一，查看KVM虚拟机配置文件及运行状态

1,KVM虚拟机默认的配置文件路径：/etc/libvirt/qemu/

而autostart目录是配置kvm虚拟机开机自启动的目录。

[root@KVM qemu]# cd /etc/libvirt/qemu

[root@KVM qemu]# ll

total 24

drwxr-xr-x 2 root root 4096 Feb 2 15:03 autostart ###开机自启动目录

-rw------- 1 root root 2998 Feb 2 13:54 hadoop1.xml

-rw------- 1 root root 2988 Feb 2 11:39 hadoop2.xml

-rw------- 1 root root 2965 Feb 2 14:03 hadoop4.xml

drwx------ 3 root root 4096 Jan 26 16:47 networks

-rw------- 1 root root 3036 Feb 2 15:52 win7.xml

2，virsh命令帮助

[root@KVM autostart]# virsh --help

virsh [options]... [<command\_string>]

virsh [options]... <command> [args...]

options:

-c | --connect=URI hypervisor connection URI

-r | --readonly connect readonly

-d | --debug=NUM debug level [0-4]

-h | --help this help

-q | --quiet quiet mode

-t | --timing print timing information

-l | --log=FILE output logging to file

-v short version

-V long version

--version[=TYPE] version, TYPE is short or long (default short)

-e | --escape <char> set escape sequence for console

或者直接输入virsh，进入虚拟化交互式终端，输入exit或quit进行退出

[root@KVM autostart]# virsh

Welcome to virsh, the virtualization interactive terminal.

Type: 'help' for help with commands

'quit' to quit

virsh #

3，查看kvm虚拟机状态

[root@KVM autostart]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

23 hadoop4 running

- hadoop1 shut off

- hadoop2 shut off

- oeltest01 shut off

4，虚拟机的开机：

[root@KVM autostart]# virsh start hadoop1

Domain hadoop1 started

[root@KVM autostart]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

24 hadoop1 running

5，虚拟机的关机或断电

（1）默认情况下virsh工具是不能对Linux虚拟机进行关机操作的，需要开启acpid服务。在安装kvm Linux虚拟机必须配置此服务。

[root@localhost ~]#chkconfig acpid on

[root@localhost ~]#service acpid restart

然后使用virsh进行关机

[root@KVM autostart]# virsh shutdown hadoop1

Domain hadoop1 is being shutdown

（2）强制关闭电源（就是直接断电，重要的业务不要这么操作）

[root@KVM autostart]# virsh destroy hadoop4

Domain hadoop4 destroyed

6，通过配置文件启动虚拟机

[root@KVM qemu]# virsh create /etc/libvirt/qemu/hadoop4.xml

Domain hadoop4 created from /etc/libvirt/qemu/hadoop4.xml

7，配置开机自启动虚拟机（autostart目录是kvm虚拟机开机自启动目录，可以看到该目录中有kvm配置文件的链接）

[root@KVM autostart]# virsh autostart hadoop4

Domain hadoop4 marked as autostarted

[root@KVM autostart]# ll

total 0

lrwxrwxrwx 1 root root 29 Feb 2 17:09 hadoop4.xml -> /etc/libvirt/qemu/hadoop4.xml

