

VeriSM™ Applied in a **XaaS Model**



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' service requirements

As a result, on-demand and subscription-based models are becoming the new norm for enterprises to deliver their services to businesses. This has resulted in increased adoption of **"Everything as a Service"** or the XaaS model. XaaS is gaining rapid popularity as it is enabling everything from technology services to key business processes to be delivered as a "Service". With the increasing adoption of disruptive technologies (such as cloud), enterprises are embracing many third party services. In such situations, enterprise IT departments are transforming themselves, acting as brokers for their own service offerings to derive agility and consumerization. This is now called a consumer-driven IT operating model, where the consumer gets the highest priority.

In this white paper, the focus is on the application of VeriSM™ model in XaaS, where cloud services have become the preferred way of doing IT business. At HCL, we have applied the VeriSM™ model to our 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, and service life-cycle value streams that are required to manage



disruptive delivery models like Cloud and 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. It also helps organizations fix problems or vulnerabilities that exist within the service thereby creating a more flexible consumption model for using cloud services by focusing on automation and integration of the IT activities.

The XaaS Model



With increasing evolution in the service management concepts, the consumer centric service management system has become the de-facto model especially in the XaaS world.

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, rendering conventional Service Management practices irrelevant. For instance, the movement of workload from one VM cluster to another, and features like auto-scaling and cloud busting, 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 microservices and each of them is independently supported by an unstructured database and non-relational database (for instance, DynamoDB) subsystems. 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-generation consumer-centric model where XaaS can be the embedded provision model providing a contemporary approach to enterprise Service Management. The letter 'X' stands for anything and everything as a service and is applicable for services (both IT and non-IT) 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.

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 fulfillment system are the most vital components of the service life-cycle. 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-generation consumer engagement portal for availing services which are processed through a completely automated process. The fulfillment 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 the distinction between a traditional 'service request' catalog and a XaaS

service catalog. Classic service request catalogs are part of the traditional request fulfillment system which is merely focused on enabling the workflow for ordering, approval, and fulfillment 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.

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 fulfillment system based on XaaS:

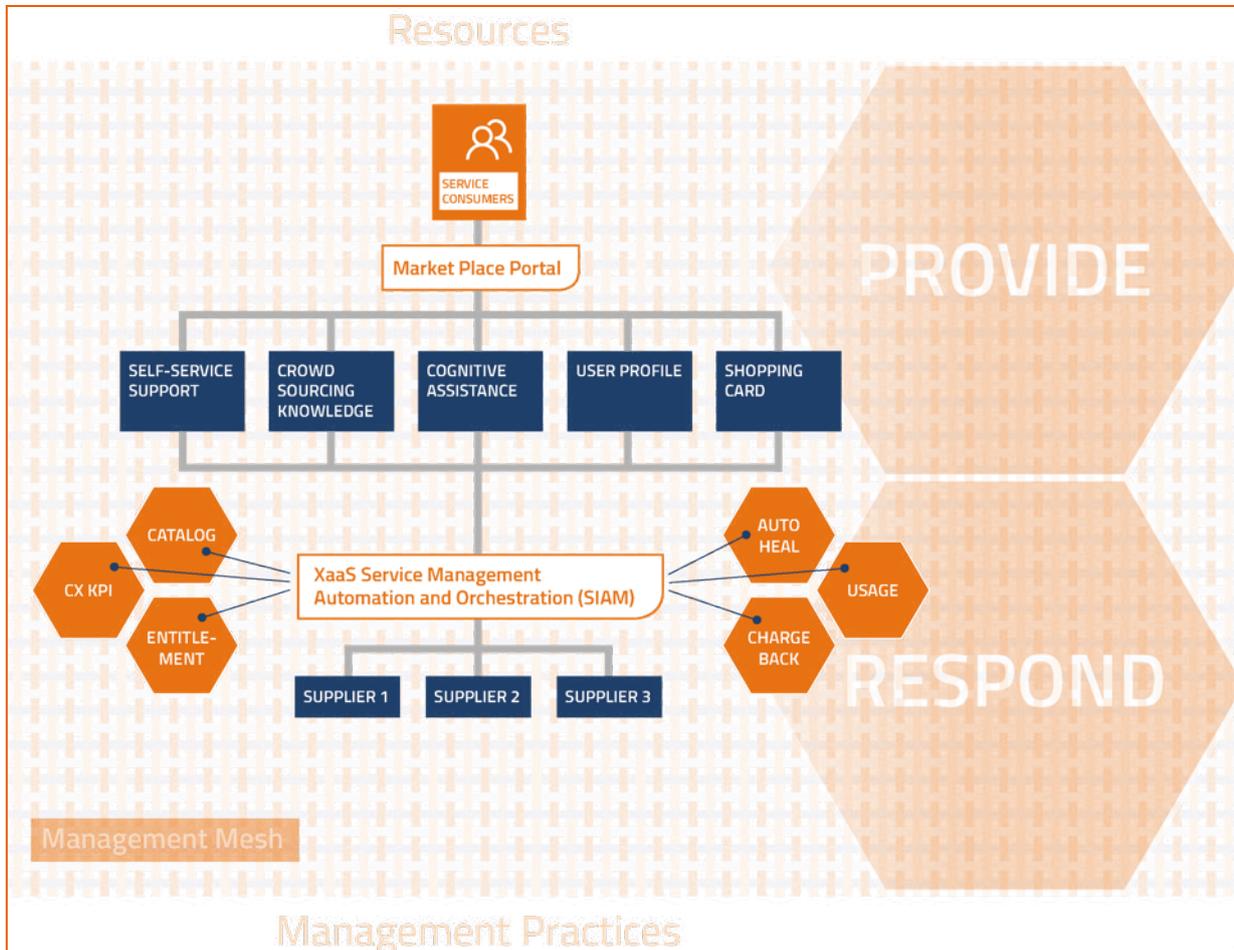


Figure 2 - Provide and Respond with XaaS

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:

Catalog Aggregation	<p>Today’s generation expects a complete catalog of service offerings, from which they can compare and choose the right products or services to fulfill their demands. To meet these surge in the demand of varied services, there is a need to have a common marketplace that needs to be connected to multiple service providers who can provide their own set of niche services. Catalog aggregation, therefore, becomes critical and provides enterprises with the opportunity to publish their own as well as various other supplier catalogs for their consumers on a single portal.</p>
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The aggregated catalog will have multiple service producers who would fulfill 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 fulfills their service request.

Automation & Orchestration

Service Orchestration is the process of integrating services or their automation engines in real-time and automating the complete fulfillment process across multiple suppliers.

SIAM

Next-generation SIAM (Service Integration and Management) solutions create a well-integrated ecosystem across multiple suppliers. This is imperative for service orchestration and effective functioning of a subscription-based consumption model.

Self-Serviceable

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.

The “user respond” model is slowly being replaced by “service respond,” or 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.

Crowd-sourced Knowledge

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.

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.

Cognitive Assistance

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 of the consumer world. Therefore, the following elements should be included in the cognitive intelligence assisted enterprise collaboration system:

- 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 get better.
- Context-based Reasoning Ability: The system understands the context of the user conversations.
- Initiation to Resolution: This is a fully automated system.

User Profiling

The personal data and 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, and contact number. The standard entitlement signifies all services that a consumer (based on their profile) is entitled to without requiring approval.

Shopping Cart

A digital shopping cart enables organizations to exhibit a large array of services and provides an intuitive consumer experience. The shopping cart is the main component that brings the enterprise marketplace experience to the consumer, like any other e-commerce web portal.

Shopping cart narrows the gap between shopping and buying. It is important to have the best shopping cart built in, within the consumer portal, to drive the highest level of consumerization. This allows the consumer to select more than one service at a time and order it in a single go.

Usage

The XaaS system provides data related to usage, performance, and availability of services. This influences consumption and demand of services by making end-users aware of usage and associated cost.

Additionally, it helps optimize the usage of capacity and licenses, and provides the ability to actively move workloads and auto-scale depending on usage patterns. This results in lower costs and improved performance.

Most importantly, it allows users to track their consumption of IT services, provides them with a view of all subscribed services, and track license management. The user is put behind the wheel and has total control of all services subscribed to.

Chargeback

As IT becomes the broker for its own services, irrespective of the service 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.

Auto-healing

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. Runbook automation must be embedded within the resolution framework to resolve the issues autonomously.

Conclusion

As enterprises start to adopt 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 fulfillment, there is a need to engage multiple fulfillers who might be mapped 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 fulfillment system and 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 fulfillment 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 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

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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 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.

About the Author



Satya Misra is an experienced architect in the field of enterprise ITSM. Satya has over 18 years of experience in service operations, consulting, and architecting various ITSM solutions. Currently, Satya is working as Practice Head for ITSM Process Consulting for DRYiCE™ where he is a key contributor in developing ITSM offerings and implementing them for HCL's esteemed customers.

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