# Alibaba Cloud

ApsaraDB for PolarDB Pricing

**Document Version: 20210123** 

(-) Alibaba Cloud

### Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

- You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloudauthorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.
- 2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company or individual in any form or by any means without the prior written consent of Alibaba Cloud.
- 3. The content of this document may be changed because of product version upgrade, adjustment, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and an updated version of this document will be released through Alibaba Cloud-authorized channels from time to time. You should pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.
- 4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides this document based on the "status quo", "being defective", and "existing functions" of its products and services. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not take legal responsibility for any errors or lost profits incurred by any organization, company, or individual arising from download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, take responsibility for any indirect, consequential, punitive, contingent, special, or punitive damages, including lost profits arising from the use or trust in this document (even if Alibaba Cloud has been notified of the possibility of such a loss).
- 5. By law, all the contents in Alibaba Cloud documents, including but not limited to pictures, architecture design, page layout, and text description, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of this document shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates.
- 6. Please directly contact Alibaba Cloud for any errors of this document.

# **Document conventions**

Style	Description	Example
<u> Danger</u>	A danger notice 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.
<u> </u>	A warning notice 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 restart an instance.
Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	Notice:  If the weight is set to 0, the server no longer receives new requests.
? Note	A note indicates supplemental instructions, best practices, tips, and other content.	Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings> Network> Set network type.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click OK.
Courier font	Courier font is used for commands	Run the cd /d C:/window command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	bae log listinstanceid  Instance_ID
[] or [a b]	This format is used for an optional value, where only one item can be selected.	ipconfig [-all -t]
{} or {a b}	This format is used for a required value, where only one item can be selected.	switch {active stand}

# **Table of Contents**

1.Specifications and pricing	05
2.Introduction of purchase methods	16
3.Purchase a cluster	17
3.1. Create a PolarDB for MySQL cluster	17
3.2. Switch the billing method from pay-as-you-go to subscrip	24
3.3. Change the billing method from subscription to pay-as-yo	25
3.4. Purchase a storage plan	26
4.Storage Plan	28
5.Notice after purchase	29
5.1. Storage Plan	29
5.1.1. View the deducted storage capacity of a storage plan	29
5.1.2. FAQ	30
5.2. Renew subscription clusters	30
5.2.1. Manually renew clusters	30
5.2.2. Automatically renew the subscription of a cluster	32
6.Storage plan pricing	36
7.Renewal	38
8.Configuration change fees	39

## 1. Specifications and pricing

This topic describes the specifications and pricing of PolarDB, including billing methods, billable items, and the prices of compute nodes, storage space, data backups, SQL Explorer, and global database networks (GDNs).

**Note** This topic is applicable to only Alibaba Cloud PolarDB. The PolarDB prices on the buy page are used as the PolarDB prices at virtual provider sites.

#### Billing methods

#### Subscription

If you use the subscription billing method, you must pay for the compute nodes that are used when you create clusters. You are charged for the consumed storage space by hour. The charges are deducted from your account balance on an hourly basis.

• Pay-as-you-go (pay by hour)

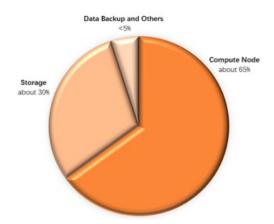
When you create the database clusters, you do not need to pay for the clusters in advance. You are charged for the compute nodes and the consumed storage space of the clusters by hour. The charges are deducted from your account balance on an hourly basis.

#### Billable items

• The following table describes the billable items of PolarDB clusters.

Billable item	Description
Compute node (a primary node and a read-only node)	Subscription or pay-as-you-go.
Storage space	Pay-as-you-go.
Data backup (You are charged only when the free quota is exceeded.)	In PolarDB, the backup feature is free. You are charged for only the space of backup files. For more information, see 备份数据.  In addition to the pay-as-you-go billing method, you can purchase storage packages by using the subscription billing method to deduct the costs of level-1 backups. For more information, see Purchase a storage plan.
SQL Explorer (optional)	After you enable SQL Explorer, the <b>pay-as-you-go</b> billing method is used. For more information, see SQL Explorer.
GDN (optional)	The GDN feature is free. You are charged for only each PolarDB cluster in GDNs. For more information, see GDN.

• The following figure shows the approximate proportions of fees for billable items in a PolarDB cluster.



#### Specifications and pricing of compute nodes

• Specifications of compute nodes

All the node specifications of PolarDB for MySQLCluster Edition are dedicated nodes. The dedicated nodes indicate that the CPU, memory, storage, and I/O resources that are allocated to the nodes are dedicated to these nodes and are not shared by other nodes. Therefore, the performance of the dedicated nodes is more stable and reliable.

PolarDB for MySQLSingle Node adopts the node specification of the burstable performance type, and shares resources in a computing resource pool. This improves resource utilization. The Single Node architecture also saves resource costs because no proxy is required.

By default, PolarDB for MySQLArchive Database uses only one compute node that has dedicated computing specifications. This saves costs at the PolarProxy layer and overheads of synchronizing redo logs.

PolarDB provides the nodes of the following specifications for your choice.

#### Specifications of compute nodes

Producted ition	Node specification code	CPU and memory	Maximum storage capacity	Maximum number of connecti ons	Internal bandwi dth	Maximu m number of IOPS	I/O bandwi dth
	polar.mysql.x4.medi um	2 cores, 8 GB	5 TB	1,200	1 Gbps	8,000	1 Gbps
	polar.mysql.x4.large	4 cores, 16 GB	10 TB	8,000	10 Gbps	32,000	4 Gbps

Productedi <del>产品</del> 系列	Node specification code	CPU and memory	Maximum storage capacity	Maximum number of connecti ons	Internal bandwi dth	Maximu m number of IOPS	I/O bandwi dth
	polar.mysql.x4.xlarg e	8 cores, 32 GB	20 TB	10,000	10 Gbps	64,000	8 Gbps
	polar.mysql.x8.xlarg e	8 cores, 64 GB	30 TB	10,000	10 Gbps	72,000	10 Gbps
	polar.mysql.x8.2xlar ge	16 cores, 128 GB	100 TB	20,000	10 Gbps	128,000	16 Gbps
	polar.mysql.x8.4xlar ge	32 cores, 256 GB	100 TB	64,000	10 Gbps	192,000	24 Gbps
	polar.mysql.x8.8xlar ge	64 cores, 512 GB	100 TB	64,000	10 Gbps	192,000	24 Gbps
	polar.mysql.x8.12xla rge	88 cores, 710 GB	100 TB	64,000	25 Gbps	256,000	32 Gbps
产品系列	polar.mysql.s2.large	4 cores, 8 GB	5 TB	1,200	1 Gbps	8,000	1 Gbps
产品系列	polar.mysql.a4.xlarg e	8 cores, 32 GB	100 TB	10,000	10 Gbps	64,000	8 Gbps

#### ? Note

- Clusters that have 2 cores and 8 GB are entry-level clusters, and are used in tests, trials, and light-load scenarios. We recommend that you do not use the clusters of this type in heavy-load production environments. In production environments, we recommend that you use clusters that have at least 8 cores and 32 GB.
- You can select a node type for the primary node when you create a Cluster Edition cluster. The same node specification is used for read-only nodes.
- The maximum number of I/O operations per second (IOPS) is a theoretical value.
- The maximum number of connections for a cluster is relevant to the node specifications
  of the cluster. If you add nodes to a cluster, the number of connections to the cluster
  cannot be increased.
- If you have higher storage requirements on Archive Database compute nodes, Submit a ticket to after-sales services to increase the maximum storage capacity to 200 TB.

