

To set up the Google Cloud CLI (gcloud) on Linux, follow these steps:

### 1. Update the System

Make sure your system's package list is up to date.

```
sudo apt-get update
```

### 2. Install Dependencies

Install the required dependencies for gcloud CLI.

```
sudo apt-get install apt-transport-https ca-certificates gnupg
```

### 3. Add Google Cloud SDK Repository

Import the Google Cloud public key and add the repository.

```
echo "deb [signed-by=/usr/share/keyrings/cloud.google.gpg] https://packages.cloud.google.com/apt  
cloud-sdk main" | sudo tee -a /etc/apt/sources.list.d/google-cloud-sdk.list
```

### 4. Import the Google Cloud Public Key

Import the Google Cloud public key for apt repositories.

```
curl https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo tee  
/usr/share/keyrings/cloud.google.gpg
```

### 5. Install the Google Cloud SDK

Update the package list and install the google-cloud-sdk package.

```
sudo apt-get update && sudo apt-get install google-cloud-sdk
```

### 6. Initialize the SDK

Once installed, initialize the Google Cloud SDK and authenticate with your Google Cloud account.

```
gcloud init
```

Follow the prompts to:

- Log in to your Google Cloud account
- Set your default project
- Set your default region/zone

### 7. Verify Installation

To verify that the installation is successful, run the following command:

```
gcloud --version
```

This should display the version of the gcloud CLI installed.

### Optional: Install Additional Components

You can install additional components if needed, such as Kubernetes, App Engine, etc.

```
gcloud components install kubectl
```

You can check the list of components by running:

```
gcloud components list
```