Backend as a Service (BaaS/mBaaS)

By: Blain Bowman

Date: 03/10/20

Link To Final Spark Page:
https://spark.adobe.com/page/xKYlQwixzbLO8/

What is MBaaS

Mobile Backend as a Service refers to a cloud service model in which most developers outsource a large amount of the behind-the-scenes features of a mobile or web application mainly to enable them to write and maintain the fronted (Lane, 2015). MBaaS vendors have the opportunity of providing the pre-written software for activities that are majorly conducted on servers such as the data management, push notifications, user authentication, cloud storage and hosting, as well as remote updating.

Five MBaaS Solutions

i. Veeam Disaster Recovery Solutions

VEEAM

Veeam Availability Suite ensures the availability and provision of the virtualized applications with recovery time and point objectives of less than fifteen minutes for all the applications and data. This is a full-scale DR solution with flexible and powerful DR tools. The recovery solutions provide VM backup and advanced image-based VM replication for VMware vSphere and Microsoft Hyper-V environments (Gropengießer & Sattler, 2014). In addition, the Veeam Availability Suite can duplicate off-site to a secondary site, or imitate through Veeam Cloud Connect to a DRaaS provider of the individual's choice as they pay for resources that one needs.

ii. IBM Spectrum Protect

(2020). Retrieved 12 March 2020, from https://www.bocada.com/wp-content/uploads/2018/10/IBM-Spectrum-Protect-Color-1.png

IBM Spectrum Protect is a complex backup solution that provides enterprises with the opportunity to make backups not only for data in cloud environments, physical or virtual but as well for the software-defined environments to store it in a more reliable DEAC cloud infrastructure. The backup solutions entail the administration platform to set the backup frequency and determine the storage of data, making it have flexible restore capabilities and fast data recovery from selected backup copies. It consists of highly scalable performance backup software that its role is based on managing administration platforms as well as multi-site replication. IBM Spectrum Protect backup solution is purchased only for resources an individual use.

iii. Oracle Blockchain Cloud Service

This is a complete distributed ledger cloud platform to provision blockchain networks, joining numerous organizations and running smart contracts to update as well as query the ledger. The cloud service is responsible to share data and process reliability as well as trusted transactions with banks, suppliers, and other registered trade partners through incorporating the existing or new cloud-based applications (Acharya, 2018). Oracle Blockchain Cloud Service provides a platform available for all required infrastructure services such as network, object store, compute, containers, identity management, and local storage. The service builds trusted business networks that add both local and international partners, including running Hyperledger Fabric outside of Oracle Cloud.

iv. Azure Blockchain Service

Azure Blockchain Service is a fully managed ledger service that provides users with the opportunity to grow and operate blockchain networks at scale in Azure. The service provides unified control for both infrastructure management and the governance of the blockchain network. The BaaS focuses on providing simple network deployment as well as operations, developing smart contracts with familiar operating tools, and built-in consortium management. The service is designed to support numerous ledger protocols such as the Ethereum Quorum ledger by applying the IBFT consensus mechanism. Network deployment is implemented through the Azure CLI, Visual Studio, or Azure portal system using the Azure Blockchain extension.

v. SAP Cloud Platform Blockchain Service

SAP offers services ranging from data management to mobile, analytics, and user experience that helps users in building a holistic solution on the SAP landscape. The services focus on increasing transparency and trust in the multi-party transactions, reducing cost as well as advancing efficiency in the involved processes. The platform minimizes fraud by facilitating secure and decentralized transactions among the various individuals both privately and publicly.

Three Reasons to use BaaS

BaaS saves a significant amount of time by providing features such as data management, user management, search, queries, and other important features that are efficient and reliable enough to save

time (Gupta, 2017). In addition, the back end development can be monotonous for developers since it is a repetitive process; hence, BaaS provides the alternative to speed up the process of software development.

Applying BaaS can save a considerable amount of money since the service supercharges apps tremendously (Gupta, 2017). The market consists of various vendors with in-depth knowledge and available for all types of needs, providing the options for individuals to choose the right vendor in accordance to their budget.

