

Geo-restore

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Contents

- Geo-Backup Checks and Investigation Tips
 - 1. Check if SQL DB failover group (FOG) is setup. If below
 - 2. Check if SQL DB is replicating to paired region - run bel...
 - 3. Kusto query to check if one RP is sending its CMS and D...
- Geo-Restore Checks and Investigation Tips
 - 1.1 Check if source director GeoSnapshotCopyActor copie...
 - 1.2 If GeoSnapshotCopyActor reports error in copying sna...

Geo-Backup Checks and Investigation Tips

1. Check if SQL DB failover group (FOG) is setup. If below

```
// SQL DB Failover group primary and replica setup for Orcasbreadth CMS and Director DB
MonGeoDRFailoverGroups
| where PreciseTimeStamp > ago(4h)
| where failover_group_name contains "orc" and failover_group_name contains "br"
| summarize count(), min(TIMESTAMP), max(TIMESTAMP) by SqlDbFailoverGroupName = failover_group_name, PrimarySql
| project ClusterName, PairedRegion, Role=role, SqlDbFailoverGroupName, PrimarySqlDbInstance, PairedRegionSeco
| order by ClusterName
```

ClusterName	PairedRegion	Role	SqlDbFailoverGroupName	PrimarySqlDbInstance	PairedRegionSecondarySqlDbInstance	
cr9.westeurope1-a.control.database.windows.net	North Europe	Secondary	orcasbrcms-northeurope-922765	orcasbrcms-northeurope-232610	orcasbrcms-northeurope-381757	
cr9.westeurope1-a.control.database.windows.net	North Europe	Primary	orcasbrcms-westeurope-131910	orcasbrcms-westeurope-424924	orcasbrcms-westeurope-984630	
cr9.westeurope1-a.control.database.windows.net	North Europe	Secondary	orcasbrdir-northeurope-112104	orcasbrdir-northeurope-146281	orcasbrdir-northeurope-436743	
cr9.westeurope1-a.control.database.windows.net	North Europe	Primary	orcasbrdir-westeurope-401392	orcasbrdir-westeurope-211715	orcasbrdir-westeurope-786902	

ClusterName	PairedRegion	Role	SqlDbFailoverGroupName	PrimarySqlDbInstance	PairedRegionSecondarySqlDbInstance	
cr3.northeurope1-a.control.database.windows.net	West Europe	Primary	orcasbrcms-northeurope-922765	orcasbrcms-northeurope-381757	orcasbrcms-northeurope-232610	
cr3.northeurope1-a.control.database.windows.net	West Europe	Secondary	orcasbrcms-westeurope-131910	orcasbrcms-westeurope-984630	orcasbrcms-westeurope-424924	
cr3.northeurope1-a.control.database.windows.net	West Europe	Primary	orcasbrdir-northeurope-112104	orcasbrdir-northeurope-436743	orcasbrdir-northeurope-146281	
cr3.northeurope1-a.control.database.windows.net	West Europe	Secondary	orcasbrdir-westeurope-401392	orcasbrdir-westeurope-786902	orcasbrdir-westeurope-211715	

2. Check if SQL DB is replicating to paired region - run below in paired region using orcasbreadth\orcasbreadth director-adhocbackingstorequery.xts

Query to OB Director

Query string

```
select 'from director_server_snapshots where host_name = 'd407c2ac3c38'
```

