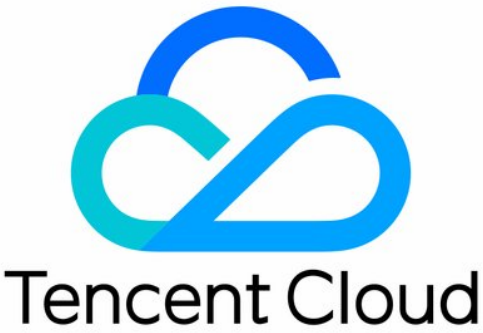
Cloud Virtual Machine

FAQ

Product Introduction



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Mounting Data Disks on Linux CVMs
Use MBR for partition and formatting

Last updated：2017-10-19 21:55:50

This method applies only to partitioning and formatting of hard disk less than 2TB. For any hard disk larger than 2TB, please use GPT mode.

For newly purchased Linux CVM, the data disk is unusable without being partitioned and formatted.

You can perform formatting of Linux CVM data disk by means of script formatting or manual formatting.

> Note:
>
> Once formatted, all the data in the disk will be cleared. Make sure that there is no data left in the disk or the important data has been backed up before formatting. To avoid any service exception, make sure that the CVM has stopped providing services before formatting.

1. Formatting of script (only for non-Ubuntu operating system)

The script formatting here applies only to the machine with a default user name of root. For any machine with a default user name of ubuntu, please use manual formatting.

1) Write the IP of the CVM to operate, ssh port number and the password for root account to the hosts.txt file, with each line representing one host, for example:

```
10.0.0.1 22 my_password
```

2) Click here to download formatting script.

3) Execute the following command at terminal

```
./batch-mkfs.py
```

In addition, if you want to perform the same operations in your own CVM shell, enter the following commands directly in the shell:

```
if grep -q /data /etc/fstab ; then uuid=notneed; echo /data already in fstab; else uuid=`mkfs.ext3 /dev/v
 > /dev/null 2>&1 && blkid /dev/vdb | awk '{print $2}'`;fi;if [[ $uuid == UUID* ]]; then echo $uuid /data
ext3 noatime,acl,user_xattr 1 0 >> /etc/fstab; mount -a; else echo mkfs failed; fi;
```

2. Manual formatting

Please perform partitioning and formatting on data disk using the following steps, and mount partitions so that the data disk is usable.

> Note:
> -When executing the following commands, please remember to modify the data drive letter. You can use "fdisk -l" to check drive letter and other information. vdb is used in the following examples for illustration. To use another drive letter, simply replace vdb with the drive letter. For example, replace fdisk /dev/vdb with fdisk /dev/xvdb
>
> - Please verify that the path is “/dev/vdb”. The wrong entry of “/dev/vda” will lead to crash of CVM.

2.1. View data disk information

After logging in to Linux CVM, you can use “fdisk -l” command to view the information about data disk.

> Note: Using "df- h" command will make it impossible to view unpartitioned or unformatted data disks.

2.2. Data disk partitioning

Execute the following command to partition data disk.

```
fdisk /dev/vdb
```

By following the instructions on the interface, enter “n” (create a new partition), “p” (create an extended partition), and “1” (use the first primary partition) in turn, press Enter twice (use default settings), and then enter “w” (save partition table) to start partitioning.
The example here creates one partition. Developers can create multiple partitions according to their needs.

2.3. Check new partitions

Use “fdisk -l” command to check that the new partition vdb1 has been created.

2.4. Formatting of new partitions

When formatting partitions, developers can decide the file system format on their own, such as ext2, ext3 and so on. The example here uses "ext3".

Use the following command to format the new partition.

```
mkfs.ext3 /dev/vdb1
```

2.5. Mount new partitions

Use the following command to create mydata directory:

```
mkdir /mydata
```

Then use the following command to manually mount the new partition:

```
mount /dev/vdb1 /mydata
```

Finally, use the following command to make a check

```
df -h
```

The appearance of the message as shown below indicates that the mounting is successful and you can view the data disk.

2.6. Add partition information

If you want the data disk to be automatically mounted to CVM when CVM is restarted or booted up, you need to add the partition information to /etc/fstab. If you do not, the data disk will not be automatically mounted to the CVM when the CVM is restarted or booted up.

> Note: Please verify whether the partition path is "/dev/vdb1" . Wrong path will lead to the failure of restarting of CVM.

Use the following command to add partition information:

```
echo '/dev/vdb1 /mydata ext3 defaults 0 0' >> /etc/fstab
```

Use the following command to make a check.

```
cat /etc/fstab
```

The appearance of the message as shown below indicates that the partition information has been successfully added.

Use GPT for partition and formatting

Last updated：2017-10-19 21:56:54

For newly purchased Linux CVM, the data disk is unusable without being partitioned and formatted.

> Note:
>
> Once formatted, all the data in the disk will be cleared. Make sure that there is no data left in the disk or the important data has been backed up before formatting. To avoid any service exception, make sure that the CVM has stopped providing services before formatting.

1. View the list of disks

Use the following command to view the disk device list:

```
fdisk –l
```

For FreeBSD system, please use the following command:

```
diskinfo -v /dev/vtbd1
```

2. Create GPT partitions

Use parted tool to create GPT partitions

For FreeBSD system, please follow the following steps:
Execute ‘gpart create -s gpt vtbd1`command

Execute 'gpart add -t freebsd-ufs -a 1M vtbd1' command

3. View new partition information

You can use the following command to view the new partition information after a partition is created:

```
fdisk –l
```

4. Formatting of partitions

Use mkfs tool to format partitions

For FreeBSD system, use newfs tool to format partitions. Enter the following command:

```
newfs -j /dev/vtbd1p1
```

5. Mount new partitions

Use the following command to mount a new partition after formatting is completed.

```
mount file system partition path mount point
```

Now use the following command to check the remaining capacity of disk.

```
df –h
```

6. Set up Auto Mount

Modify fstabl file to set it to mount the new partition automatically during system restart. Add the content in the last line as shown below.

For FreeBSD system, modify /etc/fstab file to set it to mount the new partition automatically during system restart. Add the content in the last line as shown below.

Read/write NTFS Data Disks after Reinstalling a Windows CVM to Linux CVM

Last updated：2017-10-19 21:55:04

Windows file system typically uses NTFS or FAT32 format, while Linux file system often uses EXT series format. When the operating system is reinstalled and changed from Windows to Linux, its type has changed but the data disk remains the old format. Thus, denied access to the data disk file system may occur in the reinstalled system. You can perform the following operations on the reinstalled Linux CVM to read data from the data disk of the original Windows system:

1) Use the following command to install ntfsprogs software on the Linux system so that Linxu can support NTFS file system:

```
yum install ntfsprogs
```

2) Mount the data disk under Windows to Linux CVM. Skip this step if the data disk has already been mounted.

Log in to Tencent Cloud console, enter "Cloud Virtual Machine" - "Cloud Block Storage" tab, click on the Windows data disk to be mounted, and then click "More" - "Mount to Cloud Virtual Machine" button. Select reinstalled Linux CVM in the pop-up box, then click "Confirm".

