

AWS RE:INVENT

RE:CAP

Adelaide – 13 December 2023

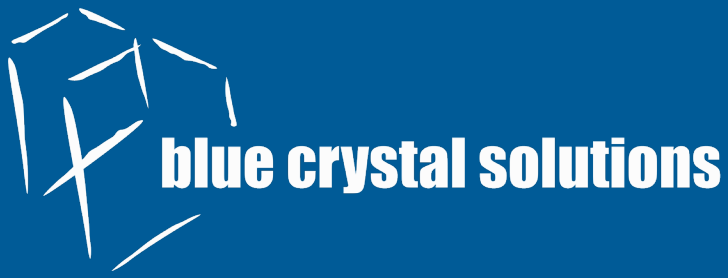
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Oracle DB SE2 Replication / DR Options

RDS Multi-AZ deployment

- Cons: One database per RDS Instance

Jobs to scp and apply logs

- Cons: Manual, Reduced SLAs, prone to errors

EFS (Regional)

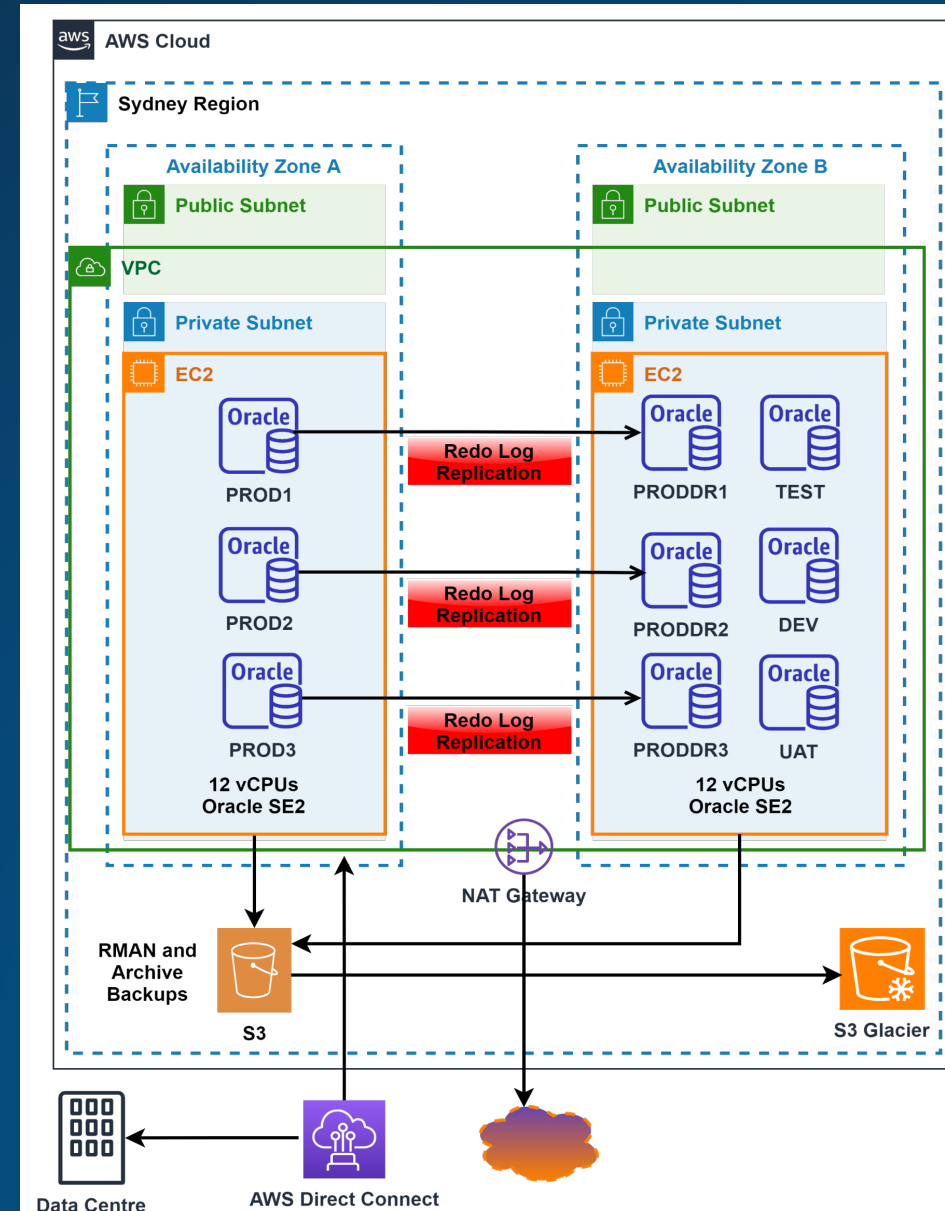
- Pros: Fully Managed, Highly Available, Elastic, Scalable, Shared Filesystem (NFS v4.0, v4.1).
- Cons: Not suitable for heavy Database IO

FSxfor OpenZFS (Multi -AZ)

- Pros: + High Performance, High Speed, Low Latency.