OK

TDS Query to OrcasBreadth Director Metadata Store

Id	snapshot_name	snapshot_identifier
3272464	d407c2ac3c38_2022-11-26T10-52-51_e2508c4f-ef61-4af2-8f70-275fff4e4aaa	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-11-26T10-52-51_e2508c4f-ef61-4af2-8f70-275fff4e4aaa
3286434	d407c2ac3c38_2022-11-27T10-53-12_164116ab-b530-416e-809c-e297ee095996	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-11-27T10-53-12_164116ab-b530-416e-809c-e297ee095996
3300612	d407c2ac3c38_2022-11-28T10-53-32_f4b7205-36a8-46ab-98e7-010215f7d48d	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-11-28T10-53-32_f4b7205-36a8-46ab-98e7-010215f7d48d
3315099	d407c2ac3c38_2022-11-29T10-53-52_97fd1d8a-6ee1-414a-a347-188f3173a372	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-11-29T10-53-52_97fd1d8a-6ee1-414a-a347-188f3173a372
3329645	d407c2ac3c38_2022-11-30T10-54-11_7c26b866-a29c-437e-b090-a45134d35a8b	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-11-30T10-54-11_7c26b866-a29c-437e-b090-a45134d35a8b
3344202	d407c2ac3c38_2022-12-01T10-54-31_b4138b88-f7cf-42d7-804b-47fcf00674f2	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-01T10-54-31_b4138b88-f7cf-42d7-804b-47fcf00674f2
3358795	d407c2ac3c38_2022-12-02T10-54-50_f83ee0d7-87a3-4eaa-9c6c-65d8e2501dac	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-02T10-54-50_f83ee0d7-87a3-4eaa-9c6c-65d8e2501dac
3373269	d407c2ac3c38_2022-12-03T10-55-10_b8494bd9-0b24-462f-9827-c3ac99a7b70a	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-03T10-55-10_b8494bd9-0b24-462f-9827-c3ac99a7b70a
3387700	d407c2ac3c38_2022-12-04T10-55-30_0cbe6526-de7a-4c03-ab9d-8a3385c96889	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-04T10-55-30_0cbe6526-de7a-4c03-ab9d-8a3385c96889
3402389	d407c2ac3c38_2022-12-05T10-55-48_19a36603-c585-41d5-9beb-5af43e0dbaad	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-05T10-55-48_19a36603-c585-41d5-9beb-5af43e0dbaad
3417254	d407c2ac3c38_2022-12-06T10-55-37_b859f419-6281-4d28-ad1e-ab1b07d907fb	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-06T10-55-37_b859f419-6281-4d28-ad1e-ab1b07d907fb
3432131	d407c2ac3c38_2022-12-07T10-55-39_14fa63be-c6f0-4ea1-92f4-6ecb8a12f074	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-07T10-55-39_14fa63be-c6f0-4ea1-92f4-6ecb8a12f074
3447085	d407c2ac3c38_2022-12-08T10-55-05_9eddbb49-6015-4c26-94b1-d0e313247541	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-08T10-55-05_9eddbb49-6015-4c26-94b1-d0e313247541
3462125	d407c2ac3c38_2022-12-09T10-55-11_8d4bfa73-a02a-4111-87a7-98c2dbc6142a	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-09T10-55-11_8d4bfa73-a02a-4111-87a7-98c2dbc6142a
3477045	d407c2ac3c38_2022-12-10T10-55-33_ee128306-f9bb-48cd-9f83-f809bc05f7e0	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-10T10-55-33_ee128306-f9bb-48cd-9f83-f809bc05f7e0
3491812	d407c2ac3c38_2022-12-11T10-55-54_a5f49966-79b7-4f16-b65a-83470aa93b2d	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-11T10-55-54_a5f49966-79b7-4f16-b65a-83470aa93b2d
3506785	d407c2ac3c38_2022-12-12T10-56-17_ad26f4f7-7e43-4708-8fbc-cfe8036321d	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-12T10-56-17_ad26f4f7-7e43-4708-8fbc-cfe8036321d
3522615	d407c2ac3c38_2022-12-13T10-59-14_9b9a37a1-2d77-4fe4-857a-1c1587a718da	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-13T10-59-14_9b9a37a1-2d77-4fe4-857a-1c1587a718da
3539478	d407c2ac3c38_2022-12-14T10-59-10_0625e1b7-14ba-d4a0-a132-6773464c6d43	/subscriptions/245b39ac-0eb0-44f8-958f-e3e21d0120e4/resourceGroups/hiCeMb3j245b39ac/providers/Microsoft.Compute/snapshots/d407c2ac3c38_2022-12-14T10-59-10_0625e1b7-14ba-d4a0-a132-6773464c6d43

3. Kusto query to check if one RP is sending its CMS and Director DB's secondary instance connection strings to the paired RP periodically

```
MonOrcasBreadthRp
| where AppName== "OrcasBreadthRp"
| where TIMESTAMP> ago(1h)
| where event startswith "orcasbreadth_utility_db_password_update_on_paired_rp"
```

TIMESTAMP	PreciseTimeStamp	ClusterName	NodeRole	MachineName	NodeName	AppName	AppTypeName	LogicalServerName	SubscriptionId	ResourceGroup	package
2023-01-10 00:06:04.8414676	2023-01-10 00:06:04.8414676	cr3.northeurope1-a.control.database.windows.net	MN	MN12	MN.12	OrcasBreadthRp	OrcasBreadthRp	DummyValue	00000000-0000-0000-0000-000000000000	DummyValue	XdbMeruComm
2023-01-10 00:06:04.8414676	2023-01-10 00:06:04.8414676	cr3.northeurope1-a.control.database.windows.net	MN	MN12	MN.12	OrcasBreadthRp	OrcasBreadthRp	DummyValue	00000000-0000-0000-0000-000000000000	DummyValue	XdbMeruComm

