

Alibaba Cloud DataV

Manage Projects

Issue: 20190725

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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>

Contents

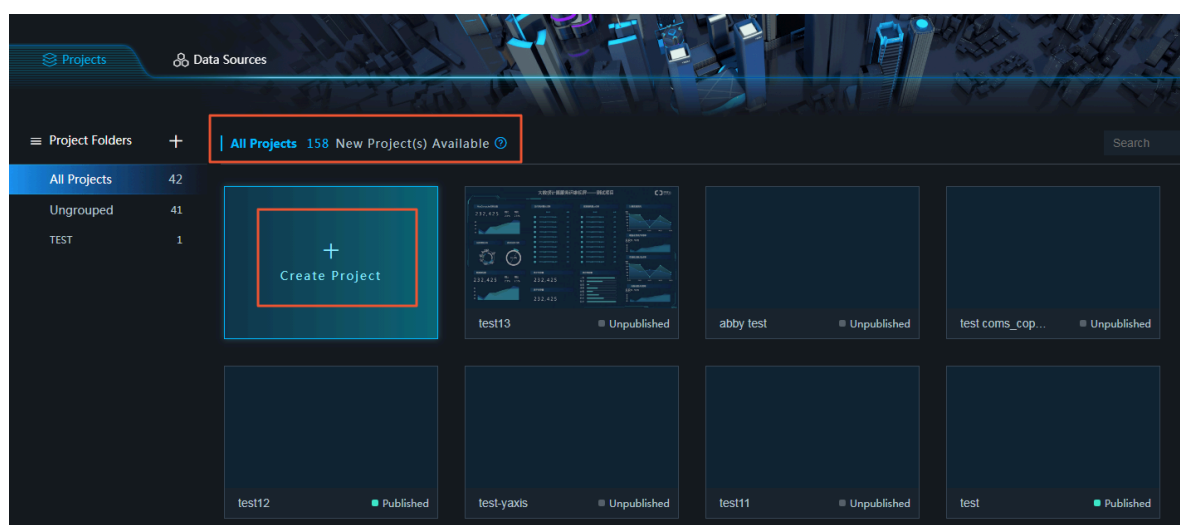
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1 Create a project

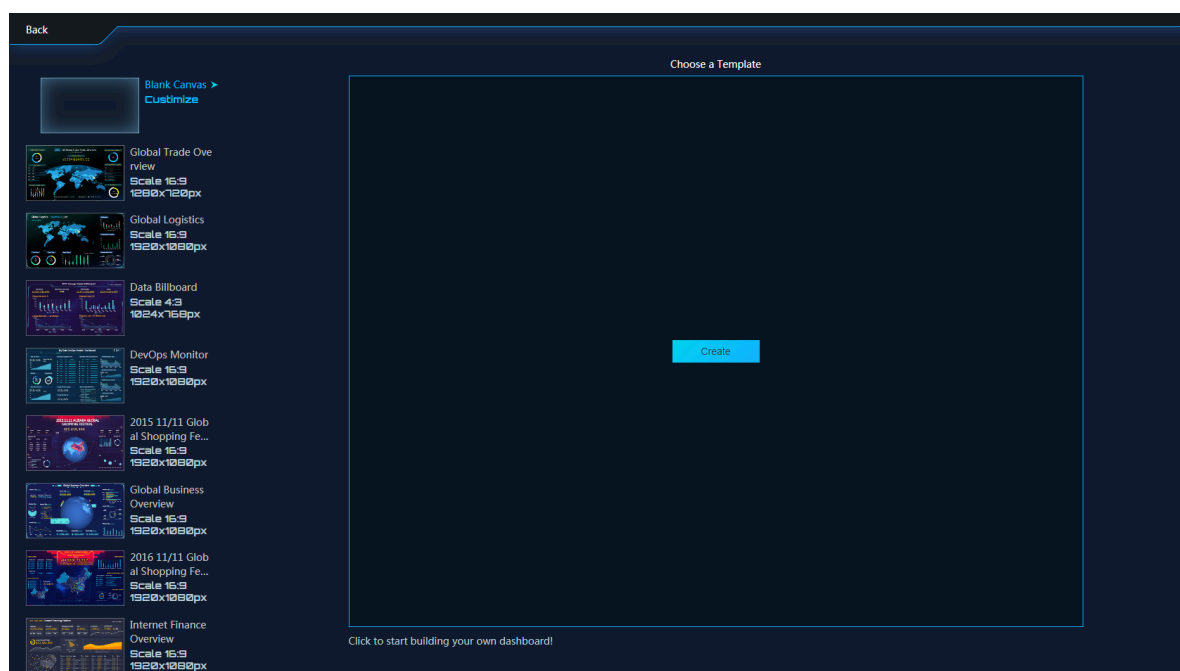
You can create up to five projects using DataV Basic Edition and up to 20 projects using our DataV Enterprise Edition.

1. Log on to the [DataV console](#).
2. To create a new visualization project select Projects > Create Project.

To display all your projects and all available projects click All Projects.



