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Automating Operations – Merely Reduce OPEX or Beyond?

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Automating OSS and its eco system components was traditionally looked at as the means & measures to reduce OPEX and increase operational efficiency. With the advent of IMS, NGN etc., a new disruptive application wave of services has arrived. To sustain this disruptive wave, back office IT applications like OSS/BSS should transform in to mature state of automation so that customer experience could be improved and tools (such as web self-care) are provided to the customer to ensure customer retention. Be it improving Service Velocity (reducing Concept to Market cycle times) or be it improving customer satisfaction (customer driven Trouble to Repair processes), automating operations has become crucial to the success of service providers business.

In order to achieve operations automation to ensure smooth delivery and consistent user experience of Next Generation services, there are various dimensions that need to be considered. Unless, all these dimensions are considered; automation of operations won't lead to the desired results.

Automation of Business Processes

The level or degree of automation of operations really depends on the business need/processes described by service providers. With more automation in place, error rates are lower. However that may not be necessarily true. System Integrators and Enterprise Architects should have the end goal of automation clear before they devise a solution. And this is tightly linked with the synchronization of business process automation and systems automation. That means systems automation is dependant on business process automation. For example, severe problems in the process automation of order capture would nullify the sophisticated automation in the downstream Service Provisioning system components. The purpose of business processes and OSS automation is to improve business results for telecommunication service providers. Processes are often implicit within an organization, buried in the network of people and systems that has evolved over the years.

As such, these processes are often very hard to formally observe and define. Many organizations often find it difficult to understand exactly how their processes work today and even harder to work out how to implement better processes. Through automation, companies are looking for a different way of improving business processes, leveraging dedicated software to capture, design and implement

processes and eventually monitor the performance of these processes across the organization. Process automation reduces disconnects between technology and business. It improves the operational flexibility and efficiency, customer satisfaction, minimizing revenue leakages and unstable processes. Process automation helps provide a holistic business-system view that plays an essential role in the transformation of a CSP into 'lean operator'.

Impact of Regulatory Norms

OSS automation is also tightly coupled with regulatory norms. For example, depending on regulatory norms in a particular country/geography, automation requirements from service providers would vary. For example, wholesale service providers in the UK, should provide a common automated platform to manage order, fault and billing information from its retailers. Whereas automation of management processes for LNP, CNAM, LIDB, E911, etc would be critical in the United States. Directives from regulators would keep playing an important role even in the future when we talk about OSS automation.

Importance of Data Quality

The success of OSS automation is directly lined with the Quality of the data that OSS systems deal with. Therefore, the stress must be given on doing thorough analysis of the quality of underlying data. Improper data not only affects the success of automation but also drastically reduces operational efficiency. As a quick fix (short term solution), this at times forces tailoring business processes in the fashion which are not good for the business benefits. For example, missing or incorrect product catalogue definition would nullify all the efforts spent on automating Concept to Market (C-2-M) processes and OSS systems components around these processes. Similarly; incorrect mapping of customer information to services and network resources would severely hamper automation of customer impact analysis part of T-2-R processes.

How Industry Standards help OSS automation

Industry initiatives such as OSS/J, MTOSI have been helping the industry to achieve OSS automation by following TMF NGOSS standards. OSS/J APIs being strictly compliant with TMF NGOSS (eTOM and SID) and as they are mapped to eTOM's high level process blocks of "Operations" map; OSS/J APIs adequately cover business processes identified by eTOM framework that are candidate for OSS automation.

Guidelines discussed above about business process automation and OSS automation standards such as OSS/J and MTOSI would ensure that automation does not endanger operational flexibility.

For example, OSS/J Trouble Ticketing APIs could be used to greatly automate some of the T-2-R processes. Large Tier1 operators like Vodafone D2 have greatly leveraged TMF NGOSS standards to automate the process of creating trouble tickets when high severity/priority fault happens in the network. Some other service providers have already counted on OSS/J Service Activation APIs to automate their service provisioning processes to greatly improve service velocity which has yielded business benefits for them. Some Service Providers are working on automating the T-2-R processes by integrating Trouble Ticketing applications from different locations and other operating companies. This would help exchanging ticket

information in automated fashion from a geography to the other and would also help escalating tickets (from regional NOCs to CNOC etc). We have now seen that completely automated T-2-R requires customer self care applications to be seamlessly interfaced with Fault Management & Trouble Ticketing components. And if we add a scenario of Automation of Customer Impact Analysis then besides Fault & Trouble Ticketing; Inventory management component would also come in to the play thereby increasing automation complexity.

Zero Touch / Flow through Provisioning: Reality?

Though, Zero Touch or Flow through Provisioning has been buzzword; practically it has never been possible to achieve it for all business lines (services). For example, when it comes to decomposition of service order request for Wire line services (be it PSTN or broadband), field engineers are required to be involved in the process and hence 100% automation has not been possible. Zero Touch or Flow through Provisioning aspect works quite well for Wireless services and has already been achieved; i.e. from the time customer places an order for a product/service till the time that service is delivered and customer receives the first bill. However, for new edge services; zero touch / flow through provisioning is not an option but the day one requirement.

OSS Automation: Lifeline for new edge services

As we are in the era of Value added services on broadband or wireless and as network has made service blending possible; there are new challenges for OSS automation. Let's take a few examples. Considering new edge services like Booster, e wallet and likes; we need an automation solution that talks to the network in a dynamic, real time fashion. And therefore, we would need an additional component in the form of Network Resource Controller (NRC) that has the capability to enforce policies on network in real time. Also; this component would serve some of the service assurance aspects to automate complex T-2-R processes for blended services.

Validation of Product Definition

With the advent in NGN, IMS, services ride on top of the network and with service execution logic separated from the network; it empowers Sales and Marketing teams to quickly introduce and/or retire products and service offerings. Product Life Cycle Management therefore becomes an important aspect of OSS automation. Unless, OSS systems are not geared up to provide tools that expedite product definition, validation lifecycle process; the true sense of value added or blended services cannot be exploited to get more financial yield from network investments. Today; off-the-shelf products are available that address this important aspect of OSS automation and help reducing product launch time.

Summary

To summarize, OSS automation needs to be looked beyond merely a tool that helps reducing OPEX and increase operational efficiency. To support roll out of new edge services; new dimensions (Network Resource Controller, Product Life Cycle Management, etc) to OSS automation have been added. As off-the-shelf products are made available catering these new automation requirements from OSS vendors, System Integrators have also tuned their OSS offerings to address this need of the hour.

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