

Alibaba Cloud DataV

User Guide

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	It is used for commands.	Run the <code>cd /d C:/windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>swich {stand slave}</code>

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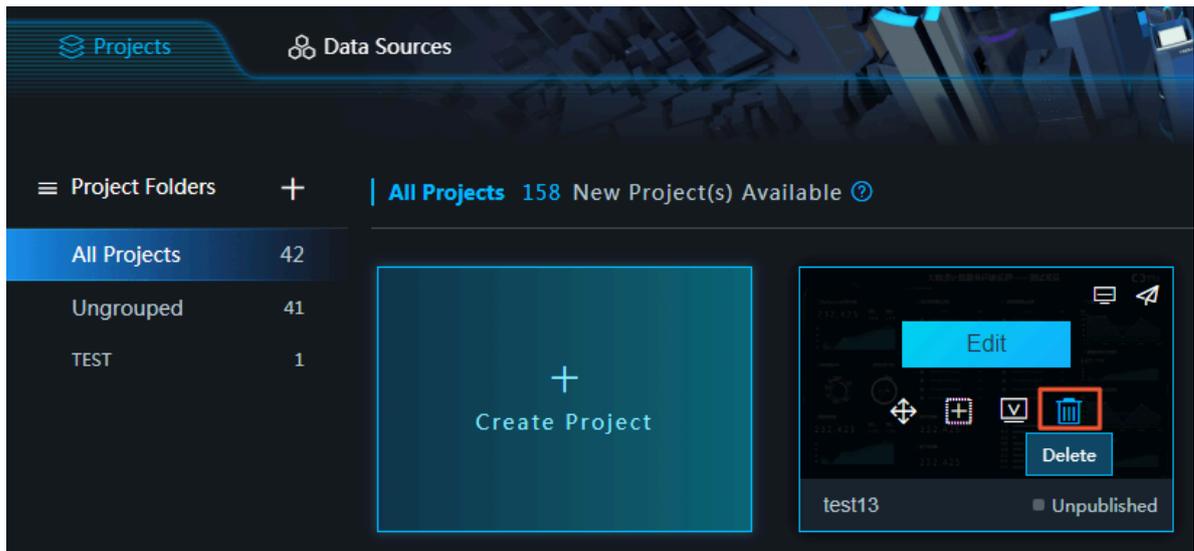
1 Manage projects

1.1 Delete a project

 **Notice:**
A deleted project cannot be restored. Proceed with caution before deleting a project.

Procedure

1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Select a visualization project.
4. Click the trash bin icon in the upper right corner of a selected project to delete the project.



2 Manage data sources

2.1 Database whitelist settings

Before you can add a data source, you must configure a whitelist for your database to ensure that DataV has access to it.

- If you are using a data source from Alibaba Cloud RDS database, see [Set whitelist](#). Add the following IP addresses to the whitelist of your RDS database.
- If you are using a data source from Alibaba Cloud ECS database, you must add the following IP addresses to the whitelist of the ECS [security group rules](#), system firewalls, and your database.
- If you are using a data source from the database on a local physical machine, you must add the following IP addresses to the whitelist of the system firewalls of this physical machine, the network firewalls, and your database.

According to your [database connection scenarios](#), add following IP addresses to the whitelist of your database.

Singapore

- Internet:
 - 47.88.235.235/0
 - 47.74.136.56/0
 - 47.88.250.141/0
 - 47.88.235.217/0
 - 47.74.136.64/0
 - 47.74.136.22/0
 - 47.74.136.12/0
 - 47.88.235.207/0

- **Intranet classic network (you must modify 11 network segment routing):**

- 11.193.8.8/0
- 11.192.152.94/0
- 11.193.8.55/0
- 11.193.8.59/0
- 10.152.165.219/0
- 11.192.152.89/0
- 11.192.152.117/0
- 11.193.8.60/0

- **Intranet VPC network:**

100.104.13.0/24

Malaysia

- **Internet:**

47.254.212.25/0

- **Intranet classic network:**

- 11.193.189.75/0
- 11.193.189.69/0
- 11.193.189.73/0
- 11.193.189.72/0

- **Intranet VPC network**

100.104.133.64/26

Japan (Tokyo)

- **Internet:**

- 47.91.9.73/0
- 47.91.13.92/0
- 47.91.9.1/0
- 47.91.9.42/0

- **Intranet classic network:**

- 11.192.149.155/0
- 11.192.149.118/0
- 11.192.147.75/0
- 11.192.149.66/0

- **Intranet VPC network:**

100.104.175.0/24

Germany

- **Internet:**

- 47.91.83.106/0
- 47.91.82.104/0
- 47.91.84.120/0
- 47.91.84.16/0
- 47.91.84.36/0

- **Intranet classic network**

- 11.192.169.2/0
- 11.192.168.143/0
- 11.193.107.16/0
- 11.192.170.80/0
- 11.192.170.221/0

- **Intranet VPC:**

100.104.244.192/26

Solution to disconnection of 11 network segments.

If you encounter the disconnection of 11 network segments, execute the following command to add a router in `/etc/rc.local`.

```
sudo route add -net 11.0.0.0/8 gw 10.152.28.247
```



Note:

The IP address behind `gw` is the server gateway.

