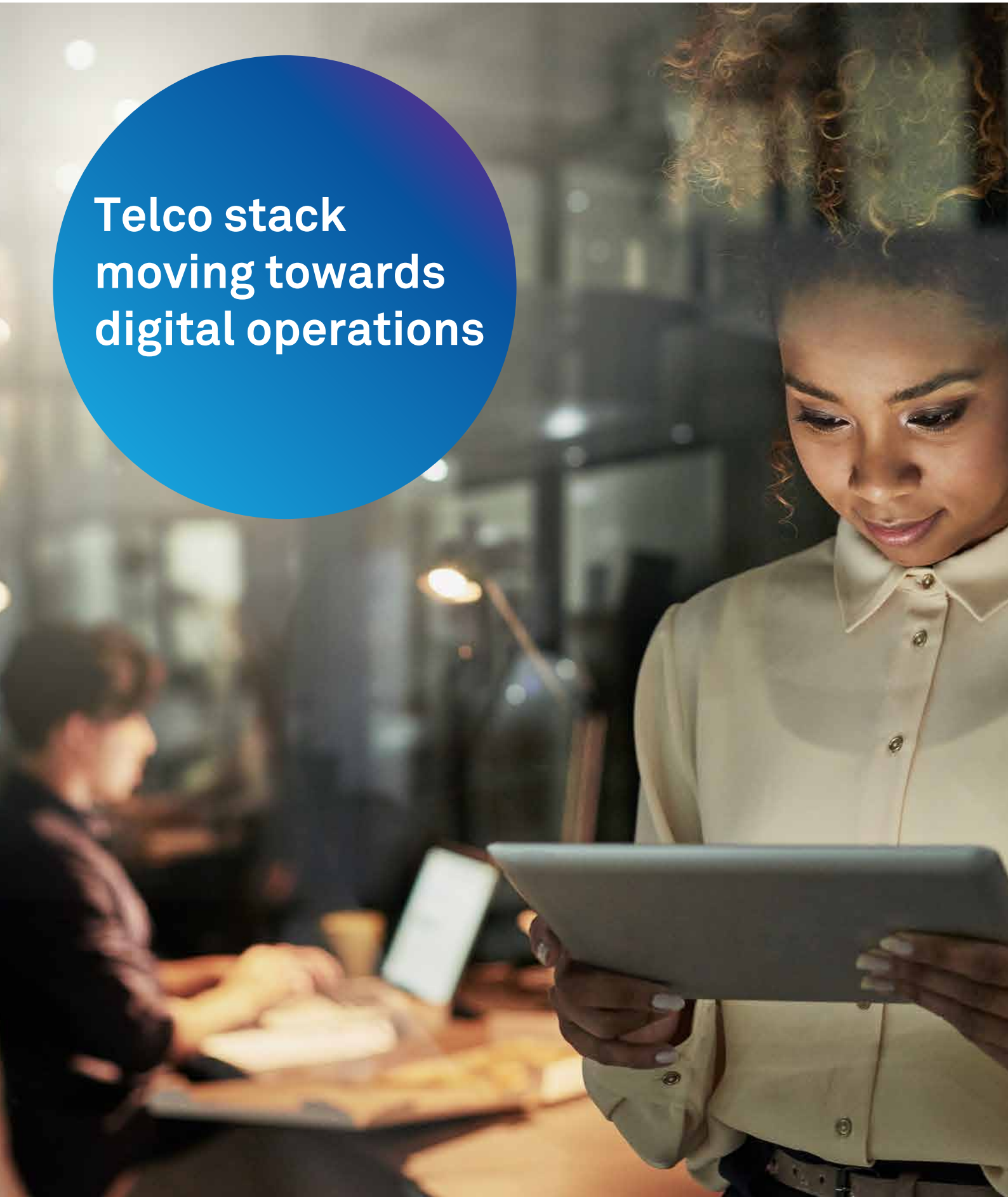
Telco stack moving towards digital operations



The telecom application stack is going through a phase of significant change: it is being moved from data centers to cloud infrastructure. This switch puts immense pressure on legacy systems to get acclimatized to the digital environment. Traditional ways of operations do not do justice to the application landscape. In the new environment, digitalizing operations becomes an essential.

