

Alibaba Cloud ApsaraDB for MongoDB Quick Start for Standalone

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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

Legal disclaimer.....	I
Generic conventions.....	I
1 Before you start.....	1
2 Get started with ApsaraDB for MongoDB.....	2
3 Create an instance.....	4
4 Set a password.....	7
5 Configure a whitelist.....	9
6 Apply for a public address.....	14
7 Connect to an instance.....	16
7.1 Connect to ApsaraDB for MongoDB through the mongo shell.....	16
8 Data migration.....	19
8.1 Migrate user-created databases to Alibaba Cloud through tools provided by MongoDB.....	19
8.2 Migrate user-created standalone MongoDB databases to ApsaraDB for MongoDB through DTS.....	23

1 Before you start

You can migrate data from a user-created MongoDB instance to an ApsaraDB for MongoDB instance. Before using ApsaraDB for MongoDB, you need to pay attention to its constraints, as listed in the following table.

Operation	Constraints
Restart an instance	You must log on to the ApsaraDB for MongoDB console or call the RestartDBInstance operation to restart an instance.
Select the database version	Currently, standalone instances support only MongoDB 3.4.
Select the storage engine	<ul style="list-style-type: none">· You can select WiredTiger or RocksDB.· Standalone instances do not support TerarkDB.
Select the region	Standalone instances are supported in China (Hangzhou), China (Shanghai), China (Qingdao), China (Beijing), and China (Shenzhen).

2 Get started with ApsaraDB for MongoDB

Purpose

This document describes how to quickly create an ApsaraDB for MongoDB instance , specify its basic settings, and connect to the instance. It helps you understand the basic process from purchasing an ApsaraDB for MongoDB instance to using the instance.

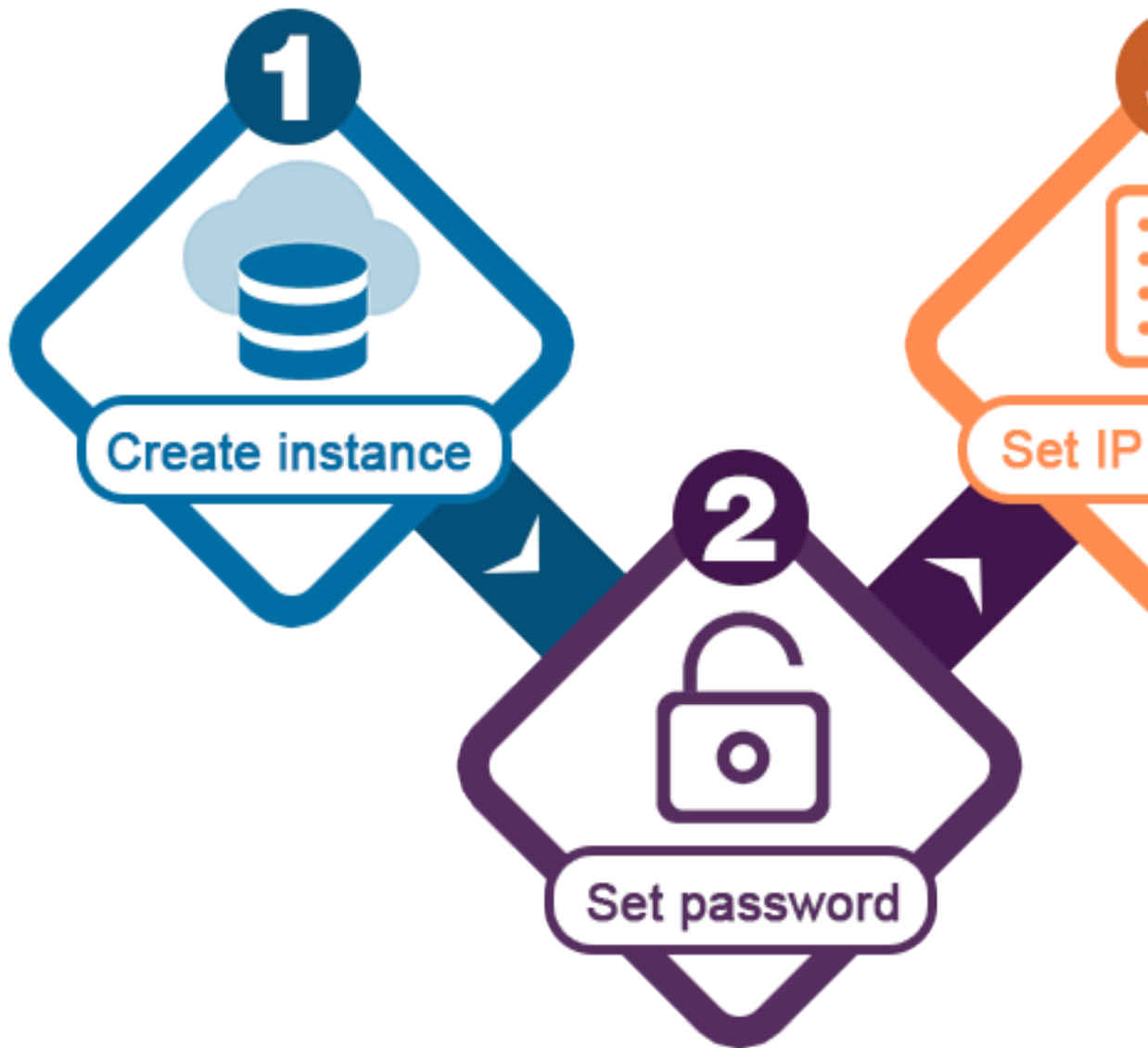
Intended audience

- Users who purchase an ApsaraDB for MongoDB instance for the first time.
- Users who need to specify basic settings after creating an ApsaraDB for MongoDB instance.
- Users who need to know how to connect to an ApsaraDB for MongoDB instance.

