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CentOS Linux Install OpenVZ Virtualization Software

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This entry is part 2 of 5 in the series [RHEL / CentOS OpenVZ Virtualization](#) ^[1]

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How do I install OpenVZ Virtualization container software under Red Hat Enterprise Linux or CentOS Linux 5.x server?

OpenVZ can be installed using yum command itself. All you have to do is setup correct repo.



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Step # 1: Setup Yum Repo

Type the following commands. cd to /etc/yum.repos.d

```
# cd /etc/yum.repos.d
```



[7]

Download repo file:

```
# wget http://download.openvz.org/openvz.repo
```

Finally, import GPG key:

```
# rpm --import http://download.openvz.org/RPM-GPG-Key-OpenVZ
```

Step # 2: Update Kernel Configuration

Type the following command to install OpenVZ Linux kernel to install 64 bit smp kernel (up to 64 GB of RAM support):

```
# yum install ovzkernel
```

Sample Outputs:

```
Loaded plugins: fastestmirror, priorities
Loading mirror speeds from cached hostfile
* addons: centose.centos.org
* updates: centosh3.centos.org
* extras: centose.centos.org
* rpmforge: apt.sw.be
* base: centose.centos.org
* openvz-kernel-rhel5: mirrors.nullroute.me
* openvz-utils: mirrors.nullroute.me
396 packages excluded due to repository priority protections
Setting up Install Process
Parsing package install arguments
Resolving Dependencies
--> Running transaction check
--> Package ovzkernel.i686 0:2.6.18-128.1.1.el5.028stab062.3 set to be installed
--> Finished Dependency Resolution

Dependencies Resolved
```

```

=====
Package                                Arch                                Version
=====
Installing:
ovzkernel                              i686                                2.6.18-128.1.1.el5.028stab062.3

Transaction Summary
=====
Install      1 Package(s)
Update       0 Package(s)
Remove       0 Package(s)

Total download size: 19 M
Is this ok [y/N]: y
Downloading Packages:
ovzkernel-2.6.18-128.1.1.el5.028stab062.3.i686.rpm
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : ovzkernel                                [1/1]

Installed: ovzkernel.i686 0:2.6.18-128.1.1.el5.028stab062.3
Complete!

```

Alternatively, type the following command to install SMP + PAE support + 4/4GB split (up to 64 GB of RAM support) kernel:

```
# yum install ovzkernel-ent
```

You can install the following kernels:

1. **ovzkernel** : Virtuozzo Linux kernel (the core of the Linux operating system)
2. **ovzkernel-PAE** : The Linux kernel compiled for PAE capable machines.
3. **ovzkernel-PAE-devel** : Development package for building kernel modules to match the PAE kernel.
4. **ovzkernel-devel** : Development package for building kernel modules to match the kernel.
5. **ovzkernel-ent** : The Linux kernel compiled for huge mem capable machines.
6. **ovzkernel-ent-devel** : Development package for building kernel modules to match the ent kernel.
7. **ovzkernel-xen**: The Linux kernel compiled for Xen VM operations
8. **ovzkernel-xen-devel** : Development package for building kernel modules to match the kernel.

Update /etc/sysctl.conf

The OpenVZ kernel is installed and updated your GRUB configuration i.e. after a reboot, the OpenVZ kernel starts automatically. However, you need to make some changes to kernel config. Edit /etc/sysctl.conf:

```
# vi /etc/sysctl.conf
```

Setup parameters as follows:

```

# Enable packet forwarding enabled
net.ipv4.ip_forward = 1
net.ipv6.conf.default.forwarding = 1
net.ipv6.conf.all.forwarding = 1
# Disable proxy arp
net.ipv4.conf.default.proxy_arp = 0
# Enables source route verification
net.ipv4.conf.all.rp_filter = 1
# Enables the magic-sysrq key
kernel.sysrq = 1
# We do not want all our interfaces to send redirects
net.ipv4.conf.default.send_redirects = 1
net.ipv4.conf.all.send_redirects = 0

```

Save and close the file.

Disable SELinux

You must disable SELinux by editing `/etc/sysconfig/selinux`:

```
# vi /etc/sysconfig/selinux
```

Place the following directive:

```
SELINUX=disabled
```

Save and close the file.

Installing The VZ Utilities

Type the following command:

```
# yum install vzctl vzquota
```

Sample Outputs:

```
Loaded plugins: fastestmirror, priorities
Loading mirror speeds from cached hostfile
 * addons: centosj-msync-dvd.centos.org
 * updates: centosh3.centos.org
 * extras: centose.centos.org
 * rpmforge: apt.sw.be
 * base: centosj3.centos.org
 * openvz-kernel-rhel5: openvz.mirrors.skynet.be
 * openvz-utils: openvz.mirrors.skynet.be
396 packages excluded due to repository priority protections
Setting up Install Process
Parsing package install arguments
Resolving Dependencies
--> Running transaction check
---> Package vzquota.i386 0:3.0.12-1 set to be updated
---> Package vzctl.i386 0:3.0.23-1 set to be updated
--> Processing Dependency: vzctl-lib = 3.0.23-1 for package: vzctl
--> Processing Dependency: libvzctl-0.0.2.so for package: vzctl
--> Running transaction check
---> Package vzctl-lib.i386 0:3.0.23-1 set to be updated
--> Finished Dependency Resolution
```

Dependencies Resolved

Package	Arch	Version
Installing:		
vzctl	i386	3.0.23-1
vzquota	i386	3.0.12-1
Installing for dependencies:		
vzctl-lib	i386	3.0.23-1

Transaction Summary

```
=====
Install      3 Package(s)
Update      0 Package(s)
Remove      0 Package(s)
```

Total download size: 400 k

Is this ok [y/N]: y

Downloading Packages:

```
(1/3): vzquota-3.0.12-1.i386.rpm
(2/3): vzctl-3.0.23-1.i386.rpm
(3/3): vzctl-lib-3.0.23-1.i386.rpm
-----
```

Total

```
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : vzctl-lib           [1/3]
  Installing      : vzquota             [2/3]
  Installing      : vzctl               [3/3]

Installed: vzctl.i386 0:3.0.23-1 vzquota.i386 0:3.0.12-1
Dependency Installed: vzctl-lib.i386 0:3.0.23-1
Complete!
```

Reboot The Server

Finally, reboot your box and boot into new OpenVZ kernel:

```
# reboot
```

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