Providing a Backend for Your Mobile Applications with Mobile Apps

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Introduction

What are Mobile Apps?

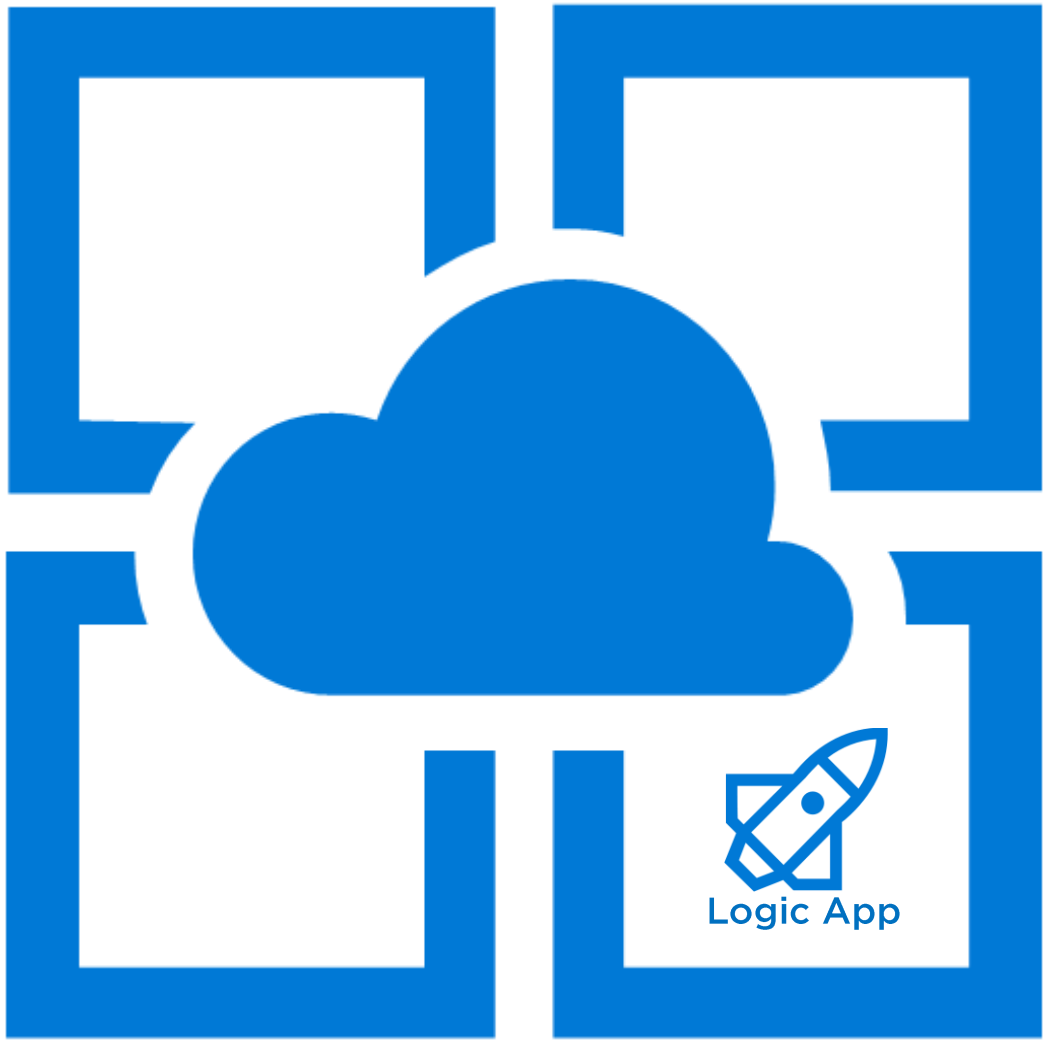
Offline sync

Push notifications

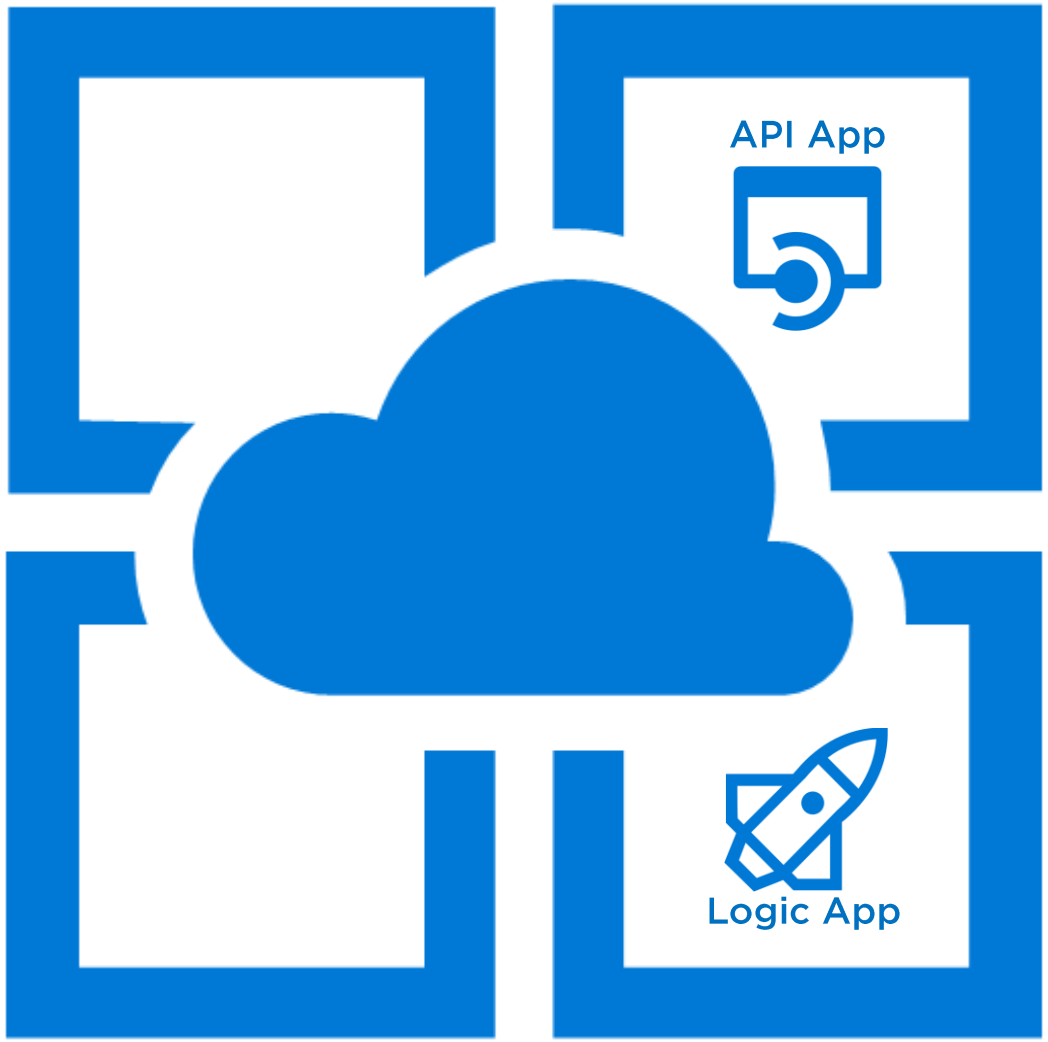
What Are Mobile Apps?

App Services

App Services



App Services



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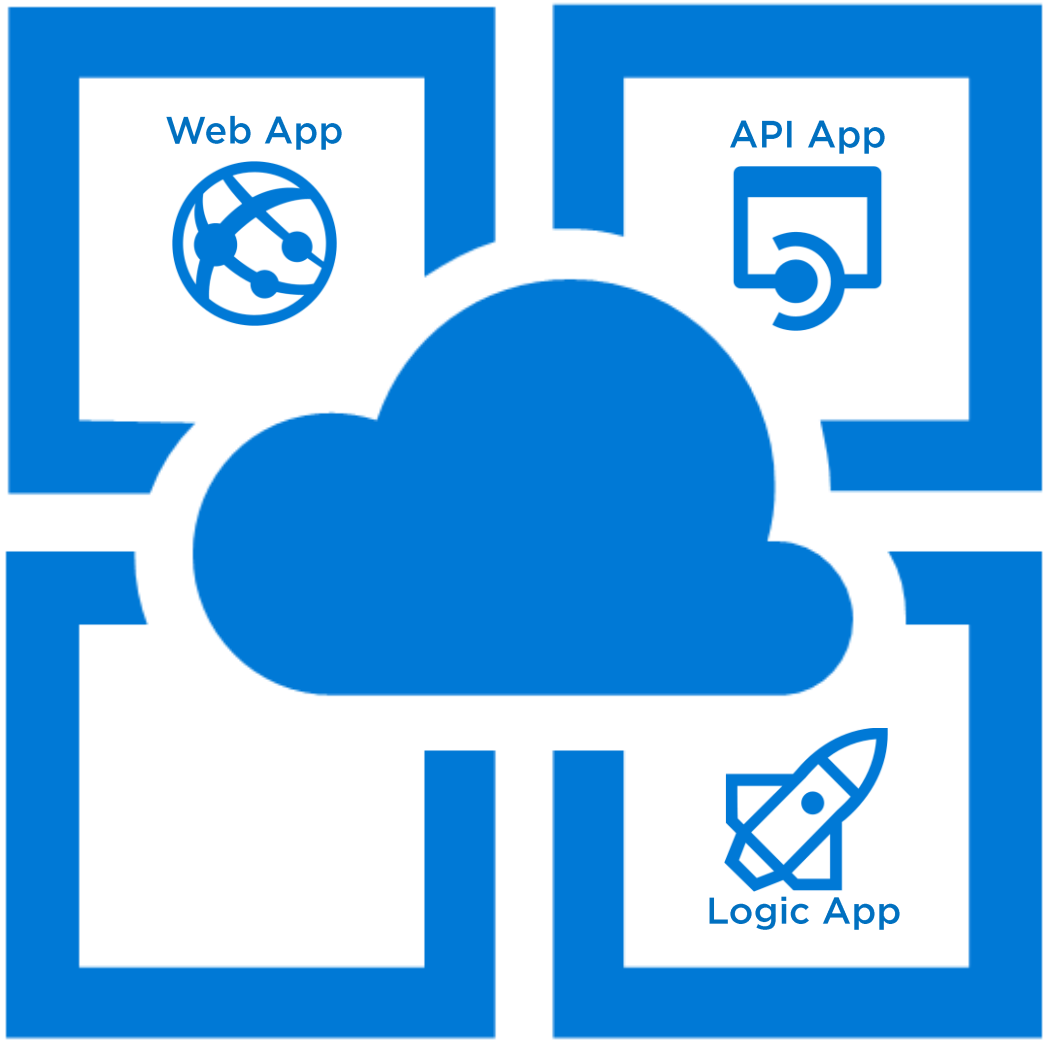