#### • Compute node pricing

**Note** The following table describes the prices of a single node. By default, a Cluster EditionPolarDB cluster consists of a primary node and a read-only node.

#### Prices of compute nodes

		Subscript	ion price (m	onthly price	e) and pay-	as-you-go	orice (hourly	/ price)	
Producted ition	Node specificatio n code CPU and memory	Mainla nd China	US (Silicon Valley)	Indone sia (Jakart a)	Germa ny (Frankf urt)	India (Mumb ai)	US (Virgini a)	Japan (Tokyo )	China (Hong Kong), Singap ore (Singa pore), Malaysi a (Kuala Lumpu r), Austral ia (Sydne y), and UK (Londo n)
	polar.mysql .x4.medium 2 cores, 8 GB	USD 44 USD 0.092	USD 62 USD 0.130	USD 74 USD 0.155	USD 67 USD 0.140	USD 61 USD 0.128	USD 50 USD 0.105	USD 64 USD 0.140	USD 76 USD 0.160

		Subscript	ion price (m	nonthly pric	e) and pay-	as-you-go	orice (hourly	y price)	
Producted ition	Node specificatio n code CPU and memory	Mainla nd China	US (Silicon Valley)	Indone sia (Jakart a)	Germa ny (Frankf urt)	India (Mumb ai)	US (Virgini a)	Japan (Tokyo )	China (Hong Kong), Singap ore (Singa pore), Malaysi a (Kuala Lumpu r), Austral ia (Sydne y), and UK (Londo n)
	polar.mysql	USD	USD	USD	USD	USD	USD	USD	USD
	.x4.large	155	240	271	264	233	202	248	295
	4 cores, 16	USD	USD	USD	USD	USD	USD	USD	USD
	GB	0.323	0.500	0.565	0.550	0.486	0.421	0.520	0.620
	polar.mysql	USD	USD	USD	USD	USD	USD	USD	USD
	.x4.xlarge	310	480	542	527	480	403	496	589
	8 cores, 32	USD	USD	USD	USD	USD	USD	USD	USD
	GB	0.646	1.000	1.129	1.098	1.000	0.840	1.040	1.230
产品	polar.mysql	USD	USD	USD	USD	USD	USD	USD	USD
	.x8.xlarge	496	620	689	651	604	496	635	743
	8 cores, 64	USD	USD	USD	USD	USD	USD	USD	USD
	GB	1.033	1.292	1.436	1.356	1.258	1.033	1.330	1.550
系列	polar.mysql	USD	USD	USD	USD	USD	USD	USD	USD
	.x8.2xlarge	991	1,239	1,378	1,301	1,208	991	1,270	1,486
	16 cores,	USD	USD	USD	USD	USD	USD	USD	USD
	128 GB	2.065	2.581	2.871	2.711	2.517	2.065	2.650	3.100
	polar.mysql	USD	USD	USD	USD	USD	USD	USD	USD
	.x8.4xlarge	1,982	2,477	2,756	2,601	2,415	1,982	2,539	2,972
	32 cores,	USD	USD	USD	USD	USD	USD	USD	USD
	256 GB	4.129	5.161	5.742	5.419	5.031	4.129	5.290	6.200

		Subscript	ion price (m	onthly price	e) and pay-	as-you-go	orice (hourly	/ price)	
Producted ition	Node specificatio n code CPU and memory	Mainla nd China	US (Silicon Valley)	Indone sia (Jakart a)	Germa ny (Frankf urt)	India (Mumb ai)	US (Virgini a)	Japan (Tokyo )	China (Hong Kong), Singap ore (Singa pore), Malaysi a (Kuala Lumpu r), Austral ia (Sydne y), and UK (Londo n)
	polar.mysql .x8.8xlarge 64 cores, 512 GB	USD 3,963 USD 8.256	USD 4,953 USD 10.319	USD 5,511 USD 11.481	USD 5,722 USD 11.921	USD 5,313 USD 11.069	USD 4,360 USD 9.084	USD 5,586 USD 11.640	USD 5,944 USD 12.390
	polar.mysql .x8.12xlarg e 88 cores, 710 GB	USD 5,449 USD 11.352	USD 6,811 USD 14.190	USD 7,577 USD 15.786	USD 7,229 USD 15.061	USD 6,640 USD 13.833	USD 5,449 USD 11.352	USD 6,981 USD 14.550	USD 8,173 USD 17.030
产品系列	polar.mysql .s2.large 4 cores, 8 GB	USD 44 USD 0.09	USD 65 USD 0.136	ó					
产品系列	polar.mysql .a4.xlarge 8 cores, 32 GB	USD 310 USD 0.646	USD 480 USD 1.000	USD 542 USD 1.129	USD 527 USD 1.098	USD 480 USD 1.000	USD 403 USD 0.840	USD 496 USD 1.040	USD 589 USD 1.230

#### Storage space pricing

Storage space refers to the space that is occupied by data files, index files, log files (online logs and archived logs), and temporary files.

Note After you purchase PolarDB, the system automatically creates the files that are required for regular database operations. These files include the preceding files and occupy some storage space.

#### • Pay-as-you-go

A serverless architecture is used for storage space. Therefore, you do not need to select the capacity when you purchase clusters. The capacity is automatically increased when the amount of data increases. You are charged for only the storage space that is occupied by the actual amount of data. On the **Overview** page of the clusters, you can view the used database storage space.

- Mainland China: USD 0.00077/GB/hour
- o China (Hong Kong) and regions outside China: USD 0.00085/GB/hour

Note Each cluster specification has a corresponding maximum storage capacity. If the capacity usage reaches 90%, the system sends text messages and emails to you on a daily basis. If you need to increase the maximum storage capacity, upgrade your cluster specifications. For more information, see Change cluster configurations.

#### • Storage packages

If you need to store a large amount of data, such as 1,000 GB or more, storage packages are more cost-effective than the pay-as-you-go billing method. Higher discounts are offered for the storage packages that provide larger storage capacities. For more information, see Purchase a storage package.

