Ceph Dashboard: Proposed RGW Features

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Proposed RGW Features for Ceph Dashboard

Admin Workflows

- multi-site setup
- CRUD zone
 - Includes pool placement and storage class
- improved multi-site status
- get/set admin caps (delegate admin privs)
- additional status/stats
 - lifecycle
 - gc
- CRUD Object Gateway Configuration or Authentication (if we're not configuring anything else)
 - config/mgmt of external auth mechs (openid::connect, ldap, &c)
- CRUD user (this exists but is skeletal)
 - get/set policy for user

Tenant / Consumer Workflows

- CRUD bucket (this exists but is skeletal)
 - create / update bucket
 - placement targets
 - get/set acls (on a bucket)
 - get/set policy for bucket
 - enable/disable versioning (on a bucket)
 - get/set lifecycle rules (on a bucket)
 - get/set CORS rules (on a bucket)
 - Mfa-delete
 - x-amz-storage-class
 - delete bucket (already exists)

Tracker: http://tracker.ceph.com/issues/39478 (mgr/dashboard: new RGW workflows & RGW enhancements)

RGW Multi-site User Stories

- As an Administrator, I want to delete the default zonegroup and default zone (per documented best practice).
- As an Administrator, I want to setup multi-site between 2 different Ceph clusters (add).
 - As an Administrator, I want to configure multi-site on the first cluster (add).
 - As an Administrator, I want to quickly configure the multi-site on the second cluster by leveraging the first cluster's multi-site configuration (import/export).
- As an Administrator, I want to be able to specify placement targets and storage classes on my local zone (edit).
- As an Administrator, I want to be able to rename the realm, zonegroup, or zone (rename).
- As an Administrator, I want to be able to view my multi-site topology to understand how the replication is configured (multi-site topology view)
- As an Administrator, I want to be able to quickly see my status and monitor the health and performance of my replication, as well as be alerted when there are problems (overview).



Assumptions

- Assume RGW is configured, i.e. >= 1 RGW daemon
- Each initial RGW deployment in a Ceph cluster includes a default zonegroup and a default zone, but no default realm.
 - It is a best practice to not use the default zonegroup and default zone as it can cause unexpected replication behavior.
 - Specifically, users are expected to delete the default zonegroup and default zone before creating any new realm, zonegroup, zone.
- Most Ceph clusters typically have 1 realm, 1 zonegroup with 2 zones.
- Assumes the same access and secret keys are already configured on each gateway instance.
- Assumes Ceph Dashboard is running on each cluster used in a 2 cluster multi-site configuration.

Ceph Dashboard: Current State

RGW Epic	RGW Feature	Description	Implemented?	ceph-mgr orch impact?
Configure RGW cluster	Single Zone	pool placement and storage class configuration		\checkmark
	Muti-site			✓
Bucket Management	Add/edit/delete		~	
	Bucket Policies			
	Scaling			
Users	Add/edit/delete		\checkmark	
	User Policies			
Zone Configuration	(Part of cluster creation)	pool placement and storage class configuration		
Logging and Troubleshooting				
Performance Monitoring	Buckets			
	Users			
	Daemons		\checkmark	
	lps			
Replication				
Authen/Authorz	Cluster level	LDAP, Keystone, Keycloak		
	Bucket level	OpenID connect, STS		

RGW Designs: Table of Content

- RGW overview (landing page)
- Topology view for initial default configuration
- Delete initial default configuration
- Add multi-site
- Topology view for multi-site configuration (after multi-site configured)
- Edit multi-site
- Export and import realm
- Rename realm/zonegroup/zone
- Enable/disable versioning for a bucket
- RGW Metrics and Alerts Asks

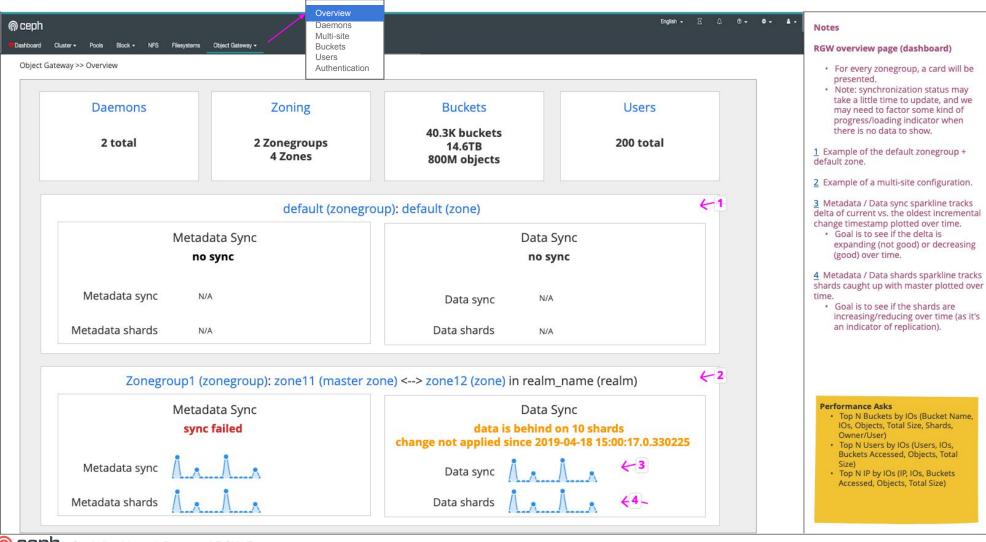


Feature: Improved multi-site status

User Stories

As an Administrator, I want to be able to quickly see my status and monitor the health and performance of my replication, as well as be alerted when there are problems (overview).



