

# TECHNOLOGY SPOTLIGHT

The eNlight Cloud: Making IT Easy

Sponsored by ESDS

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Cloud computing, the much hyped savior of IT, is taking every vertical by storm today. This cloud wave is not only enabling "anything as a service" to make our lives easy and simpler, but it is also grappling for innovations in operating and service models as the 3rd Platform gets increased acceptance and adoption across organizations. Gone are the days when scalability meant manual interventions or caps that cannot be increased automatically as applications faced peak usage times.

The maturity in the market is at a point in which today's organizations are looking at scalability and flexibility as basic hygiene rather than luxury or overpaid features. This means that the intelligence that gets built into cloud computing can be unparalleled but needs to be offered to the customers in a user-friendly, cost-effective, and secured model with different availability options. The transparency in "pay-per-use" consumption model is what is expected to drive the true mass consumption of cloud in every vertical.

While the end user (internal or external) enjoys the scalability and flexibility of cloud in performing different functions, the IT teams are the ones that make it happen. Hence, these IT teams are those in real need of smart tools/processes for migration, management, uptime, and availability to enable business outcomes for today's competitive world. The absence of these tools/processes cannot only affect the business indirectly but can also force the organization to pay more for the same set of work, thereby affecting the bottom line tremendously (either in the form of people or cost in delivering the services or business limitations).

Cost control and productivity enhancement still remain the biggest concerns of organizations even today. Although cloud helps to control costs and the facts discussed above do allow the organizations to limit their spend and do more with the same budget, the next-generation organizations increasingly want to get into the driver's seat and keep a check on their active usage, payments; and at times, smart tools that can predict their costs basis past consumption/peak trends automatically.

With all the tools, enhancements, smart consumption models, and availability options, service and support have become the key differentiators in the market. Today, CIOs are considering a variety of service offerings that can enhance their organization's business and let them focus on their core strategic jobs. Although cloud does solve many problems and presents a ray of light for the much-strained IT infrastructures, its next wave of evolution is what is expected to truly transform the way it touches our lives and the features discussed above would be critical to any organization's successful cloud journey into the future.

### **Situation Overview**

Cloud-based services and models, though they have progressed by leaps and bounds in the last few years, have long been in existence, but they are yet to capture and sweep the IT space as what was expected from the start. While some of it is attributed to slow economic growth and others to macroeconomic factors, a large part of it is due to the limited innovation and availability of support services and customer satisfaction tools in this space. According to the *IDC Cloud Survey 2014 for India*:

- 57% of IT customers consider cloud as a normal way of providing services, whereas only 44% of the line-of-business (LOB) users feel cloud should only be used for specific projects only,
- Only 35% of the small and medium-sized businesses (SMBs) feel cloud is the way forward.
- About 43% of total cloud usage is ad-hoc with only 13.5% feel that their cloud usage is at an optimized stage,
- 55% of the users have issues with their current service provider (SP)
- 65.4% of the current email and collaboration work is outsourced.

Most of this is attributed to the limited availability of service and support models (everyone offering the same in some way) and tools and innovation in smart management, scalability, flexibility, security, and ease of use options. Today's organizations need intelligence to be built into their cloud deployment that can take over some portion of their tedious job and help them innovate and think strategically. Most of the available options in the market cover a large part of it, but a true combination of all these features is being demanded in the market that is allowing new concepts, innovations, and organizations to thrive like never before.

# eNlight Cloud

ESDS' eNlight cloud addresses each vertical and business requirement in a simple and unique way and presents endless opportunities and innovations in its approach that can be utilized by organizations to remain competitive in their market but in a cost-effective and secured manner (and is based on an open platform). It is an intelligent auto sizing and scaling (vertical) public cloud that embraces the right infrastructure unique to one's business and presents a series of advantages over some of its peers in the same category.