	Mainland China		China (Hong Kong) and regions outside China		
Capacity (GB)	Without storage plans (USD/month)	Storage plan (USD/month)	Without storage plans (USD/month)	Storage plan (USD/month)	
100	56	55 (about 1.7% off)	62	61 (about 1.6% off)	
200	112	109 (about 2.7% off)	124	121 (about 2.4% off)	
300	168	163 (about 3.0% off)	186	182 (about 2.2% off)	
500	280	271 (about 3.2% off)	310	302 (about 2.6% off)	
1,000	560	490 (about 12.5% off)	620	550 (about 11.3% off)	

	Maintand China China			g) and regions outside
Capacity (GB)	Without storage plans (USD/month)	Storage plan (USD/month)	Without storage plans (USD/month)	Storage plan (USD/month)
2,000	1,120	980 (about 12.5% off)	1,240	1,090 (about 12.1% off)
3,000	1,680	1,210 (about 28.0% off)	1,860	1,340 (about 28.0% off)
5,000	2,800	2,020 (about 28.0% off)	3,100	2,230 (about 28.1% off)
10,000	5,600	3,260 (about 41.8% off)	6,200	3,630 (about 41.5% off)
20,000	11,200	6,510 (about 41.9% off)	12,400	7,250 (about 41.5% off)
30,000	16,800	9,760 (about 42.0% off)	18,600	10,870 (about 41.5% off)
50,000	28,000	14,860 (about 47.0% off)	31,000	16,550 (about 46.6% off)
100,000	56,000	29,720 (about 47.0% off)	62,000	33,110 (about 46.6% off)

#### Data backup pricing (beyond the free quota)

The backup and restoration features of PolarDB are free. Backup files occupy some storage space. When you use the backup feature of PolarDB, you are charged based on the storage capacity and the storage duration of backup files (data and logs). For more information about how to configure the backup feature, see 备份数据.

#### **Pricing**

Region	Level-1 backup	Level-2 backup	Log backup
Mainland China	USD 0.000464/GB/hour	USD 0.0000325/GB/hour	USD 0.0000325/GB/hour
Hong Kong (China) and regions outside China	USD 0.000650/GB/hour	USD 0.0000455/GB/hour	USD 0.0000455/GB/hour

Backup type	Free quot <i>a</i>	Billing method
----------------	-----------------------	----------------

Backup Free type quota
Used databas e storage space × 50%  You can view the used databas e storage space on the Overvie w page in the console.

Backup type Level-2 backups	Free quota None	Bibling freet to Total size of level-2 backups × Hourly price  For example, if the total size of level-2 backups is 1,000 GB, the hourly fee is USD 0.0325.  The calculation formula is 1,000 GB × USD 0.0000325 = USD 0.0325.
Log backups	100 GB	Hourly fee = (Total size of log backups - 100 GB) $\times$ Hourly price  For example, if the total size of log backups is 1,000 GB, the hourly fee is USD 0.02925.  The calculation formula is (1,000 GB - 100 GB) $\times$ USD 0.0000325 = USD 0.02925.

#### SQL Explorer pricing (optional)

You are charged for SQL Explorer based on the storage capacity of audit logs.

- Mainland China: USD 0.0013/GB/hour.
- China (Hong Kong) and regions outside China: USD 0.0019/GB/hour.

**Note** The storage capacity of audit logs is billed on a pay-as-you-go basis, and cannot be billed by using the subscription billing method.

#### GDN pricing (optional)

The GDN feature is free. You are charged for only each PolarDB cluster that uses the GDN feature. For more information about the pricing of PolarDB clusters, see Specifications and pricing of compute nodes.

#### **FAO**

• What is the price if I add a read-only node?

The price of a read-only node is consistent with that of the primary node. For more information, see Specifications and pricing of compute nodes.

• Is the storage capacity doubled after I add a read-only node?

No, the storage capacity is not doubled after you add a read-only node. PolarDB uses an architecture where computing is decoupled from storage. The read-only nodes that you purchase are computing resources. Therefore, the storage capacity is not increased.

A serverless architecture is used for storage space. Therefore, you do not need to select the capacity when you purchase clusters. The capacity is automatically increased when the amount of data increases. You are charged for only the used storage space. Each cluster specification has the corresponding maximum storage capacity. To increase the maximum storage capacity, upgrade your cluster specifications. For more information, see Upgrade cluster specifications.

• Is the number of read-only nodes related to the maximum number of connections? Can I increase the maximum number of connections by adding read-only nodes?

No, the number of read-only nodes is irrelevant to the maximum number of connections. The maximum number of connections of PolarDB is determined by the node specifications. For more information, see 使用限制. If you need more connections, upgrade the specifications. For more information, see Upgrade specifications.

# 2.Introduction of purchase methods

### 3. Purchase a cluster

### 3.1. Create a PolarDB for MySQL cluster

This topic describes how to create a PolarDB for MySQL cluster in the PolarDB console.

**? Note** If you use an ApsaraDB RDS for MySQL instance, you can create a PolarDB for MySQL cluster by using the Migration from RDS method. The created PolarDB cluster retains the accounts, databases, IP address whitelist, and required parameters of the source ApsaraDB RDS for MySQL instance. For more information, see **Create a PolarDB for MySQL cluster from an ApsaraDB RDS for MySQL instance**.

#### **Prerequisites**

An Alibaba Cloud account is created and is used to log on to the Alibaba Cloud Management Console. For more information, see Register and log on to an Alibaba Cloud account.

#### **Background**



- PolarDB supports virtual private clouds (VPCs). VPC is an isolated network on Alibaba Cloud. It provides extra protection and is more secure than a classic network.
- To optimize the performance of PolarDB, PolarDB clusters need to be deployed in the same internal network with Alibaba Cloud products. We recommend that you deploy PolarDB clusters and Elastic Compute Service (ECS) instances in the same VPC to ensure the optimal performance of PolarDB. If your ECS instance is deployed in a classic network, you must migrate the instance to a VPC.

#### **Procedure**

- 1. Log on to the PolarDB console.
- 2. In the upper-left corner of the page, click Create Cluster.
- 3. Specify **Subscription** or **Pay-as-you-go** as **Product Type**.
  - **Subscription**: If you use the subscription billing method, you must pay for compute nodes when you create the cluster. You are charged for the consumed storage space by hour. The fees are deducted from your account balance on an hourly basis.
  - Pay-as-you-go: If you use the pay-as-you-go billing method, you are charged for the used resources. You are charged for compute nodes and the consumed storage by hour. The fees are deducted from your account balance on an hourly basis.
- 4. Specify the following parameters.

Parameter	Description	
	The region where the cluster resides. You cannot change the region after the cluster is created.	
Region	Note Make sure that the PolarDB cluster and the Elastic Compute Service (ECS) instance to be connected are deployed in the same region. Otherwise, the cluster and the ECS instance cannot communicate over the internal network and can communicate over only the Internet. This compromises performance.	