3. Select a template from the list on the left side of the page.



4. Click Create.

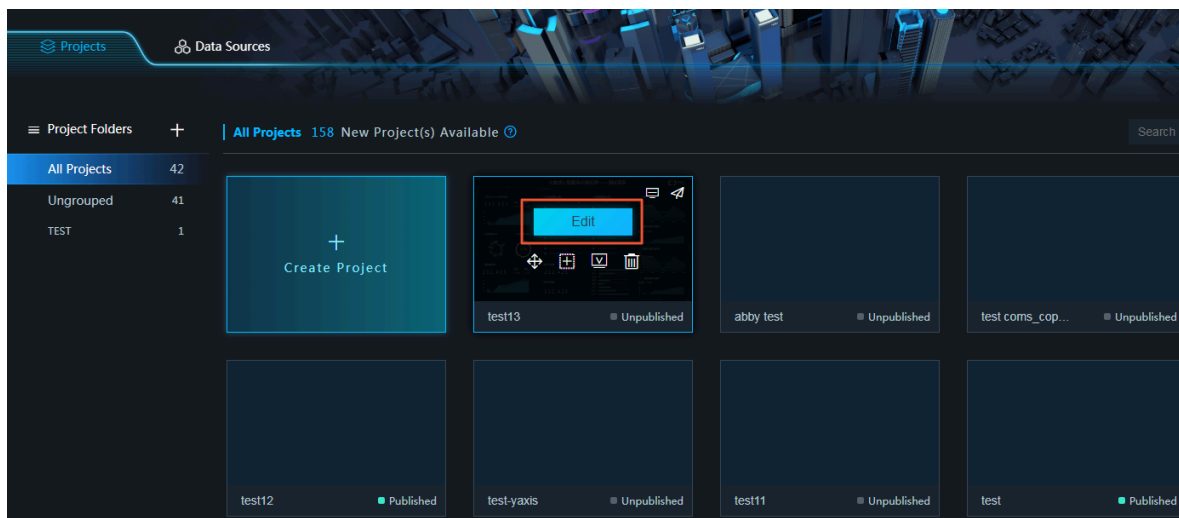
5. Enter the name of a visualization project and click Create.

The project editor page will be displayed.

2 Edit a project

Procedure

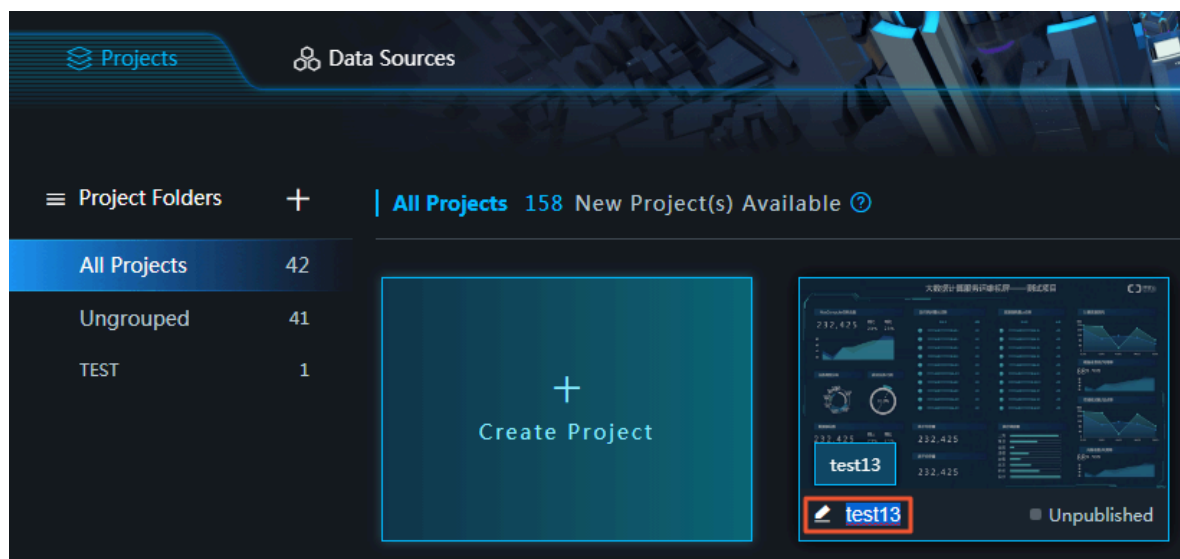
1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Click Edit to enter the visualization project editor page.



3 Rename a project

Procedure

1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Select a project, and then click the pen icon or project name to modify.



4. Enter a new name.



Note:

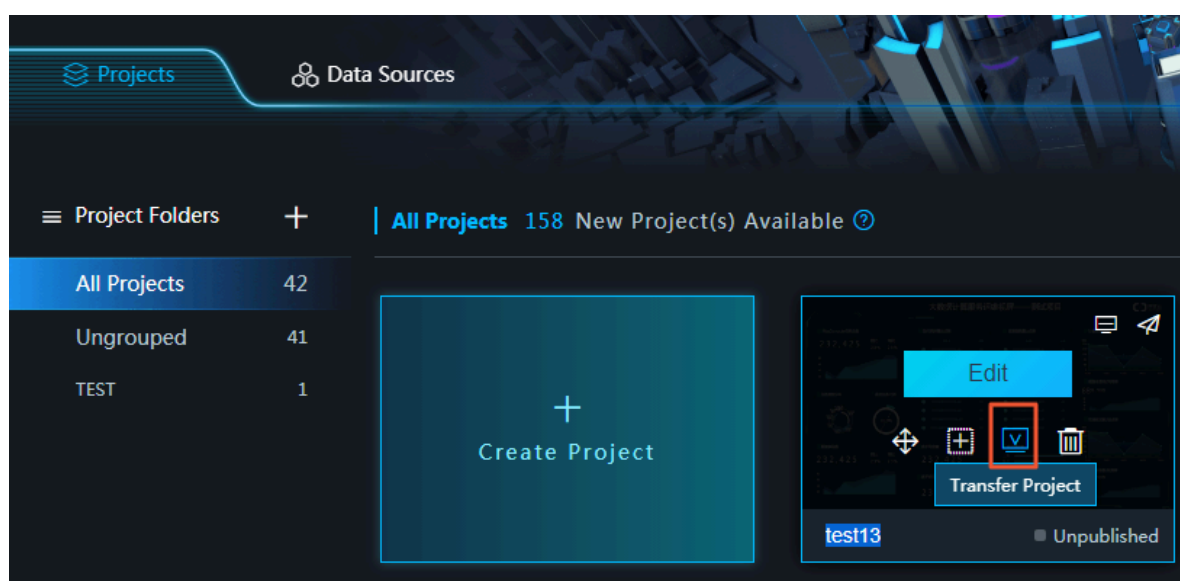
The name of projects can be the same.

4 Transfer a project to other users

This function is only available for users of the Enterprise Edition or later editions.

Procedure

1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Select a visualization application.
4. Click the Transfer Project icon.



5. Enter the Transfer ID of the other user.

Copy this project to another user

Transfer ID

Enter the other user' transfer ID (case sensitive)

❓ Enter the other user's authentication code.(User authentication code can be found under User Info menu at top right conner.) You can directly transfer a copy of current project to another user's account, with both style and data configuration.To avoid data leakage, please check the code carefully.(This function is only available in enterprise edition or above.)

Copy history

Transfer ID	Time
-------------	------

Copy

6. Click Copy to transfer the copy of a project to the other user.

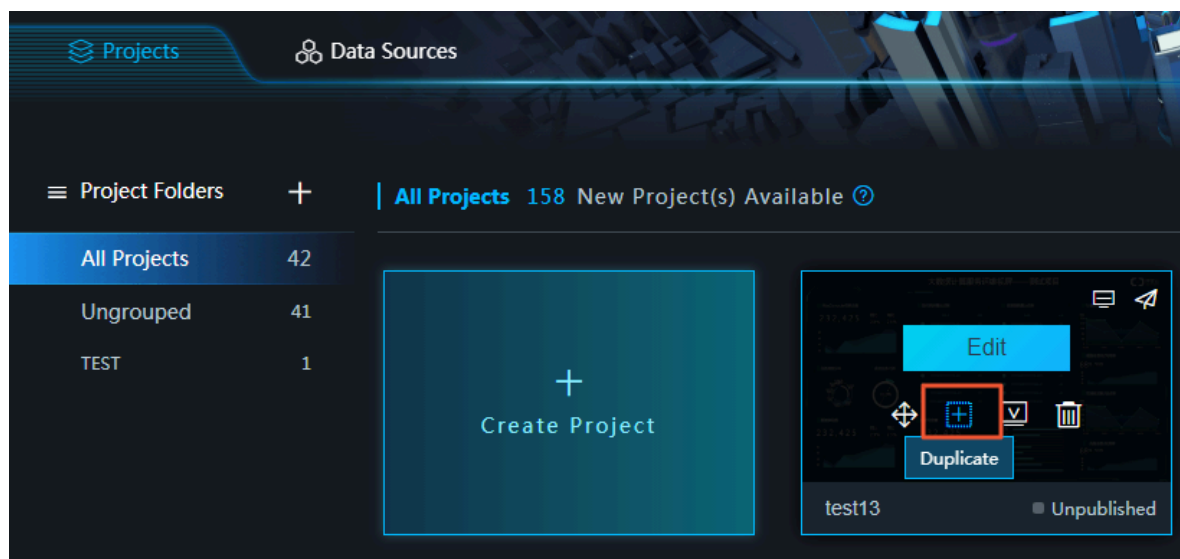
5 Duplicate a project

The duplicate function will generate a project copy named “xxx_Copy” and has the following functions:

- Create projects with the same style.
- Use copies for modifications and updates in a development or testing environment without interrupting the online application.

Procedure

1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Select a visualization project and click Duplicate.



