

## The Evolving Role of Alert Notification Tools in IT Operations

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Alert notification products are evolving beyond being an "add-on" mechanism used to pass information to off-site personnel's mobile devices. IT operations managers looking to ensure real-time information delivery and provide their IT organization with the ability to directly interact with the IT operations infrastructure should investigate the value of augmenting their existing IT investments with alert notification tools.

### Key Findings

- Considerable effort is taken to detect and process issues, but few IT organizations put the same effort into ensuring the issues are immediately delivered to the right IT personnel. IT operations information delivery is as important as gathering the information.
- Alert notification products are beginning to fulfill two roles: delivering information to mobile devices, and providing interactive access to IT operations tools and the processes they support.

### Recommendations

- When considering alert notification tools, do not restrict your thinking to information delivery. Consider the value of leveraging the same mobile technology to enable interactions with IT operations management tools to orchestrate IT management processes and remediate issues.
- Alert notification tools are not equal in capabilities, so understand the message information, your escalation and outage requirements, and the level of IT operations tools integration you need to identify the most appropriate product to meet your needs.
- IT organizations with IT process automation projects (such as change management and server provisioning) should investigate the use of alert notification tools to provide process status awareness and process step interaction.

## ANALYSIS

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IT operations are increasingly under pressure to remain fully in control and aware of the IT infrastructure state 24/7, irrespective of the location of personnel. When vendors develop availability and performance tools, information is typically delivered through Web-based monitors and reports.

Unfortunately for the vendors, IT operations organizations do not have people sitting in front of monitors waiting for something to occur. This means that when an IT state change is detected and an IT operations tool updates a display, the chances of it being immediately noticed by the IT support organization are low.

Historically having the ability to notify personnel of IT events using mobile devices was relegated to "out-of-hours" support, with IT support staff being given the "IT support pager." In addition, the ability for the IT operations tools data to be automatically delivered to pagers was not always useful because of inappropriate data (such as poor data message formats) and the amount of data delivered (that is, too much data or too much unimportant data). In IT operations, most paging-based notification was created using human interaction, with the on-site personnel contacting IT specialists when an IT issue occurred. The day of the pager is long gone.

### **Passing Information to a Mobile Device — We Do That Already, Don't We?**

Anyone with a mobile phone can be a recipient of IT operations data. Because IT operations organizations are increasingly held accountable for the IT services they provide, there is a real need to receive IT management information, even if IT operations personnel are standing next to the server that is experiencing an issue. The ability to pass information to a mobile device has been available for decades; however, it's not just the mechanism the alert notification tools provide that differentiates them — it's the process they provide (such as escalation and outage, guaranteed data delivery or data ownership), the support for a range of delivery mechanisms and mobile devices, out-of-the-box integration with a range of IT operations fault and problem management tools and, in some cases, the ability to have bidirectional communication with the IT operations tools.

The alert notification tools also provide a consolidated mechanism for the administration and management of mobile device interaction. This ensures that data, no matter where the source is, is delivered to mobile devices in a coordinated, logged, tracked, secure and reported way. Whereas passing information to mobile devices from multiple IT operations tools or tools that do not focus specifically on alert notification results in conflicting data being sent, issue ownership not being established, service levels being broken (due to ownership not being established), unmanaged responses or duplicate data being passed to multiple personnel.

### **Alert Notification — No Longer Just an Add-on**

Traditionally, alert notification has been regarded as a "nice to have" add-on for established availability, performance and problem management products from companies such as BMC, CA, EMC Smarts, HP, IBM Tivoli and Microsoft. Alert notification tools' add-on status is changing. The need to collect, filter, analyze, log, and report event and problem data must also include the need to ensure its delivery. After all, why collect critical IT operations data if you do not have the processes and mechanisms to ensure its delivery?

In addition, the ability to be made aware of an issue which then requires an action has traditionally needed a network connection and then the creation of a virtual private network (VPN)

via a laptop to deal with it. Alert notification products now include bidirectional interaction with IT management tools. Why be told of an IT situation if your IT operations staff are not in a position to deal with it? Tools were available to deal with it, but they were separate tools (that is, you got a notification from your pager and then logged in from your laptop to deal with it).

In a growing number of IT organizations, simply having alert data passed to a mobile device is not good enough. There is also the need to acknowledge the receipt of data and send a confirmation to a management product about a step it is asking to make, while being able to fully interact with IT operations processes (that is, making one or more decisions in an automated IT operations process).

Although bidirectional paging communication has been available for more than a decade, few leveraged this capability due to complexity, a lack of trust in IT operations task automation, a lack of good integration with IT operations tools and a lack of basic integration from pagers.