Parameter	Description	
	The method to create a PolarDB cluster.	
	Create Primary Cluster: creates a PolarDB cluster.	
	<ul> <li>Create Secondary Cluster: creates a secondary cluster that is deployed in a global database network (GDN). For more information about how to create a secondary cluster, see 新建全球数据库和添加从集群.</li> </ul>	
	<ul> <li>Migration from RDS: creates a PolarDB for MySQL cluster by cloning the data of an ApsaraDB RDS for MySQL instance and synchronizing incremental data from the RDS instance to the PolarDB for MySQL cluster. This method is often used for data migration. The read/write status of the PolarDB cluster is Read Only before reverse data migration is started. By default, the binary logging is enabled. For more information, see Create a PolarDB for MySQL cluster from an ApsaraDB RDS for MySQL instance.</li> </ul>	
	■ RDS Engine Type: the engine type of the source RDS instance. The value of this parameter can be only MySQL. You do not need to specify this parameter.	
	RDS Engine Version: the engine version of the source RDS instance. The value of this parameter can be 5.6 or 5.7.	
	<ul> <li>Source RDS Instance: the available source RDS instances that exclude read- only instances.</li> </ul>	
Create Type	Note You can select an RDS instance from the available source instances that exclude read-only instances. You cannot select the RDS instances where the transparent data encryption (TDE) or secure sockets layer (SSL) feature is enabled or part of the data is not stored in the InnoDB storage engine. When you restore data from a backup file to the PolarDB cluster, the source instance runs as expected.	
	<ul> <li>Clone from RDS: creates a PolarDB cluster by cloning the data of an RDS instance.</li> <li>For more information, see Create a PolarDB for MySQL cluster by using the Clone from RDS method.</li> </ul>	
	■ RDS Engine Type: the engine type of the source RDS instance. The value of this parameter can be only MySQL. You do not need to specify this parameter.	
	RDS Engine Version: the engine version of the source RDS instance. The value of this parameter can be 5.6 or 5.7.	
	Source RDS Instance: the available source RDS instances that exclude read- only instances.	
	<b>Note</b> You can select an RDS instance from the available source instances that exclude read-only instances. You cannot select the RDS instances where the TDE or SSL feature is enabled or part of the data is not stored in the InnoDB storage engine. When you restore data from a backup file to the PolarDB cluster, the source instance runs as expected.	
	<ul> <li>Restore from Recycle: creates a cluster by restoring a backup file of a deleted cluster from the recycle bin.</li> </ul>	
	Source Version: the version of the cluster that has been deleted.	
	Deleted Clusters: the name of the cluster that has been deleted.	
	■ Backup History: the backup file that you want to restore.	

Parameter	Description The primary zone where the cluster is deployed.
Primary	<ul> <li>Each zone is an independent geographical location in a region. The zones that are deployed in the same region are similar.</li> </ul>
Availability Zone	<ul> <li>You can deploy your PolarDB cluster and ECS instance in the same zone or in different zones.</li> </ul>
	<ul> <li>You need only to select the primary zone. The system automatically selects a secondary zone.</li> </ul>
	The type of the network. The value of this parameter can be only <b>VPC</b> . You do not need to specify this parameter.
Network Type	Note If you need to use the classic network, you must select a VPC first, and configure the classic network after the cluster is created. For more information, see VPC-facing endpoints and public-facing endpoints.
	Make sure that the PolarDB cluster and the ECS instance to be connected are deployed in the same VPC. Otherwise, the cluster and the ECS instance cannot communicate over the internal network. This compromises performance.
	<ul> <li>If you have created a VPC that meets your network plan, select the VPC. For example, if you have created an ECS instance and the VPC where the ECS instance resides meets your network plan, select this VPC.</li> </ul>
	Otherwise, use the default VPC and the default VSwitch.
	■ Default VPC:
	The default VPC is a unique VPC in the selected region.
VPC	■ The subnet mask for the default VPC consists of 16 bits, such as 172.31.0.0/16. A maximum of 65,536 private IP addresses can be provided.
VSwitch	The default VPC is not included in the total number of VPCs that you can create.
	■ Default VSwitch:
	The default VSwitch is a unique VSwitch in the selected zone.
	■ The subnet mask for the default VSwitch consists of 20 bits, such as 172.16.0.0/20. A maximum of 4,096 private IP addresses can be provided.
	<ul> <li>The default VSwitch is not included in the total number of VSwitches that you can create in a VPC.</li> </ul>
	<ul> <li>If the default VPC and VSwitch cannot meet your business requirements, you can create your own VPC and VSwitch. For more information, see Create a VPC.</li> </ul>
	<ul> <li>MySQL 8.0: fully compatible with MySQL 8.0. MySQL 8.0 supports parallel queries.</li> <li>In specific scenarios such as TPC-H tests, the performance increases by 10 times after parallel queries are used. For more information, see Parallel query.</li> </ul>
Compatibilit	MySQL 5.7: fully compatible with MySQL 5.7.
У	MySQL 5.6: fully compatible with MySQL 5.6.
	PostgreSQL 11: fully compatible with PostgreSQL 11.

|--|

Edition	The edition of the cluster. Only <b>Standard (2-16 Nodes) (Recommended)</b> is supported. Use the default setting. You do not need to specify the parameter.	
Node Specificatio n	The node specification of the cluster. Select the specification based on your business requirements. All the nodes in the cluster are dedicated nodes. The dedicated nodes offer stable and reliable performance. For more information about the specifications, see Specifications and pricing.	
Nodes	The number of nodes to be created. By default, the system creates a primary node and a read-only node. The read-only node has the same specification as the primary node. You do not need to specify this parameter.	
	Note If the primary node fails, the system uses the read-only node as the primary node and generates another read-only node. For more information about read-only nodes, see Architecture.	
Storage Cost	The storage cost of the cluster. You do not need to specify this parameter. You are charged for the consumed storage space on an hourly basis. For more information, see Specifications and pricing.	
	Note You do not need to specify the storage capacity when you create a cluster. The system automatically increases or decreases the storage capacity based on the volume of the data to be stored.	
Time Zone	The time zone of the cluster. The default value is UTC+08:00.	
	Note This parameter is available only when the Compatibility parameter is set to MySQL 8.0, MySQL 5.7, or MySQL 5.6 for the PolarDB cluster.	