Quick start flowchart

If you use ApsaraDB for MongoDB for the first time, you can start with [Before you start](#) and [ApsaraDB for MongoDB console](#).

The following figure shows the operations that you need to perform from purchasing an instance to using the instance.



3 Create an instance

You can log on to the Alibaba Cloud [ApsaraDB for MongoDB console](#) or call the `CreateDBInstance` operation to create an ApsaraDB for MongoDB instance. For more information about how to bill an instance, see [Billing items and pricing](#). This topic describes how to create an instance in the ApsaraDB for MongoDB console.

Prerequisites

- You have registered an Alibaba Cloud account. If you do not have an Alibaba Cloud account, click [Register](#).
- To create a Pay-As-You-Go instance, ensure that your account balance is sufficient.

Procedure

1. Log on to the [ApsaraDB for MongoDB console](#).
2. In the left-side navigation pane, click **Replica Set Instances**. On the page that appears, click **Create Instance** to go to the instance creation page.
3. Select **Subscription** or **Pay-As-You-Go**. For more information about the billing methods, see [Billing items and pricing](#).
4. Specify the instance configuration. The following table describes related parameters.

Area	Parameter	Description
Basic Configuration	Region	<p>The geographical location of the instance. Instances in different regions cannot be interconnected through an intranet. Once an instance is created, you cannot change the region. Therefore, you need to select a region with caution.</p> <p>Supported regions: China (Hangzhou), China (Shanghai), China (Qingdao), China (Beijing), and China (Shenzhen).</p> <p>Instances in the same region (such as an ECS instance and an ApsaraDB for MongoDB instance) can be interconnected through an intranet.</p>

Area	Parameter	Description
	Zone	<p>The physical area with its power supply and network isolated from other counterparts in the same region.</p> <p>For more information about regions and zones, see Regions and zones.</p> <p>An ApsaraDB for MongoDB instance and an ECS instance in different zones of the same region can be interconnected through an intranet. For more information, see Connect to an ApsaraDB for MongoDB instance through a cross-zone intranet.</p> <p>The network latency is minimal when an ECS instance and an ApsaraDB for MongoDB instance in the same zone are interconnected through an intranet.</p>
	Database Version	<p>The database version of the instance. Currently, ApsaraDB for MongoDB supports MongoDB 3.4.</p>
	Storage Engine	<p>The storage engine of the instance. You can select WiredTiger or RocksDB.</p> <p>For more information about storage engines, see Versions and storage engines.</p>
	Replication Factor	<p>ChooseSingle Node.</p>
Network Type	VPC	<p>The Virtual Private Cloud. A VPC is an isolated network environment that provides enhanced security and better performance than traditional classic networks. You need to create a VPC in advance. For more information about how to configure a VPC, see Configure a VPC for a new instance.</p>
Specifications	Specifications	<p>The CPU and memory occupied by the instance.</p>
	Storage Space	<p>The maximum number of connections and maximum input/output operations per second (IOPS) vary depending on specifications. The maximum IOPS indicates the maximum number of read or write operations separately. The maximum sum of read and write operations can be twice the maximum IOPS.</p>


Area	Parameter	Description
Set Password	<ul style="list-style-type: none"> · Set now · Set after purchase 	<p>The password used to connect to ApsaraDB for MongoDB for the first time.</p> <ul style="list-style-type: none"> · The password must consist of any three types of characters, including uppercase letters, lowercase letters, digits, and special characters. Special characters include exclamation points (!), number signs (#), dollar signs (\$), percent signs (%), carets (^), ampersands (&), asterisks (*), parentheses (()), underscores (_), plus signs (+), hyphens (-), and equal signs (=). [DO NOT TRANSLATE] · The password must be 8–32 characters in length. <p>You can set a password when creating the instance. You can also set a password or reset the password when the instance is running.</p>
Purchase Quantity	Duration	<ul style="list-style-type: none"> · Subscription: Select the duration and quantity for the subscription-based instance to be purchased. You can select one to nine months for the subscription period on a monthly basis, or one to three years for the subscription period on a yearly basis. · Pay-As-You-Go: Select the quantity for the Pay-As-You-Go instance to be purchased with the same configuration. You can select an integer in the range of 1 to 10.
	Quantity	

