Veeva White Paper

SaaS Knockoffs:

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Abstract:

While many life sciences system vendors espouse the popular promises of Software-as-a-Service (SaaS) technology, only a rare few can deliver. These vendors claim to offer some of the same advantages of SaaS but they have not been built, from the ground up, as true multi-tenant SaaS systems. Without this fundamental architecture, they are nothing more than 'wolves in SaaS clothing.'

The following white paper discusses what life sciences companies must consider when searching for a SaaS application, and the rich advantages that genuine SaaS applications deliver such as rapid deployment, low-maintenance, free upgrades, low cost, and easy configuration.

Introduction:

The popularity of SaaS applications has caused a proliferation of pricey knockoffs – applications claiming to deliver the advantages of true SaaS. In reality, these imposters are just cleverly disguised 'wolves in SaaS clothing' shackled by all the same costs and limitations as outdated, on-premise and hosted solutions.

Hard as these wolves may try, there's simply no easy way for traditional software vendors to legitimately convert their client/server products into multitenant SaaS solutions. Some have tried. To date, all have failed. The only successful multi-tenant SaaS implementations are those architected from the ground up. SaaS development requires a new engineering team with skills that are radically different than those for a client/server application. SaaS is, as Harvard Professor Clayton Christensen and author of the Innovator's Dilemma categorizes these types of technologies, a 'disruptive innovation.'

Unable to transform their applications into SaaS, many vendors instead try to confuse buyers. They make a few tweaks to the database servers, change their pricing structure, run a new ad campaign, and go to market with their faux SaaS apps…claiming all the advantages SaaS delivers.

The rise of cloud computing – often used synonymously with the term SaaS – has given vendors another way to fake a SaaS application. Vendors imply that because their application runs 'in the cloud' that their users enjoy all the benefits of multi-tenant SaaS – not necessarily true. The cloud delivers computing as a utility while SaaS delivers an application (such as CRM or regulated content management). Therefore, cloud and SaaS can be mutually exclusive. In fact, a SaaS application can be delivered in a range of models: from the vendor's own data center, to a third-party, 'hosting' vendor, to a true cloud computing environment like Force.com™.

KEY POINT: *Just because an application runs in the cloud does NOT necessarily make it multi-tenant SaaS. The same goes for the term "hosted" – hosted applications are not SaaS applications. Leasing or offering monthly payments does not make an application SaaS either.*

Why is this important? As a customer, if the application is not true SaaS, you will not realize all of the celebrated benefits of SaaS that have become mission-critical to today's life sciences organizations. Worse still, you may pay for something you'll never actually get. Here's how not to be fooled.

How to Spot a Fake

The tremendous marketing efforts to brand 'SaaS' and 'in the cloud' have made these terms table stakes for all vendors. As a result, software providers are abusing these terms recklessly, and it's creating buyer confusion. But there's one way to positively determine whether or not you are looking at a fake or the real deal: ask if the application is multi-tenant. Multi-tenancy is the only underlying, mission-critical characteristic that enables an application to deliver all of the important benefits of SaaS.

Multi-tenancy is the architectural model that allows life sciences SaaS application vendors – vendors with applications running '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 base code that is centrally maintained. Importantly, no one customer has access to another's data and each can configure their own instance of the application to meet their specific needs.

How is this possible? The multi-tenant architecture provides a boundary between the platform and the applications that run on it, making it possible to create applications with logic that is independent of the data it controls. Instead of hard-coding data tables and page layouts, users define attributes and behaviors as metadata that functions as the application's logical "blueprint."

In contrast to common client/server applications, users in multi-tenant applications such as salesforce. com, Google™ Mail, and eBay® all share the same physical instance and version of an application. Individual deployments of these applications occupy virtual partitions rather than separate physical stacks of hardware and software. These partitions store the metadata that defines each organization'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 particular 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. This approach makes it possible for administrators to configure and update an application as often as needed using simple point and- click tools.

Most vendors that advertise themselves as a 'hosted service' simply charge customers to install, configure, and maintain their software as separate customer instances on the vendor's hardware and at the vendor's location. They abuse the term 'SaaS' by referring to the fact that their application can be accessed over an Internet connection or by saying that their application is 'in the cloud.' However, just as with traditional software, these 'hosted services' incur major expenses each time the software is upgraded and are subject to annual maintenance and support fees. When there's a change, the application must still be redeployed for each customer, and previous customizations are lost as are the shared economies of scale that are enjoyed with multi-tenant SaaS.

Multi-tenancy is the only underlying, mission critical characteristic that enables an application to deliver all of the celebrated benefits of SaaS

To illustrate the difference between SaaS's multitenant architecture and the single-tenant architecture characteristic of typical client/server or hosted/ on-demand applications, think of a neighborhood or townhouse community versus an apartment complex. In the neighborhood, each homeowner has his own yard to mow, his own plumbing to maintain, his own electrical system to operate, and his own walkway to clear. This is a common single-tenant infrastructure where each customer has its own dedicated server that runs its own version of the application. In some

neighborhoods, each homeowner may keep his server on his own property – i.e., on-premise client/server. In other neighborhoods, each homeowner may connect to his server remotely – i.e., hosted or on-demand.