Parameter	Description
	Specifies whether table names are case-sensitive. The default value is <b>Not Case-sensitive</b> . If table names are case-sensitive in your on-premises database, we recommend that you select <b>Case-sensitive</b> . This ensures that you can migrate data in an easy way.
Table Name Case Sensitivity	<ul> <li>Note</li> <li>This parameter is available only when the Compatibility parameter is set to MySQL 8.0, MySQL 5.7, or MySQL 5.6 for the PolarDB cluster.</li> <li>The value of this parameter cannot be changed after the cluster is created. Proceed with caution.</li> </ul>
Release Cluster	The backup retention policy that is used after the cluster is deleted or released. The default value is Retain Last Automatic Backup (Automatic Backup before Release).  Retain Last Automatic Backup (Automatic Backup before Release): retains the last backup after you delete the cluster.  Retain All Backups: retains all the backups after you delete the cluster.  Retain No Backups (Cannot be Restored): retains no backups after you delete the cluster.
	<ul> <li>Note</li> <li>This parameter is available only when the Compatibility parameter is set to MySQL 8.0, MySQL 5.7, or MySQL 5.6 for the PolarDB cluster.</li> <li>If you need to retain backups after you delete or release the cluster, you may need to pay a few fees. You can delete the backups to reduce costs. For more information, see Data backup pricing (beyond the free quota).</li> </ul>
Enable TDE	Specifies whether to enable TDE. After TDE is enabled, PolarDB encrypts the data files of your cluster. You do not need to modify the code to allow access to the services. The read and write performance is reduced by 5% to 10%.
	<ul> <li>Note</li> <li>This parameter is available only when the Compatibility parameter is set to PostgreSQL 11 or Compatible with Oracle Syntax for the cluster.</li> <li>You cannot disable TDE after TDE is enabled.</li> </ul>

Parameter	Description
Cluster Name	The name of the cluster. The name must meet the following requirements:  o It cannot start with <a href="https://">https://</a> .  o It must be 2 to 256 characters in length.  If you leave this parameter empty, the system automatically generates a cluster name. You can change the cluster name after the cluster is created.
	The resource group of the cluster. Select a resource group from the created resource groups. For more information about how to create a resource group, see Create a resource group.
Resource Group	Note A resource group is a container that includes a group of resources in an Alibaba Cloud account. You can perform centralized management on these resources. A resource belongs to only one resource group. For more information about resource groups, see Use RAM to create and authorize resource groups.

5. Specify **Purchase Plan** and **Number** for the cluster and click **Buy Now**. You can specify the purchase plan for only the subscription clusters.

Note You can create a maximum of 50 clusters at a time. This allows you to create multiple clusters in specific scenarios. For example, you can enable multiple game servers at a time.

- 6. On the **Confirm Order** page, confirm your order information. Read and accept the terms of service, and then click **Buy Now**.
- 7. On the **Purchase** page, confirm the unpaid order and the payment method and click **Purchase**.
- 8. After you complete the payment, it requires 10 to 15 minutes to create the cluster. Then, the newly created cluster is displayed on the Clusters page.



- If nodes in the cluster are in the **Creating** state, the cluster is being created and unavailable. The cluster is available only if it is in the **Running** state.
- Make sure that you have selected the region where the cluster is deployed. Otherwise, you cannot view the cluster.

#### What to do next

Configure a whitelist for a cluster

#### **Related API operations**

API	Description
CreateDBCluster	Creates a PolarDB cluster.

API	Description
DescribeDBClusters	Queries PolarDB clusters.
DescribeDBClusterAttribute	Queries information about a specified PolarDB cluster.
Describe Auto Renew Attribute	Queries the auto-renewal status of subscription PolarDB clusters.
ModifyAutoRenewAttribute	Modifies auto-renewal parameters for a subscription PolarDB cluster.

# 3.2. Switch the billing method from payas-you-go to subscription

This topic describes how to switch the billing method of a PolarDB cluster from pay-as-you-go to subscription. You can switch the billing method based on your business requirements.

#### **Prerequisites**

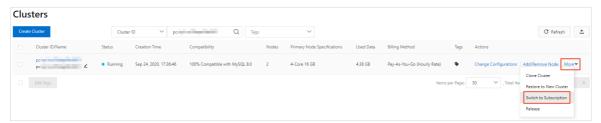
- You cluster is in the **Running** state.
- You cluster has no pending orders for switching from pay-as-you-go to subscription. If pending orders exist, you must pay for or cancel them on the Orders page.
- If a cluster uses a specification that is no longer available, you cannot switch the billing method of the cluster to **subscription**. In this case, you must change the cluster configurations before you switch the billing method to **subscription**. For more information about how to change the cluster configurations, see Change cluster configurations.

#### **Impacts**

The operations in this topic do not affect the cluster performance.

#### **Procedure**

- 1. Log on to the PolarDB console.
- 2. In the upper-left corner of the console, select the region where the cluster resides.
- 3. Find the cluster for which you want to switch the billing method, and choose More > Switch to Subscription in the Actions column.



4. On the **Switch to Subscription** page, confirm the cluster information, and the value of the **Purchase Plan** parameter. Then, read the terms of the service agreement, select the check box, and click **Buy Now**.

#### ? Note

- The new billing method takes effect after you pay for the order.
- If the order is unpaid or the payment fails, an unfinished order appears on the Orders
  page. You cannot purchase a new cluster or switch the billing method to subscription
  because of the unfinished order. In this case, you must pay for or cancel this order.

# 3.3. Change the billing method from subscription to pay-as-you-go

This topic describes how to change the billing method of a PolarDB cluster from subscription to pay-as-you-go. You can change the billing method based on your business requirements.

#### **Prerequisites**

- Your cluster is in the Running state.
- The **subscription** billing method is used for the cluster.
- The cluster is not in a temporary upgrade state.
- Make sure that your account balance is sufficient to avoid service downtime that is caused by overdue payments after you change the billing method to pay-as-you-go.

#### **Pricing**

After you change the billing method of the cluster from **subscription** to pay-as-you-go, a **subscription** refund is returned to your original payment account.

Refund = (Number of remaining days/Total days) × Order cash amount



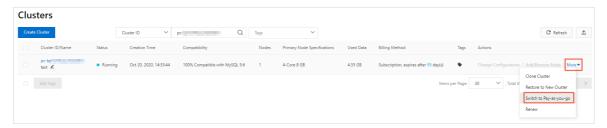
- The order cash amount indicates the actual paid cash amount that excludes vouchers and coupons.
- You are not charged for service fees when you change the billing method from subscription to pay-as-you-go.

#### **Impacts**

The operations in this topic do not affect the cluster performance.

#### Procedure

- 1. Log on to the PolarDB console.
- 2. In the upper-left corner of the console, select the region where the cluster resides.
- 3. Find the cluster for which you want to change the billing method and choose More > Switch to Pay-as-you-go in the Actions column.



4. On the **Switch to Pay-as-you-go** page, confirm the cluster information, read and accept the terms of service, and then click **Buy Now**.



- The new billing method takes effect after you complete the payment.
- If the order is unpaid or the payment fails, an unfinished order appears on the Orders
  page. You cannot purchase a new cluster or change the billing method from
  subscription to pay-as-you-go before you complete the payment. In this case, you must
  pay for or cancel the order.

### 3.4. Purchase a storage plan

The storage capacity of PolarDB is automatically scaled in or out based on the amount of stored data. You do not need to manually specify the storage capacity. You are charged for only the used storage. We recommend that you purchase PolarDB storage plans if you want to store a large volume of data. This reduces the storage costs.

