



White Paper



Private or Public Cloud?

Choosing the Best Model for
Insurance and Finance CRM

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Moving your organization to the cloud promises many rewards. Cost savings. Flexibility. Scalability. Speed. Agility. For organizations that choose the right cloud model, cloud computing can deliver on all these promises and more. The key is in realizing that all clouds are not created equal. There are two primary cloud models – public and private – and each is best-suited for different types of organizations and requirements.

It's critical that organizations evaluate each cloud model and vendor in light of their long-term business strategy to capitalize on the cost savings of cloud computing.

Public clouds are ideal for many small and medium sized enterprises and have worked wonders for consumer-based applications. They are not well suited for large organizations seeking to drive customer retention and revenue generation across the organization, however, as this requires a level of integration that is expensive and difficult to achieve in the public cloud. Data security in the public cloud is also a concern for organizations with stringent security requirements. With data stored offsite, often in a multi-tenant scenario, it is critical that the public cloud be properly architected to guard against attacks and data leaks. For organizations such as these, private cloud is the key to success.

PUBLIC VS PRIVATE: ONE SIZE DOES NOT FIT ALL

Gartner Research defines cloud computing as, "A style of computing where scalable and elastic IT-enabled capabilities are delivered as a service to customers using Internet technologies."¹ The underlying premise of the model is virtualization, in which resources such as networks, servers, storage systems, and applications are pooled to create efficiencies and automated management techniques reduce the effort required to run the data center.

In cloud computing, data and applications are completely abstracted and can reside anywhere they can be accessed on-demand via a browser. This has created tremendous opportunities for small and medium sized organizations to leverage software and data storage capabilities previously available to organizations with much larger IT infrastructure and budgets. At the same time, it has enabled organizations of all sizes to pursue strategies aimed at enhancing agility and customer service responsiveness, increasing storage capabilities and scalability, and accessing data and services on demand to reduce their IT spend.

Despite a surge in movement to the cloud in recent years, cloud computing is not a new concept. The idea of shared computing services was first envisioned in the 1960s by John McCarthy and became a reality in the 1990s, when Application Service Providers ("ASPs") began delivering software applications to customers via a web browser. Touted as a cost-effective alternative to on-premise software, this early model of public cloud computing promised "out-of-the-box" functionality in a single tenant scenario with little or no infrastructure or maintenance requirements. Customer data and applications were stored in data centers owned and operated by the ASPs. Fees were billed on a usage or monthly/annual fee basis. Ultimately, however, the ASP model failed because it was not scalable for the vendor delivering the service due to the technologies at the time.

The next iteration of public cloud computing, the Software as a Service ("SaaS") model, aimed to improve on this model by leveraging software engineered to work in the cloud, data center automation, and multi-tenancy to reduce costs and streamline delivery of applications over the web to customers. Virtualization played a major role in facilitating efficiency in the cloud computing model. "Because it allows providers to partition large servers into many smaller virtual servers that have been rightsized for their assigned tasks, virtualization is the key to the flexibility and cost advantages of cloud computing."² As with ASP, customers paid for service on a per-use basis or according to a fixed time period. Despite their attractions, the public nature of these cloud models have limitations that may cancel out any cost savings or convenience. For example, customizations can be difficult and costly. Integration with systems residing outside of the service provider's network is often not possible. When it is an option, costs can be prohibitive. The fact that corporate data resides outside an organization's firewall raises security, data privacy, and data control concerns. As a result of these issues, ASP and SaaS models

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have proven problematic for large enterprises with multiple systems and company-specific processes who are seeking to move away from siloed systems toward an integrated enterprise solution that automates cross-functional workflows, improves customer service, drives revenues, and increases customer loyalty across the organization.