6 Delete a project

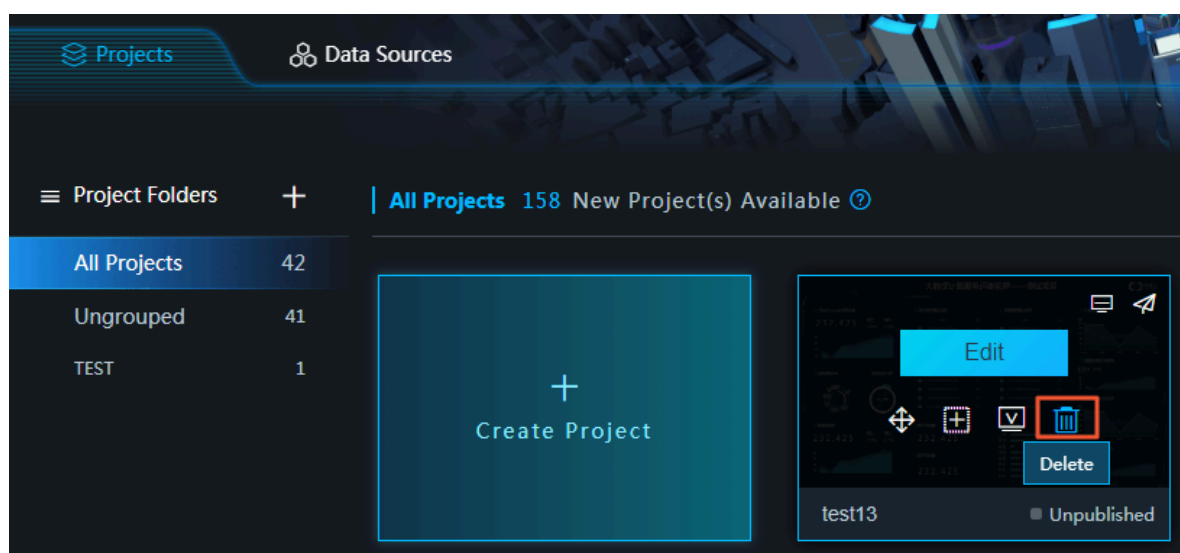


Notice:

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

Procedure

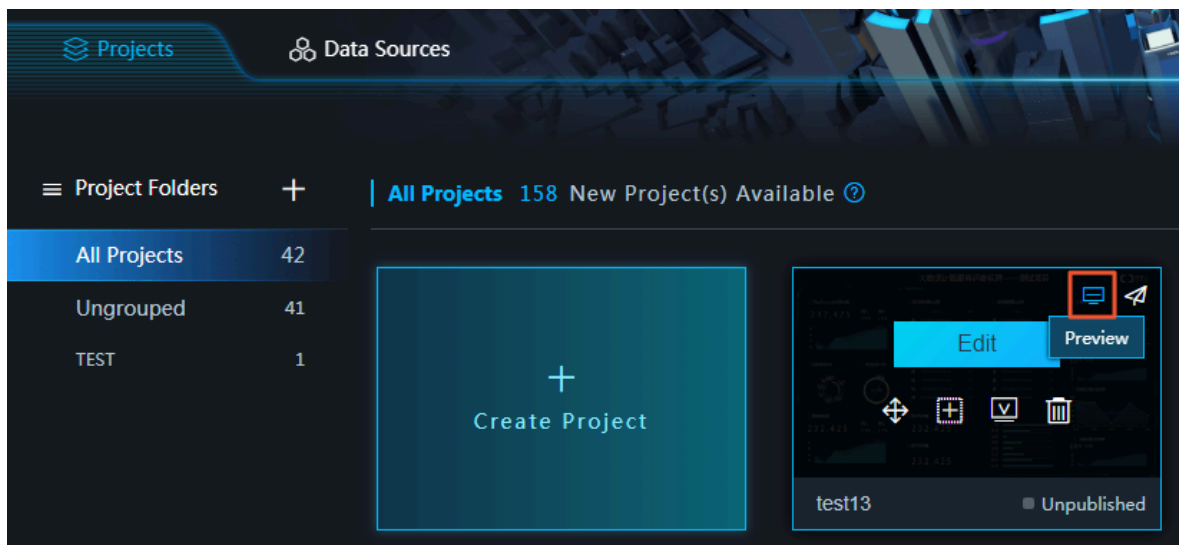
1. Log on to the [DataV console](#).
2. Click Projects to enter the visualization project management page.
3. Select a visualization project.
4. Click the trash bin icon in the upper right corner of a selected project to delete the project.



