TEAM LEAD VERSION (DevOps-Week-2)

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ Microlearning
- ▶ Questions
- ▶ Interview/Certification Questions
- ▶ Coding Challenge
- ▶ Article of the week
- ▶ Video of the week
- ▶ Retro meeting
- ▶ Case study / project

Teamwork Schedule

Ice-breaking 5m

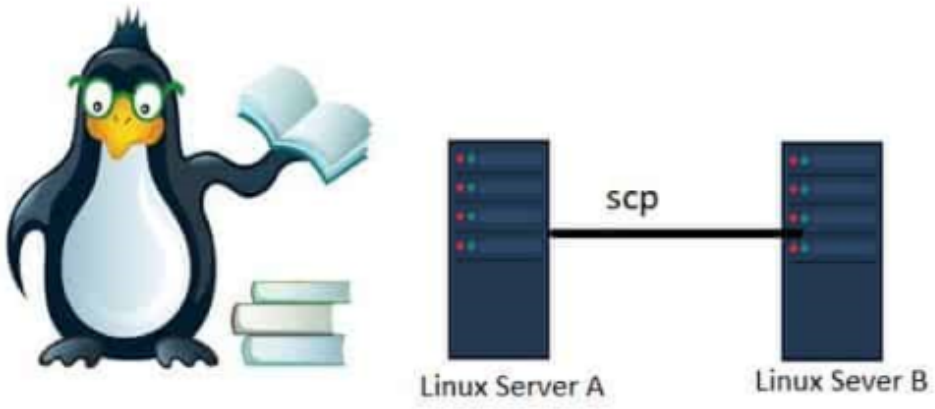
- Personal Questions (Stay at home & Corona, Study Environment, Kids etc.)
- Any challenges (Classes, Coding, AWS, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Team work 10m

- Ask what exactly each student does for the team, if they know each other, if they care for each other, if they follow and talk with each other etc.

Microlearning 15m

How to Use SCP Command



SCP (secure copy) is a command-line utility that allows you to securely copy files and directories between two locations. SCP uses by default the port 22, and connect via an encrypted connection or secure shell connection (ssh).

With scp, you can copy a file or directory:

- From your local system to a remote system.

- From a remote system to your local system.
- Between two remote systems from your local system.

When transferring data with scp, both the files and password are encrypted so that anyone snooping on the traffic doesn't get anything sensitive.

SCP Command Syntax:

The scp command syntax take the following form:

```
scp [OPTION] [user@]SRC_HOST:]file1 [user@]DEST_HOST:]file2
```

`OPTION` : scp options such as cipher, ssh configuration, ssh port, limit, recursive copy ...etc.

`[user@]SRC_HOST:]file1` : Source file.

`[user@]DEST_HOST:]file2` : Destination file.

Local files should be specified using an absolute or relative path, while remote file names should include a user and host specification.

scp provides a number of options that control every aspect of its behavior. The most widely used options are:

`-P` : Specifies the remote host ssh port.
`-p` : Preserves files modification and access times.
`-q` : Use this option if you want to suppress the progress meter and non-error messages.
`-C` : This option forces scp to compresses the data as it is sent to the destination machine.
`-r` : This option tells scp to copy directories recursively.

The `colon (:)` is how scp distinguish between local and remote locations.
To be able to copy files, you must have at least read permissions on the source file and write permission on the target system.

1. Copy a Local File to a Remote System with the scp Command:

To copy a file from a local to a remote system run the following command:

```
scp file.txt remote_username@10.10.0.2:/remote/directory
```

`file.txt` is the name of the file we want to copy, `remote_username` is the user on the remote server, `10.10.0.2` is the server IP address. The `/remote/directory` is the path to the directory you want to copy the file to.
If you don't specify a remote directory, the file will be copied to the remote user home directory.

You will be prompted to enter the user password, and the transfer process will start.

Omitting the filename from the destination location copies the file with the original name. If you want to save the file under a different name, you need to specify the new file name:

```
scp file.txt remote_username@10.10.0.2:/remote/directory/newfilename.txt
```

If SSH on the remote host is listening on a port other than the default 22 then you can specify the port using the -P argument:

```
scp -P 2322 file.txt remote_username@10.10.0.2:/remote/directory
```

The command to copy a directory is much like as when copying files. The only difference is that you need to use the -r flag for recursive.

To copy a directory from a local to remote system, use the -r option:

```
scp -r /local/directory remote_username@10.10.0.2:/remote/directory
```

- if you use pem key, you need the add it;

```
scp tyler.pem file.txt remote_username@10.10.0.2:/remote/directory
```

2. Copy a Remote File to a Local System using the scp Command:

To copy a file from a remote to a local system, use the remote location as a source and local location as the destination.

