**Install Red Hat Enterprise Linux systems as virtual guests.**

**Presentation**

Installing an **RHEL 7** system as virtual guest requires two steps:

* creating a **Kickstart** file with all the configuration parameters (ip address, disk partitioning, etc),
* running the command for the creation itself.

**Kickstart File**

To create a VM called **postfix.example.com** (here with an IP address of **192.168.1.10**, a **gateway** in **192.168.1.1**, a **DNS** server in **192.168.1.5**, a **repository** server in **192.168.1.5**, **Pass1234** as a password, and a total disk size of **6GB**), create the file **/var/www/html/conf/ks\_postfix.cfg** and paste the following lines:

**keyboard --vckeymap=us --xlayouts='us'**

**lang en\_US.UTF-8**

**network --device=eth0 --bootproto=static --ip=192.168.1.10 --netmask=255.255.255.0 --gateway=192.168.1.1 --nameserver=192.168.1.5 --activate --ipv6=auto**

**network --hostname=postfix.example.com**

**rootpw *Pass1234***

**timezone America/Los\_Angeles --isUtc**

**bootloader --location=mbr --boot-drive=vda**

**clearpart --all --initlabel --drives=vda**

**ignoredisk --only-use=vda**

**part pv.9 --fstype="lvmpv" --ondisk=vda --size=5000**

**#part /boot/efi --fstype=efi --grow --maxsize=200 --size=20**

**part /boot --fstype="ext4" --ondisk=vda --size=300**

**volgroup rhel --pesize=4096 pv.9**

**logvol swap  --fstype="swap" --size=500 --name=swap --vgname=rhel**

**logvol /  --fstype="ext4" --size=3072 --name=root --vgname=rhel**

**%packages**

**@base**

**@core**

**%end**

**reboot**

Note: Comment out the line beginning with “part /boot/efi” in case of an EFI-based system.

**Creation Command**

Run the following command:

# **/bin/virt-install \**

**--virt-type kvm \**

**--name=postfix.example.com \**

**--disk path=/var/lib/libvirt/images/postfix.example.com.img,size=6 \**

**--ram=1024 \**

**--vcpus=1 \**

**--os-variant=rhel7 \**

**--accelerate \**

**--graphics vnc \**

**-v -l http://192.168.1.5/repo/CentOS/7/os/x86\_64/ \**

**--network bridge:br0 \**

**--extra-args="console=tty0 console=ttyS0,115200 ks=http://192.168.1.5/conf/ks\_**

**postfix.cfg"**

Note1: **http** in the previous command can be replaced with **nfs**, **ftp**, etc.  
Note2: If you get this message “**ERROR internal error: process exited while connecting to monitor: qemu-kvm: -chardev pty,id=charserial0: Failed to create chardev**“, follow this [thread](https://www.centos.org/forums/viewtopic.php?f=48&t=48075).  
Replace “**devpts  /dev/pts  devpts  defaults  0  0**” with “**devpts  /dev/pts  devpts  gid=5,mode=620  0  0**” in the **/etc/fstab** file of the KVM host.  
Note3: Since **RHEL 7.4**, **1024MB** of memory is not enough anymore, use at least **1064MB**.