7 Preview 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 and then click Preview.

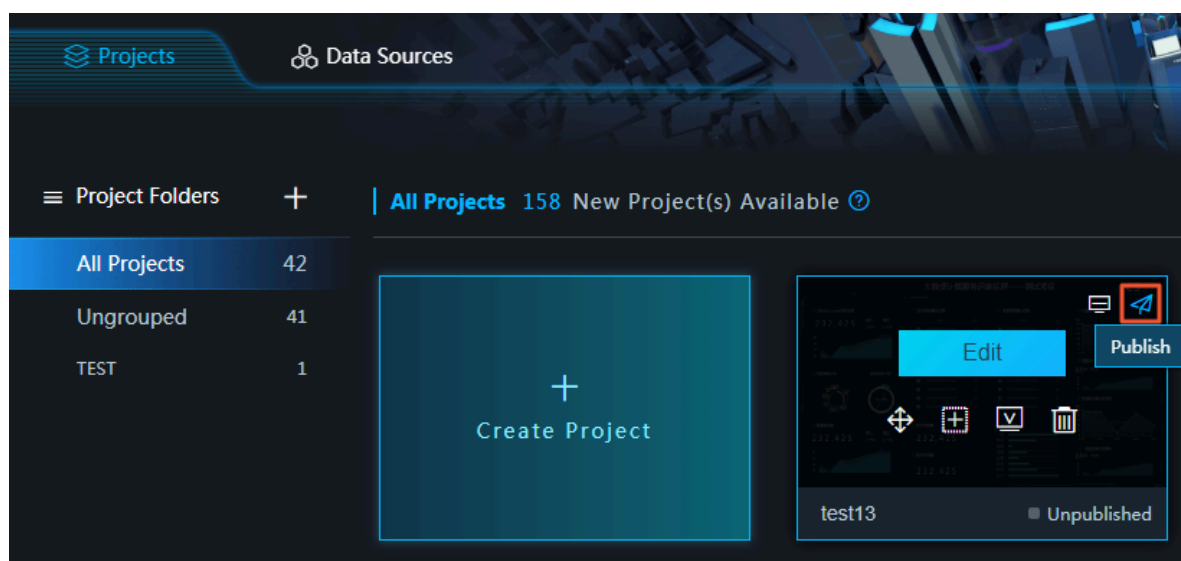


8 Publish a project

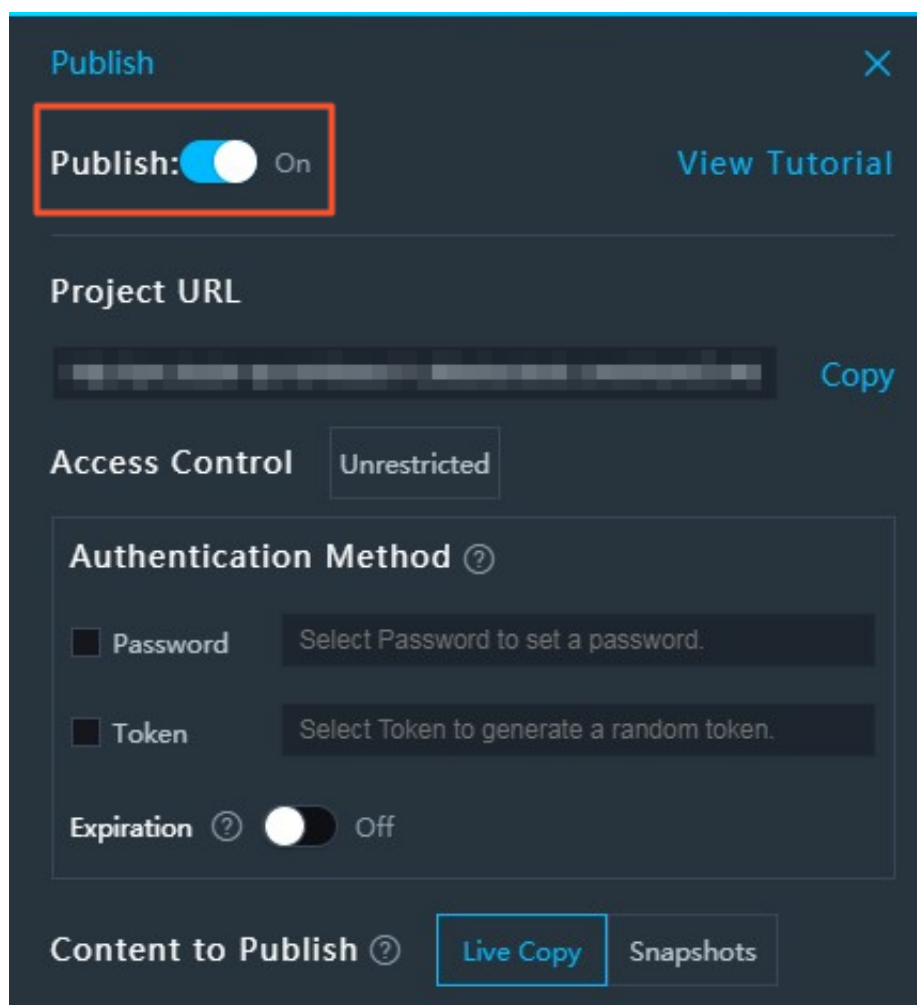
This topic describes how to publish a project and configure access control, the authentication methods, and the publish content for the project.

Procedure

1. Log on to the [DataV console](#).
2. Click Projects.
3. Select a project and click Publish.



4. Turn on Publish.



After you turn on Publish, the system automatically generates a project URL. Other users can access your project by using this URL. However, this URL takes effect only once when users first access it.

Configure access control

You can make a DataV project public or encrypt it with either one of the following authentication methods:

- Password authentication.
- Token authentication.

For more information about these two authentication methods, see the sections [Configure password authentication](#) and [Configure token authentication](#).

Configure password authentication (for Enterprise Edition)

1. In the Authentication Method area, select Password.

2. In the Password field, enter a password. The password must contain at least six characters, including at least one uppercase letter, one lowercase letter, and one number.

**Note:**

If a password is set, the console displays a message The password has been set.

