**Access a virtual machine’s console.**

Note: This is an [RHCSA 7 exam objective](https://www.certdepot.net/rhel7-rhcsa-exam-objectives/).

**Standard procedure**

With **KVM**, to access the virtual machine’s console under **X Window**, type:

# **virt-manager**

If you aren’t under **X Window**, there is another way to access a virtual machine’s console: you can go through a **serial console**.

On the virtual machine, add ‘**console=ttyS0**‘ at the end of the kernel lines in the **/boot/grub2/grub.cfg** file:

# **grubby --update-kernel=ALL --args="console=ttyS0"**

Note: Alternatively, you can edit the **/etc/default/grub** file, add ‘**console=ttyS0**‘ to the **GRUB\_CMDLINE\_LINUX** variable and execute ‘**# grub2-mkconfig -o /boot/grub2/grub.cfg**‘.

Now, reboot the virtual machine:

# **reboot**

With **KVM**, connect to the virtual machine’s console (here **vm.example.com**):

# **virsh console vm.example.com**

Connected to domain vm.example.com

Escape character is ^]

Red Hat Enterprise Linux Server 7.0 (Maipo)

Kernel 3.10.0-121.el7.x86\_64 on an x86\_64

vm login:

**Emergency procedure**

Sometimes you have lost all links to your virtual machine (error in the **/etc/fstab** file, ssh configuration, etc) and, as you didn’t set up any virtual console, you are in real trouble. There is still a solution!  
Connect to the physical host and shut down your virtual machine (here called **vm.example.com**):

# **virsh destroy vm.example.com**

Define where the virtual machine image file is located (by default in the **/var/lib/libvirt/images** directory with a name like **vm.example.com.img**):

# **virsh dumpxml | grep "source file="**

<source file='/var/lib/libvirt/images/vm.example.com.img'/>

Map your virtual machine image file into the host environment (**-a** for add and **-v** for verbose):

# **kpartx -av /var/lib/libvirt/images/vm.example.com.img**

add map loop0p1 (253:2): 0 1024000 linear /dev/loop0 2048

add map loop0p2 (253:3): 0 10240000 linear /dev/loop0 1026048

From the previous display, you know that you’ve got two partitions (in fact **/boot** and **/**, distinguishable by their respective size).  
You need to mount the **/boot** partition to be able to change the grub configuration:

# **mount /dev/mapper/loop0p1 /mnt**

Then, edit the **/mnt/grub2/grub.cfg** file and add ‘**console=ttyS0**‘ at the end of every line containing **/vmlinuz** (the **linux** kernel).  
Unmount the partition:

# **umount /mnt**

Unmap the virtual machine image file (**-d** for delete and **-v** for verbose):

# **kpartx -dv /var/lib/libvirt/images/vm.example.com.img**

del devmap : loop0p2

del devmap : loop0p1

loop deleted : /dev/loop0

Restart your virtual machine:

# **virsh start vm.example.com**

Domain vm.example.com started

Connect to your virtual machine console:

# **virsh console vm.example.com**

Connected to domain vm.example.com

Escape character is ^]

CentOS Linux 7 (Core)

Kernel 3.10.0-123.el7.x86\_64 on an x86\_64

vm login:

This procedure works for **RHEL 6**/**CentOS 6** and **RHEL 7**/**CentOS 7**.