Test Suite	Test Case	Steps	Expected results	Status	Note
INSTALLATION TESTS					
Install and configure GCS driver	Copy driver files	1. Get the latest source code of gcs cinder backup driver from private git-hub repo. 2. Copy the source code in cinder backup drivers directory.	Successfully getting and copying the source code	pass	Skip this for Mitaka since we will automatically get google backup driver source code on installing cinder backup service in Mitaka
	Configure cinder.conf	Edit [DEFAULT] section of cinder.conf with below options: (Note: values assigned are for example purpose) **backup_driver = cinder.backup.drivers.google backup_gcs_credential_file = "/home/biarca/gcscinder-0bea0f6844ab.json" backup_gcs_bucket = "gcscinderbucket" backup_gcs_project_id = "gcscinder"** Also, some other configurable options are: backup_gcs_object_size backup_gcs_block_size backup_gcs_user_agent backup_gcs_reader_chunk_size backup_gcs_writer_chunk_size backup_gcs_num_retries backup_gcs_bucket_location backup_gcs_storage_class backup_gcs_retry_error_codes backup_gcs_enable_progress_timer	Successfully editing of cinder.conf with GCS backup driver's specifc options	pass	
	Update cinder exception file		Successfully updated cinder exception file	pass	Skip this in Mitaka
	Restart cinder backup service		Cinder backup service status is up	pass	
BACKUP TESTS					
GCS Cinder Full Backup	Full Backup with size 1	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
	Full Backup with size 5	1. Create Cinder volume of 5 GB Size. 2. Create Backup using Cinder backup-create command	Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
	Full Backup with size 10	1. Create Cinder volume of 10 GB Size. 2. Create Backup using Cinder backup-create command	Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
	Full Backup with wrong json gcs account credential file	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	Authentication and Authorization will fail so backup-creation will end in error state	pass	
	Full Backup with bucket name less than 3 characters	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	HttpError Invalid bucket name	pass	
	Full Backup with bucket name greater than 63 characters	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	HttpError Invalid bucket name	pass	
	Full Backup with bucket name not unique across all projects in Google Cloud Storage.	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	HttpError	pass	
	Full Backup with bucket name already existing in same project id provided in cinder.conf	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	This case is handled in google backup driver source code. Donot create the bucket if it already exists.	pass	
	Full Backup with invalid project id	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	Project id is needed for creating bucket. If project id specified in cinder.conf doesnot belongs to google account credential json file specified in cinder.conf, backup creation will end in error state HttpError	pass	
	Full Backup with backup_gcs_object_size not multiple of backup_gcs_block_size	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	Invalid backup: Chunk size is not multiple of block size for creating hash.	pass	
	Full Backup without updating cinder exception file and some exception occured and code flow trying to reference undefined exception.	1. Create Cinder volume of 1 GB Size. 2. Create Backup using Cinder backup-create command	AttributeError: 'module' object has no attribute	pass	
GCS Cinder Incremental Backup	Incremental Backup with size 1	1. Create Cinder volume of 1 GB Size. 2. Create Full Backup using Cinder backup-create command. 3. Create incremental Backup using Cinder backup-create command with --incremental option.	1. Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
	Incremental Backup with size 5	1. Create Cinder volume of 5 GB Size. 2. Create Full Backup using Cinder backup-create command. 3. Create incremental Backup using Cinder backup-create command with --incremental option.	1. Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
	Incremental Backup with size 10	1. Create Cinder volume of 10 GB Size. 2. Create Full Backup using Cinder backup-create command. 3. Create incremental Backup using Cinder backup-create command with --incremental option.	1. Check for the backup using the Cinder backup-list command to make sure new backup is created and status should be available	pass	
RESTORE TESTS					
GCS Cinder Backup Restore	Full Backup Restore on Same volume	1. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attached the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of backup.	pass	
	Full Backup Restore on new volume	1. Create a new Cinder volume of same or bigger size of source volume. 2. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attached the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of backup.	pass	
	Full Backup Restore on new volume	1. Create a new Cinder volume of smaller size than the source volume. 2. Create the backup-restore using the cinder backup-restore command.	Ex: if new volume size is 1 GB and backup source volume size is 2GB, then ERROR: Invalid volume: volume size 1 is too small to restore backup of size 2. (HTTP 400) (Request-ID: req-5d425c65-cadd-4e37-bcbd-6b775dcd6df8)	pass	

	Backup Restore to Same volume from first incremental backup	1. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attach the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of first incremental backup.	pass																					
	Backup Restore to Same volume from second incremental backup	1. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attach the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of second incremental backup.	pass																					
	Backup Restore to new volume from first incremental backup	1. Create a new Cinder volume of same or bigger size of source volume. 2. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attach the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of first incremental backup.	pass																					
	Backup Restore to new volume from second incremental backup	1. Create a new Cinder volume of same or bigger size of source volume. 2. Create the backup-restore using the cinder backup-restore command.	1. Check for the status of restored volume to be available. 2.Attach the restored volume to a VM and check for the data intact from the restored volume w.r.t the time of second incremental backup.	pass																					