

**Distributed Cache Service**

# **Data Migration Guide**

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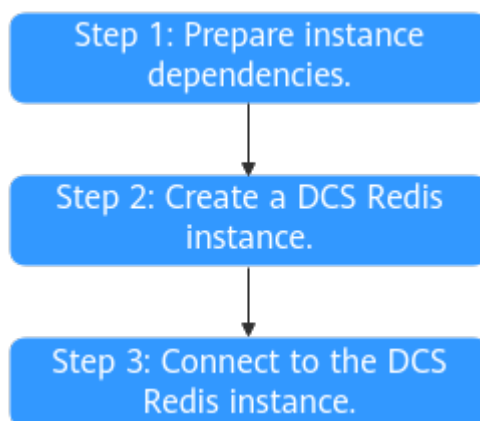
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# 1 Overview

This document takes the example of creating and connecting to a single-node Distributed Cache Service (DCS) Redis 5.0 instance to quickly get you started with DCS.

## Process

**Figure 1-1** Using DCS



1. **Prepare instance dependencies.**  
A DCS Redis instance runs in a Virtual Private Cloud (VPC). Before creating an instance, ensure that a VPC and a subnet is available.
2. **Create a DCS Redis instance.**  
When creating a DCS Redis instance, you can customize it with the required type and specifications, and configure a VPC and a subnet. The VPC and subnet cannot be changed for the created instance.
3. **Connect to the DCS Redis instance.**  
You can access a DCS instance through any Redis client.

# 2 Step 1: Prepare Instance Dependencies

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## Description

Each DCS instance is deployed in a VPC and bound to a specific subnet. They provide an isolated virtual network environment and security protection policies which you can easily configure and manage. Before creating a DCS instance, you need to prepare a VPC and a subnet.

If you already have a VPC and a subnet, you do not need to create them again.

## Creating a VPC and a Subnet

For details, see [Creating a VPC](#).

- The VPC and the DCS Redis instance must be in the same region.
- Retain the default settings unless otherwise specified.

# 3 Step 2: Buy a Redis Instance

This section describes how to buy a single-node DCS Redis 5.0 basic edition instance on the DCS console.

## Prerequisites

- To achieve fine-grained management of your HUAWEI CLOUD resources, create IAM user groups and users and grant specified permissions to the users. For details, see [Permission Management](#).
- You have prepared necessary resources.

## Procedure

- Step 1** Go to the [Buy DCS Instance](#) page.
- Step 2** Select the billing mode.
- Step 3** Select a region closest to your application to reduce latency and accelerate access.
- Step 4** Configure the instance. For details, see [Table 3-1](#).

**Table 3-1** Instance configuration

| Parameter              | Description   |
|------------------------|---|
| Cache Engine           | The default value is <b>Redis</b> .                       |
| Edition                | Select <b>Basic</b> .                                     |
| CPU Architecture       | The default value is <b>x86</b> .                         |
| Version                | Select <b>5.0</b> .                                       |
| Instance Type          | Select <b>Single-node</b> .                               |
| AZ                     | Retain the default AZ.                                    |
| Instance Specification | In this example, select the flavor for 128 MB cache size. |

| Parameter                | Description  |
|--------------------------|--|
| VPC                      | Select the prepared VPC and subnet.<br>To access a DCS Redis instance in an ECS, select the VPC where the ECS is.  |
| IP Address               | You can select <b>Automatically-assigned IP address</b> or <b>Manually-specified IP address</b> . You can use the default port 6379 or enter a different number.<br>In this example, select <b>Automatically-assigned IP address</b> and use the default port 6379.  |
| Name                     | Name of the instance.  |
| Enterprise Project       | The default value is <b>default</b> .<br>If you cannot select an enterprise project, see <a href="#">Why Can't I Select the Required Enterprise Project When Creating a DCS Instance?</a>  |
| Password Protected       | You can select <b>Yes</b> or <b>No</b> .<br>If you select <b>Yes</b> , enter <b>Password</b> and <b>Confirm Password</b> .   |
| Parameter Configuration  | Select <b>Default templates</b> .  |
| Quantity                 | One instance will be created by default, and you can buy up to 100 DCS instances at a time.  |
| (Optional) More Settings | Click to expand <b>More Settings</b> . You can set <b>Description</b> , <b>Command Renaming</b> , <b>Maintenance</b> , and <b>Tag</b> .<br>In this example, you can skip these settings. After the instance is created, you can configure your instances on the console. For details, see <a href="#">Renaming Commands</a> , <a href="#">Managing Tags</a> , and <a href="#">Modifying Maintenance Window</a> . |

**Step 5** Click **Next**.

**Step 6** Confirm the instance information, and click **Submit**.

The instances have been created successfully if they are in the **Running** state.