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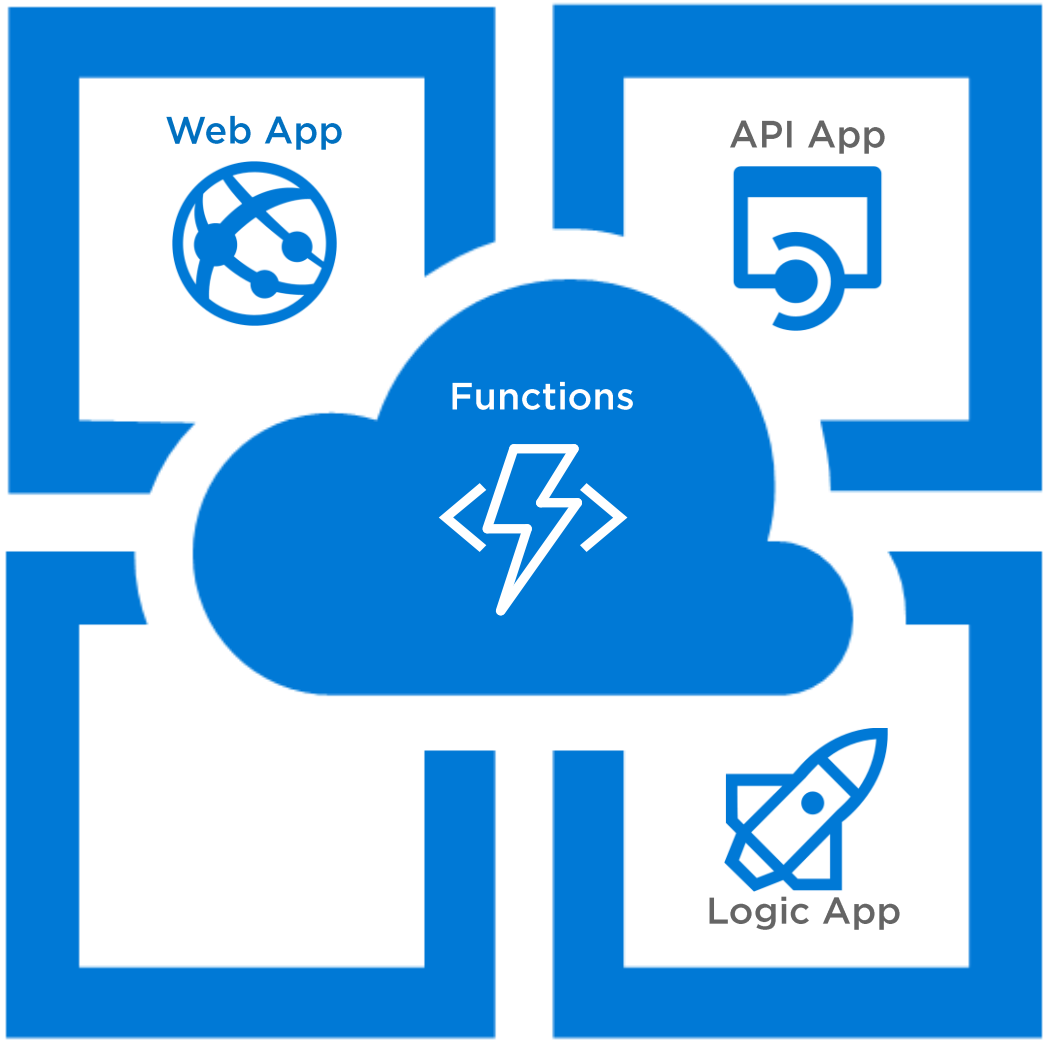

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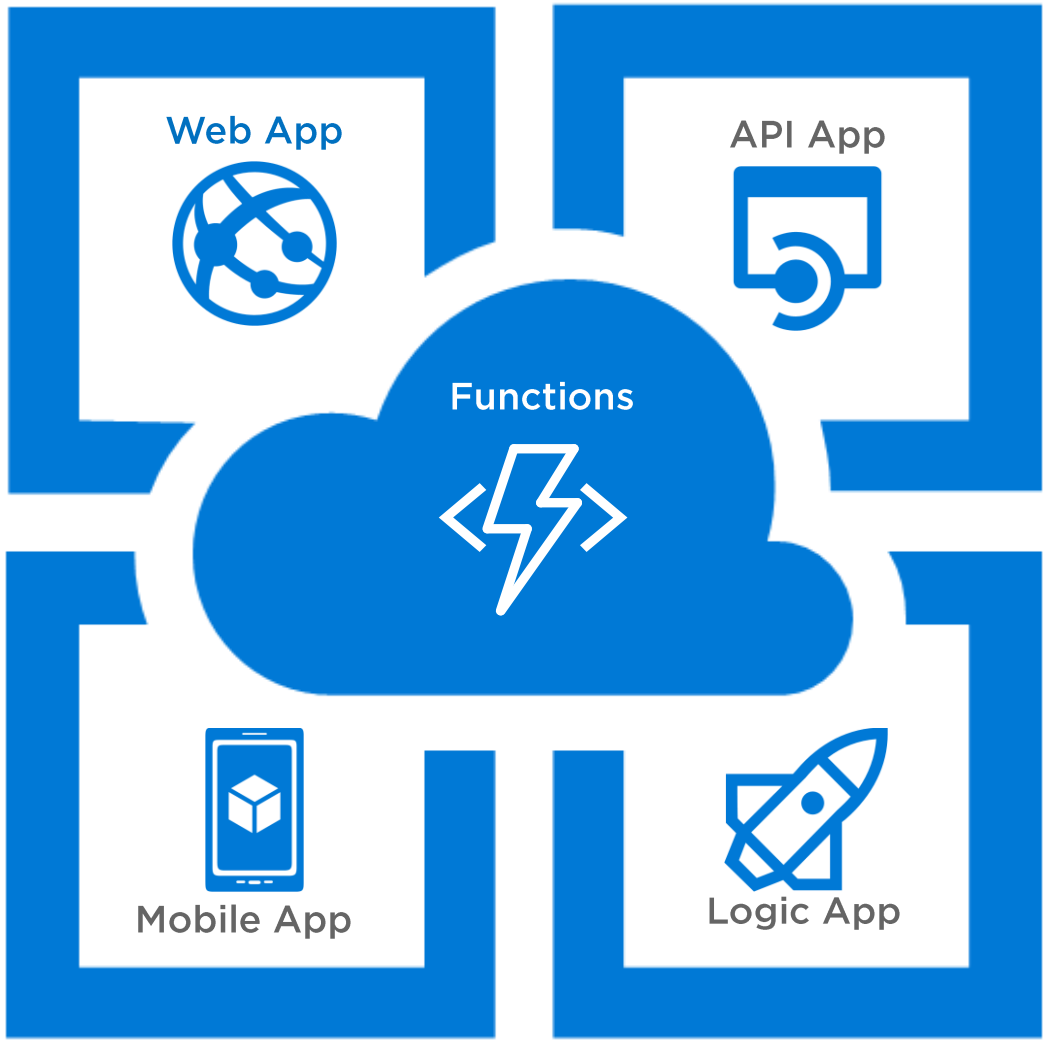

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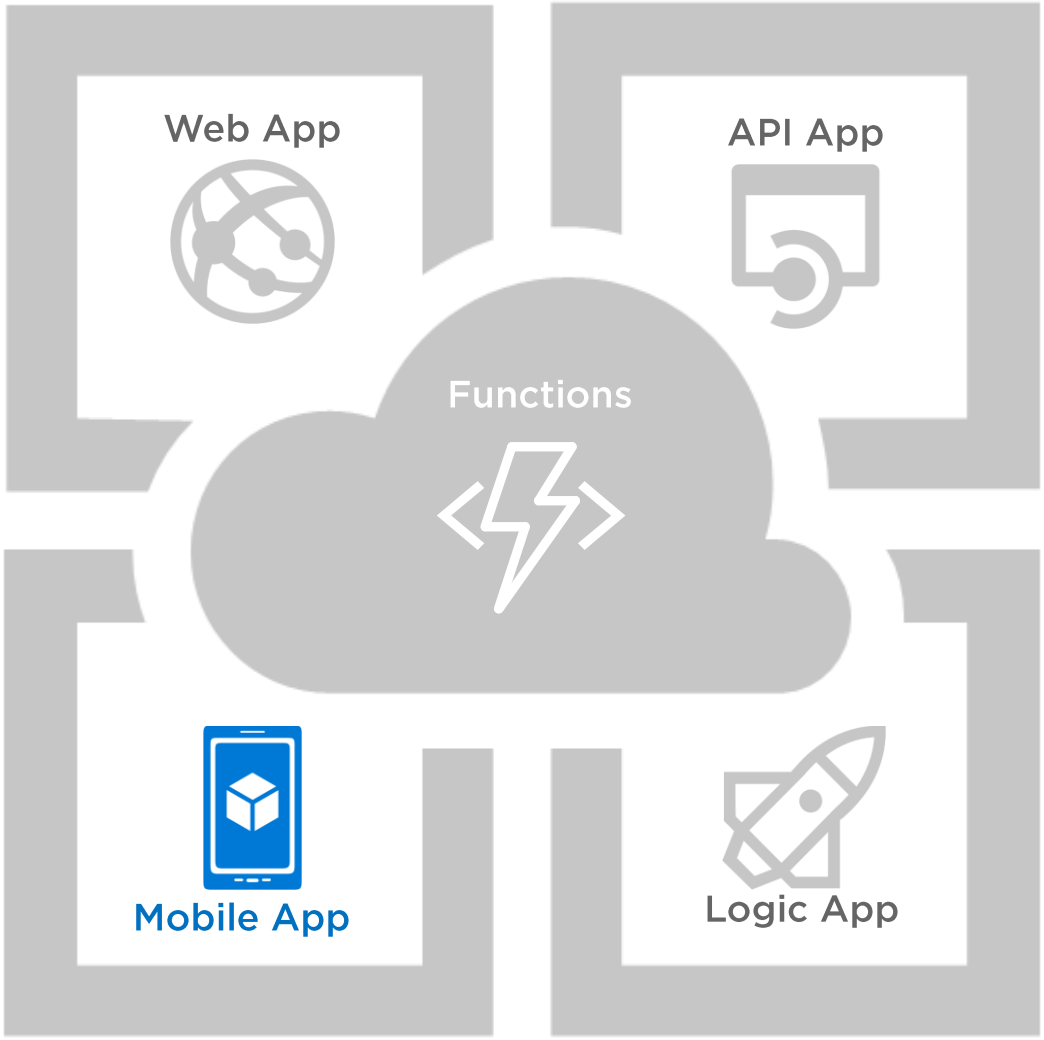