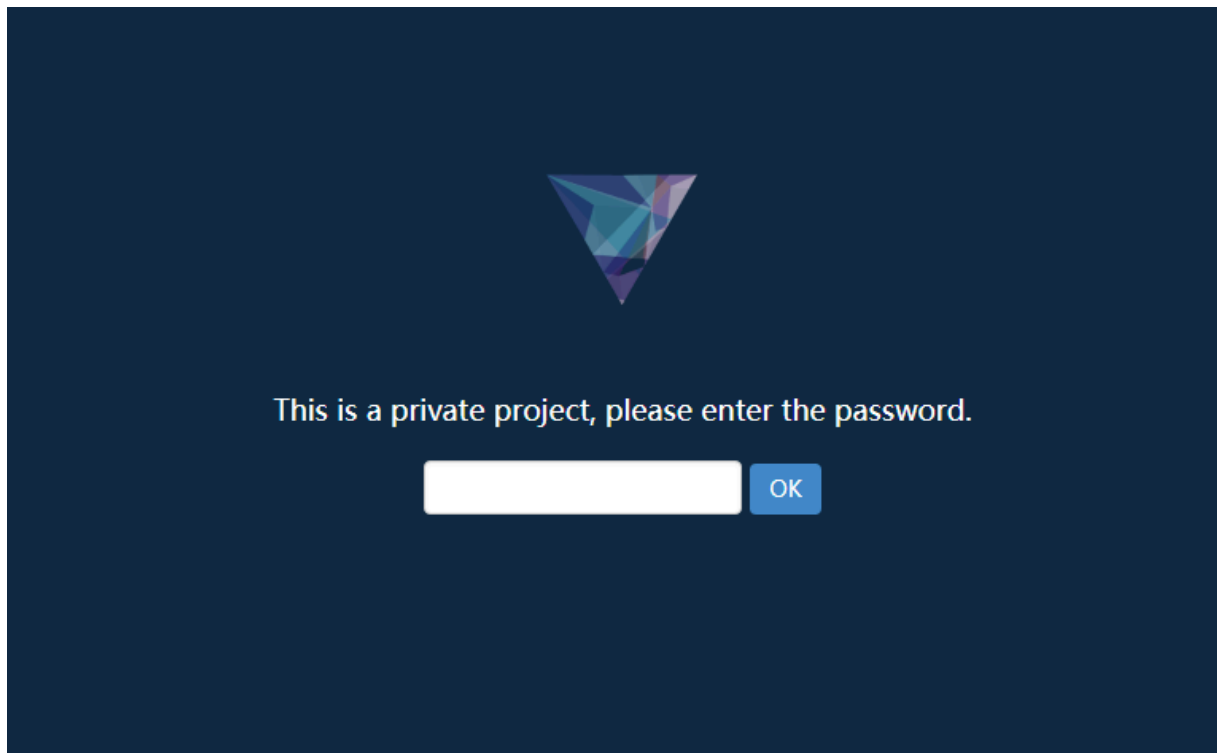
3. (Optional) Set the Expiration date.

**Note:**

You can set the expiration date only after you set a password or turn on token authentication.

- If you turn on Expiration, you can set the validity period of the password. The maximum validity period is 32 hours. After a user enters the password and accesses the project for the first time, the user can access the project within the validity period without a password.
- If you turn off Expiration, users who want to access the project must enter the password.

A password is required when a user accesses the project after the password is set for the first time.



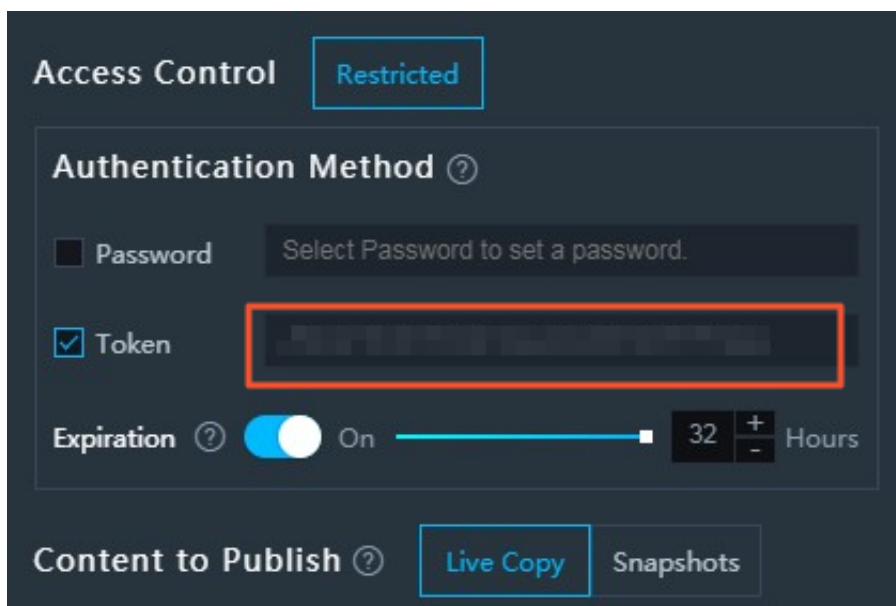
Configure token authentication (for Enterprise Edition)

You can turn on token authentication to publish a project and grant access to this project according to your permissions.

In the Authentication Method area, select Token and follow these steps:

- (Optional) Set the Expiration date.
 - If you turn on Expiration, you can set the validity period of the password. The maximum validity period is 32 hours. After a user enters the password and accesses the project for the first time, the user can access the project within the validity period without a password.
 - If you turn off Expiration, users who want to access the project must enter the password.
- Obtain the token.

After you turn on Token authentication, DataV automatically generates a token. We recommend that you save this token for subsequent use.



When a user accesses the project by using the URL, the user receives an Access Denied message, indicating that the access is rejected. To allow the user to access this project by using the URL, follow these steps:



Note:

To prevent replay attacks, make sure that your server time is UTC+8. The server time and local time can differ by one minute. If the difference exceeds one minute, the validation fails.

