DISASTER RECOVERY WITH IBM CLOUD VIRTUAL SERVERS

Phase 1: Problem Definition and Design Thinking

In this part you will need to understand the problem statement and create a document on what have you understood and how will you proceed ahead with solving the problem. Please think on a design and present in form of a document.

Problem Definition:

The project involves creating a disaster recovery plan using IBM Cloud Virtual Servers. The objective is to safeguard business operations by developing a plan that ensures continuity for an on-premises virtual machine in unforeseen events. This plan will include setting up backup strategies, configuring replication, testing the recovery process, and guaranteeing minimal downtime. The project encompasses defining the disaster recovery strategy, implementing backup and replication, validating recovery procedures, and ensuring business continuity.

Design Thinking:

Disaster Recovery Strategy:

Define the disaster recovery strategy and objectives, including recovery time objectives (RTO) and recovery point objectives (RPO).

Backup Configuration: Configure regular backups of the on-premises virtual machine to capture critical data and configurations.

Replication Setup: Implement replication of data and virtual machine images to IBM Cloud Virtual Servers to ensure up-to-date copies.

Recovery Testing: Design and conduct recovery tests to validate the recovery process and guarantee minimal downtime.

Business Continuity: Ensure that the disaster recovery plan aligns with the organization's overall business continuity strategy.

Assignment Notebook Submission

Conversation flow

Disaster recovery (DR) planning is a crucial aspect of ensuring business continuity in the face of unforeseen events. IBM Cloud offers various services that can be leveraged for disaster recovery, including IBM Cloud Virtual Servers. Here's a general outline of how you might approach disaster recovery using IBM Cloud Virtual Servers:

1. Assessment and Planning:

- Identify critical workloads and data that need to be protected.
- Determine Recovery Time Objective (RTO) and Recovery Point Objective (RPO) for each workload.
- Assess the types of disasters you need to protect against.

2. IBM Cloud Virtual Servers:

- **Replication:** Use technologies like IBM Cloud Virtual Server instances in different geographical regions to replicate data and workloads. This can be done using tools such as block storage snapshots, object storage replication, or third-party replication tools.
- **High Availability:** Configure load balancers and auto-scaling groups to distribute traffic and ensure high availability of your applications.

3. Backup and Snapshot Strategies:

- Implement regular backups and snapshots of critical data and configurations.
- Leverage IBM Cloud's backup and snapshot services to capture the state of your virtual servers at specific points in time.

4. Network Considerations:

- Configure VPNs or Direct Link services to establish secure and reliable connections between your primary and recovery environments.
- Set up proper network security groups and firewall rules to control traffic between environments.

5. Monitoring and Automation:

- Implement monitoring tools to keep an eye on the health and performance of your virtual servers.
- Use automation scripts to manage the failover process in case of a disaster.

6. Documentation:

- Create comprehensive documentation for your disaster recovery plan, including step-by-step procedures for failover and recovery.
- Ensure that the documentation is accessible to relevant personnel.

7. Testing:

- Regularly test your disaster recovery plan to ensure that it works as expected.
- Conduct simulated disaster scenarios to validate the efficiency of your recovery procedures.

8. Documentation Updates:

- Keep your documentation up to date as your infrastructure and applications evolve.
- Update the disaster recovery plan based on lessons learned from testing and real-world events.

