Alibaba Cloud **Elastic Compute Service Quick Start for Entry-Level Users**

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.

- 1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized 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 due to product version upgrades , adjustments, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and the updated versions of this document will be occasionally released through Alibaba Cloud-authorized channels. You shall 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 the document in the context that Alibaba Cloud products and services are provided on an "as is", "with all faults" and "as available" basis. 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 bear any liability for any errors or financial losses incurred by any organizations, companies, or individuals arising from their download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, bear responsibility for any indirect, consequent

- ial, exemplary, incidental, 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 intellectu al 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 contact Alibaba Cloud directly if you discover any errors in this document

II Issue: 20200213

Document conventions

| Style | Description | Example | |
|--------------|---|---|--|
| | 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. | |
| A | 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. | |
| • | 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. | |
| | 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. | | |

| Style | Description | Example |
|-------------|--|-----------------------|
| {} or {a b} | This format is used for a required value, where only one item can be selected. | switch {active stand} |

II Issue: 20200213

Contents

| Legal disclaimer | I |
|---|----|
| Document conventions | I |
| 1 Overview | 1 |
| 2 Getting started | 2 |
| 2.1 Preparations | |
| 2.2 Select instance types | |
| 2.3 Create an ECS instance | |
| 2.4 Connect to an ECS instance | 6 |
| 2.5 Release an instance | 7 |
| 2.6 Quick reference | 7 |
| 2.7 Format a data disk for a Windows-based ECS instance | 12 |
| 2.8 Format a data disk for a Linux-based ECS instance | 14 |

IV Issue: 20200213

1 Overview

This document describes how to quickly create, connect, and release instances using the console.

Elastic Compute Service (ECS) instances are referred to as ECS instances or instances in this document.

This document applies only to console operations. For API users, see API overview.

Procedure

- 1. Complete the preparations.
- 2. Select the configuration.
- 3. Create an instance.
- 4. Connect to the instance.
- 5. If data disks are created, you must format and mount data disks for a Linux instance, or format and mount data disks for a Windows instance.
- **6.** Release the instance.

2 Getting started

2.1 Preparations

Before you begin, you need to complete the preparations described in this article.

- · Sign up for Alibaba Cloud.
- · Bind your credit card or PayPal account.
- Register by using your real name if you want to create an ECS instance in a region inside mainland China.
- To create ECS instances in a VPC, you need to *create a VPC and switch* in the target region.
- · A security group is a virtual firewall, and each instance must belong to at least one security group. The system provides one default security group. You can also create a security group in the target region and add security group rules that meet your business needs.

2.2 Select instance types

ECS offers more than 200 ECS instance types in over 10 categories to meet your needs for different scenarios that have different service loads.

Principles for selecting instance types

The following table lists the principles on selecting instance types for individual users. These recommended instance types are only for your reference when you start using ECS. For more instance types, see #unique_16.

| Category | Instance type and specifications | Disk | Public bandwidth | Scenario |
|--------------------|---|----------------------|---------------------|--|
| Entry level | 1 vCPU and 1 GiB memory (ecs.t5-lc1m2.small) | 40 GiB ultra disk | 1 Mbit/s | Recommended for web application servers, and personal websites with light traffic. |
| | | | | Note: The performance mode of the t5 instance family is based on vCPU credits. For more information, see #unique_18. |
| Entry level | 1 vCPU and 2 GiB memory (ecs.t5- c1m4.xlarge) | 40 GiB ultra disk | 2 Mbit/s | Recommended for websites with moderate traffic, simple development environments, and code repositories. |
| General purpose | 2 vCPUs and 8 GiB memory (ecs.g6.large) | 40 GiB ultra disk | 3 Mbit/s | Meets the requiremen ts of 90% of typical cloud computing users, and is recommended for enterprise operations , parallel computing , and common data processing. |
| Advanced | 4 vCPUs and 16 GiB memory (ecs.sn2ne.xlarge) | 40 GiB ultra disk | 5 Mbit/s | Recommended for medium- to large -scale websites, distributed analytics and computing, and web applications. |

References

For more information about website architecture cases and scenarios, see ${\it Web}$

Hosting Solution.