Nonetheless, these organizations wish to take advantage of many of the benefits of the cloud, which has paved the way for the private cloud. In this third wave of cloud computing, organizations can take advantage of modern virtualization and automation technologies to deploy a secure, on-site application that combines the cost savings of a public cloud with the customization and integration capabilities of an on-premise model. Private cloud environments deliver the responsive, on-demand provisioning of resources, scalability and cost-savings of public clouds but they do so within the organization's firewall to satisfy data security concerns and compliance issues. According to Gartner Research, "The majority of large enterprises and many midmarket enterprises will build private cloud services."³

In private cloud computing, data can reside on-premise or be hosted by an off-premise vendor in a single-tenant scenario. In either case, the organization retains complete and exclusive control over the data. Like a public cloud, data is virtualized in a pool of servers, storage and networks, but it is often the organization's own IT infrastructure. The use of orchestration and automation to coordinate the delivery of these resources elevates a virtualized environment to a private cloud.

Moving from a public to private cloud model down the road can be costly, time consuming, and tedious if the vendor is not engineered for quick migration. Therefore, it's critical that organizations evaluate each cloud model and vendor in light of their long-term business strategy to capitalize on the cost savings of cloud computing. This is particularly important for organizations seeking to implement an enterprise integrated customer relationship management (CRM) system.

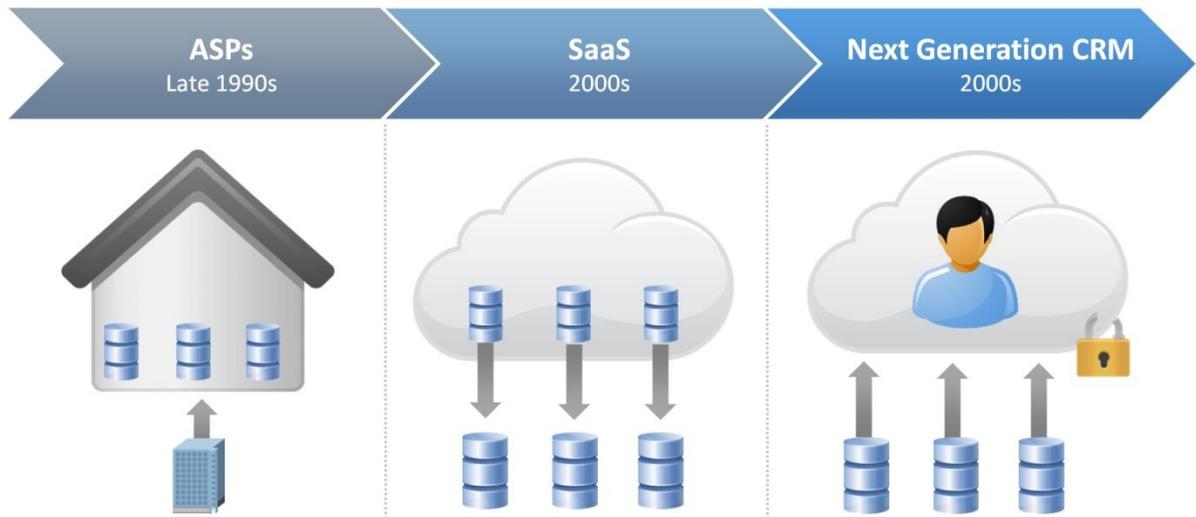


Figure 1: Evolution of CRM

PRIVATE CLOUD IS BEST FOR FINANCIAL SERVICES AND INSURANCE ORGANIZATIONS

The financial services and insurance industries have a strong demand for people-centered information that is best enabled by CRM software. They tend to have complex technology infrastructures that require solutions with flexible integration capabilities, and support a large number of users who benefit from scalable solutions that can be deployed in the cloud. Companies in these markets recognize additional benefits from a comprehensive view of customer information across the enterprise, including the ability to attract and retain critical employees, drive customer loyalty, and increase assets under management.

In both industries, competition for both top talent and customers are driving the need for integrated customer relationship management strategies that streamline users' workloads, enable and automate cross-functional workflows, maintain a secure audit trail of all interactions, and capture a greater share of customer wallet – all in a cost-effective manner. With its multi-tenant structure and limited customizability, the public cloud fails to deliver on these needs as effectively as the private cloud.

Only private cloud delivers on the complex security, data ownership, integration, and customization needs of financial services and insurance organizations. In particular, private clouds built on a model driven engineering platform deliver maximum flexibility in deploying easily customized, fully integrated applications with all the benefits of cloud.

