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What is Back End as a Service?

Back end as a service is an emerging trend that has gained increased popularity in the past few years. It is a development strategy, mostly in mobile (MBaas), that focuses on developing an API first, using those APIs as a base to develop upon, and then link the back end storage to the cloud. This has started to replace the "mobile first" mentality. Which traditionally stated that a mobile web page was to be constructed first and then the back end would be built for each platform.

The difference lies in the fact that BaaS starts its development based on the essential elements found in the foundational similarities between all platforms. Things such as notifications, network integration, location services, and storage capabilities. These services would all have their own APIs, which would allow them to be integrated with applications with ease. This gives developers a consistent way to manage back end data, which means reduces the need for developers to make another backend for each service the application uses.

Like any job, it's important to choose the right tool. So when is BaaS the right tool for a developer? The use of BaaS really shine when it comes to pumping out a first prototype and testing if it has a place in the market. As many of the back end operations would be done for the developer, the user would see some reduced aspects of unique interaction. This means that Baas also excels at its purpose when the application in question is not highly complicated.

BaaS vs. Mobile Middleware

The fundamental mentality behind Baas is how the back end connects to the front end of the application. Mobile middleware predominantly integrates backend serves to the applications through a local server. This requires the host to purchase and maintain their own hardware. This Reversely, BaaS eliminates this need by operating from the cloud. This allows for the same service to be completed but through the use of offsite datacenters. Leaving the dirty work to someone else.

Benefits of Baas.

1. Getting to market faster: Without abstract server APIs, developers would have to code and integrate each service into every application they create. BaaS creates one, unified API that encompasses all the basic functions. Streamlining the entire process.

2. Collaborative app development: some platforms allow customers to have virtual collaboration capabilities. These capabilities act as a catalyst for teams to actively collaborate, regardless of role.

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3. Real time data access: Baas removes the need for developers to create a data persistence later. In the same swoop, it gives them access to data resources such as ERP and CRM databases.

4. Developing for multiple platforms: utilizing a BaaS provider, developers do not have to worry about coding specific back end utility based on platform. Baas, and MBaaS, actively provide SDKs that abstract much of the grunt work required for developing for the back end.

5. Reduce cost: A lot of time, effort and money goes into creating a back end for each feature of an application. MBaas abstracts the server side infrastructures. Eliminating the need to code for each unique feature. This ultimately saves time, money and allows developers to focus more heavily on more unique features.

6. Scalable: It would come as an extra cost. But resources can easily be modified to fit a growing need.

Draw backs of BaaS.

1.Extremely data-centric: BaaS runs on the mentality of data first, code second. This means a developer cannot have long-running functions. On the other hand, a developer can define short validators or define things through conditionals. Such as “when a new order is created. Do this.”

2.Security: Clients tend to be in an untrusted environment. Extra end-user credentials should be used as well as the usual SSL and other authentication methods.

3.Less Control: Seeing as much of the back end would be normalized through a third party. Much of the user interaction would be limited. This could prevent the user from performing task as they would initially intend.

4. Delayed notifications: Since the service would be provided offsite, by a third party, notifications can come in extremely delayed (even up to an hour). This can cause frustration in the user if they are handling, or expecting time sensitive information.

Popular BaaS Providers

<u>Google Firebase</u>
Firebase can be split into three main features. Develop, Grow and Earn. The developing category offers a database on the cloud, authentication services through social medias, cloud messaging and notifications, testing tools and environments, and crash reporting. Grow helps with analyzing data and user interaction. This category offers mobile specific analytics which

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piggy back off Google Analytics. Notification Analytics, application indexing and dynamic linking. The earn category is simply for marketing

Apple Cloud Kit
Services include user authentication, Databases (private, public and shared), storage solutions, scaling, automatic syncing with apple devices and data sharing. Some disadvantages to apple cloud kit include little to no features to enact server side logic. Users must sign in to iCloud devices. Developers have to use less than optimal architecture since they are forced to use logic on the client side. And it only supports iOS applications.

Kinvey
Kinvey was ranked at the top of "Forrester Wave Enterprise Health Cloud" reports of Q3, 2017. Kinvey provides a broad spectrum of support which include enterprise data integration, robust options for cloud native services, and high security standards.

Amazon Web Services For Mobile
AWSM offers development starter kits, and provides for multiple platforms including iOS and android. Analytics to measure user interaction. Email, sms and push notifications. Secure multi factor authentication. Databases powered by amazon dynamoDBl. A vast and powerful cloud infrastructure as well as amazing storage services.

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