

example of a physical server. The physical server may include more or fewer components than those shown in FIG. 2, or may have different component configuration manners.

[0049] Optionally, FIG. 4 is a schematic structural diagram of a cloud platform according to an embodiment of this application. As shown in FIG. 4, a cloud platform 00 includes a plurality of computing nodes, and the plurality of computing nodes include an image file storage node 001, an image service node 002, an image file conversion node 003, a virtual machine creation node 004, and a virtual machine storage node 005. Each computing node may be a cloud server, and communication between the computing nodes may be performed in an interconnection bus or network connection manner. Alternatively, a plurality of computing nodes are integrated into a same cloud server. This is not limited in this embodiment of this application.

[0050] After obtaining data of software in a software operating environment to generate a client image file, a client 01 uploads the client image file to the image file storage node 001. Optionally, an image format of the client image file may be a community format such as vhd, qcow2, zvhd, or vmdk. An image format of the client image file is not limited in this embodiment of this application. The software in the software operating environment includes an operating system and application software. The software operating environment may be a software operating environment of a data center such as a local virtual machine, a public cloud platform, a private cloud platform, a hybrid cloud platform, and an IDC equipment room. A hardware carrier of the software operating environment is not limited in this application.

[0051] The image file storage node 001 is configured to store the client image file uploaded by the client 01. The image file storage node 001 may be an object storage service (Object Storage Service, OSS) user bucket.

[0052] The image service node 002 is configured to provide a combined application programming interface (Application Programming Interface, API) service. The combined API downloads the client image file from the image file storage node 001, and transmits the client image file to the image file conversion node 003.

[0053] The image file conversion node 003 is configured to convert an image format of the client image file into a specified image format. An image file in the specified image format may support large-scale mounting. For example, the specified image format may be a QCOW2 format. In a Windows operating system, mounting usually refers to assigning a drive letter to a disk partition (including a virtualized disk partition). Third-party software, such as disk partition

CLAIMS

What is claimed is:

1. A virtual machine management method for a cloud platform, wherein the method comprises:

5 providing, by the cloud platform, an Object Storage Service(OSS) user bucket, the OSS user bucket is used to receive a first client image file which is uploaded by a client, wherein the first client image file carries a first software operating environment and a license, and the license is used to authenticate a software in the first software operating environment;

10 providing, by the cloud platform, a Bring Your Owner License (BYOL) option and a Buy License From Platform (BLFP) option;

receiving, by the cloud platform, an instruction for triggering the BYOL option;

15 generating, by the cloud platform, a first cloud platform image file according to the first client image file in the OSS user bucket, wherein the first cloud platform image file is used to create a first virtual machine on the cloud platform, and a license fee of the software running on the first virtual machine is exempted in the cloud platform.

2. The method according to claim 1, wherein the method comprises:

20 providing, by the cloud platform, an image file upload box, a name text box, and an OS version selection box, wherein the image file upload box is used to receive the first client image file uploaded by the client, the name text box is used to enter a name of the first client image file, and the OS version selection box is used to select an OS version of the first client image file.

3. The method according to any one of claims 1 to 2, wherein the software in the first software operating environment is an operating system.

4. The method according to any one of claims 1 to 3, wherein the software in the first software operating environment is an application software.

25 5. The method according to any one of claims 1 to 4, wherein a format of the first cloud platform image file is a qcow2 format or a zvhd format.

6. The method according to any one of claims 1 to 5, wherein a format of the first client image file is one of a vhd format, a qcow2 format, a zvhd format, or a vmdk format.

30 7. A virtual machine management method for a cloud platform, wherein the method comprises:

providing, by the cloud platform, an Object Storage Service(OSS) user bucket, the OSS user bucket is used to receive a second client image file which is uploaded by a client, wherein the second client image file carries a second software operating environment;

providing, by the cloud platform, a Bring Your Owner License (BYOL) option and a Buy
5 License From Platform (BLFP) option;

receiving, by the cloud platform, an instruction for triggering the BLFP option;

generating, by the cloud platform, a second cloud platform image file according to the second
client image file in the OSS user bucket, wherein the second cloud platform image file is used to
create a second virtual machine on the cloud platform, the second software operating environment
10 and a license which provided by the cloud platform are set on the second virtual machine, and the
license is used to authenticate a software in the second software operating environment.

