TECHNOLOGY SPOTLIGHT

eMagic: Click to Manage
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Organizations around the globe today are pushing their IT departments to be strategic thinkers rather than operation enablers. While everyone is working hard to achieve this never-ending goal, the greatest hurdle to achieve this still remains the basic day-to-day functions such as monitoring, deploying, and managing assets in various forms.

For CIOs, being transformational is as important as being operational (keeping the lights on) and hence, they need their and their team's time to be invested in strategic investment areas and to enable their team to support and do more in the limited (however large or small) infrastructure, budget, and time.

The Indian environment is particularly attributed to the infrastructure silos that are a result of a number of years of purchases based on projects, business requirements, or line-of-business (LOB) functions. A lot has already been said about management of these heterogeneous environments through simplified tools, spanning across multiple locations. However, the space still needs a lot of innovation to address some of the concerns posed by the ever increasing sprawl of IT assets.

In many ways, the innovation that has been happening in this area is more evolutionary rather than revolutionary. In simple terms, companies have been focusing on either ease of use, automated features, customized reporting capabilities, asset management, network monitoring and analysis, or a certain combination of the needs. However, the fact of the matter is that companies are expecting the tool to address the aforementioned features along with a certain degree of automation.

In addition, customers are expecting the tool (in the fast-evolving world) to be in a mode of constant innovation, limited customization, and at times, ease of use. However, largely over the past few years, the mindset among the vendor community did not only limit the ability to address market needs, but also was the reason these tools failed to impress customers in the long run.

Innovative and integrated tools can offer cost-effective propositions in addition to reducing dependence on manual interventions and can help manage some of these heterogeneous environments in a true "one view" concept. The rising complexity in the datacenter space has created an environment that is pushing the need for more focus on management tools and ROI. Automation remains the most urgent function (along with security) to be addressed in the market today.

Situation Overview

Automation today is defined in various terms from different service providers and OEMs and includes a host of features suiting different environments. Tools from various vendors that aim to streamline the networks or enable provisioning, configuration, and efficiency, along with lowering costs, are increasingly addressing the needs of the market, though there is certainly room for more innovation and process-driven management and governance.

Customers today require faster response times to service requests as well as the capability to customize reports and have "anytime, anywhere" access, in addition to the basic functions of automation. The 3rd Platform, especially cloud, is driving the need for new tools (both from features and delivery mechanism) and processes and solutions that can integrate the legacy infrastructure management with the cloud services/applications on cloud, providing a single view of infrastructure and network.

eMagic Can Manage!

ESDS' eMagic is an integrated tool (developed on an open source platform) for an enterprisewide management and monitoring of IT assets and applications along with service-level agreement (SLA) reports, provisions for change management, and heterogeneous hypervisor support. The material and inventory management (live devices) can be done easily with an auto discovery feature that can create a complete directory of devices along with their identifiable components such as RAM, CPU, cards, and disks. It uses a variety of protocols or standards such as SSH, WMI, and SNMP for this purpose and also gives the users an option to map the assets across racks and datacenter layout, thereby easing the job of IT teams. ESDS uses eMagic for management of its more than 7,000 servers spread across its datacenters in the United States, United Kingdom, and India and serves as a testimony to its strength.

Some of the salient features of eMagic include:

- **3 Click Build, Deploy, and (Monitor) Manage (BDM) concept.** With eMagic's auto discovery capability, all live devices can be mapped with a single click without having to worry about manual interventions. An organization of any size and complexity and spanning across multiple locations can benefit from this. The assets can then be logically mapped to build a hierarchy (department, business unit, regions, and organizations). The tool is not only limited to mapping but can also deploy IT assets allowing actual rack representations to be kept in mind and saving time and cost in deploying these assets. The Manage function enables the administrators (permissions set according to policies and guidelines) to monitor, read, and/or analyze all the parameters possible around server and the associated network flow. Various kinds of alerts, features, and reports can then be customized according to specific requirements. The customization and ease of use hold the key from a customer's perspective.

- **No "one size fits all" theory.** An important function of innovation is to know that every organization or individual has particular needs and hence, an organization that understands it well is able to address most of the customer pain points. eMagic works on the same concept and provides a host of common and specific features for verticals such as banking, financial services, and insurance (BFSI); government; IT/IT-enabled services (ITeS); and enterprises. Apart from the basic features, it also helps specific verticals with its special features such as 24 x 7 accessibility for the BFSI vertical, an integrated view for enterprises, and comprehensive monitoring of projects for the government. The ability to customize and offer add-ons becomes one of the differentiators in this space.

- **Comprehensive management and analysis.** An important aspect of automation is the ability to have an integrated view and a horizontal analysis (across components, devices, and networks as well as for power, space, bandwidth, and syslog) so a full picture can be referred and acted upon. eMagic's capability to manage and analyze the dynamic changes in the network topology or traffic and the use of NetFlow collector in conjunction with the same enable the users to have an integrated view in a graphical user interface (GUI) that is easy to understand and take action on with the help of real-time reports availability.

