Backup and Restoring Jenkins Data

- If you are using Jenkins for a while, then you must be aware about the importance of **jobs related data** and what can happen **when the data is lost**.
- **The data loss can be the result of hardware or software failure, data corruption, or a human-caused event, or accidental deletion of data.**
- The purpose of the backup is to **create a copy of data that can be restored** in the event of a primary data failure.
- Backup copies allow data to be restored from an earlier point in time to help the business recover from an unplanned event.

Why Jenkins needs Backup and Restoring Mechanism?

- In Jenkins, **all the settings, build logs, and archives of the artifacts are stored under the JENKINS_HOME directory**.
- This is because Jenkins **does not use any database. (Be careful not to mention you connected Jenkins's server with a database)**
- Setting access **rights, selecting the necessary plugins and job configuration is quite a laborious process**, so it is a good idea to organize regular backups of all the necessary settings and parameters.
- There is an assumption in this information.
- We are assuming that as DevOps Engineer, you are not cleaning up your Jenkins environment and infrastructure after the build and deployment process is completed.
- We usually clean up our environment because we have automated provisioning our Jenkins server in the AWS using terraform.

How to perform Backup and Restoring in Jenkins

In this session we will be exploring 2 ways:

- We are going to write a declarative Jenkins pipeline to build a simple image application software.
- We are going to use the **ThinBackup plugin and periodic backup plugins.**

How to take backups in Jenkins?

- The simplest way is to just keep Jobs' folder separately as backup and whenever it is needed just copy it back.
- As the build jobs created under this directory contains all the details of each individual jobs configured in the Jenkins install. The files related to jobs can be replicated to multiple locations.

To use this plugin, follow the steps defined below:

- From the Jenkins home page, click on **Manage Jenkins** and in the next page click on **Manage plugins**.
- Now download and install the **ThinBackup** plugin.
- After downloading you must be able to see 3 options as:
    - Backup Now
    - Restore
    - Settings
- Click on **Settings** link to configure the backup options.
- Just provide the configuration details as required and save the settings.
- Provide a persistent location for Backup directory
- Then write a cron expression to schedule backup in Backup schedule for full backups
- Check the required options and save it.
- Now from this point **ThinBackup** plugin will automatically take backup for your Jenkins and store it in some persistent location provided.

Restoring in Jenkins

If your Jenkins fail for any of the reason, then:

- Restart Jenkins
- Download the **ThinBackup** plugin again and specify the same location persistent location for Backup directory as specified earlier.
- Now this time select restore option

- Select the desired backup from Restore Configuration page.
- It is done