**INNOVATION OF DISASTER RECOVERY WITH IBM CLOUD VIRTUAL SERVERS**

**Problem Definition :**

IBM Cloud offers a range of services and solutions that can be leveraged to innovate disaster recovery strategies. Disaster recovery (DR) in the context of IBM Cloud virtual servers involves creating and implementing a plan to ensure the continuity of your IT infrastructure and data in the event of a disaster or outage. Here's how you can innovate your disaster recovery strategy using IBM Cloud virtual servers:

**INNOVATION :**

**1. High Availability and Redundancy:** Deploy virtual servers in IBM Cloud across multiple data centers and regions to ensure high availability and redundancy. This helps mitigate the risk of a single point of failure.

**2. Automated Backups:** Utilize automated backup and snapshot features to regularly back up your virtual server instances. This ensures that you have a recent copy of your data and configurations that can be restored in case of an issue.

**3. Disaster Recovery as a Service (DRaaS):** IBM Cloud offers DRaaS solutions, such as IBM Resiliency Orchestration, which can help you automate and orchestrate your disaster recovery plan. This enables faster recovery times and minimizes downtime.

**4. Geo-Dispersed Data Centers:** Distribute your virtual servers across geographically dispersed IBM Cloud data centers to ensure that your data is safe from regional disasters.

**5. Load Balancers:** Implement load balancers to distribute traffic across multiple virtual servers. This can help in case one server becomes unavailable, as traffic is automatically redirected to healthy servers.

**6. Replication Services:** Utilize replication services provided by IBM Cloud, such as IBM Cloud Object Storage or databases like Db2, to replicate data in real-time or with minimal latency to another location.

**7. Backup to Cloud Object Storage:** Backup your critical data to IBM Cloud Object Storage, which offers durability, scalability, and geo-redundancy. This ensures your data remains safe even if your virtual servers fail.

**8. Testing and Recovery Drills:** Regularly test your disaster recovery plan and perform recovery drills to ensure that it works as expected. IBM Cloud virtual servers can be used to create isolated environments for testing.

**9. Monitoring and Alerts:** Set up monitoring and alerting systems to keep track of the health and performance of your virtual servers. IBM Cloud provides various monitoring tools and services for this purpose.

**10. Managed Services:** Consider using IBM Cloud's managed services for virtual servers. This can offload much of the operational and maintenance tasks, allowing you to focus on the disaster recovery aspects.

**11. Security and Compliance:** Ensure that your disaster recovery strategy complies with security and compliance requirements. IBM Cloud provides various security services and features to help secure your virtual servers.

**12. Collaboration and Documentation:** Collaborate with your IT team and document the disaster recovery plan thoroughly. Ensure that all team members are familiar with the plan and their roles in case of a disaster.

**13. Hybrid Cloud Solutions:** If you have a hybrid cloud setup, ensure that your disaster recovery strategy encompasses both on-premises and IBM Cloud resources.

**14. Regular Updates and Optimization:** Keep your disaster recovery plan up to date as your infrastructure evolves. Continuously optimize the plan based on changing business requirements and new IBM Cloud features.

**CONCLUSION :**

Innovating disaster recovery using IBM Cloud virtual servers involves a combination of technology, process, and collaboration to ensure that your IT infrastructure remains resilient and available even in the face of unexpected events. It's essential to tailor your disaster recovery plan to your specific business needs and regularly review and update it to stay prepared for any contingencies.