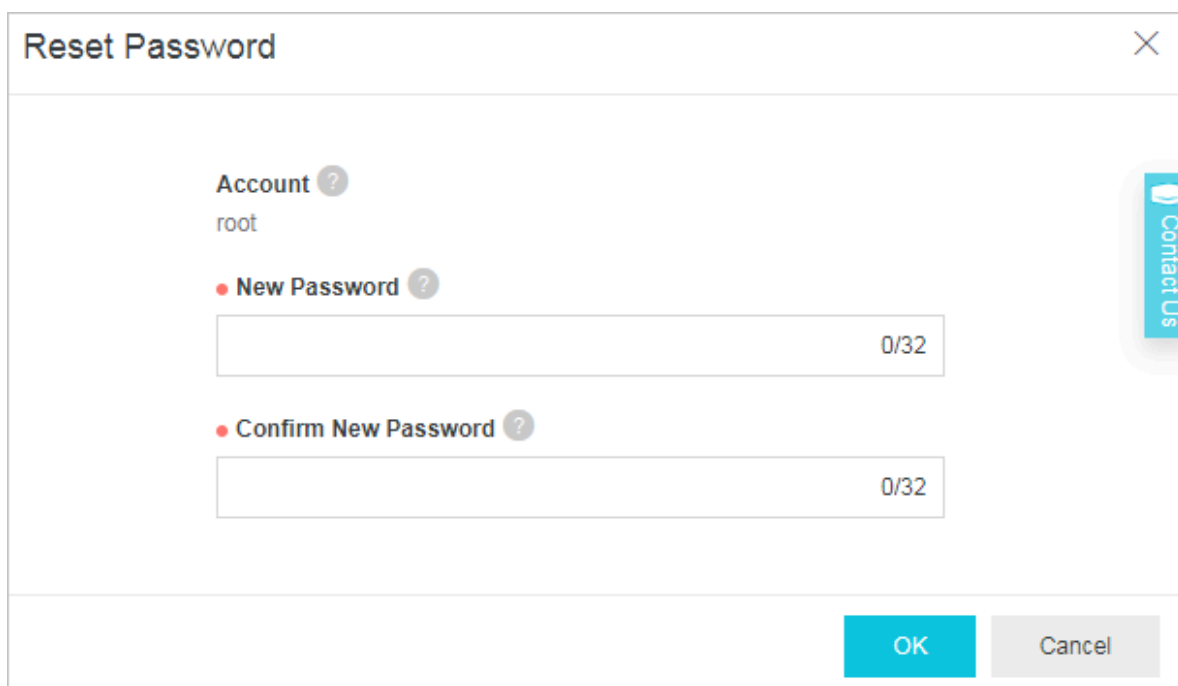
5. Click Buy Now to go to the Confirm Order page.
6. On the Confirm Order page that appears, read and select ApsaraDB for MongoDB Agreement of Service and follow the instructions to complete the payment process.

4 Set a password

If you did not set a password when creating an instance or need to change the old password when using ApsaraDB for MongoDB, you can reset the password for the instance.

Procedure

1. Log on to the [ApsaraDB for MongoDB console](#).
2. Click the target instance ID or choose  > Manage in the Operation column corresponding to the target instance.
3. In the left-side navigation pane, click Accounts. On the page that appears, click Reset Password.
4. In the Reset Password dialog box that appears, enter a new password, confirm your password, and click OK, as shown in the following figure.



Note:

- The password must consist of any three types of characters, including uppercase letters, lowercase letters, digits, and special characters. Special characters include exclamation points (!), number signs (#), dollar signs (\$),

percent signs (%), carets (^), ampersands (&), asterisks (*), parentheses (()), underscores (_), plus signs (+), hyphens (-), and equal signs (=).

- The password must be 8–32 characters in length.

5 Configure a whitelist

After an ApsaraDB for MongoDB instance is created, it automatically adds the IP address 127.0.0.1 to a whitelist, indicating that all IP addresses and CIDR blocks are prohibited to access this instance. To guarantee database security and stability, you must delete 127.0.0.1 and add IP addresses or CIDR blocks that need to access your ApsaraDB for MongoDB instance to the whitelist. Otherwise, you cannot view the connection information about the instance on its Basic Information page. ApsaraDB for MongoDB allows you to add a maximum of 1,000 IP addresses to the whitelist.

Context

Before using the target instance for the first time, you must configure its whitelist.

Procedure

1. Log on to the [ApsaraDB for MongoDB console](#).
2. Click the target instance ID or choose  > Manage in the Operation column

corresponding to the target instance.

3. On the Basic Information page that appears, click **Set the whitelist and the address** will be displayed., as shown in the following figure.

Basic Information

Accounts

Database Connection

Backup and Recovery

Monitoring Info

Alarm Rules

▶ Parameters

▶ Data Security

▶ Logs

▶ CloudDBA

Basic Information

Instance ID [REDACTED]