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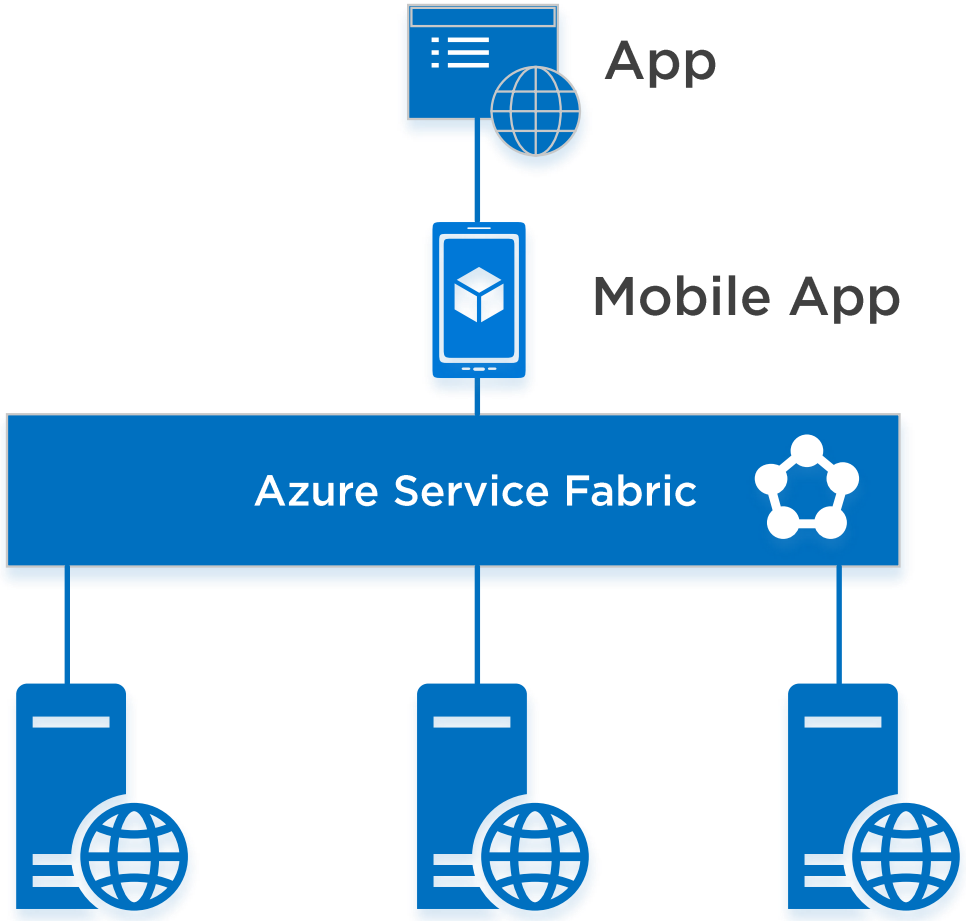

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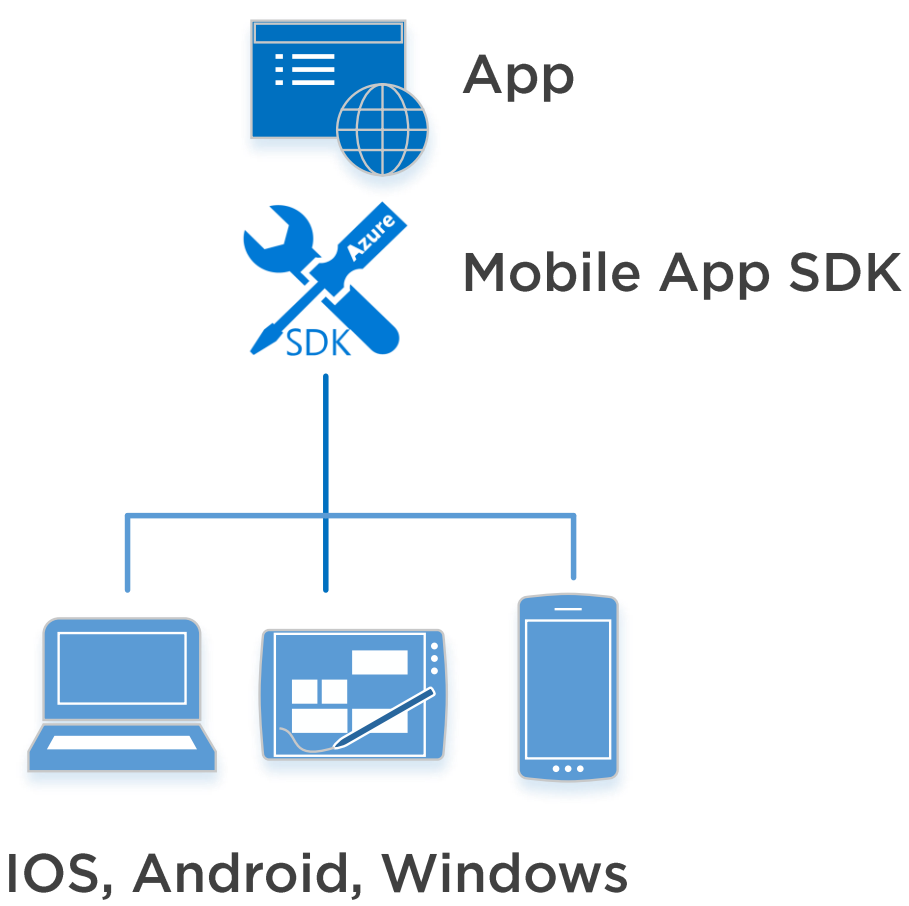

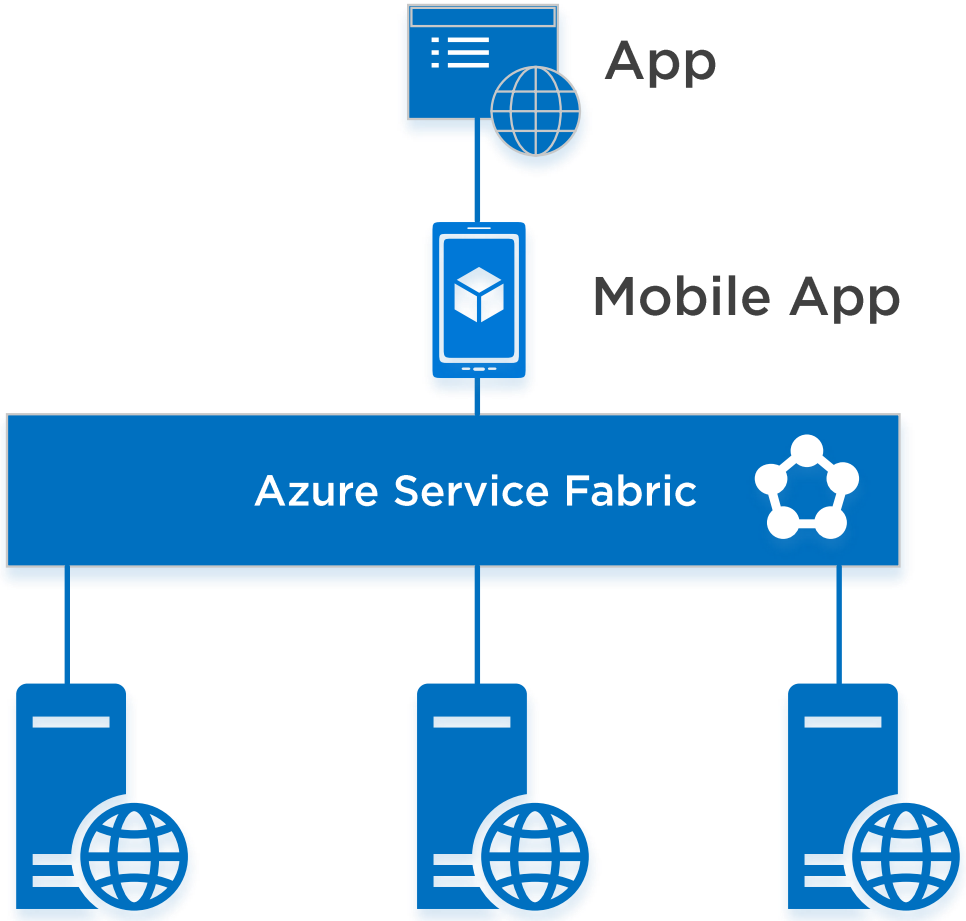

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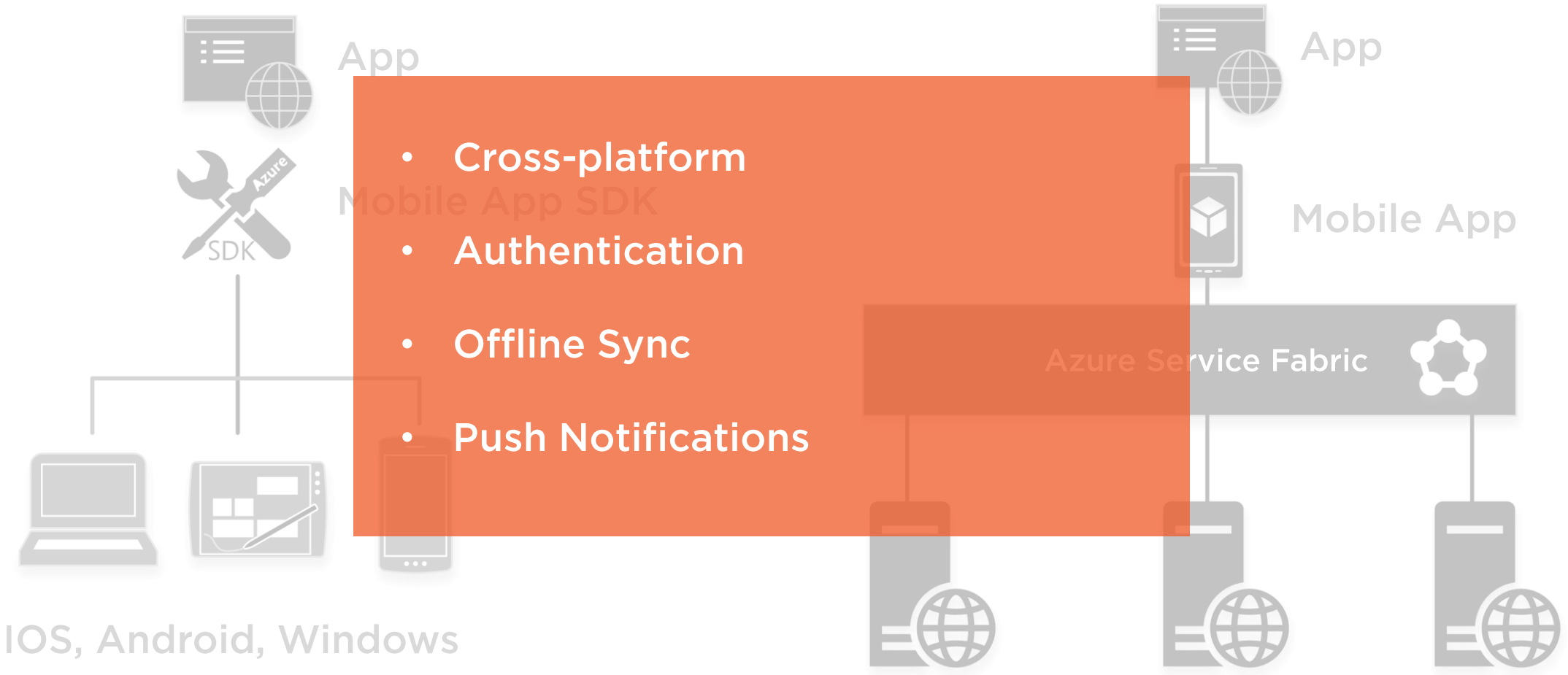


- Cross-platform
- Authentication
- Offline Sync
- Push Notifications

Azure Mobile App

Consists of two parts: backend and SDK

Backend runs

- .NET and Node.js

The SDK is available for

- IOS, Android, Windows
- Xamarin (IOS, Android, Forms)
- Cordova

Authentication / authorisation

Push notifications

Offline sync

All other App Services features

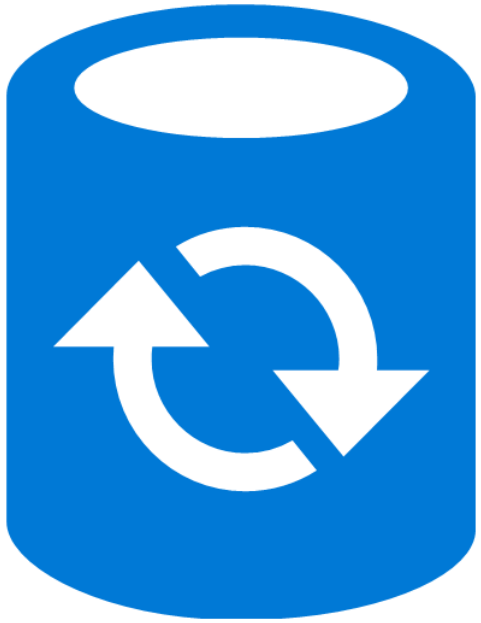
Demo

The outlines of a Mobile App

Visual Studio

Offline Sync

Why Use Offline Sync?