If you find that the instance specifications are too high or too low during use, you can change the instance type by upgrading or downgrading the instances. For more information, see #unique_21.

2.3 Create an ECS instance

This topic uses an entry-level instance as an example to describe how to create an instance in the ECS console.

Context

Instances are the core components of ECS and show the compute capacity of ECS. To help you get familiar with the ECS console, this topic describes how to create a pay-as-you-go and pay-by-traffic entry-level ECS instance in the ECS console. For more information, see #unique_22. You can also create an ECS instance by calling an API operation. For more information, see #unique_23.

Procedure

- 1. Go to the ECS Custom Launch page.
- 2. To complete Basic Configurations, follow these steps:
 - a) Select a billing method In this example, select Pay-As-You-Go.
 - b) Select a region, such as China (Hangzhou). The system randomly allocates a zone by default.



Note:

After an instance is created, you cannot change the region and zone. Proceed with caution.

- c) Select an instance type and specify the number of instances. In this example, choose All Generations > X86-Architecture > Entry- Level (Shared) > Compact Type xn4.
 - The available instance types are determined by the region you select. For more information, see *Instance types*.
- d) Select an image. In this example, select the CentOS 7.6 public image.
- e) Select a storage space. In this example, only the system disk is used. A 40 GB ultra disk is selected by default.

- 3. Click Next: Networking to finish the networking and security group configuration.
 - a) Select VPC as the network type. In this example, the default VPC and VSwitch are used.
 - b) Set the network billing method. In this example, select Assign public IP and Pay-By-Traffic.
 - c) Select a security group. If you have not created a security group, you can use the default security group.
 - d) Add an Elastic Network Interface (ENI). Skip this step if the selected instance type does not support ENI.
- 4. Click Next: System Configurations.

You can specify the settings based on your needs. We recommend that you set Logon Credentials and Instance Name. In this example, select Password and set the instance name to ecs-01.

5. Click Next: Grouping.

You can specify the settings based on your needs. If you are creating multiple instances, we recommend that you add labels to manage these instances.

6. Click Next: Preview.

Confirm the selected configurations. You can also click the Edit icon to modify the configurations.

7. Read and confirm Terms of Service, and then click Create Instance.

Result

Click Console to return to the ECS console. The instance creation process may take one to two minutes. Click the Refresh button to check whether the instance is created. If the newly created ECS instance is in the Running state, the instance is created.

What's next

- For an ECS instance that runs the Linux system, you can connect to the instance without any other configurations. For more information, see *Connect to an ECS instance*.
- For an ECS instance that runs the Windows system, you need to use the Sysprep tool to initialize the operating system. Do not restart the instance during

initialization. After initialization, you can connect to the instance. For more information, see *Connect to an ECS instance*. The time of initialization is determined by the type of ECS instances.

- For an I/O-optimized instance that runs the Windows system, two to three minutes are needed for initialization.
- For a non-I/O optimized instance that runs the Windows system, ten minutes are needed for initialization.

2.4 Connect to an ECS instance

After creating an ECS instance, you can use multiple methods to access the instance. This topic describes how to use Management Terminal in the ECS console to access your ECS instance.

Procedure

- 1. In the instance List, find the ecs-01 instance you have created. In the Actions column, click Connect.
- 2. In the VNC Password dialog box that appears, copy the password, and then click Close.



Notes

The password only appears the first time you connect to Management Terminal. You must remember the password and use it to access Management Terminal later.

- 3. In the Enter VNC Password dialog box that appears, paste the password, and then click OK.
- 4. Log on to the ECS instance. Perform the following operations based on your operating system:
 - For the Linux system, enter the username root and the instance logon password that is set when you created the ECS instance.
 - For the Windows system, in the upper-left corner of the Management Terminal, choose Send Remote Call > CTRL+ALT+DELETE to enter the logon interface. Enter the password that is set when you created the ECS instance to log on.