5 Ways to Spot a Fake

So, how can you decipher all of the terminology to ensure that you are purchasing true SaaS?

Ask the vendor these important questions:

1) How many versions of the application does the vendor maintain and how many instances of the app?

2) How are configurations handled?

3) What is the limit on the number of custom objects that can be created?

4) How long does it take to do an upgrade – including mobile users? How many upgrades are done a year and how much do they cost?

5) Is the application scalable both up and down as often as is necessary without extra costs?

In a townhouse community, there are some things in common areas that are shared, such as lawn care or gardening. But residents still shovel their own driveways, maintain their heating and cooling systems and fix their own leaky roofs. This is SoSaaS (Same old Software, as a Service) that many vendors try to pass off as the real thing. They bundle some hardware together and install their own products, but there is still a significant difference between what they are selling and the power behind true multitenant SaaS.

Now think of the multi-tenant apartment complex. The lawn, plumbing, electrical system, water supply, and walkways are shared by all of the apartment's tenants. Residents never have to do any maintenance themselves because it is handled by a central office. They can, however, do whatever they want with the interior of their apartment. They can paint the walls any color, buy any furniture and hang their own art, tailoring their homes to their lifestyle. This is multi-tenancy, and is the reason that multi-tenant SaaS is so extremely cost-efficient to deploy and maintain.

The customer has no hardware to purchase, install, or maintain. The application is built on a shared infrastructure, where all servers, networks, and functionality are managed from a central location and the application is accessible through any Web browser. The provider handles all system upgrades, which are transparent and automatic so users are always working on the latest, highest-quality release.

Advantages of Multi-Tenancy

Multi-tenancy is what makes all the benefits of SaaS possible: rapid time to deployment/value, faster innovation cycles, infinite scalability, and more. These advantages may be potentially lifesaving for industries in turmoil like life sciences. Of this list, arguably the most important advantages that multi-tenancy enables are adaptability, performance, and cost savings.

Adaptability

The most highly valued benefit of multi-tenant SaaS as cited by life sciences organizations is its flexibility or adaptability. Whether an emerging biotech, a stable managed markets organization, or the world's largest pharmaceutical company, they all need systems that can be changed as often as is necessary to keep up with market fluctuations, regulation changes, new product launches, territory adjustments, and technology innovation. This is also important for pharmaceutical companies that are experimenting with new models, processes and tools because they can't carry out these experiments effectively with single-tenant technology. It's cost-prohibitive to make the necessary and constant changes.

An example of this adaptability is shared by Dan McCall, COO of Avidas Pharmaceuticals, "Our SaaS CRM system is totally adaptable to our needs. When users suggest a change – like re-configuring fields in the call reporting detail – it happens…as quickly and easily as that."

There's an order of magnitude in terms of the time it takes to make any changes to a single tenant architecture such as client/server or hosted applications vs. multi-tenant. A change that takes six months to develop and deploy with a client/server environment takes just a few minutes to do with a true SaaS application.

"We need a system that shifts with business demands. For a rapidly growing company such as ours, SaaS is a perfect solution. As we grow, SaaS allows new functions to be added quickly," said Paul Bidawid, VP Supply Chain & Managed Markets, ProStrakan Pharmaceuticals.

Overall System Performance & Quality

Life sciences organizations benefit from both hardware and software performance improvements with a true multi-tenant SaaS solution. When it comes to hardware, the provider sets up a world-class server and network that would not be financially feasible for any one individual customer to purchase on its own. It's simply economies of scale. Customers benefit from their own slice of that first-class hardware resulting in markedly more scalable, reliable, and secure performance than any other alternative. This is true no matter how large or small the customer is – from 10 to 10,000 users, each customer still enjoys the same outstanding hardware.

The same is true with multi-tenant SaaS software. All customers are running on the same version or same set of code which means that all of the users are working on the very latest and greatest release of the software 100% of the time. This, as opposed to single-tenant architectures, where there may be as many as 20 different releases of the application in use and 20 different sets of code to maintain for their users. Upgrades are usually so painful that it's not uncommon for customers to wait until they absolutely have to before implementing the upgrade. Therefore, to support their customers, the vendor needs teams of people to maintain, investigate bugs, and make and deploy patches for each version of their software. This requires tremendous resources. In fact, more than 50% of a client/server software development costs are wasted on maintaining old versions of the application and two-thirds of a vendor's engineering team is devoted to managing old releases rather than developing new ones.

In contrast, a SaaS vendor can direct its entire engineering team to developing the next release because it is not wasting time supporting six, seven, or 10 different, older versions of the application. With multi-tenant SaaS, there is always only one version available to all users. In addition to being incredibly more efficient, the SaaS team can be much more innovative and fix bugs before they are ever detected by the user. Furthermore, tech support is always running on the same version as every user, so they see what the users see, avoiding confusion and frustration.

"As we grow, SaaS allows new functions to be added quickly."