TAKING CONTROL OF DATA OWNERSHIP, SECURITY, & PORTABILITY

Despite the attractiveness of cost savings and increased agility, the National Institute of Standards and Technology ("NIST") cites "security, interoperability, and portability ... as major barriers to broader adoption" of cloud computing.⁴

This is particularly true for the financial services and insurance industries, where the sensitive nature of customer data makes data ownership and security an absolute necessity. Unfortunately, the nature of public cloud, in which data is stored off-site, forces organizations to abdicate control over the data and expose it to any risks inherent in the vendor's system. This could include insufficient security to protect data from hackers, virus

attacks and accidental leaks to other customers. Such information leaks, as well as frequent or prolonged downtime could cause irreparable damage to the company's reputation. It could also expose the company to legal repercussions in line with the tightening regulatory environment. Further compounding the problem is the fact that vendors often have technology partners. With multiple parties involved in delivering the solution, it can be difficult and time consuming to identify the source and resolve the problem.

One need only look at some recent public cloud security breaches for examples. Zappos, Amazon.com, Nasdaq, Citigroup, Sony PlayStation Network and Qriocity, even Google have all fallen prey to hackers who have gained access to private customer information.

The ability to integrate easily and tightly and share data across the enterprise is a key differentiator for organizations looking to excel in customer service and share of customer wallet.

A private cloud environment eliminates concerns of data ownership, residency and security, as organizations have exclusive control of their data on-site and can limit access according to their own security model. Virtualization enables complete abstraction at the data layer so companies don't have to move legacy data offsite – it can reside anywhere the organization wishes to support compliance requirements for data residency. In addition, organizations have access to real-time data directly from the source, without the need for third party bridges, consolidation of data, or the risk of providing users with outdated or inconsistent data held in replicated databases. Existing investments in IT infrastructure, which for many companies in the financial services and insurance sectors are quite significant, can also be leveraged and utilized more efficiently, transforming them into dynamic private cloud environments, while still adhering to existing corporate privacy and security standards.

Organizations can implement security models tailored to their unique needs to restrict unauthorized access to data by hackers and eliminate the risk of accidental exposure to unauthorized users in a multi-tenancy model. The control offered by private cloud enables financial services and insurance enterprises to comply with the strict regulatory environment, including FISMA, HIPAA, and Sarbanes Oxley.

INTEGRATING ACROSS THE ENTERPRISE FOR BEST RESULTS

Financial services and insurance organizations hold a wealth of siloed information in back-office, legacy, and third-party systems. Integrating this data into a single application for all users is an essential strategy for driving revenues, customer loyalty, and employee retention. User adoption is increased by making employees net receivers of information. With complete customer knowledge at their fingertips, users can identify upsell and cross-sell opportunities, take advantage of cross-functional workflows, and provide consistent, proactive customer service.

While both public and private cloud solutions can integrate with back-office systems and third party applications, there are some key differences in the way it is done and how the resulting data appears to the user. In the public cloud, data is either copied into a data mart or warehouse using an Extract, Transform, and Load (ETL) tool or accessed via APIs that typically limit functionality to 'read only' and fail to deliver the information throughout the entire application. This form of integration requires data to be transmitted over the Internet, is rarely seamless to the user, can result in inconsistent or outdated data being presented to users, and can also prevent workflows or users accessing all the information they need to achieve desired outcomes.

A private cloud solution can integrate with any number of back-office systems and third party applications to deliver appropriate information and functionality to each role in the enterprise, whether front-office, middle-office, or back-office. A key differentiator from public cloud is that the private cloud provides secure integration behind the corporate firewall, thereby eliminating the risk of transmitting data outside the corporation. Private clouds can be architected similarly to the public model, using replication to present data to the end user. They can also be architected to integrate data at source and leave data where it lies. This second model ensures all users across the enterprise have immediate access to the most up-to-date data. A model-driven engineering framework is an example of a private cloud framework that leaves data where it lies. With a model-driven engineering CRM solution, customers can integrate systems in-house and add or remove systems as the organization's needs change, with little or no cost.

