Getting Started with Auto-Failover Groups

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Agenda

- Introduction to Auto-Failover Groups
- How Auto-Failover Groups Work
- Setting Up Auto-Failover Groups
- Best Practices for Auto-Failover Groups

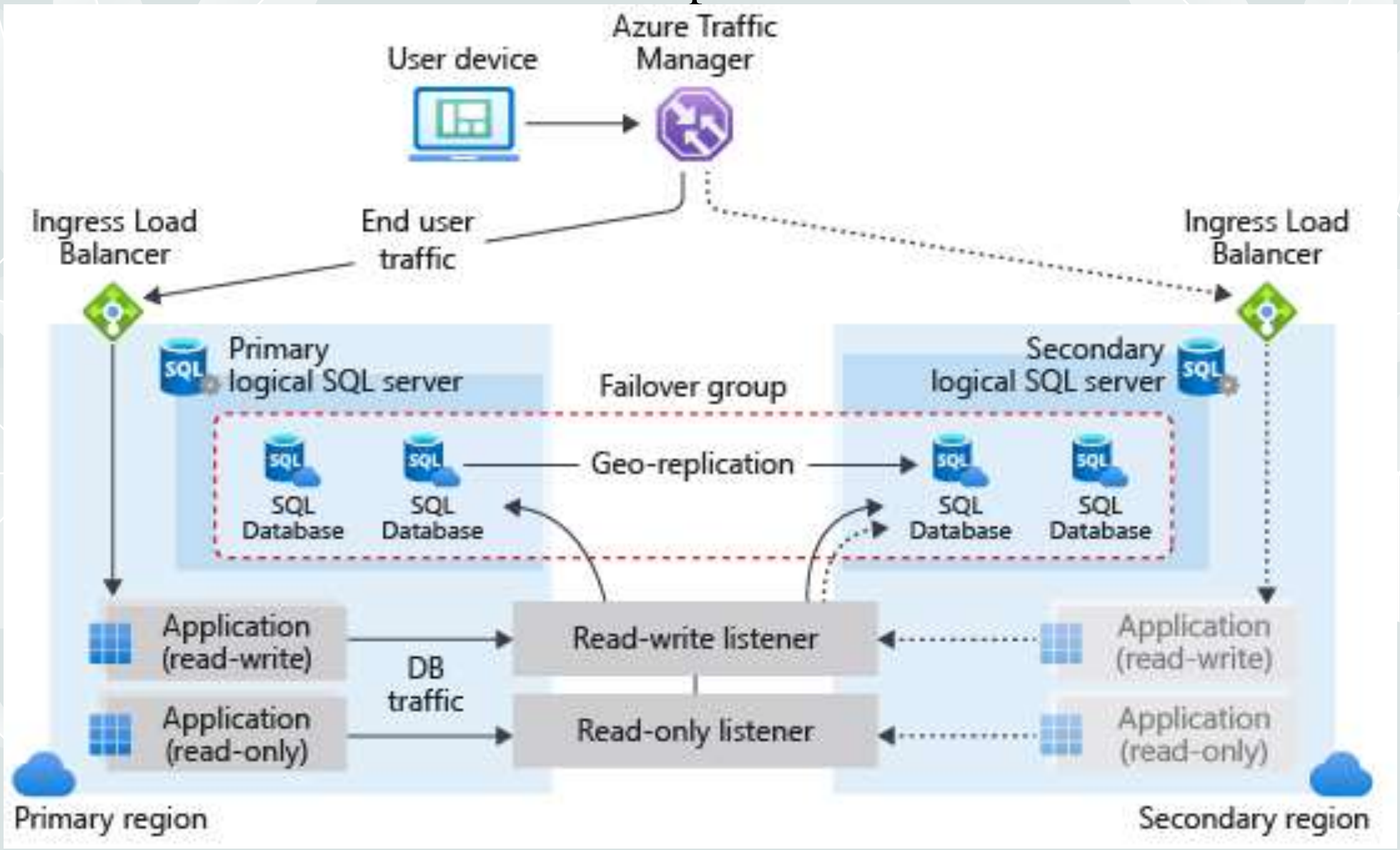
Introduction to Auto-Failover Groups

Auto-failover groups are a feature in Azure SQL Database and Azure SQL Managed Instance that provide a high-availability and disaster recovery solution

How Auto-Failover Groups Work

The primary purpose of auto-failover groups is to ensure that your database remains available and accessible in the event of a failure or disaster. They are designed to automatically switch (failover) from a primary database or server in one region to a secondary database or server in a different region.

How Auto-Failover Groups Work



How Auto-Failover Groups Work

- **Primary Database/Server**: This is the main server where your application's read-write workloads are run.
- **Secondary Database/Server**: This server is usually in a different geographic region and is used for failover. It can also be used for read-only workloads to distribute the traffic.

How Auto-Failover Groups Work

1. **Automatic Failover**: In the event of a catastrophic failure, such as a data center outage, the system automatically switches to the secondary server. This process ensures minimal disruption to your services.

2. **Synchronization**: Data is continuously synchronized from the primary to the secondary server. This synchronization can be either synchronous or asynchronous, depending on the configuration and requirements.

3. **Read-Only Routing**: Secondary databases can be used for read-only queries, which helps in load balancing and improves application performance.

How Auto-Failover Groups Work

4. Customization and Configuration: Auto-failover groups allow for customization in terms of failover policies, including the grace period before failover and whether to fail back to the primary once it's back online.

5. Application Transparency: The failover process is transparent to applications. Applications connected to the database do not need to change their connection strings; Azure manages the redirection of the connections to the active server.

Use Cases

Use Cases:

- **Disaster Recovery**: Protects against regional outages and disasters by enabling automatic failover to a geographically distant secondary.
- **High Availability**: Enhances availability by automatically handling failover without manual intervention.
- **Global Load Distribution**: Allows for the distribution of read-only workloads across global regions.

Demo: How to Setup Auto Failover Groups

- **Let us now explore Auto-failover Groups by taking a look on how to set it up.**

Best Practices

Failover groups overview & best practices - Azure SQL Database | Microsoft Learn

Thank you

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