If you forget the ECS instance logon password, reset the instance password. For more information, see *Reset instance passwords*.

2.5 Release an instance

This topic describes how to release an ECS instance. If you no longer need an instance, you can release it so it does not continue to incur fees.

For VPC-Connected instances, if you do not enable the No fees for stopped instances (VPC-Connected) feature, the instance continues to incur fees even after it is stopped. For instances in classic networks, the instance constantly incurs fees throughput its lifecycle. If you no longer need an instance, you can release it to prevent any possible fees. For more information, see *Stop an instance* and *Release an instance*.

This topic describes how to release a Pay-As-You-Go instance in the ECS console. Subscription instances are released automatically after the billing cycle ends.



Note:

If there is data on the instance, we recommend that you *create a snapshot* to back up the data before releasing it.

Procedure

- 1. In the list of instances, locate the instance ecs-01 to release. In the Actions column, choose More > Instance Status > Release.
- 2. In the displayed dialog box, select Release Now, then click Next.
- 3. Confirm that you want to release the instance, then click OK.

The released instance is then no longer displayed on the Instances page.

2.6 Quick reference

This topic is a quick reference guide for common operations of Alibaba Cloud ECS instances and resources. This guide offers solutions for such scenarios as

connecting to an instance remotely, scaling a disk, upgrading or downgrading configurations, and using snapshots or images.

Operation instructions and limits

To guarantee proper operation of your ECS instance, read *ECS operation instructions* and *limits* carefully before using your instance.

Create and manage ECS instances

Basic operations

- 1. Create an ECS instance.
- 2. Connect to the ECS instance. Depending on the operating system running on your ECS instance and your actual scenario, use one of the following methods:
 - For any type of operating system, use the *Management Terminal* for scenarios involving troubleshooting and maintenance.
 - For Linux or Unix-like OSs, you can connect to a Linux instance by using a password, or connect to a Linux instance by using an SSH key pair.
 - · For Windows OSs, you can connect to a Windows instance.
- 3. Stop the ECS instance.
- 4. Release the instance.

To use an ECS instance, follow these steps:

Change configurations

You can change the instance type, IP addresses, and network bandwidth of your instance.

- Subscription instances: Upgrade configurations of Subscription instances or renew for configuration downgrade
- · Change configurations of Pay-As-You-Go instances
- Change public IP address
- · Convert public IP address to EIP address

If the current operating system no longer meets your business needs, you can *change* the operating system.

Billing

You can switch from Pay-As-You-Go to Subscription.

Select either of the following methods to renew your Subscription instances:

- · Manual renewal
- · Auto-renewal

Refined management of and control over ECS instances

You can use the following features to refine your management of and control over ECS instances:

- User data
- · Metadata, including instance identity
- Instance RAM roles

Create and manage cloud disks

Basic operations

To use a cloud disk as a data disk, follow these steps:

- 1. Create a cloud disk.
- 2. Attach a cloud disk.
- 3. (Linux) Format and mount a data disk or (Windows) Format a data disk.
- 4. Create snapshots to back up data.
- 5. Detach a cloud disk.
- 6. Release a cloud disk.

Change configurations

To adjust the capacity of your system disks or data disks, you can *increase the system* disk size or resize the data disks. For more information about resizing a data disk, see Linux _ Resize a data disk and Windows _ Resize a data disk.

Manage data on a cloud disk

If data errors occur on a cloud disk, you can use a snapshot to *roll back a cloud disk* and restore data.

If you want to restore a cloud disk to its initial status after it is created, you can reinitialize a cloud disk.

If you want to copy data on an existing cloud disk to a new, empty cloud disk, you can create a cloud disk from a snapshot.

Create and manage snapshots

Basic operations

To use a snapshot, follow these steps:

- 1. Create a snapshot by using either of the following methods:
 - · Create snapshots.
 - Create and delete an automatic snapshot policy, and apply automatic snapshot policies to disks, to enable automatic snapshot creation.
- 2. View a snapshot chain.
- 3. Delete unnecessary snapshots to reduce charges and free disk space

Using snapshots

To copy or back up data, you can use a snapshot to create a cloud disk from a snapshot, or roll back a cloud disk.