TIMESTAMP	PreciseTimeStamp	ClusterName	NodeRole	MachineName	NodeName	AppName	AppTypeName	LogicalServerName	SubscriptionId	ResourceGroup	package
2023-01-10 00:06:10.2340659	2023-01-10 00:06:10.2340659	cr3.westeurope1-a.control.database.windows.net	MN	MN18	MN.18	OrcasBreadthRp	OrcasBreadthRp	DummyValue	00000000-0000-0000-0000-000000000000	DummyValue	XdbMeruCommo
2023-01-10 00:06:10.2340659	2023-01-10 00:06:10.2340659	cr3.westeurope1-a.control.database.windows.net	MN	MN18	MN.18	OrcasBreadthRp	OrcasBreadthRp	DummyValue	00000000-0000-0000-0000-000000000000	DummyValue	XdbMeruCommo

Geo-Restore Checks and Investigation Tips

- 1. *GeoBackupsNotAvailable*: Unable to geo-restore server pgflexservername as its geo-backups are not available yet.


1.1 Check if source director GeoSnapshotCopyActor copied the snapshot successfully in the BCDR sub in the paired region.

```
let end_time = now();
let start_time = end_time - 7d;
let myServerName = '<server-name>';
MonOBDirectorV2ActorEvents
| where PreciseTimeStamp between (start_time..end_time)
| where ActorName == "GeoSnapshotCopyActor"
| where ServerName =~ myServerName or LogicalServerName =~ myServerName
| where Message contains "completionPercent"
| order by PreciseTimeStamp
```

completionPercent as 100

ionName	originalEventTimestamp	Message
		"diskSizeGB": 32,
actorSession	2023-01-09 12:33:44.452253	ProcessCheckSnapshotCopyCompleteState: GET on deaa29cc3f76_2023-01-09T11-49-20_aa1807d2-3454-4128-88c6-31c3d1aa0fe7-backup returned provisioningState as Succeeded with completionPercent as 100
actorSession	2023-01-09 12:33:44.4529776	ProcessCheckSnapshotCopyCompleteState: GET on deaa29cc3f76_2023-01-09T11-49-20_aa1807d2-3454-4128-88c6-31c3d1aa0fe7-backup returned provisioningState as Succeeded with completionPercent as 100 Snapshot copy completed - st
actorSession	2023-01-09 12:29:00.2770971	[properties and { "osType": "Linux", "creationData": { "createOption": "CopyStart", "sourceResourceId": "/subscriptions/eb0bc9de-c8ed-4c06-89da-895c99b003e0/resourceGroups/ohkUXvtf0bc9de/providers/Microsoft.Compute/snapshots/deaa29cc3f76_2023-01-09T11-49-20_aa1807d2-3454-4128-88c6-31c3d1aa0fe7", "sourceUniqueId": "78b57b43-f9d3-4a6a-8b74-56f66cf19e11" }, "diskSizeGB": 32,
actorSession	2023-01-09 12:29:00.3552307	ProcessCheckSnapshotCopyCompleteState: GET on deaa29cc3f76_2023-01-09T11-49-20_aa1807d2-3454-4128-88c6-31c3d1aa0fe7-backup returned provisioningState as Succeeded with completionPercent as 99
actorSession	2023-01-09 12:29:00.3560661	ProcessCheckSnapshotCopyCompleteState: GET on deaa29cc3f76_2023-01-09T11-49-20_aa1807d2-3454-4128-88c6-31c3d1aa0fe7-backup returned provisioningState as Succeeded with completionPercent as 99 Snapshot copy isn't complete -

If snapshots are created correctly in BCDR-tagged resource group, it's possible paired RP is not able to connect to secondary Director DB. Refresh secondary connection strings in paired RP by running below CAS in source region's DSConsole: `Set-OrcasBreadthMetadaStoresCnxnStringsInPairedRP` and ask the customer to retry after some time (15mins), if it is not working, you can file an ICM for this.

1.2 If GeoSnapshotCopyActor reports error in copying snapshots across-region, check DiskRP telemetry to see what happened to cross-region copy calls to Disk RP here: <https://disks.kusto.windows.net/Disks>  and file an ICM to investigate and resolve the issue.

```
DiskManagerApiQoSEvent
| where PreciseTimeStamp > ago(4h)
| where MonitoringApplication contains "europe"
| where operationName == "Snapshots.ResourceOperation.PUT"
| where resourceName contains "<name of snapshot that failed to be copied>"
```

From above query for any failures, use operationId in query below to determine detailed sequence on the disk R

```
DiskManagerContextActivityEvent
| where PreciseTimeStamp > ago(2h)
| where activityId == "<operation ID from above query>"
```



How good have you found this content?