If the problem is unresolved, you can open a ticket and send it to ECS to inform Alibaba Cloud technical support engineers that the 11 network segments are unable to access your server.

2.2 Add data sources

2.2.1 Add DataV Data Proxy Service

DataV Data Proxy Service is a database connection tool that provides highly secure connections. If you are concerned about data privacy and security issues, you can use DataV Data Proxy Service. If your data cannot be accessed through the Internet, or you are not using Alibaba Cloud database services, you must expose the Internet IP address of your database to establish the connection.

Procedure

1. Use the HTTP protocol to enter the [DataV console](#), and select Data Sources > Add Source.
2. Select DataV Data Proxy Service from the Type drop-down list.



Note:

- This service SDK only provides HTTP services. If you need HTTPS services, you must apply for an HTTPS certificate recognized by Google Chrome.
- We recommend you enable HTTP services until the HTTPS certificate is applied.
-

3. Enter the database information.

Add Source ✕

*Type
DataV Data Proxy Service

*Name

*Host

*Port

*Key

*Secret

*Database
Database List

This approach requires you deploy open source code on ECS. Check tutorial: [Tutorial](#)

- **Name:** Displays the name of the data source.
- **Host:** The IP address of your server. If you are using an ECS server, you should configure it as the public IP of the ECS server.
- **Port:** The Port is automatically generated after the code package is downloaded and installed.
- **Key:** The Key is automatically generated after the code package is downloaded and installed.
- **Secret:** The Secret is automatically generated after the code package is downloaded and installed.

To obtain a Key and a Secret, see [DataV Proxy Configuration in Linux](#).

- **Database:** The name of the currently selected database.

If all the parameters are configured, the system will test the data source connection automatically.

4. Click OK when the connection is verified.

3 Advanced skills

3.1 DataV proxy configuration in Linux

With DataV data proxy services, you can configure safer data queries without the need to apply database permissions or write APIs. The DataV data proxy services pass encrypted SQL query strings and database ID values to applications that can connect to the database, get query results, and return the results to the DataV page.

Click [here](#) to download a sample application published on GitHub. The application can be deployed to an ECS instance. Before performing the following procedure, you need to prepare the MySQL database and tables that need to be displayed.

The following procedure uses a Node.js sample application, or you can use a new developed application.

1. Buy an ECS instance. You can use the lowest possible configuration and upgrade it based on your requirements.
2. Deploy the code and start the service.
3. Configure the database.
4. Configure the database to DataV.

Purchase an ECS server

To purchase a cost-effective ECS server, we recommend you:

- Select Pay-As-You-Go as a billing option.
- Select Public Image from the Images section, and select CentOS 7.4 64-bit.
- Select PayByTraffic from the Network Billing Method section.
- Select a data disk if you have any special requirements.
- Select other configurations and complete the purchase according to the preceding figure.

Deploy the code and start the service

1. Implement the following commands to download the DataV proxy sample application and extract it.

```
wget https://files.alicdn.com/tpsservice/3b30abf1b9f8a2056cc135d2a6587bb9.zip
unzip 3b30abf1b9f8a2056cc135d2a6587bb9.zip
```

```
cd {decompressed directory}
```



Notice:

If the system displays unzip command is not found, you need to first implement `yum install unzip` and then continue the following commands.

2. Implement the following commands to install Node.js and dependencies.

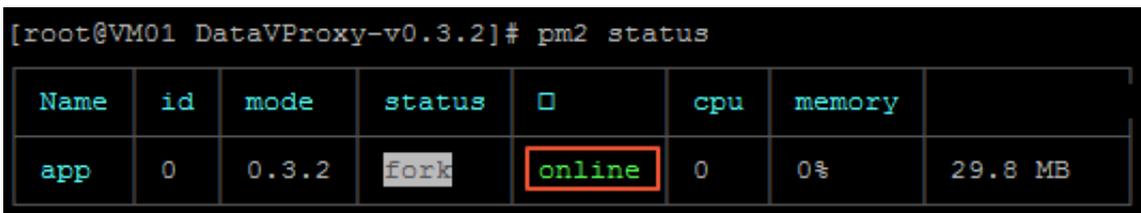
```
wget -qO- https://raw.githubusercontent.com/creationix/nvm/v0.33.11/install.sh | bash
bash
nvm install 8.9
npm install pm2 -g
npm install --registry=https://registry.npm.taobao.org
```

3. Implement the following command to run the DataV proxy sample application.

```
pm2 start app.js
```

4. Implement the following command to view the running status of the application.

```
pm2 status
```



If the running status is online, it indicates that the application is activated successfully, and you can continue with the following steps:

- Implement `node ./bin/info.js` to view the domain name, port, Key, Secret, and configured database information of the Data proxy.

```
[root@VM01 DataVProxy-v0.3.2]# node ./bin/info.js
host: 192.168.1.100 (Please refer to DataV Proxy domain name and ECS instance information for the host)
port: 9998
Key : o4XXXXXXXXXXXXXXXXXXXX4oj
Secret : pXXXXXXXXXXXXu
DB in Config:
test => connected
```



Notice:

You need to save the information that is used when configuring a DataV data source.