For example to copy a file named **file.txt** from a remote server with IP 10.10.0.2 run the following command:

```
scp remote_username@10.10.0.2:/remote/file.txt /local/directory
```

If you haven't set a passwordless SSH login to the remote machine, you will be asked to enter the user password.

3. Copy a File Between Two Remote Systems using the scp Command:

When using scp you don't have to log in to one of the servers to transfer files from one to another remote machine.

The following command will copy the file /files/file.txt from the remote host host1.com to the directory /files on the remote host host2.com.

```
scp user1@host1.com:/files/file.txt user2@host2.com:/files
```

You will be prompted to enter the passwords for both remote accounts.

To route the traffic through the machine on which the command is issued, use the -3 option:

```
scp -3 user1@host1.com:/files/file.txt user2@host2.com:/files
```

Ask Questions 15m

1. Which command is used to terminate the Terraform-managed infrastructure?

A. terraform terminate
B. terraform erase
C. terraform delete
D. terraform destroy

Answer: *D*

2. Which command is used to list of the resources in state in Terraform?

A. terraform state --list
B. terraform show list
C. terraform state list
D. terraform ls state

Answer: *C*

3. A Jira _____is a set os statuses and transitions that an issuw moves through during its lifecycl.

A. epic
B. version
C. workflow
D. report

Answer: *C*

4. A(n) _____ is a set of jobs that can be divided into manageable user stories.

A. tasks
B. subtasks
C. epic
D. bug

Answer: *C*

5. Put the steps for starting a sprint in the proper order

(1) Create the Sprint

(2) Start the Sprint

(3) Fill the Sprint Backlog

(4) Fill the Product Backlog

A. 1, 2, 3, 4
B. 4, 1, 2, 3
C. 3, 2, 1, 4
D. 4, 1, 3, 2

Answer: *D*

Interview/Certification Questions 20m

1. What are the different phases in DevOps?

The various phases of the DevOps lifecycle are as follows:

Plan: Initially, there should be a plan for the type of application that needs to be developed. Getting a rough picture of the development process is always a good idea.

Code: The application is coded as per the end-user requirements.

Build: Build the application by integrating various codes formed in the previous steps.

Test: This is the most crucial step of the application development. Test the application and rebuild, if necessary.

Integrate: Multiple codes from different programmers are integrated into one.

Deploy: Code is deployed into a cloud environment for further usage. It is ensured that any new changes do not affect the functioning of a high traffic website.

Operate: Operations are performed on the code if required. Monitor - Application performance is monitored. Changes are made to meet the end-user requirements.

2. Explain the concept behind Infrastructure as Code (IaC).

Answer:

Infrastructure as Code (IaC) is a process for managing and operating data servers, storage systems, system configurations, and network infrastructure.

In traditional configuration management practices, each minute configuration change required manual action by system administrators and the IT support team. But with IaC, all the configuration details are managed and stored

in a standardized file system, wherein the system automatically manages infrastructure changes and deals with system configurations.

Therefore, we do not require most of the manual effort since everything is managed and automated by following the IaC approach. Tools such as Terraform or Ansible can be used to implement IaC approach.

3. How Terraform works?

Answer:

Terraform produce an execution plan delineate, what it will do to reach the desired state, and then executes it to build the described infrastructure. As the configuration changes, Terraform is able to determine what changed and create incremental execution plans which can be applied.

4. Why JIRA is used?

Answer:

Atlassian developed JIRA is nothing but an issue tracking tool and most commonly used in agile methodology. Let me explain the few advantages of using JIRA;

JIRA is a platform-independent tool and that can run on any operating systems JIRA workflows are easy to customize completely based on user requirements. Cost-effective and user-friendly software testing tool Using the JIRA tool user can easily debug the complex errors JIRA software tool allows user to track the progress of a project on time to time base

5. What is an issue in JIRA? Answer:

An issue in JIRA represents anything in the form of a software bug, project-related task, or any request form. Issues are considered as the building blocks of JIRA software projects. The different organization uses the JIRA to track the issues which are raised during the development of a software project.

Article of the Week 10m

- How to Use Git/GitHub without asking for authentication always: Passwordless Usage of Private Git Repositories

Video of the Week 10m

- Terraform Explained

Retro Meeting on a personal and team level 10m

Ask the questions below:

- What went well?
- What could be improved?
- What will we commit to do better in the next week?

Coding Challenge 5m

- Coding Challenge: Reverse Input Number

Case study/Project 10m

- Project-202: Phonebook Application (Python Flask) deployed on AWS Application Load Balancer with Auto Scaling and Relational Database Service using Terraform

Closing 5m

-Next week's plan

-QA Session
