**Problem Statement**

An e-commerce company is looking to deploy a high-performance, scalable, and resilient web application on Azure to support its global customer base. The platform must handle unpredictable and fluctuating user demand while maintaining high availability and security for both internal and external communications. The solution must also enable seamless internal connectivity for microservices and secure data access across multiple services and instances.

The company faces the following specific challenges:

1. **High Demand and Availability:** The application must manage unpredictable traffic spikes and maintain availability during peak usage. The architecture needs an efficient way to distribute traffic and scale resources automatically to meet user demand.
2. **Secure and Isolated Network Infrastructure:** Internal application components need secure communication channels to prevent unauthorized access and ensure data integrity. The company requires isolated subnets for different tiers of the application (e.g., web, application, and database) while enabling private connections between these components.
3. **Efficient Resource Management:** There is a need for centralized storage to enable shared access to files, logs, and assets for the application. Shared storage should be accessible by all instances in the web and application tiers without compromising security.
4. **Private and Consistent Name Resolution:** To improve internal communication, the company requires private DNS resolution for its application services, enabling consistent, secure access to components without exposing them publicly.
5. **Data Security and Access Control:** Sensitive application and customer data should be securely stored and accessed, ensuring that only authorized instances and services can read or write this information.