

Private SaaS

The Next Big Wave of Innovation for the Enterprise

Accelerating Enterprise Application Modernization- Rapidly and Cost Effectively

Abstract:

*Private SaaS enables enterprises to take advantage of the efficiencies of cloud economics and utility within the context of their own enterprise or their “extended enterprise” that includes vendors, customers and supporting partners. The key difference between Private SaaS and conventional SaaS is that the subscribers in a Private SaaS are “by-invitation-only” or restricted to a selected participation group that can become subscribing members. Implementing Private SaaS improves the management oversight, governance and insight on specific software usage, available to the CIO for business processing. Taken together this means, higher asset capacity utilization and lowered cost of service delivery. **CIOs can implement Private SaaS to recast their existing IT applications portfolio as a profit center based on extracted business value rather than a classic cost center, and deliver software services faster and with lower cost and with improved management control.***

So much has been written about the rise of the Cloud that it can feel more like fog than a cloud. So Corent Technology coming forward with a novel idea like “Private SaaS” whose very premise appears at first to challenge the basic intent of accessibility for that most common of cloud application types, SaaS (Software as a Service,) is asking a lot. There are more than enough good ideas about cloud discussed everywhere that paying attention to far-out ideas can seem like a waste of time. It’s not!!The unexpected use case has often been the driver of new directions and businesses based on a revolutionary technology capabilities. That’s what Private SaaS is; a technology capacity that enables a different type of business model; the selling of software services on a subscription basis within the organization. Cloud helps that model by providing some key technologies that are very useful in supporting SaaS, but it’s the ability to easily bring onboard and support users who want to use the software, no matter where they are, as long as they have a browser, that is the heart of the SaaS Business model.

Research from many well recognized industry and academic sources indicates that a great deal of the growth in Cloud usage is being driven by SaaS, where the customers can subscribe to generic applications and avoid having to incur the capital expense and operational costs of running the application in-house. Clouds we are most familiar with in this regard include Amazon, Rackspace, IBM SmartCloud, Microsoft Azure, and many others. These are largely oriented to a public use of SaaS. Enterprises of all sizes can now use cloud technology within their own datacenters, essentially taking the next step to virtualization that company datacenters have experienced for years as a way to more efficiently maximize their owned or leased datacenter assets. Private Clouds are typically setup as a way to provide infrastructure that is a more flexible alternative to a traditional datacenter computer

sourcing, or to provide an extra layer of security and governance that a Public Cloud may not include as a standard.

Many organizations are embracing the Private Cloud concept as a way to test the usefulness of the cloud concept of an integrated shared services environment, without having to migrate their workloads out of their organizations' control. Whether they utilize all the dynamic cloud concepts such as elasticity or not, they will be able to take advantage of cloud virtualization technologies and experiment with the operational and client utility management differences between their traditional datacenter model whether is it using virtualization technologies or not.

Private Cloud and Private SaaS are different concepts. Private SaaS can be implemented on a Private Cloud or a Public Cloud or even in a traditional corporate non-cloud datacenter. The concept of Private SaaS is based on the idea the subscribers are explicitly invited or restricted to a group that is allowed access to the software application. It doesn't matter where that SaaS application is running, on a Public, Private, Hybrid or even a non-cloud environment. The conceptual foundations of SaaS grew out of a 'software as a service' philosophy that embodied the idea that it could be used from anywhere there was an internet connection. That universal accessibility is one of the underlying foundations of SaaS. In a Private SaaS offering, a subscriber may enjoy access from anywhere there is an internet connection, but they must belong to the private group that is allowed to logon to the service.

A key factor in the ability for SaaS Providers to scale efficiently is that the usual constraints of infrastructure setup and configuration for each new customer are largely eliminated. These advantages are still relevant advantages to the enterprise setting up a Private SaaS application. In Private SaaS they simply have their marketing on an invitation only basis and restrict access to those they explicitly wish to have as subscribers.