3) Use `parted -l` command to check the data disk mounted from Windows:

4) Use `mount -t ntfs-3g data disk path mount point' command to mount the data disk:

5) Since the file system is identifiable, Linux system can directly perform read and write operations on the mounted data disk.

Environment Configurations
LNMP Environment Configurations for CentOS

Last updated：2017-11-17 21:00:52

Make sure that you have followed the steps in Installing Software via YUM in CentOS Environment to install the necessary software.

1. Configuration of nginx

1) Start nginx service

Start the nginx with the following command:

```
service nginx restart
```

2) Test whether nginx service is working properly

Test with the following command:

```
wget http://127.0.0.1
```

If the result is as shown below and displays "'index.html' saved" at the end, it means the nginx service is working properly.

```
--2013-02-20 17:07:26-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 151 [text/html]
Saving to: 'index.html'
100%[======================================================================
2013-02-20 17:07:26 (37.9 MB/s) - 'index.html' saved [151/151]
```

3) In the browser, visit the Public IP of CentOS CVM to check if the nginx service is working properly.

The appearance of the following page indicates that nginx has been installed and configured successfully:

2. Configuration of PHP

2) Start php-fpm

Start php-fpm service with the following command

```
service php-fpm start
```

2) Modify the configurations of php-fpm and nginx to achieve the linkage between nginx and php.

View the php-fpm default configuration using the following command:

```
cat /etc/php-fpm.d/www.conf |grep -i 'listen ='
```

Returned results are:

```
listen = 127.0.0.1:9000
```

The above result suggests that the listener port of php-fpm by default is 9000. Now, you only need to modify the configuration and forward the request parsed by php to 127.0.0.0: 9000.

Use the following command to find nginx configuration file:

```
nginx -t
```

And use vi command to modify the configuration file:

Locate the following segment in the configuration file and modify the red part.

```
server {
  listen       80;
  root   /usr/share/nginx/html;
  server_name  localhost;

  #charset koi8-r;
  #access_log  /var/log/nginx/log/host.access.log  main;

  location / {
      index  index.html index.htm;
  }

  #error_page  404              /404.html;
```

```
    # redirect server error pages to the static page /50x.html
    #
    error_page   500 502 503 504  /50x.html;
    location = /50x.html {
        root   /usr/share/nginx/html;
    }

    # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
    #
    location ~ ¥.php$ {
        fastcgi_pass   127.0.0.1:9000;
        fastcgi_index   index.php;
        fastcgi_param  SCRIPT_FILENAME  $document_root$fastcgi_script_name;
        include        fastcgi_params;
    }

}
```

After modification, press "Esc" key and enter ":wq", save the file and then return.

Check whether the configuration is correct using the following command:

```
cat /etc/nginx/nginx.conf
```

3. Restart the service

Restart nginx using the following command to make the configuration effective:

```
service nginx restart
```

The results are as follows:

```
Stopping nginx:  [ OK ]
Starting nginx:  [ OK ]
```

4. Environment configuration validation

Create index.php under a web directory using the following command:

```
vim /usr/share/nginx/html/index.php
```

Write the following:

```
<?php
echo "<title>Test Page</title>";
echo "hello world";
?>
```

In the browser, visit the Public IP of CentOS CVM to check whether the environment configuration is successful. If the webpage shows "hello world", it means the configuration is successful.

LNMP Environment Configurations for SUSE

Last updated：2017-11-10 09:45:21

Make sure that you have followed the steps in Installing Software via YAST in SUSE Environment install the necessary software.

1. Configuration of nginx

1) Start nginx service

Start the nginx with the following command:

```
service nginx restart
```

2) Test whether nginx service is working properly

Test with the following command:

```
wget http://127.0.0.1
```

If the result is as shown below and displays "'index.html' saved" at the end, it means the nginx service is working properly.

```
--2013-02-20 17:07:26-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 151 [text/html]
Saving to: 'index.html'
100%[======================================================================
2013-02-20 17:07:26 (37.9 MB/s) - 'index.html' saved [151/151]
```

3) In the browser, visit the Public IP of CentOS CVM to check if the nginx service is working properly.

The appearance of the following page indicates that nginx has been installed and configured successfully:

2. Configuration of PHP

1) Create a new configuration file php-fpm.conf with the following command:

```
vim /etc/php5/fpm/php-fpm.conf
```

Write the following:

```
[global]
error_log = /var/log/php-fpm.log
[www]
user = nobody
group = nobody
listen = 127.0.0.1:9000
pm = dynamic
pm.max_children = 5
pm.start_servers = 2
pm.min_spare_servers = 1
pm.max_spare_servers = 3
```

3. Start services

Start all services with the following commands:

```
/etc/init.d/mysql start; /etc/init.d/php-fpm start; /etc/init.d/nginx start
```

Example:

4. Environment configuration validation

Create index.php under a web directory using the following command:

```
vim /usr/share/nginx/html/index.php
```

Write the following:

```
<?php
echo "<title>Test Page</title>";
echo "hello world";
?>
```

In the browser, visit the Public IP of SUSE CVM to check whether the environment configuration is successful. If the webpage shows "hello world", it means the configuration is successful.

LNMP Environment Configurations for Ubuntu

Last updated：2017-09-19 22:29:07

Make sure that you have followed the steps in Installing Software via Apt-get in Ubuntu Environment to install the necessary software.

1. Configuration of nginx

1) Start nginx service

Start the nginx with the following command:

```
sudo /etc/init.d/nginx start
```

2) Test whether nginx service is working properly

Test with the following command:

```
wget http://127.0.0.1
```

If the result is as shown below and displays "'index.html' saved" at the end, it means the nginx service is working properly.

```
--2013-02-20 17:07:26-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 151 [text/html]
Saving to: 'index.html'
100%[======================================================================
2013-02-20 17:07:26 (37.9 MB/s) - 'index.html' saved [151/151]
```

3) In the browser, visit the Public IP of Ubuntu CVM to check if nginx service is working properly.

The appearance of the following page indicates that nginx has been installed and configured successfully:

2. Configuration of PHP

1) Confirm the starting mode of php

Confirm the starting mode in /etc/php5/fpm/pool.d/www.conf (The example environment is ubuntu12, php5.3, and the php configuration path may vary with different versions), and check the listener method of php by searching with the keyword listen:

```
listen = /var/run/php5-fpm.sock
Listen = 127.0.0.1:9000; can listen into the sock method above, and please add the line separately when
```

2) Start php-fpm

Here, no configuration modifications are made to php under ubuntu12. Use the following command to start php-fpm service:

```
sudo /etc/init.d/php5-fpm start
```

3) Modify the configurations of php-fpm and nginx to achieve the linkage between nginx and php.

View the php-fpm default configuration using the following command:

```
sudo netstat -tunpl | grep php-fpm
```

Example:

The above result suggests that the listener port of php-fpm by default is 9000. Now, you only need to modify the configuration and forward the request parsed by php to 127.0.0.0: 9000.

