Creating Next Generation Enterprise Apps Using Cloud Services

SNAPPii

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EXECUTIVE SUMMARY

Enterprises are facing global changes regarding their interaction with clients, partners and employees via mobile applications. Next generation, native, mobile apps will leverage social opportunities and allow access to both web-based services and custom enterprise data apps and backend systems.

A shift from server-focused application development to client-focused development caused higher expenses and took more time for deployment. This caused a relatively quick adoption for many companies to cloud-based services as an alternative. MBaaS, Mobile Backend as a Service, can be handled by simple APIs online to deliver secure and flexible features to applications which will allow concentration on the client-side development model.

Cloud-based development systems are a cost effective and fast way to create custom mobile apps. The main purpose of this white paper is to demonstrate the importance cloud services play in making mobile apps. Drag and Drop Visual WYSIWYG editor features and their challenges are also discussed.

INTRODUCTION

The rapid rise and increasing consumer-driven demand for mobile applications is growing at a heated pace. Mobile apps have already proven to be an excellent way to promote/run your business and communicate with your customers. Now organizations are realizing the benefits and potential of implementing internal mobile apps to streamline business processes and communication with their employees. Enterprise mobile apps can further any companies' strategies aimed at improving customer loyalty and employee productivity while decreasing costs.

One of the core challenges with mobile applications is that there is no single operating system suitable for all devices. Every device type runs on its own OS and has its own software and interface peculiarities. These devices support native, hybrid and HTML5 web apps on different OS platforms like iOS, Android, Windows Mobile and BlackBerry. Choosing the platform(s) upon which to create your apps is as important a task as determine what apps you want to build. The choice will also hinge on who your audience is and how you want to attract and interact with your potential app users. Once the apps are developed, the ease of executing on-going maintenance and enhancements will play a big role in their success.

Although faced with the challenge of multi-device/OS support and the level of intricacies in the complex apps users are demanding, it's no wonder enterprises are nevertheless putting vast amounts of time and resources into determining their mobile app strategies. Mobile devices and apps have given companies access to users in a myriad of ways and the users are responding and wanting more. With companies now adding in the internal component of strategies like BYOD (bring your own device) and users demanding access to enterprise backend systems, developing relevant apps is quickly becoming a necessity.

Cloud services and in some cases MBaaS (mobile back end as a service) will be a critical component to publishing and continually updating any number of informational, social, ecommerce and even internal applications rapidly and inexpensively.

THE STRATEGY OF MOBILE BACKEND AS A SERVICE

When implemented properly, utilizing MBaaS for enterprise mobile application development offers numerous benefits. MBaas is the term used to describe tools that provide cloud-based, pre-built components for developing mobile app backends. These platforms reduce the cost, time and difficulty needed to build, deploy and maintain mobile apps allowing developers to focus their efforts on core features. These types of mobile back end tools accelerate the process of new mobile app creation. Consumers require functionalities like GPS localization, social media integration and payment options to search, stay and purchase online. Employees are demanding BYOD opportunities with access to corporate enterprise systems like SAP, Salesforce and Oracle potentially combined with social networking and other services.

Taking advantage of MBaaS in your mobile app developments means addressing and resolving the potentially major issues before they happen.

- ***Product quality:***
  When your customer-facing mobile application is released there is a greater chance to be noticed and expand your business by gaining new clients. Internal apps have the potential to positively impact employees and productivity. The reverse side, however, is that if the app is poorly constructed, users will simply remove it from their devices. The golden rule is to deliver useful and reliable mobile applications focusing on quality and usefulness over "fancy" but possibly unstable technologies/features.

- ***Distribution***
  Your mobile application must be robust and work quickly regardless of the geographic location in which it is being downloaded and used. Consumers simply won't tolerate slow working or buggy applications. To compete with the vast and rapidly increasing breadth of offerings in the app stores, you will have to offer maximum stability and availability, which can be a costly proposition.

- ***Security***
  With any cloud infrastructure data privacy and integrity is critical. This is a mutli-level process addressing everything from the app that sits on a device to the back end support systems and shared resources. Your mobile app must ensure secure access to all information is provided at all times.

