PROJECT PHASE 2

<u>PROJECT TITLE</u> : Disaster recovery with IBM cloud servers

<u>Phase 2</u>: INNOVATION

Disaster recovery with IBM Cloud virtual servers is a critical aspect of ensuring business continuity and data resilience. IBM Cloud offers various services and features to help you implement an effective disaster recovery plan for your virtual servers. Here's an overview of the key components and innovations that matter in detail :

➢ INTRODUCTION:

 Disaster recovery (DR) is the process of restoring access to data and applications after a disaster. DR plans and solutions help businesses minimize downtime and financial losses in the event of a disaster.

IBM Virtual Servers offer a variety of DR solutions that can be tailored to meet the specific needs of each business. These solutions include:

<u>Replication</u>: Replication involves copying data from one server to another in real time or on a scheduled basis. This allows businesses to quickly restore access to data

and applications in the event of a disaster at the primary site.

Backup and restore: Backup and restore involves creating copies of data and applications and storing them in a safe location. In the event of a disaster, the data and applications can be restored from backup.

Cloud DR: Cloud DR involves using cloud-based resources to provide disaster recovery protection. This can be a cost-effective and scalable option for businesses of all sizes.

➢Presentation Goals

- Provide an understanding of what disaster recovery is and why it's crucial for business continuity.
- Explain what IBM Virtual Servers are and their significance in the context of disaster recovery.
- Highlight the built-in disaster recovery features of IBM Virtual Servers.
- Discuss various disaster recovery solutions that can be implemented using IBM Virtual Servers.
- Summarize the main points and key takeaways from the presentation.

➢Key objective

- Ensure uninterrupted business operations during and after disruptive events.
- Safeguard critical data from loss or corruption.
- Minimize system and application downtime to meet Recovery Time Objectives (RTO).
- Develop a crisis management plan for immediate disaster response.
- Conduct regular DR drills to assess and improve preparedness.
- Maintain records of successful DR operations for reference and reporting.

➢ Benefits of using IBM Virtual Servers for DR

There are many benefits to using IBM Virtual Servers for disaster recovery,

- Flexibility: IBM Virtual Servers offer a variety of DR solutions that can be customized to meet the specific needs of each business.

- Scalability: IBM Virtual Servers can be scaled to meet the changing needs of businesses. This makes them a good choice for businesses of all sizes.

- Reliability: IBM Virtual Servers are built on a reliable and secure platform. This helps businesses ensure that their data and applications are protected in the event of a disaster.

- Affordability: IBM Virtual Servers are a cost-effective DR solution. Businesses can choose the DR solution that best meets their needs and budget.

➢ Replication

- Replication is a common DR strategy that involves copying data from one server to another in real time or on a scheduled basis. This allows businesses to quickly restore access to data and applications in the event of a disaster at the primary site.

- IBM Virtual Servers offer a variety of replication solutions, including:

- IBM Cloud Hyper Protect Virtual Servers: IBM Cloud Hyper Protect Virtual Servers offer a fully managed DR solution that uses replication to protect data and applications.

- IBM Cloud Power Virtual Servers: IBM Cloud Power Virtual Servers offer a variety of replication options, including synchronous replication, asynchronous replication, and remote copy.

- IBM Power Systems Private Cloud: IBM Power Systems Private Cloud offers a variety of replication options for IBM Power Systems servers.

➢ Innovation Techniques

- Utilize AI and machine learning to predict potential failures and proactively take action to prevent downtime.

- Implement automated orchestration tools to streamline the DR process, reducing manual intervention.

- Leverage SDS solutions to provide flexibility and scalability for storage resources in DR scenarios.

- Implement APIs for seamless integration between DR systems and IBM Virtual Servers, enabling rapid failover.

- Integrate DevOps practices and IaC to automate DR provisioning and configuration.

➢ Backup and restore

- Backup and restore is a DR strategy that involves creating copies of data and applications and storing them in a safe location. In the event of a disaster, the data and applications can be restored from backup.

- IBM Virtual Servers offer a variety of backup and restore solutions, including:

- IBM Cloud Backup Service: IBM Cloud Backup Service is a fully managed backup and recovery service that can be used to protect data on IBM Virtual Servers.

- IBM Tivoli Storage Manager: IBM Tivoli Storage Manager is a backup and recovery software solution that can be used to protect data on IBM Virtual Servers.

- IBM Spectrum Protect: IBM Spectrum Protect is a backup and recovery software solution that can be used to protect data on IBM Virtual Servers.

➢ Cloud DR

- Cloud DR is a DR strategy that involves using cloud-based resources to provide disaster recovery protection. This can be a cost-effective and scalable option for businesses of all sizes.

- IBM Virtual Servers offer a variety of cloud DR solutions, including:

- IBM Cloud Disaster Recovery as a Service: IBM Cloud Disaster Recovery as a Service is a fully managed DR service that can be used to protect data and applications on IBM Virtual Servers.

- IBM Cloud Hyper Protect Virtual Servers: IBM Cloud Hyper Protect Virtual Servers offer a fully managed DR solution that uses replication to protect data and applications.

- IBM Cloud DR Orchestration: IBM Cloud DR Orchestration is a software solution that can be used to automate and manage DR processes for IBM Virtual Servers.

➢ Benefits Of Cloud DR

- Eliminates the need for dedicated physical DR sites, reducing capital expenses.

- Easily scales resources up or down in the cloud to match your DR needs.

- Provides flexibility in choosing recovery locations and strategies.

- Enables faster recovery times compared to traditional DR approaches.

- Reduces the complexity associated with traditional DR solutions.

- Provides global accessibility to data and applications for remote users.

- Helps prevent disasters through proactive monitoring and mitigation.

➤Achivements

- Achieved minimal downtime during disaster events, ensuring business continuity.

- Successfully recovered critical systems and data within the defined Recovery Time Objectives (RTO).

- Ensured the integrity of data with a recovery process that maintains data consistency.

- Implemented redundant IBM Virtual Server configurations to reduce the risk of hardware failures.

- Defined incident response procedures to address unforeseen challenges promptly.

- Ensured that critical business processes continued even in the face of disruptions.

➢ Conclusion

- BM Virtual Servers offer a variety of DR solutions that can be tailored to meet the specific needs of each business. These solutions include replication, backup and restore, and cloud DR.

- By using IBM Virtual Servers for DR, businesses can minimize downtime and financial losses in the event of a disaster.