Event Management - The Autonomous Way
Why is the traditional way of handling alerts getting outdated, fast?
24x7 availability: The key challenge for modern enterprises

Downtime is expensive – over $100,000 for a single hour of downtime a year for large enterprises, according to consulting firm ITIC’s 2017 reliability and hourly cost of downtime trends survey. In fact, the survey of 800+ businesses found that for over 80% of enterprises, the cost is above $300,000, while 33% stated it to be $1 million or more.¹

Those figures indicate the IT burdens on today’s hyper-connected and hyper-instrumented digital businesses, which are expected to provide 24x7 service availability and are under immense pressure from their competitors. Thus, the key requirement for any enterprise to thrive is “round the clock” availability of its key systems within acceptable performance limits. In response, enterprises have been increasing the depth and breadth of their monitoring coverage.

Subsequently, millions of alerts are generated by different systems within an organization, causing a flood of alerts that includes many false alarms. Generally, these alerts are processed by the IT teams, manually, with or without static scripts. To meet high uptime expectations, IT teams must monitor these alerts 24x7 in the command center and always be ready to act if a problem crops up.

¹ https://itic-corp.com/blog/2017/05/hourly-downtime-tops-300k-for-81-of-firms-33-of-enterprises-say-downtime-costs-1m/
Traditional command centers aren’t working for modern IT systems anymore

Substantial effort is wasted analyzing unnecessary alerts. Beyond this, a bigger risk with alert floods is that they can increase the chances of missing legitimate alerts that truly need to be acted upon fast. This often results in outages as well as monetary and reputation damages for the enterprise.

The prevalent incident resolution process is to get all teams on an incident bridge, try to assign responsibility, find the root cause of the problem, and discuss probable fixes. However, the knowledge within the teams is often siloed. A complete, comprehensive context is missing, making diagnosis and corrections slow and error-prone.

Here are the major challenges underpinning modern IT systems driven by a traditional command center:

- **Use of multiple, disparate tools**: The current solution that most enterprise command center teams are using combines several unrelated alert management tools. However, with the increasing scale, complexity, agility, and continuous evolution of enterprise technology stacks, this approach is failing to keep up. Traditional alert management solutions are largely rule-based and hence are non-adaptive. They quickly become ineffective and a maintenance nightmare. Moreover, these disparate tools often cannot communicate with each other to give a bigger picture of the overall system.

- **A reactive approach**: Largely, manual command center operations are purely reactive, siloed, sluggish, dependent on tacit knowledge, and unable to adapt to change. This results in longer IT outages, leading to business and reputation damages for the enterprise.

- **Uninformative indicators**: The messages generated by many IT monitoring tools are uninformative. They confuse the technical teams at least as much as they inform them.

- **Lack of precise information**: A lack of detail increases the amount of time needed to get to the root cause of an issue. In addition, it also fails to deliver the clarity business owners expect, and can damage client relationships.
Autonomous enterprises: The need of the hour

To avoid outages, enterprises must detect true issues instantaneously, predict impending major issues, and resolve them quickly. The command center solution needs to be predictive, proactive, autonomous, and constantly adapt to changes in the environment and processes.

An efficient, cost-effective response to these demands is using Artificial Intelligence (AI) in operations. This approach includes:

1. Moving from reactive to proactive:
   Instead of resolving issues after the system failure has already cost the business, AI and Machine Learning will anticipate failures before they occur.

2. A closed-loop solution, detection to resolution:
   An AI-based solution manages all the steps of the lifecycle of an incident/issue and provides resolution as the endpoint.

3. Spanning diverse IT ecosystems and operating models:
   Today’s IT environments are a patchwork quilt of operating systems, applications, hardware platforms, and geographies. Enterprises must find a way to view these systems as a singular business engine while accounting for the peculiarities of each environment.

