

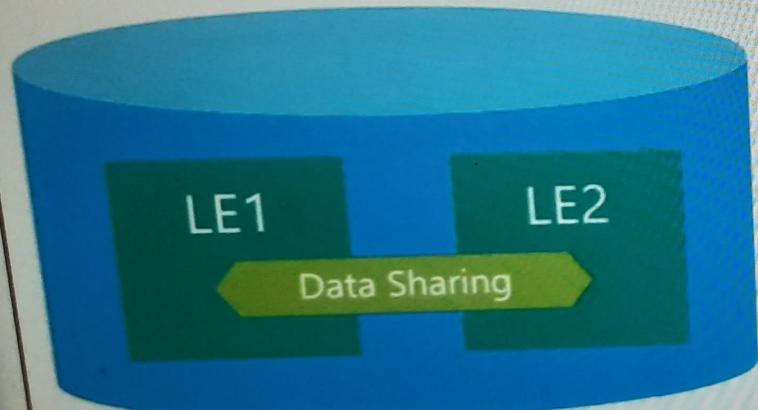
Environment planning - Instances

- In the production environment planning phase, the determination of number instances based on the organizational and business requirements is key .
- Instances are nothing but a separate database. For Example: In Development Environment each user will have separate instance.
- Production environments are meant to be precisely that: Environments that a business can run their daily business in F&O apps in, deployed on performance tiers in Azure with a guaranteed high level of availability and support.
- Usually, one production instance is instantiated on a Microsoft Azure Active Directory (Azure AD) tenant. Single instance is more likely suffice for an organization with lesser business units.
- To handle the requirements of a specific implementation, you might require multiple production instances that run in parallel. Some of the common scenarios where multiple production instances might be required are
 - A global implementation's requirements for data residency, latency, or data volume can't be met by one instance.
 - Different business units in an organization are implementing the product separately as independent applications.

roduction - Single Instance

Single Instance PROD

Instance 1



Advantages:

- Master data is shared, and Intercompany transactions are supported, and the data is visible across legal entities *within the instance*,
- As the data centers are from a single region the *data is centralized* and reporting is easier and accurate
- Since there is only one instance, the *application lifecycle management* such as code development, testing and deployment is much simpler and easier

roduction - Single Instance

Single Instance PROD

Instance 1

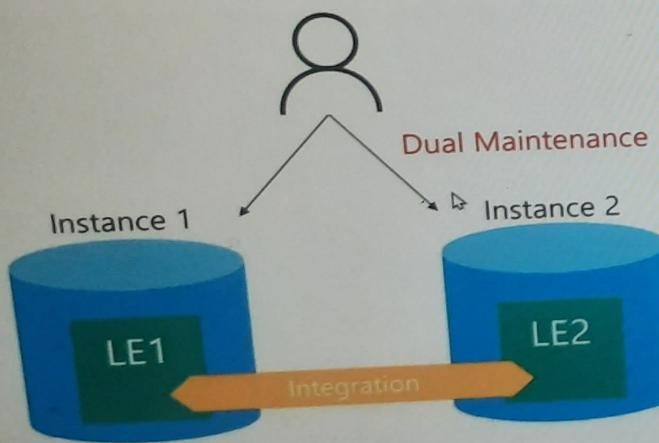


Disadvantages:

- Data centers may be centralized but users may be distributed across the globe, so the user experience may not be the best due to network latency and performance is affected..
- Data centers selection will be challenge due to statutory requirements for data residency. Each regions may have different residency requirements. For Example: China Region
- There is very less flexibility to schedule servicing operations, such as code deployments and upgrades. The downtime of the application is unavoidable during maintenance operations.