"Since inception, six upgrades of our SaaS CRM application have been seamlessly pushed out to our organization. Our administrators have the option to turn any of the new features on or off as they see fit," said Rick Keefer, president of Publicis Selling Solutions, a leading pharmaceutical contract sales organization. "Our sales teams look forward to upgrades because of the new functionality they gain." Another benefit of SaaS is that upgrades are an integral part of the solution. They are delivered transparently, frequently, and painlessly without any additional cost.

Cost Savings

The pharmaceutical industry has spent millions of dollars on infrastructure and data centers plus millions more on maintaining all of that technology. Multi-tenant SaaS makes these costs literally disappear because there IS no hardware to buy or install and there is no software on site to maintain.

"We could not have been able to provide our smaller commercial teams with the level of specialization they needed at the cost we could afford with any other technology."

In addition to hardware, software, and maintenance savings, multi-tenant SaaS is much faster and less expensive to implement. To prepare a product for deployment, client/server software vendors utilize a specialty firm or department to build the product, then test it and work out any bugs. Next, the vendor must purchase and prepare the hardware infrastructure on which the software will run. The entire process can take several months to even years, in some cases – and that's just preparing to deploy a product. With multi-tenant SaaS, product design and configuration happens in parallel and goes through multiple cycles of review to make sure it's current before it is ever presented to users. That means project team members can log in and start working on Day One of a multi-tenant SaaS project. The application is already running on the most robust hardware systems available, which is one of the reasons why a multitenant SaaS application can be deployed in weeks rather than months or years.

In the past, developers had to have all of the necessary security, analytics, and other engines prepared before they built the application. With applications in the cloud, IT doesn't have to build multi-language engines or mobility engines – just concentrate on creating the business rules. Nucleus Research states that this allows custom applications to be built at least five times faster and at half the cost of traditional applications. Some analysts suggest that it's kind of like starting at the 10-yard line where you can jump to working on solving the business problem rather than figuring out how to build the business process engines. And the benefits grow exponentially as you add more applications…the incremental cost of building a new application is zero. In a September 2009 study by IDC[1] of 10 companies that had each built multi-tenant SaaS enterprise custom applications in the cloud, IDC found the following:

- Custom applications were developed and deployed in 76% less time and required 76%-85% fewer developer hours;
- Study participants reduced their three-year TCO by 54%, saving $560,000 per application;
- Users reduced annual downtime by 97% and spent 60% less time dealing with the service issues; and,
- Study participants tripled their output of custom applications and doubled annual upgrades from 1 to 2.

Overall, benefits accounted for $3.1 million annually for each company in the study. On average these companies were able to recognize a benefit of $8.21 for every $1 invested in reduced costs for development and post-development management, and in higher revenue recognition due to increased agility and faster time to market.

"We selected a multi-tenant SaaS CRM application because it offers us a cost-effective, flexible solution for supporting the sale of multiple products and product types by different selling teams into more than one medical specialty," said Tom Farb ,

[1] IDC White Paper sponsored by Salesforce.com, Force.com Cloud Platform Drives Huge Time to Market and Cost Savings, Doc # 219965, September 2009

president & COO of Indevus Pharmaceuticals. “We could not have been able to provide our smaller commercial teams with the level of specialization they needed at the cost we could afford with any other technology.”

The overall cost savings of multi-tenant SaaS applications over client/server applications is staggering. In fact, traditional software can cost a life sciences companies 30-50% more than a multi-tenant SaaS application. The ongoing savings in maintenance only adds to this discrepancy. This fact is another reason why SaaS knockoffs are so prevalent.

Many experts believe that the single-tenant software model is dead. Enterprise software vendors can no longer get away with pushing all the cost and complexity on to the customer. After decades of limited options, customers are revolting against painful upgrades and mediocre functionality enhancements that fail to deliver on the business value promised

Conclusion: 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 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 addressed the scalability issue that was created by the limited reach of isolated dynamos and in the process unleashed the full potential of the industrial revolution to companies of all shapes and sizes.

We are in the midst of a similar revolution today with SaaS. Business applications delivered on a multitenant platform have become the modern-day version of electrical power – call it digital electricity. But only with true, multi-tenant SaaS can life sciences companies feel the full effects of this technology revolution.

Don’t be fooled by SaaS ‘wolves in sheep’s clothing’ – they are purposefully designed to confuse buyers. Some vendors try to mislead by using terms that sound like multi-tenant, such as ‘isolated tenancy,’ ‘megatenancy’ and ‘hybrid tenancy,’ which are – at best – lower levels of multi-tenancy but not genuine SaaS.

If a vendor can bring its application on premise, it’s not multi-tenant SaaS. If an application is running in the cloud but cannot be defined as multi-tenant, it will not deliver all of the celebrated benefits that make SaaS the revolutionary technology that it is today.

It’s only authentic if it is multi-tenant.

About Veeva Systems

Veeva Systems is the leader in cloud-based solutions for the global life sciences industry. Committed to innovation, product excellence, and customer success, Veeva has over 60 customers, ranging from the world’s largest pharmaceutical companies to emerging biotechs. Founded in 2007, Veeva is a privately held company headquartered in the San Francisco Bay Area, with offices in Philadelphia, Barcelona, Beijing, and Shanghai. For more information, visit www.veevasystems.com.

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