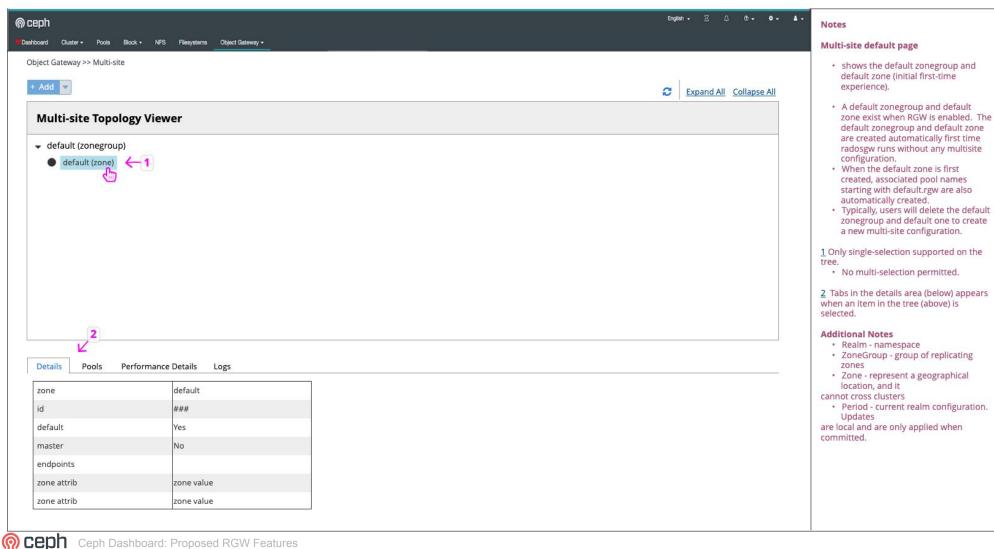


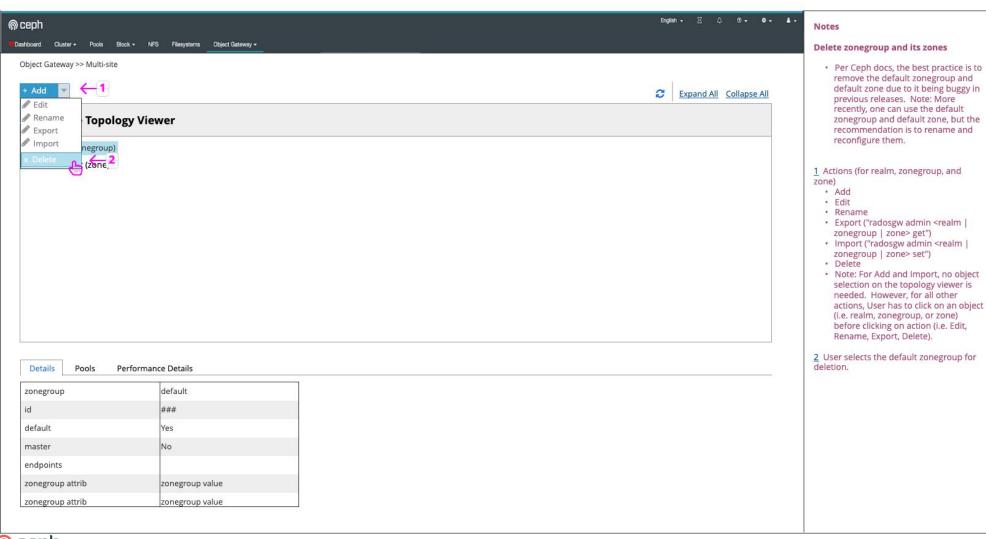
Feature: Delete initial default configuration

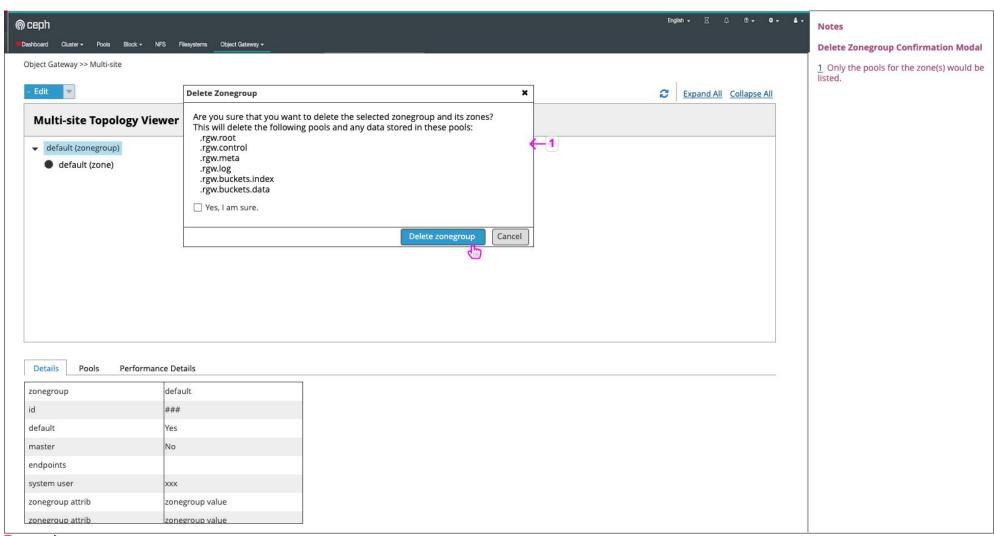
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