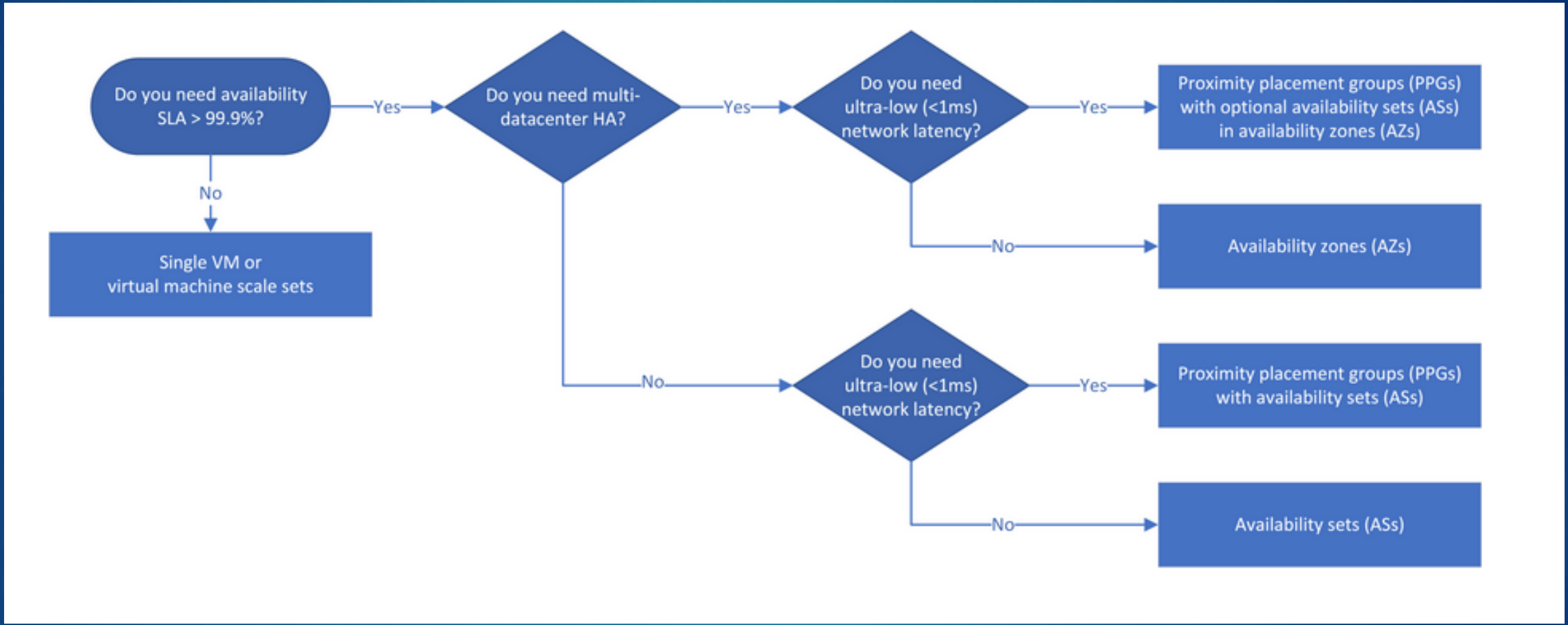
Unit 10 Seminar Preparation

DR solutions Design and review

Part B

A decision tree and example of high-availability (HA) and disaster recovery (DR) options when deploying multi-tier infrastructure-as-a-service (IaaS) apps to Azure (Microsoft, 2022)



https://learn.microsoft.com/en-us/azure/architecture/example-scenario/infrastructure/iaas-high-availability-disaster-recovery

Basic description of

RPO= 1 hr; RTO= 8 hrs; high availability (HA) required.

One possible high-level diagram of a DR solution that meets the specified requirements could include the following components:

1. **Primary data center:** This is the main location where the primary (live) systems and data are hosted.
2. **Secondary data center:** This is a backup location that is used to host the replicated systems and data in case of a disaster at the primary data center.
3. **Replication**: In order to ensure that the data in the secondary data center is up-to-date, the primary data center continuously replicates the systems and data to the secondary location. The specified RPO of 1 hour means that the replication should be set up to capture changes to the systems and data at least once every hour.
4. **Failover:** In the event of a disaster at the primary data center, the systems and data in the secondary data center can be quickly activated (or "failed over") to keep the business operations running. The specified RTO of 8 hours means that the failover process should be designed to complete within 8 hours of the disaster occurring.
5. **High availability**: To ensure that the systems and data remain available even in the event of a disaster, the DR solution should be designed with high availability in mind. This may include features such as redundant hardware and network connections, as well as automated processes for monitoring and managing the systems and data in the secondary data center.

Basic description of

RPO= 24 hrs; RTO = 72 hrs; HA NOT required.

One possible high-level diagram of a DR solution that meets the specified requirements could include the following components:

1. **Primary data center:** This is the main location where the primary (live) systems and data are hosted.
2. **Secondary data center:** This is a backup location that is used to host the replicated systems and data in case of a disaster at the primary data center.
3. **Replication**: In order to ensure that the data in the secondary data center is up-to-date, the primary data center continuously replicates the systems and data to the secondary location. The specified RPO of 24 hours means that the replication should be set up to capture changes to the systems and data at least once every 24 hours.
4. **Failover:** In the event of a disaster at the primary data center, the systems and data in the secondary data center can be activated (or "failed over") to keep the business operations running. The specified RTO of 72 hours means that the failover process should be designed to complete within 72 hours of the disaster occurring

Basic description of

RPO= 5 minutes; RTO= 1 hr; HA required.

One possible high-level diagram of a DR solution that meets the specified requirements could include the following components:

1. **Primary data center:** This is the main location where the primary (live) systems and data are hosted.
2. **Secondary data center:** This is a backup location that is used to host the replicated systems and data in case of a disaster at the primary data center.
3. **Replication**: In order to ensure that the data in the secondary data center is up-to-date, the primary data center continuously replicates the systems and data to the secondary location. The specified RPO of 5 minutes means that the replication should be set up to capture changes to the systems and data at least once every 5 minutes.
4. **Failover:** In the event of a disaster at the primary data center, the systems and data in the secondary data center can be quickly activated (or "failed over") to keep the business operations running. The specified RTO of 1 hour means that the failover process should be designed to complete within 1 hour of the disaster occurring.
5. **High availability:** To ensure that the systems and data remain available even in the event of a disaster, the DR solution should be designed with high availability in mind. This may include features such as redundant hardware and network connections, as well as automated processes for monitoring and managing the systems and data in the secondary data center.

References

Microsoft. (2022) High availability and disaster recovery scenarios for IaaS apps. Available from: https://learn.microsoft.com/en-us/azure/architecture/example-scenario/infrastructure/iaas-high-availability-disaster-recovery