Automation and monitoring play a crucial role in enabling a transition to digital operations. When it comes to monitoring, it is extremely important that we understand cloud. Cloud deployments are elastic and capable of self-healing; however, robust and efficacious monitoring is a requisite for that.

Big data is a core business asset accelerating disruption in the telecom industry. Telcos need to accumulate and process huge volumes of data from customers, charging/billing systems, logs, and network appliances for enabling valuable insights and informed decisions. Traditional ways of monitoring will not facilitate this digital world requirement. The need is to take operations to the next level!

Digital operations in the digital world

Digital operations is a state wherein companies leave their deep-rooted style of being reactive and proactively take a step towards agile and seamless operations. It is about enhancing business efficiency by stitching different components together, which include technology, tools, business processes and the players involved in these processes.

Digital operations aims at empowering the customers as well as the employees with robust operations that in turn accelerate the business. Digital operations paves a path for organizations to modernize and scale more resourcefully. This is a new state that requires more agility in the way telecommunication companies operate. Currently, businesses need real time data and insights, and efficiency to cater to the ever-demanding market, curb revenue loss, minimize churned customers, and avoid productivity losses. Communications service providers (CSPs) need to have swift responses to any security breaches, event anomalies, and inconsistencies.

A focus on enabling closed loop operations powered by automation and monitoring tools will help map out your digital operations strategy

Reimagining operations with digital

It is important to make a significant shift in an organization's operational investments. Operational investments here imply the efforts to transform traditional ways of operations and monitoring by bringing in innovation. While almost all Telcos are venturing into digital services offerings, it is necessary to restructure operations. Effort should be aimed at bringing onboard real-time operations. This requires different tools to work in tandem in an integrated way.

Here are some guidelines that can help organizations in their digital operations journey:

Tools help

Organizations should be well equipped with the required set of tools so as to analyze data and take apt preventive steps to handle incidents within time. Progressive analytics and artificial intelligence tools can make a substantial difference in prescriptive intelligence by providing actionable inputs rather than plain old data monitoring.

Being agile makes you less fragile

Great value can be achieved if business product offerings are in chunks rather than one-shot rollout. Agility comes, if the organization is enabled to break the vision of a project into multiple deliverables by collaborating with stakeholders, seeking feedback, improving in every iteration while inching towards the set vision. Agility is what will keep an organization ahead of the competition.

Real-time data availability is the key

Finding the relevant information from a mammoth set of data is like searching for a needle in a haystack. Organizations should have relevant data available instantaneously in order to understand the cause and the related dependencies along with their business impact in real time. Each second contributes to the business value.

Real-time response to any signal

As organizations collect real-time data, they can now act in sync with the system behavior so as to avert scenarios like server crash, slow connectivity, security breach, failing customer requests etc. Teams also need to be well-trained in order to understand the systems because any false positives reported by the team will cost a huge amount to the business.

Be proactive rather than reactive

It is key to act proactively in case any potential anomalies are signaled via real time operations and thereby, avert any critical business impact. Monitoring systems should be so robust that anomalies detected should be treated with first level automation procedures to avoid any further business process degradation.

Adaptive knowledge management systems

Post incident, the issue resolution should be automatically updated in the knowledge management systems based on the analysis provided by the teams in the resolution section. This would contribute to avoiding repetitive mistakes in future and also improve business service value.

The enablers: Automation and monitoring tools

Figure 1 is a schematic representation of the monitoring tools and the required automation with which high degree of digital operations can be achieved. Tools need to work in tandem so as to deliver the correct flavor of automation. This enables closed loop operations.

