

Graph Engine Service

Getting Started

Issue 01
Date 2025-08-14



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1 Implementing Association Recommendations Using GES

Scenario

This section describes how to use GES' **Real-time Recommendation** algorithm to swiftly recommend potential friends with similar preferences. It helps you quickly familiarize yourself with the service usage process. For further guidance on using GES, refer to [GES Overview](#).

Procedure

Before proceeding with the following steps, ensure all necessary preparations have been completed according to [Preparations](#).

1. **Create a graph**: Create a custom graph.
2. **Import graph data**: Once the graph is created, proceed to import graph data.
3. **Analyze the graph using the real-time recommendation algorithm**: Use the real-time recommendation algorithm to analyze the graph based on the obtained query results.
4. **Release graph resources**: Upon completion of graph data analysis, if there is no further need for the graph instance, you are advised to delete the graph to free up resources and prevent additional charges.

Preparations

1. Before using GES, you need to [sign up for a HUAWEI ID and enable Huawei Cloud services](#).
If you already have enabled Huawei Cloud services and completed real-name authentication, skip this step.
2. Before using GES, check your account status to ensure it is not in arrears or frozen.

Step 1: Create a Graph

1. Log in to the GES console. On the displayed **Overview** page, click **Create Graph** in the upper right corner.

2. The **Customize Graph** tab page appears.
3. Set graph parameters.
 - **Graph Name:** Enter a new graph name or use the default one. Note: The graph name cannot be changed after the graph is created.
 - **GES Software Version:** The latest version is used by default.
 - **VPC:** If your account has VPCs, a VPC is automatically selected. You can change it as needed. You can click **View VPC** to check the names and IDs of existing VPCs. If no VPCs are available, you need to create a VPC. After the VPC is successfully created, it will be automatically selected.
 - **Subnet:** A subnet is automatically selected by default. If needed, change it to the subnet where you want to create a cluster. To verify the subnet associated with the selected VPC, click **View VPC** next to **VPC**.
 - **Other parameters:** Retain the default values.

Figure 1-1 Network parameters

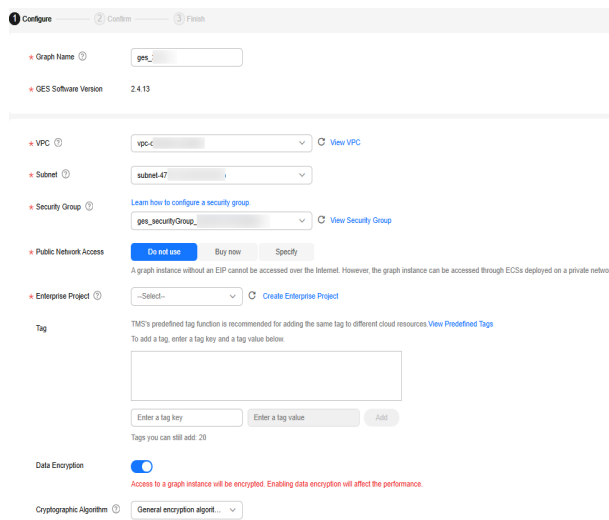
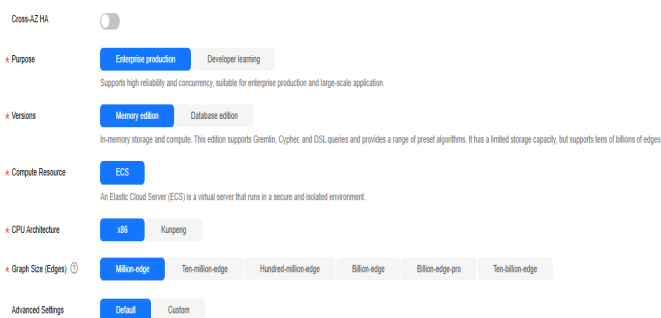


Figure 1-2 Graph parameters



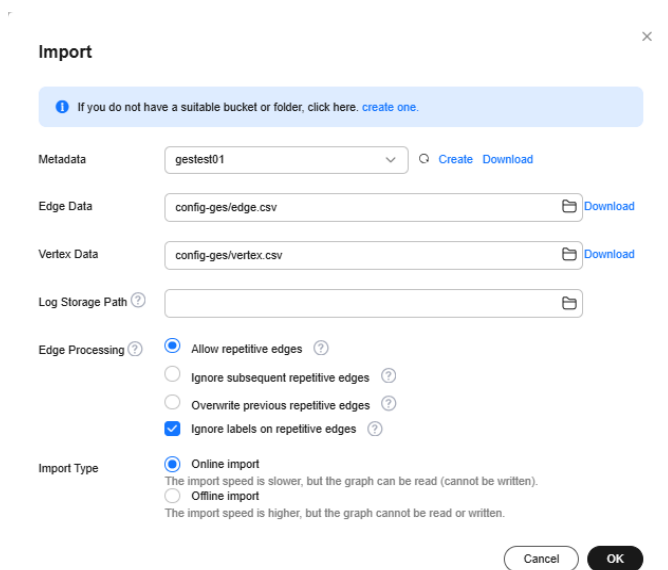
4. Click **Next**. On the displayed **Confirm** tab, confirm the configuration and click **Submit**.
5. After the submission is successful, the system will automatically redirect to the **Finish** tab. You can click **Back to Task Center** to check the status and running result of the created graph.
6. After the graph is created, the graph status changes to **Running** on the **Graph Management** page.