So, what’s the way out?
Harnessing the power of AI eliminates the need to always have eyes on the glass to determine trouble with any system.
Autonomous event management: A next-gen value proposition

AI shows its true value in the end-to-end event management process:

1. **Proactive failure detection:**
   - AI algorithms can be leveraged in spotting anomalies across streams of millions of data points. These anomalies can help spot a failure long before it occurs, allowing the tech teams to anticipate an issue beforehand.

2. **Prioritization and filtering:**
   - Most tickets that reach the technical teams are false alarms. Machine Learning (ML) algorithms can filter irrelevant tickets and ensure that human hours are not spent on recognizing and marking false alarms. In addition, as more disparate systems are integrated, these algorithms can even prioritize issues by their business impact.

3. **Aggregation:**
   - An effective event management solution must be able to process a large amount of data from multiple systems by correlating related alerts and working on the main issue (root cause) rather than wasting time in dealing with multiple symptoms.

4. **Autonomous resolution:**
   - Beyond detecting and analyzing incidents, AI can help orchestrate the actual downstream resolution. If these resolution processes score high on complexity, a proactive approach will empower the engineers with the next best actions so that the resolution process can be expedited. In certain cases, AI can go into an assisted mode and support human experts in collaborating and resolving the incident.

To implement the above points, enterprises need solutions with the following features:

- **Model-based, case-based, and rule-based proactive learning:**
  - Today, most solutions in the market have fixed functionality. Such solutions fail to adapt to the ever-changing business and technology landscape. Modern enterprises need a solution that evolves through learning from system and human feedback, applying all three aspects of reasoning—model-based (leveraging the enterprise blueprint), case-based (leveraging historical data), and rule-based (leveraging tacit knowledge), which brings depth to analysis and actions.

- **Broad technology compatibility:**
  - AI solutions minimize human dependence only if they cover a wide range of technology stacks and platforms. Therefore, broad technology coverage and compatibility is key for easy scaling.

- **Ease of deployment:**
  - With digital technologies evolving faster than ever, businesses need solutions that can be deployed in their unique technology ecosystem swiftly. Therefore, an AI solution must be both adaptable and deployment-ready.
The benefits of leveraging AI for event management

Here are the key benefits of leveraging AI for event management so that IT turns into a source of competitive advantage:

- **Lower costs**: It can help enterprises bring down the cost of IT operations in the long run by reducing the headcount that drives command center in the enterprise. This minimizes the time to solve issues and decreases incidents that create losses for the business.

- **Efficiency**: It boosts the efficiency of the human workforce by enabling them to do more in less time. It helps them focus where their attention is needed the most, and augments their skills with real-time, ready-to-use actionable insights.

- **Resilience**: By taking the noise out of the system and automatically resolving issues, AI makes the enterprise IT more resilient to upstream and downstream changes in addition to systemic failures.

- **Predictability**: Proactively analyzing incident data can reveal usage patterns and recurring problems in digital systems. This can make system needs more predictable, and therefore easier to plan for, reducing the costs of unanticipated outages.

- **Continuous learning**: It enables enterprises to learn continuously about performance patterns and needs from their varied systems.

- **Ease of remote working**: As workplaces adapt to hybrid models, AI makes remote working easier by keeping digital systems up and running, as well as make them fail-proof in the long run.

- **Minimize human errors**: Automating orchestration of functions within a command center reduces the risk caused by human errors.

- **Better resource utilization**: AI and machine learning make human resource utilization more efficient by assigning tickets to the appropriate command center professionals, based on their history of success on the type of issue, time to resolve, and various other parameters.
The way forward

As time passes, IT systems will become even more diverse and complex. Taking a reactive approach to managing these systems on a day-to-day basis leaves the door open to unchecked IT spending. Moreover, the past decade has demonstrated that unintelligent automation of detection and resolution pathways only adds complexity without boosting business sustainability in the long run. It is time for CIOs to recognize the potential of AI in making enterprises autonomous. This will be the key to minimizing spending merely for running the business and instead freeing up funds for digital innovation.

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