



VeriSM™ Applied in a XaaS Model

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1 Introduction

In the present era of digitalization, with the proliferation of cloud and mobility, there are a variety of services and applications available for access on demand over the internet. Services are ordered and consumed at an astounding rate today. Hence there is a need for enterprises to source and facilitate the consumption of their users' services requirements, all on demand.

Hence, on demand and subscription-based models are becoming the new norm for enterprises to deliver their services to the business, which has resulted in an increase in the adoption of "everything as a service" or a XaaS model. XaaS is fast gaining popularity as it enables everything from technology services through to key business processes which can be delivered as a "Service". With the increasing adoption of disruptive technologies (such as cloud), enterprises started embracing many third party provided services. In such situations, the enterprise IT departments are now transforming themselves as a broker of their own service offerings to the business in order derive the agility and consumerization experience for its consumer. This is now called a consumer driven IT operating model, where the consumer has been given the highest priority.

In this white paper, the focus is on how you can apply the VeriSM model in XaaS where cloud services become the preferred way of doing the business of IT. At HCL, we have applied the VeriSM model in its varied Service Management solutions. This is particularly designed to meet the requirements of a consumer driven operating model. This covers the new Service Management principles, a balanced management mesh & service lifecycle value streams that are required to manage disruptive delivery models like Cloud & DevOps, along with the highest level of autonomies and Orchestration.

VeriSM allows organizations to deliver services as desired by their business by reducing time-to-market to implement new requirements for new or modified services; or to fix problems or vulnerabilities that exists within the service. Thereby, creating a more flexible consumption model for using cloud services by focusing on automation and integration of the IT activities.

2 XaaS Model

As service management evolves, consumer centric operating models are at the forefront of service provision and consumption.

Traditional operating models of IT service providers were designed around monolithic IT infrastructure, client server architecture and very limited virtualization. However, in today's world, the IT infrastructure is highly virtualized and services are offered for consumption on a subscription basis, and this is rendering conventional service management practices irrelevant. For instance, the movement of a workload from one VM cluster to another and features like auto scaling, cloud busting, etc. are mostly system driven and automated, as opposed to traditional approaches with a lot of human involvement driven through a Request for Change (RFC).

Services are essentially composed of micro services and each micro service is independently supported by an unstructured database and non-relational database(ex-DynamoDB) sub systems. Additionally, the service supply chain roles such as service creator, service operator, service provider, service broker and service integrator have become active actors, performing various roles within the enterprise IT management. In order to consume these services dynamically, a robust service catalog which unifies the various micro-elements of a service and its supply chain roles is of paramount importance. The service catalog becomes the center of the universe and the heart of the management mesh. Put simply, unless a service is published in the catalog, it cannot be consumed by the consumer.

VeriSM is a next-gen consumer centric model where XaaS can be the embedded provision model and is a contemporary approach to enterprise service management. The letter 'X' stands for anything and everything as a service and is applicable for the services (both IT and non-IT services) at the enterprise level.

XaaS is a rapidly expanding model where everything is offered to consumers on a subscription basis through a next-generation consumer engagement portal. It is integral to cloud computing, and all cloud delivery models such as software as a service, infrastructure as a service and platform as a service are covered.

3 VeriSM model applied in XaaS

In the XaaS world where everything is offered as a service (on a subscription basis), the consumer portal and the service fulfilment system are the most vital components of the service lifecycle. This is where the Provide and Respond stages of the VeriSM model take place.