• Auto scalability. While scaling for some of us means how far it can extend, it is actually the usage scalability that matters at peak usage times. eNlight cloud's utility-based scaling takes into account this notion and dynamically provisions resources like random-access memory (RAM), bandwidth, CPU, among others. The inbuilt intelligence differentiates between active (in use) and idle resources, and accordingly scales the resources either way with the capability being possible without a reboot. The automation capability limits the human intervention required for good purposes and automatically takes into account the minimum and maximum limits set and does readjustments on its own. The scale up and down is based on the automatic sensing of the load and basis the same, it makes the CPU, RAM, and other combinations and auto scales the resources every 30 seconds. What it means for the customers is that without putting in much effort, the scalability is taken care of intelligently by this function on its own thereby saving both cost and time.

- Flexibility at your fingertips. Whatever is the need or the business model, the flexibility to dynamically provision, pool, schedule, and remove resources gives the user endless opportunities to perform tasks with the click of a button or at times, automated, to suit the user's requirements.
- True pay-per-consume model. While the cloud itself was conceptualized to make IT cost-effective, the next wave of evolution demands that innovation be brought into this aspect as well. eNlight cloud takes it into the next level in which users pay for individual resources only when they are using it, though the idle ones remain available to perform, the user does not have to pay until its actual usage is metered. For example, resources like CPU and bandwidth are only accounted for if the VM is on a running mode else the user is only charged for the storage that was committed. The billing happens every five minutes as the basis of consumption and is visible on the customer's dashboard with a prepaid or a postpaid payment option. The transparency in operations plus the true "pay-per-consume" concept is sure to benefit organizations looking forward to a cloud journey.
- Smart tools. With eNlight's user-friendly graphical user interface (GUI) and control panel, daily server management becomes a delight for the IT administrator as the server intelligently monitors and performs proactive functions and predictions (in some cases, basis available data) that help the business to remain agile indirectly. Web-based interface is also there to facilitate anytime, anywhere access and frequent (as required) backups ensure (near to) zero data loss and downtime. The mobile application—based access also guarantees the access is not limited to large screen availability and allows VM creation, provisioning (in less than a minute), monitoring, as well as call logging from it. These tools are sure to increase the productivity of the teams directly or indirectly.
- Always on service. eNlight's unique capabilities allow it to be one of the most seamless service providers wherein the server reboot requirement is not anymore required while scaling up or down or during upgrades or even during backups. The seamless service can surely act as a differentiator for any business when compared with its peers. The Intel and Cisco infrastructures behind the SP's capabilities ensure that the service is up and running at all times without any downtime.
- Security at the highest level: Security remains the single largest concern for anyone and everyone who wants to embrace cloud. ESDS, while on one hand provides security per some of the most trusted international frameworks and regulations; on the other hand, it also takes into account the India conditions and has a full state-of-the-art and secured datacenter located in India, wherein both physical and virtual security are being kept at the highest level. While the physical systems include biometric devices, the seven-layer security ensures that access of security staff, CCTV, among others, is restricted on a "need-to-know" basis only. The virtual security includes measures such as network isolation (using network virtualization to ensure different network resources for even the same hardware), ensuring every customer in a separate virtual LAN (VLAN) and for server and storage (using isolation layers) along with load balancing techniques; anti-spoof/anti-sniff firewalls; anomaly detectors; and filtering systems to ensure that security concerns are addressed at the highest possible level.
- Tightly coupled architecture. The architecture is based on various international and national best practices and within the gamut of the IT Infrastructure Library (ITIL) framework. Various considerations (apart from security) such as isolation of storage from public access and tightly integrated server architecture and other modules ensure the integrity of processes and data that are being executed on the cloud.