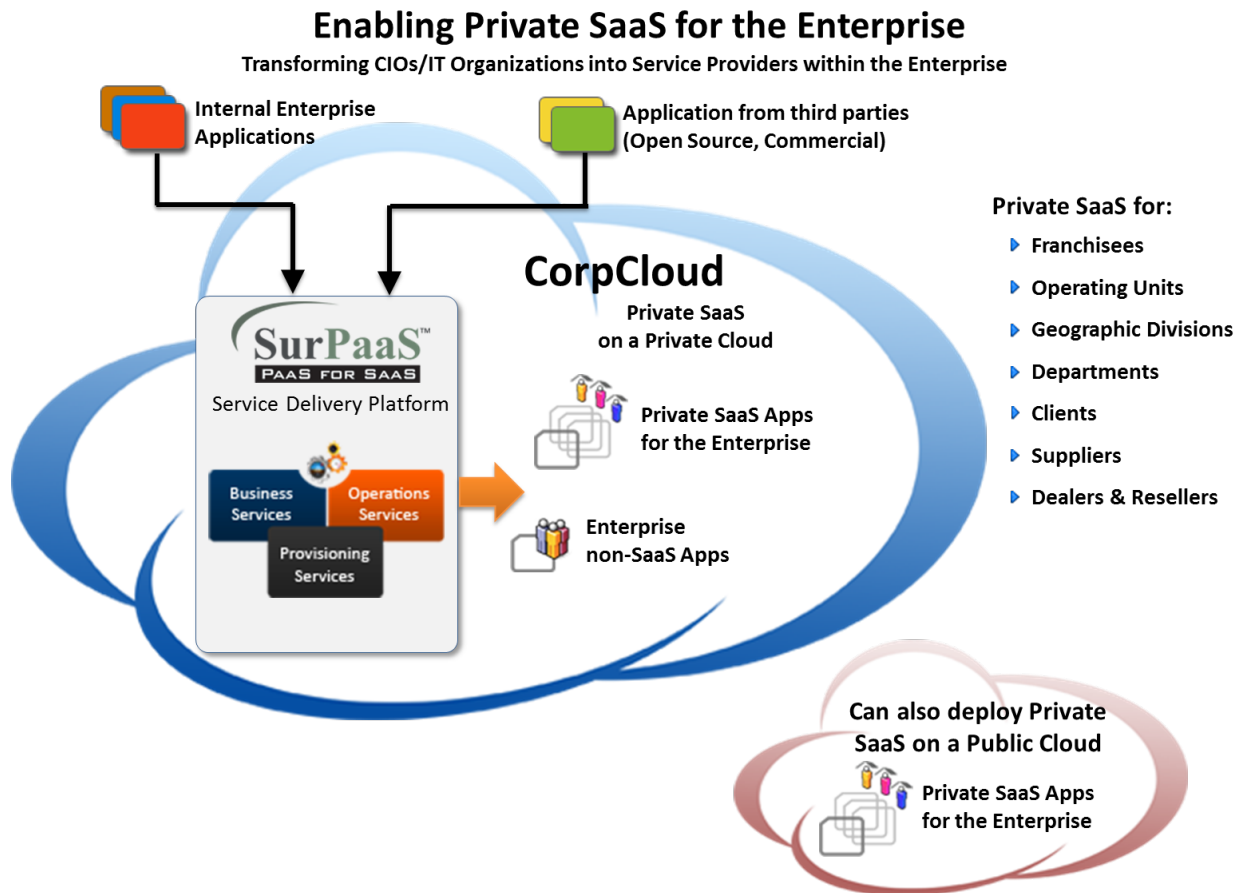
Even if a SaaS Provider is using a Private Cloud as the infrastructure for their offering, it doesn't mean that their offering is Private SaaS. In fact many public SaaS Providers are using their own datacenters, and even though the infrastructure in those datacenters is a Private Cloud, the SaaS offering itself can be publically available for anyone to sign-up as a user. Anyone can access it and subscribe to the software service. There is no necessary correlation between Private Cloud and Private SaaS. Private SaaS can be delivered from any infrastructure, public or private.

To be considered Private SaaS, a software offering must be restricted to a private group. It can be marketed and offered publically, but with restricted entry, like a club with membership qualification rules.

For the purposes of the discussion here, Private SaaS means the offering of a Software Service to a controlled and limited audience. The infrastructure supporting the Private SaaS offering is immaterial.

It's quite easy to imagine scenarios where the SaaS model can be applied to a corporation, or to a corporation and its business partners (i.e. the extended enterprise) in a way that would be Private SaaS. The inherent needs of Public SaaS are also relevant in the context of Private SaaS. The SaaS business model needs to support operations and lifecycle activities that are part of the operations in many organizations, as well as SaaS specific capabilities, including subscription management, monitoring,

metering, tenant management, and billing. All these are concepts that can be applied to good effect in a Private SaaS environment.



"The same imperatives that are driving the software market to the SaaS business model are equally applicable within the enterprise. The need for more efficient methods of deploying, delivering, managing and updating software, as well as the additional value derived from the information on who is using that software and how and when that comes with SaaS approach, can significantly raise the value provided by the IT organization."

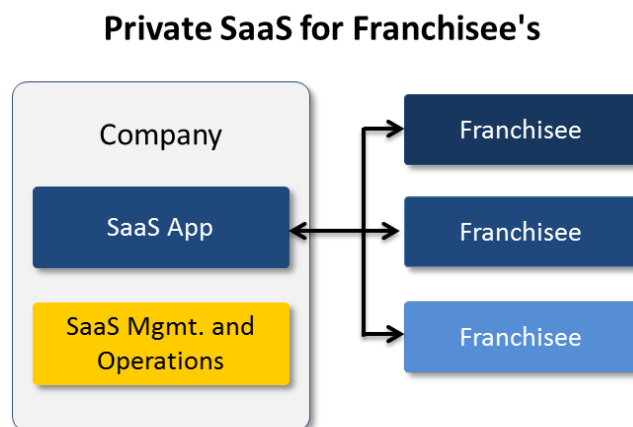
Jeffery Kaplan, Managing Director, THINKStrategies