- **Framework and compliance.** eMagic works well within the framework of established and defined change management, incident, and problem management guidelines of the IT Infrastructure Library (ITIL). It helps the output to be standardized with respect to various compliance, auditing, or regulatory perspectives that can be utilized by various teams via customized views possible in the tool.

- **Inventory and asset management.** In addition to the horizontal view, deep asset view (component level) and logical views are also possible according to user customization that can be seen in a GUI, web-based interface, or a mobile app. Various kinds of alerts, thresholds, and a combination (in some cases) can be set to minimize manual interventions and loss of time, money, or reputation (indirectly). This holds the key in the event of an incident or organizations with large or multiple datacenters.

- **Heterogeneous support.** Another important aspect of eMagic is its ability to support multiple and different hypervisors and enable hybrid cloud management (orchestration) through management of virtual machines (VMs). The support is not limited to the view of different VMs but also includes the creation, deletion, or any other activity associated with the VM. All these can also be managed at a tap from the mobile app, thereby giving it the anytime, anywhere capability. Multiple or distributed environments would find this feature to be really helpful.

- **Secured architecture.** The eMagic architecture is based on Perl and PHP frameworks that necessarily differentiate the public versus nonpublic access to files and data from the core. Layered approach ensures that security is inbuilt at all levels and permissions are granted on the basis of guidelines and policies specific to an organization. Restrictions, thresholds, specific actions, and alerts are possible and can be customized at each level to ensure security. A multifold approach to security allows the organization to safeguard itself from various breaches.

- **Compatibility and performance.** eMagic performs well with MySQL, MSSQL, PostgreSQL, and Oracle database servers, thereby offering multiple options to end users in terms of its compatibility. Multithreading concept allows it to maintain the same level of performance during peak or normal times. The ability to remain virtually transparent to the network traffic sure adds to the performance capabilities while performing its function.

- **Support and service.** The certified professionals define the quality of service and support on any issue, and with ESDS, there is 24 x 7 support mechanism through phone, chat, and email supported by more than 100 professionals based out of India only. There are also dedicated support options for enterprises that demand additional attention.

Use Cases

A variety of use cases are available for eMagic in which customers have benefitted from the three-click approach in different circumstances. Table 1 shows only some of the use cases (names and exact applications are withheld due to nondisclosure agreements with most of them).

TABLE 1

Use Cases of eMagic

Vertical	Use Case(s)
Animal husbandry, poultry	Multi-location analysis and reports as well as customized modules
eGovernance (state/city)	Enterprise capabilities
Manufacturing	Auditing purpose and add-ons
BFSI	Reporting, auditing, and monitoring and add-ons
Retail	Enterprise capabilities
Hospitality	Enterprise capabilities
Government	Administration, auditing, and reporting
IT/ITeS	Distributed network monitoring

Source: IDC, 2015

Market Challenges

ESDS faces some of the market challenges owing to tightening IT spend as well as the CIOs' need to justify a management tool on top of some of the already available resources. ESDS needs to continuously educate intenders and customers about the integrated capabilities of eMagic as well as the new features and road map for the same. The ROI and total cost of ownership (TCO) discussions around the tool with quantifiable numbers can also help the CIOs to build a business case. ESDS needs to continue with the innovation and new features bringing more compatibility as well as integrated support to let it align with the datacenter needs of tomorrow.

Conclusion

Automation and management of IT assets continues to remain the biggest pain point of today's CIOs and IT teams. ESDS' eMagic addresses most of these concerns through its innovative architecture and customization capabilities, in addition to the basic functions. The ability to customize reports and analysis and set up combinations of thresholds, alerts, and access can surely help the organizations to better manage their server and network assets across multiple locations or large datacenters.

Automation in the scenario in India requires special attention owing to geographical vastness and the diversity in IT infrastructure buying patterns across regions. In addition to these, the slow pace of technical updation of the workforce (at times) and the inability of the IT teams to match the business pace also pose a challenge that needs to be addressed in the context of expansion. The datacenters have accumulated a mix of hardware from different vendors over a period of time and with different management tools to support all of them. eMagic can act as a savior and manage this heterogeneity very well for the customers (a single tool for managing all across), resulting not only in direct cost and time savings but also indirect ones in terms of multiple skill requirements or support options.

ESDS' eMagic answers some of the other customer pain points in terms of ease of use, customization, and scope capabilities along with monitoring and reporting ones that address the concerns of various verticals. Different verticals have utilized it in different ways through standard or enterprise licenses with add-ons or customizations to benefit from. In the long run, adding more capabilities and scope and having additional modules that can get integrated with eMagic can surely witness its wider adoption from Indian audience.