Continue to work while you are offline

Improve local app performance

What Is Offline Sync?

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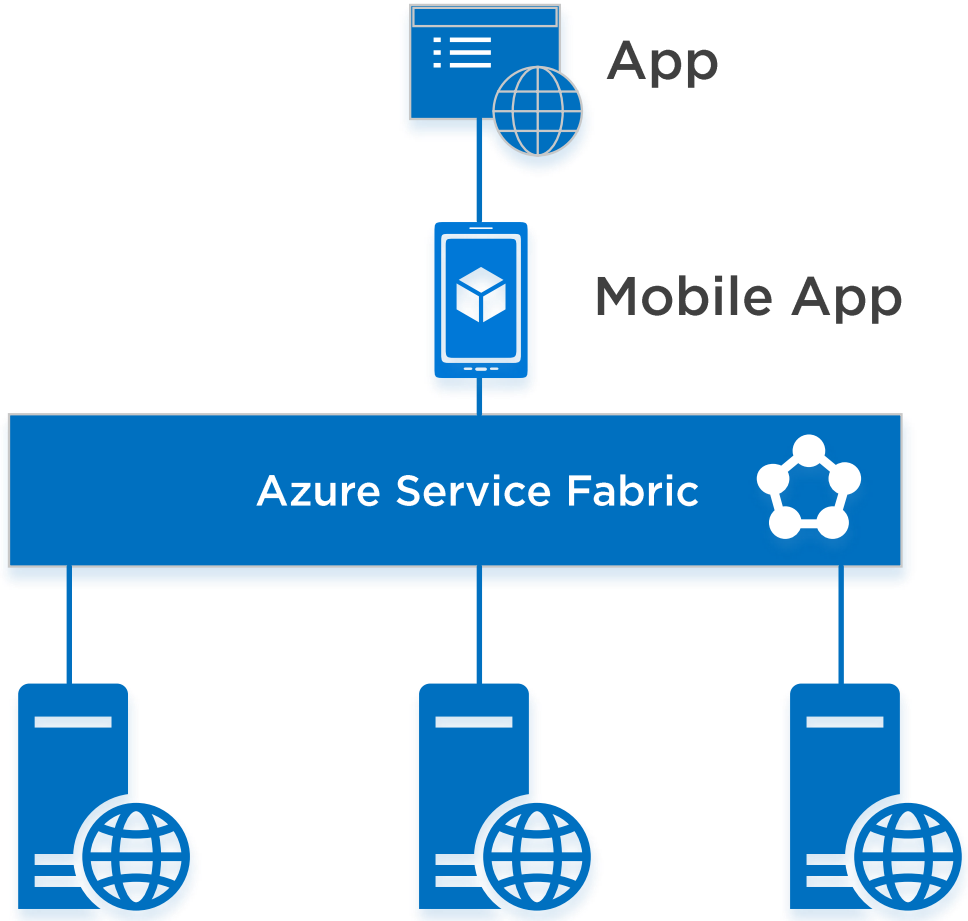

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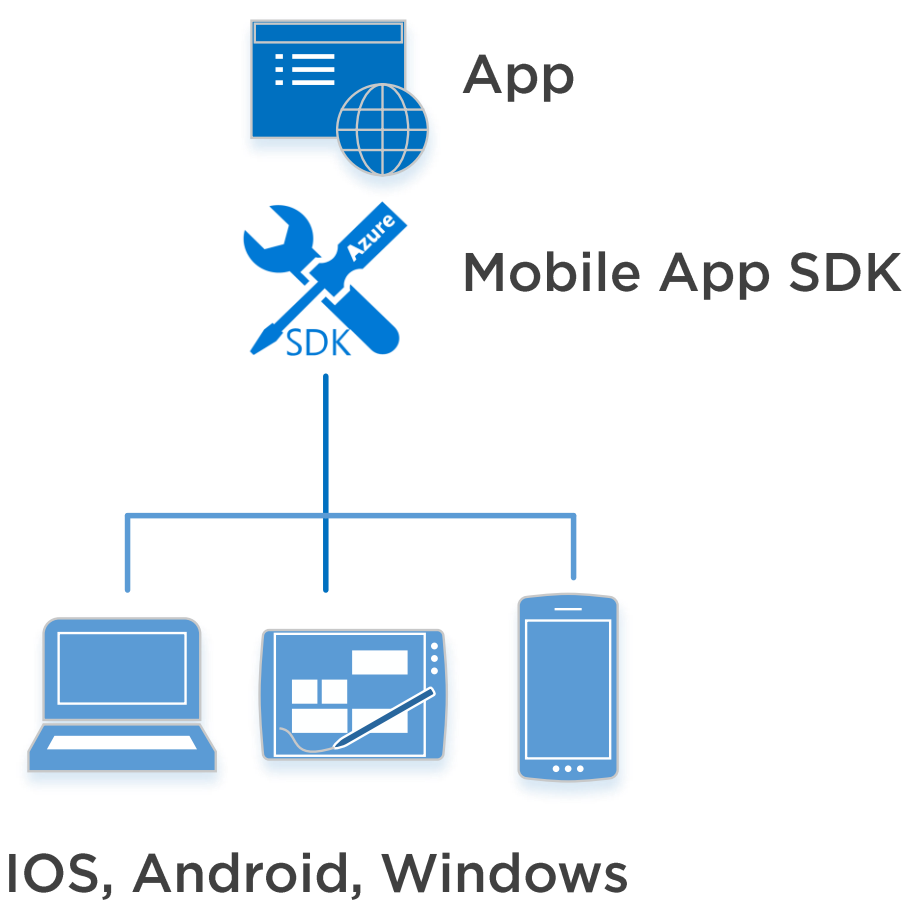

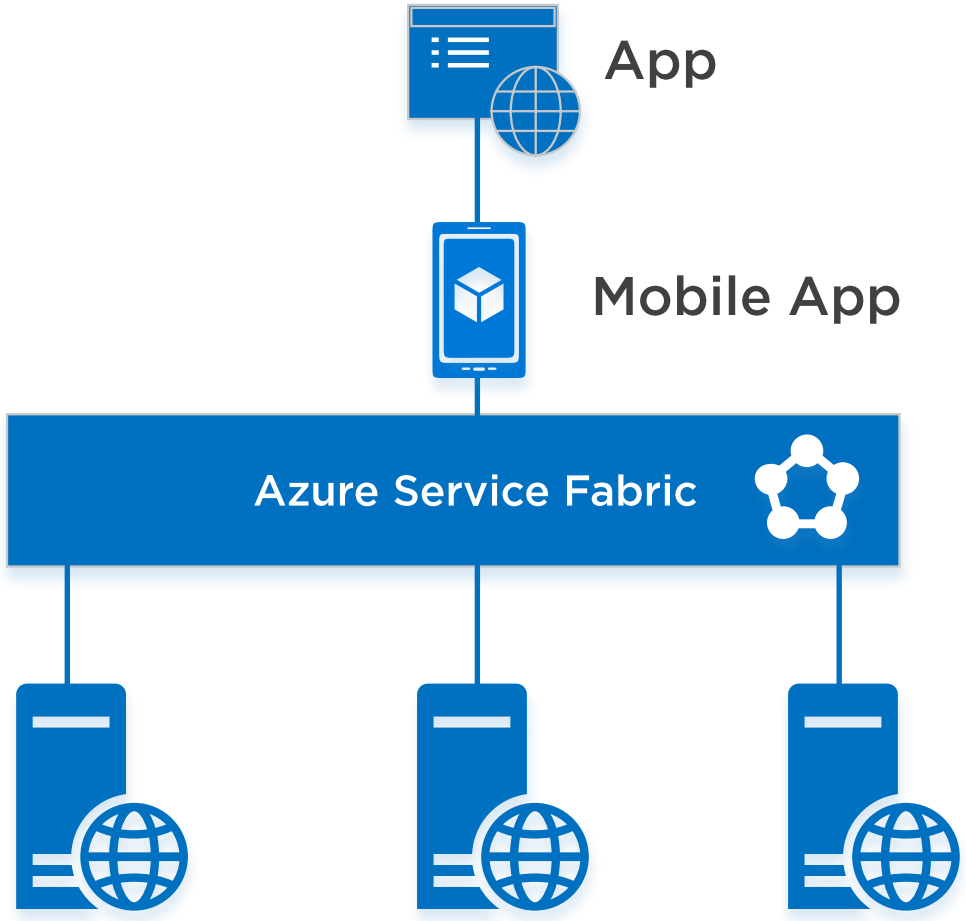

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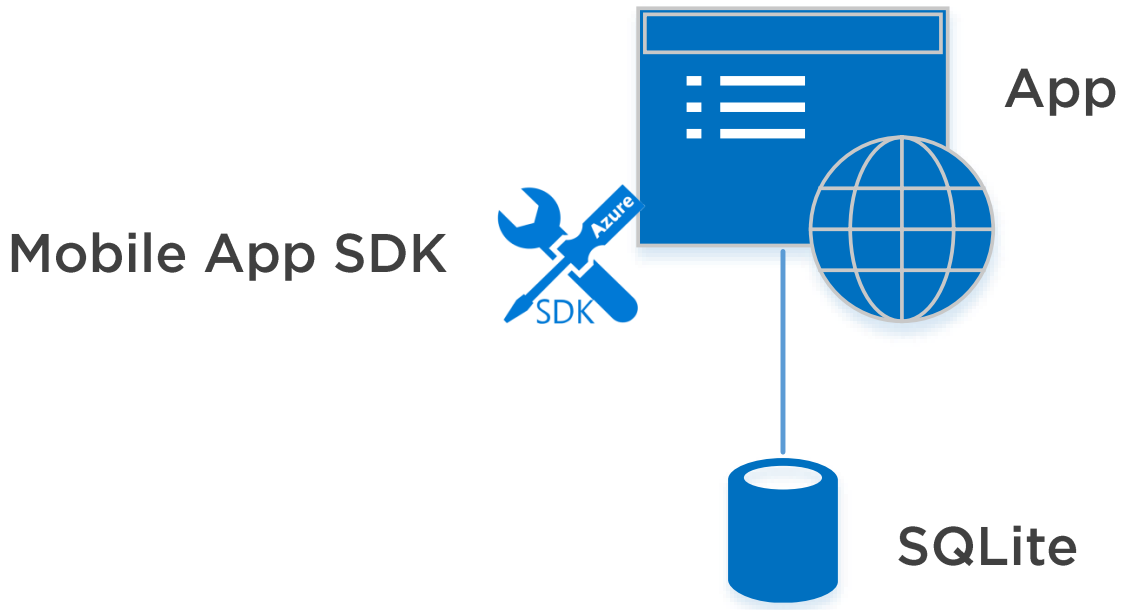