Private SaaS Use Cases

Franchises

The franchise business model is a scenario that easily lends itself to the SaaS model because the franchisees can be considered as if they are independent but tightly integrated customers. In this case the software they use to run their franchise is something that is usually mandated by the franchiser and often is custom software designed specifically for the operating business model. If not custom software, it may be a commercial software package that is specially configured or customized for that business. Whichever type of software it is, the application has the potential to be transformed into multi-tenant software with Corent's SurPaaS™ platform as it doesn't alter the original code and doesn't require the enterprise to have access to the source code for the application to execute in run time mode. Therefore both in-house developed and off-the-shelf commercial software are good targets for transformation to Private SaaS. *The use of Private SaaS for the franchise business model is an excellent fit because it enables the corporation to operate and manage a growing business entity with a cost of service delivery curve that decreases as more franchisees join and efficient SaaS software techniques like Multi-Tenancy are employed. This reduces the cost of overhead for the corporation and its franchisees, increasing their competitiveness.*

In a typical scenario, each franchisee could see only the data from their franchise location, while the corporation (now the Private SaaS Provider) could see the entire data pool. This capability of the SaaS-Provider to have access to the Tenant data is not usually a requirement of SaaS, but for this franchisee scenario it makes sense. In fact it's typical in franchised companies to have some franchisees with more than one franchise location, and the company often owns certain locations themselves. We can see from this that the modern SaaS platform needs to be flexible enough to accommodate a hierarchical approach for access to Tenant data (which would be a single Franchisee Location in this scenario.) A hierarchical view mechanism that allows access based on a Tenant Group goes beyond what would normally be built into software installed at each tenant separately; but it is important for a flexible Private SaaS solution.



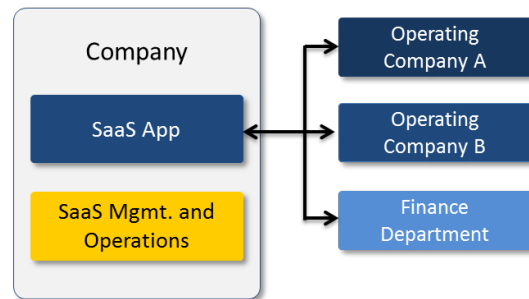
A Private SaaS solution will enable the company to operate and manage their franchisees software from a central location by treating each franchise location as a Tenant and having the SaaS capabilities for monitoring, billing and managing the operations within their control. All the capabilities for easily adding new tenants (franchisees), providing software updates, and monitoring usage which are valuable in a public SaaS scenario would be valuable in a Private SaaS scenario as well.

Subsidiaries and Internal Divisions/Departments / Business Units

In many large organizations, especially geographically dispersed ones, it is not uncommon to find that the same software package is being run in two or more instances. Organizations that want to consolidate these environments so that they can provide the same application as a service can do so with a SaaS delivery model. Besides consolidating the management and operational control and likely reducing the cost of service delivery significantly, it will address the issues of allocating resource costs more appropriately, because the SaaS model includes the concept of billing based on subscribed users and resource usage.

CIO's have a much better opportunity to manage the company's IT resources and collect critical operational utility metrics based on the use of software Corent's SurPaaS™ SaaS enablement platform includes capabilities to collect statistics on what discrete transactions are performed within the application, revealing valuable information about actual usage patterns. By analyzing the tracking data it is easy to evaluate feature and function utility. This provides generous feedback on application usage that can be analyzed in aggregate or by specific tenant. The CIO can determine if there are usage patterns that warrant special attention or intervention in a near real time manner allowing for corrective actions to be

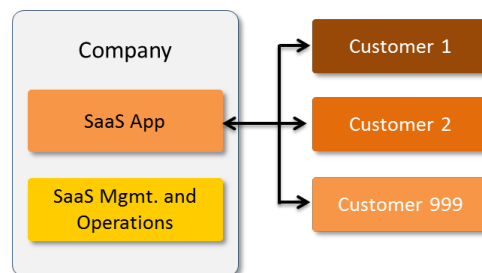
Private SaaS for Organizations



implemented in order to manage operations to a healthy state. Alternatively the CIO might discover one department or region, which is setup as a tenant, is not making as much use of a particular feature of the software. Inquiries can be made to see if this is a training issue or an indication that the software is not meeting the needs of those users. This type of analysis can also be used to drive decisions about budget allocations, because the CIO, and the department and/or regional managers can easily see if the software is actually being used to a beneficial extent.

Beyond enabling better insight into existing software usage, the advantageous economics of a SaaS architecture can allow for improvement and expansion of the internal IT services role and greater relevance in partnering with the business to expand company value. The cost of service delivery for multi-tenant SaaS applications can be from 7 to 17 times lower than the cost of running individual instances of the application for each tenant. This is based on costs of a typical supporting infrastructure with some use of virtualization or cloud technologies. If the individual instances are traditional hardware systems based the savings will be much greater. This economic advantage provides an opportunity for the CIO to re-allocate budget to funding innovation projects.

