Multisite Synchronization Process

The RADOS Gateway synchronizes metadata and data operations between all master and secondary zone group sets. Metadata operations relate to buckets: creating, deleting, enabling and disabling versioning, and managing users. The meta master, which is in the master zone of the master zone group, manages metadata updates. Data operations are those relevant to objects.

When a multisite configuration is active, the RADOS Gateway performs an initial full synchronization between the master and secondary zones. Subsequent updates are incremental. When the RADOS Gateway writes data to any zone within a zone group, it synchronizes this data between all of the zones in other zone groups. When the RADOS Gateway synchronizes data, all active gateways update the data log and notify the other gateways. When the RADOS Gateway synchronizes metadata because of a bucket or user operation, the master updates the metadata log and notifies the other RADOS Gateways.

Configuring Multisite RGW Deployments

You can deploy, configure, and remove multisite Ceph RADOS Gateway instances by using the Ceph orchestrator command-line interface or by using a service specification file.

Multisite Configuration Example

The following example configures a realm with one zone group containing two zones, one acting as the master zone and the other as a secondary zone. Each zone has one RADOS Gateway instance associated with it.

Configure the Master Zone

These example steps configure the RADOS Gateway instance in the master zone.

1. Create a realm.

```
[ceph: root@node01 /]# radosgw-admin realm create --default --rgw-realm=gold
```

2. Create a master zone group.

```
[ceph: root@node01 /]# radosgw-admin zonegroup create --rgw-zonegroup=us \
  --master --default --endpoints=http://node01:80
```

3. Create a master zone.

```
[ceph: root@node01 /]# radosgw-admin zone create --rgw-zone=datacenter01 \
  --master --rgw-zonegroup=us --endpoints=http://node01:80 \
  --access-key=12345 --secret=67890 --default
```

4. Create a system user.

```
[ceph: root@node01 /]# radosgw-admin user create --uid=sysadm \
  --display-name="SysAdmin" --access-ke y=12345 --secret=67890 --system
```

5. Commit the changes.

```
[ceph: root@node01 /]# radosgw-admin period update --commit
```