Q) What is CM?

A) Configuration management is a process of tracking and controlling the changes in software in terms of the requirements, design, functions and development of the product.

Q) What is difference between chef, puppet and ansible?

|  |  |  |
| --- | --- | --- |
| Chef | Puppet | Ansible |
| 1. Agent base CM tool 2. Top to bottom execution 3. Pull mechanism 4. Authentication by using private keys 5. Uses DSL Ruby 6. Client info stores in ohai 7. Here cookbooks are used to configure 8. Cookboooks available in chef supermarket 9. Keep servers in desired state in every 30 minutes | 1. Agent base CM tool 2. Random execution 3. Pull mechanism 4. Authentication by using SSL keys 5. Uses DSL Ruby 6. Client info stores in facts 7. Configured using modules 8. Manifest available in puppet forge 9. Keep servers in desired state. | 1. Agent less CM tool 2. Top to bottom execution 3. Push mechanism 4. Authentication by using SSH keys 5. Uses PYTHON YAML 6. Client info stores in setups 7. Configured using playbooks 8. Modules available in Ansible Galaxy 9. One time deployment |

Q). what is chef architecture

NODE 1

NODE 3

WORK STATION

NODE 2

SERVER

Chef has 3 main layers

1. Workstation
2. Server
3. Clients

Nodes are being managed

* Workstation being run by sys admin
* And chef service responsible for storing and managing all of the roles,recipes and configuration data to be applied to nodes

Q) What is the role of starter kit in chef?

A) The starter kit will create the necessary configuration files like chef directory, knife.rb, validator.pem & user.pem files

Q). WHAT IS CHEF ZERO ?

1. Local mode chef cookbook execution is called CHEFZERO.

Q) WHAT IS CHEF AUTOMATE ?

A) Chef automate is a continuous automation platform for delivering infrastructure, compliance, and applications by using chef, inspec, and habitat.

Q) WHAT IS OHAI?

A) ohai is a tool that is use to collect system configuration data.it is run by the chef client at the beginning of every chef run to determine system states.

Attributes ohai collects:

OS,Network,memory,disk,cpu,kernel,hostnames,fully qualified domain names, virtualization,cloud provider meta data

docs.chef.io/ohai.html

Q) What are limitations of chef?

A

Q) What is a role in chef?

A) A Role is a way to define certain patterns and processes that exit across nodes in an organization as belong to a single organization.

Each role consists of zero or more attributes and a runlist.

Each node can have zero or more roles assign to it.

Q) What is a resource?

A) Resource represents a piece of infrastructure & its desired state such as package that should be installed

A service that should be running

Or a file that should be generated

A block of resource can be considered as a recipe

Q) What is Recipe?

A) Collection of resources that describes a particular configuration or policy.

Q) How chef will create client.pem first time it’s adding to server or what is bootstrap do?

A) During the initial chef-client run, the chef-client will register with

the Chef server using the private key assigned to the chef-validator, after which the chef-client will obtain a client.pem private key for all future authentication requests to the Chef server.

After the initial chef-client run has completed successfully, the chef-validator is no longer required and may be deleted from the node.

Use the delete\_validation recipe found in the chef-client cookbook (https://github.com/chef-cookbooks/chef-client) to remove the chef-validator.

Every request made by the chef-client to the Chef server must be an authenticated request using the Chef server API and a private key. When the chef-client makes a request to the Chef server, the chef-client authenticates each request using a private key located in /etc/chef/client.pem.

Q) What is the difference between files and templates?

A) Files are static where as templates are dynamic

Q) How to execute next resource if previous resource was failed?

A) By using

Ignore\_failure

Ruby Type: true, false | Default value: false

Continue running a recipe if a resource fails for any reason.

Refer:https://docs.chef.io/resource\_execute.html

Q)How you make chef server high availability?

A) Any of the below methods by

Using backend cluster,

In this method the server is divided in to two segments 1)front end groups and 2) back end clusters

Frontend group comprises of one or more nodes running the chef srever

Backend cluster comprises of three nodes working together providing highly available data persistence for frontend group.

using amazon web services:

by using autoscalling and loadbalancing

using drdb(deprecated db):

Q)What is databags?

A)Databag is a global variable that is stored as a json data

& is accessible from a chef server. A databag is indexed for searching & can be loaded by a recipe or accessed during a search

Q) How to create a encrypted databag?

A) A databag item may be encrypted using shared secret encryption

openssl passwd -1 –salt <password>

Q) How to write chef custom ohai plugins ?

A) Custom ohai plugins describes additional configuration attributes to be collected by ohai & provided to the chef client during chef runs. Refer for the code-syntax:

<https://docs.chef.io/ohai_custom.html>

Q) What is environments in chef?

A) An environment is a way to map an organization’s real-life workflow to what can be configured and managed when using Chef server. Every organization begins with a single environment called the \_default environment, which cannot be modified (or deleted). Additional environments can be created to reflect each organization’s patterns and workflow.

Q) What is attributes?

A) An attribute is a specific detail about a node, such as an IP address, a host name, a list of loaded kernel modules, the version(s) of available programming languages that are available, and so on.

An attribute may be unique to a specific node or it can be identical across every node in the organization.

Attributes are most commonly set from a cookbook, by using knife, or are retrieved by Ohai from each node prior to every chef-client run.

Q) How to create attributes in chef?

A) A default attribute located in a cookbook attribute file

A default attribute located in a recipe

A default attribute located in an environment

A default attribute located in a role

A force\_default attribute located in a cookbook attribute file

A force\_default attribute located in a recipe

A normal attribute located in a cookbook attribute file

A normal attribute located in a recipe

An override attribute located in a cookbook attribute file

An override attribute located in a recipe

An override attribute located in a role

An override attribute located in an environment

A force\_override attribute located in a cookbook attribute file

A force\_override attribute located in a recipe

An automatic attribute identified by Ohai at the start of the chef-client run

<https://docs.chef.io/attributes.html>

Q) What is Infrastructure as code?

A) Infrastructure as code(IAC):

IAC is automation of IT operations(build, deploy, merge) by provisioning of code, rather then manual process.

Provisioning of dev, test and prod environment by writing code in an centralised location.

Q) Explain bff\_package resource in chef?

A) Use the bff\_package resource to manage packages for the AIX (unix)platform using the installp utility.

When a package is installed from a local file,it must be added to node using the remote\_file or cookbook\_file resources.

Q) Explain chef\_acl resource?

A) The chef\_acl resource to interact with access control list that exit on chef server.

Q) Explain chef –jenkins plugin?

A) Chef-jenkins adds the ability to use Jenkins to drive continuous deployment and synchronization of environments from a git repository.

Q) Explain chef-trac-hacks ?

A) Chef-trac-hacks adds the ability to fill a coordination gap between aws and chef client.

Q) How to troubleshoot cookbook issue?

A)

Q) Explain the bootstrapping process? Or

Diff b/w validation.pem & client.pem?

A) The chef-client will use the /etc/chef/validation.pem private key to authenticate itself for the initial run, because /etc/chef/client.pem doesn't exist yet. This initial run will, produce that client.pem, which is then used for all subsequent client requests.