New: Now supports on -demand data replication across filesystems

- Transfer incremental point -in-time snapshots of your volumes between file systems
- Replicate production data for development, experimentation, and analytics workloads



Application Replication / DR Options



Jobs to scp Application Code

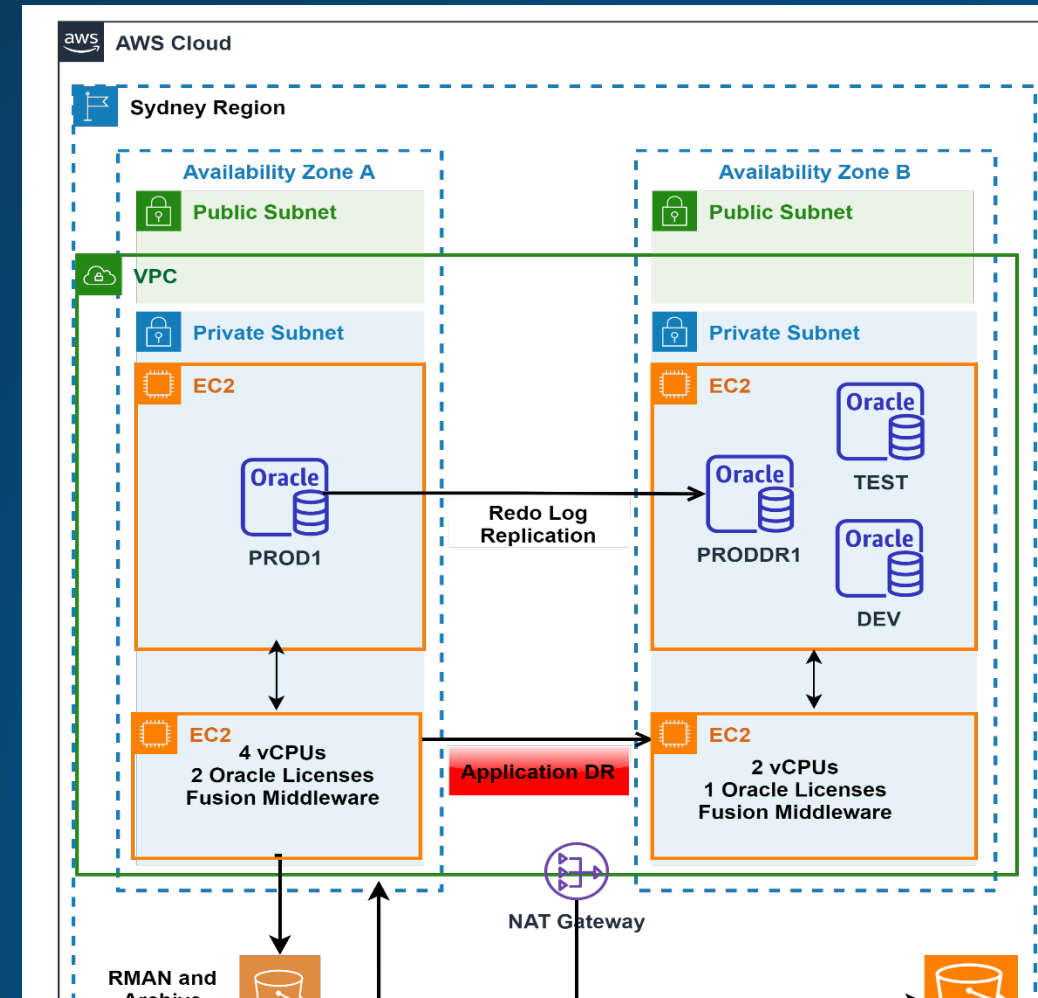
- Cons: Manual, Error Prone, Reduced SLAs

EFS (Regional)

- Pros: Fully Managed, Highly Available, Elastic, Scalable, Shared Filesystem (NFS v4.0, v4.1).

