple concepts: achieving desired state, centralized modeling of IT infrastructure

- Anything that can run the chef-client can be managed by Chef ( Example physical or virtual servers running ( Win or Linux Operating systems)

# Chef Components
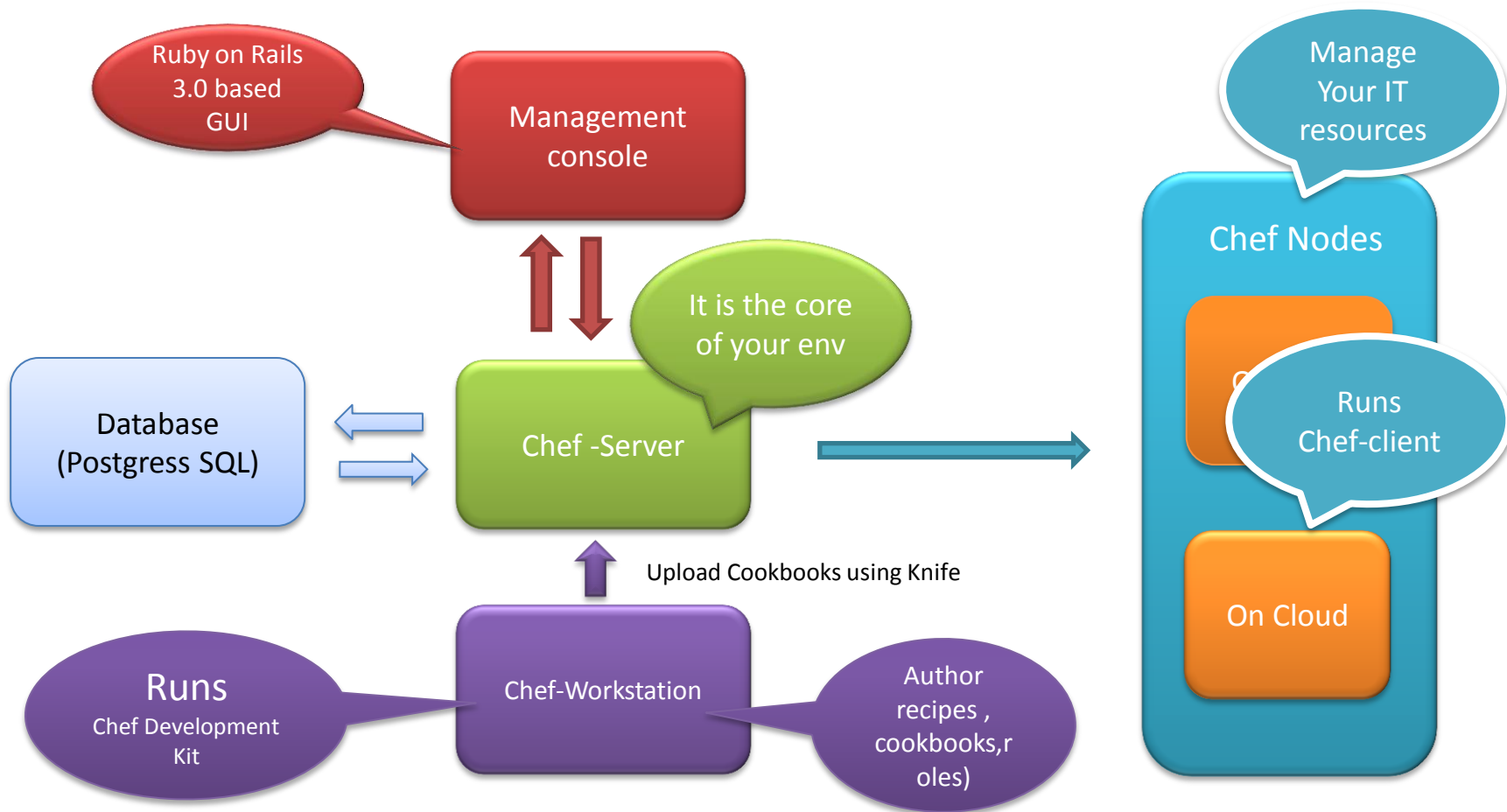
# Chef components – Quick overview

**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

# Get started with chef

| Hosted Chef | Chef Server |
|---|---|
| Off Premise | On Premise |
| Less control | Greater control |
| No maintenance required by you | Need to maintain and manage |
| Less customization | Highly customized |