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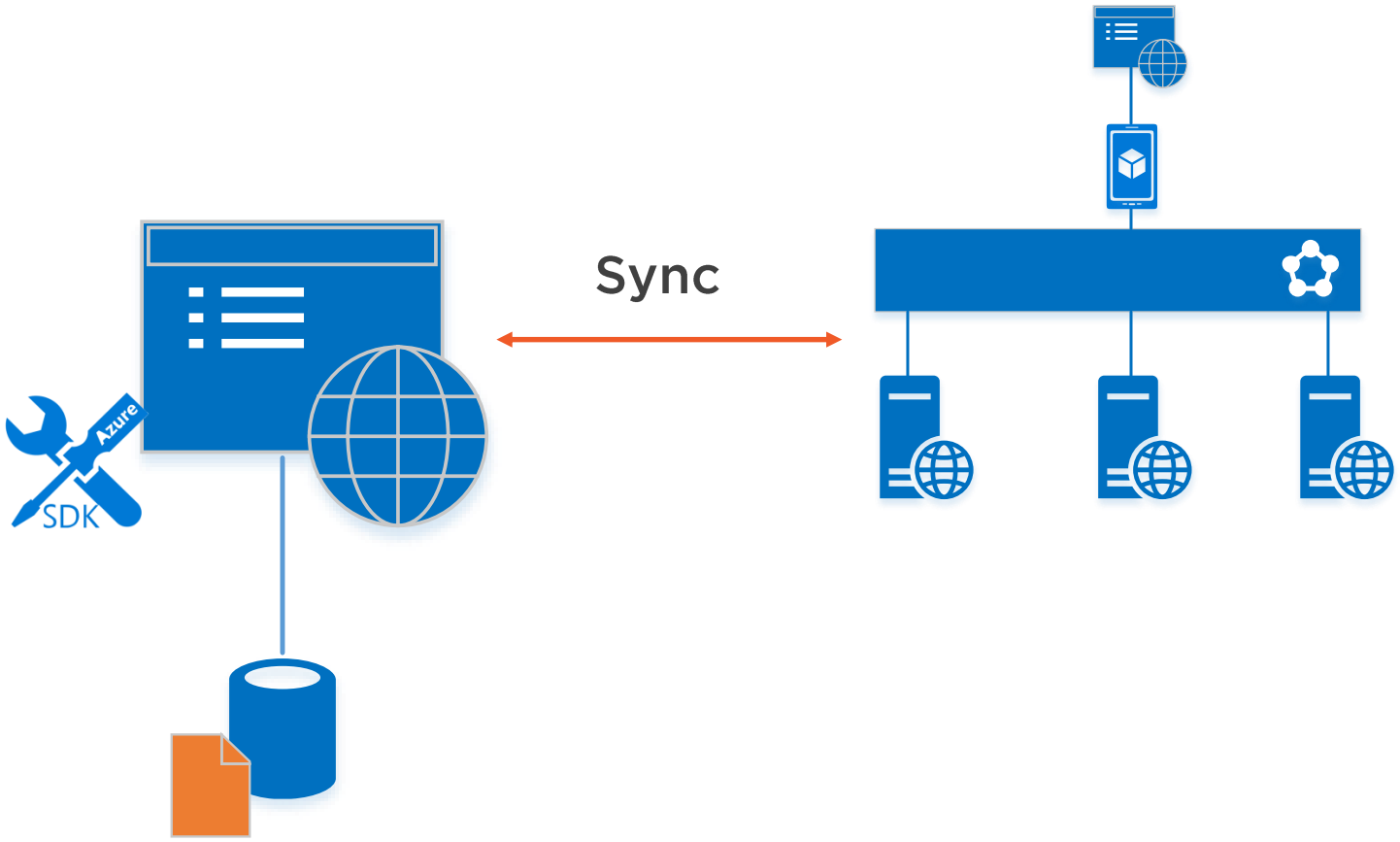

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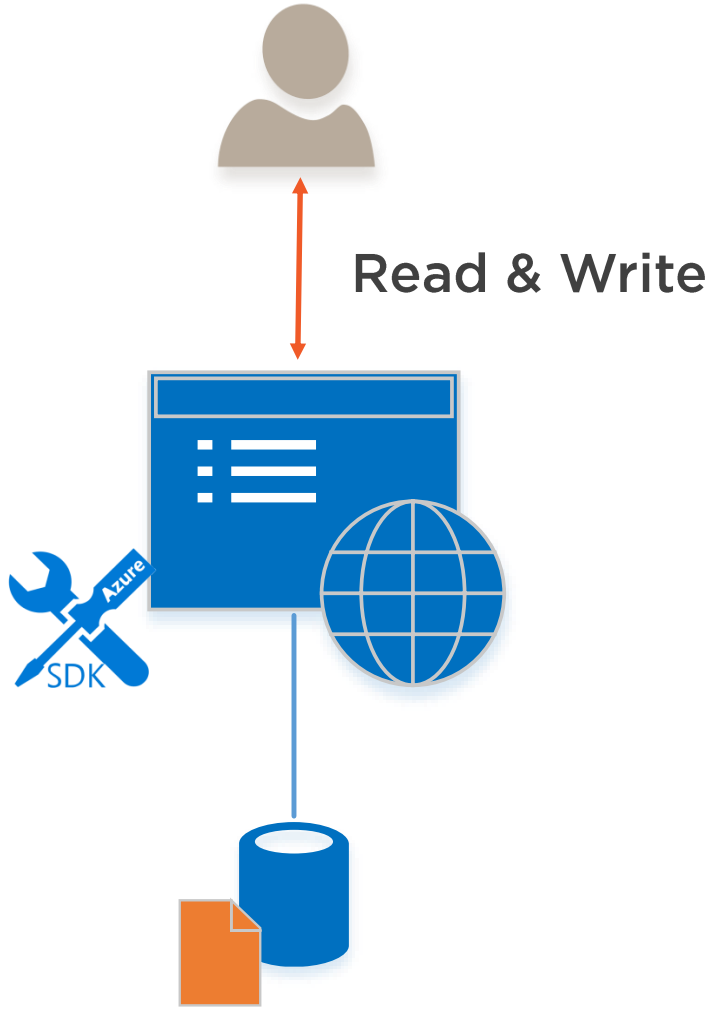

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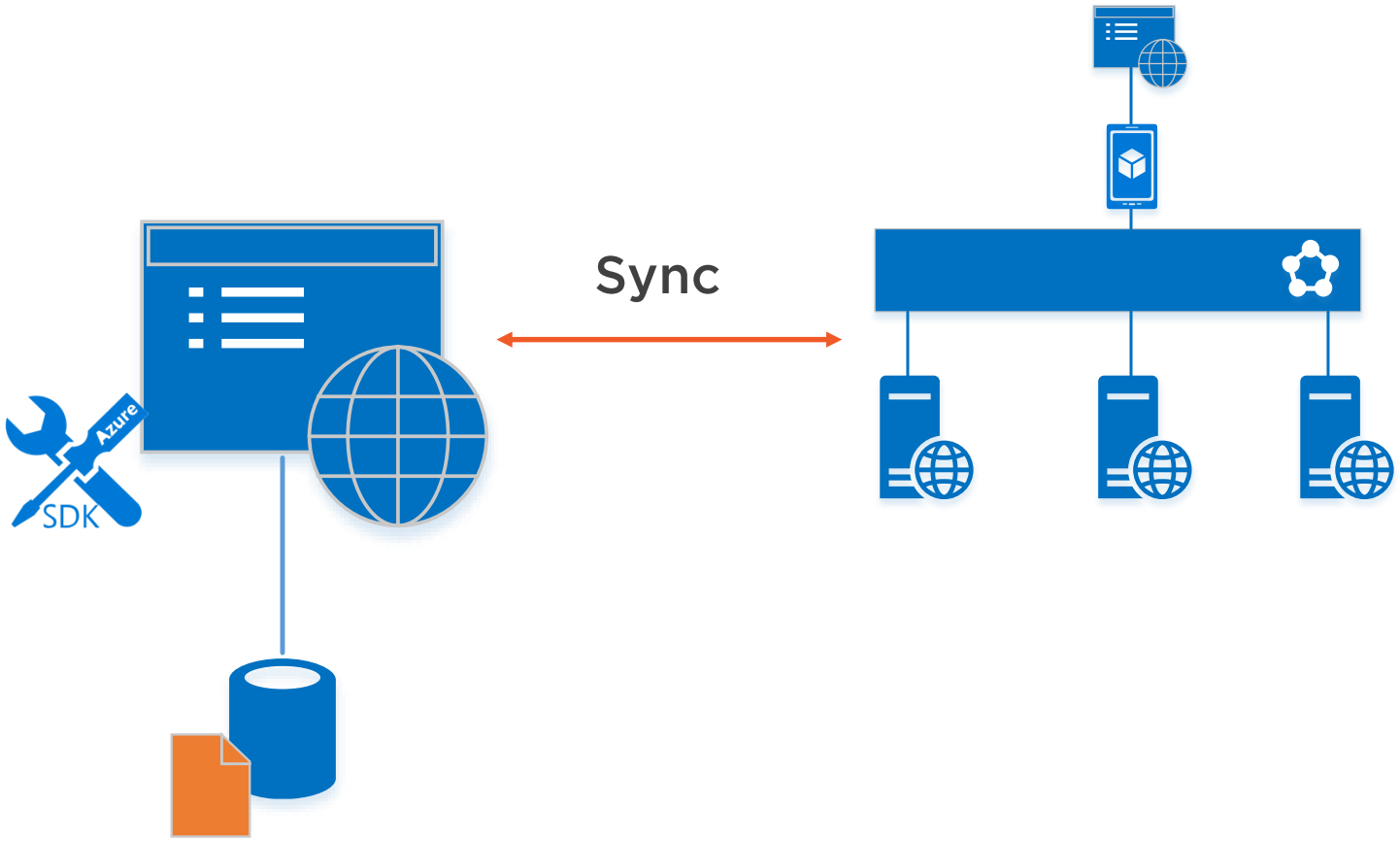


About Offline Sync

You need the SDK & Mobile App Backend

You need a local datastore

- By default, this is SQLite
- You can implement your own datastore

Conflict detection and handling

Amount of sync calls limited in some tiers

Demo

Change the app to support offline sync

Visual Studio

Push Notifications

Why Use Push Notifications?

Notify users of events

Easily do this cross-platform

Abstract the details of the notification system

What Is a Notification?

Notifies the user

Can be in many forms

Tile

Toast

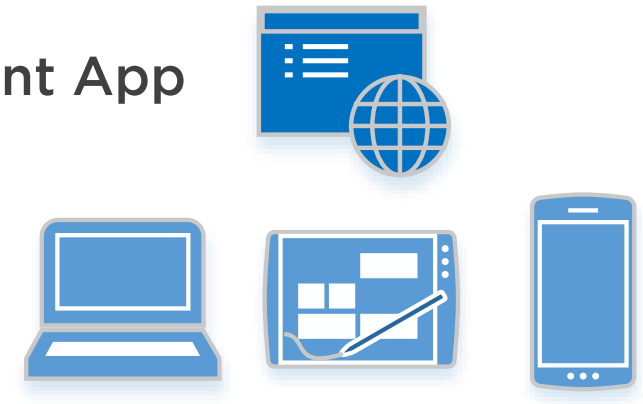
Badge

How Do Push Notifications Work?