- Certifications. Various certifications such as ISO 9001, ISO 20000/BS 15000, and ISO 27001/BS 7799 also ensure that appropriate steps have been taken to ensure security and integrity in the best possible manner and within the known frameworks of best practices. The platform is also certified by SAP for hosting of various SAP modules and a PCI certification is also expected very soon. The capability maturity model (CMMI) level-3 certification also ensures improvements at all times.
- Support and service. ESDS also differentiates itself on the basis of certified professionals in addition to the certified infrastructure that further generates confidence about its services and support. The service availability is 99.9% for cloud and 99.999% for the datacenter supporting it. The support mechanism comprises of 24x7 phone, chat, and email, supported by 100+ professionals based out of India only. ESDS has been successfully supporting over 30,000 customers internationally over the last 10 years. There are also dedicated support options for enterprises that are willing to go an extra step.

### **Use Cases**

Various verticals are using ESDS eNlight cloud for different scenarios as listed below. These are only some of the use cases (names and exact applications are withheld due to nondisclosure agreements [NDAs] with most of them).

Vertical	Established Use Case(s)
eCommerce	Web servers, scalable testing systems
Education	Various examination and learning applications
Government (Public Service Commission)	Primary websites
Municipality	Tax collection and other government applications
Election Commission	Voter search, results
Hospitality	Primary websites and payment systems
IT/IT enabled services (ITeS)	Test and dev, HR applications, VAS data, etc.
Healthcare	Primary website and other health applications
BFSI	Various banking applications

One of the important use cases for eNlight cloud could be disaster recovery wherein in the event of a disaster, the capabilities can be utilized easily and with speed as required in a disaster. The additional benefit could necessarily be the fact that customer does not have to pay until the disaster strikes and the actual compute is utilized. It can certainly save some cost associated with the present disaster recovery options/the way disaster recovery is planned today.

# **Market Challenges**

ESDS faces certain challenges owing to the perception (and sometimes real world scenarios) about the cloud services and models in India. Most of them are attributed to the security risks and the turbulent bandwidth (required to access anything on cloud) constraint in India. While the security risks can be mitigated by ESDS by emphasizing and demonstrating the seven-layer security approach, the bandwidth constraint can be overcome by light GUIs and other tools. ESDS does need to work continuously toward making its systems secure in the light of new threats and attack vectors and needs to frequently update customers on the additional steps/tools/processes that are put in place to mitigate such risks and instill confidence toward its offerings. Another challenge faced by the service provider is the lack of constant innovation that has made many of its peers become obsolete in some of their offerings overtime. ESDS needs to constantly look for new offerings; avenues and models to enable customers to remain relevant in the competitive scenarios while at the same time, not lose the ease of use/migration function of any such offerings.

### Conclusion

eNlight cloud, therefore, addresses some of the key concerns that are acting as limiting factors today toward the true adoption of cloud in India. While all the verticals are embracing cloud in some form or the other, the results of the cloud survey 2014 (listed above) clearly show that the adoption is increasing along with concerns of true transparency, security, and affordable scalability.

Organizations today are cautious about spending only when required and eNlight cloud's transparency in paying only when using in the true sense, along with auto scalability, would act as a relief to most of these intenders or users. Customer satisfaction is sure to increase on the account of these aspects and to bring more workloads and production environments into cloud.

Another key reason for low adoption of cloud in some pockets or adoption for specific projects only, is security concern. While some of it is limited to the presence of datacenter in India, the others are worried about physical and virtual security layers. ESDS clearly addresses most of these concerns in the best possible ways with an opportunity to improve every time with a new certification or framework as an ongoing process, thereby addressing some of the LOB concerns about security and transparency as well.

Another key aspect that is addressed to enable customer confidence is service, uptime, and support capabilities that can be offered as a combined feature. Various combinations along with 24x7 qualified and/or dedicated support options, and a reliable infrastructure at the backend can surely boost the performance multifold and can provide the organizations with the much required confidence about these aspects that can really address the SMBs' low confidence as well as the ad-hoc nature of projects executed today.

eNlight cloud surely differentiates itself with some of the unique use cases that can serve as reference points for future intenders. As long as innovation thrives in ESDS (and in eNlight cloud), it will surely address some of the key customer pain points and is expected to find greater acceptability in the market.

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