**Step 7** Return to the **Cache Manager** page to view and manage your DCS instances.

----End

# 4 Step 3: Connect to the DCS Redis Instance

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This section describes how to access a single-node DCS Redis instance through redis-cli on an ECS within a VPC.

## NOTE


To access a DCS Redis instance through other clients, see [Access in Different Languages](#). To access an instance through the Web CLI on the console, see [Connecting to Redis on the Console](#).

## Prerequisites

- A DCS Redis instance has been created and is in the **Running** state.
- An ECS has been created and is in the same region and VPC as the DCS Redis instance. For details about how to create an ECS, see [Purchasing an ECS](#).
- If the ECS runs the Linux OS, ensure that the GCC compilation environment has been installed on the ECS.
- If you have configured an IP whitelist for the DCS Redis instance, add the IP address of the ECS to the whitelist. For details, see [Managing IP Address Whitelist](#).

## Procedure (Linux)

**Step 1** Obtain the IP address or domain name and port number of the DCS Redis instance.

1. Log in to the [DCS console](#).
2. Click  in the upper left corner of the management console and select the region where your instance is located.
3. In the navigation pane of the DCS console, choose **Cache Manager**.
4. Click the instance you want to view.
5. Check **Connection Address** and **IP Address** in the **Connection** area.



**Figure 4-1** Connection information



**Step 2** Install redis-cli.

The following steps assume that your client is installed on the Linux OS.

1. Log in to the ECS.
2. Run the following command to download the source code package of your Redis client from <https://download.redis.io/releases/redis-6.2.13.tar.gz>:

**wget http://download.redis.io/releases/redis-6.2.13.tar.gz**

**NOTE**

The following uses redis-6.2.13 as an example. For details, see the [Redis official website](#).

3. Run the following command to decompress the source code package of your Redis client:

**tar -xzf redis-6.2.13.tar.gz**

4. Run the following commands to go to the Redis directory and compile the source code of your Redis client:

**cd redis-6.2.13**

**make**

**cd src**

**Step 3** Access the DCS Redis instance.

1. Run the following command to access the chosen DCS Redis instance:

**./redis-cli -h {dcs\_instance\_address} -p 6379**

{dcs\_instance\_address} indicates the IP address/domain name of the DCS instance and **6379** is the port used for accessing the instance. To obtain the IP address/domain name and the port, see [Step 1](#).

The following uses a domain name as an example. Change the address and port as required.

```
[root@ecs-redis redis-5.0.8]# cd src
[root@ecs-redis src]# ./redis-cli -h redis-xxxxxx.dcs.huaweicloud.com -p 6379
redis-xxxxxx.dcs.huaweicloud.com:6379>
```

2. If you have set a password for the DCS instance, enter the password in this step. You can read and write cached data only after the password is verified. Skip this step if the instance is not password-protected.

**auth {password}**

{password} indicates the password used for logging in to the chosen DCS Redis instance. This password is defined during DCS Redis instance creation.

The command output is as follows:

```
redis-xxxxxx.dcs.huaweicloud.com:6379> auth *****  
OK  
redis-xxxxxx.dcs.huaweicloud.com:6379>
```

----End

## Procedure (Windows)

Click [here](#) to download the Redis client installation package for Windows. Decompress the package in any directory, run the command prompt **cmd.exe** in Windows and go to the directory. Then, run the following command to access the DCS Redis instance:

```
redis-cli.exe -h XXX -p 6379
```

**XXX** indicates the IP address/domain name of the DCS instance and **6379** is an example port used for accessing the DCS instance. For details about how to obtain the IP address/domain name and port, see [Step 1](#). Change the IP address/domain name and port as required.

# 5 Common Practices

This section describes common practices of DCS to help you better use it.

| Practice  | Description   |
|---|---|
| <a href="#">Serializing Access to Frequently Accessed Resources</a> | In Internet scenarios such as seckill, the system needs multiple machines to run concurrently to handle traffic burst. Assume that two users' requests arrive at the same time but on different machines. Although the two requests can be handled spontaneously, an inventory oversold or disordered access problem may still occur. This is because a machine's lock only takes effect on threads in the Java VM where the machine runs. To serialize access to resources, you can use DCS Redis instances for distributed locking. |
| <a href="#">Using Nginx for Public Access to Redis</a>              | By default, public network access is not supported for Redis 4.0 and later versions. This practice describes how to access a DCS Redis instance in the VPC through a jump server over public network.   |
| <a href="#">Connecting a Redis Client to DCS Through CCE</a>        | More and more applications are deployed in containers. This practice describes how to deploy Redis clients in Cloud Container Engine (CCE)'s cluster container to access DCS through CCE.   |