To use an OAuth authentication server for Grafana login on Windows in an offline environment, you'll need to set up and configure both the OAuth server (e.g., Keycloak) and Grafana. Below is a step-by-step guide to achieve this:

**Step 1: Install and Configure Keycloak (OAuth Server)**

1. **Prepare Keycloak:**
   * Follow the steps from the previous explanation to download and install Keycloak on your Windows server.
2. **Start Keycloak:**
   * Open Command Prompt, navigate to the Keycloak bin directory, and run:

plaintext

Copy code

cd C:\keycloak\bin

standalone.bat

1. **Create an Admin User:**
   * Open another Command Prompt, navigate to the Keycloak bin directory, and run:

plaintext

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add-user-keycloak.bat -r master -u admin -p password

1. **Access the Keycloak Admin Console:**
   * Open a web browser and navigate to http://localhost:8080/auth/admin.
   * Log in with the admin credentials you created.
2. **Create a Realm:**
   * In the Keycloak Admin Console, click on the drop-down menu in the top-left corner and select "Add Realm".
   * Enter a name for your new realm (e.g., "grafana") and click "Create".
3. **Create a Client:**
   * In the new realm, go to the "Clients" section.
   * Click "Create" and enter the following details:
     + Client ID: grafana
     + Client Protocol: openid-connect
     + Root URL: http://localhost:3000
   * Click "Save".
   * After saving, configure the client settings:
     + Access Type: confidential
     + Standard Flow Enabled: On
     + Valid Redirect URIs: http://localhost:3000/login/generic\_oauth
   * Click "Save".
4. **Create a Client Secret:**
   * In the "Credentials" tab of the client settings, note the Secret. This will be used in Grafana configuration.
5. **Create a User:**
   * Go to the "Users" section.
   * Click "Add user" and enter a username (e.g., "grafana\_user").
   * Click "Save".
   * Go to the "Credentials" tab for this user and set a password.

**Step 2: Install and Configure Grafana**

1. **Download Grafana:**
   * Download Grafana from the official Grafana downloads page.
   * Transfer the installer to your offline Windows machine and install it.
2. **Configure Grafana for OAuth:**
   * Open the grafana.ini configuration file located in the Grafana installation directory, typically at C:\Program Files\GrafanaLabs\grafana\conf\grafana.ini.
   * Edit the [auth.generic\_oauth] section to include the Keycloak details:

ini

Copy code

[auth.generic\_oauth]

enabled = true

name = Keycloak

allow\_sign\_up = true

client\_id = grafana

client\_secret = <your-client-secret>

auth\_url = http://localhost:8080/auth/realms/grafana/protocol/openid-connect/auth

token\_url = http://localhost:8080/auth/realms/grafana/protocol/openid-connect/token

api\_url = http://localhost:8080/auth/realms/grafana/protocol/openid-connect/userinfo

1. **Start Grafana:**
   * Open Command Prompt and navigate to the Grafana installation directory:

plaintext

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cd C:\Program Files\GrafanaLabs\grafana\bin

grafana-server.exe

1. **Access Grafana:**
   * Open a web browser and navigate to http://localhost:3000.
   * You should see the Grafana login page with an option to log in using Keycloak.

**Step 3: Test and Verify the Setup**

1. **Login with Keycloak:**
   * On the Grafana login page, click on the Keycloak login option.
   * You will be redirected to the Keycloak login page. Log in with the Keycloak user credentials you created (e.g., "grafana\_user").
2. **Verify Access:**
   * After successful authentication, you should be redirected back to Grafana, logged in as the Keycloak user.

By following these steps, you will have configured Grafana to use Keycloak for OAuth authentication in an offline environment on a Windows machine.