Private SaaS for Customers



The SaaS model can also help the CIO achieve additional economies of scale and standardization by thwarting the natural behavior of the organizational units to deploy departmental solutions and their usually costly support staff. Since SaaS costs are low and services can be subscribed to 'as needed' and

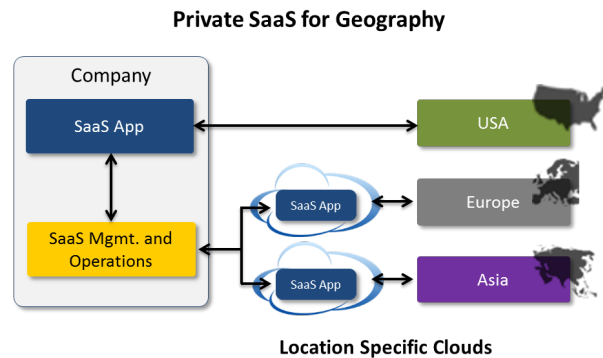
for only the people who need it, departments can be offered low cost, instantly provided services based on the corporate standard software, and the enterprise can avoid the fractured and disorganized proliferation of desktop and departmental scale solutions that are often purchased to avoid the expense and time delay in acquiring software through traditional IT provisioning channels. This can help the CIO achieve a more consistent and integrated IT environment for the enterprise.

Even in those cases where the application software must, for certain reasons, be setup as a separate instance for each department or other company entities, using a SaaS model can provide significant advantages. SaaS is a business model and can be delivered with a multi-tenant capable application or by providing the same SaaS characteristics, but with a separate instance for each tenant in a ‘virtual-tenancy’ environment. This virtual tenancy model provides the advantages of automatic provisioning, subscription billing and the same centralized tenant management as with a multi-tenant application, but with somewhat less resource efficiency. However this virtual tenancy model has its own strengths, including the ability to have different versions or customizations for each tenant, and being able to locate the virtual instance in a place geographically advantageous for that tenant. In either scenario the CIO has improved oversight and the ability to offer an efficient managed service to the enterprise with Private SaaS.

The “World is Flat” but it is still a big planet

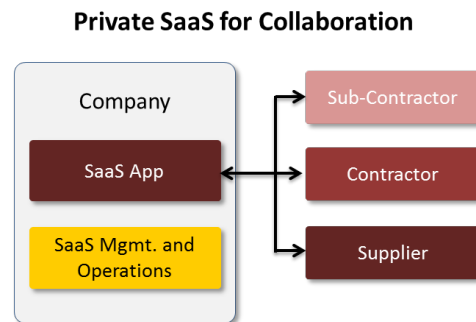
Geographic distance can be a big consideration in providing services for users who may be located far from each other. Latency and distance can make it challenging to provide the response times for applications that are required to make them usable and practical. Even with a multi-tenant SaaS solution that can accommodate many tenants, it may be desirable to have separate multi-tenant SaaS instances to serve the users in a specific geography. This may be useful for performance reasons, and also for legal and regulatory compliance where some countries have specific laws concerning where personal data about their citizens may be stored. By

placing the application on a cloud or other datacenter in the local geographic area, the application data location compliance rules can be met. Having the ability to manage the Tenants from a central location provides a company with an ability to address geography related performance and legal issues while managing the application centrally.



Collaboration throughout the Supply Chain, Dealers and Distributors

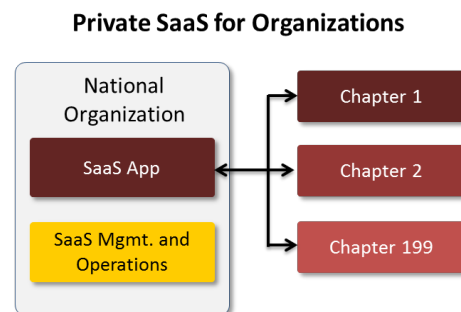
The value of a supply chain or multi-tier distributors’ distribution network or in any similar collaborative partner ecosystem, computing, processing and utilization activity can be enhanced by the ability of the dealers and distributors to have access to a Private SaaS offering. That benefits enhancement could be come from a price point lower than what would otherwise be available for the same service using fixed in place IT assets for each entity, or access to specific features and capabilities that would otherwise be unavailable or expensive to acquire on the affiliates own. Even if the software offered as Private SaaS does not restrict the distributors to its sole use in connection with a SaaS



Provider, there can still be significant advantages to the SaaS Provider. For example a company may be able to see, via monitoring or analytics, new opportunities for delivery optimization, coordinating and raising the efficiency of operations. By having a closer relationship with its supply chain members, a company can better position itself to see potential issues well before they arise, or quickly remediate constraints and problems that may affect operations. The application may also be a significant benefit to the suppliers, distributors and dealers using it, allowing them to have sophisticated application capabilities available to them while not requiring them to invest in acquiring that capability or the expertise in IT to manage it. They get the use of the application, and are part of a broader customer service support model. Having access to this software is a benefit of doing business with the Private SaaS Provider organization and can help to strengthen the business relationship.