Zone Hangzhou Zone B

Storage Engine WiredTiger

Specification Information

Specification Details 1 Core,2 GB

Specification Code dds.n2.small.1

Disk Space 20 G

IOPS 1800

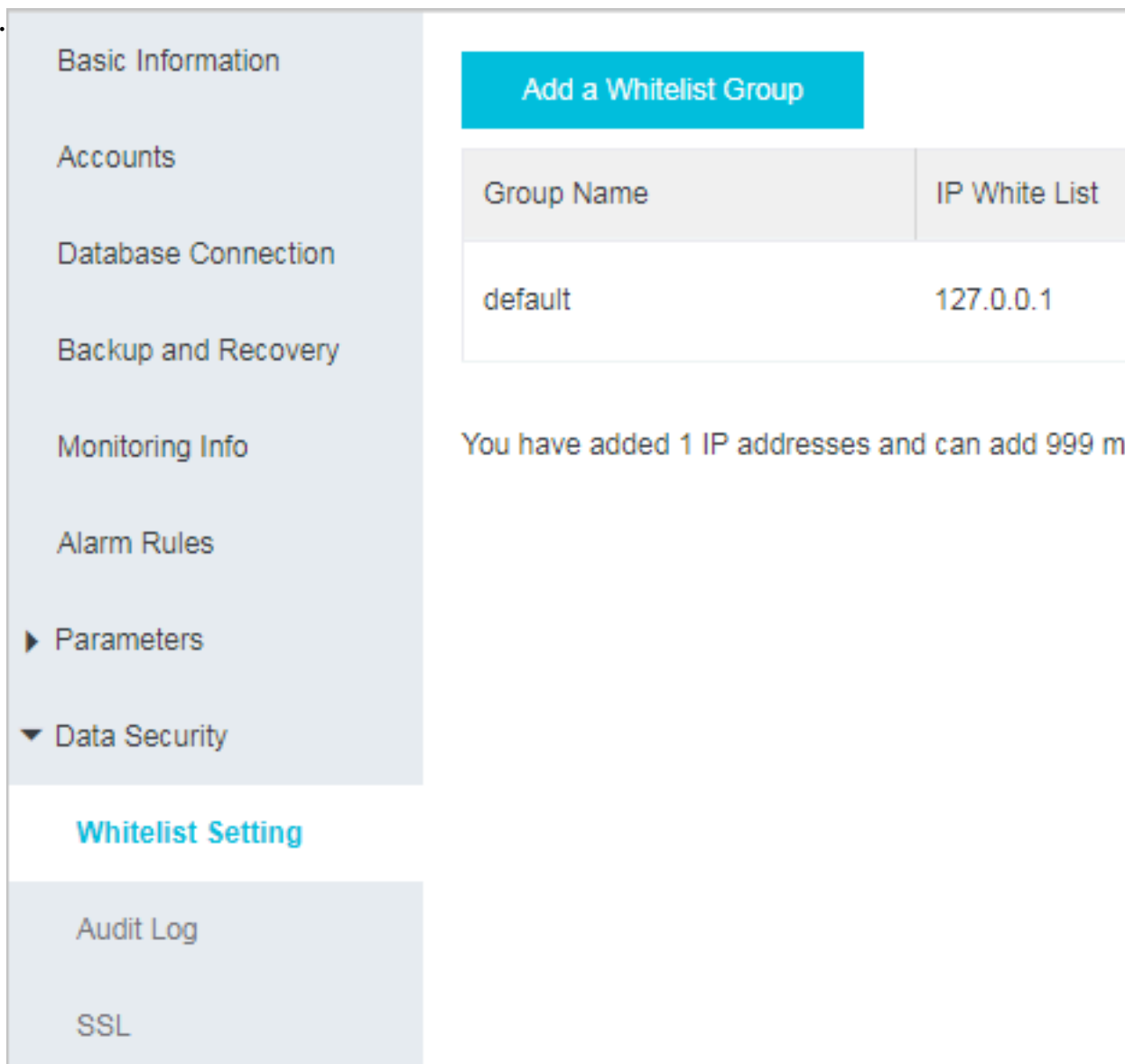
Billing Method Pay-As-You-Go

Expiration Time Pay-As-You-Go instances ca

Connection Info (Connection String URI) ?

Network Type	Address (Note: Repla
VPC	Set the whitelist and t

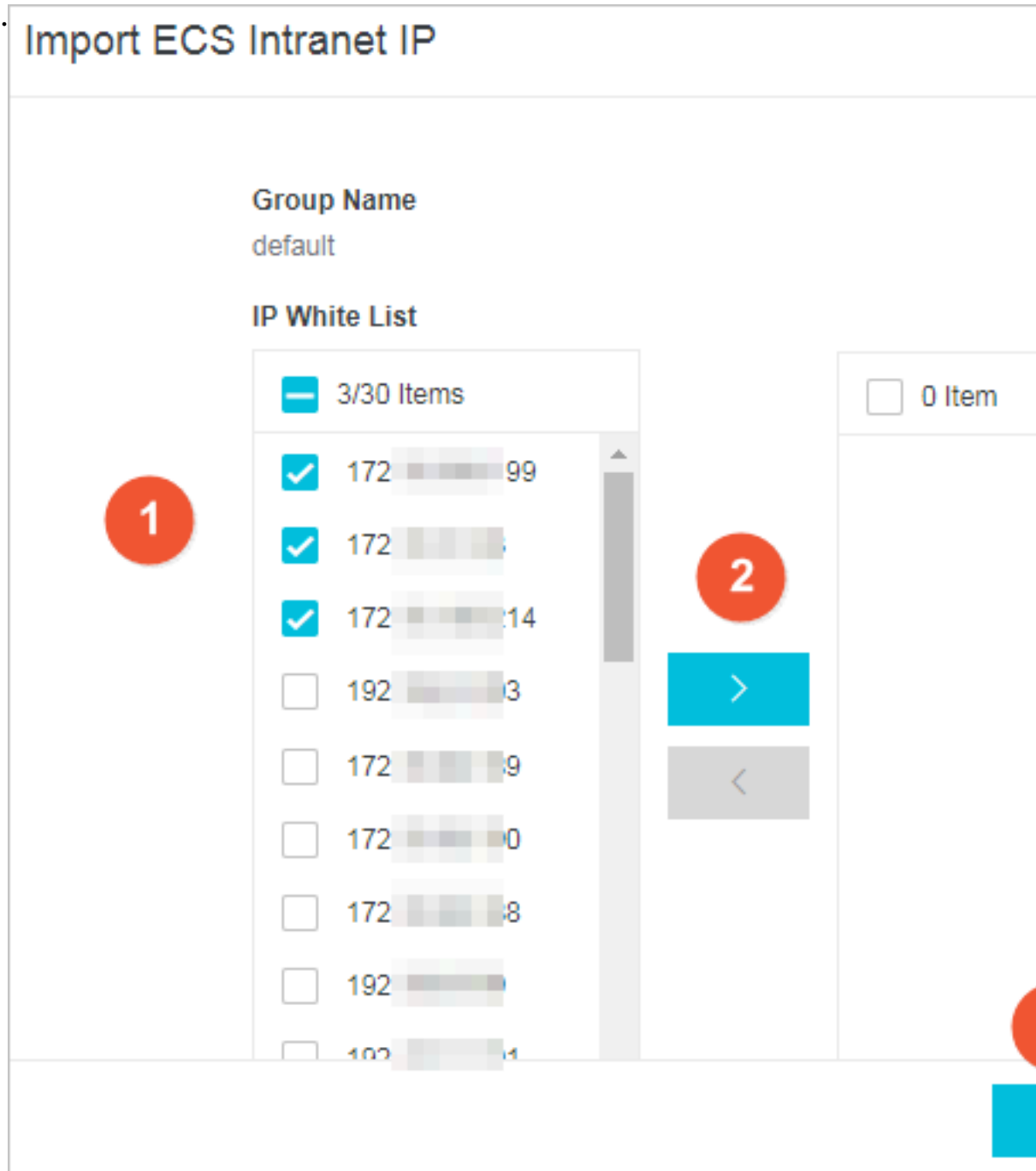
Alternatively, in the left-side navigation pane, choose **Data Security > Whitelist Setting**, as shown in the following figure.