BaaS is a simple, fast, and flexible architecture for advancing the functionality and efficiency of a data structure and any app functionality without wasting resources in the traditional operation cycle available in the App store.

Three BaaS Solutions with Pros and Cons

1). IBM Spectrum Protect

Pros:

a. It provides the opportunity to take a backup from Windows, Linux servers, or AIX and restore from tape, CD, or disk.

b. The solution's stability is extremely high since it is derived from Spectrum Protect; hence, it is scalable and can be fitted for any client.

c. The solution provides a very straightforward deployment with minimal configuration to do and reliable as well as an efficient backup solution.

Cons:

a. The first level of support is too complex to be understood or applied by new users; hence, wasting a significant amount of time to get from them and proceed to the next level of support which is also significant.

b. The system does not provide immediate validation, a notification concerning the previous backup, and no risk of corruption occurring.

2). Azure Blockchain Services

Pros:

a. The Microsoft Azure cloud provides high availability in data centers on a global scale, by offering a service level agreement of 99.95%, which is a feature that most businesses cannot attain.

b. The service is highly scalable and uses minimal compute power with nothing more than the click of a button.

c. Azure Blockchain Services is cost effective, enabling users to manage there IT budgets since individuals purchase only as much as they need.

Cons:

a. Azure requires professional management and maintenance, which includes patching as well as server monitoring.

b. The service mainly requires expertise to ensure all operating parts function together efficiently.

3). Veeam Disaster Recovery Solutions

Pros:

a. The service provides various features on a solution, and after the turn off Veeam maintains all of the data.

b. There are numerous vendors with in-depth Veeam knowledge to improve and protect the clients' data.

c. The system is flexible, has an excellent user interface, and helps in protecting an individual's IP address as well as critical information.

Cons:

a. Requires advanced integration with cloud service providers.

b. The backup system offers long-term retention data that is complex to understand or apply.

App Examples, with One BaaS Solution, and Three Solutions Why

WhatsApp is among the App examples that apply the Microsoft Azure to connect their applications with backend cloud storage and APIs. Azure Mobile Service provides all of the functionality required for authentication, data syncing, push notifications and more. The solution provides a backend, infrastructure, software, mobile backend, blockchain, and platform as a package with the App. Microsoft Azure provides the opportunity to build, deploy, manage, and test mobile as well as web apps.

One Company Using BaaS and Why

Facebook is among the firms that use BaaS. The platform provides the company with an opportunity to support its projects in the long-term, meaning that Facebook can keep a large amount of data without the fear of failure (Oliver, 2016). Both the Android and iOS developers can access information via the Cloud of the system, which is reliable and available.

References

Lane, K. (2015). Overview of the backend as a service (BaaS) space. API Evangelist. Retrieved fromhttp://www.integrove.com/wp-

content/uploads/2014/11/api-evangelist-baas-whitepaper.pdf

Gropengießer, F., & Sattler, K. U. (2014). Database backend as a service: Automatic generation, deployment, and management of database backends for mobile applications. Datenbank-Spektrum, 14(2), 85-95.

Oliver, K. (2016, February 5). The shuttering of Facebook parse and the future of mobile backend-as-a-service. The New Stack. Retrieved from https://thenewstack.io/shuttering-parse-future-mobile-backend-service/

Gupta, K. (2017, January 24). Top 10 reason to go for backend as a service (BAAS). Freelancing Gig. Retrieved fromhttps://www.freelancinggig.com/blog/2017/01/24/top-10-reason-go-backend-service-baas/

Acharya, V. (2018). Oracle blockchain cloud service-part 1/5. Experimenting with Oracle Fusion Technologies. Retrieved fromhttps://blogs.oracle.com/acharyavivek/oracle-blockchain-cloud-service-part-15

CREATED BY
Blain Bowman

Credits:

Created with an image by Fabian Grohs - "More shots like this on my instagram pages -

https://instagram.com/motivational.coder - https://instagram.com/grohsfabian"