

A decorative graphic on the left side of the slide, consisting of a network of thin, light-blue lines and small circles, resembling a circuit board or a stylized tree structure.

CHEF TASKS

DEVOPS MASTER WORKSHOP

TASK 1: HOW TO BRING UP A CHEF WORKSTATION

- Activity: Bring up a Chef Workstation
- Definition of Done:
 - Create a GitHub repository for Chef tasks alone . Create a sub folder for the task and upload screenshot.(chef version installed)

#	Steps	Commands
1	Clone the repository	git clone https://github.com/AnjuMeleth/DevOpsMasterChef.git
2	Run the Chef workstation installation script	sh workstation.sh
3	Set the path <i>/opt/chefdk/embedded</i>	echo 'eval "\$(chef shell-init bash)"' >> ~/.bash_profile
4	Source the file to set correct path	source \$HOME/.bash_profile
5	Get the chef version	chef -v
6	List the tools installed with Chefdk	ls /opt/chefdk/bin

TASK 2:HOW TO RUN A FIRST CHEF RECIPE

- Activity: Create a hello.txt file using a Chef recipe
- Definition of Done:
 - No screenshot to be uploaded.

#	Steps	Commands
1	Create a folder samples and go into it	mkdir samples cd samples
2	Create a file hello.rb	vi hello.rb
3	Run the recipe	chef-apply hello.rb
4	“hello.txt” file will be created	

TASK 3:HOW TO CREATE AN ACCOUNT IN HOSTED CHEF

- Activity: Create an account in hosted Chef
- Definition of Done:
 - No screenshot to be uploaded

#	Steps	Commands
1	Sign up in Hosted Chef	
2	Create an Organisation	

TASK 4:HOW TO ESTABLISH CONNECTION BETWEEN HOSTED CHEF SERVER AND WORKSTATION

- Activity: Bring up a chef Master
- Definition of Done:
 - No screenshot to be uploaded.

#	Steps	Commands
1	Go to Administartion of the organisation created	
2	Click on Starter kit and Download Starter kit to path ~/Documents/Chef	
3	Extract the zipped starter kit and copy the kit to Chef Workstation using File Zilla	
4	Knife.rb file in ~/Documents/Chef/chef-starter/chef-repo/.chef has the configuration details	

TASK 5: HOW TO CREATE A COOKBOOK

- Activity: Create nginx cookbook that starts an Nginx service
- Definition of Done:
 - Nginx service is started. Create a sub folder for the task and upload screenshot.(Nginx in chef workstation)

#	Steps	Commands
1	Make sure you are in ~/chef-starter/chef-repo/cookbooks folder	
2	Create an nginx cookbook	chef generate cookbook nginx
3	Go to recipes folder in nginx cookbook	
4	Edit default.rb file	vi default.rb
5	Run the cookbook in local mode. Make sure you are in cookbooks folder	sudo chef-client -z -o nginx
6	View the nginx page in the browser	

TASK 6: HOW TO UPLOAD THE COOKBOOK TO CHEF SERVER

- Activity: Use knife utility to upload the Chef Server
- Definition of Done:
 - Can view the cookbook in Chef Server
 - Create a sub folder and upload the relevant screenshot(nginx cookbook in Chef Server)

#	Steps	Commands
1	Make sure in the cookbooks folder	
2	Upload nginx cookbook to Chef Server	knife upload cookbook nginx
3	View the cookbook uploaded in organisations ->policy ->cookbooks	
4	Delete the nginx cookbook from Chef Server	knife cookbook delete nginx

TASK 7: HOW TO ESTABLISH PASSWORDLESS CONNECTION BETWEEN CHEF WORKSTATION AND CHEF NODE

- Activity: Enable Password less connection between workstation and node so that node could be bootstrapped
- Definition of Done:
 - No screenshots to be uploaded.

#	Steps	Commands
1	Install Filezilla client. Go to Edit -> Setting -> SFTP -> Add Keyfile Give the IP address of the workstation and port 22 , username ubuntu. Then transfer the pem file to ubuntu folder	
2	Stop all firewall	sudo service ufw stop
3	Start ssh	sudo service ssh start
4	Add the ssh details	eval `ssh-agent -s` sudo chmod 400 JenkinsMumbai.pem ssh-add JenkinsMumbai.pem
5	Access the node system from master	ssh ubuntu@<IP address>

TASK 8:HOW TO SETUP A CHEF NODE

- Activity: Set up a Chef node using bootstrapping
- Definition of Done:
 - Chef-client installed in Chef node.
 - Create a sub folder and upload the relevant screenshot(Node in Chef Server)

#	Steps	Commands
1	Make sure you are in chef-repo folder and fetch the SSL certificates from the Chef Server	knife ssl fetch
2	Bootstrap the Chef Node	knife bootstrap <Ip address> -x ubuntu -N chef_node --sudo
3	View the node details in the Chef Server under Nodes	
4	Verify the chef-client installation in Chef node	chef-client -v

TASK 9:HOW TO RUN A COOKBOOK ON CHEF NODE

- Activity: Configure Chef Node with nginx cookbook
- Definition of Done:
 - Nginx installed in Chef node.
 - Create a sub folder and upload the relevant screenshot(nginx running in Chef node)

#	Steps	Commands
1	Edit the run list of the Chef node. Drag and drop the cookbooks needed	
2	Run the Chef-client in the Chef Node	sudo chef-client

TASK 10: HOW TO RUN A COMPLEX COOKBOOK ON CHEF NODE



- Activity: Create a cookbook that customizes the Nginx page and apply it on Chef node
- Definition of Done:
 - Nginx service with modifications could be viewed in Chef node (Upload the screenshot)

#	Steps	Commands
1	Modify the default.rb file in cookbooks/nginx/recipes	vi default.rb
2	Update the version in Nginx cookbook	vi metadata.rb
3	Create a files folder in nginx cookbook and create an index.html file	vi index.html
4	Create another cookbook apt. Make sure you are in cookbooks folder	chef generate cookbook apt
5	Modify the default.rb file in apt cookbook	vi default.rb
6	Upload the apt cookbook	knife cookbook upload apt
7	Upload the nginx cookbook	knife cookbook upload nginx
8	Edit the run list for the node in Chef server	
9	Run the chef client in Chef node	sudo chef-client

TASK 11: HOW TO RUN A DEPLOY A CONTAINERISED APPLICATION ON CHEF NODE

- Activity: Create a cookbook petclinic for our spring pet clinic application.
 - We need to install docker first and use the containerized image anjurose/chefapp.
- Definition of Done:
 - Petclinic application could be viewed in Chef node (Upload the screenshot)

#	Steps	Commands
1	Create a cookbook petclinic	chef generate cookbook petclinic
2	Modify the default.rb file in the cookbook	vi default.rb
3	Upload the cookbook	knife cookbook upload petclinic
4	Edit the run list for the node in Chef server	
5	Run the chef client in Chef node	sudo chef-client