To simplify deployment, you can use a system disk snapshot to create a custom image using a snapshot, and create an instance from a custom image.

Create and manage custom images

Only custom images can be operated in the ECS console.

You can run a custom image by using the following methods:

- · Create a custom image using a snapshot
- · Create a custom image by using an instance
- · Use Packer to create a custom image
- · Copy custom images across different regions.
- · Share custom images across different accounts.
- Import custom images
- Create and import custom images stored on an on-premises server by using Packer

You can also *export custom images* to back up your environment and delete custom images when they are no longer required.

Create and manage security groups

Basic operations

To use a security group, follow these steps:

- 1. Create a Security Group.
- **2.** Add security group rules.
- **3.** Add to or remove from a security group
- 4. Delete a security group rule.
- 5. Delete a security group.

Manage security groups and their rules

To simplify business deployment, you can *clone a security group* across regions or network types.

If new security group rules disrupt your online business application, you can restore security group rules fully or partially.

Create and manage SSH key pairs

To use an SSH key pair, follow these steps:

- 1. Create an SSH key pair, or import an SSH key pair.
- 2. Bind a SSH key pair, or bind the SSH key pair after a Linux instance is created or when you create an instance.
- **3.** Connect to a Linux instance by using an SSH key pair.
- **4.** Unbind an SSH key pair.
- 5. Delete a SSH key pair.

Create and manage ENIs

To use an ENI, follow these steps:

- 1. Create an ENI.
- 2. Attach an ENI to an instance, or attach an ENI when creating an instance.
- 3. Optional. Configure an ENI.
- 4. Detach an ENI from an instance.
- 5. Delete an ENI.

Use tags

You can apply tags to group resources for easier resource organization. To use tags, follow these steps:

- 1. Add a tag to resources.
- 2. Filter resources by tags.

3. Delete a tag.

2.7 Format a data disk for a Windows-based ECS instance

This topic describes how to create a partition of the Master Boot Record (MBR) format for a new data disk attached to an ECS instance that runs the Windows system. Then, it describes how to mount an NTFS file system onto the partition. You can create multiple partitions for a data disk based on your business needs.

Context

The following section describes the risks of formatting a data disk:

- Disk partitioning and formatting are high-risk operations. Proceed with caution. This topic describes how to format a new data disk. If you have stored data on the data disk, you must create a snapshot for the data disk to avoid data loss. For more information, see *Create a snapshot*.
- You can only partition data disks that are attached to ECS instances. You cannot perform this operation on the system disk. If you forcibly use a third-party tool to partition the system disk, unknown risks such as system failure and data loss may occur. You are only allowed to expand partitions or add new partitions for the system disk that has been expanded. For more information, see *Extend a Windows file system*.

Procedure

The following procedure only applies to data disks with a size of less than 2 TiB. For more information about instructions for data disks with a size of greater than 2 TiB, see #unique_91. In this example, a 20 GiB data disk is attached to an ECS instance that runs the Windows Server 2012 R2 64-bit operating system. A single Master Boot Record (MBR) partition is created for the data disk.

- 1. Connect to the instance.
- 2. On the Windows Server desktop, right-click the Start icon, and select Disk Management.
- 3. Find the unformatted data disk (Disk 2 in this example), which is in the Offline state.

4. Right-click the blank space in Disk 2, and select Online.

After Disk 2 goes online, Disk 2 enters the Not Initialized state.

- 5. Right-click the blank space in Disk 2, and select Initialize Disk.
- 6. In the Initialize Disk dialog box, select Disk 2, and select either of the following partition formats:
 - Currently, MBR is most frequently used. This format only supports data disks less than 2 TiB and a maximum of four primary partitions. If you want to divide a disk into more than four partitions, you need to use a primary partition as an extended partition and create logical partitions in it.
 - GUID Partition Table (GPT) is a new partition format, which cannot be recognized by earlier versions of Windows. The data disk size that GPT supports is determined by the operating system and the file system. In Windows, GPT supports a maximum of 128 primary partitions.

