Enterprise Mobility Architecture

Moving Forward

Defining the Mobile Enterprise
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Introduction

The advent of fast, reliable and accessible technology brought with it numerous advances. We moved from manual systems to automated ones in all occupations. Our accounting systems moved from tedious, repetitive registers to the easy and efficient computer workbooks or accounting software. Similarly, organizations all over the world began to shift in terms of the technology they employed. Trends began to change, and what no one had imagined a few years ago suddenly became possible. One of the most significantly revolutionizing trends included the need for remote working and integrated workplaces. As we progressed in the field of communication, and organizations realized that employees no longer needed to be present at their desks physically all year long (Lam & Shankararaman, 2007). Therefore, more and more companies began to rely on technology that provided them with mobility of not just resources, but actual employees as well. Our standard corporate procedures and departmental activities changed massively with the introduction of enterprise mobility.

Enterprise mobility is the trend toward a shift in work habits, with more employees working out of the office and using mobile devices and cloud services to perform business tasks (N, Narayan, & V, 2012). However, the term does not limit mobility to just employees or even resources. This is the mobility of huge amounts of corporate data, ready to be accessed from anywhere at any time of the day. A simple example can help elucidate this breakthrough in modern corporate technology even better. When an employee uploads a presentation from his distant office in some different part of the world, and his colleague located in a separate part of the world needs to access it, it is enterprise mobility, or rather, mobile enterprise applications that help him do so. He can log onto a central server and access the presentation without the hindrance of borders and geographical limitations in between. This is the kind of corporate ease that mobile enterprise applications have brought with them. In fact, the situation these days makes enterprise mobility imperative for large corporations because in order to keep up with their competitors, they must adapt to a faster, increasingly efficient technology (Duggan, 2012). However, suddenly altering your company's technological framework is not an easy task. Although enterprise mobility and mobile enterprise applications bring in a myriad of benefits for the company, they also pose serious threats and risks.
What is Enterprise Mobile Architecture?

Enterprise mobile solutions require some sort of framework to work on. There is analysis, development and a designing process that goes into the construction of an enterprise mobile application’s architecture. Qualified technicians all around the world help their organizations shift from previously installed technology systems to the upgraded enterprise mobility networks or applications with the objective of enhancing productivity (Clevenger, 2011). There are a number of important decisions that have to be made when designing an enterprise mobility framework, such as the kind of platform the framework will target, or the resources that are available to the company when designing the system. Although there is limited research available on the best practices, or choices to be made when it comes to enterprise mobile architecture, a beginner can gain insight into its design without great difficulty. In fact, experts have laid down some ground rules and criteria for what a good, well-built mobile architecture framework should look like.

Building And Maintaining An Enterprise Mobile Architecture

In the competitive corporate world where the fight for profit margins, market share, consumer loyalty and market equity is endless, organizations need to develop mobile enterprise applications that help respond to the widespread target areas even faster. In a world where the boundary between personal and professional is no longer solid and visible, corporations that use cloud application and excel in the art of enterprise mobility succeed. Therefore, building and deploying effective mobile enterprise applications is important, but so is developing the architecture (Hurley, Lai, Piquet, & Sybase, 2011). There are several areas that experts need to consider for the design and implementation of enterprise mobile application’s architecture. Some of them include the kind of model that the enterprise mobile applications will use, the governing principles that will be the starting point for the architecture or framework, the corporate roles and responsibilities that should be incorporated into the system, etc.

The Model for the Enterprise Mobile Architecture

Among the numerous decisions that the design and implementation of Enterprise Mobile application’s architecture calls for, is the decision about the kind of platforms a company’s mobile enterprise solutions should target. With multiple devices and Mobile platforms available from Apple, Microsoft, Google, Blackberry it is very important to understand whether you need Platform Specific or Cross Platform Application(Esposito, 2012).
A Platform Specific Platform application focuses only on a single platform such as Apple iPads only. The need for the kind of platform that the enterprise mobile application should serve on should be identified initially, during the platform selection process. Once the framework has been designed to be platform specific, it would be extremely difficult to alter it so that it is compatible with other platforms as well.