# Chef - Components
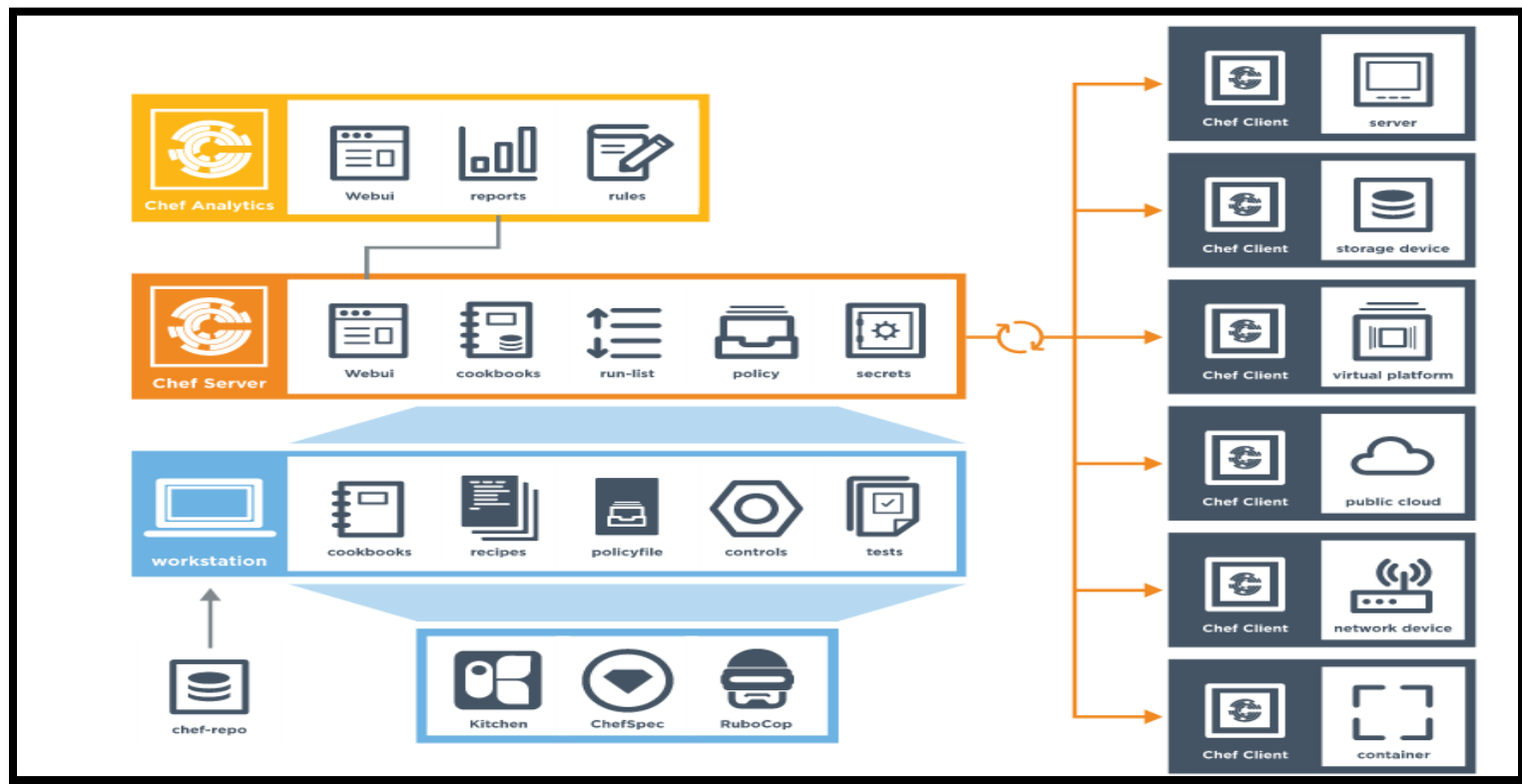
# Chef - Server

- The Chef server acts as a hub of information.