Modify the configuration of nginx with the following command:

```
sudo vim /etc/nginx/sites-available/default
```

Locate the following contents, and add supported file type. After addition, it is shown as follows:

Enter the following content at the end of the configuration file:

```
location ~ \.php$ {
        fastcgi_pass 127.0.0.1:9000;
        #Fastcgi_pass unix:/var/run/php5-fpm.sock; # select the starting mode of php based on the act
```

```
        fastcgi_index index.php;
        include fastcgi_params;
}
```

After modification, press "Esc" key and enter ":wq", save the file and then return.

Check whether the configuration is correct using the following command:

```
sudo cat /etc/nginx/sites-available/default
```

3. Restart the service

1) Use the following command to restart php-fpm:

```
sudo /etc/init.d/php5-fpm restart
```

The results are as follows:

```
* Restarting PHP5 FastCGI Process Manager php5-fpm
  ...done.
```

2) Restart nginx using the following command to make the configuration effective:

```
sudo /etc/init.d/nginx restart
```

The results are as follows:

```
Restarting nginx:  nginx.
```

4. Environment configuration validation

Create index.php under a web directory using the following command:

```
sudo vim /usr/share/nginx/www/index.php
```

Write the following:

```
<?php
echo "<title>Test Page</title>";
```

```
echo "hello world";
?>
```

In the browser, visit the Public IP of Ubuntu CVM to check whether the environment configuration is successful. If the webpage shows "hello world", it means the configuration is successful.

Linux Power Management Configuration

Last updated：2017-09-19 22:30:21

A Linux system without an acpi management program will suffer failures of soft shutdown. Therefore, make sure that the acpi (power management for Linux) module has been installed on your CVM.

Checking method

Check whether the acpi has been installed using the following command:

```
ps -ef|grep -w "acpid"|grep -v "grep"
```

If there's no such process, it hasn't been installed. Then you need to follow the next step to install the module. If there's such process, the next step can be ignored.

Installation method

Use the following command to install the acpi module.

1) For Ubuntu/Debian system

```
sudo apt-get install acpid
```

2) For Redhat/CentOS system

```
yum install acpid
```

3) For SUSE system

```
in apcid
```

> Note: The CoreOS system doesn't have such problem.

Reset Passwords of Activated Linux CVMs

Last updated：2017-09-19 22:31:48

If you need to reset password for a batch of Linux CVMs without shutting them down, you can download the reset script (Click here to download) to batch reset password online.

> Note: If you run the script on a machine of public network, the ip added to the hosts.txt file must be the Public IP of the host. If the script is run on the private network CVM of Tencent Cloud, you can fill in the Private IP of the host.

The using method of script is as follows.

Input the ip of CVM to be operate on, ssh port, account, old and new passwords into the hosts.txt file. Each line represents a host, for example:

```
10.0.0.1 22 root old_passwd new_passwd
10.0.0.2 22 root old_passwd new_passwd
```

Run the following code:

```
./batch-chpasswd.py
```

Example of returned results:

```
------------------------------------------------------------
change password for root@10.0.0.1
spawn ssh root@10.0.0.1 -p 22
root's password:
Authentication successful.
Last login:  Tue Nov 17 20:22:25 2015 from 10.181.225.39
[root@VM_18_18_centos ~]# echo root:root | chpasswd
[root@VM_18_18_centos ~]# exit
logout
------------------------------------------------------------
change password for root@10.0.0.2
spawn ssh root@10.0.0.2 -p 22
root's password:
Authentication successful.
Last login:  Mon Nov  9 15:19:22 2015 from 10.181.225.39
[root@VM_19_150_centos ~]# echo root:root | chpasswd
[root@VM_19_150_centos ~]# exit
logout
```

Code Deployment
Upload Files via WinSCP

Last updated：2018-04-02 10:40:10

WinSCP is an open source graphical SFTP client that uses SSH in Windows environment and supports SCP protocol. Its main function is to copy files between the local and remote computers safely. Instead of using FTP to upload code, you can use the server account and password to access the server directly via WinSCP, without any configuration on the server side. Download address: Official Download
Start WinSCP after installation. The interface is as follows. Fill in the information as shown and log in.

> How to fill in the fields:
>
> - Protocol: either SFTP or SCP is OK
> - Host Name: Public IP of CVM (Log into CVM Console to view the Public IP of CVM)
> - Username: the system username for CVM (SUSE/CentOS/Debian: root, Windows: Administrator, Ubuntu: ubuntu)
> - Password: the password corresponding to the username of CVM
> - Port: 22 by default

Click on Log In after completing the information. After successful login, select a local file and drag it to the remote site on the right, and then you can upload the file to the Linux CVM.

Upload Files via FTP

Last updated：2017-11-09 11:33:19

You can use FTP channel to upload application from your own server to CVM.

1. Configure FTP service on CVM

1) Run the following commands as root to install Vsftp (take CentOS system as an example):

```
yum install vsftpd
```

2) Before starting the vsftpd service, you need to log into the CVM to modify configuration files to disable anonymous login.

Open the configuration file with the following command:

```
vim /etc/vsftpd/vsftpd.conf
```

Change

```
anonymous_enable=YES (on the 11th line in the configuration file)
```

to

```
anonymous_enable=NO
```

to disable anonymous login.

3) Read the effective configuration.

```
cat /etc/vsftpd/vsftpd.conf |grep ^[^#]
```

The following results will be returned:

```
local_enable=YES
write_enable=YES
local_umask=022
anon_upload_enable=YES
anon_mkdir_write_enable=YES
anon_umask=022
dirmessage_enable=YES
```

```
xferlog_enable=YES
connect_from_port_20=YES
xferlog_std_format=YES
listen=YES
pam_service_name=vsftpd
userlist_enable=YES
tcp_wrappers=YES
```

4) Start vsftpd service.

```
service vsftpd start
```

5) Set up an FTP user account.

Set up an FTP user account by running the following command:

```
useradd
```

For example, if the account is "ftpuser1", the directory is /home/ftpuser1, and login via ssh is not allowed:

```
useradd -m -d /home/ftpuser1 -s /sbin/nologin ftpuser1
```

And set a password for the account using the following command:

```
passwd
```

For example, setting the password for the above account as "ftpuser1":

```
passwd ftpuser1
```

After setting these up, you can log on to the FTP server using the account.

6) Modify the pam configuration of vsftpd, so that users can connect to the CVM via the account and password they set by themselves.