THE TRADITIONAL MOBILE APP DEVELOPMENT APPROACH - INTERNAL SERVER-SIDE DEVELOPMENT AND OUTSOURCING

Traditionally, organizations can/do offer their own cloud services in a number of ways, but key among these are:

Internal server-side development through delivery of data via internal infrastructure

- In this case, software, hardware and networking infrastructure is first allocated and only then transferred into the data center. Using Objective-C, Java, PHP and other programming languages the required services are coded on the backend. Once these services are exposed via APIs and tested they can be further managed. If a client requests it, there is an opportunity to integrate to other public cloud systems like social channels and PayPal.

Internal server-side development by delivering data via Infrastructure-as-a-Service

- This is very similar to the first approach with the main difference being that instead of an internally managed infrastructure, a third party provider (outsourcing) is utilized. This is a less expensive option, but the backend software development and management is still the customer's duty.

THE CHALLENGES OF TRADITIONAL APPROACHES

Traditional server-side development is not without challenges. It is these obstacles that are causing many companies to struggle with how to address their increasing mobile app demands timely and cost effectively.

- It is a costly venture to have an app built, thoroughly tested and accepted in the app stores. From hiring developers and having your app coded for cross platform use (ie. iOS and Android), to testing, distribution and maintenance, the numbers can easily exceed six figures.

- From inception to release, it can prove extremely difficult to get an app to market in a timely manner with traditional approaches. Server-side app development can take several months from start to finish which can prove detrimental in the increasingly fast moving world of mobile apps.

- Creating cross platform mobile apps traditionally requires highly skilled and experienced programmers who can develop both in Java and Objective-C. These developers are scarce and in high demand so organizations often have to hire one or more developers in each coding language to fill this need. Even still, the demand for experienced mobile developers exceeds the supply.

- Keeping apps competitive requires constant updates or fixes which can sometimes prove as challenging as the initial build. App updates require additional coding which means additional expense. Additionally, internal or third party resources will have already moved on to other projects so stopping for updates means delaying new projects to maintain previous ones.

A NEW APPROACH FOR APPS CREATED WITH MOBILE CLOUD SERVICES

Given the above-mentioned challenges, utilizing an online mobile app development platform is an excellent alternative to traditional app making approaches Using snAPPii, you can build your cross-platform, native mobile applications at a fraction of the time and cost.

snAPPii is a cloud-based platform for developing sophisticated, feature rich mobile apps without writing code for the majority of apps. We enable programmers and non-programmers to build native apps quickly without having to know Objective-C and Java programming. Experienced programmers can dramatically accelerate app builds with snAPPii by taking advantage of not having to re-write code for the same features on

different applications and focusing on coding enhancements to the platform for business-specific needs. Additionally snAPPii's own App Designers leverage the platform to offer clients full service custom app development.

SnAPPii users build mobile applications over the cloud without having to install any software. Our Visual WYSIWYG editor with drag, drop and configure functionality offers a wide range of benefits.

Some of snAPPii's core features and capabilities include:

1. Data Connectors. Build sophisticated data driven native apps that leverage data from both internal enterprise systems as well as cloud based applications. snAPPii offers several pre-built data connectors to commonly used web services like SalesForce, Vimeo, Mailchimp, SoundCloud, Twitter and etc. Connect to websites, web based applications and internal databases with RESTful API web services. Send and retrieve critical information and mobilize business processes. With snAPPii there's no need to be a programmer to create an XML data connector. snAPPii has several pre-built data connectors and we provide step by step instructions on how to create a new connector to suit your needs.

2. Push Notifications. Schedule and send push notifications to users to promote news, events, appointments and special offers. You can promote your business and let clients know the latest news, special deals and other information you want to convey quickly and easily.

3. User Management. Signup and login features to capture user information and control access rights to individual screens and tabs. Create multiple levels of access in your app allowing some content to be available only to specific users. snAPPii supports O-Auth protocol for user validation providing the ability to log users in to a variety of web based systems for authentication via LinkedIn, Twitter, Facebook, etc.

4. PayPal Integration. Shopping cart functionality with Paypal integration to allow product, service and membership sales directly through the app.

5. Social Media. snAPPii offers out of the box full integration with Facebook, Twitter, LinkedIn, YouTube, RSS feeds, etc. Allow your users to stay connected to family, friends and business associates through social networking offerings in your app. You can also upload RSS feeds to company news (blog feeds) or any blog, magazine, newspaper or other outlet where an RSS feed is present.