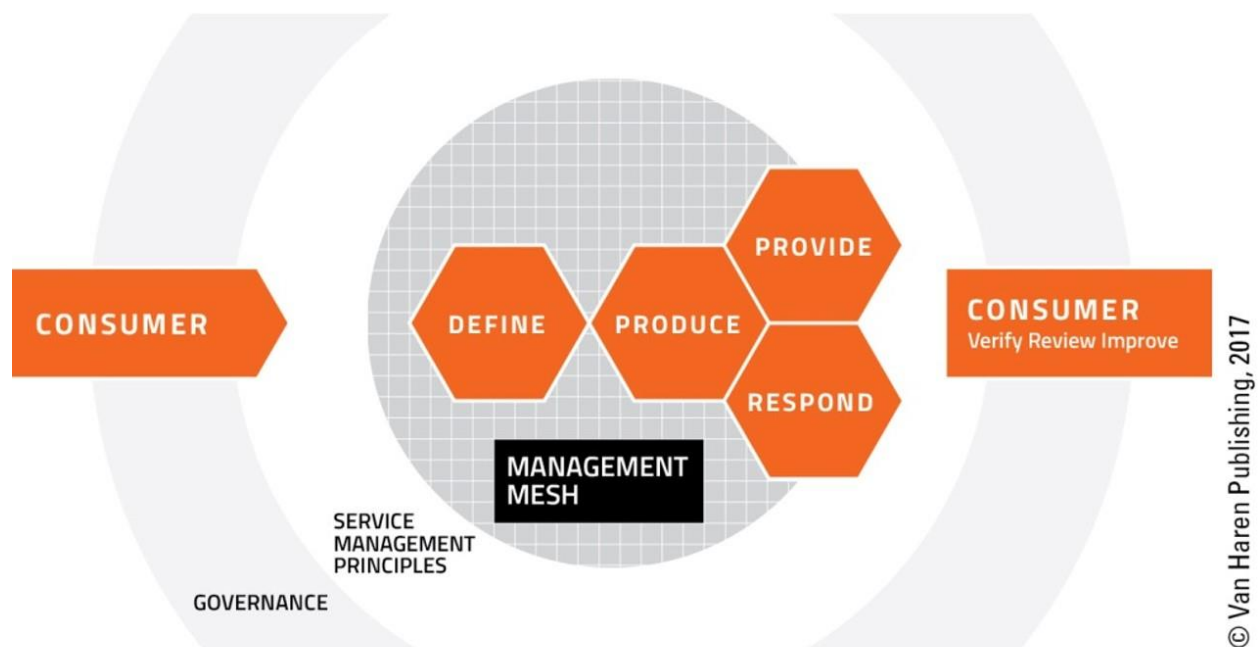


Figure 1 – The VeriSM Model

Source: VeriSM™ - A service management approach for the digital age

Consumers access the XaaS next-gen consumer engagement portal for availing services, which are processed through a completely automated process. The fulfilment engine orchestrates the provision of services using multiple service providers (fulfillers) who are part of the service supply chain.

The model allows both service orders (requests) and service maintenance (issues), and is based on an entitlement concept where consumers only have access to services which are pre-authorized, thereby eliminating the need for approvals.

Some may be wondering about what the distinction is between a traditional 'service request' catalog and a XaaS service catalog. Classic service request catalogs are part of the traditional request fulfilment

system which is merely focused on enabling the workflow for ordering, approval and fulfilment activities which are mostly carried out manually. These orders are related to consumable items such as laptop, mouse, password reset, data backup, and internet access, etc.

On the other hand, a true service catalog powered by the XaaS model provides anything and everything as a service to its consumers such as virtual machines, cloud instances, application services, and IT products. XaaS automates and orchestrates the provision of services using multiple service providers who are part of the supply chain.

The figure below provides an overview of a consumer service fulfilment system based on XaaS:

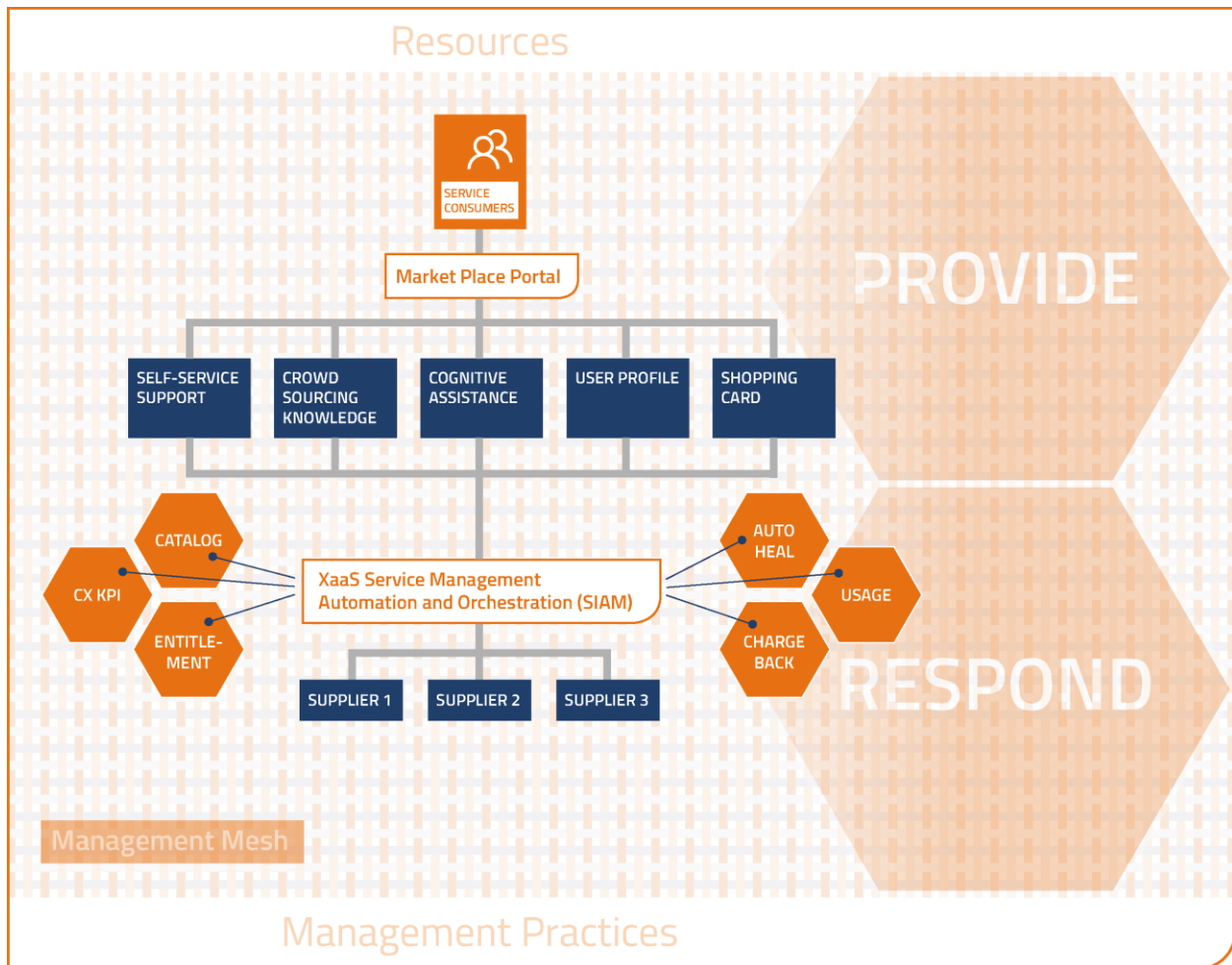


Figure 2 – Provide and Respond with XaaS

The key components in the Provide and Respond stages of the VeriSM model, which are applied in the XaaS world, are outlined in the table below:

<p>Catalog Aggregation</p>	<p>Today’s generation expect options from which they can compare and choose the right product or services to fulfil their demands. To meet the burst in the demand of services, the market needs to be opened to multiple service providers who can provide their own set of niche services. Catalog aggregation therefore becomes critical and provides enterprises the opportunity to publish their own as well as various other supplier catalogs to their consumers on a single portal.</p> <p>The aggregated catalog will have multiple service producers who would fulfil their services individually, preferably through the individual automation engine. Such an aggregated catalog enables consumers to choose a variety of services (simple to complex) without worrying about how each individual supplier fulfils their service request.</p>
<p>Automation & Orchestration</p>	<p>Service Orchestration is the process to integrate services or their automation engines in real-time and automate the complete fulfilment process across multiple suppliers.</p>
<p>SIAM</p>	<p>Next-gen SIAM (Service integration and management) solutions create a well-integrated ecosystem across multiple suppliers. This is imperative for service orchestration and for effective functioning of a subscription-based consumption model.</p>
<p>Self-Serviceable</p>	<p>Modern users demand superior quality of services, and they want to be empowered by self-service capabilities that allow them to manage their services on their own.</p> <p>The “user respond” model is slowly being replaced by “service respond,” more precisely, a true Self–Service model that allows users to obtain outcomes without any intervention from the service provider. It is therefore important that a self-service component is designed in the Define phase, built within the service in the Produce phase and provided to the consumer as a default feature.</p>