#### Notes

- You can select the following types of storage plans: storage plans that apply to regions inside mainland China, and storage plans that apply to China (Hong Kong) and regions outside China. You can purchase only one storage plan for each type.
  - o Mainland China: supported by all PolarDB clusters in mainland China.
  - China (Hong Kong) and regions outside China: supported by all PolarDB clusters in China (Hong Kong) and regions outside China.
- You are charged for the extra storage capacity that is not covered by the storage plan based on the pay-as-you-go billing method. Assume that you have three PolarDB clusters and each cluster requires 400 GB of storage. If you purchase a storage plan of 1,000 GB and these clusters share the storage plan, you are charged for the extra 200 GB of storage based on the pay-as-you-go billing method. For more information, see View the deducted storage capacity of a storage plan.



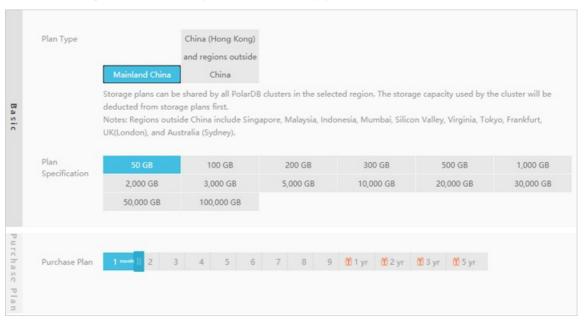
#### Storage plan pricing

For more information about PolarDB storage plan pricing, see Storage plan pricing.

#### Purchase a storage plan

- 1. Log on to the PolarDB console.
- 2. In the upper-left corner of the page, click Create Cluster.

3. Click the **Storage Plan** tab, and specify the following parameters.



Parameter	Description	
Plan Type	<ul> <li>Mainland China: The storage plan can be used by all PolarDB clusters that are deployed in regions of mainland China, such as China (Hangzhou), China (Shanghai), and China (Beijing).</li> <li>China (Hong Kong) and regions outside China: The storage</li> </ul>	
	plan can be used by all PolarDB clusters that are deployed in China (Hong Kong) and regions outside China, such as China (Hong Kong), UK (London), and Singapore (Singapore).	
Plan Specification	The storage capacity that is provided by the storage plan.	
	The validity period of the storage plan.	
Purchase Plan	Note If you purchase a storage plan for one year or longer, you are offered a 15% discount on the monthly price. For more information, see Storage plan pricing.	

- 4. Click Buy Now.
- 5. Read and accept the agreement of service, and then click Pay to complete the payment.

Pricing•Storage Plan ApsaraDB for PolarDB

# 4.Storage Plan

## 5. Notice after purchase

### 5.1. Storage Plan

# 5.1.1. View the deducted storage capacity of a storage plan

The storage capacity of PolarDB is automatically scaled in or out based on the amount of stored data. You do not need to manually specify the storage capacity. You are charged for only the used storage. We recommend that you purchase PolarDB storage plans if you want to store a large volume of data. This reduces the storage costs. This topic describes how to view the deducted storage capacity of a storage plan.

#### **Notes**

- You can select the following types of storage plans: storage plans that apply to regions inside mainland China, and storage plans that apply to China (Hong Kong) and regions outside China. You can purchase only one storage plan for each type.
  - Mainland China: supported by all PolarDB clusters in mainland China.
  - China (Hong Kong) and regions outside China: supported by all PolarDB clusters in China (Hong Kong) and regions outside China.
- You are charged for the extra storage capacity that is not covered by the storage plan based on the pay-as-you-go billing method. Assume that you have three PolarDB clusters and each cluster requires 400 GB of storage. If you purchase a storage plan of 1,000 GB and these clusters share the storage plan, you are charged for the extra 200 GB of storage based on the pay-as-you-go billing method. For more information, see View the deducted storage capacity of a storage plan.
  - Note For more information about storage plans, see FAQ.

#### **Procedure**

- ? Note
  - You can view further details of valid resource plans and resource plans that have expired within one year.
  - To view the storage usage of the cluster, see View the database storage usage.
- 1. Log onto the Billing Management console.
- 2. In the left-side navigation pane, choose **Resource Packages > Usage Details**.
- 3. On the **Usage Details** page, select **Deduct** from the **Log Type** drop-down list and click **Search**. Then, view further details of the storage plan.



#### 5.1.2. FAQ

This topic provides answers to some frequently asked questions about storage plans.

• Are storage plans bound to clusters for sale?

No, storage plans are not bound to clusters for sale. You must separately purchase storage plans. The storage that is used by clusters is automatically deducted from storage plans in the same regions.

• Can multiple clusters share a storage plan?

Yes. A storage plan can be shared by all clusters in the regions that are specified by the **Plan Type** parameter. You can specify Mainland China or Outside Mainland China as Plan Type.

• Can the clusters that use different engines share a storage plan?

Yes, clusters that use different engines can share a storage plan. A storage plan can be shared by PolarDB for MySQL, PolarDB for PostgreSQL, and PolarDB-O clusters.

• How am I charged for the storage that exceeds the storage capacity of the storage plan?

The storage that exceeds the storage capacity of the storage plan is charged based on the pay-as-you-go billing method. For more information, see Storage space pricing.

### 5.2. Renew subscription clusters

### 5.2.1. Manually renew clusters

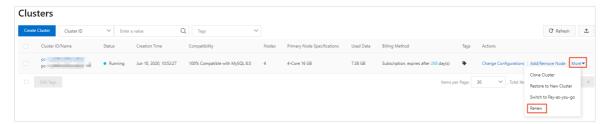
This topic describes how to manually renew clusters in the PolarDB or Billing Management console.

#### Limits

Manual renewal is applicable to only **subscription** PolarDB clusters. **Pay-as-you-go** PolarDB clusters do not expire. Therefore, you do not need to renew pay-as-you-go clusters.

#### Method 1: Renew clusters in the PolarDB console

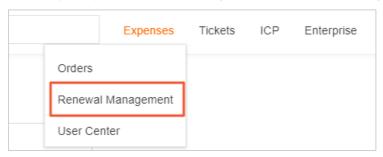
- 1. Log on to the PolarDB console.
- 2. In the upper-left corner of the console, select the region where the cluster resides.
- 3. Find the name of the cluster that you want to renew. In the **Actions** column for the cluster, choose **More** > **Renew**.



- 4. On the **Renew** page, select a purchase plan, select the check box of **Terms of Service**, and then click **Buy Now**.
- 5. On the Purchase page, confirm the unpaid order and the payment method and click Purchase.

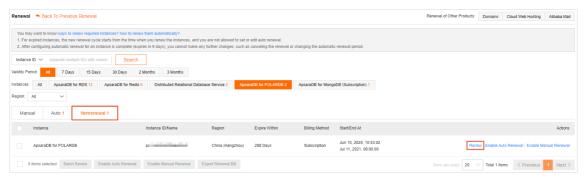
#### Method 2: Renew clusters in the Billing Management console

- 1. Log on to the PolarDB console.
- 2. In the top navigation bar, choose Expenses > Renewal Management.



