

# OS RECOMMENDATIONS

## CEPH DEPENDENCIES

As a general rule, we recommend deploying Ceph on newer releases of Linux. We also recommend deploying on releases with long-term support.

### LINUX KERNEL

- **Ceph Kernel Client**

If you are using the kernel client to map RBD block devices or mount CephFS, the general advice is to use a “stable” or “longterm maintenance” kernel series provided by either <http://kernel.org> or your Linux distribution on any client hosts.

For RBD, if you choose to *track* long-term kernels, we currently recommend 4.x-based “longterm maintenance” kernel series:

- 4.9.z
- 4.4.z

For CephFS, see [CephFS best practices](#) for kernel version guidance.

Older kernel client versions may not support your **CRUSH tunables** profile or other newer features of the Ceph cluster, requiring the storage cluster to be configured with those features disabled.

## PLATFORMS

The charts below show how Ceph’s requirements map onto various Linux platforms. Generally speaking, there is very little dependence on specific distributions aside from the kernel and system initialization package (i.e., sysvinit, upstart, systemd).

### LUMINOUS (12.2.Z)

Distro	Release	Code Name	Kernel	Notes	Testing
CentOS	7	N/A	linux-3.10.0	3	B, I, C
Debian	8.0	Jessie	linux-3.16.0	1, 2	B, I
Debian	9.0	Stretch	linux-4.9	1, 2	B, I
Fedora	22	N/A	linux-3.14.0		B, I
RHEL	7	Maipo	linux-3.10.0		B, I
Ubuntu	14.04	Trusty Tahr	linux-3.13.0		B, I, C
Ubuntu	16.04	Xenial Xerus	linux-4.4.0	3	B, I, C

### JEWEL (10.2.Z)

Distro	Release	Code Name	Kernel	Notes	Testing
CentOS	7	N/A	linux-3.10.0	3	B, I, C
Debian	8.0	Jessie	linux-3.16.0	1, 2	B, I
Fedora	22	N/A	linux-3.14.0		B, I
RHEL	7	Maipo	linux-3.10.0		B, I
Ubuntu	14.04	Trusty Tahr	linux-3.13.0		B, I, C

### HAMMER (0.94.Z)

Distro	Release	Code Name	Kernel	Notes	Testing
CentOS	6	N/A	linux-2.6.32	1, 2	
CentOS	7	N/A	linux-3.10.0		B, I, C
Debian	7.0	Wheezy	linux-3.2.0	1, 2	
Ubuntu	12.04	Precise Pangolin	linux-3.2.0	1, 2	

Ubuntu	14.04	Trusty Tahr	linux-3.13.0	B, I, C
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FIREFLY (0.80.Z)

Distro	Release	Code Name	Kernel	Notes	Testing
CentOS	6	N/A	linux-2.6.32	1, 2	B, I
CentOS	7	N/A	linux-3.10.0		B
Debian	7.0	Wheezy	linux-3.2.0	1, 2	B
Fedora	19	Schrödinger's Cat	linux-3.10.0		B
Fedora	20	Heisenbug	linux-3.14.0		B
RHEL	6	Santiago	linux-2.6.32	1, 2	B, I, C
RHEL	7	Maipo	linux-3.10.0		B, I, C
Ubuntu	12.04	Precise Pangolin	linux-3.2.0	1, 2	B, I, C
Ubuntu	14.04	Trusty Tahr	linux-3.13.0		B, I, C

NOTES

- **1:** The default kernel has an older version of `bt rfs` that we do not recommend for `ceph-osd` storage nodes. We recommend using XFS.
- **2:** The default kernel has an old Ceph client that we do not recommend for kernel client (kernel RBD or the Ceph file system). Upgrade to a recommended kernel.
- **3:** The default kernel regularly fails in QA when the `bt rfs` file system is used. We do not recommend using `bt rfs` for backing Ceph OSDs.

TESTING

- **B:** We build release packages for this platform. For some of these platforms, we may also continuously build all ceph branches and exercise basic unit tests.
  - **I:** We do basic installation and functionality tests of releases on this platform.
  - **C:** We run a comprehensive functional, regression, and stress test suite on this platform on a continuous basis. This includes development branches, pre-release, and released code.
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