In this example, select MBR, and click OK.

- 7. In the Disk Management window, right-click the Unallocated section of Disk 2, and then select New Simple Volume.
- 8. In the New Simple Volume wizard, perform the following operations:
 - a) Click Next.
 - b) Specify the size of the simple volume. If you want to create only one primary partition, use the default value. Click Next.
 - c) Select a drive letter. In this example, select F. Click Next.
 - d) Specify the formatting settings, including file system, allocation unit size, and volume label. Confirm whether to enable Quick Formatting and File and Folder Compression. In this example, use the default settings. Click Next.
 - e) Start creating a simple volume. When the information shown in the following figure appears in the wizard, a new simple volume is created. Click Finish to close the New Simple Volume wizard.

Result

After Disk 2 is partitioned and formatted, its status is displayed in the Disk Management window.

In This PC, you can view a new drive named New Volume (F:). The data disk is ready for you to use.

2.8 Format a data disk for a Linux-based ECS instance

This topic describes how to create a single partition on a data disk attached to an Elastic Compute Service (ECS) instance that runs the Linux system and mount a file system onto the partition. You can create multiple partitions for a data disk based on your business needs.

Prerequisites

Before formatting a data disk for an ECS instance that runs the Linux system, you must make sure that you meet the following prerequisites:

- Data disks that you have purchased separately are attached to ECS instances. If data disks are purchased with ECS instances, skip this operation. For more information about how to attach data disks to ECS instances, see #unique_50.
- The device name of the data disk is obtained. You can view the device name of the data disk on the Disks page in the ECS console by choosing More > Modify Disk Property.



Note:

By default, device names are assigned by the system. The device names for I/O optimized instances start from /dev/vdb to /dev/vdz. If the device name is dev/xvd* where * indicates a lowercase letter, the instance in use is not I/O optimized.

Context

The following procedure only applies to data disks with a size of less than 2 TiB. For more information about instructions for data disks with a size of greater than 2 TiB, see #unique_91.

This example uses a new 20 GiB data disk with a device name of /dev/vdb attached to an I/O optimized instance that runs the CentOS 7.6 operating system. A single Master Boot Record (MBR) partition is created and the ext4 file system is mounted onto the partition.



Note:

You can also use the GUID Partition Table (GPT) format. For more information, see #unique_91.

The following section describes the risks of formatting:

- Disk partitioning and formatting are high-risk operations. Proceed with caution. This topic describes how to format a new data disk. If you have stored data on the data disk, you must create a snapshot for the data disk to avoid data loss. For more information about how to create a snapshot, see #unique_28.
- You can only partition data disks attached to ECS instances. You cannot perform this operation on the system disk. If you forcibly use a third-party tool to partition the system disk, unknown risks such as system failure and data loss may occur. You are only allowed to extend partitions or add new partitions for the system disk that has been expanded. For more information, see Resize partitions and file systems of Linux system disks.

Procedure

- 1. Connect to the ECS instance. For more information, see Connect to an ECS instance.
- 2. Run the fdisk -l command to view all data disks attached to the ECS instance.



Note:

If /dev/vdb is not displayed in the command results, the ECS instance does not have a data disk. Check whether the data disk is attached to the ECS instance.

- 3. Run the following commands to create a single partition for the data disk.
 - a) Run the fdisk -u /dev/vdb command to partition the data disk.
 - b) Enter p to view the partition information of the data disk. In this example, the data disk is not partitioned.
 - c) Enter n to create a new partition.
 - d) Enter p to set the partition as the primary partition.



Note:

In this example, you only need to create a primary partition for the data disk. If you want to create more than four partitions, enter e(extended) to create at least one extended partition.