Production - Multiple Instance

Multiple Instance PROD

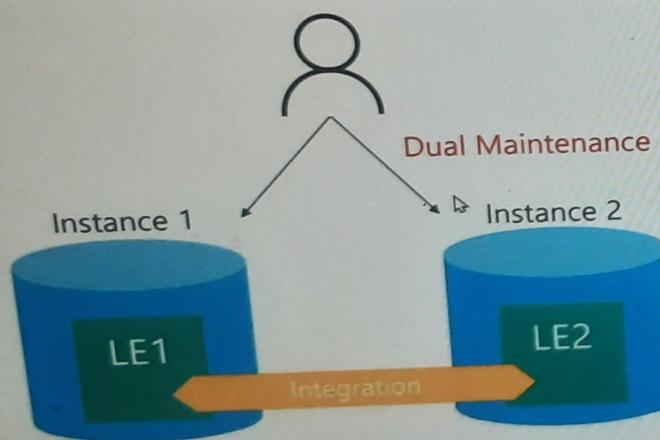


Advantages:

- Data centers can be selected to provide the best latency experience.
- Data centers can be selected to satisfy statutory requirements for data residency.
- There is more flexibility to schedule servicing operations, such as code deployments and upgrades.
- It is possible to have different stakeholders for the different production instances

Production - Multiple Instance

Multiple Instance PROD

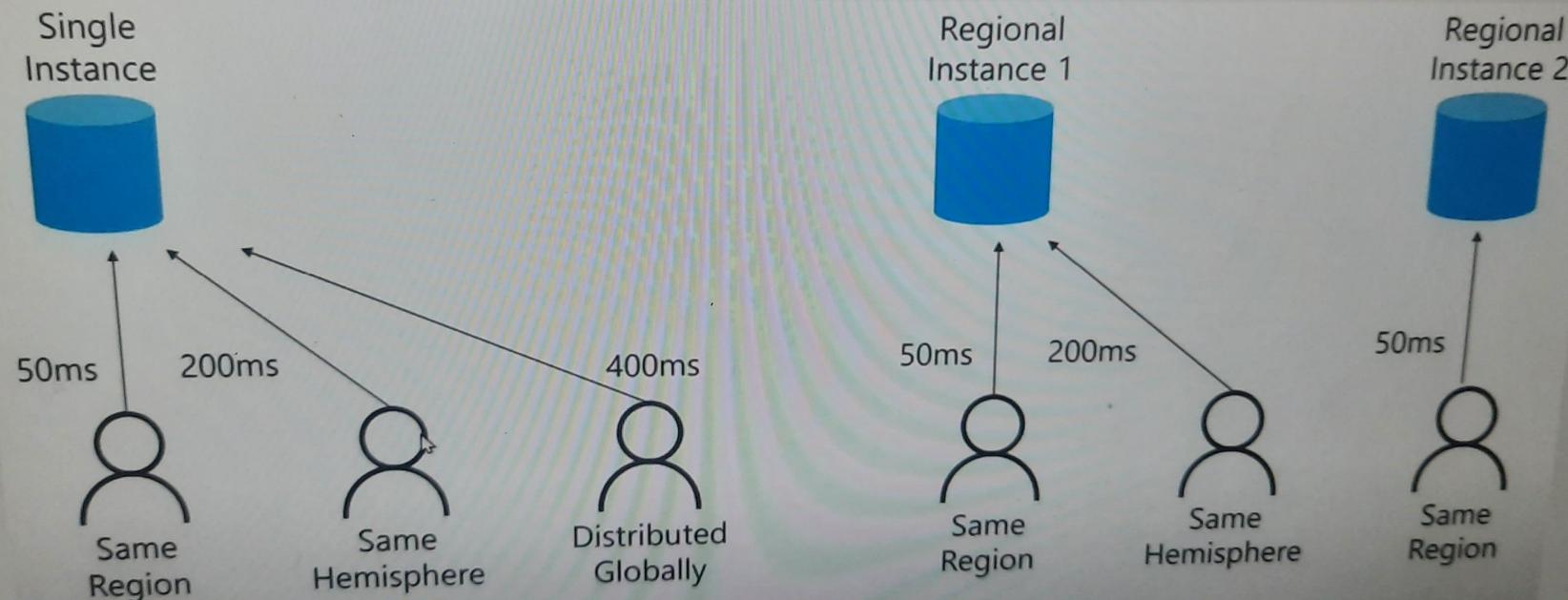


Disadvantages:

Master data isn't shared and Intercompany transactions aren't supported.

- Integrations must be configured in each instance.
- Microsoft Azure DevOps must be configured in each instance.
- User acceptance testing (UAT) must be done on each instance, even if the code is the same as there might be data variations, different application configurations per region might affect functionality, and different data centres might support a different set of Azure services

Single vs Multiple Instance PROD – Network Latency



Single vs Multiple Instance PROD - Environment Management