Affiliate Organizations, Partners

Similarly the value of an affiliation could be enhanced by the ability to have access to the Private SaaS offering. That enhancement could be due to a price point lower than would otherwise be available for the same service, or access to specific features and capabilities that would otherwise be unavailable or expensive to acquire on the affiliates own. By providing various capabilities that affiliates find useful, the relationship between firms is enhanced. Even if the software offered as Private SaaS can be used for purposes beyond just the interactions between the provider and the user, and does not in any way restrict the affiliates to only using it in connection



with the SaaS Provider, there can still be significant advantages to the SaaS Provider. One of the benefits of the SaaS model that SaaS Providers have is the access to metadata information about how their tenants are using the software. This can be very valuable information as an organization attempts to understand, manage and organize a collection of dispersed or loosely associated entities.

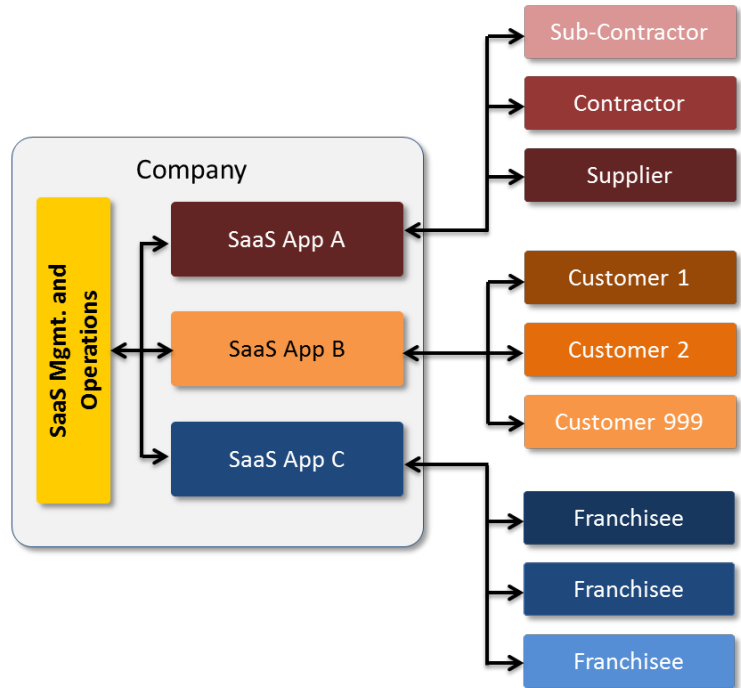
The benefits of Private SaaS for corporations of any size

One of the many benefits of a Private SaaS implementation is the reduction in number of application instances to manage, and integration complexities and operations costs compared to running many separate applications. Private SaaS streamlines the operations needed to provide a software service. As large as those benefits are, they can be greatly expanded if the Private SaaS model can be implemented across several applications, where the cost savings and consistency of infrastructure, operations and management is applicable to a much broader portion of the company's IT operations. There are many benefits for a Private SaaS application including replacing multiple instances that may previously have been maintained to achieve the perceived necessary separation to provide confidence in the security of the data of a particular group of users, or for privacy requirements, which could be legal or regulatory, or simply because that's the way it was traditionally done or corporately mandated. The ability to securely manage the data repository of separate groups of users by designating them as tenants can result in a substantial reduction in infrastructure costs. In addition to the direct cost of the infrastructure, there is also an indirect cost benefit from the reduction in operations and management expenses needed to run all the separate instances of an application that would otherwise be required.

Private SaaS can enhance the corporate offering that a partnership or business relationship with the SaaS Provider can have, by providing valuable software to partners, affiliates or customers that will be seen by them as a benefit of doing business with that company.

A benefit of the SaaS model that SaaS Providers enjoy is the constant contact with their customers. Because the customer is logged onto the SaaS Provider system in the normal course of daily activities, there are many opportunities to have information interactions and gather valuable feedback on business and IT performance. Even if the contact is not explicit, the inherently available information just from customer activities and frequency

Private SaaS for Multiple Purposes



Key Benefits for Corporations

- Streamlines operations for providing a software service
- Reduces the number of software instances to be managed and maintained
- Automatically implements security based on a well-designed tenant model
- Enables the extension of an internal software service to third parties while ensuring appropriate security
- Provides insight to subscriber behavior and usage patterns

of logons, transactions, inquiries to the Help forums, or frequency and length of usage time can reveal information that is useful in nurturing customer satisfaction. In addition the ability of the SaaS Provider to compare aggregate information for all, or specific demographics groups of tenants, with a specific benchmark, can reveal useful information.

Benefits of Private SaaS for ISV SaaS Providers

Private SaaS can be a mechanism for ISV's to market their solutions to enterprises that want to use a customized version or one that has specific integrations to their own systems, or even simply a look and feel that is coordinated with the corporate brand. By utilizing the Private SaaS model, the ISV can provide the enterprise with a version of their SaaS offering, designated and configured for their exclusive use. The enterprise may intend to use the application internally and have only themselves as the one and only tenant, and that is fine. Or the enterprise may want to be a SaaS Provider for their divisions, departments, subsidiaries, suppliers and partners, and in effect have an OEM type relationship with the ISV. In either case the big advantage to the ISV is having only one code base and delivery model to support, both for their regular SaaS customers and their enterprise customers who demand a completely independent instance of their own.

