Working with Block Volumes/attaching volume to multiple instances.txt

Attaching a Volume to Multiple Instances
The Oracle Cloud Infrastructure Block Volume service provides the capability to attach a block volume to multiple compute instances.

With this feature, you can share block volumes across instances in read/write or read-only mode. Attaching block volumes as read/write an

This topic describes how to attach block volumes as shareable, along with the limits and considerations for this feature.

See Volume Access Types for more information about the available access type options. For attaching volumes to single instances, see Atta

Limits and Considerations
The Block Volume service does not provide coordination for concurrent write operations to block volumes attached to multiple instances, s

Once you attach a block volume to an instance as read-only, it can only be attached to other instances as read-only. If you want to attac

If the block volume is already attached to an instance as read/write non-shareable you can't attach it to another instance until you deta

You can't delete a block volume until it has been detached from all instances it was attached to. When viewing the instances attached to

You can attach up to 32 instances to a shared volume if the volume is not configured for the Ultra High Performance level

Volumes configured for the Ultra High Performance level require multipath-enabled attachments. You can attach up to 25 instances with mul

Block volumes attached as read-only are configured as shareable by default.

Performance characteristics described in Block Volume Performance are per volume, so when a block volume is attached to multiple instance

Volumes configured for the Ultra High Performance level can also be attached to multiple instances, however the total IOPS and throughput
Configuring Multiple Instance Volume Attachments with Read/Write Access
The Block Volume service does not provide coordination for concurrent write operations to volumes attached to multiple instances. To prev

You can see an sample walkthrough of scenario using OCFS2 described in Using the Multiple-Instance Attach Block Volume Feature to Create

Attach the block volume to an instance as Read/Write-Shareable using the Console, CLI, or API.

Set up your OCFS2/O2CB cluster nodes.

Create your OCFS2 file system and mount point.

Required IAM Policy
To use Oracle Cloud Infrastructure, you must be granted security access in a policy by an administrator. This access is required whether

For administrators: The policy in Let users launch compute instances includes the ability to attach/detach existing block volumes. The po

If you're new to policies, see Getting Started with Policies and Common Policies. For reference material about writing policies for insta
Using the Console
To attach a volume to multiple instances from the Instance details page
To attach a volume to multiple instances from the Block Volume details page
To view the instances attached to a volume from the Volume details page
To view the volumes attached to an instance from the Instance details page
Using the CLI
For information about using the CLI, see Command Line Interface (CLI).

To attach a volume to an instance as shareable, read/write
To list all the instances attached to a volume
Using the API
Use the following APIs to attach volumes and work with volume attachments to instances:

AttachVolume

Set the isShareable attribute of AttachVolumeDetails to true.

GetVolumeAttachment
ListVolumeAttachments

The ListVolumeAttachments operation will only return the attached instances that are in compartment you specify. You need to run this ope

For information about using the API and signing requests, see REST API documentation and Security Credentials. For information about SDKs

Additional Resources
See the following links for example deployments of shared file systems on Oracle Cloud Infrastructure.

GitHub project for automated terraform deployment of BeeGFS: oci-beegfs

GitHub project for automated terraform deployment of Lustre: oci-lustre

GitHub project for automated terraform deployments of IBM Spectrum Scale (GPFS) distributed parallel file system on Oracle Cloud Infrastr