

SaaS Maturity Evolution for Transforming ISVs business



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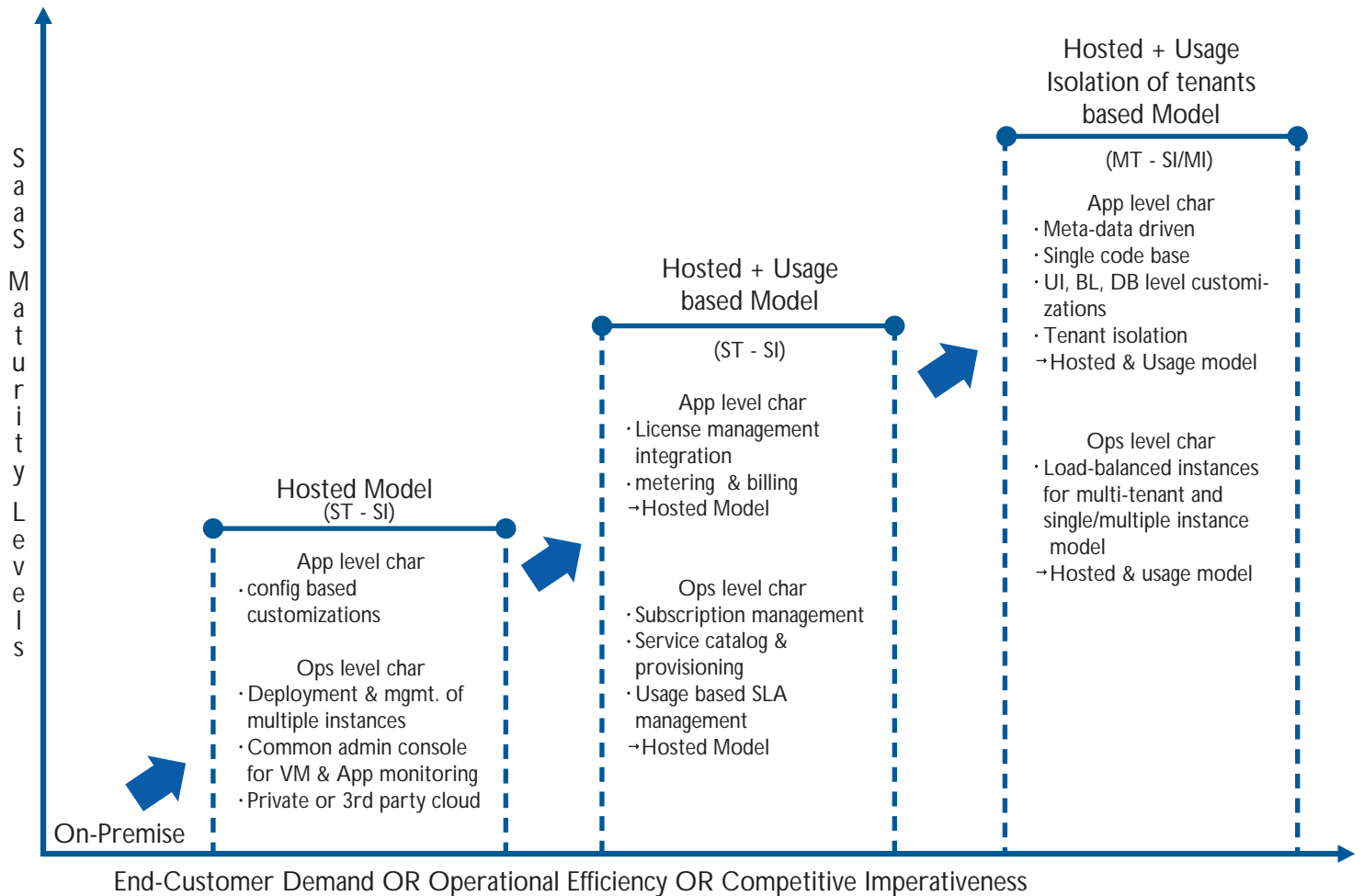