Using this approach also provides the enterprise with additional options, including having the ISV manage the operations of the Private SaaS instance, and ensuring the option of becoming a tenant of the publically offered SaaS application sometime in the future.

Key Benefits for ISV SaaS Providers

- Streamlines operations for providing a private software service by leveraging a public SaaS service platform
- Reduces the number of software instances to be managed and maintained as subscribers are kept up to date by the SaaS Provider
- Enables ISV to market customized versions
- Enables the software to be white labeled and offered as SaaS by third parties.
- Enables the ISV to provide customized extensions / integrations to enterprise systems

ISV SaaS Providers can use the Private SaaS model to provide service with integration into enterprise systems while providing the enterprise the assurance that they have security and management over the users that are within the system.

ISV's can also use the Private SaaS model to provide a reseller with a customized version of their SaaS offering for a particular market. This can be useful when the reseller is providing some added value services, doing specific integrations for their market niche, or otherwise extending the market reach of the ISV. Since many ISV's do not have the capacity or ability to grow their marketing and support staff as rapidly as needed in a global marketplace, having Managed Service Providers (MSP) or reseller partners can be an efficient way to expand into additional markets or geographies.

What must be in place to support Private SaaS?

The needs of Private SaaS are not very different than that of Public SaaS. It is likely, with the proliferation of access points and employees doing ever more work from home or on mobile devices or

through public network connections that the same level of security concerns will exist for Private SaaS as for Public SaaS.

Similar to Public SaaS, there may be legal and regulatory considerations that prescribe where certain types of data can be stored, or other important compliance requirements to manage. These factors can affect the placement of the data and servers and even preclude some departments from joining the main SaaS service. In these cases there may be a need to have some department continue to use an isolated instance of their own. In these cases it is very advantageous to be able to manage and operate the mix of Isolated Tenancy models and Multi-Tenancy instances as a consolidated SaaS offering within the extended enterprise. This Tenant-Centric capability of being able to view and manage all tenants, no matter which instance of the service they are using, their own instance or a shared instance, is a major operational advantage.

In cases where all the individual departments or geographic units can become Tenants on the SaaS system, there may be a need to allocate each tenant onto a specific one of multiple instances of a single

Key to Supporting Private SaaS

- Flexibility to support multiple Tenancy Models simultaneously
- Automation of Tenant on-boarding with appropriate controls
- Ability to centrally support tenants in different clouds and geographies
- Monitoring, reporting and dashboards that enable oversight and insight to services
- Support for metering and billing options
- Operational and Management capabilities for the SaaS applications
- Ability to support multiple applications
- Ability to support multiple subscription types
- Support for tiered complex tenancy models such as Franchisee or subsidiary
- API's for integration with other enterprise systems

application running in parallel in different locations. Many companies have operations in many locations around the globe, and they may wish to implement regional instances of the multi-tenant application in order to avoid the network latency introduced by long distances. In these cases, it makes sense to have the SaaS software running in geographically closer to the users to provide a better response time experience. It is advantageous to have the ability to manage all the Tenants on all the instances as one set of SaaS Tenants. Thus the European divisions of an organization might all be provisioned onto the SaaS application instance running in Germany, while the Asian divisions would be provisioned to the instance in Japan, ensuring the best possible performance for each group.

Beyond the location specific capabilities and the ability to handle a mix of single-tenant and multi-tenant instances, the enterprise needs the same capabilities for SaaS Operations and Management as a provider of Public SaaS. They will need to have Tenant provisioning and management capabilities, monitoring and reporting, as well as subscription and billing capabilities.

With a collection of Private SaaS applications, an enterprise could create a portal, or showroom catalog that would present all the available choices for Private SaaS applications.

Tenant provisioning is a key capability to enable fast access to the application for any users who want to take advantage of it, and this is critical to making the subscriber's decision process easy and convenient,

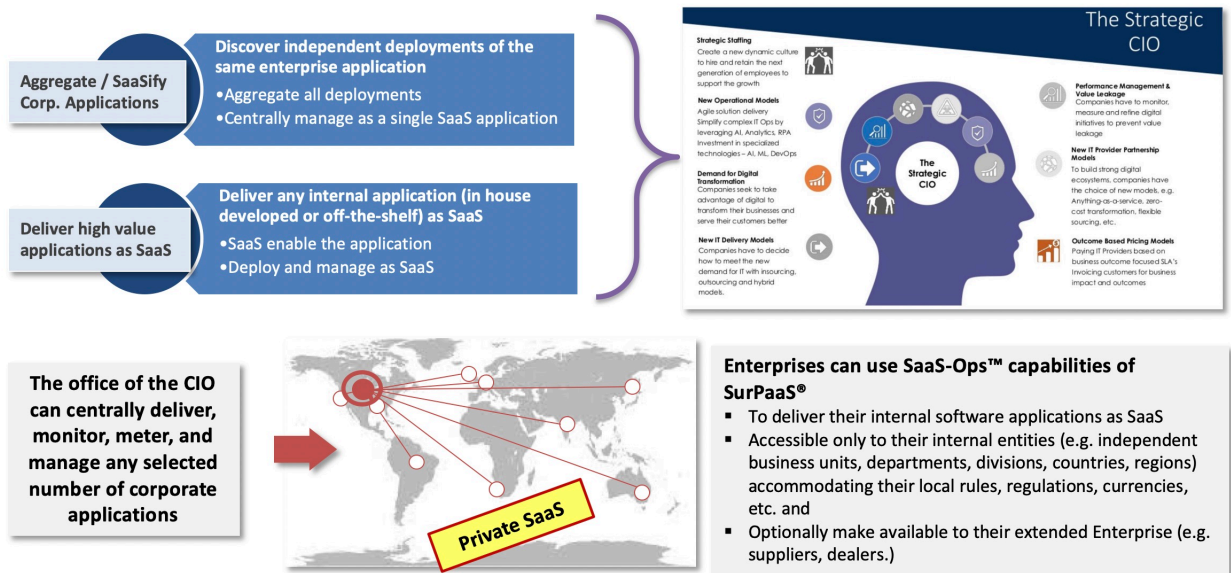
similarly to the Public SaaS provider. With a collection of Private SaaS applications, an enterprise could create a portal, or showroom catalog that would present all the available choices for Private SaaS applications.