Plain Vanilla Push Notifications

App backend

Client App



IOS, Android, Windows

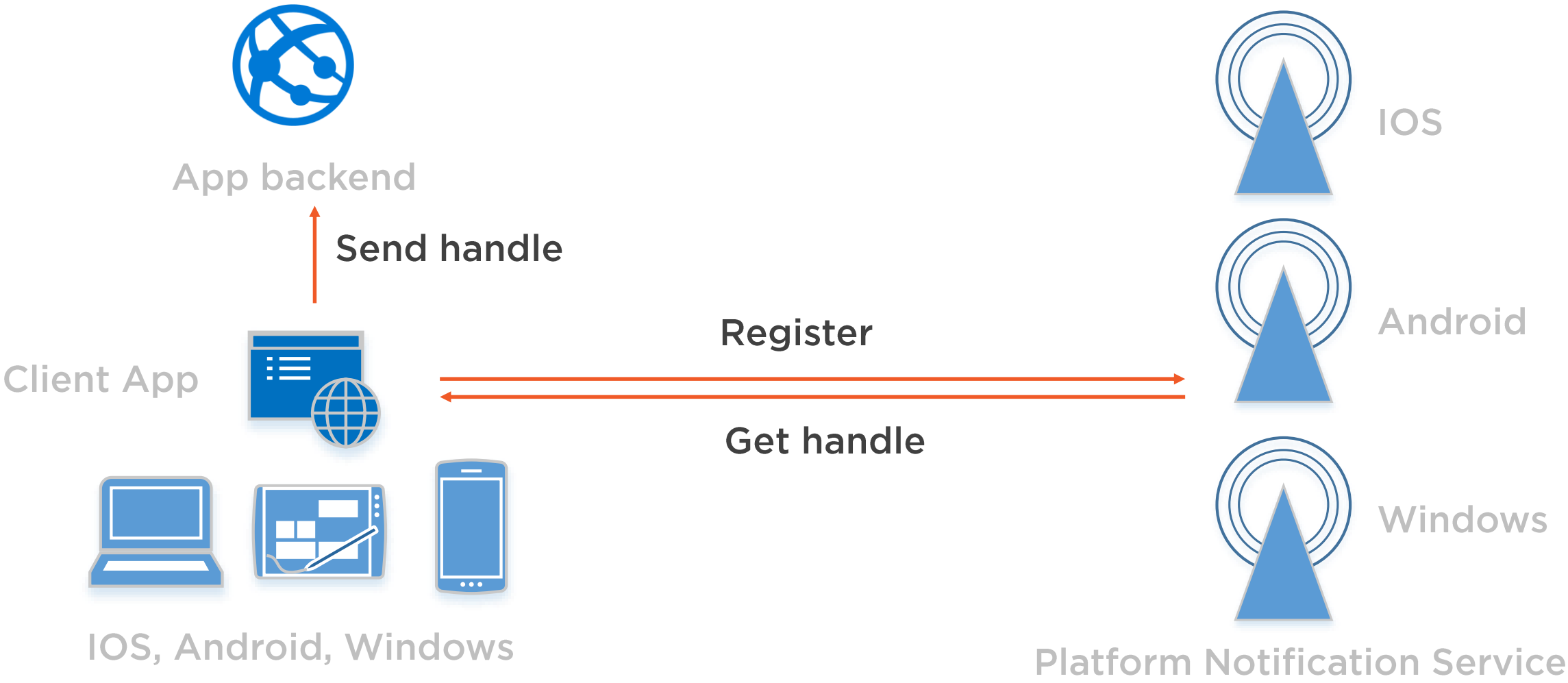
IOS

Android

Windows

Platform Notification Service

Plain Vanilla Push Notifications



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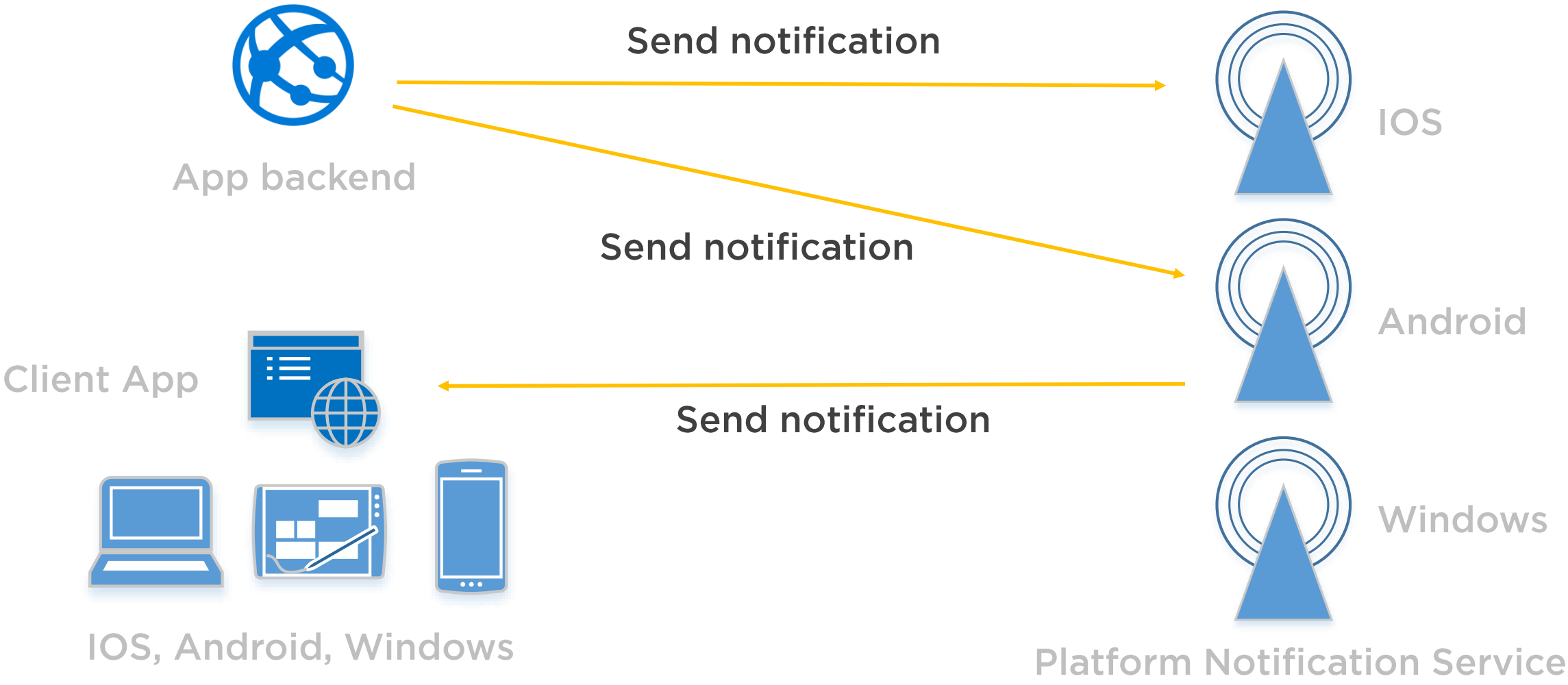