SaaS Maturity Evolution for Transforming ISVs business

ISVs (Independent Software Vendors) have traditionally been using the On-Premise model to deliver their products to customers. However, with the evolution of Cloud Computing and associated delivery models, software vendors are considering adopting SaaS/Cloud. For an ISV, SaaS has different levels of maturity which means that SaaS has multiple functionalities and typically an ISV would need to evolve in the SaaS model following a typical product development life cycle. The SaaS delivery model promises the consumer a pay-per-use model for consuming software without any upfront capital expenditure in terms of buying the license and infrastructure and without the overhead of maintaining the infrastructure necessary to run the software. This basically means moving from CAPEX to OPEX. This whitepaper addresses the evolution of SaaS Maturity Model amongst the ISV's and how they are leveraging the SaaS model to do business better. Before dealing with SaaS and its implications to business at different points in its evolution, however, here is a graphical snapshot of the 3-phased evolution of the SaaS model and what each stage entails.

There are three levels of SaaS maturity for an ISV currently using "On-Premise" model. An ISV can choose to be in one of these levels based on the operational efficiency or the resource usage it desires, or on competitive pressure or on customer demand. An ISV will move from one level to the subsequent one, based on some of these factors. Also, based on an ISV's specific application area such as Engineering/CAD/CAM

software or Human Capital Management software etc., some of these levels may never be required. However, this model typically shows a natural progression for SaaS maturity and has, temporarily, ignored the "Company Strategy" which can alter or restrict movement to a particular SaaS maturity level.



Glossary

ST – Single Tenant SI – Single Instance MI – Multiple Instance MT – Multiple tenants

Each level brings with it certain attributes at an application/product level and some at the operational level. Each progressive level encompasses the application/product and operational level characteristics of the previous level. At all the three levels, ISV's face business implications; however the intensity varies from level to level. As the ISV's move up in the SaaS maturity evolution, their business model is driven by factors like quicker go to market, customer centricity and greater operational efficiency.

To begin with, most ISVs are functioning at Level 0 which is the old model of selling perpetual licenses with yearly subscriptions and annual maintenance to the customer. However, this is quickly becoming obsolete with the advent of Cloud computing. ISVs are now better poised to adopt a higher level of SaaS maturity. The level to which an ISV moves (0->1 / 0->2 / 0->3) depends significantly on product priorities as well as company strategy. Although, this model gives ISVs good licensing

revenue and has been the bread and butter for most ISVs, current market demand pushes them towards adopting a SaaS model (either Level 1/2/3).

The benefits derived by ISV's from their on demand products depend on the level of maturity they have achieved in their SaaS Journey.



The Three Levels Of SaaS Maturity

Level 1, the hosted Model is essentially hosting the traditional single-tenant software as a dedicated instance to every customer. This is the easiest of the SaaS models. Here the software instance for a particular tenant is separate from an instance used by another tenant. The only level of sharing here could be the infrastructure. Re-engineering of the software at this level is not required at all.

In the Level 2 model, the software is still single-tenant and requires a dedicated instance running for every tenant. The only difference here is that the customer is not required to pay for the entire license of the software. A single license of the software can be shared between multiple customers in a time-sharing model. The software re-engineering for SaaS is not required.

In the final model at Level 3, the software is completely multi-tenant. This means that a single running instance of the software can be shared by multiple customers. The software therefore takes care of the necessary tenant level isolations required for multi-tenancy and also could offer tenant specific customizations at various levels. To host existing single-tenant software as SaaS in this level of maturity requires considerable re-engineering effort. There are some techniques such as Aspect Oriented Programming which can provide isolation of tenants to a certain degree and typically provide multi-tenancy.

