Offline First with Cloudant

The IBM Cloudant database provides fully managed NoSQL services primarily delivered through the cloud.

Cloudant Mobile Sync, an offering of Cloudant, provides an offline-first architecture. Mobile applications often use an offline-first architecture so the application can function without an internet connection. The app syncs its data to the cloud when a connection becomes available.

Developers can build robust applications when they adopt Cloudant Mobile Sync's offline-first architecture. These applications deliver a consistent user experiences across devices without a constant network connection. When a connection does become available, the application provides seamless data synchronization.

Mobile apps, internet of things (IoT) deployments, and collaborative work environments are use cases for offline-first capabilities.

With an offline-first architecture, the app's local database allows users to create, read, update, and delete (CRUD) the data without a network connection. With a service like Cloudant Mobile Sync, the database provider does not need to write its custom syncing process between the device and the central database. The data is stored on the local device in a structured format that mirrors the data schema used in the cloud database. It only requires a single data access layer.

Cloudant provides bidirectional synchronization, which ensures that changes in the cloud database propagate to the local databases and maintain consistency across devices.

Other key features of Cloudant Mobile Sync include:

- Automated conflict resolution
- Replication
- Data encryption during transmission
- Easy app integration

Summary

In this reading, you've learned about the offline-first architecture of Cloudant with Cloudant Mobile Sync.

- Offline-first architecture helps developers build applications, such as mobile apps which don't require a constant connection to a network
- Offline-first applications deliver consistent user experiences across devices, regardless of network connectivity