Plain Vanilla Push Notifications

App backend

- Complexity of multiple platforms
- Platform dependency
- Routing

Client App

IOS, Android, Windows

IOS

Android

Windows

Platform Notification Service

Push Notifications with Notification Hubs

App backend

Client App

IOS, Android, Windows

Notification Hubs

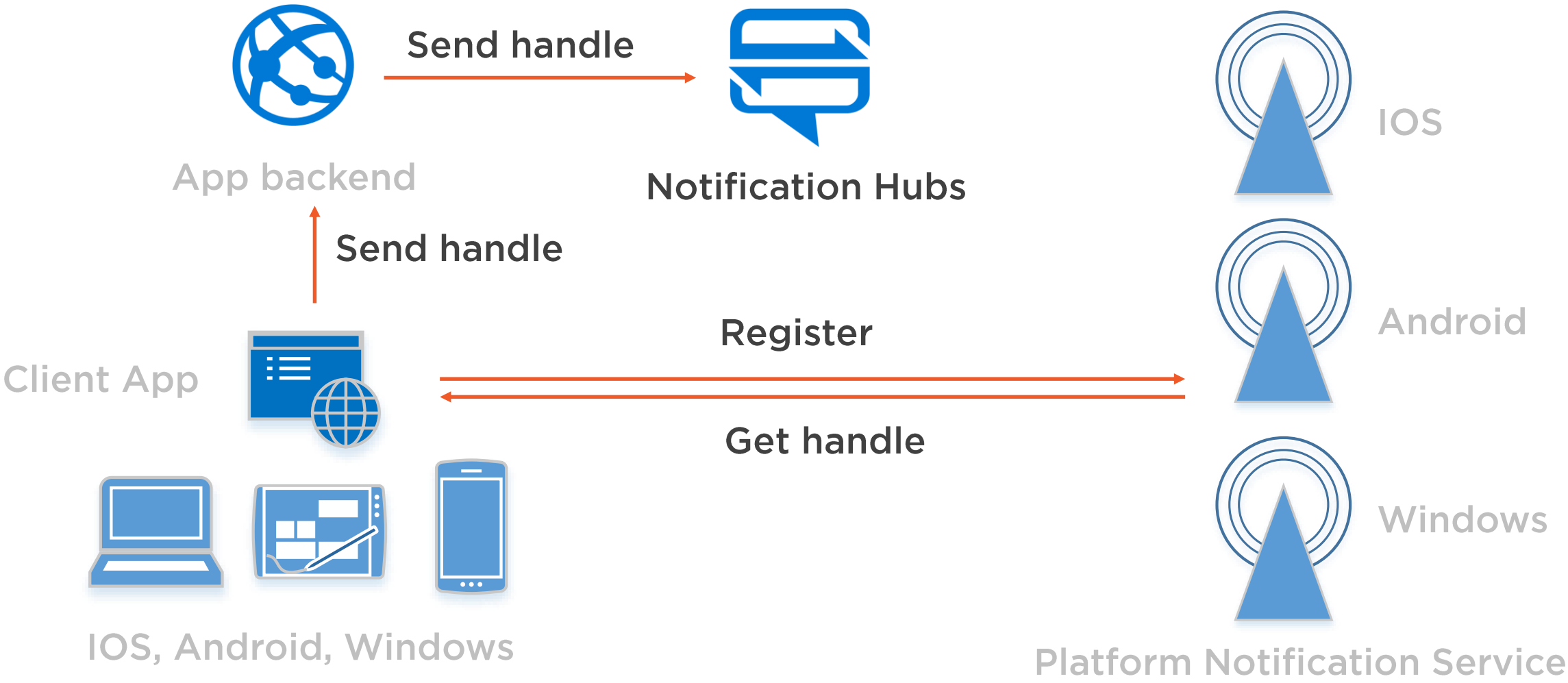
IOS

Android

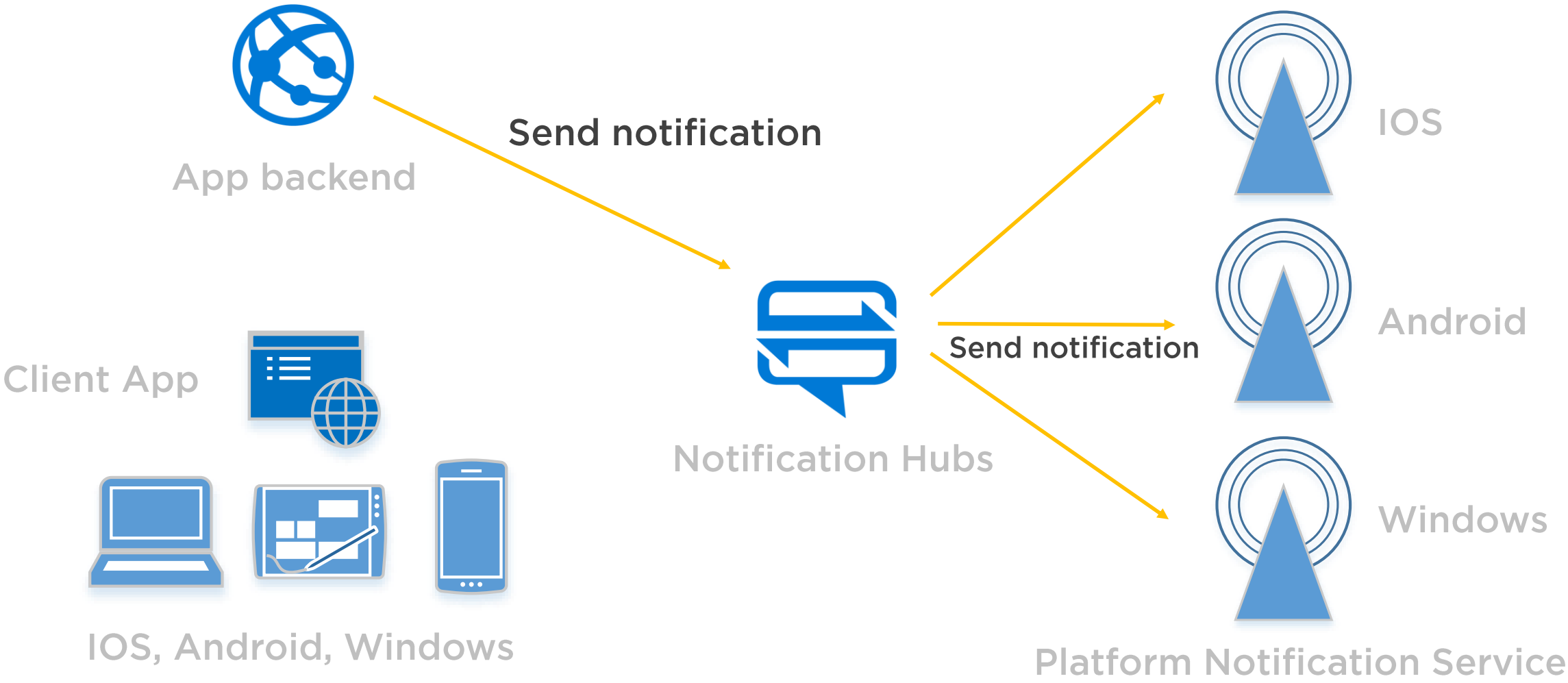
Windows

Platform Notification Service

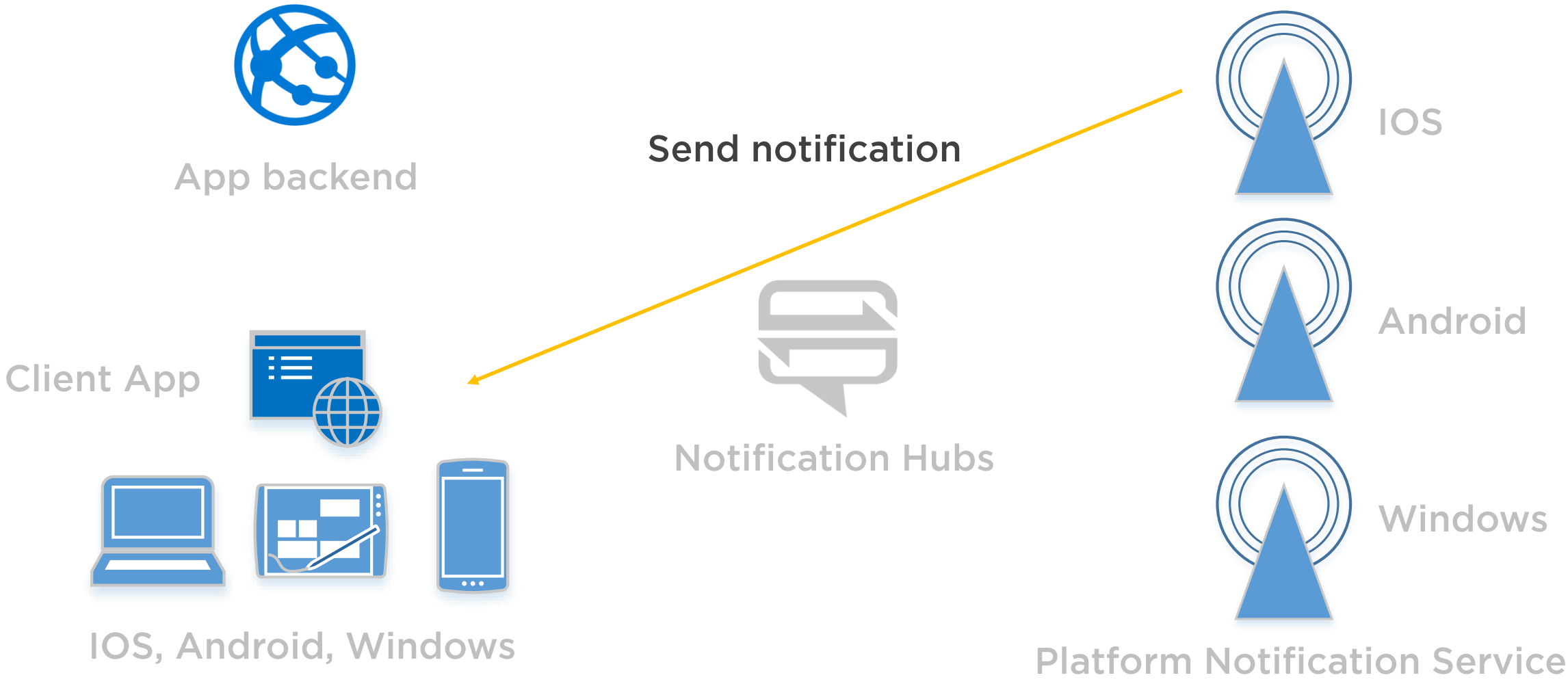
Push Notifications with Notification Hubs



Push Notifications with Notification Hubs



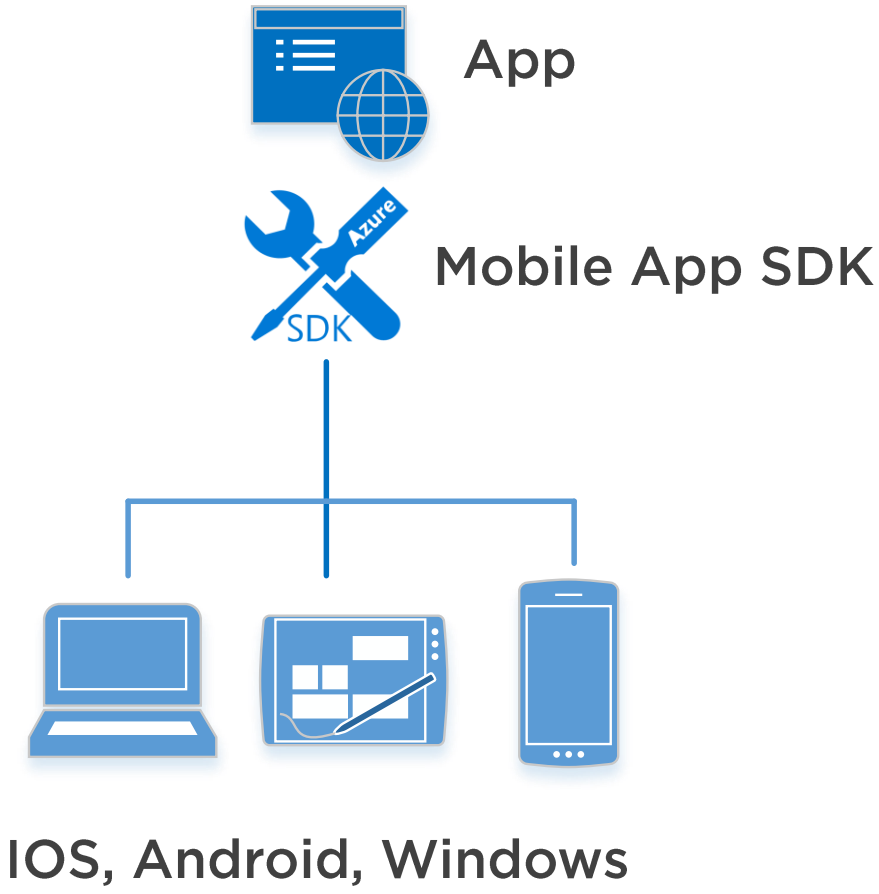
Push Notifications with Notification Hubs