Use the following command to modify the pam:

```
vim /etc/pam.d/vsftpd
```

Modify to:

```
#%PAM-1.0
auth required /lib64/security/pam_listfile.so item=user sense=deny file=/etc/ftpusers onerr=succeed
auth required /lib64/security/pam_unix.so shadow nullok
auth required /lib64/security/pam_shells.so
```

```
account required /lib64/security/pam_unix.so
session required /lib64/security/pam_unix.so
```

Confirm whether the modified file is correct using the following command:

```
cat /etc/pam.d/vsftpd
```

Returned results are:

```
auth required /lib64/security/pam_listfile.so item=user sense=deny file=/etc/ftpusers onerr=succeed
auth required /lib64/security/pam_unix.so shadow nullok
auth required /lib64/security/pam_shells.so
account required /lib64/security/pam_unix.so
session required /lib64/security/pam_unix.so
```

Restart the vsftpd service using the following command to make the modification effective:

```
service vsftpd restart
```

The results are:

```
Shutting down vsftpd:  [ OK ]
Starting vsftpd for vsftpd:  [ OK ]
```

2. Upload files to Linux CVM

1) Download and install open source software FileZilla

Please use FileZilla Ver. 3.5.1 or 3.5.2 (Using FileZilla Ver. 3.5.3 for FTP uploading will lead to problems). Since FileZilla official site only provides the latest Ver.3.5.3 for download, you are recommended to search for download links for Ver.3.5.1 or 3.5.2 on your own. Recommended download link for Ver. 3.5.1: http://www.oldapps.com/filezilla.php?old_filezilla=6350

2) Connect to FTP

Run FileZilla, fill in setting form, and then click "Quick Links".

> Description of the settings:
>
> - Host: Public network IP of CVM (Log in to CVM Console page to view the public network IP of CVM).
> - User Name: ID of the FTP user account set in the previous step (here “ftpuser1” is used as example).

> - Password: Password of the FTP user account set in the previous step (here “ftpuser1” is used as example).
> - Port: FTP listener port, default is "21".

3) Upload files to Linux CCVM

When uploading a file, select the local file with the mouse and drag it to the remote site to upload it to Linux CVM.

> Note: CVM FTP path does not support automatic unzipping or deletion of uploaded tar zip files.

Upload Files via SCP

Last updated：2017-11-13 09:56:10

Linux machine can upload files to Linux CVM with the following commands:

```
scp local file address  CVM login name@CVM public network IP/domain name  CVM file location
```

For example, upload local file "/home/lnmp0.4.tar.gz" to the directory for the CentOS CVM with IP of 129.20.0.2:

```
scp /home/lnmp0.4.tar.gz root@129.20.0.2 /home/lnmp0.4.tar.gz
```

Press "Enter" and type in login password to complete the upload.

Installing Software
Install Software via Apt-get under Ubuntu Environment

Last updated：2018-03-15 19:41:38

To enhance users' software installation efficiency on CVM and reduce the costs for downloading and installing software, Tencent Cloud provides you with Apt-get download source. Users of CVM on the operating system of Ubuntu12.04 can quickly install software through Apt-get.

For apt-get download source, software package can be installed directly without adding software source. In order to speed up software installation, the system has already configured mirror of Ubuntu for private network. The mirror is a full image of official x86_64 and is in line with the source of official website.

1. Installation steps

1) Log into the CVM on the operating system of Ubuntu12.04

2) Use the following command to install the software:

```
sudo apt-get install
```

Examples are as follows:

```
sudo apt-get install nginx php5-cli php5-cgi php5-fpm php5-mcrypt php5-mysql mysql-client-core-5.5
```

Result:

3) Input "Y" to confirm and start the installation until the software is installed.

2. View the information of the installed software

After the software has been installed, you can view the installation directory of the software package and all the files within the package using the following command:

```
sudo dpkg -L
```

The following command can be used to view the version information of the software package:

```
sudo dpkg -l
```

Examples are as follows:

```
sudo dpkg -L nginx
sudo dpkg -l nginx
```

The results are as follows (The actual version may be different from this one; please refer to the version actually queried):

Install Software via YUM under CentOS Environment

Last updated：2017-10-19 21:58:47

Make sure that you have followed the steps in Installing Software via YUM in CentOS Environment to install the necessary software.

1. Configuration of nginx

1) Start nginx service

Start the nginx with the following command:

```
service nginx restart
```

2) Test whether nginx service is working properly

Test with the following command:

```
wget http://127.0.0.1
```

If the result is as shown below and displays "'index.html' saved" at the end, it means the nginx service is working properly.

```
--2013-02-20 17:07:26-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 151 [text/html]
Saving to: 'index.html'
100%[======================================================================
2013-02-20 17:07:26 (37.9 MB/s) - 'index.html' saved [151/151]
```

3) In the browser, visit the Public IP of CentOS CVM to check if the nginx service is working properly.

The appearance of the following page indicates that nginx has been installed and configured successfully.

2. Configuration of PHP

2) Start php-fpm

Start php-fpm service with the following command

```
service php-fpm start
```

2) Modify the configurations of php-fpm and nginx to achieve the linkage between nginx and php.

View the php-fpm default configuration using the following command:

```
cat /etc/php-fpm.d/www.conf |grep -i 'listen ='
```

Returned results are:

```
listen = 127.0.0.1:9000
```

The above result suggests that the listener port of php-fpm by default is 9000. Now, you only need to modify the configuration and forward the request parsed by php to 127.0.0.0: 9000.

Use the following command to find nginx configuration file:

```
nginx -t
```

And use vi command to modify the configuration file:

Locate the following segment in the configuration file and modify the red part.

```
server {
  listen       80;
  root   /usr/share/nginx/html;
  server_name  localhost;

  #charset koi8-r;
  #access_log  /var/log/nginx/log/host.access.log  main;

  location / {
      index  index.html index.htm;
  }

  #error_page  404              /404.html;

  # redirect server error pages to the static page /50x.html
  #
```

```
    error_page   500 502 503 504  /50x.html;
    location = /50x.html {
        root   /usr/share/nginx/html;
    }

    # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
    #
    location ~ ¥.php$ {
        fastcgi_pass   127.0.0.1:9000;
        fastcgi_index   index.php;
        fastcgi_param  SCRIPT_FILENAME  $document_root$fastcgi_script_name;
        include        fastcgi_params;
    }

}
```

After modification, press "Esc" key and enter ":wq", save the file and then return.

Check whether the configuration is correct using the following command:

```
cat /etc/nginx/nginx.conf
```

3. Restart the service

Restart nginx using the following command to make the configuration effective:

```
service nginx restart
```

The results are as follows:

```
Stopping nginx:  [ OK ]
Starting nginx:  [ OK ]
```

4. Environment configuration validation

Create index.php under a web directory using the following command:

```
vim /usr/share/nginx/html/index.php
```

Write the following:

```
<?php
echo "<title>Test Page</title>";
echo "hello world";
?>
```

In the browser, visit the Public IP of CentOS CVM to check whether the environment configuration is successful. If the webpage shows "hello world", it means the configuration is successful.

Install Software via zypper under SUSE Environment

Last updated：2017-11-29 22:52:18

Make sure that you have followed the steps in Installing Software via YAST in SUSE Environment install the necessary software.