- e) Enter the partition number and press Enter. In this example, you can enter 1 to create one partition.
- f) Enter the number of the first available sector, or press Enter to use the default value 2048.
- g) Enter the number of the last sector. In this example, press Enter to use the default value.
- h) Enter p to view the intended partitions of the data disk.
- i) Enter w to start partitioning and exit after partitioning is complete.

```
[root@ecshost~]# fdisk -u /dev/vdb
Welcome to fdisk (util-linux 2.23.2).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.
Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x3e60020e.
Command (m for help): p
Disk /dev/vdb: 21.5 GB, 21474836480 bytes, 41943040 sectors Units = sectors of 1 \star 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e
Device Boot Start End Blocks Id System
Command (m for help): n
Partition type:
p primary (0 primary, 0 extended, 4 free)
e extended
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-41943039, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-41943039, default
 41943039):
Using default value 41943039
Partition 1 of type Linux and of size 20 GiB is set
Command (m for help): p
Disk /dev/vdb: 21.5 GB, 21474836480 bytes, 41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e
Device Boot Start End Blocks Id System
/dev/vdb1 2048 41943039 20970496 83 Linux
Command (m for help): w
The partition table has been altered!
```

```
Calling ioctl() to re-read partition table.
Syncing disks.
```

4. Run the fdisk -u /dev/vdb command to view the new partition.

If the following information appears, the new partition has been created.

```
[root@ecshost~ ]# fdisk -lu /dev/vdb

Disk /dev/vdb: 21.5 GB, 21474836480 bytes, 41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e

Device Boot Start End Blocks Id System
/dev/vdb1 2048 41943039 20970496 83 Linux
```

5. Run the mkfs.ext4/dev/vdb1 command to create a file system in the new partition.

In this example, an ext4 file system is created. You can also create other file systems based on your needs. For example, if you want to share files between the Linux, Windows, and Mac systems, you can run the mkfs.vfat command to create a Virtual File Allocation Table (VFAT) file system.



Note:

The time required to create a file system depends on the size of the data disk.

```
[root@ecshost~ ]# mkfs.ext4 /dev/vdb1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
1310720 inodes, 5242624 blocks
262131 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2153775104
160 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632,
2654208,
4096000
Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
```

Writing superblocks and filesystem accounting information: done

- **6. Optional: Run the** cp /etc/fstab /etc/fstab.bak **command to back up the** etc/ fstab **file.**
- 7. Run the echo /dev/vdb1 /mnt ext4 defaults 0 0 >> /etc/fstab command to write the information of the new partition into the /etc/fstab file.

You can separately mount the data disk as a folder to store webpages. In this case, the /mnt portion in the command must be replaced with the intended mount point folder path.



Note:

The Ubuntu 12.04 operating system does not support barriers. You need to run the echo '/dev/vdb1 /mnt ext4 barrier=0 0 0' >> /etc/fstab command to write the information of the new partition into the file.

8. Run the cat/etc/fstab the command to view the information of the new partition in the /etc/fstab file.

```
[root@ecshost~ ]# cat /etc/fstab
#
# /etc/fstab
# Created by anaconda on Wed Dec 12 07:53:08 2018
#
# Accessible filesystems, by reference, are maintained under '/dev/disk'
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
UUID=d67c3b17-255b-4687-be04-f29190d37396 / ext4 defaults 1 1
/dev/vdb1 /mnt ext4 defaults 0 0
```

- 9. Run the mount/dev/vdb1/mnt command to mount the file system.
- 10Run the df -h command to view the current disk space and usage.

If the new file system information appears, mounting is successful. You can use the new file system without restarting the instance.

```
[root@ecshost~ ]# df -h
Filesystem Size Used Avail Use% Mounted on
/dev/vda1 40G 1.6G 36G 5% /
devtmpfs 234M 0 234M 0% /dev
tmpfs 244M 0 244M 0% /dev/shm
tmpfs 244M 484K 244M 1% /run
tmpfs 244M 0 244M 0% /sys/fs/cgroup
tmpfs 49M 0 49M 0% /run/user/0
/dev/vdb1 20G 45M 19G 1% /mnt
```