CAD lab-4

Explain what keystone

Keystone is the identity service component in OpenStack that provides authentication and authorization for other OpenStack services. It manages the user credentials, roles, and permissions to control access to the OpenStack resources.

Keystone allows administrators to manage users, groups, and projects within their OpenStack deployment, providing centralized authentication and authorization across all OpenStack services. It supports multiple forms of authentication, including password-based, token-based, and external authentication via external identity providers such as LDAP or Active Directory.

Keystone also supports role-based access control, allowing administrators to define roles and permissions for users and groups to access OpenStack resources. With Keystone, administrators can create, modify, and delete user accounts, manage groups and roles, and define policies for access to specific resources.

In summary, Keystone is a critical component in the OpenStack architecture that provides centralized identity management and access control for other OpenStack services. It enables administrators to control and manage user authentication and authorization across OpenStack services, ensuring secure and controlled access to OpenStack resources.

What is CLI programming in openstack

CLI programming in OpenStack refers to the use of the command-line interface (CLI) to interact with OpenStack services and perform tasks. The CLI is a powerful tool that provides access to OpenStack functionality and enables automation and scripting.

The OpenStack CLI is a set of command-line tools that allow users to interact with OpenStack services and manage resources, such as instances, networks, and storage. These tools are available through the OpenStack client, a command-line interface that can be installed on a user's local machine.

The OpenStack CLI provides a simple and convenient way to interact with OpenStack services without using the Horizon dashboard. It enables users to execute commands and scripts to automate tasks and manage resources, such as creating and deleting instances, adding and removing users, and managing networks and storage.

Instance creation in openstack

Instance creation is a fundamental function in OpenStack that allows users to create and launch virtual machines, also known as instances. An instance can be used for various purposes, such as hosting websites, running applications, and testing software.

To create an instance in OpenStack, users can use either the Horizon dashboard or the command-line interface (CLI). The steps to create an instance are generally the same, regardless of the method used.

Here are the steps to create an instance in OpenStack using the CLI:

* Authenticate: Users need to authenticate themselves by providing their username and password or token.
* Choose an image: Users need to choose an image to use for the instance. An image is a pre-configured virtual machine that includes an operating system and any necessary applications.
* Choose a flavor: Users need to choose a flavor, which defines the virtual hardware resources allocated to the instance, such as CPU, memory, and disk space.
* Configure networking: Users need to configure networking for the instance, including assigning a fixed IP address, connecting to a network, and configuring security groups.
* Launch the instance: Users can use the openstack server create command to create the instance, specifying the image, flavor, network, and other details.