

## Project 7: Jenkins Agent Auto-Provisioning + MySQL-backed Python Script

### Goal:

Auto-provision Jenkins agents for each deployment job. Deploy a Python script that logs system stats to a MySQL DB.

### Requirements:

- Jenkins master: Ubuntu
- Jenkins agent: EC2 launched at runtime (Amazon Linux)
- App EC2s: Ubuntu or CentOS

### Ansible roles:

- Install Python, script
- Set up MySQL, create table, connect script
- Schedule with cron or systemd timer

### Artifact:

- Python script and config zipped and archived on Jenkins
- Uploaded to private S3 or artifactory

### Expected Output:

- Python script logs memory and CPU usage into MySQL
- Accessible via scheduled run (every 5 min via cron/systemd)