8. The method according to claim 1, wherein the method comprises:

providing, by the cloud platform, an image file upload box, a name text box, and an OS
version selection box, wherein the image file upload box is used to receive the second client image
15 file uploaded by the client, the name text box is used to enter a name of the second client image
file, and the OS version selection box is used to select an OS version of the second client image
file.

9. The method according to any one of claims 7 to 8, wherein the software in the second
software operating environment is an operating system.

20 10. The method according to any one of claims 7 to 8, wherein the software in the second
software operating environment is an application software.

11. The method according to any one of claims 7 to 10, wherein a format of the second cloud
platform image file is a qcow2 format or a zvhd format.

25 12. The method according to any one of claims 7 to 11, wherein a format of the second client
image file is one of a vhd format, a qcow2 format, a zvhd format, or a vmdk format.

13. The method according to any one of claims 7 to 12, wherein the fourth license is a license
provided by the client or another cloud platform.

14. The method according to any one of claims 7 to 13, wherein a license fee of the software
in the second software operating environment in the second virtual machine is charged in the cloud
30 platform.

15. A virtual machine management apparatus for a cloud platform, wherein the apparatus

comprises:

a first obtaining module, configured to provide an Object Storage Service(OSS) user bucket, the OSS user bucket is used to receive a first client image file which is uploaded by a client, wherein the first client image file carries a first software operating environment and a license, and
5 the license is used to authenticate a software in the first software operating environment;

a first generation module, configured to provide a Bring Your Owner License (BYOL) option and a Buy License From Platform (BLFP) option; receive an instruction for triggering the BYOL option; generate a first cloud platform image file according to the first client image file in the OSS user bucket, wherein the first cloud platform image file is used to create a first virtual machine on
10 the cloud platform, and a license fee of the software running on the first virtual machine is exempted in the cloud platform.

16. The apparatus according to claim 15, wherein the first obtaining module, further configured to provide an image file upload box, a name text box, and an OS version selection box, wherein the image file upload box is used to receive the first client image file uploaded by the
15 client, the name text box is used to enter a name of the first client image file, and the OS version selection box is used to select an OS version of the first client image file.

17. The apparatus according to any one of claims 15 to 16, wherein the software in the first software operating environment is an operating system.

18. The apparatus according to any one of claims 15 to 16, wherein the software in the first
20 software operating environment is an application software.

19. The apparatus according to any one of claims 15 to 18, wherein a format of the first cloud platform image file is a qcow2 format or a zvhd format.

20. The apparatus according to any one of claims 15 to 20, wherein a format of the first client image file is one of a vhd format, a qcow2 format, a zvhd format, or a vmdk format.

25 21. A virtual machine management apparatus for a cloud platform, wherein the apparatus comprises:

an obtaining module, configured to provide an Object Storage Service(OSS) user bucket, the OSS user bucket is used to receive a second client image file which is uploaded by a client, wherein the second client image file carries a second software operating environment;

30 a generation module, configured to provide a Bring Your Owner License (BYOL) option and a Buy License From Platform (BLFP) option; receive an instruction for triggering the BLFP option;

generate a second cloud platform image file according to the second client image file in the OSS user bucket, wherein the second cloud platform image file is used to create a second virtual machine on the cloud platform, the second software operating environment and a license which provided by the cloud platform are set on the second virtual machine, and the license is used to
5 authenticate a software in the second software operating environment.

22. The apparatus according to claim 21, wherein the generation module is further configured to provide an image file upload box, a name text box, and an OS version selection box, wherein the image file upload box is used to receive the second client image file uploaded by the client, the name text box is used to enter a name of the second client image file, and the OS version selection
10 box is used to select an OS version of the second client image file.

23. The apparatus according to any one of claims 21 to 22, wherein the software in the second software operating environment is an operating system.

24. The apparatus according to any one of claims 21 to 22, wherein the software in the second software operating environment is an application software.

15 25. The apparatus according to any one of claims 21 to 24, wherein a format of the second cloud platform image file is a qcow2 format or a zvhd format.

26. The apparatus according to any one of claims 21 to 25, wherein a format of the second client image file is one of a vhd format, a qcow2 format, a zvhd format, or a vmdk format.

20 27. The apparatus according to any one of claims 21 to 26, wherein a license fee of the software running on the second virtual machine is charged in the cloud platform.

28. A computer program configured to cause a computer to execute a method according to any one of claims 1 to 6.

29. A computer readable storage medium which stores the computer program according to claim 28.

25 30. A computer program configured to cause a computer to execute a method according to any one of claims 7 to 14.

31. A computer readable storage medium which stores the computer program according to claim 30.