The moment workloads are created on the cloud or data center, it is discovered by hybrid cloud management platform and configuration items pertaining to the resources is updated automatically in the Configuration Management Database (CMDB) of ITSM. This ensures readiness to manage tickets on these resources. Monitoring and automation is established for preventive and reactive maintenance at three levels – infrastructure, security and application. Proactive and reactive tickets are created in the ITSM systems automatically. Thresholds can be set for various parameters on the cloud and data center at all three levels to receive alerts and propagate it to ITSM as a ticket. ITSM can take preventive and corrective actions via Hybrid Cloud management platform invoking auto provisioning towards the cloud and data center.

Let's take the example of an application server whose CPU utilization has crossed the threshold limit. In such a scenario, the monitoring systems will come into action and create a ticket in the ITSM tool.

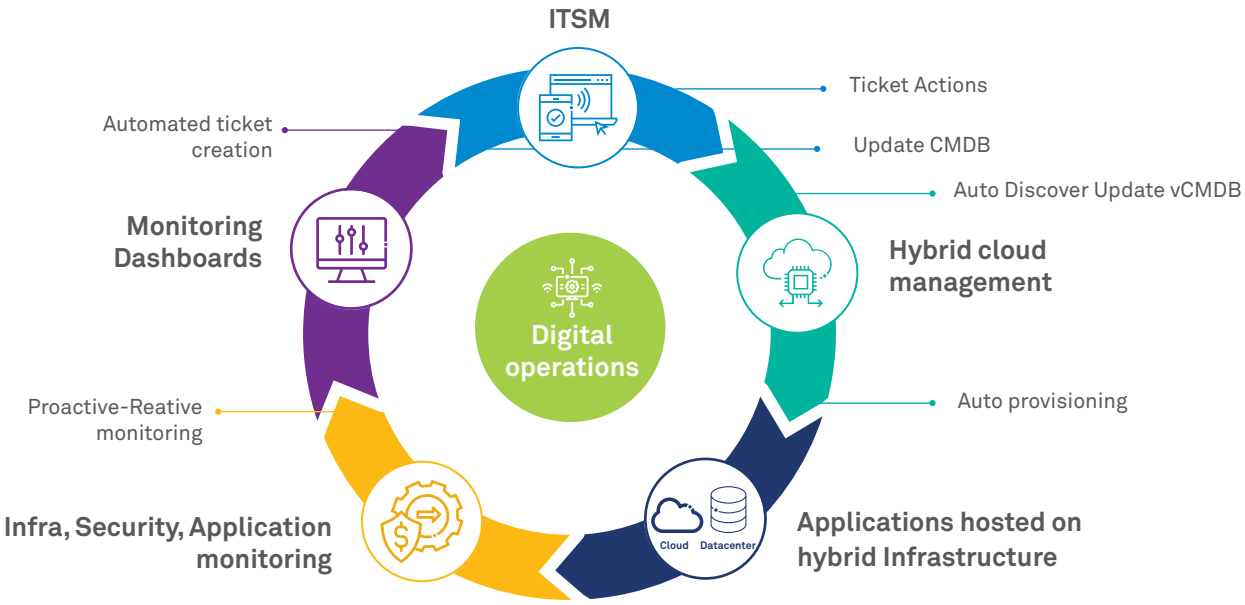


Fig. 1 - Schematic representation of tools and automation for achieving high degree of digital operations

Once the ticket is created, the cloud management platform will create additional resources to handle the additional load in order to avoid the undesirable situation of reduced performance by the application Lserver. Post these updates, hybrid cloud management platform will enable automated ticket closure. Thus, this entire show will be run through zero intervention by the operations team.

The digital roadmap

The world is moving towards 'no operations' or NoOps - a state where there is no need for an operations team or the state where the team will shift focus from operations to outcomes. While NoOps is the desired state, achieving digital operations is definitely a stepping stone towards it.

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