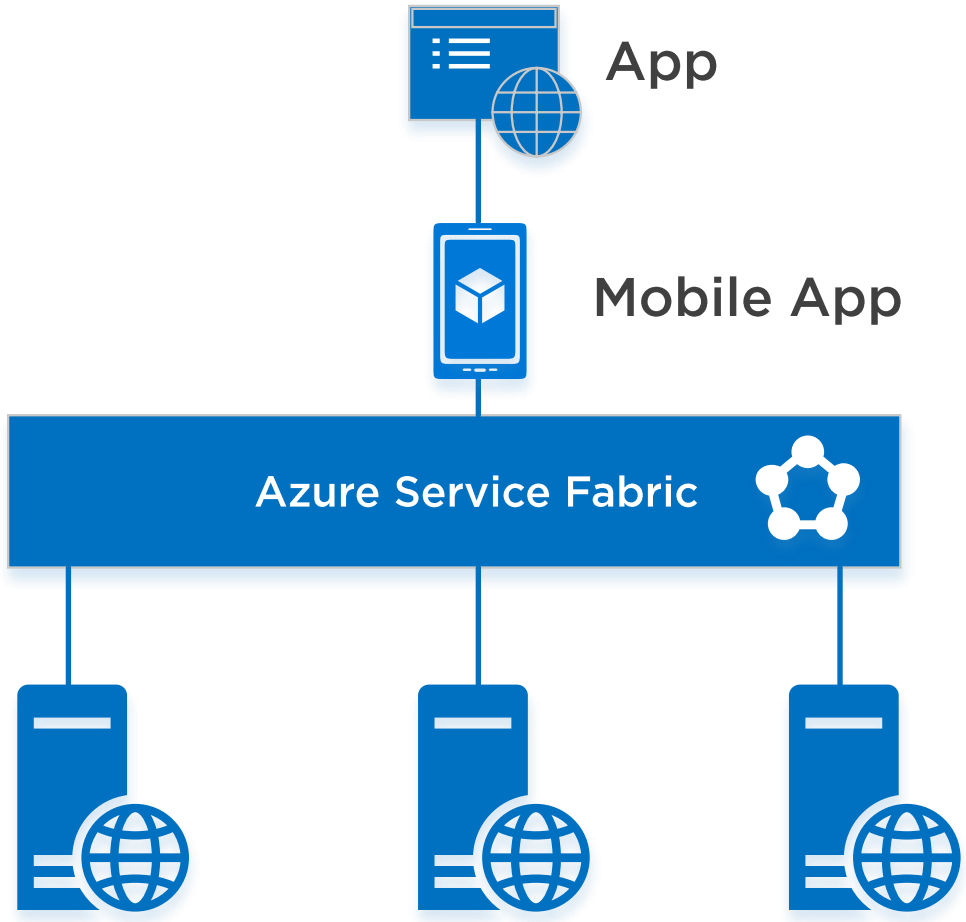


Push Notifications with Notification Hubs

- Abstracts platform complexities
- Provides granularity
- Telemetry

Push Notifications with Azure Mobile Apps





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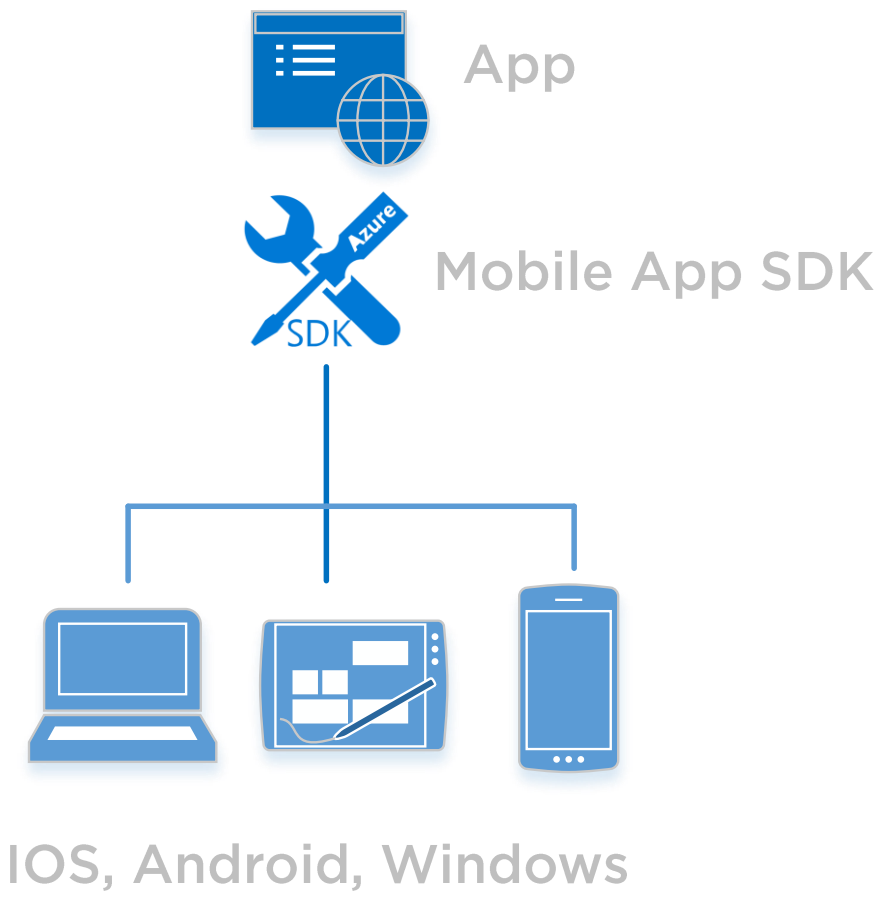
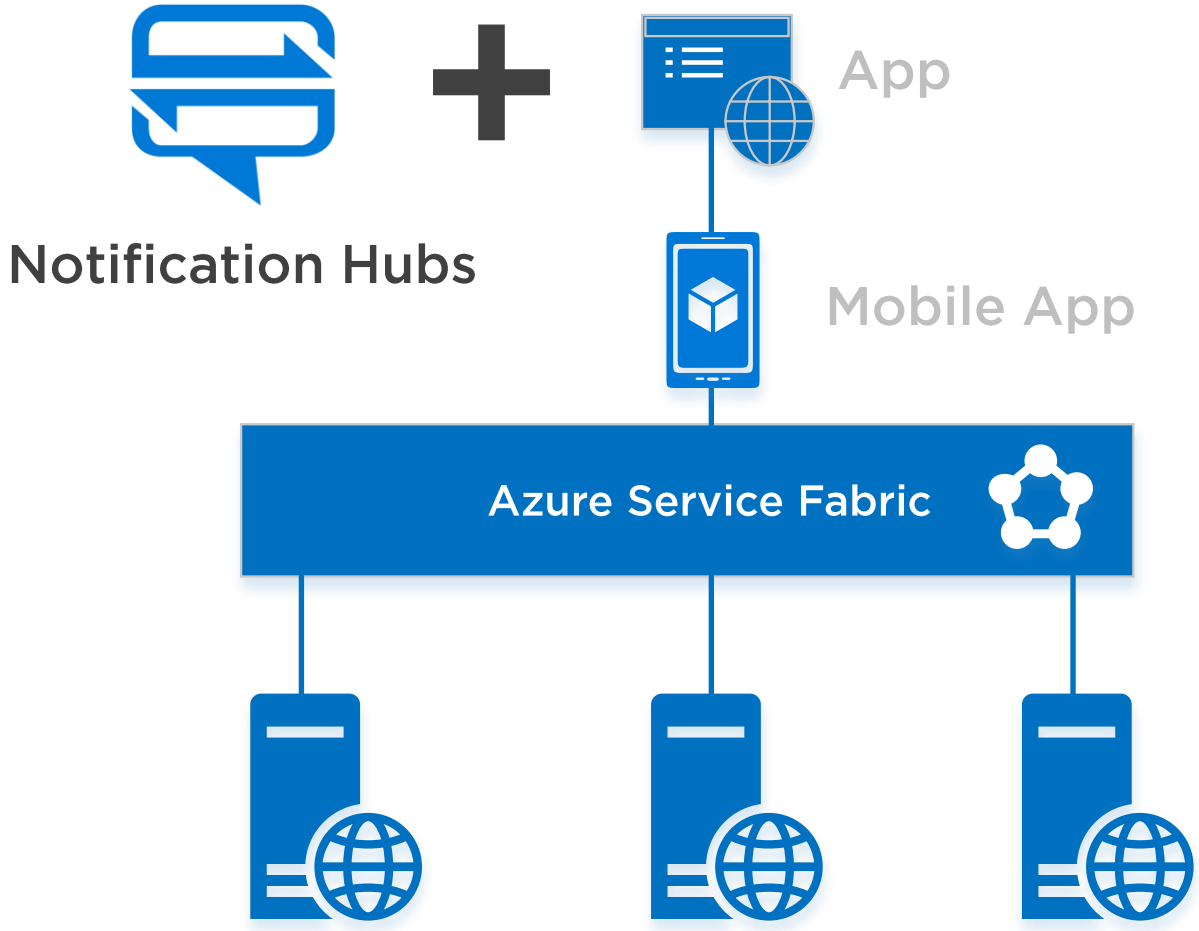
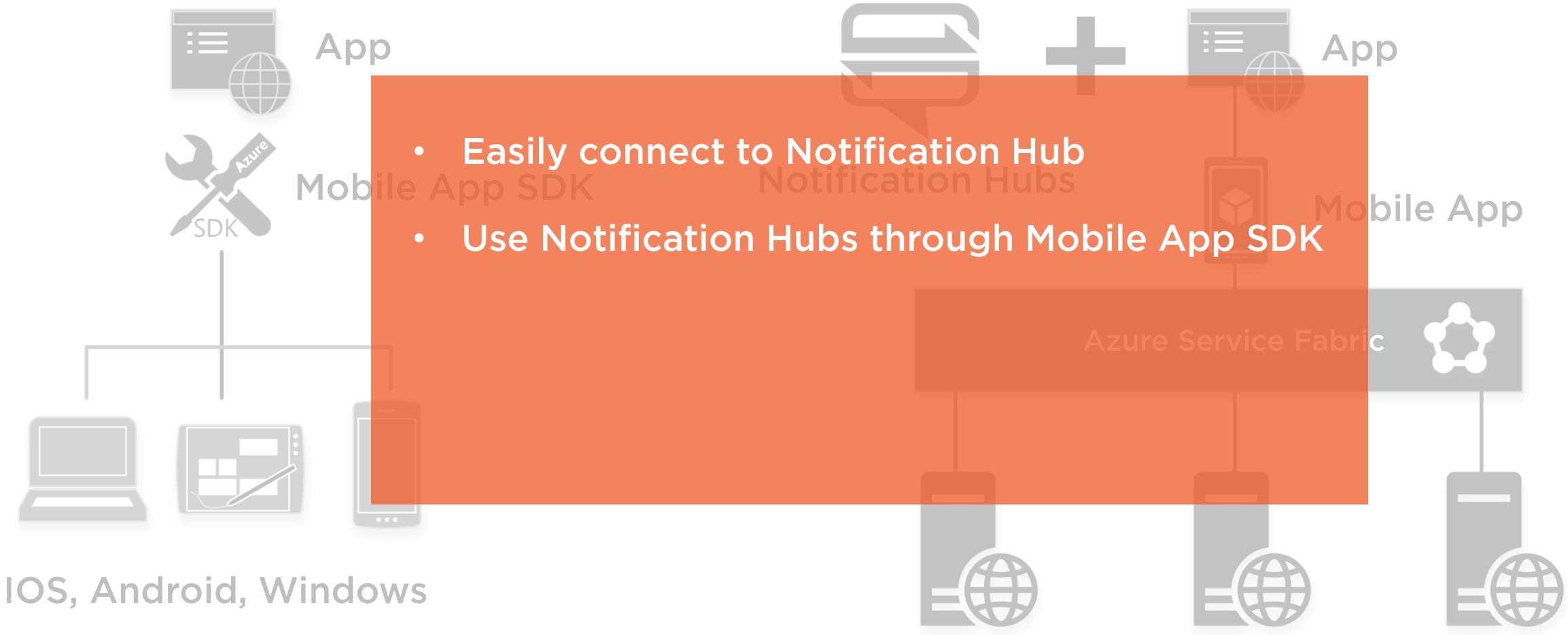




Push Notifications with Azure Mobile Apps



- Easily connect to Notification Hub
- Use Notification Hubs through Mobile App SDK

About Push Notifications

Uses Notification Hubs

Provides notifications on client devices

IOS, Android, Windows (Universal & Phone)..

Does not send SMS/Email/Web notifications

Notification Hubs

Set up Push Notifications

1. **Add Notifications Hub to Mobile App backend**
2. **Register app for push notifications**
3. **Configure backend to send notifications**
4. **Update your code**
    a) Client:
        1. register device and subscribe to notifications
    b) Backend
        1. Connect to Notification Hub
        2. Send notifications

Summary

- Connect apps to a backend
- Cross-platform
- Offline sync
- Push notifications