

Online Exclusive

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## Cut the Cord and Take to the Cloud

Whether it's an emerging biotech, a stable managed markets organization, or the world's largest pharmaceutical company, every client needs an adaptable customer relationship management (CRM) system. Life sciences companies must be able to make changes to the system as often as necessary to keep up with market fluctuations, regulatory changes, territory realignments, and technology innovation. A simple field change that takes up to six months in a client/server environment, takes just a few minutes with an application "in the cloud."

Cloud computing is a witty term used to describe the process of taking traditional software off the desktop and moving it to a server-based system that's hosted centrally by a service provider. This service allows companies to make updates, alleviate glitches, and manage software from any location from one computer, rather than run around to every system and make changes locally.

While cloud computing might be the catchphrase of the moment, not all systems are created equal. A feature that should be considered when looking for a new software-as-a-service (SaaS) system is multi-tenancy, which is a chief characteristic of mature cloud computing application.

### Making Sense of Multi-tenancy

Multi-tenancy is the architectural model that allows pharmaceutical SaaS CRM vendors—vendors with products "in the cloud"—to serve multiple customers from a single, shared instance of the application. In other words, only one version of an application is deployed to all customers who share a single, common infrastructure and code base that is centrally maintained. No one customer has access to another's data, and each can configure their own version of the application to meet their specific needs.

Multi-tenant architectures provide a boundary between the platform and the applications that run on it, making it possible to create applications with logic that's independent of the data they control. Instead of hard-coding data tables and page layouts, administrators define attributes and behaviors as metadata that functions as the application's logical blueprint. Individual deployments of those applications occupy virtual partitions rather than separate physical stacks of hardware and software.

These partitions store the metadata that defines each life sciences company's business rules, fields used, custom objects, and interfaces to other systems. In addition to an application's metadata, these virtual partitions also store custom code, ensuring that any potential problems with that code will not affect other customers, and preventing

bad code associated with one object from affecting any other aspects of an individual customer's application.

In addition, the model must be totally scalable—both up and down—as a result of employee changes, transaction growth, new product launches, mergers and acquisitions, or any number of business events that can dramatically alter business needs. CRM solutions from traditional on-premise vendors are expensive to scale because of the complexity and cost of scaling each layer of hardware and software stacks, which often require messy system replacements and data migrations.

### Centralized Upkeep

Life sciences organizations benefit from both hardware and software performance improvements with a true multitenant cloud computing solution. When it comes to hardware, the provider sets up a server and network using the pooled resources of all its sales revenues that would not be financially feasible for any one individual customer to purchase on its own. It's simply an economy of scale.


Investing in first class hardware results in more scalable, reliable, and secure performance than any other alternative. This is true no matter how large or small the client is—from 10 to 10,000 users, each customer still uses the same hardware.

The same is true with software. With multi-tenant SaaS, all customers are running on the same version or same set of

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code, which means that all of the users are working on the very latest release of the software 100 percent of the time—as opposed to locally installed programs where there may be 20 different versions of an application in use and 20 different sets of code to maintain without a single customer on the latest release. For each version of the software, the vendor provides the team to maintain it, investigate bugs, make and deploy patches, and more.

### No Hardware, No Problem

Gartner estimates that two thirds of IT time and budgets is spent on maintaining infrastructure and dealing with updates. Multi-tenant SaaS lowers these costs because there is no hardware to


buy or install, and there is no on-site software to maintain or update.

In addition to hardware, software, and maintenance savings, cloud computing CRM systems are much faster and therefore less expensive to implement. With multi-tenant SaaS, product design and configuration happens in parallel. That means project team members can log in and start working on day one.

### The Maturation of a Technology

In his book, *The Big Switch*, Nicholas Carr describes how one hundred years ago, companies stopped generating their own power with “dynamos” and instead plugged into a growing national

power grid of electricity. Looking back today, the benefits are obvious: dramatically lower cost, greatly reduced maintenance, and ubiquitous distribution. It also made the process of upgrading much easier as changes made to the common grid were immediately available to the benefit of all users. But most importantly it unleashed the full potential of the industrial revolution to companies of all shapes and sizes.

The life sciences industry is in the midst of a similar revolution today. Cloud computing has become the modern-day version of electrical power—the grid, replaced by the cloud. But only with true, multi-tenant SaaS can companies feel the full effects of this innovation. 

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