

Developing the cloud

Capitalizing on your sales force.com investment with a force.com strategy



Introduction

Salesforce.com's rapid emergence in the enterprise Customer Relationship Management (CRM) marketplace is not only proving that Software as a Service (SaaS) is now a viable alternative to traditional on-premise software, but that organizations are willing to move more and more applications into the cloud and to an on-demand model. Having already invested in licenses for salesforce.com CRM or having heard the hype, organizations are asking what else can be developed on the platform that will increase their Return on Investment (ROI)?

With salesforce.com's force.com platform ("force.com"), organizations have an alternative to developing custom applications that reside within the traditional on-premise server farms and infrastructure; instead organizations may choose a development platform that operates as a service, just like their CRM application. However, not all applications and not all organizations are well suited to a force.com strategy. There are certain flavors, or themes of applications, that share common characteristics and capabilities that are ideal for developing on this emerging platform. In addition, there are organizations more suited – both from a technical and a business perspective – to capitalizing on force.com. Building the right applications will yield benefits ranging from quick integration and shared business logic, less maintenance and IT support teams, to quicker adoption and greater collaboration across teams and business units.

Interested parties need to carefully consider two fundamental questions: What are the key traits of companies that are successful in embracing force.com as a development platform; and, what are the types of applications that are a good fit for development on force.com?

Force.com – your organization on-demand

Building on their success as the pioneer and leader in SaaS, salesforce.com has developed an on-demand development platform that provides the tools necessary to build business applications that take advantage of salesforce.com's multi-tenant, hosted infrastructure – force.com.

To fully comprehend the details of this offering and how it benefits organizations, an understanding of what force.com provides is necessary. Answering the following questions helps explain the offering and how it differs from traditional development platforms:

- **What is force.com?** Force.com is a combination of tools and technologies, coupled with the infrastructure that enables IT organizations to build business software online. Maintenance, monitoring, and upgrades to the servers and databases are handled entirely by salesforce.com staff; all physical housing of the data is managed within salesforce.com's data centers. Access to these machines and the installed applications is performed entirely over the Internet.
- **How is force.com different from salesforce.com CRM?** Salesforce.com CRM is a pre-built application providing sales force automation, marketing, and service & support functionality. This application provides traditional CRM business processes and a data model allowing businesses to track accounts, contacts, sales opportunities, marketing campaigns, and more. Salesforce.com CRM is a pre-built application built on force.com, and is an example of the capabilities and potential that force.com provides.
- **How is force.com different from traditional platform offerings?**

The fundamental difference between force.com and traditional software platforms is that force.com operates entirely off-premise as a Platform as a Service ("PaaS") offering, leveraging salesforce.com's SaaS model. Accordingly, force.com benefits from salesforce.com's multi-tenant infrastructure, development tools, and support model. Although other vendors – such as Oracle – offer SaaS platforms, force.com is not a series of bundled applications, but instead provides the means to build what an organization needs.



Fig 1. Force.com enables multiple business applications to be built on a shared base using a traditional software stack. This allows for the re-use and sharing of organization-wide business logic, integration, visual components, and data model while sharing a common database.

¹ Additional user licenses will incur additional charges. The cost of development of force.com applications is not factored into any licensing costs.

Time to consider Force.com

The adoption of force.com will continue to accelerate as more organizations embrace SaaS and the capabilities of the force.com platform evolve. As this trend continues, it will be important to recognize when force.com is a viable development option for an organization. Companies that are considering moving forward with force.com should find one or more of the following applicable:

- **Already using salesforce.com CRM** – Already using salesforce.com CRM is by far the largest and most compelling consideration and fit for pursuing a force.com strategy. Building on the experience already obtained by an organization's resources through the use and implementation of salesforce.com's CRM application – both from a technical as well as a business, change management and deployment perspective – provides a strong foundation to adopt force.com's development capabilities. Such an organization has already grasped the paradigm shift of SaaS and made an investment into user licenses for the CRM application. With these licenses already purchased, existing users can access any new applications built on force.com without any additional license fees
- **Smaller companies and start-ups** – Limiting up-front capital expenditures and maintaining a small overhead and support footprint within IT organizations are two critical cost drivers for small companies and start-ups. As an on-demand service, force.com utilizes a "pay as you go" operating cost model whereby company's pay a monthly subscription cost, paying for additional

scale and growth only when the company grows. With salesforce.com maintaining and managing the entire infrastructure, the number of IT employees needed to "keep the lights on" is significantly reduced.

- **Mature Service Oriented Architecture (SOA) framework already in place** – Force.com is the embodiment of cloud computing and a natural extension of SOA. Residing on the Internet alone, integration with force.com is only available through web services. Organizations that have already embraced this approach to enterprise architecture are easily able to consume and expose web services to enhance the capabilities of their current framework, often in a quicker timeframe than when integrating with traditional on-premise applications.

Building the right applications

While force.com is powerful and versatile enough to build almost any type of application, there are applications that can fully realize the strengths inherent in force.com. The best candidates fall into three themes that are strong fits for the platform. The table below highlights these themes: the problems organizations face, how force.com successfully addresses these challenges, and sample applications that fall under the particular theme. Although certain applications fit into a specific theme, linking themes and the applications within can yield great scale (e.g. linking accounting systems with the inventory management system, and linking the inventory management system with an order management / distribution system.)

Theme	The problem	How Force.com helps	Sample applications
Disparate, yet related data centric applications	<ul style="list-style-type: none"> • Work across multiple, database-driven applications is related, but systems are not tied together • Integration between varying vendors is difficult to develop and worrisome for maintenance • Decentralized administration; each application is maintained by a different group • Business users must interact with multiple systems, with different interfaces to perform daily tasks 	<ul style="list-style-type: none"> • Ability to develop multiple applications that access a single, unified database • Ability to provide users access to a single front-end application via their browser to complete their job tasks • Ability to provide access to all data without complicated integrations • Ability – based off security and permissions – to allow users to access the application functionality they are authorized to use 	<ul style="list-style-type: none"> • Leads & marketing • Finance/ accounting & inventory management • Purchasing & inventory management • Portfolio / Investment management & Account / house holding
Frequently used and collaborative systems	<ul style="list-style-type: none"> • Common data objects are shared between various users • Access to the same data is frequent and often by multiple users • Locking of objects needs to be minimized while data integrity is maintained 	<ul style="list-style-type: none"> • Centralized database provides consolidated view of all data objects • Built-in rules for security, profiles, teams, org-wide defaults, and role hierarchies maintains data integrity by minimizing access to data by unauthorized users • Audit trail functionality maintains history of data changes, enabling accountability 	<ul style="list-style-type: none"> • Recruiting • Staffing and resource management • Time and Expense • Event management
Shared business logic with low to medium transaction volume	<ul style="list-style-type: none"> • Multiple applications need to follow workflow rules that guide overall process • Bi-directional linkage between applications for data needs is required • Transaction volumes fall at a medium range of data / user access 	<ul style="list-style-type: none"> • Consolidated platform allows easy linkages / hand-offs between various applications built on platform • Provides simple, robust workflow capabilities with advanced workflow available through APEX code • Supports access through multiple interfaces, from basic web, custom portals, and API-level access 	<ul style="list-style-type: none"> • Quoting & underwriting • Inventory management • Order management and distribution • Project Management, time & expense

Building for the future

Despite having only been released a short while ago, adoption of force.com as a platform has been steadily progressing, as organizations continue to develop additional custom applications to support mission critical business processes, encompassing Enterprise Resource Planning, Human Resource Management, Supply Chain Management, and financial services, among others. Utilizing the capabilities and tools provided by force.com, organizations have leaped into the cloud, utilizing force.com in a myriad of ways:

- **Electronic Arts, Inc.** – Leveraging its investment in salesforce.com's CRM application, expanded its cloud footprint to meet the needs of Talent Acquisition. Spanning 14 applications, EA embraced the force.com platform and brought Web 2.0 capabilities such as Social Network Sourcing, Internal Candidate Tracking, Global Employee Referrals, and Event Managers to the organization.
- **The Walt Disney Company** – Tracking where and when Mickey Mouse appears is critical to the brand image of Disney. There is only one Mickey and he can only be in one place at any given time. To ensure everyone within the organization is aware of Mickey's location at any time, Disney utilized force.com to develop a custom application to support the mission critical objective of knowing – where is Mickey?
- **CODA 2 GO** – Bringing financial services to the web, CODA is utilizing force.com to develop a suite of financial packages, entirely available in the cloud. General Ledger Account functionality, Opportunity to Cash, and Procure to Pay are just a few of the capabilities being enabled in the cloud with force.com.
- **Republican National Convention (RNC)** – To track and register the attending politicians at the RNC, the GOP turned to the cloud. After previous years during which eight page Microsoft Word documents were needed to track each delegate, for 2008, the committee wanted something more robust. In a matter of days, a combination of Google Apps and force.com was developed to support the 5000+ members of the GOP. Further, Presidential candidates from both major parties, including Mitt Romney and Barack Obama, as well as former Democratic Virginia Governor Mark Warner (for his Senate campaign) have used force.com to facilitate fund raising.

Organizations from all sectors are seeing the benefits of force.com and trying to determine how to utilize the platform to enhance the capabilities of their own organization. Keeping in mind the key characteristics identified above and the "themes" of applications that are a good match for force.com, organizations are rapidly embracing force.com in an ever-increasing variety of ways.

Risks and associated complexities

Committing to a development platform inherently brings trade-offs that must be considered and evaluated. With force.com, these trade-offs are focused on the nature of operating on salesforce.com's servers, and having to work within the development framework that salesforce.com enforces in order to maintain a stable environment for all customers.

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- **Locked into the platform** – When developing on force.com, an IT organization is committed to developing applications on a proprietary system that follows a product roadmap determined and executed by salesforce.com. This means development is occurring in a different language than those traditionally found in the industry (Java and .NET) and future enhancements / releases are controlled outside the organization. In addition, every user of the force.com applications must have a license to access these applications. While these licenses have various pricing schemes, this ties an organization into a steady stream of license payments per year rather than upfront costs of purely development and hardware. Finally, due to the proprietary nature of the code that runs on the force.com, migrating to a different platform may require extensive porting and re-writing.
- **Single set of rules, hierarchies, and limits** – By building multiple applications in a single force.com instance, all applications are subjected to the same role hierarchies, logic and business rules, the same limits on workflow rules and custom fields, etc. While proper configuration and customization will allow many of these to be worked around, the more applications built into a single instance, the more complicated maintenance and support of these applications will become. Currently no effective mechanism exists to share licenses across multiple force.com instances, so should an organization decide to build applications in separate instances to separate the logic, user licenses must be procured for each instance. In an effort to control the quality of code that runs on the platform – which left uncontrolled could impact all users in the multi-tenancy model – salesforce.com imposes several restrictions on the number of transactions a piece of code can generate.
- **Integration, security, and up time** – Force.com can be only be integrated with via Web Services. This means that organizations must have various services already exposed as Web Services, and exposed past internal firewalls. And while salesforce.com has a strong record of up time and reliability, maintaining the up time of the applications lies outside of an organization's control.

Conclusion

As more organizations assess and invest in SaaS, these evaluations are finding that SaaS is a strong fit to solve a wide range of business problems. These same organizations are realizing that with an investment in force.com, their own custom SaaS applications, tailored specifically to their needs and integrated with a single source of all data can be built quickly on an infrastructure that is entirely managed and maintained by salesforce.com.

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