

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

Step 1: Install the Google Cloud SDK

1. Download the Installer:

- Visit the [Google Cloud SDK download page](#) and download the Windows installer.

2. Run the Installer:

- After downloading, run the installer (google-cloud-sdk-installer.exe).
- Follow the installation prompts:
 - Choose the installation directory (default is fine).
 - Select the components you want to install (by default, it installs everything).

3. Install Additional Dependencies (Optional):

- If prompted, choose whether you want to install additional dependencies, such as Python or Google Cloud Storage commands.

4. Add gcloud to PATH:

- The installer should automatically add gcloud to your PATH. If not, you'll need to manually add the directory to your environment variables.

Step 2: Initialize the gcloud CLI

1. Open Command Prompt (or PowerShell):

- Press Win + R, type cmd, and hit Enter.

2. Run gcloud init:

- In the terminal, type:
- gcloud init
- This command will prompt you to sign in with your Google account and set the default project.
 - **Sign in:** The command will open a browser window for you to log into your Google account.
 - **Set Project:** You will be asked to choose a default Google Cloud project.

3. Verify Installation:

- To verify the installation was successful, run:
- gcloud --version
- This should output the installed version of the Google Cloud SDK.

Step 3: Set Up Authentication (if necessary)

If you need to authenticate with a service account or use specific credentials:

1. Authenticate with Service Account:

- Download your service account JSON key file from the Google Cloud Console.
- Use the following command to authenticate:
- `gcloud auth activate-service-account --key-file=<path-to-your-service-account-file>.json`

2. Set Authentication for Specific Project (if required):

- Use this command to set a project:
- `gcloud config set project PROJECT_ID`

Step 4: Verify Setup

To ensure everything is set up correctly, run the following command:

```
gcloud info
```

This will show you the current configuration of the gcloud CLI.
