INSTALLING RPM PACKAGES

You may install stable release packages (for stable deployments), development release packages (for the latest features), or development testing packages (for development and QA only). Do not add multiple package sources at the same time.

INSTALL RELEASE KEY

Packages are cryptographically signed with the `release.asc` key. Add our release key to your system's list of trusted keys to avoid a security warning:

```
sudo rpm --import 'https://ceph.com/git/?p=ceph.git;a=blob_plain;f=keys/release.asc'
```

ADD RELEASE PACKAGES

CUTTLEFISH

Cuttlefish is the most recent stable release of Ceph. These packages are recommended for anyone deploying Ceph in a production environment. Critical bug fixes are backported and point releases are made as necessary.

Packages are currently built for the RHEL/CentOS6 (`el6`), Fedora 17 (`f17`), OpenSUSE 12 (`opensuse12`), and SLES (`sles11`) platforms. The repository package installs the repository details on your local system for use with `yum` or `up2date`.

Replase the``{DISTRO}`` below with the distro codename:

```
su -c 'rpm -Uvh http://ceph.com/rpm-cuttlefish/{DISTRO}/x86_64/ceph-release-1-0.el6.noarch.rp
```

For example, for CentOS 6 or other RHEL6 derivatives (`el6`):

```
su -c 'rpm -Uvh http://ceph.com/rpm-cuttlefish/el6/x86_64/ceph-release-1-0.el6.noarch.rpm'
```

You can download the RPMs directly from:

```
http://ceph.com/rpm-cuttlefish
```

BOBTAIL

Bobtail is the previous recent major release of Ceph. These packages are recommended for those who have already deployed bobtail in production and are not yet ready to upgrade.

Packages are currently built for the RHEL/CentOS6 (`el6`), Fedora 17 (`f17`), OpenSUSE 12 (`opensuse12`), and SLES (`sles11`) platforms. The repository package installs the repository details on your local system for use with `yum` or `up2date`.

Replace the``{DISTRO}`` below with the distro codename:

```
su -c 'rpm -Uvh http://ceph.com/rpm-bobtail/{DISTRO}/x86_64/ceph-release-1-0.el6.noarch.rpm'
```

For example, for CentOS 6 or other RHEL6 derivatives (`el6`):

```
su -c 'rpm -Uvh http://ceph.com/rpm-bobtail/el6/x86_64/ceph-release-1-0.el6.noarch.rpm'
```

You can download the RPMs directly from:

```
http://ceph.com/rpm-bobtail
```

DEVELOPMENT RELEASE PACKAGES

Our development process generates a new release of Ceph every 3-4 weeks. These packages are faster-moving than the stable releases. Development packages have new features integrated quickly, while still undergoing several weeks of QA prior to release.

Packages are cryptographically signed with the `release.asc` key. Add our release key to your system's list of trusted keys to avoid a security warning:

```
sudo rpm --import 'https://ceph.com/git/?p=ceph.git;a=blob_plain;f=keys/autobuild.asc'
```

Packages are currently built for the CentOS-6 and Fedora 17 platforms. The repository package installs the repository details on your local system for use with `yum` or `up2date`.

For CentOS-6:

```
su -c 'rpm -Uvh http://ceph.com/rpms/el6/x86_64/ceph-release-1-0.el6.noarch.rpm'
```

For Fedora 17:

```
su -c 'rpm -Uvh http://ceph.com/rpms/fc17/x86_64/ceph-release-1-0.fc17.noarch.rpm'
```

You can download the RPMs directly from:

```
http://ceph.com/rpm-testing
```

INSTALLING CEPH PACKAGES

Once you have added either release or development packages to `yum`, you can install Ceph:

```
sudo yum install ceph
```

INSTALLING CEPH OBJECT STORAGE

Ceph Object Storage runs on Apache and FastCGI in conjunction with the Ceph Storage Cluster.

1. Install Apache and FastCGI.

   ```
   rpm -ivh fcgi-2.4.0-10.el6.x86_64.rpm
   rpm -ivh mod_fastcgi-2.4.6-2.el6.rf.x86_64.rpm
   ```

2. Install the Ceph Object Storage daemon.

   ```
   yum install ceph-radosgw
   ```

3. Add the following lines to your Ceph configuration file.

```
[client.radosgw.gateway]
      host = {fqdn}
      keyring = /etc/ceph/keyring.radosgw.gateway
      rgw socket path = /tmp/radosgw.sock
      log file = /var/log/ceph/radosgw.log
      rgw print continue = false
```

Note: Replace {fqdn} with the output from hostname. This is important. Debian systems use the simple hostname, but on CentOS 6/RHEL 6 you must use the fully qualified domain name.

1. Create a data directory.

```
mkdir -p /var/lib/ceph/radosgw/ceph-radosgw.gateway
```

2. Change httpd ServerName in /etc/httpd/conf/httpd.conf.

```
ServerName {FQDN}
```

3. Create an Apache httpd virtual host in /etc/httpd/conf.d/rgw.conf.

```
FastCgiExternalServer /var/www/s3gw.fcgi -socket /tmp/radosgw.sock
<VirtualHost *:80>
        ServerName <FQDN of the host>
        ServerAdmin root@localhost
        DocumentRoot /var/www
        RewriteEngine On
        RewriteRule ^/([a-zA-Z0-9-_.]*)([/]?.*) /s3gw.fcgi?page=$1&params=$2&%{QUERY_STRING}
        <IfModule mod_fastcgi.c>
                <Directory /var/www>
                        Options +ExecCGI
                        AllowOverride All
                        SetHandler fastcgi-script
                        Order allow,deny
                        Allow from all
                        AuthBasicAuthoritative Off
                </Directory>
        </IfModule>
        AllowEncodedSlashes On
        ErrorLog /var/log/httpd/error.log
        CustomLog /var/log/httpd/access.log combined
        ServerSignature Off
</VirtualHost>
```

1. Turn off fastcgiwrapper in /etc/httpd/conf.d/fastcgi.conf by commenting out the following line:

```
#FastCgiWrapper On
```

2. Add a fastcgi script.

```
#!/bin/sh
exec /usr/bin/radosgw -c /etc/ceph/ceph.conf -n client.radosgw.gateway
```

3. Make s3gw.fcgi executable:

```
chmod +x /var/www/rgw/s3gw.fcgi
```

4. Create a user key.

```
ceph-authtool -C -n client.radosgw.gateway --gen-key /etc/ceph/keyring.radosgw.gateway
ceph-authtool -n client.radosgw.gateway --cap mon 'allow r' --cap osd 'allow rwx' /etc/ce
ceph auth add client.radosgw.gateway --in-file=/etc/ceph/keyring.radosgw.gateway
```

5. Please make sure /etc/ceph/keyring.radosgw.gateway file and /var/log/ceph/radosgw.log are accessible by the apache user.

```
sudo chown apache:apache /etc/ceph/keyring.radosgw.gateway
sudo chown apache:apache /var/log/ceph/radosgw.log
```

Note: This is important. The user is `root` for Debian.

1. Create `.rgw.buckets` and add it to the Ceph Object Storage daemon.

```
rados mkpool .rgw.buckets
radosgw-admin pool add --pool .rgw.buckets
```

2. Configure Apache and the Ceph Object Storage daemon to start on boot.

```
chkconfig httpd on
chkconfig ceph-radosgw on
```

3. Start the services.

```
/etc/init.d/httpd start
/etc/init.d/ceph-radosgw start
```

See Ceph Object Storage for additional details.