Subscriptions and Billing considerations may be different than those for a Public SaaS company, but the principles of automatic cost allocation based on subscriptions will likely simplify the inter-company budgeting. The CIO will also want access to the Dashboard and KPI's that are key to understanding the business health of a SaaS offering. By treating the SaaS offering as any business would, the CIO can start to position the IT organization as a profit center instead of a cost center. Granted the enterprise may wish to keep the profit insignificant if they are not selling to organizational entities outside the enterprise, but they will have the ability to see the cost of service delivery and 'subscription revenue' from the perspective of a Public SaaS provider.

“By treating the SaaS offering as any business would, the CIO can start to position the IT organization as a profit center instead of a cost center.”

The IT department continues to have responsibility for, and to operate the application as they previously did for each individual departmental instance, but with a much lower cost and with much more insight and oversight of the organizations use of the application.

SurPaaS® Provides a common Service Delivery Platform to the Enterprise **Enables Strategic Enterprise CIOs to deliver any internal software application “as a Service”**



One of the advantages of the SaaS model is the additional insight that can be obtained regarding how the application is being used, and when, and by whom, and even, with sophisticated monitoring, how well the application is performing. This information is available to the CIO of an organization offering Private SaaS and can be useful in determining the actual, as opposed to the claimed use of application, and the real performance, as opposed to the reported performance. Armed with this information the

CIO is in a better position to discuss the investments in infrastructure, training and support for applications as they relate to actual business use.

A Private SaaS provider will benefit from the same types of sophisticated monitoring, reporting and analytics and that a public SaaS provider would rely on to manage their application to maintain operations at a consistent and satisfactory level for their customers. The fact that an enterprise has customers that may be a little more of a 'captive' set of users than those in a public SaaS situation only means that the objections will come in the form of emails, memos, irate phone calls and other forms of corporate complaining that no CIO wants to have happen. CIO's have plenty of incentive to get as much management and operational insight for Private SaaS as providers of public SaaS, and to measure and report the efficiency and effectiveness with which they are delivering a service.

To operate and manage Private SaaS, the capabilities required will be essentially the same as for public SaaS, with perhaps the exception of credit card based billing, although this may also be useful. The capabilities needed include the general areas of provisioning, configuration, monitoring, subscription management, billing, reporting and analytics and a dashboard to provide a means of visualizing the state and history of the operational environment.

Some of these capabilities may leverage other PaaS capabilities in the cloud or within the enterprise datacenter. Provisioning a new tenant may be as simple as creating a new tenant record for a multi-tenant application or it may involve setting up and configuring an isolated instance of the application for that tenant. It may be a situation where a cloud image is stored for automated instantiation when a new tenant is added, and a then configured for that new tenant. Or it may be more sophisticated and a stored application architecture definition in an expert integrated system environment like IBM PureSystems, Red Hat Ansible or AWS CloudFormation could be used to deploy a multi-tenant version of the application to new cloud geography when the administrator determines customers will need to access the application from that locale. This sophisticated application pattern definitions can encapsulate the best practices and architectural configuration and the architecture of the application, application server and database integrations in a way that allows automated elasticity to support changes in workload demands and ensures smooth scalability. These cloud level capabilities that affect the virtual objects in the cloud can be exploited by the SaaS operations and management platform by triggering the appropriate actions according to the automated steps based on tenant actions or the directives of the administrator for the SaaS application.

The SaaS Provider, whether their SaaS application is being delivered in the isolated tenancy model where every tenant has a separate instance of the application, or as a multi-tenant application where many tenants share and instance, all need to have an operations and management capability that enables them to manage their tenants. To meet the specific needs of a SaaS business, the operations and management capabilities, which consist of both OSS (Operational Support Services) and BSS (Business Support Services), have to be centered on the concept of tenant. This is not surprising since in the SaaS world, the tenants are the customers, and customer-centric processes are key to good customer service. The typical cloud management applications, consoles, API's and toolsets, and the PaaS support applications can be very useful and leveraged to assist in managing the cloud objects such as server instances, storage, and networks; but they don't have the tenant-centric perspective relating to the application being offered as SaaS. To the Cloud Provider, the tenant is the SaaS Provider, and what is

needed for SaaS is a set of capabilities and perspectives that are centered on the Tenants of the SaaS Provider.