The ability to integrate easily and tightly (for workflow) and share data across the enterprise is a key differentiator for organizations looking to excel in customer service and share of customer wallet. For example, companies can integrate with multiple systems to streamline and enhance the financial planning process. The solution can pull customer information from one store and portfolio data from another and leverage an integrated enterprise reporting system to present the customer with a complete snapshot of a customer's holdings, products and advisor recommendations. This improves the efficiency of the financial plan preparation process by eliminating the need to search for and re-enter data and therefore enables advisors to prepare more plans in the same amount of time. Ultimately this depth of integration enables the advisor to learn more about the customer and capture a greater share of wallet.

Integration to data at source also supports collaboration from front-office through to back-office. Because data is not being sourced from replicated databases, all users have access to the same data, in accordance with their security privileges. This is reflected in an improved customer experience in which customers do not have to repeat information across different departments, and are offered products and services in line with their needs and customer tier.

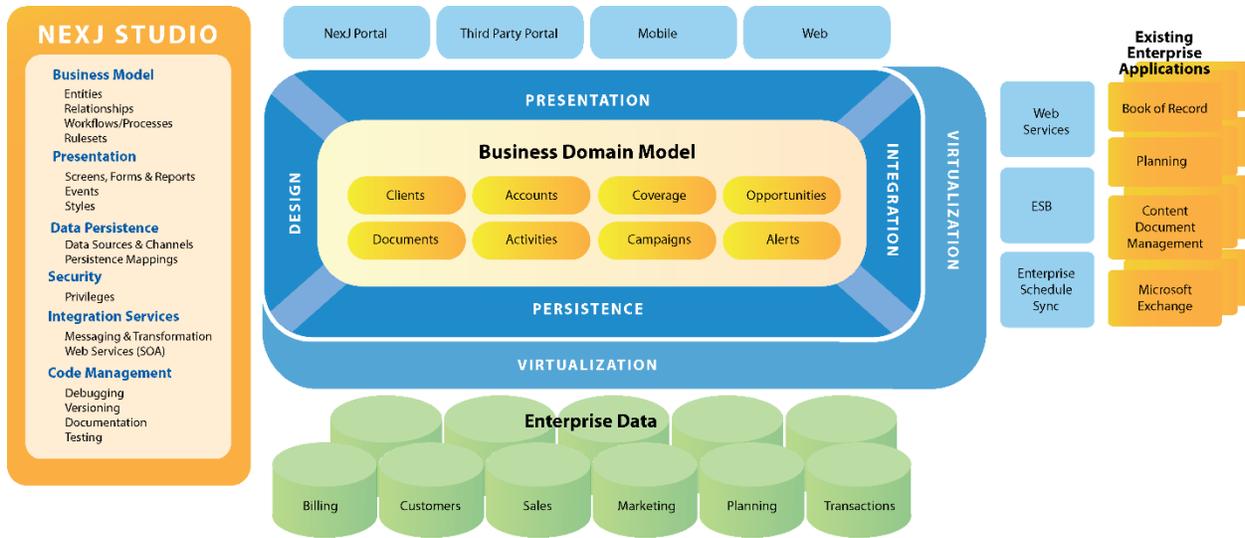


Figure 2: NexJ Systems Integration

CREATING A CUSTOM-FIT APPLICATION

One of the key obstacles to maximizing the value of early CRM investments was the need for organizations to manipulate their processes and data into ‘cookie cutter’ hosted solutions. Because the application was owned by the host vendor, customizations in the public cloud were either impossible or, at the very least, costly to perform and upgrade. Unfortunately, this rigid ‘round hole, square peg’ method of implementation made solutions less intuitive, caused user dissatisfaction which drove down adoption, and prevented organizations from realizing the maximum value of their CRM solution.

Safeguarding data within the organization is just as important as protecting against external leaks and attacks.

At first blush, vertical-specific SaaS solutions appear to resolve this issue by combining agility with industry-appropriate functionality. Ultimately, however, this is a “quick fix” that fails to address a company’s unique processes or support its dynamic growth and expansion.