6. Custom calculations. Create custom formulas to calculate orders, measure project specifications, and develop productivity tools. It doesn't matter whether you are planning to create a simple calculator, to determine tips on a restaurant bill, or a complex one to count gallons of gas or water for a utility company, for example. snAPPii calculating controls will enable you to implement any calculator format based on your business needs.

7. Digital Forms. Enables customers to submit data to you 24x7 in the format you determine. Collect, store and send information from customers, partners, clients, and employees. Any data in business - documents, photos, GPS locations, digital signatures, etc can be turned into a form for capture.

8. Multi-Language Support. snAPPii currently supports 17 languages: English (U.S.), English (UK), French (France), German, Simplified Chinese, Italian, Spanish, Portuguese (Brazil), Portuguese (Portugal), Swedish, Korean, Japanese, Russian, Arabic, Hebrew, Danish and Dutch. Simply select any of the 17 available languages from the snAPPii WYSIWYG editor and immediately start making an app.

9. Photo controls. Take, share, e-mail, post and store pictures using the Photo Button.The Photo Button lets you create apps that leverage the mobile device camera to take pictures which can be shared, emailed, posted to a website, and sent to a corporate database. The camera has become a scanner of sorts to take pictures of documents and for other personal and business needs.

This can be very useful for any number of reasons:

– Document car accidents

– Report vandalism

– Report news

– Send pictures of houses for rent and purchase

The uses are endless and an easy way to allow visual submission of information quickly and easily.

10. Customizable UI. You have total control over the User Interface down to the pixel level. Build apps with full control over the layout. Unlike a template-based approach, you have complete control over the UI laying out each element – texts, images, multiple buttons, etc exactly how and where you want them.

11. Testing is an important part of the app development process. Using the SnAPPii platform, development teams can work collaboratively in parallel work streams. The SnAPPii WYSIWYG Visual Editor and the live build Preview App enable teams to build and update apps quickly, instantly view changes on their devices and provide immediate feedback. This dramatically compresses the development cycle, improves time to market, and lowers costs.

12. Quick and easy app updates. Making and distributing app changes takes literally minutes and doesn't require you to be a programmer. Anyone can create changes fast making the total cost of ownership with SnAPPii a fraction of apps requiring source code changes.

13. Flexible delivery models for snAPPii are available depending on your organization's desired level of security and control.

- SnAPPii Visual WYSIWYG editor: The back-end is hosted and managed by SnAPPii in the cloud
- SnAPPii intelligently distributes API calls among the servers and scales based on demand
- SnAPPii Visual WYSIWYG editor: The back-end is hosted and managed by SnAPPii in the cloud, but with dedicated infrastructure and VPN access for increased security and control
- SnAPPii Visual WYSIWYG editor: The back-end is hosted and managed on your premises or data center, for maximum control and access to local data sources

CONCLUSION

Offering next generation native mobile applications guarantees a more immersive experience with your clients, partners and employees, which in turn will help increase visibility and popularity. The snAPPii Visual WYSIWYG editor is the key enabler for cross platform, data rich apps by providing scalable backend services that also integrate social media as well as data from your corporate enterprise systems.

By adopting the snAPPii app development platform as a key component of your mobile strategy, significant cost savings can be realized from lower capital costs, development costs and operating costs. Furthermore, business agility is increased as you accelerate your time to market and leverage the reusability of existing services.

Join the many customers and partners who have embraced a mobile cloud solution using the snAPPii app development platform to deliver their custom native apps faster, and at significantly lower cost and risk. Contact us today to begin taking advantage of all these benefits as part of your enterprise mobile app strategy.

Find out more: **www.snAPPii.com**

snAPPii is an open, cloud-based mobile app building platform that allows individuals and companies of any size to easily build native, cross-platform business apps without requiring any mobile programming skills. The development process is also significantly accelerated for experienced programmers writing code only to enhance the platform for some business specific functions.

Customers like GallantMEDIA, NIBA, TerraSafe, Hospitality Recruiters and many others have delivered their apps faster, with fewer resources and lower costs utilizing the scalable, flexible snAPPii platform. For additional information please email us at sales@snAPPii.com or call +1 603-651-0066.

Visit www.SNAPPII.com today to begin building your mobile app online - free (nothing to download)!