4. Select **Manually Modify** or **Import ECS Intranet IP** to configure the IP address whitelist.

- Select **Manually Modify**. On the page that appears, enter IP addresses or CIDR blocks and click **OK**.
- Select **Import ECS Intranet IP**. The system displays all ECS intranet IP addresses under your account. You can select ECS intranet IP addresses,

add them to the whitelist, and click OK, as shown in the following figure.



Note:

- You need to separate IP addresses with commas (,) and ensure that they are different from one another. You can add a maximum of 1,000 IP addresses. Supported formats include 0.0.0.0/0, 10.23.12.24, and 10.23.12.24/24. 10.23.12.24 is an IP address, and 10.23.12.24/24 is a CIDR notation, in which the suffix /24 indicates the number of bits for the prefix of the IP address. The suffix ranges from 1 to 32.

- 0.0.0.0/0 and empty indicate that your ApsaraDB for MongoDB instance can be accessed by all IP addresses. In this case, the database is at high security risk . We recommend that you add only the public IP addresses or CIDR blocks of your web servers to the whitelist.

Result

After configuring the whitelist, you can view the VPC connection information about the instance on its Basic Information page.

Subsequent operations


- If you use the whitelist correctly, you can guarantee the highest-level security protection for your ApsaraDB for MongoDB instance. We recommend that you maintain the whitelist on a regular basis.
- If necessary, you can select **Manually Modify** or **Import ECS Intranet IP** to modify the whitelist.

6 Apply for a public address

ApsaraDB for MongoDB allows you to apply for a public address to connect to an instance through the Internet.


Connection types

ApsaraDB for MongoDB supports two network types for connecting to an instance: Intranet Connection - VPC and Public IP Connection.

Connection type	Description
Intranet Connection - VPC	<ul style="list-style-type: none"> • ApsaraDB for MongoDB supports Intranet Connection - VPC by default. • If your applications are deployed on an ECS instance that is in the same region and configured with the same network type as your ApsaraDB for MongoDB instance to be connected, the two instances can be interconnected through an intranet. You do not need to apply for a public address. • The connection type of Intranet Connection - VPC can provide you with enhanced security and optimal performance.
Public IP Connection	<ul style="list-style-type: none"> • You need to apply for and release a public address. • In the following scenarios where your ApsaraDB for MongoDB instance cannot be connected through an intranet, you need to apply for a public address: <ul style="list-style-type: none"> - You use an ECS instance to access an ApsaraDB for MongoDB instance, but the two instances are in different regions or configured with different network types. - You use a non-Alibaba Cloud device to access an ApsaraDB for MongoDB instance. <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p> Note: Considering certain security risks for using a public address, we recommend that you migrate your applications to an ECS instance that is in the same region and configured with the same network type as your ApsaraDB for MongoDB instance and select Intranet Connection - VPC.</p> </div>

Apply for a public address

There are certain security risks for connecting to an instance through the Internet. To guarantee data security, you need to [release a public address](#) in a timely manner after using it.

1. Log on to the [ApsaraDB for MongoDB console](#).
2. In the upper-left corner of the home page, select the region where the target instance is located.
3. Click the target instance ID or choose  > Manage in the Operation column corresponding to the target instance.
4. On the Basic Information page that appears, click Database Connection in the left-side navigation pane.
5. On the Database Connection page that appears, click Apply for Public IP to the right of Public IP Connection.
6. In the Apply for Public IP dialog box that appears, click OK.



Note:

After the application procedure, you can use the obtained public address to access the target instance. Before that, you need to add the public IP address of the terminal that you use to connect to the instance to the whitelist. For more information, see [Configure a whitelist](#).

7 Connect to an instance

7.1 Connect to ApsaraDB for MongoDB through the mongo shell

You can use the mongo shell to connect to an ApsaraDB for MongoDB instance.

Prerequisites

Use mongo shell 3.0 or a later version to connect to ApsaraDB for MongoDB, otherwise authentication fails.

Procedure

1. Log on to the [ApsaraDB for MongoDB console](#).
2. Click the target instance ID to go to its Basic Information page.

3. In the left-side navigation pane, click Database Connection to view the connection information under Intranet Connection - VPC and Public IP Connection and select a connection type as required, as shown in the following figure.

The screenshot displays the 'Database Connection' configuration page in the ApsaraDB for MongoDB console. The left navigation pane is active, with 'Database Connection' highlighted. The main content area is divided into two sections: 'Intranet Connection - VPC' and 'Public IP Connection'. Each section contains a table with columns for 'Role' and 'Address', and a 'ConnectionStringURI' field.

Intranet Connection - VPC	
Role	Address
Primary	dds-██████████
ConnectionStringURI	mongodb://root:****@██████████

Public IP Connection	
Role	Address
Primary	dds ██████████
ConnectionStringURI	mongodb://root:****@██████████

In each connection address, the domain name is separated from the port number with a colon (:). The default port number is 3717, and the default database name is admin.

4. On an [ECS](#) instance, run a mongo command to connect to ApsaraDB for MongoDB.

The following command is an example:

```
mongo --host dds-xxxx.mongodb.rds.aliyuncs.com:3717  
-u root -p --authenticationDatabase admin
```

Mongo shell FAQs

- [Connection](#)
- [Connections](#)
- [High load](#)

8 Data migration

8.1 Migrate user-created databases to Alibaba Cloud through tools provided by MongoDB

MongoDB provides two command tools: `mongodump` and `mongorestore`. You can use these command tools to migrate data from user-created MongoDB database to standalone ApsaraDB for MongoDB instances.