- To change the Key, use node `./bin/genkv.js` to generate a new one.
- Access `http://domain name:port/status` to verify server status. The domain name is the public network IP of your ECS instance. The port is the port you have identified, which usually is 9998.

Configure the database

1. [Database whitelist settings](#) and authorize remote connections.
2. In the directory where DataVProxy is located, implement `vim config.js`, open `config.js`, and add a database to the database filed , as shown in the following example.

```
databases: [  
  {  
    id: 'test', // Make sure that there are no repeated IDs. Then  
    , input them into the DataV backend "database" field.  
    type: 'mysql', // rds, ads  
    host: '127.0.0.1', // Domain name and IP address  
    user: 'root', // User name  
    password: 'root', // Password  
    database: 'test', // Database name  
    port: 3306 // Port  
  },  
  {  
    // ...  
  },  
  //... Enter the database you want to add here.  
]
```

3. After the configuration is complete, perform the following commands separately and restart the MySQL database and the DataV proxy application.

```
systemctl restart mysqld.service
```

```
pm2 restart 0
```

Configure the data source to DataV

1. Use the HTTP protocol to enter the [DataV console](#).
2. Select Data Sources > Add Source.
3. On the New Data Source page, go to the Type drop-down list and select DataV Data Proxy Service.

- 4. Enter the information from the previous Deployment section (outlined in red) into the following input box. For more information about the parameters, see [Add DataV Data Proxy Service](#).

Add Source ✕

*Type
DataV Data Proxy Service

*Name
datav_proxy

*Host
116. .12

*Port
9998

*Key
04 4oj

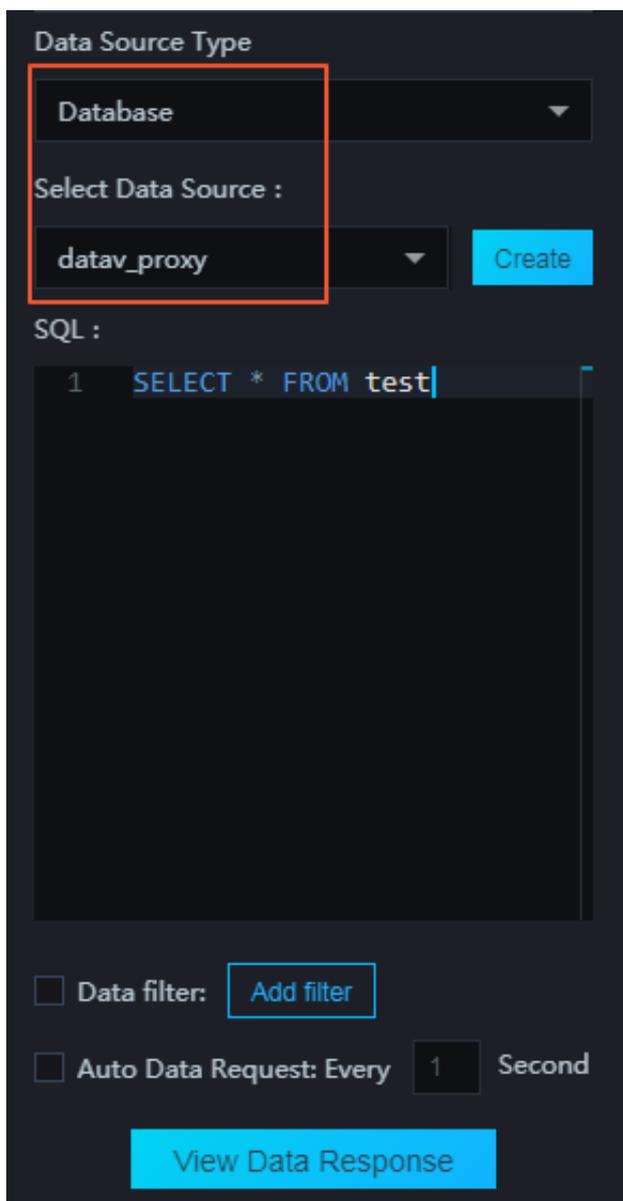
*Secret
.....

*Database
Database List test

[Input database name](#)

This approach requires you deploy open source code on ECS. Check tutorial: [Tutorial](#)

5. In the data settings field, go to Data Source Type and select Database. Custom the data source based on the preceding figure.



Data Source Type

Database

Select Data Source :

datav_proxy

Create

SQL :

```
1 SELECT * FROM test
```

Data filter: [Add filter](#)

Auto Data Request: Every Second

[View Data Response](#)

**Note:**

- This service SDK only provides HTTP services. If you need HTTPS services, you must apply for an HTTPS certificate recognized by Google Chrome.
- We recommend you enable HTTP services until the HTTPS certificate is applied.

O & M

- **Check real-time logs**

```
pm2 logs
```

- **Check history logs**

```
ls -al . /{the directory where DataVProxy is located}/logs
```

- **Restart**

```
pm2 restart all
```

- **Start service**

```
pm2 start app.js
```