1. Configuration of nginx

1) Start nginx service

Start the nginx with the following command:

```
service nginx restart
```

2) Test whether nginx service is working properly

Test with the following command:

```
wget http://127.0.0.1
```

If the result is as shown below and displays "'index.html' saved" at the end, it means the nginx service is working properly.

```
--2013-02-20 17:07:26-- http://127.0.0.1/
Connecting to 127.0.0.1:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 151 [text/html]
Saving to: 'index.html'
100%[======================================================================
2013-02-20 17:07:26 (37.9 MB/s) - 'index.html' saved [151/151]
```

3) In the browser, visit the Public IP of CentOS CVM to check if the nginx service is working properly.

The appearance of the following page indicates that nginx has been installed and configured successfully.

2. Configuration of PHP

1) Create a new configuration file php-fpm.conf with the following command:

```
vim /etc/php5/fpm/php-fpm.conf
```

Write the following:

```
[global]
error_log = /var/log/php-fpm.log
[www]
user = nobody
group = nobody
listen = 127.0.0.1:9000
pm = dynamic
pm.max_children = 5
pm.start_servers = 2
pm.min_spare_servers = 1
pm.max_spare_servers = 3
```

3. Start services

Start all services with the following commands:

```
/etc/init.d/mysql start; /etc/init.d/php-fpm start; /etc/init.d/nginx start
```

Example:

4. Environment configuration validation

Create index.php under a web directory using the following command:

```
vim /usr/share/nginx/html/index.php
```

Write the following:

```
<?php
echo "<title>Test Page</title>";
```

```
echo "hello world";
?>
```

In the browser, visit the Public IP of SUSE CVM to check whether the environment configuration is successful. If the webpage shows "hello world", it means the configuration is successful.

Access Internet
Allow CVMs withtout Internet access to access Internet

Last updated：2017-10-19 21:52:30

When the CVM chooses 0Mbps bandwidth, the public network cannot be accessed. The CVM can only access the external network through a CVM with a Public IP.

1. Principle

- A CVM without a Public IP can access the public network through a CVM with a Public IP by using proxy on a CVM with a Public IP or via vpn.
- The proxy is easy to configure but complicated to use. It is suggested that you use pptp vpn to do this. (i.e., A CVM without a Public IP can be connected with a CVM with a Public IP through pptp protocol, and the CVM with a Public IP will be set to the gateway in pptp network)

2. Configuration

Assume that a CVM with a Public IP is A, and a CVM without a Public IP is B.

1) Install pptpd on A, on CentOS for example (other Linux release versions are similar) using the following command:

```
yum install pptpd
```

2) Modify the configuration file /etc/pptpd.conf by adding the following two lines

```
localip 192.168.0.1
remoteip 192.168.0.234-238,192.168.0.245
```

3) Modify the configuration file /etc/ppp/chap-secrets by adding the username and password (the 1st column indicates the username, and the 3rd column indicates the password)

```
user    pptpd   pass    *
```

4) Start services

```
service pptpd start
```

5) Enable the forward capability

```
# echo 1 > /proc/sys/net/ipv4/ip_forward
# iptables -t nat -A POSTROUTING -o eth0 -s 192.168.0.0/24 -j MASQUERADE
```

6) Install the client on B, on CentOS for example, using the following command:

```
# yum install pptp pptp-setup
```

7) Create a configuration file

```
# pptpsetup --create pptp --server 10.10.10.10 --username user --password pass --encrypt
```

Note: --server is followed by A's IP address.

8) Connect pptpd

```
# pppd call pptp
```

9) Set the route:

```
# route add -net 10.0.0.0/8 dev eth0
# route add -net 172.16.0.0/12 dev eth0
# route add -net 192.168.0.0/16 dev eth0
# route add -net 0.0.0.0 dev ppp0
```

In addition, if B is Windows CVM, a network "Connecting to Workspace" can be created to connect to the pptpd server

Windows CVM Operation Manual
Format Data Disks of Windows CVMs
Data Disk Partition and Formating of Windows CVMs

Last updated：2017-10-25 15:07:24

By default, the data disks purchased on the CVM purchase page are not automatically mounted under an offline state. Data disks that are not partitioned and formatted cannot be used. This tutorial will guide you to mount, partition and format data disks in a Windows system.

The path to the "Disk Management" interface may vary with the Windows version (Windows 2012, Windows 2008, Windows 2003, etc.), but the steps to partition and format the disks are basically the same.

This article provides the guide on how to mount, partition and format data disks on Windows 2012 and Windows 2008.

> Note:
>
> Once formatted, all the data in the disk will be cleared. Make sure that there is no data left in the disk or the important data has been backed up before formatting. To avoid any service exception, make sure that the CVM has stopped providing services before formatting.

1. Disk Partitioning and Formatting on Windows 2012

On Windows 2012, the path to Disk Management is "Start" - "Server Management" - "Tools" - "Computer Management" - "Disk Management".

"Disk 1" is an unpartitioned disk. Here, the process is illustrated by creating one partition for "Disk 1". Right click on Disk 1, then select "Online". Right click again, then select "Initialize Disk". Select "GPT" or "MBR" depending on the partitioning method, and click on the "OK" button.

> Note: Make sure to select GPT as the partitioning method if the disk is larger than 2TB.

Right click on the unallocated space, and select "New Simple Volume". In the "New Simple Volume Wizard" pop-up window, click "Next".
Enter the desired disk size for the partition, then click "Next". Enter the drive letter, then click "Next". Select "File System", then "Format Partition", and click "Next". Upon completing the New Simple Volume Wizard, click "Finish".

2. Disk Partitioning and Formatting on Windows 2008

On Windows 2008, the path to "Disk Management", different from that on Windows 2012, is "Server Management" - "Storage" - "Disk Management".

"Disk 1" is an unallocated disk. Here, the process is illustrated by creating one partition for "Disk 1".

"Disk 1" is not online in the initial state. Right click "Disk 1", and then click "Online" in the pop-up menu.

Again, right click "Disk 1", and then click "Initialize Disk" in the pop-up menu.

Select the GPT initialization method, and click the "OK" button.

Note: Make sure to select GPT as the partitioning method if the disk is larger than 2TB.

Right click on the unallocated region behind "Disk 1", and select "New Simple Volume" in the shortcut menu that pops up.
As prompted by the Wizard, enter the size of the disk partition, then click "Next".

Select "File System", then "Format Partition", and click "Next".

Upon completing the New Simple Volume Wizard, click "Finish".

"Formatting..." is displayed.

At this point, the newly partitioned data disk can be seen on the computer screen.

> Note: Do not convert a basic hard disk to a dynamic hard disk. We are not liable for any data loss arising out of this action.

3. Online Settings

Under a Windows operating system, online settings are often needed in Disk Management. To help you make better use of Elastic Cloud Block Storage, we recommend that you modify the operating system as follows:
Open the cmd line and run the following command

```
diskpart
san policy = onlineall
```

Once remounted to the Windows CVM, the Elastic Cloud Block Storage can be used directly without any user action as long as it contains a valid file system.