Step 2: Import Graph Data

After the graph is created, you need to import graph data. Follow these steps:

1. On the **Graph Management** page, locate the graph you created, click **More** in its **Operation** column, and select **Import**.
2. In the **Import** dialog box that appears, set the import parameters. See **Figure 1-3**.

Figure 1-3 Importing data



Click **Download** next to **Metadata**, **Edge Data**, and **Vertex Data** respectively and save the downloaded three templates to your OBS bucket.

NOTE

The downloaded templates already include a set of movie data that can be used directly.

- Importing a metadata file:
 - i. On the **Metadata Management** page, click **Import** in the upper left corner. In the displayed **Import** dialog box, select **OBS** for **Type**, click **Upload** next to **Select File**, upload the metadata file stored in the OBS path, and set **Name**. Then, click **OK**. See **Figure 1-4**. The imported metadata file will then be displayed on the **Metadata Management** page.

Figure 1-4 Import a metadata file

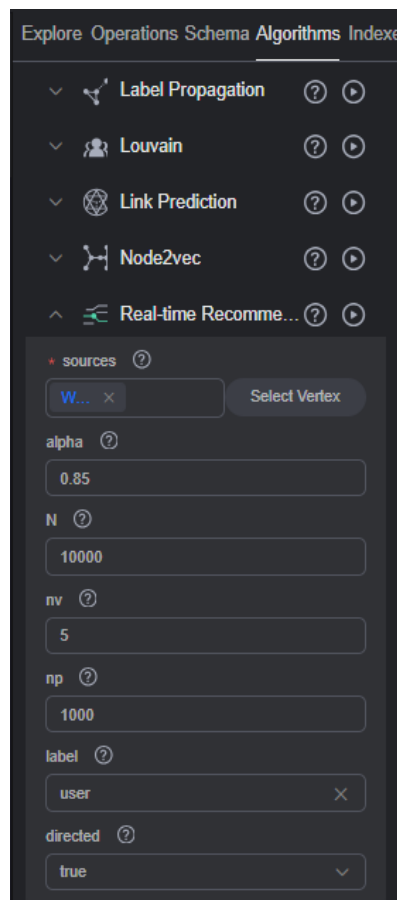


- ii. Return to the **Graph Management** page. Locate the graph you created and click **Import** in the **Operation** column. In the displayed **Import** dialog box, select the metadata file you just uploaded in the **Metadata** drop-down list.
 - **Edge Data** and **Vertex Data**: Select the templates uploaded in the OBS path.
 - **Log Storage Path**: Leave this parameter blank.
 - **Edge Processing** and **Import Type**: Retain their default values.
3. Click **OK**.

Step 3: Analyze the Graph Using the Real-Time Recommendation Algorithm

1. After the import is complete, click **Access** in the **Operation** column of the graph.
2. On the left of the editor page, click the **Algorithms** tab and find the **Real-time Recommendation** algorithm.
3. Set **sources** to **Will** and **label** to **user**. This means querying users with preferences similar to Will's. Retain the default values for other parameters.

Figure 1-5 Setting algorithm parameters



Click  next to the **Real-time Recommendation** algorithm. The subgraph consisting of top nodes in the computation result is displayed on the canvas,

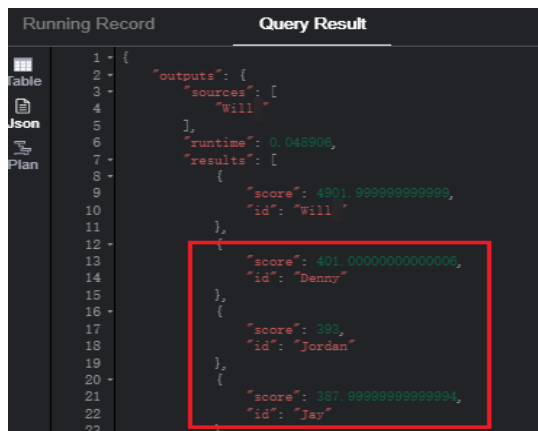
with node sizes varying according to the final scores. The JSON result is displayed in the query result area.

Figure 1-6 Result display



4. From the query results, it can be seen that users Denny, Jordan, and Jay have the highest matching degree with Will. This algorithm assists user Will in recommending potential friends with similar preferences. (**score** represents the score of each node, where a larger value indicates a higher recommendation level.)

Figure 1-7 Query result analysis



Step 4: Release Graph Resources

Upon completion of graph data analysis, if there is no further need for the graph instance, you are advised to delete the graph to free up resources and prevent additional charges.

1. On the **Graph Management** page, locate the graph you want to delete, click **More** in its **Operation** column, and select **Delete**.
2. In the dialog box that appears, enter **DELETE** or click **Auto Enter**, and click **OK**.