

To set the `GOOGLE_APPLICATION_CREDENTIALS` environment variable on a Linux system, follow these steps:

### Steps to Set the Environment Variable:

#### 1. Locate the Service Account Key File:

- Ensure you have the JSON key file for your GCP service account. If you don't have one, you can generate it from the [Google Cloud Console](#):
  - Navigate to **IAM & Admin > Service Accounts**.
  - Select or create a service account and download the key in JSON format.

#### 2. Copy the Key File:

- Place the JSON key file in a secure and accessible directory, e.g., `/home/your-username/.gcp/your-key-file.json`.

#### 3. Set the Environment Variable Temporarily:

- Use the export command in your terminal:
- `export GOOGLE_APPLICATION_CREDENTIALS="/home/your-username/.gcp/your-key-file.json"`
- This will set the environment variable for the current terminal session.

#### 4. Verify the Environment Variable:

- Run the following command to confirm it's set correctly:
- `echo $GOOGLE_APPLICATION_CREDENTIALS`
- It should output the path to your JSON file.

#### 5. Set the Environment Variable Permanently:

- Add the export command to your shell configuration file (e.g., `~/.bashrc`, `~/.zshrc`, or `~/.profile`):
- `echo 'export GOOGLE_APPLICATION_CREDENTIALS="/home/your-username/.gcp/your-key-file.json"' >> ~/.bashrc`
- Reload the shell configuration:
- `source ~/.bashrc`

#### 6. Test in Your Application:

- Ensure your application or GCP CLI uses the credentials by running a command such as:
- `gcloud auth application-default login`

By following these steps, you set up the `GOOGLE_APPLICATION_CREDENTIALS` environment variable for GCP authentication on a Linux system.