Read/write EXT Data Disks after Reinstalling a Linux CVM to Windows CVM

Last updated：2017-12-15 15:32:34

The file system format of Windows is generally NTFS or FAT32, while that of Linux is EXT series. When the operating system is reinstalled and changed from Linux to Windows, its type has changed but the data disk remains the old format. Thus, denied access to the data disk file system may occur in the reinstalled system. You can perform the following operations on the reinstalled Windows CVM to read data from the data disk of the original Linux system:

1) Assume that the data disk of Linux CVM has two partitions:

2) Download and install DiskInternals Linux Reader software on the reinstalled Windows CVM (For download address, please click here).

3) Mount the data disk under Linux to Windows CVM. Skip this step if the data disk has already been mounted.

Log into Tencent Cloud console, enter "Cloud Virtual Machine" - "Cloud Block Storage" tab, click on the Linux data disk, and then click "More" - "Mount to Cloud Virtual Machine" button. Select reinstalled Windows CVM in the pop-up box, then click "Confirm".

4) Click to run DiskInternals, and you can see the information of data disk just mounted. /root/mnt and /root/mnt1 are for partitions vdb1 and vdb2 respectively:

5) Click to enter /root/mnt, and right-click the file you want to copy, and select Save to save the file.

6) Please note that the Linux data disk is read-only at this time. If you need to perform read and write operations on the data disk as Windows data disk, please first back up the files you need and then re-format it into a standard type supported by Windows operating system. For specific operations, please see here.

Windows OS Configuraiton
Install and Configure IIS

Last updated：2017-11-09 11:29:41

> NOTE: Do not install any anti-virus software of PC type on Windows CVM. Such software may block the telnet port of the CVM, making it impossible to log in to the CVM.

1. Installation and configuration of IIS

1.1. Example for Windows2012R2

1) Click "Start" at the bottom left corner of Windows CVM, select "Server Manager" to open the Server Manager interface.

2) Select "Add Roles and Features", then in "Before You Begin" in the "Add Roles and Features Wizard" pop-up box, click "Next". In "Installation Type", select "Role-based or Feature-based Installation", then click "Next".

3) In the left side of the window, select "Server Role" tab, check "Web Server (IIS)", click "Add Features" button in the pop-up box, and then click "Next".

4) In the "Features" tab, click "Next", and in the "Web Server Role (IIS)" tab, also click "Next".

5) In the "Role Services" tab, check the "CGI" option, then click "Next".

6) Confirm the installation and wait for the installation to be completed.

7) When the installation has been completed, access localhost in the browser of CVM to verify whether the installation is successful. The appearance of the following page indicates that the installation has been completed successfully.

1.2. Example for Windows2008

1) Click "Server Manager" in the "Management Tool" in the "Start" menu at the bottom left corner of Windows CVM to open the Server Manager interface.

2) Click "Add Roles and Features" to add server roles. In this case, select "Web Server (IIS)", as shown below:

3) Click "Next". When selecting role services, check "CGI", as shown below:

4) After the settings are made, click "Install" to proceed with the installation:

5) Access the public network IP of Windows CVM via browser to check whether the IIS service is running normally. The appearance of the following page indicates that IIS has been installed and configured successfully.

2. Installation and configuration of PHP

2.1. Installation of PHP 5.3 and earlier versions

1) Download the PHP installer (Download from: http://windows.php.net/download/), select the installer indicated in the following figure:

2) After the download, install PHP. When you need to select Web service, select "IIS FastCGI", as shown below:

3) Complete the installation of PHP under the guidance of installation interface.

4) Create a PHP file hello.php under C: / inetpub / wwwroot, as shown below:

The following content is written to the hello.php file:

```
Test Page";
echo "hello world";
?>
```

5) Access the public network IP of Windows CVM via browser to check whether the environment configuration has been completed successfully.

2.2. Installation of PHP versions above 5.3

For PHP versions above 5.3, the installer mode has been canceled, and the installation is only performed through zip file or debug pack. The following example shows the zip installation in Windows Server 2012R2 environment.

1) Download the PHP zip installer. Please note that you must select Non Thread Safe (NTS) x86 package when running under IIS. (If you have to select x64 package for PHP in Windows Server 32bit (x64), you cannot select IIS. In this case, you can use Apache as an alternative option)

Select the installer as shown below:

2) The installation of PHP versions above 5.3 depends on Visual C ++ Redistributable Update. Download and install VC Update Installer according to the name of downloaded PHP installer by referring to the relations as shown in the following table:

PHP Installer Name	Download Link for Visual C ++ Redistributable Installer
Php-xxx-nts-Win32-VC14-x86.zip	Visual C ++ Redistributable for Visual Studio 2015
Php-xxx-nts-Win32-VC11-x86.zip	Visual C ++ Redistributable for Visual Studio 2012 Update 4
Php-xxx-nts-Win32-VC9-x86.zip	Microsoft Visual C ++ 2008 SP1 Redistributable Package (x86)

For example, if the downloaded PHP installer is the one shown as below,

then download the installer for VS2015 version based on the relation indicated in the first row, and download and install the .exe file.

3) Unzip the PHP zip installer (in this case, extract to C:\PHP), copy php.ini-production and rename it to php.ini.

4) Click "Server Manager" - "IIS"; On the local IIS, right-click and select IIS Manager.

Click on the host name (IP) on the left to go to the home page, then double-click "Handler Mappings".

Click "Add Module Mappings" button on the right, fill in the following information in the pop-up box, and click "OK" to save.

If you are unable to select php-cgi.exe as the executable file, please change the file name extension of the selected file to .exe.

5) Click on the host name (IP) on the left to return to the home page, then double-click "Default Document".

Click "Add" button on the right to add the default document with the name of index.php.

6) Click on the host name (IP) on the left to return to the home page, then double-click "FastCGI Settings".

Select the path, click the "Edit" button on the right, then in the "Monitor the Changes Made to File", select the php.ini path.

7) Create a PHP file index.php under C:\inetpub\wwwroot, to which the following content is written:

```
<?php

phpinfo ();

?>
```

Save, visit http: //localhost/index.php within from the CVM to verify whether PHP has been installed successfully:

Change SID on Windows CVMs

Last updated：2017-12-18 12:07:04

> Note: This only applies to Windows Server 2008 R2 and Windows Server 2012. For any need to batch edit SID, you can create a custom image (select "Run Sysprep to Create an Image").

1. Background

Microsoft's operating system uses a security identifier (SID) to identify computers and users. When there is a need to build a Window domain environment, modification of SIDs is required to overcome the inability to join the domain due to the fact that CVM SIDs generated based on the same image are the same.

2. Operation Steps

1) Log into the CVM using the console VNC

2) Save the current network configuration

Click "Start" - "Run". Type cmd to open the command line. Run the command ipconfig / all. Keep record or save screenshots of the result information.

3) Open the Sysprep tool

Run the sysprep.exe program under the folder C: \ windows \ system32 \ sysprep.

As shown below, select "Enter System Out-of-Box Experience (OOBE)" under "System Cleanup Action", and meanwhile check the "General" option. Select "Restart" under "Shutdown Options".

4) Clicking on "OK" will restart the system. When the restart is done, complete the configuration steps following the wizard (select language, reset password, etc.)