Faster Go To Market

A simple Hosted SaaS model at Level 1 will serve the purpose of going to market faster. The customer will benefit from an offering in terms of reduced maintenance costs as it would be deployed on shared infrastructure but may still have to pay for the complete license of the software to use it. This is a good entry-level offering for a vendor in the SaaS model, but it is not a sustainable or scalable model. Very soon, the vendor would be bogged down in managing the multiple customers' instances on the available infrastructure or would not be able to add new customers with the available infrastructure running out. The cost of running the operations in this model is very high once you reach a good user base. Some of the ISV customers who adopted this model a year or more ago are now looking at moving to greater SaaS maturity both in terms of product functionalities and operational efficiencies.

Customer Centricity

The Level 2 model addresses the shortcomings of the Level 1 model. The Level 2 model is more customer-centric and the vendor is able to provide more competitive pricing for this software with different levels of SLAs. There is increased level of sharing of the infrastructure and the license, which reduces the operational cost. The Level 2 model supports self-provisioning and service catalog for the customer offerings. Desktop as a service delivery model also falls in the hosted and usage based pricing category and would be a good option for many of the Desktop applications/products. This level requires some integration with the license management engine of the product to capture correct metering and usage information.

Driving Greater Operational Efficiencies

In the Level 3 model, vendor looks to achieve greater operational efficiency through making the software completely multi-tenant. Multi-tenant software can help the vendor to optimize the operational cost to the maximum extent which allows the vendor to offer very competent usage based pricing for the software with various SLAs

This means that a single running instance of the software can be shared by multiple customers. To host existing single-tenant software as SaaS in this level of maturity requires considerable re-engineering effort. At level 3, the software takes care of the necessary tenant level isolations required for multi-tenancy and also could offer tenant specific customizations at various levels. The end customer, however, may be oblivious to the fact that the software is multi-tenant, but the level of customization possible for each tenant may be limited.

The level of customization allowed by the multi-tenanted software for each tenant will depend on how effectively the single-tenant software could be multi-tenant enabled. Multi-tenancy also varies at different layers of software such as Presentation or Business Logic or Database. The cost of multi-tenant enabling existing software could vary depending on the architecture of the software, but will have to provide positive ROI within a short span of time. A possible approach could be use of Multi-tenancy platforms using Aspect Oriented Programming or Reverse Proxy and other techniques for multi-tenant enablement of n-tier or web architecture based products. An alternative approach is always to invest in engineering effort for fully featured multi-tenancy.

Summary

Each level of SaaS Maturity is tied to some operation and application level attributes. An ISV based on their product roadmap needs to take a decision whether to move from an On-Premise software to Level 1/2/3 or if they have been using Level 1 then whether to move to Level 2/3.

In the last one year, there have been significant advancements in service delivery aspects for SaaS with the availability of out-of-the box platforms that offer some or all of these functionalities:

- a) Service catalog and user self-provisioning
- b) User authorization, Single Sign-On, users permissions
- c) Metering, Billing and usage parameters
- d) Shopping cart, order management, Payments & settlements

These out-of-the box platforms integrate with the ISV products to offer SaaS Maturity of Level 1 and Level 2. Many ISVs are looking at these platforms for faster migration and significant cost savings. Some of the ISVs are also looking at developing their products on Public PaaS platforms such as Azure or Force.com or GAE. These platforms provide some of the functionalities and characteristics inherently required at the Application/Product level in these public PaaS offerings. However, for the operational aspects might require the use of some of the components of the out-of-the box third party platforms. For Level 3, n-tier products could explore the use of Aspect Oriented programming for bringing in the tenant isolations which is core to the product level multi-tenancy as an easier method rather than complete re-engineering of the code.

Wipro believes that many of the ISVs would look to adopting out-of-the box platforms and techniques such as Aspect oriented programming for their SaaS journey for their existing products and for their new product development, use Public PaaS platforms or build a completely SaaS based product. SaaS evolution has proved to be conducive for doing business better through faster go to market, greater customer centricity, driving greater operational efficiencies

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