1. Publish a project and save the project code (the last segment of the project URL).
2. Separate the project code and the current time (in milliseconds) with a vertical bar (|).
3. Use the token to encrypt the preceding string through HMAC-SHA256 Base64.
4. Name the time and the encrypted signature as `_datav_time` and `_datav_signature` respectively.
5. Insert the time and the encrypted signature in the query string of the `url` parameter.

**Note:**

If you use the GET method to pass parameters in your project URL, we recommend that you use the token signature validation for security. For more information, see [Check the validity of digitally signed parameters in a token](#).

Examples:• **PHP:**

```
<? php
    $ token = " kBwoX9rFX9 v4zb0T0Gjd _wr65DZ3P_ WW ";
    $ screenID = " 03d1b68fae b09671046d 1ef43f588c 33 ";
    $ time = time ()* 1000 ;
    $ stringToSi gn = $ screenID .'|'.$ time ;
    $ signature = urlencode ( base64_enc ode ( hash_hmac (' sha256
    ', $ stringToSi gn , $ token , true ))) ;
    $ url = " http :// local . datav . aliyun . com : 9999 / share
    /".$ screenID ."? _datav_tim e =".$ time ."& _datav_sig nature
    =".$ signature ;
?>
< iframe width = 100 % height = 100 % src ="<?=$ url ?>" />
```

• **Node.js:**

```
const crypto = require (' crypto ');
var token = " Ev97w0USAt Jusc3Vsd90 2ngr_vfVFH 67 ";
var screenID = " 14c5448c00 ecde02b065 c231d1659f 38 ";
var time = Date . now ();
var stringToSi gn = screenID +'|'+ time ;
var signature = crypto . createHmac (' sha256 ', token ).
update ( str ). digest (). toString (' base64 ');
var url =" http :// datav . aliyun . com / share /"+ screenID
+"? _datav_tim e =" + time +"& _datav_sig nature =" + encodeURIC
omponent ( signature );
```

• **Java:**

```
package com . company ;
import java . security .*;
import java . util . Date ;
import javax . crypto .*;
import javax . crypto . spec . SecretKeyS pec ;
```

```

import org.apache.commons.codec.binary.Base64 ;
import java.net.URLEncoder ;
public class TokenTest {
    public static String getSignedU rl ( String screenID
, String token ){
        Date date = new Date ();
        Long time = date . getTime ();
        String stringToSi gn = screenID + "|" + time ;
        String signature = HMACSHA256 ( stringToSi gn .
getBytes (), token . getBytes ());
        String url = " http :// datav . aliyun . com / share
/"+ screenID +"? _datav_tim e =" + time +"& _datav_sig nature
=" + signature ;
        return url ;
    }
    /**
     * SHA256 encryption by using the native
    abstraction of Java
     * @param str Encrypted packet
     * @return
     */
    public static String HMACSHA256 ( byte [] data , byte
[] key )
    {
        try {
            SecretKeySpec signingKey = new SecretKeySpec
( key , " HmacSHA256 ");
            Mac mac = Mac . getInstanc e (" HmacSHA256 ");
            mac . init ( signingKey );
            return URLEncoder . encode ( byte2Base6 4 ( mac .
doFinal ( data ))) ;
        } catch ( NoSuchAlgo rithmExcep tion e ) {
            e . printStack Trace ();
        } catch ( InvalidKey Exception e ) {
            e . printStack Trace ();
        }
        return null ;
    }
    private static String byte2Base6 4 ( byte [] bytes ){
        return Base64 . encodeBase 64String ( bytes );
    }
    public static void main ( String [] args ) throws
Exception {
        System . out . println ( getSignedU rl (" screenId ", "
token "));
    }
}

```

Configure the publish content (for Enterprise Edition)

You can set the version of the project that other users can access. By default, the latest version is displayed. You can also display an existing version as needed.

- If you click Live Copy, all modifications made on the canvas are synchronized to the project in real time. Users can view the modifications after you publish the latest project.
- If you click Snapshots, only the snapshot of the project content is displayed.

Modifications made on the canvas are not synchronized to the project, but can be

used as a backup for previewing a project version. To publish a snapshot, follow these steps:

1. In the Content to Publish area, click Snapshots.
2. Click Create Snapshot. The current project configurations are saved as a snapshot.



Note:

You can enter a note for the snapshot as needed. The snapshot data is saved if Publish is turned off.

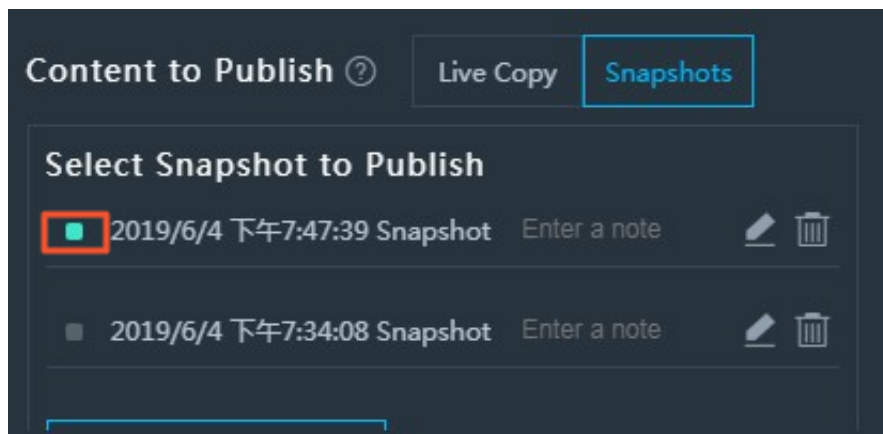
3. Click Create Snapshot to add an existing snapshot. Currently, you can create up to three snapshots.
4. Click the Delete icon to delete a snapshot that you no longer need.