Cross platform applications develop your architecture such that it can run with all sorts of devices. If your company is a large one and there may be a lot of variety when it comes to the devices that your employees and personnel use, this sort of a model is the best for you. Furthermore, there are three kinds of ‘reference models’ that you must implement in your enterprise mobile framework, which is part of the architectural decisions. The Meta Model or Concept Model helps establish the terminology that would be widely used within the system. It also helps ensures rigor and precision in deliverables, policies, and other artifacts (Fowler, 2012).

The Capability Model is important to establish a product and implementation agnostic view of the capabilities or functions required to support Enterprise Mobility, as this enables for example a mechanism to establish and match device and application profiles, or to select products or solutions by comparing the capabilities required and provided (Saha, 2007).

The Maturity Model shows how an organization can achieve maturity in a series of phases. The Capacity Model sets the framework for this model because it is important to realize the capacity of the model before helping it reach its maturity through a hefty investment.

- The framework should be commences by determining some ground rules and facts. There should be decisions such as the ownership or control of the system and applications, the security risks that are involved in moving to an enterprise mobile architecture, the key policies that the framework should be in compliance with, where the financial back up for such a huge implementation will come from, what benefits and targets are expected to be achieved through this change, etc. Once these basic preliminaries have been established, the design phase should move on to establish the enterprise mobile architecture. These encompass four key components to finally enabling enterprise mobility. They include
  - Mobile application architecture
  - Visualization and information architecture
Integration architecture

Mobile application architecture is established keeping the needs of the customers in mind. The new applications differ from the old, conventional ones in that they are not monolithic and do not focus on one business process. These applications shift the focus form the company to the consumer by introducing bundles of smaller, more efficient mobile applications (Anupindi & Coady, 2011). Visualization and information architecture is a next generation model for human and interface interaction and incorporates multi touch screen mechanisms, accelerometers, microphones, and other such features that we often see in our smart phones. This model represents a major evolution of the event-driven application model that was the foundation of client/server and web-based applications. It’s a shift from applications that were designed to sense and respond to individual events to one that has to handle more complex events that enable enhanced reality experiences.

Furthermore, the last kind of architecture is the integration architecture which ensures that all the other models, reference architecture elements and architecture frameworks work in harmony. Latest trends in this kind of architecture include the ability to use micro-transaction units which means the new mobile devices and their enterprise mobility is a lot faster.

Risks Of Enterprise Mobility

Every breakthrough in technology has brought with it myriad of benefits, as well as a number of threats to conventional comfort. Similarly enterprise mobility has a lot of challenges that organizations need to tackle. The enterprise mobile architecture or structure that a company decides to use should be carefully tested for security threats and risks. This is because, as mentioned earlier, with the advent of enterprise mobility, there comes a greater mobility of all kinds of corporate data. This means that there is an element of vulnerability. A hacker or an enemy of the corporation or its consumers could now simply access one basic server or cloud computing device and gain access to a chunk of important and probably confidential data.

Furthermore, this sort of a shift means a lot of valuable capital will be invested into the company (Lankhorst, 2012). The directors and the concerned departments need to go through a lot of considerations before pooling in that large an amount.

Benefits of Enterprise Mobility

Moving with the era of technology always has its perks for any corporation, and so does the shift to mobile enterprise applications. This mobility boosts worker’s productivity and increases revenues for companies. This sort of technology is a revolution in the way businesses deal all over the world. Every aspect of the way trade is done nowadays, including the fact that the world really is a global village
today, requires that there be mobility. And enterprise mobility architecture provides the framework for this. When employees can work from any part of the world and collaborate on any project despite their geographical limitations, this serves to enhance their motivation levels and given them ease of work. These factors in turn increase efficiency because of the time saving that the applications do.

However, it is very crucial for businesses to plan their mobile enterprise strategy well. Their mobile enterprise framework needs to be aligned with their corporate culture, policies and already existing framework of the organization. The mobile enterprise strategy incorporates trends like BYOD (Bring Your Own Device) and BYOA (Bring Your Own App). The company must carefully consider if it really wants to promote such practices within the organizational departments.

**Conclusion**

Enterprise Mobility is fast approaching the stage where it is no longer a luxury or choice, but a necessity. Organizations seem to have run short of options but to embrace this innovative technology. It brings in easy access, mobility of organizational activities and a whole range of other benefits. But it also brings in a number of security threats that must be looked into first. Technology will always advance and corporations will find themselves fighting for survival, but what is important is that there is no compromise made when it comes to the ethics and values of an organization.
Bibliography