Prerequisites

- The version of `mongodump` and `mongorestore` is the same as the version of the user-created MongoDB database.
- The storage space of the standalone instance must be larger than the storage space of the user-created MongoDB instance. If the storage space is insufficient, you can use [Change the configuration](#) to expand the storage space.

Precautions

- This is a full migration. To avoid data inconsistency, stop writing into the database before the migration starts.
- If you have used `mongodump` to back up the database, move the files in the dump folder to other directories. Ensure that the dump folder is empty before data migration. Otherwise, existing backup files in this folder will be overwritten.
- Run the `mongodump` and `mongorestore` commands on the server where the user-created database is deployed. Do not run these in the mongo shell.

Back up the user-created database

This is a full migration. To avoid inconsistencies in data, stop the services related to the user-created database and stop data writing before migration.

1. On the server where the user-created database is deployed, run the following command to back up all the data:

```
mongodump -- host < mongodb_host > -- port < port > - u <
username > -- authenticationDatabase < database >
```

Note:

- **<mongodb_host>**: the server address of the user-created database. If this database is deployed on the current server, set this parameter to 127.0.0.1.
- **<port>**: the service port number for the user-created database. The default port number is 27017.
- **<username>**: the account used to log on to the user-created MongoDB database.
- **<database>**: the name of the authentication database for the user-created database. The default database name is admin.

Example:

```
mongodump -- host 127 . 0 . 0 . 1 -- port 27017 - u root
-- authenticationDatabase admin
```

2. Enter the password in the `Enter password :` prompt to start data backup.

Wait until the data backup is complete. The data of the user-created database is backed up in the dump folder of the current directory.

Migrate data to ApsaraDB for MongoDB

1. Obtain the connection address of the primary node of standalone instance.
 - a. Log on to the [ApsaraDB for MongoDB console](#).
 - b. Select the region where the destination instance is located.
 - c. In the left-side navigation pane, click Replica Set Instances.
 - d. Click the ID of the instance.
 - e. In the left-side navigation pane, click Database Connection.

The screenshot shows the 'Database Connection' page in the ApsaraDB for MongoDB console. It is divided into two main sections: 'Intranet Connection - VPC' and 'Public IP Connection'. Each section contains a table with 'Role' and 'Address' columns, and a 'ConnectionStringURI' field. The 'Intranet Connection - VPC' section has a primary node address ending in '.mongodb.rds.aliyuncs.com:3717' and a connection string URI. The 'Public IP Connection' section has a primary node address ending in '.pub.mongodb.rds.aliyuncs.com:3717' and a connection string URI. Both sections have an 'Update Connection String' button.



Note:

- **Intranet Connection - VPC:** A Virtual Private Cloud (VPC) is an isolated virtual network that has higher security and performance than a classic network.

The VPC network is suitable for user-created MongoDB databases built based on [ECS instances](#). The ECS instance and ApsaraDB to MongoDB instances must be in the same region and VPC. You also need to add the private IP address of the ECS instance to the MongoDB instance whitelist. For more information, see [Configure a whitelist](#).

- **Public IP Connection:** Instances are not automatically configured with a public IP address to ensure security. You must manually apply for a public IP address for the instance. For more information, see [Apply for a public IP address](#).

To migrate instances through the public network connection address, you must add the public IP address of the user-created MongoDB database to the whitelist of the ApsaraDB for MongoDB instance.

2. On the server of the user-created MongoDB database, run the following command to import all the data of the database to ApsaraDB for MongoDB.

```
mongorestore --host <Primary_host> -u <username> --authenticationDatabase <database> <Backup_directory>
```

Note:

- **<Primary_host>**: the connection address of the primary node in the replica set instance.
- **<username>**: the database account for the ApsaraDB for MongoDB instance. The default username is root.
- **<database>**: the name of the authentication database for the ApsaraDB for MongoDB instance. The default database name is admin.
- **<Backup_directory>**: the directory that stores backup files. The default backup directory is dump.

Example:

```
mongorestore --host dds-bp-*****-pub.mongodb.rds.aliyuncs.com:3717 -u root --authenticationDatabase admin dump
```

3. Enter the password in the `Enter password :` prompt to start data migration.



Note:

For more information about how to set a database password, see [Set a password](#).

Wait until the data migration is complete. Switch your businesses to the ApsaraDB for MongoDB instance during off-peak hours to avoid negatively affecting your businesses.

More information

After migrating databases to ApsaraDB to MongoDB instances, you can connect to the database, manage the database, and manage database users as required.

[Connect to ApsaraDB for MongoDB through the mongo shell](#)

8.2 Migrate user-created standalone MongoDB databases to ApsaraDB for MongoDB through DTS

This topic describes how to use Data Transmission Service (DTS) to migrate data from user-created MongoDB databases to ApsaraDB for MongoDB. DTS supports full data migration and incremental data migration. You can use incremental data migration to migrate data seamlessly to ApsaraDB for MongoDB without any service interruptions.

Prerequisites

- The service port of the user-created MongoDB instance is open to the public network.
- The database version of the source database must be 3.0, 3.2, 3.4 or 3.6. MongoDB 4.0 is not supported. For more information about data migration in MongoDB 4.0, see [Migrate user-created databases to Alibaba Cloud through tools provided by MongoDB](#).
- The storage space of the ApsaraDB for MongoDB instance must be larger than the storage space of the user-created MongoDB instance.