lrwxrwxrwx 1 root root 26 Feb 2 15:03 win7.xml -> /etc/libvirt/qemu/win7.xml

8，导出kvm虚拟机配置文件，可以通过这种方式进行配置文件的备份。

[root@KVM qemu]# virsh dumpxml hadoop4 > /etc/libvirt/qemu/hadoop4.bak.xml

[root@KVM qemu]# ll

total 32

drwxr-xr-x 2 root root 4096 Feb 2 17:09 autostart

-rw-r--r-- 1 root root 1 Feb 2 17:13 hadoop1.bak.xml

9，删除虚拟机，由于kvm虚拟机是由配置文件和磁盘文件组成，如果删除的话，把两个文件都要删除

[root@KVM qemu]# virsh undefine hadoop4 ###删除hadoop.xml文件，但没有删除磁盘文件

Domain hadoop4 has been undefined

[root@KVM qemu]# ll

total 28

drwxr-xr-x 2 root root 4096 Feb 2 17:18 autostart

-rw-r--r-- 1 root root 1 Feb 2 17:13 hadoop1.bak.xml

-rw------- 1 root root 2998 Feb 2 13:54 hadoop1.xml

-rw------- 1 root root 2988 Feb 2 11:39 hadoop2.xml

-rw-r--r-- 1 root root 3205 Feb 2 17:13 hadoop4.bak.xml

drwx------ 3 root root 4096 Jan 26 16:47 networks

-rw------- 1 root root 3036 Feb 2 15:52 win7.xml

[root@KVM qemu]# rm -rf /images/test/hadoop4.img ###删除磁盘文件

[root@KVM qemu]#

wKiom1awdUiAXz3vAABB6021GzY021.png

10，重新定义虚拟机配置文件。可通过刚才导出的配置文件来恢复虚拟机，并重新定义

[root@KVM qemu]# mv hadoop4.bak.xml hadoop4.xml ###恢复配置文件

[root@KVM qemu]# ll

total 28

drwxr-xr-x 2 root root 4096 Feb 2 17:18 autostart

-rw-r--r-- 1 root root 1 Feb 2 17:13 hadoop1.bak.xml

-rw------- 1 root root 2998 Feb 2 13:54 hadoop1.xml

-rw------- 1 root root 2988 Feb 2 11:39 hadoop2.xml

-rw-r--r-- 1 root root 3205 Feb 2 17:13 hadoop4.xml

drwx------ 3 root root 4096 Jan 26 16:47 networks

-rw------- 1 root root 3036 Feb 2 15:52 win7.xml

[root@KVM qemu]# virsh define /etc/libvirt/qemu/hadoop4.xml ###重新定义配置文件

Domain hadoop4 defined from /etc/libvirt/qemu/hadoop4.xml

[root@KVM qemu]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

24 hadoop1 running

25 hadoop2 running

- hadoop4 shut off ###定义生效

- oeltest01 shut off

11，编辑kvm虚拟机配置文件可以使用virsh edit 虚拟机名。不过也可以直接通过vi /etc/libvirt/qemu/hadoop4.xml也是可以修改的，但不建议。

[root@KVM qemu]# virsh edit hadoop4

<domain type='qemu'>

<name>hadoop4</name>

<uuid>586b3cae-943f-d283-d8e7-ed62b01bfa34</uuid>

<memory unit='KiB'>1048576</memory>

<currentMemory unit='KiB'>1048576</currentMemory>

<vcpu placement='static'>1</vcpu>

<os>

<type arch='x86\_64' machine='rhel6.6.0'>hvm</type>

<boot dev='hd'/>

</os>

<features>

<acpi/>

<apic/>

<pae/>

</features>

<clock offset='utc'/>

<on\_poweroff>destroy</on\_poweroff>

<on\_reboot>restart</on\_reboot>

<on\_crash>restart</on\_crash>

<devices>

<emulator>/usr/libexec/qemu-kvm</emulator>

<disk type='file' device='disk'>

<driver name='qemu' type='raw' cache='none'/>

<source file='/images/test/hadoop4.img'/>

<target dev='hda' bus='ide'/>

<address type='drive' controller='0' bus='0' target='0' unit='0'/>

</disk>

<disk type='block' device='cdrom'>

<driver name='qemu' type='raw'/>

<target dev='hdc' bus='ide'/>

<readonly/>

<address type='drive' controller='0' bus='1' target='0' unit='0'/>

</disk>

<controller type='usb' index='0' model='ich9-ehci1'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x7'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci1'>

<master startport='0'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x0' multifunction='on'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci2'>

<master startport='2'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x1'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci3'>

<master startport='4'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x2'/>

</controller>

<controller type='ide' index='0'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x01' function='0x1'/>

</controller>

<interface type='network'>

<mac address='52:54:00:fe:f5:a3'/>

<source network='default'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x03' function='0x0'/>