Note:

Currently, you can only switch among a snapshot and the real-time version. A snapshot cannot be restored after it is deleted. Therefore, we recommend that you exercise caution when performing this action.

5. Click the green icon (outlined in red in the following figure) to switch among snapshots.



6. Refresh the publish page to view the publish content.

9 Check the validity of digitally signed parameters in a token

This topic describes how to check the validity of digitally signed parameters in the token for a DataV project.

To do so, log on to the DataV console and navigate to the Publish page to enable token authentication when you publish a project. This validity check helps to authenticate the digitally signed parameters that are passed in your project URL. In addition, it protects these parameters against unauthorized changes, improving the overall security of your profile and project data.

Background information

Assume that your employee ID is 123 and you publish a DataV project to your system. The system calculates the project URL by using a token. After you pass your employee ID `workid` to the system by using the GET method as follows, the system presents your project data: `https://datav.aliyun.com/share/xxx?_datav_time=1556022195845&_datav_sig_nature=%2BDZFj3QDIla%2F00fBZLdJMgk2Z10cs9MLL1GiHdYkwa0%3D&workid=123`.

However, you can change the value of the `workid` parameter in the project URL as the one that follows to view the profile and project data of the user with the employee ID 124: `https://datav.aliyun.com/share/xxx?_datav_time=1556022195845&_datav_sig_nature=%2BDZFj3QDIla%2F00fBZLdJMgk2Z10cs9MLL1GiHdYkwa0%3D&workid=124`.

Therefore, the system must be able to digitally sign such parameters and check the validity of these parameters so to protect against unauthorized changes when they are passed in the URL. If a user changes the value of a digitally signed parameter without authorization, the requested URL becomes inaccessible as a result.

Prerequisites

- Your project is published with token authentication enabled. For more information, see [Configure token authentication](#).

- The GET method is used to pass the parameters that must be protected against unauthorized changes, with these parameters added to the end of your project URL.

Digitally sign a parameter

The name of a digitally signed parameter starts with a `datav_sign_` string. This string can be followed by any valid characters that comprise the parameter name. As such, the regular expression for the name of a digitally signed parameter is `/^datav_sign_.*\/`.

If a parameter does not comply with the preceding rule, it will not be digitally signed. Furthermore, the system does not check its validity and its value can be changed.

Calculate a URL with digitally signed parameters

You can run the following Node.js code to calculate a URL with digitally signed parameters:

```
const crypto = require('crypto');
const querystring = require('querystring');
const signedQueryParamReg = /^datav_sign_.*\/; // A parameter that complies with the regular expression needs to be digitally signed.

const token = "93TWnmeBtx xxxxxxxxxx3 thGyAgzenn sS ";
const screenID = "b92xxxxxxx xxxxxxxxxx x27b4c538c d4 ";
const time = Date.now();

const customParams = {
  datav_sign_no: 123998,
  name: 123
};

let signParamsStr = Object.keys(customParams)
  .filter(paramName => customParams[paramName] && signedQueryParamReg.test(paramName))
  .sort()
  .map(param => `${param}=${customParams[param]}`)
  .join('&');

let stringToSign = [screenID, time];
signParamsStr && stringToSign.push(signParamsStr);
stringToSign = stringToSign.join('|');
let signature = crypto.createHmac('sha256', token).update(stringToSign).digest().toString('base64');
let queryParams = {
  _datav_time: time,
  _datav_signature: signature
};

Object.keys(customParams).forEach(paramName => {
  queryParams[paramName] = customParams[paramName];
});

let url = `http://datav.aliyun.com/share/${screenID}?${querystring.stringify(queryParams)}`;
```

```
console . log ( url );
```

The URL you obtain is as follows:

```
http :// datav . aliyun . com / share / b92db8e093 58c82efca0  
727b4c538c d4 ? _datav_tim e = 1556023246 894 & _datav_sig nature =  
GGSbvxlEmU eBoRVco8Jg rJVWRcmao7 NuRYt20rGB C5g % 3D & datav_sign  
_no = 123998 & name = 123
```

Within the validity period of the URL:

If you change the value of the `datav_sign _no` parameter, the URL becomes inaccessible. This is because this parameter complies with the parameter-signing rule and is digitally signed. Therefore, changing the value of this parameter affects the URL calculation.

If you change the value of the `name` parameter, the URL remains accessible. This is because this parameter does not comply with the parameter-signing rule and is not digitally signed. Therefore, changing the value of this parameter does not affect the URL calculation.

For information about the parameter-signing rule, see [Digitally sign a parameter](#).

Perform the validity check

1. Determine which parameters must be digitally signed. That is, which parameters cannot be changed without authorization.
2. Publish a DataV project when you enable token authentication. For more information, see [Publish a project](#).
3. Calculate the URL of the project. For more information, see [Calculate a URL with digitally signed parameters](#).
4. Use the URL obtained from the previous step to access the project. The system automatically checks the validity of digitally signed parameters.

If you attempt to access the project after changing the value of a digitally signed parameter, your access request is denied.