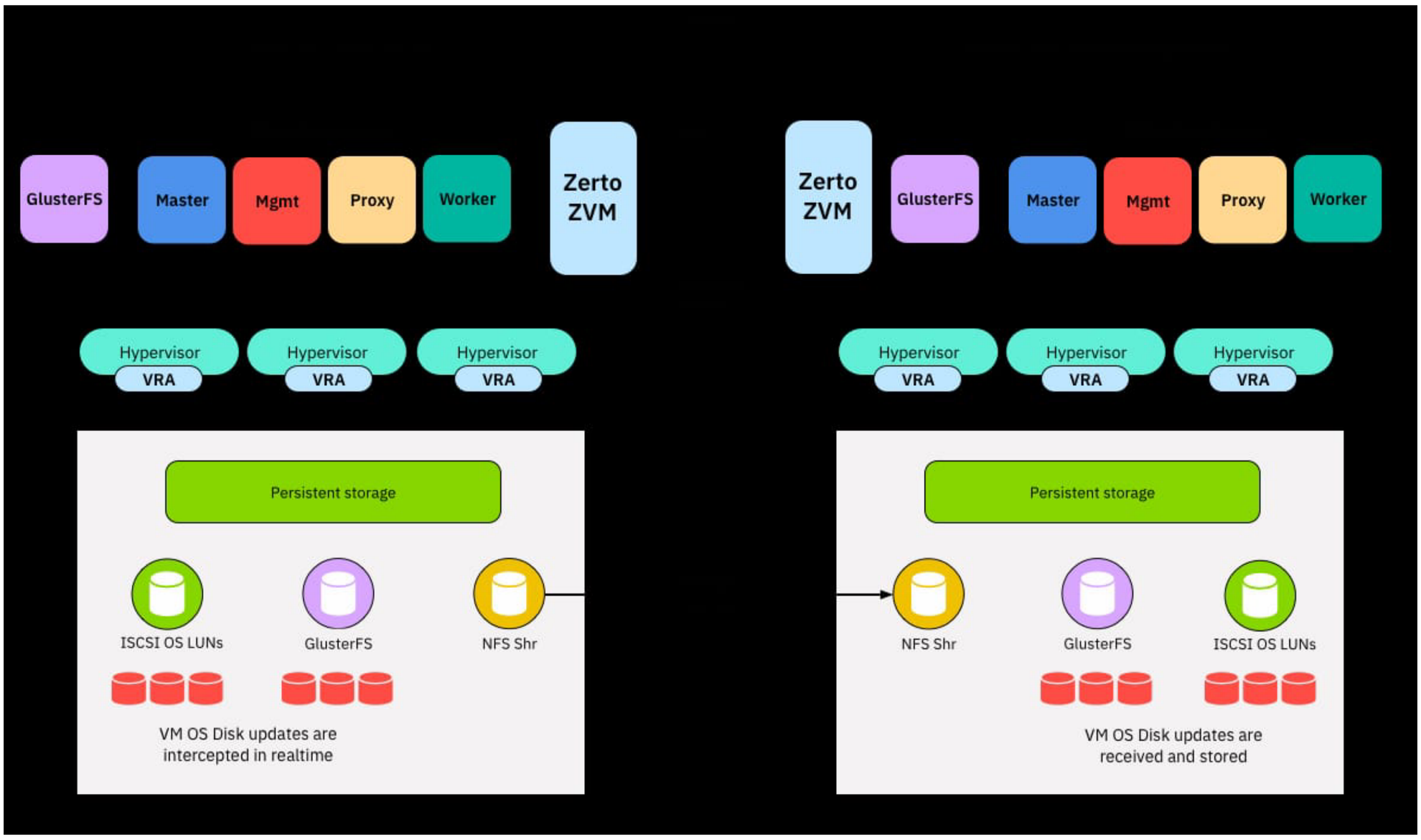
9. Training:

- Ensure that relevant staff members are trained on the disaster recovery procedures.
- Conduct training sessions periodically, especially if there are updates or changes to the plan.

10. Collaboration with IBM Support:

- Establish a relationship with IBM Cloud support to get assistance in case of issues or questions related to disaster recovery.

Remember, disaster recovery is an ongoing process, and regular reviews and updates are essential to ensure the effectiveness of your plan. Always consult IBM Cloud documentation and support resources for the latest information and best practices specific to their services.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VM OS Disk updates are intercepted in realtime
VM OS Disk updates are received and stored