</interface>

<serial type='pty'>

<target port='0'/>

</serial>

<console type='pty'>

<target type='serial' port='0'/>

</console>

<input type='mouse' bus='ps2'/>

<graphics type='vnc' port='5914' autoport='no' listen='0.0.0.0'>

<listen type='address' address='0.0.0.0'/>

</graphics>

<video>

<model type='cirrus' vram='9216' heads='1'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x02' function='0x0'/>

</video>

<memballoon model='virtio'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x05' function='0x0'/>

</memballoon>

</devices>

</domain>

使用vi也可以进行编辑修改该配置文件

[root@KVM qemu]# vi /etc/libvirt/qemu/hadoop4.xml

<!--

WARNING: THIS IS AN AUTO-GENERATED FILE. CHANGES TO IT ARE LIKELY TO BE

OVERWRITTEN AND LOST. Changes to this xml configuration should be made using:

virsh edit hadoop4

or other application using the libvirt API.

-->

<domain type='qemu'>

<name>hadoop4</name>

<uuid>586b3cae-943f-d283-d8e7-ed62b01bfa34</uuid>

<memory unit='KiB'>1048576</memory>

<currentMemory unit='KiB'>1048576</currentMemory>

<vcpu placement='static'>1</vcpu>

<os>

<type arch='x86\_64' machine='rhel6.6.0'>hvm</type>

<boot dev='hd'/>

</os>

<features>

<acpi/>

<apic/>

<pae/>

</features>

<clock offset='utc'/>

<on\_poweroff>destroy</on\_poweroff>

<on\_reboot>restart</on\_reboot>

<on\_crash>restart</on\_crash>

<devices>

<emulator>/usr/libexec/qemu-kvm</emulator>

<disk type='file' device='disk'>

<driver name='qemu' type='raw' cache='none'/>

<source file='/images/test/hadoop4.img'/>

<target dev='hda' bus='ide'/>

<address type='drive' controller='0' bus='0' target='0' unit='0'/>

</disk>

<disk type='block' device='cdrom'>

<driver name='qemu' type='raw'/>

<target dev='hdc' bus='ide'/>

<readonly/>

<address type='drive' controller='0' bus='1' target='0' unit='0'/>

</disk>

<controller type='usb' index='0' model='ich9-ehci1'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x7'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci1'>

<master startport='0'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x0' multifunction='on'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci2'>

<master startport='2'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x1'/>

</controller>

<controller type='usb' index='0' model='ich9-uhci3'>

<master startport='4'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x04' function='0x2'/>

</controller>

<controller type='ide' index='0'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x01' function='0x1'/>

</controller>

<interface type='network'>

<mac address='52:54:00:fe:f5:a3'/>

<source network='default'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x03' function='0x0'/>

</interface>

<serial type='pty'>

<target port='0'/>

</serial>

<console type='pty'>

<target type='serial' port='0'/>

</console>

<input type='mouse' bus='ps2'/>

<graphics type='vnc' port='5914' autoport='no' listen='0.0.0.0'>

<listen type='address' address='0.0.0.0'/>

</graphics>

<video>

<model type='cirrus' vram='9216' heads='1'/>

<address type='pci' domain='0x0000' bus='0x00' slot='0x02' function='0x0'/>

</video>

<memballoon model='virtio'>

<address type='pci' domain='0x0000' bus='0x00' slot='0x05' function='0x0'/>

</memballoon>

</devices>

</domain>

12，其他virsh命令：

（1）挂起服务器

[root@KVM qemu]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

24 hadoop1 running

25 hadoop2 running

- hadoop4 shut off

- oeltest01 shut off

[root@KVM qemu]# virsh suspend hadoop1

Domain hadoop1 suspended

[root@KVM qemu]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

24 hadoop1 paused

25 hadoop2 running

- hadoop4 shut off

- oeltest01 shut off

（2）恢复服务器

[root@KVM qemu]# virsh resume hadoop1

Domain hadoop1 resumed

[root@KVM qemu]# virsh list --all

Id Name State

----------------------------------------------------

21 win7 running

24 hadoop1 running

25 hadoop2 running

- hadoop4 shut off

- oeltest01 shut off

如果想知道更多的命令，可以通过virsh --help进行查询。