Chapter 1
Enterprise Mobility Reference Architecture:
Mobility Services Overview

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ABSTRACT

The smart phone has become one of the most important devices in our day to day lives. Mobility is also impacting business significantly and most enterprises are providing services to facilitate the mobile workforce. This chapter introduces an enterprise mobility reference architecture. The architecture highlights the key aspects of enterprise mobility such as platform and application development, end user support, collaboration, virtualization, mobile security, monitoring and mobile analytics. The architecture is presented from several viewpoints to cater to different needs of clients. The relationship of the mobile architecture to a cloud reference architecture is also explained. Finally, a use case to demonstrate how a real world scenario maps to the architecture is also discussed.

INTRODUCTION

The purpose of this chapter is to discuss the essential cornerstones of mobile enterprise architecture as they relate to End-to-End Cloud Computing Architecture Design. It is based on IBM's architectural best practices in mobility and covers aspects such as application development, end user support, collaboration, virtualization, device management, and mobile analytics.

Mobility can be defined in many ways. It is about business in motion; business with anyone, anywhere, anytime. Today's Mobile leaders are doing more to integrate mobile into the fabric of their business. Mobile is also about transacting business, driving revenue and leveraging insights from mobile usage to identify and capture new business opportunities.

DOI: 10.4018/978-1-5225-0759-8.ch001

This Reference Architecture Overview uses mobile infrastructure, mobile platforms, mobile software, and mobile services to implement mobile solutions for the enterprise. It is intended to be used by a wide range of clients and architects who are involved in building an end-to-end mobile solution. It shows how IBM builds a solution for the client one level above the technical speak.

The target mobile architecture is based on IBM project experiences in building and supporting mobile and workplace infrastructure, and while being a prescriptive blueprint, it can be implemented with multiple points of variability based on architectural decisions, use cases, requirements and budget. These points of variability do not change the nature of the reference architecture that is designed to maximize the value realized from the IBM experience in building mobile solutions.

Reference Architectures typically provide several views for clients. These can be tailored to client interest or need. Views included in this chapter are:

- Capabilities,
- Functional,
- Cloud-aligned, and
- End user experience

BACKGROUND

Mobile's Disruptive Influence on Business

It's no secret that mobile has fundamentally changed the ways that we live, work and play. Mobility is bringing to light important new features and functions required by the mobile workforce. From an enterprise perspective, if we look beyond the new world of our more mobile workforces, we can see mobile impacting business in even bigger and more profound ways.

First, Mobility is changing and disrupting traditional business models with new data and insight. Employees are interacting, making decisions and taking action in real time. As a result, IDC FutureScape estimates that 100% of the Line of Business apps in customer-facing roles will be built for mobile-first consumption by 2017 (IDC, 2014) .

Second, because of incredible adoption, particularly in growth markets, mobile is bringing consumerization to business. A few years ago simply having a mobile application was sufficient. Now consumers want a superior personalized experience. It is impacting not only their decision to do business with a company in the present, but in the future as well. In fact, according to "*IBM Mobile App Consumer Survey*", a commissioned study conducted by Forrester Consulting on behalf of IBM in September 2014, 65% of app users said that a poor mobile experience will stop them from making other purchases from a company (IBM, 2014).

Third, mobile is having a huge impact on enterprise IT. Mobile has accelerated the speeds at which applications must be developed and while application demand booms, development is slowed by manual processes, cross platform requirements and complicated integrations with backend data. Also, now applications, data and devices are often not directly within company control. Moreover skills availability continues to plague most organizations. Mobile requires a new approach to IT and organizations that cannot quickly and adequately adapt will fail to fully realize the benefits of mobility (Buckellew, Custis, Esposito & Lesser, 2013).