Notes

- Data in the admin database cannot be migrated even if it is selected.
- The config database is an internal database. We recommend that you do not migrate data from the config database unless otherwise specified.
- For user-created standalone MongoDB instances, you must first enable oplog to use DTS incremental data migration. For more details, see [Preparations before incremental data migration](#).
- We recommend that you migrate your data during off-peak hours to avoid business interruptions.

Billing information

Migration type	Configuration fee	Public network traffic fee
Full data migration	Not billed	Not billed
Incremental data migration	Billed. For more information, see Data Transmission Service pricing .	Not billed

Migration type description

- **Full data migration:** All data from the user-created MongoDB database is migrated to the destination instance.
 - Migrates databases.
 - Migrates collections.
 - Migrates indexes.
- **Incremental data migration:** The incrementally updated data of the user-created database is synchronized to the database in the destination instance on the basis of full data migration.
 - Synchronizes the create and delete operations on databases.
 - Synchronizes the create, delete, and update operations on documents.
 - Synchronizes the create and delete operations on collections.
 - Synchronizes the create and delete operations on indexes.

Migration permission requirements

If you use DTS to migrate MongoDB databases, you need different permissions when performing different types of migration. The details are as follows:

Source database	Full data migration	Incremental data migration
User-created MongoDB database	Read permissions	<ul style="list-style-type: none"> · Read permissions on the source database · Read permissions on the admin database · Read permissions on the local database
ApsaraDB for MongoDB	Read and write permissions	Read and write permissions



Note:

For more information about how to create and authorize a MongoDB account, see [db.createUser](#) in the official MongoDB documentation.

Preparations before incremental data migration

To use DTS for incremental data migration, you must first enable oplog for the source database. The following section describes how to enable oplog for user-created MongoDB databases. Skip this step if you only perform full data migration.



Note:

This operation requires the MongoDB service to be restarted, which will affect database access. We recommend that you perform this operation during off-peak hours.

1. You can use the mongo shell to log on to the user-created MongoDB server. You must run the following commands to stop the MongoDB service of the user-created database.

```
use admin
db.shutdownServer()
```

2. Run the following command to start the MongoDB service from the back end as a replica set:

```
mongod --port 27017 --dbpath /var/lib/mongodb --logpath /var/log/mongodb/mongod.log --replSet rs0 --bind_ip 0.0.0.0 --auth --fork
```



Note:

- This command uses the existing database path in the user-created MongoDB instance `/var/lib/mongodb` and the log file `/var/log/mongodb/mongod.log`. You can specify the directory path based on the actual directory path on the user-created server.
- This command uses 0.0.0.0 as the binding address of the MongoDB service, which allows access from all IP addresses.
- This command enables authentication. Users can only access the database after passing authentication.
- You can run the `kill` command to end the process.

3. Use the mongo shell to log on to the user-created MongoDB server and run the following commands to initialize the replica set:

```
use admin
```

```
rs . initiate ()
```

4. Wait for a few minutes. The status of the current node will change to primary.

You have enabled oplog for the user-created MongoDB database deployed in a standalone architecture. You can run the `rs . printReplli cationInfo ()` command to view the status of oplog.

The procedure of migrating data from MongoDB databases to ApsaraDB for MongoDB instances

1. Log on to the [DTS console](#).
2. In the left-side navigation pane, click Data Migration.
3. In the upper-right corner of the Data Migrati page, click Create Migration Task.
4. Configure Source and Destination Databases of the migration task.

Parameter	Description
Task Name	<ul style="list-style-type: none"> • DTS automatically generates a name for each task. Task names are not required to be unique. • You can modify task names as needed. We recommend that you specify meaningful names for the tasks to help identify the tasks.

Parameter	Description
Source Database	<ul style="list-style-type: none"> • Instance Type: Select User-Created Database with Public IP Address. • Database Type: Select MongoDB. • Host Name or IP Address: Enter the address of the user-created MongoDB instance. This address must be a public IP address. • Port: Enter the service port of the user-created MongoDB instance. • Database Name: Enter the name of the authentication database of the user-created MongoDB database. • Database Account: Enter the account used to connect to the user-created database. For more information, see Migration permission requirements. • Database Password: Enter the password of the database account used to connect to the user-created MongoDB instance.
Destination Database	<ul style="list-style-type: none"> • Instance Type: Select MongoDB Instance. • Instance Region: Select the region where the destination MongoDB instance is located. • MongoDB instance ID: Select the instance ID of the destination MongoDB instance. • Database Name: Enter the name of the authentication database in the destination instance. The default name is admin. • Database Account: Enter the account used to connect to the database of the destination MongoDB instance. For more information, see Migration permission requirements. • Database Password: Enter the password of the database account used to connect to the destination MongoDB instance.