5) Verify SID
Click "Start" - "Run". Type cmd to open a command line. Run the whoami / user command and refer to the figure below to verify if SID has been modified.

6) Refer to the configuration saved in Step 2 to reset network card information (IP address, gateway address, DNS, etc.).

Install Windowns Programs Upload Files to Windows CVMs

Last updated：2017-10-21 16:32:54

1) Open the" Remote Desktop Connection" dialog box, click "Options".

2) In the "Local Resources" tab, click "Detail" button.

3) In the drive module, select the local hard disk where the file you want to upload to Windows CVM is located.

4) After the configuration, log in to Windows CVM, select "Start" - "Computer" to view the local hard disk that is mounted to the CVM.

5) Copy the code files in the local hard disk to the Windows CVM to complete the file upload.

system maintenance Closean CVM

Last updated：2017-11-13 12:13:41

1. Analysis on the Shutdown of Virtual Clients

The following is the shutdown process of Windows virtual machine on Tencent Cloud.

1) Libvirt on the parent host sends shutdown command to qemu component via qmp protocol;
2) Qemu component transfers shutdown command to child host by injecting acpi interruption (For details, see technical documents on vmcs);
3) When receiving the shutdown signal, Windows tells applications and service processes to exit;
4) Close the core service process;
5) Turn off the power.

The shutdown process on Windows is basically the same as shown above. The sequence in which the applications and services are closed in step 3-4 may vary with the settings of system.

As a closed-source system, Windows provides some APIs to allow the programs with kernel mode and user mode to intervene in the shutdown process. And some services of Windows will also affect the shutdown process during operation, making the shutdown impossible. In some cases, Windows shutdown process can be very time-consuming to prevent the computer from being shut down.

In virtual scenarios, besides informing the Windows itself to shut down by sending a message, another means, which is similar to powering off a physical machine, is provided to stop a virtual client. This means is called "hard shutdown". Correspondingly, the shutdown action initiated by a system signal is called "soft shutdown".

Hard shutdown has some impact on the Windows itself and the user experience, mainly in the following two ways:

1) A hard shutdown interrupts some services and applications, which as a result may operate improperly, such as unsaved documents, and unfinished Windows Update processes;

2) As the NTFS system (or the earlier FAT32 system) of Windows writes some key data during the shutdown process, a hard shutdown may result in the failure to write such key data to the disk, which would lead Windows to determine that the NTFS file system is damaged.

For these reasons, it's recommended Tencent Cloud users take soft shutdown as the preferred way to shut down Windows.

2. Several Scenarios of Shutdown Failure

However, as mentioned above, there may be some issues within the Windows system that interfere with the shutdown process and result in shutdown failure. The scenarios include but not limited to:

1) A Windows Update process may extend the shutdown time. For some patch operations, the Windows system may take some actions during the shutdown process, by which time messages like "Please do not power off or unplug your machine" will display.

2) If "Shutdown Event Tracker" mechanism is enabled on the Windows system, when the system is shut down due to any error in the system service and driver, the system will provide user with a prompt box based on the configuration or fill in the error description to wait for the user to complete these operations. Windows will not turn off the power until the user has completed these operations.

3) Windows can be set to not allow shutdown while the user is not logged in to the system. In this case, the soft-shutdown command sent from the virtual host will be discarded by Windows so that the shutdown cannot be achieved.

4) Before the shutdown, Windows will broadcast a message to every service and application. If the applications responding to this message do not send a response that allows the shutdown, Windows will not initiate the shutdown. In this scenario, some settings can be made on Windows to ignore this process.

5) In the power management-related operation "What will Windows do when you press the power button ", if Windows is set to ignore it or do nothing, Windows will ignore the shutdown event of the virtualized parent host.

6) Based on the settings of power management, Windows will go into Sleep and not handle shutdown event.

7) In case of initial purchase of Windows, the initialization process is slightly longer due to the use of sysprep for distributing images. Windows will ignore the shutdown event until the initialization has been finished.

8) If the Windows system itself is damaged due to some malicious software installed within it or infection with Trojan virus or other viruses, Windows can be prevented from shutdown.

Tencent Cloud has optimized most of the above scenarios when publishing Windows public images so that the soft-shutdown can be completed successfully. These optimization measures are integrated into the script of Windows Power Management to be used for making adjustments to Windows features such as power management, turn-off of "Shutdown Event Tracker" and shutdown while user is not logged in to the system.

But these optimization measures cannot solve the scenarios where Windows is infected with viruses and Trojans or the system is damaged; In addition, if these relevant settings in the Windows virtual machine of

user are adjusted again, there is no guarantee that the soft-shutdown can be completed successfully. In some cases, forced shutdown would pose a risk. For example, in the process of Windows Update, it is necessary to wait for the update to complete. During the soft-shutdown process, user needs to check the scenarios of shutdown failure by opening VNC, so as to conduct appropriate processing as required. Please perform hard-shutdown only if it is very necessary to do so.

Continue Using Windows 2003

Last updated：2017-10-21 16:30:07

1. Recommendations

Microsoft has announced to stop providing extended support for Windows Server 2003 and Windows Server 2003 R2 as of July 14, 2015. At the same time Tencent CVMs that run a Windows 2003 system will no longer have access to updates and patches from Microsoft and may be exposed to issues and risks like program incompatibility, instability and insecurity. In order to ensure the security and stability of your businesses, it's recommended that you migrate the CVMs that are currently running the Windows Server 2003 system to a Windows Server 2008 R2 version.

2. Instructions for Use

Starting September 14, 2015, Tencent Cloud will stop providing Windows 2003 system images (including public image, custom image and Image Marketplace image) to all users. If you are currently running Windows 2003 for your CVM, and want to continue to use it, you can submit a request using a work order. Upon approval you can apply for the continued access to the entryway to purchase Windows 2003 systems for the requested period.

> Note: Request for renewal of the 2003 system is supported in Guangzhou, Guangzhou OPEN, Shanghai, Beijing and Hong Kong

3. Risk Warning

Tencent Cloud reminds you to be fully aware of the following risks before applying for the continued use of Windows Server 2003 / Windows Server 2003 R2:

1) Continue to use the Tencent CVMs that contain Windows Server 2003 operating system. As of July 14, 2015, these Tencent CVMs will no longer receive updates and patches from Microsoft, and your applications and businesses may be exposed to a variety of risks, including but not limited to security issues, application incompatibility, compliance requirements, and other uncertain security risks arising from non-functional issues.

2) If you continue to use Tencent CVMs running Windows Server 2003 after July 14, 2015, Tencent Cloud will not be held responsible for any fault, security issue, incompatibility or other uncertain risks due to lack

of support from Microsoft, and you will have to bear the risks, consequences and liabilities arising therefrom all by yourself.