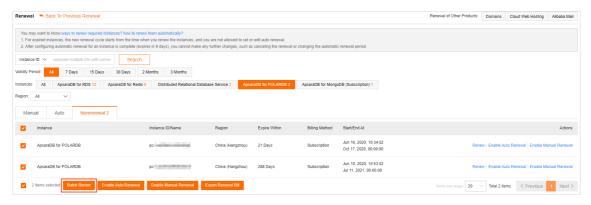
- 3. On the **Manual** tab or the **Nonrenewal** tab of the **Renewal** page, use filters to find the cluster that you want to renew. You can renew one or more clusters at a time.
  - o Renew a cluster

In the Actions column for the cluster, click Renew



• Renew multiple clusters

Select the clusters that you want to renew. Then, in the lower part of the page, click **Batch Renew**.



- 4. On the **Renew** page, select a purchase plan, select the check box of **Terms of Service**, and then click **Buy Now**.
- 5. On the **Purchase** page, confirm the unpaid order and the payment method and click **Purchase**.

#### Auto-renewal

If you enable auto-renewal, you do not need to manually renew your clusters or concern yourself with the service interruptions that are caused by unexpected expiration. For more information, see Automatically renew the subscription of a cluster.

### 5.2.2. Automatically renew the subscription of a cluster

This topic describes how to enable auto-renewal for PolarDB for MySQL clusters. After auto-renewal is enabled, you do not need to manually renew your cluster subscription.

#### Context

A subscription cluster has a validity period. If the cluster is not renewed in a timely manner, service interruptions or even data loss occurs after the cluster expires. If you enable auto-renewal for your cluster, you do not need to manually renew your subscription or concern yourself with service interruptions caused by unexpected cluster expiration.



**?** Note Pay-as-you-go clusters do not expire. Therefore, no renewal is required.

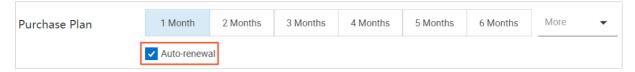
#### Considerations

- After auto-renewal is enabled for a cluster, the subscription fee is deducted from your account nine days before the cluster expires. Coupon deduction is also supported. Make sure that your account balance is adequate.
- If you manually renew the subscription of the cluster before the automatic fee deduction, the system automatically renews the subscription of the cluster next time before the cluster expires.
- The auto-renewal feature takes effect the next day after you enable this feature. If your cluster expires the next day, manually renew the subscription of the cluster to prevent service interruptions. For more information, see Manually renew clusters.

#### Enable auto-renewal when you purchase a cluster

Note After you enable auto-renewal, the system automatically renews the subscription of the cluster based on the subscription cycle. For example, if you purchase a cluster for three months and enable auto-renewal, you are charged for a three-month subscription in each time of auto-renewal.

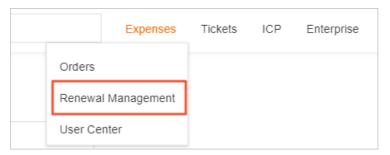
When you create a cluster, you can select Auto-renewal.



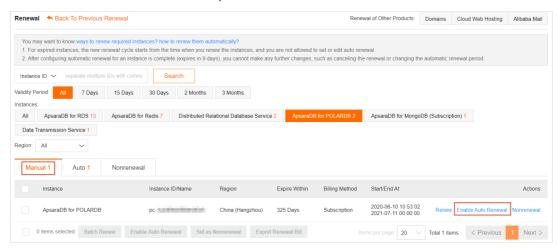
#### Enable auto-renewal after a cluster is purchased

(?) Note After you enable auto-renewal, the system automatically renews the subscription based on the renewal cycle you select. For example, if you select a three-month renewal cycle, you are charged for a three-month subscription in each time of auto-renewal.

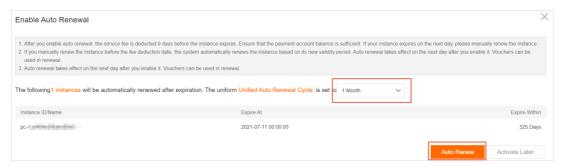
- 1. Log on to the PolarDB console.
- 2. In the top navigation bar, choose Expenses > Renewal Management.



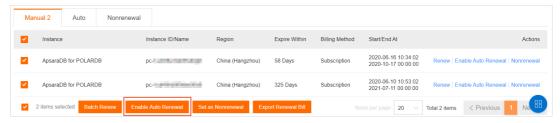
- 3. Click the **Manual** or **Nonrenewal** tab. Set filters to find the clusters for which you want to enable auto-renewal. You can enable auto-renewal for a single cluster or multiple clusters at a time.
  - o Enable auto-renewal for a single cluster
    - a. In the Actions column of the cluster, click Enable Auto Renewal.



b. In the dialog box that appears, select a value for **Unified Auto Renewal Cycle** and click **Auto Renew**.



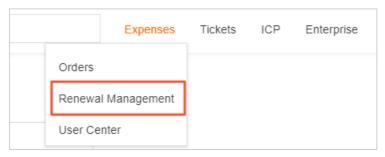
- o Enable auto-renewal for multiple clusters in a batch
  - a. Select multiple clusters and click **Enable Auto Renewal**.



b. In the dialog box that appears, select a value for **Unified Auto Renewal Cycle** and click **Auto Renew**.

#### Edit the auto-renewal cycle

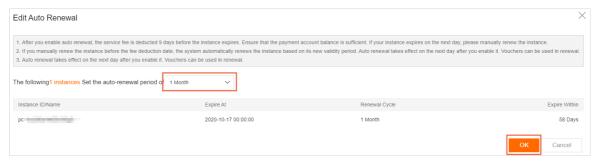
- 1. Log on to the PolarDB console.
- 2. In the top navigation bar, choose Expenses > Renewal Management.



3. Click the Auto tab. Set filters to find the cluster. In the Actions column of the cluster, click Edit Auto Renewal.

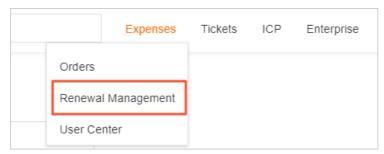


4. In the dialog box that appears, edit the auto-renewal cycle and click OK.



#### Disable auto-renewal

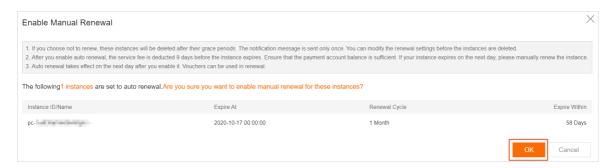
- 1. Log on to the PolarDB console.
- 2. In the top navigation bar, choose Expenses > Renewal Management.



3. Click the Auto tab. Set filters to find the cluster. In the Actions column of the cluster, click Enable Manual Renewal.