<p>Crowd-sourced Knowledge</p>	<p>In a crowd sourced knowledge management system, the public is both the contributor and consumer of knowledge. This means that the knowledge management system is connected to the internet enabling unparalleled collaboration.</p> <p>XaaS enables a crowd sourced knowledge management system by integrating both private and public knowledge bases, and provides a centralized portal where enterprise content, manufacturer content, and community-based knowledge can be accessed.</p>
<p>Cognitive Assistance</p>	<p>Cognitive intelligence is utilized in the XaaS model to provide a virtual assistant with cognitive capabilities for the service consumer, to empower artificial intelligence (AI) based orchestration and to improve service response. Consumerized experience is one of the important elements in the consumer world. Therefore, following elements should be included in the cognitive assisted enterprise collaboration system:</p> <ul style="list-style-type: none"> • Natural Language Processing: Consumers can converse with a chat-bot in natural language • Continuous Learning: With time AI and machine language will learn automatically and only gets better with the time • Context based Reasoning ability: The system understands the context of the user conversations • Initiation to Resolution: The system is a totally human-less system with issues entirely resolved by a bot
<p>User Profiling</p>	<p>The personal data and its associated attributes of a specific consumer carry the digital representation of the user's identity. This profile contains different attributes with respect to preference management and standard entitlement. Preference management allows the consumer to manage his/her preferences such as choice of communication channels, preferred time, contact number, etc. The standard entitlement signifies all services that a consumer (based on their profile) is entitled to without requiring approval.</p>
<p>Shopping Cart</p>	<p>A digital shopping cart enables organisations to exhibit a large array of services and provides an intuitive consumer experience. Shopping cart is the main component to bring the enterprise market place experience for the consumer like any other ecommerce web portal.</p> <p>Shopping cart narrows the gap between the shopping and buying. It is important to have the best shopping cart built in within the consumer portal in order to drive the highest level of consumerization. This allows the consumer to select more than one service at the same time and order it in a single go.</p>

<p>Usage</p>	<p>The XaaS system provides data related to usage, performance & availability of services. This influences consumption and demand of services by making end-users aware of usage and associated cost.</p> <p>Additionally, it helps optimizing the usage of capacity and licences and provides the ability to actively move workloads and to auto-scale depending on usage patterns, resulting in lower costs and improved performance.</p> <p>Most importantly, it allows users to track their consumption of IT services, a view of all subscribed services & license management. The user is put behind the wheel and has total control of all services subscribed.</p>
<p>Chargeback</p>	<p>As IT has become broker of their own services irrespective of them being sourced internally or externally, they need to be billed to their consumers. This entire mechanism is facilitated by Chargeback/Show-back processes, based on subscription, service contract and usage information.</p>
<p>Auto healing</p>	<p>Auto healing resolves potential issues before they impact the end users. Basically, it collects data and starts taking decisions based on AI and machine learning algorithms. A runbook automation must be embedded within the resolution framework to resolve the issues on its own.</p>

4 Conclusion

As enterprises start to adopt more and more cloud services, they will eventually consume third party services on an ever-increasing basis. These services are usually complex and composite in nature, therefore, for their fulfilment, there is a need to engage multiple fulfillers who may belong to different service providers. This calls for a true Next-Gen SIAM orchestration which is powered by the VeriSM™ model in a XaaS provision system in order to facilitate the consumption of IT services across this complex IT landscape. In other words, it facilitates the development of new or enhanced services using automation and orchestration in a true SIAM model. The service fulfilment system and the consumer portal are the most vital components of the service lifecycle. The model allows both service orders (requests) and service maintenance (issues) and is based on an entitlement concept where consumers only have access to services which are pre-authorized. The availing services are processed in a completely automated manner. The fulfilment engine orchestrates the provision of services using multiple service providers who are part of the supply chain. This model is a perfect example of optimizing the Provide and Respond stages by integrating supply channels and offering them as a seamless one-stop-shop.

References:

HCL's Foundation for XaaS: Service Architecture in 21CE

Service Integration: A practical guide to multivendor service management

IFDC VeriSM™ Model

5 About the Author and the IFDC

About the Author

Satya Misra is an experienced architect in the field of enterprise ITSM. He has worked in a leading role in IT service management development programmes in both service provider and customer environments. Satya has over 18 years of experience in Service Operations, Consulting & Architecting various ITSM solutions. Currently, Satya is working as Practice Head for ITSM Process Consulting for HCL Technologies where he is a key contributor in developing ITSM offerings and implementing them for HCL's esteemed customers.

About the IFDC

The IFDC aspires to be a global thought leader in the area of digital competences, thus enabling organizations and professionals to take full advantage of the opportunities offered by the digital transformation. The mission of the IFDC is to develop, own, maintain and promote (open) standards and approaches for the development of professionals in the digital era. VeriSM™ is the first of the approaches to be developed by the IFDC. The IFDC is a non-profit organization, funded by strong partnerships with industry leading organizations. The IFDC adopts a community-based approach to the development of new content.

Trademarks:

VeriSM™ is a trademark of the IFDC.