Corent's SurPaaS™ platform is purpose built with this tenant-centric perspective for the operations and management capabilities. Its ability to provision new tenants is designed to automate that process and make it seamless no matter whether that entails simply adding tenant data to a multi-tenant application, or requires the instantiation and configuration of a virtual server or servers. It automates the setup of the entire necessary operational infrastructure, the accounts and information for billing, subscription management and analytics, some of which are external to the SaaS application. The SurPaaS® application is designed to provide a complete solution for the SaaS Provider to manage and operate their SaaS business, and to do it so that the provider can manage all their tenants and all their applications on any cloud, public or private. SurPaaS® is designed to provide these operations and management capabilities for any mix of tenancy models in which SaaS can be delivered from separate virtualized instances for each tenant to a fully shared multi-tenancy model.

By providing the services SaaS Providers need, from provisioning to tenant management to billing, monitoring, reporting and subscription management, SurPaaS® provides a complete SaaS solution with the tenant centric orientation and flexibility that enhances a SaaS Providers ability to go to market, whether that market in internal, external or both.

Boeing used Corent SurPaaS to rapidly transform their Parts Management System into a Private SaaS

Corent SurPaaS was used to transform Boeing's in-house developed Parts Management System - managing tens of thousands of parts for the C-17 aircraft - to a private SaaS application. So corporate IT can host it once and many other divisions / departments only 'subscribe' to it and use it as if it was their own copy as opposed to replicating the hosting and maintenance effort. Boeing expected development to take **12 months**. With Corent's SurPaaS, it took **18 days**.



With capabilities that can meet all of the business use case scenarios described above, SurPaaS® enables a complete solution while providing the ability to customize and augment the capabilities to take advantage of particular features of different capabilities. For example a particular provider may wish to use a different billing system and SurPaaS® can be configured to use another, besides the default billing system included. SurPaaS® REST API's can be used to create custom integrations and specific cloud capabilities can be exploited by utilizing proprietary technologies like Red Hat Ansible, AWS CloudFormation or PureSystems applications patterns from IBM, to enhance the dynamic elastic capabilities for isolated single tenant, or multi-tenant instances of a SaaS application to ensure

optimized and automatic adjustments of cloud resources to match demand, thereby automatically ensuring exactly the right level of resources from a cloud are allocated when needed.

*“Corent were able to take our extremely large and complex enterprise web application and have it running fully multi-tenanted in the cloud in a matter of a few weeks, with no code changes and absolutely minimal input from my team. Let me just underline that: We got ourselves a fully SaaS/MT application in a few weeks without changing even a single line of our code. **Corent’s solution is an astonishing achievement.**”*

Robert J. Stanley, Senior Technologist, [Perceptive Informatics Inc.](#)

About Corent Technology

Corent Technology's **SurPaaS®** is a proven, comprehensive, and turnkey SaaS-enablement and SaaS service delivery software platform.

SurPaaS® provides two major capabilities:

- **SurPaaS® SaaS** is a complete Operations and Management solution for SaaS providers. It offers all the required capabilities for running a turnkey SaaS business, including provisioning, subscription management, integration to billing and BI services, tenant management, dashboard and extensibility via its REST APIs. It also provides automated publishing capabilities that enable integration with and selling through public cloud marketplaces such as Red Hat Marketplace, Azure Marketplace and AWS Marketplace.
- **SurPaaS® Multi-Tenant Services™** provides a path to any of the multi-tenancy models of SaaS by providing an automated software “plug-in” approach to instant transformation of conventional, single-tenant software applications into robust multi-tenant SaaS solutions. Corent's Multi-Tenant Services™ eliminates the time consuming and costly process of re-architecting their applications for multi-tenancy. In addition SurPaaS® integrates seamlessly with applications that already have multi-tenant capabilities, enabling them to utilize the SaaS Operations and Management features of SurPaaS® SaaS.

Corent enabled SaaS solutions can be deployed on any public, private or hybrid cloud; leveraging the technology stack of the SaaS provider's choice while ensuring the lowest cost of service delivery.

For more information about Corent, please visit: www.corenttech.com.

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A global CIO at Fortune 500 firms, Leone has served as EVP, CIO of Ingram Micro Inc., as a SVP, CIO at Federal Mogul and the FIAT Group and leadership positions at Union Carbide, Dow Chemical, and Polineri Europa. He currently serves as the Managing Partner of Apri Technology Partners.

Scott Chate, VP Partner & Market Development, Corent Technology



Scott has decades of experience in the software industry, leading business changes that took advantage of emerging technologies, including developing, implementing and managing a diverse set of initiatives and projects within multi-nationals and global organizations including IBM, Oracle, Mercer Consulting, as well as in the energy industries.