- Cookbooks and policy settings are uploaded to the Chef server by users from workstations.

- (Policy settings may also be maintained from the Chef server itself, via the Chef management console web user interface.)

- The chef-client accesses the Chef server from the node on which it's installed to get

    - configuration data,

    - perform searches of historical chef-client run data, and

    - then pull down the necessary configuration data.

- After the chef-client run is finished, the chef-client uploads updated run data to the Chef server (as the updated node object), uploads data generated by audit-mode (for additional rules processing by Chef Analytics), and generates reporting data.

- Chef management console is the user interface for the Chef server. It is used to manage data bags, attributes, run-lists, roles, environments, and cookbooks, and also to configure role-based access for users and groups.

**Chef Server**

# Chef workstation

# Chef - Workstation



**WorkStation**

- One (or more) workstations are configured to allow users to author, test, and maintain cookbooks. Cookbooks are uploaded to the Chef server from the workstation.

- Ruby is the programming language that is the authoring syntax for cookbooks. Most recipes are simple patterns (blocks that define properties and values that map to specific configuration items like packages, files, services, templates, and users).

- Often, a workstation is configured to use the **Chef development kit** as the development toolkit.

- The Chef development kit is a package from Chef that provides an optional (but recommended) set of tooling, including Chef itself, the chef command line tool, Kitchen, ….and more

# Chef – Workstation ( Chef Development Kit)


development kit

The Chef development kit is a package that contains everything that is needed to start using

Chef:

- chef-client

- chef

- Ohai

- Everything else needed to author cookbooks and upload them to the Chef server

# Chef Node

https://training.thecloudenabled.com

# Chef - Node

- A node is any machine—physical, virtual, cloud, network device, etc.—that is under management by Chef.

- A chef-client is installed on every node that is under management by Chef.

- The Chef client works with the Chef server to bring systems to their desired states with policies you provide as recipes.

- The chef-client performs all of the configuration tasks that are specified by the run-list and will pull down any required configuration data from the Chef server as it is needed during the chef-client run.

node

Chef Client

# Chef  Super Market

# Chef - Supermarket

- Chef Supermarket is the location in which community cookbooks are authored and maintained.

- Cookbooks that are part of the Chef Supermarket may be used by any Chef user.

- How community cookbooks are used varies from organization to organization.

**Chef Supermarket**

# Chef - Pricing

| | CHEF BASICS<br>Free<br>Get Started → | HOSTED CHEF<br>$72 per node<br>ANNUAL (MIN. 20 NODES)<br>Start Your Free Trial →<br>for up to 5 nodes | CHEF AUTOMATE<br>$137 per node<br>ANNUAL<br>Start Your Free Trial →<br>for 30 days |
|---|:---:|:---:|:---:|
| Chef Client, Server, and Chef DK | ✓ | ✓ | ✓ |
| Supermarket Content | ✓ | ✓ | ✓ |
| Hosting services for Chef Server | | ✓ | |
| Supported Content | | ✓ | ✓ |
| Workflow | | | ✓ |
| Compliance | | | ✓ |
| Visibility | | | ✓ |
| High Availability | | ✓ | ✓ |
| Support | 30 days of 8x5 Support | 8x5 Support | 24x7 Support |

# Lab 1 : deploy Chef server

Step 1 : Login to **https://cloudenabled.signin.aws.amazon.com/console**

**Uname   : ibm**
**password : root1234**

**Step 2 :  Launch a Ubuntu 14.04  VM ( t2.small ,40 GB Magnetic disk)**

**Step 3 : SSH to Ubuntu  VM**

**Step 4 : Install Chef server on Ubuntu vm**

**Note : create keyapir and security group by your name**

# Thank You

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