4. In the message that appears, click **OK**.



#### **Related API operations**

API	Description		
CreateDBCluster	Creates a PolarDB cluster.		
	Note You can enable auto-renewal when you create a cluster.		
ModifyAutoRenewAttribute	Sets the auto-renewal status of a subscription cluster.		
	Note You can enable auto-renewal after a cluster is created.		
DescribeAutoRenewAttribute	Queries the auto-renewal status of a subscription cluster.		

# 6. Storage plan pricing

The storage capacity of PolarDB is automatically scaled out or in based on the amount of the stored data. You do not need to manually specify the storage capacity. You are charged for only the storage that you use. We recommend that you purchase PolarDB storage plans if you require a large storage capacity to store a large amount of data. This reduces the storage costs.

#### Storage pricing

For more information about the storage pricing of PolarDB, see Storage space pricing.

#### Prices of storage plans and discounts

If you need to store a large amount of data, such as 1,000 GB of data or more, storage plans are more cost-effective than the pay-as-you-go billing method. Larger discounts are offered for the storage plans that provide higher storage capacities.

Capacity (GB)	Mainland China		China (Hong Kong) and regions outside China	
	Without storage plans (USD/month)	Storage plan (USD/month)	Without storage plans (USD/month)	Storage plan (USD/month)
100	56	55 (about 1.7% off)	62	61 (about 1.6% off)
200	112	109 (about 2.7% off)	124	121 (about 2.4% off)
300	168	163 (about 3.0% off)	186	182 (about 2.2% off)
500	280	271 (about 3.2% off)	310	302 (about 2.6% off)
1,000	560	490 (about 12.5% off)	620	550 (about 11.3% off)
2,000	1,120	980 (about 12.5% off)	1,240	1,090 (about 12.1% off)
3,000	1,680	1,210 (about 28.0% off)	1,860	1,340 (about 28.0% off)

> Document Version: 20210123

Capacity (GB)	Mainland China		China (Hong Kong) and regions outside China	
	Without storage plans (USD/month)	Storage plan (USD/month)	Without storage plans (USD/month)	Storage plan (USD/month)
5,000	2,800	2,020 (about 28.0% off)	3,100	2,230 (about 28.1% off)
10,000	5,600	3,260 (about 41.8% off)	6,200	3,630 (about 41.5% off)
20,000	11,200	6,510 (about 41.9% off)	12,400	7,250 (about 41.5% off)
30,000	16,800	9,760 (about 42.0% off)	18,600	10,870 (about 41.5% off)
50,000	28,000	14,860 (about 47.0% off)	31,000	16,550 (about 46.6% off)
100,000	56,000	29,720 (about 47.0% off)	62,000	33,110 (about 46.6% off)

Pricing• Renewal ApsaraDB for PolarDB

### 7.Renewal

You can extend the subscriptions of the cluster and storage planthat you purchased.

Pay-as-you-go clusters are billed based on the actual usage and never expire. You do not need to renew pay-as-you-go clusters. However, you must make sure that your account balance is sufficient.

#### Billing

For more information, see Specifications and pricing.

#### **Deduction date**

- Auto renewal: Fees are first deducted at 08:00 on the ninth day before a subscription cluster expires. If the deduction fails, the system attempts to deduct fees once a day until fees are deducted or the expiration date arrives. You must make sure that your Alibaba Cloud account balance is sufficient. If your cluster is about to expire the next day, renew the cluster manually.
- Manual renewal: Pay manually if you want to renew a subscription cluster.

#### **Related topics**

- Manually renew clusters
- Automatically renew the subscription of a cluster

> Document Version: 20210123

# 8. Configuration change fees

This topic describes how you are billed for changing the configurations of **pay-as-you-go** and **subscription** clusters.

#### Pay-as-you-go

You are charged for **pay-as-you-go** clusters by hour. After you change the configurations of a pay-as-you-go cluster, the cluster is charged based on the price of the new configurations on an hourly basis.

#### Subscription

Change type	Billing description
Upgrade specificatio ns or add nodes	Payment = Total fees of the new configurations for the remaining subscription period - Total fees of the original configurations for the remaining subscription period. Total fees of the new configurations for the remaining subscription period is calculated based on the following formula: Monthly price of the new configurations/30/24 × Remaining subscription period measured in hours. Total fees of the original configurations for the remaining subscription period is calculated based on the following formula: Monthly price of the original configurations/30/24 × Remaining subscription period measured in hours.
	For example, the monthly price of the new configurations is USD 14,400. The monthly price of the original configurations is USD 7,200. The remaining subscription period is 50 days. The payment is calculated based on the following formula: $(14,400/30/24 \times 50 \times 24) - (7,200/30/24 \times 50 \times 24) = USD 12,000$ .
Downgrade specificatio ns or delete nodes	Refund = Total fees of the original configurations for the remaining subscription period - Total fees of the new configurations for the remaining subscription period. Total fees of the original configurations for the remaining subscription period is calculated based on the following formula: Monthly price of the original configurations/30/24 × Remaining subscription period measured in hours. Total fees of the new configurations for the remaining subscription period is calculated based on the following formula: Monthly price of the new configurations/30/24 × Remaining subscription period measured in hours.
	For example, you subscribe to a cluster for three months during which you pay USD 3,500 for the cluster. If you use coupons, you pay USD 3,000 for the cluster. After you use the cluster for two months, the total fees of the original configurations for the remaining month become USD 1,000. The total fees of the new configurations for a month are USD 800. The refund is calculated based on the following formula: 1000 - 800 = USD 200.
	<b>Note</b> The system refunds fees for the downgraded configurations of a subscription cluster. However, the system does not refund fees for the entire cluster. If you need the refund for the entire cluster, Submit a ticket to apply for the refund. If your application is approved, your subscription cluster is frozen and will be deleted in 14 days.

#### **FAQ**

Why is my received refund less than the refund that I calculated for the downgraded configurations of the cluster?

Check whether the following events occurred before you downgraded the cluster configurations:

- You are offered discounts for the order of the original configurations. For example, if you purchase the cluster at the International site (alibabacloud.com) and the subscription period is one year or longer, you are offered a 15% discount. Assume that the original price of the cluster is USD 1,000 and you pay USD 850 for the cluster. If you downgrade the cluster configurations, USD 850 is used as the payment amount to calculate the refund of the downgrade.
- Assume that you use coupons for the order of the original configurations and you pay USD 500 for the order. If you downgrade the cluster configurations, USD 500 is used as the payment amount to calculate the refund of the downgrade.

#### Related documents

• Manual configuration change

You can manually upgrade or downgrade the configurations of a cluster. For more information, see Change the configurations of a cluster and Add or remove read-only nodes.

Automatic configuration change

You can use PolarDB for MySQL and the automatic scale-out and automatic scale-in features of Database Autonomy Service (DAS) to automatically change cluster configurations. For more information about the automatic scale-out and automatic scale-in features, see Autonomy center You can customize the trigger conditions for automatic scale-out and automatic scale-in based on the peak and off-peak hours of your business and the business frequency. When the trigger conditions are met, PolarDB for MySQL automatically upgrades or downgrades the cluster configurations by level.