This is not to suggest that customizations cannot be performed in the public cloud, but it does introduce a number of unknowns to the equation. For example, who will perform the customizations? Who owns the IP? How much will customizations cost and when will they be complete? Who will perform upgrades and will the customizations be maintained? What will happen if a consultant performs customizations?

Deploying an application in a private cloud breaks down these barriers to customization because the organization owns the solution exclusively and can configure or extend it as needs require. This provides organizations with the flexibility to tailor a solution to their unique needs and business processes and continue to evolve the solution as requirements and processes change over time.

SUPPORT FLEXIBLE ENTITLEMENTS

Safeguarding data privacy within the organization is just as important as protecting against external leaks and attacks. Not only do customers demand to know that their personal information is safe, but regulatory bodies mandate it, handing out stiff penalties for non-compliance.

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In a public cloud, data resides outside the organization's firewall, prompting concerns of unauthorized access to data from within the host organization.

In a public cloud, data resides outside the organization's firewall, prompting concerns from privacy advocates over unauthorized access to data from within the host company's organization. As an example, they cite the recording of more than 10 million phone calls between American citizens by AT&T and Verizon, in cooperation with the United States NSA. A private cloud, on the other hand, allows organizations to implement complex entitlement models that restrict access to sensitive data and lay these concerns to rest. Furthermore, the single tenant model and data ownership inherent in private clouds built with physical separation of hardware eliminates the risk of accidental information leaks that may occur in a public multi-tenant scenario.

Equally important for compliance purposes is the ability to define audit requirements and maintain a trail of all interactions and access to data. This is a readily available option in the private cloud but not so in the public cloud.

INTEGRATED ADVISOR DESKTOPS IN THE CLOUD

NexJ Systems is a leading provider of cloud-based software, delivering enterprise CRM solutions primarily to the financial services and insurance industries. In addition to providing the performance and usability promised by first generation Cloud Computing, NexJ solutions were built to address the integration challenges, inflating costs and limited functionality encountered in the public cloud.

NexJ's private cloud integrated desktops provide all the advantages of a cloud solution with the security and flexible integration options of an on-premise solution. NexJ enables large financial services and insurance organizations to deploy an integrated desktop that virtualizes comprehensive customer data; provides an intelligent service model to personalize transactions; leverages business intelligence for a best practices service model, and enables intelligent, proactive actions to maximize opportunities, all with the security and control of a private cloud.

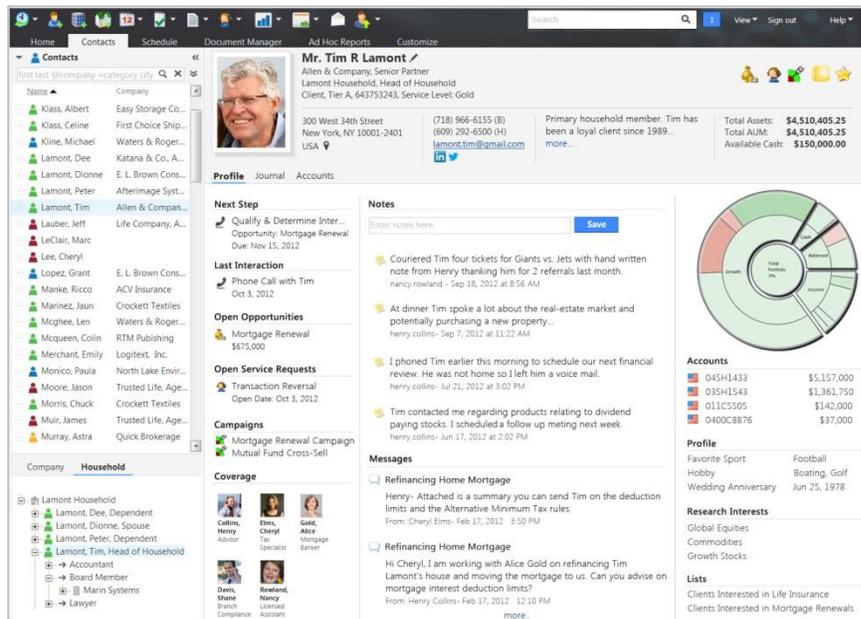


Figure 3: NexJ Systems Integrated Advisor Desktop

The NexJ Integrated Desktop provides the following key benefits for organizations:

- ▶ **Integration** – NexJ’s open and flexible architecture can securely integrate into all enterprise systems behind the corporate firewall without the need for complex synchronizations or proprietary protocols.
- ▶ **Customization** – an open toolkit empowers the customer to customize the solution in order to implement corporate best practices without compromise.
- ▶ **Flexibility** – organizations can quickly adapt to changing business conditions, technologies, and methods by which customers choose to interact with the enterprise.

NexJ has helped many leading organizations enhance their customer relationship management strategies with a secure, private cloud that delivers the flexibility, customization, and integration they need to improve customer loyalty, attract top industry talent, and drive upsell and cross-sell opportunities across the enterprise. Wells Fargo Advisors and Morgan Stanley Smith Barney are just two of these success stories.

In October 2007, Wells Fargo Advisors (formerly Wachovia Securities) acquired A.G. Edwards of St. Louis, MO creating the second largest retail brokerage firm in the United States. Wells Fargo Advisors had a critical need to migrate the A.G. Edwards advisors off their end of life platform and to augment Wells Fargo’s existing advisor platform with new CRM functionality. This project was of strategic importance to the success of the merger and the growth of Wells Fargo Advisors.

Wells Fargo Advisors selected NexJ Contact for Finance, tailored for the Financial Advisor, to provide private cloud customer relationship management seamlessly integrated with financial systems and third party applications already in use by Wells Fargo Advisors. The aim of the solution was to:

- ▶ Increase advisor productivity by delivering CRM capabilities that save time and allow for more opportunities to convert leads and referrals to sales
- ▶ Improve advisor satisfaction and retention with a platform that integrates all customer information and tools needed to deliver industry leading customer service
- ▶ Increase client confidence and trust through targeted customer loyalty programs that drive relevant and proactive client interactions

The solution is now live with over 25,000 users and will be rolled out to the entire population of over 35,000 advisors and support staff across Wells Fargo’s five distribution channels.

Similarly, following a merger, Morgan Stanley Smith Barney required a next-generation brokerage platform that provides a client-centric hub for contact and profile data, interactions, and financial planning tools. NexJ deployed its integrated desktop in a private cloud to provide 40,000 users with comprehensive customer information coupled with automation and an intelligent service model to enable intelligent, proactive interactions with clients and improve customer service.

MAXIMIZING THE VALUE OF CRM IN THE CLOUD

Cloud computing has changed the way companies do business. Organizations that previously lacked the budget or IT resources to implement enterprise software such as CRM or quickly scale their business to meet customer needs can now meet these needs in the cloud, even as they reduce IT and infrastructure costs.

Of the two primary models of cloud computing, public and private, only private cloud can deliver the integration, customization, data ownership, and security that financial services and insurance organizations need. A private cloud enables financial services and insurance organizations to retain ownership and control over their data, implement a customized and flexible integrated enterprise solution for customer relationship management, and leverage the wealth of data across the enterprise, while taking full advantage of the cost savings and agility of cloud computing.

END NOTES

- 1 Bittman, T. (2012, February). Private Cloud Computing and The Future of Infrastructure. Gartner Research webinar.
- 2 Forecast: Cloudy with a Chance of Virtualization. (2009 September). Dell Power Solutions. Retrieved from www.ngsecurityeu.com/media/whitepapers
- 3 Bittman, T. (2012, February). Private Cloud Computing and The Future of Infrastructure. Gartner Research webinar.
- 4 <http://www.nist.gov/itl/cloud/index.cfm>



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About NexJ Systems

NexJ provides enterprise customer management solutions to the financial services and insurance industries. Our solutions, which integrate information from multiple systems into a unified view, include industry-specific customer relationship management (CRM) for multi-channel engagement and collaboration; customer process management for client onboarding and KYC; and customer data management to better understand customers across line of business and regional data silos.

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