4. Service Contents

Once you are fully aware of the risks and are willing to bear the possible consequences and liabilities, you can access the service that Tencent Cloud provides for you to continue to use Windows Server 2003, which contains:

- the ability to continue to use Tencent CVMs running the existing Windows Server 2003 operating system.
- the ability to continue to use a Windows Server 2003 image (including system image, existing custom image, Image Marketplace image) to purchase and create Tencent CVMs.
- the ability to query the Windows Server 2003 image lists provided by Tencent Cloud through the Console and Cloud API. (Creating custom images is not supported)
- the ability to continue to request annual and monthly renewals for your Tencent CVMs that are running Windows Server 2003.

5. Service Fee

No additional cost will apply to your continued use of Tencent CVMs running Windows Server 2003, while an appropriate service fee will be charged for purchases and renewals of Tencent CVMs.

6. Notes

Because Microsoft has ended the support for Windows Server 2003, you understand and agree that the following situations shall not be considered substandard service quality, failure or responsibility on the part of Tencent Cloud:

1) You instance that is running Windows Server 2003 may be exposed to high risk of failure, various security issues, incompatibilities, inability to work properly, or even total breakdown of the system.

2) In the case any application running in your Windows Server 2003 instance experiences any failure that needs to be resolved by installing Microsoft patches or through OS-level troubleshooting by Microsoft, we can only provide assistance in troubleshooting, and may not be able to provide a complete solution to the issue.

3) Due to limitations in terms of hardware compatibility and driver-related issues, new Tencent CVMs in the future may not be able to support the running of Windows Server 2003 images.

During the renewal period, you have the responsibility to protect the Tencent CVMs that are running Server 2003, and to monitor the security threats reported in Windows Server 2003 to avoid any impact on other Tencent Cloud users.

Although Tencent Cloud provides you with the ability to continue to use Windows Server 2003, we advise and encourage you to migrate the existing instances of Windows Server 2003 to the instances of Windows Server 2008 R2 and Windows Server 2012 R2 to protect your data and businesses.

Power Management Configuration

Last updated：2017-11-13 14:42:16

High-performance power management options need to be set on Windows Server to enable soft-shutdown of virtual machine. Otherwise, the virtual machine only can be shut down by console in a hard-shutdown manner. Take Windows 2012 as an example, the power management is set as follows:

> NOTE: You do not need to restart the computer to change power management.

1) Download power change and setup tools of Tencent Cloud to execute in the console (private network address: http: //mirrors.tencentyun.com/install/windows/power-set-win.bat,
save to C:\Later, then execute it in the console).

After execution, use powercfg -L to view the current power management scheme.

2) In "Control Panel" - "System and Security" - "Power Options", change the idle time limit and turn-off time of display and hard drive.

Activate Windows License

Last updated：2017-11-13 14:44:24

Tencent CVM uses KMS for granting authorization to Windows server. Currently, only Windows 2008 and Windows 2012 need such authorization.

1. Automatic activation tool

Tencent Cloud encapsulates a script for Windows activation on QCloud that simplifies the steps for manual activation. Please visit the following address on Windows CVM for download (http://mirrors.tencentyun.com/install/windows/activate-win.bat), and execute the script after the download.

2. Run the activation manually.

1) Click "Start" - "Run", enter cmd.exe to open the console window.

2) Enter the following commands in turn:

```
cscript /nologo %windir%/system32/slmgr.vbs -skms kms.tencentyun.com:1688
cscript /nologo %windir%/system32/slmgr.vbs -ato
```

Note 1:
On some systems, if there is a problem with the system clock, error will occur during manual activation. In this case, you need to synchronize the system clocks. The synchronization between clocks is performed as follows: Enter the following commands in the console window:

```
w32tm /config /syncfromflags:manual /manualpeerlist:"ntpupdate.tencentyun.com"
w32tm / resync
```

Note 2:
SPP Notification Service on Windows is used to perform activation-related services and its normal operation needs to be ensured.

Some optimization software may disable the change to execute permissions of service-related executables. For example, the change to the execute permission of sppsvc.exe process can cause abnormal operation of service.

Before you attempt to activate Windows, make sure the service and other basic functions on Windows are in a normal condition.

System Updates

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1. Obtain updates via the public network.

Users can install the patch program through the Windows Update service program of the system. The steps are as follows:

Click "Start" - "Control Panel" - "Windows Updates", click "Check for Updates" button. After the check completes, you'll be notified of the availability of several update packages.

Click "Available Updates", then "Choose the Update to Install" pop-up box will appear. Select the update to install, click "Install", then wait until the appearance of the message that the installation is completed.

If you are prompted to restart your system after the update is completed, please restart the CVM.

> Note: When you restart the CVM after the patch is updated, please observe the CVM through VNV. If the message that "Updating...Do not turn off the power" or "Configuration has not been completed" appears, do not perform a hard-shutdown, which can damage your CVM.

2. Obtain updates via the private network.

If the CVM cannot be connected to the public network, the user can set it to use patch server of Tencent Cloud private network to install the updates. Windows patch server of Tencent Cloud contains most patch updating programs that are often used on Windows, but does not include hardware driver packages and some seldom-used server update packages.

For some seldom-used services, update patch may not be found on the patch server of Tencent Cloud private network. To address this problem, Tencent Cloud is still making efforts in improving more patch programs.

If you want to use patch server of Tencent Cloud private network, do as follows:

1) After logging in to Windows CVM, download the setup tool wusin.bat at Tencent Cloud private network through IE:
http://mirrors.tencentyun.com/install/windows/wusin.bat

2) Save it to C:\wusin.bat, and open the console to execute.

> NOTE: When this script is directly executed through IE, console window will be closed automatically and you are unable to view the output messages.

If you no longer need to use the Windows patch server of Tencent Cloud private network, you can download the cleanup tool wusout.bat as follows:

1) After logging in to Windows CVM, download cleanup tool wuout.bat through IE: http://mirrors.tencentyun.com/install/windows/wusout.bat

2) Save it to C:\wusout.bat, and open the console to execute.

> NOTE: When this script is directly executed through IE, console window will be closed automatically and you are unable to view the output messages.

Update Virtio Network Card Drive

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Tencent Cloud CVM Windows Server 2008 R2 Enterprise Edition SP1 and Windows Server 2012 R2 have been equipped with VirtIO NIC driver to optimize the network performance of virtual hardware. Tencent Cloud will continue to make improvements to NIC driver for enhanced performance and troubleshooting. Users can download the latest version of NIC driver.

> - Users can right-click "Computer" - "Property", and view the system version information in "View Basic Information About Your Computer".
> - The network will flash during the upgrade. Check whether it will affect the business before the upgrade. You need to restart the computer after the upgrade.

Tencent Cloud users can download VirtIO NIC driver installation file for Windows Server 2008 R2 and Windows Server 2012 R2 from the following private network address. Private network download address: http://irrors.tencentyun.com/install/windows/virtio_64_10003.msi

Double-click to start the installer, select "Typical" installation mode, then click "Install" button.

Security tips will appear during installation, check "Always trust software from Tencent Technology (Shenzhen) Company Limited", then click "Install" button.

When the following pop-up box appears, select "Always install this driver software".

After installation is completed, you will be prompted to restart your computer to take effect. In this case, restart the computer.