



**▲** For more information on the Linux dnsmasq security vulnerabilities (**MULTIPLE CVEs**), please see this Vulnerability Article (<https://access.redhat.com/security/vulnerabilities/3199382>).

## Chapter 29. Configuring the Xen kernel boot parameters

The GNU Grand Unified Boot Loader (GRUB) is a program for booting various installed operating systems or kernels. GRUB also allows the user to pass arguments to the kernel. The GRUB configuration file (located in `/boot/grub/grub.conf`) creates the list of operating systems the GRUB boot menu interface. When you install the **kernel-xen** RPM, a script adds the **kernel-xen** entry to the GRUB configuration file which boots **kernel-xen** by default. Edit the **grub.conf** file to modify the default kernel or to add additional kernel parameters.

```
title Red Hat Enterprise Linux Server (2.6.18-3.el5xen) root (hd0,0) kernel
/xen.gz--2.6.18-3.el5 module /vmlinuz-2.6..18-3.el5xen ro root=/dev/VolGroup00/LogVol100
rhgb quiet module /initrd-2.6.18-3. el5xenxen.img
```

If you set your Linux grub entries to reflect this example, the boot loader loads the hypervisor, **initrd** image, and Linux kernel. Since the kernel entry is on top of the other entries, the kernel loads into memory first. The boot loader sends, and receives, command line arguments to and from the hypervisor and Linux kernel. This example entry shows how you would restrict the Dom0 linux kernel memory to 800 MB.

```
title Red Hat Enterprise Linux Server (2.6.18-3.el5xen) root (hd0,0) kernel
/xen.gz--2.6.18-3.el5 dom0_mem=800M module /vmlinuz-2.6..18-3.el5xen ro
root=/dev/VolGroup00/LogVol100 rhgb quiet module /initrd-2.6.18-3. el5xenxen.img
```

You can use these GRUB parameters to configure the Virtualization hypervisor:

```
mem
```

This limits the amount of memory that is available to the hypervisor kernel.

```
com1=115200, 8n1
```

This enables the first serial port in the system to act as serial console (com2 is assigned for the next port, and so on).

```
dom0_mem
```

This limits the memory available for the hypervisor.

```
dom0_max_vcpus
```

This limits the amount of CPUs visible to the Xen domain0.

```
acpi
```

This switches the ACPI hypervisor to the hypervisor and domain0. The ACPI parameter options include:

```
/* **** Linux config options: propagated to domain0 ****/ /* "acpi=off": Disables both
ACPI table parsing and interpreter. */ /* "acpi=force": Overrides the disable blacklist.
*/ /* "acpi=strict": Disables out-of-spec workarounds. */ /* "acpi=ht": Limits ACPI from
boot-time to enable HT. */ /* "acpi=noirq": Disables ACPI interrupt routing. */
```

```
noacpi
```

This disables ACPI for interrupt delivery.

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