New:

- **Increased IOPS:** Amazon EFS now supports up to 250,000 read IOPS (was 55,000 read IOPS) and up to 50,000 write IOPS (was 25,000 write IOPS) per file system (Regional, Elastic Throughput mode).
- **Replication Failback:**
 - Easier and cost-effective synchronization of changes between EFS file systems.
 - Quick replication of incremental changes from the DR to the Primary file system after DR events and other DR-related activities.



Database & EC2 Backup & Restore Options:

Database backups:

- Via RMAN to local storage or to S3 (via agent / CLI), S3 to S3 Glacier via S3 Lifecycle management.
- Via RMAN to local storage and then include in AWS Backup - Backup duration & restorability concerns.

EC2 backups:

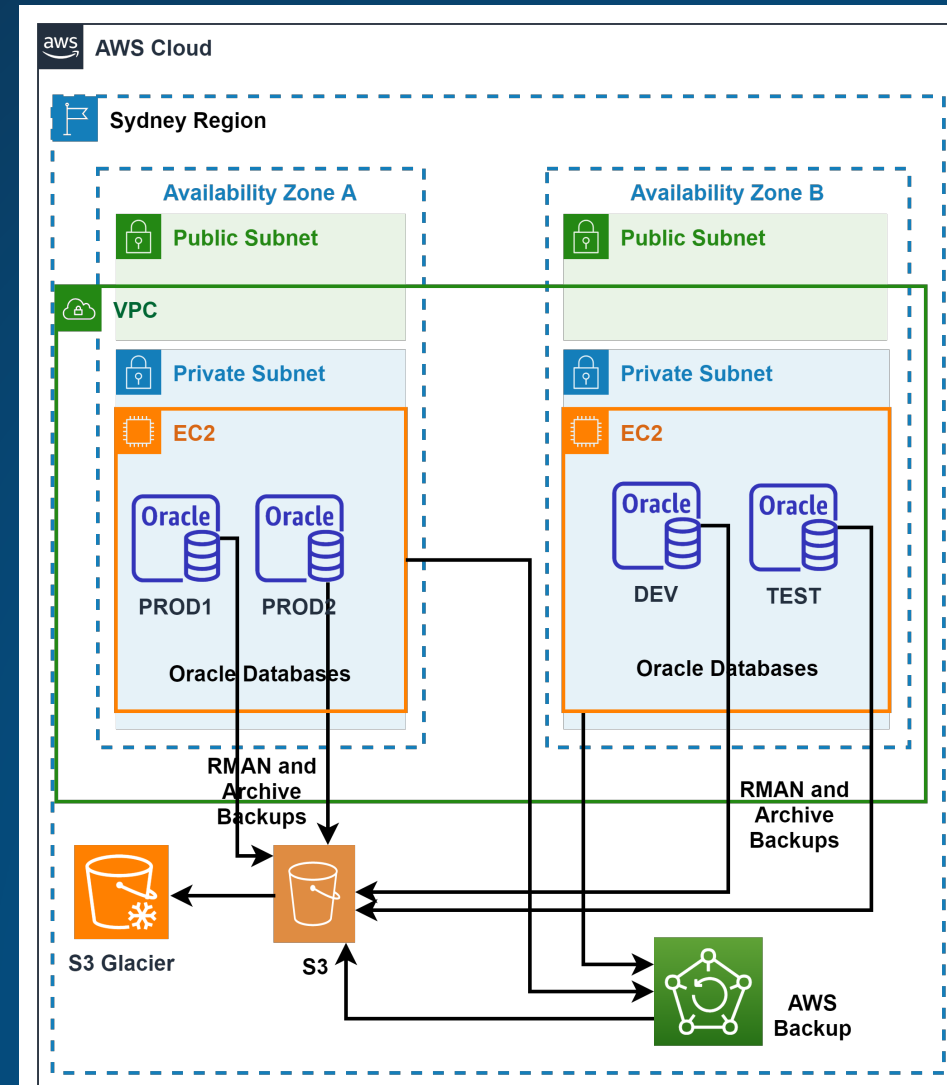
- AWS Backup for EC2 includes all Volumes
- Volumes that host the database might not need to be backed up, & have very high rates of change (ASM rebalancing, temp & undo spaces...)
- Restored snapshots can only be read at 3MB/sec
- Reduces the restore options for databases when the databases are included in the EC2 backup.

A combination of AWS Backup for specific EBS Volumes and Database backup to S3 is the preferred option.

- Backups of EBS Volumes are considered manual EBS snapshots.

New: AWS Backup

- EBS Snapshots Archive now available
- Automatic Restore testing & validation





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Thank you



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