5. After configuring the parameters, click, click Set Whitelist and Next in the lower-right corner.

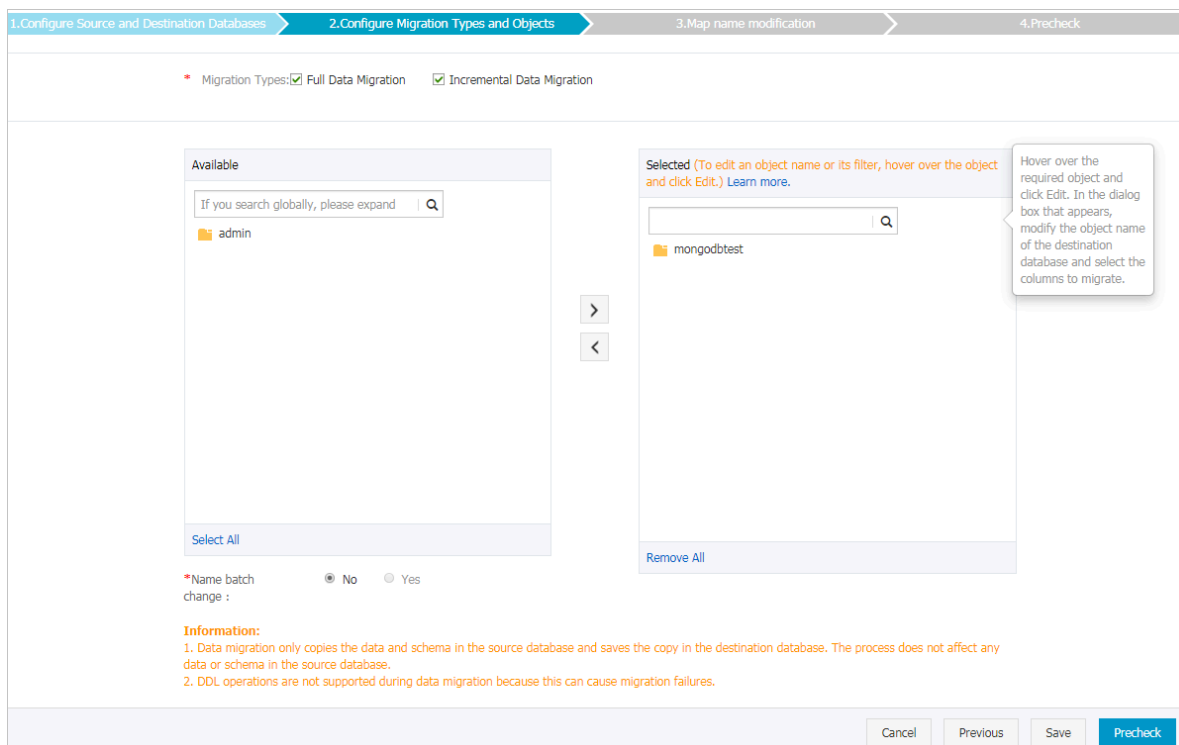




Note:




- The IP address of the DTS server is automatically added to the whitelist of the destination ApsaraDB for MongoDB instance. This ensures that the DTS server can connect to the ApsaraDB for MongoDB instance. After the migration is complete, you can delete the whitelist if you no longer need it. For more information, see [Configure a whitelist](#).
- If a whitelist is configured for the user-created MongoDB database, you must perform the following operations: In the Source Database section, click Obtain

DTS IP to obtain the IP address of the DTS server. Then, add the obtained IP address to the whitelist of the user-created MongoDB database.


6. Select the migration object and migration type.




Parameter	Description
Migration Types	<ul style="list-style-type: none"> If you need to migrate all of the data, select Full Data Migration for Migration Types. <div style="background-color: #f0f0f0; padding: 5px; margin: 5px 0;">  Note: To ensure data consistency, do not write new data into the source MongoDB database during full data migration. </div> <ul style="list-style-type: none"> If you need to migrate the data without stopping businesses, select Full Data Migration and Incremental Data Migration for Migration Types. <div style="background-color: #f0f0f0; padding: 5px; margin: 5px 0;">  Note: For user-created standalone MongoDB instances, you must first enable oplog to use DTS incremental data migration. For more details, see Preparations before incremental data migration. </div>

Parameter	Description
Migration objects.	<ul style="list-style-type: none"> · Select the database to be migrated from the Available section and click  to add the database to the Selected box. <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p> Note:</p> <ul style="list-style-type: none"> - Data in the admin database cannot be migrated even if it is selected. - The config database is an internal database. Do not migrate data from the config database unless otherwise specified. </div> <ul style="list-style-type: none"> · The migration object can be a database or a collection/function · · After an object is migrated to an ApsaraDB for MongoDB instance, the object name in ApsaraDB for MongoDB is the same as that in the user-created database. <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p> Note:</p> <p>If the migrated object has different names in the user-created source database and the destination instance, you can use the object name mapping function provided by DTS. For more information, see Object name mapping.</p> </div>

7. When you complete the preceding configurations, click Precheck in the lower-right corner.

 **Note:**

- A precheck is performed before the migration task starts. The migration starts only after the precheck succeeds.
- If the precheck fails, click the  icon corresponding to the check items to view their details. Perform a precheck again after the problems are rectified.

8. After the precheck succeeds, click Next.

9. On the Confirm Settings page, set Channel Specification and select Data Transmission Service (Pay-As-You-Go) Service Terms.

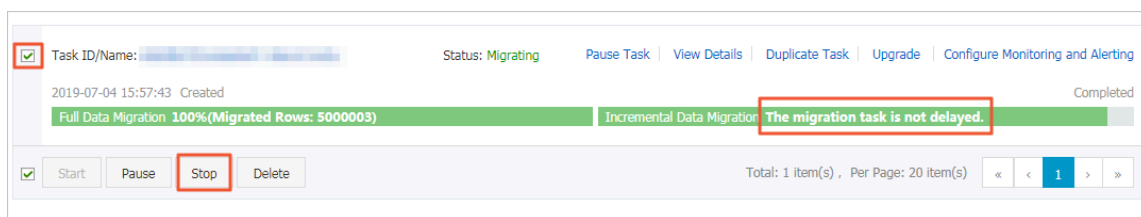
10. Click Buy and Start to start the migration.

- Full data migration

Wait until the migration task stops automatically.

- Incremental data migration

The migration task does not stop automatically. To stop the migration task, wait until the task is in the The migration task is not delayed state, and stop writing to the source database. After a few minutes, the task enters the The migration task is not delayed state again, and you can stop the task.



Check whether the data is correct. If yes, you can switch your business from the user-created database to the ApsaraDB for MongoDB instance.

More information

[Connect to a standalone ApsaraDB for MongoDB instance through the mongo shell](#)