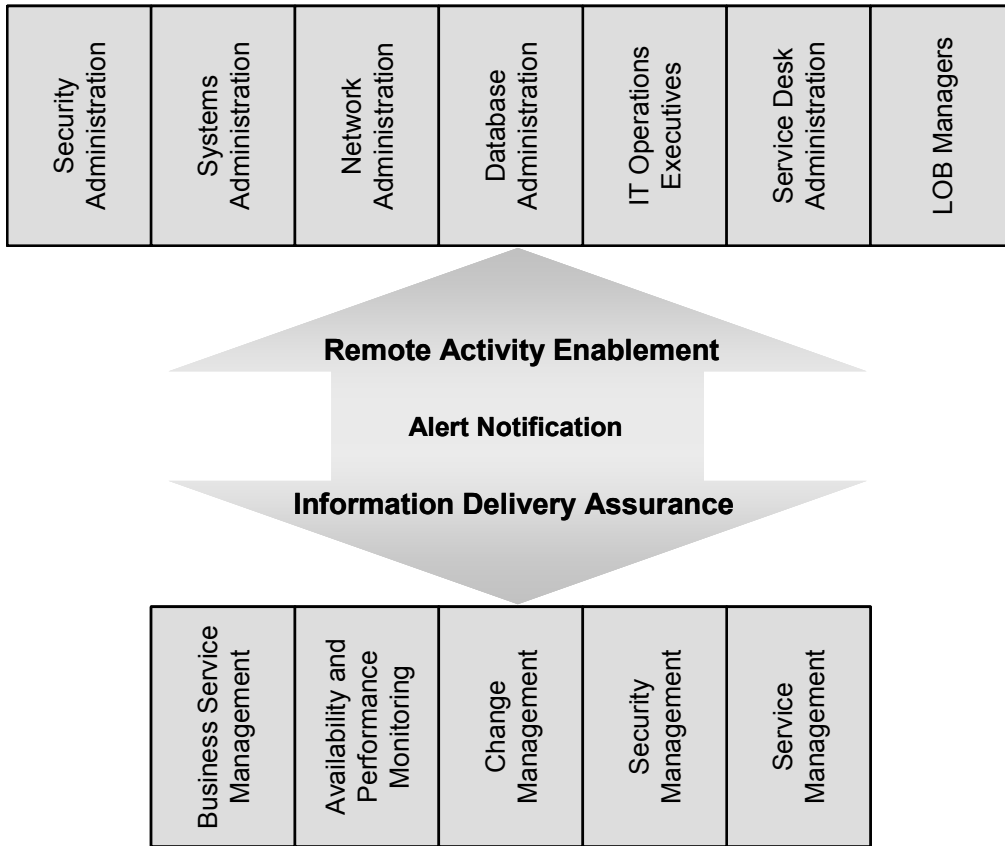
Alert notification tools are being asked to provide two distinct capabilities:

- **Information Delivery Assurance** — Ensuring the delivery of the right format to the right people at the right time.
- **Remote Activity Enablement** — Mobile, bidirectional communication with IT operations tools to verify and enable actions and task activation.

## **Information Delivery Assurance and Remote Activity Enablement**

Information delivery assurance (IDA) can be considered "passive" because it is simply a data delivery mechanism with the ability to acknowledge receiving ownership of the information. Remote activity enablement (RAE) can be considered "active" because it enables full interaction with the IT operations management tools and the processes they support (see Figure 1).

**Figure 1. IDA and RAE**



Acronym Key: LOB — line of business

Source: Gartner (May 2008)

## Examples of How IDA and RAE Support IT Operations Initiatives

### Business Service Management (BSM)

- Understanding how IT infrastructure issues affect IT services is important for many IT organizations. The ability to deliver data about an IT service issue as fast and effectively as possible is critical because it reduces the mean time to repair (MTTR), helps avoid breaking agreed-to service levels and, most importantly, reduces the financial effect on the business.
- Because most BSM tools are monitors, IDA capabilities are most likely needed.

### Availability and Performance Management (A&PM)

- Understanding IT infrastructure element issues remains a key requirement for most IT organizations. The challenge is ensuring that the issue is detected as fast as possible and getting the right data to the right people. This not only provides a more effective MTTR, but when performance degradation is detected, rapid notification can result in the issue being remediated and an outage being avoided.
- Because most A&PM tools are monitors, IDA capabilities are likely needed.

## **Problem Management (Service Desk)**

- Understanding the status of trouble tickets is important to the IT organization and the business, with the ticket status being updated as it flows through the escalation and outage process. The combination of problem management and traditional alert notification tools is well-established and will continue to add value as the notification tools support other IT operations areas.
- Because most problem management tools are logging workflow and reporting products, the IDA capability is likely needed, as well as where to provide problem management data and close a ticket once the issue has been solved. However, routing, creating work-arounds and closing the problem all require RAE.

## **Configuration Management and Change Management**

- Understanding the state of the IT infrastructure configuration is an ongoing task, and one that requires constant supervision and management. The change process can require human intervention, and that means getting personnel involved no matter where they are.
- For configuration and change management, there is a requirement for IDA and RAE capabilities to enable information on configuration changes to be broadcast and provide the ability to authorize and make decisions on change decisions.

## **IT Operations Process Automation (Runbook Automation Tools)**

- The adoption of runbook automation tools to support IT operations process automation continues to gather momentum. IT operations process automation requires careful monitoring and, in many cases, steps requiring human intervention (such as step authorization). This means that a combination of passive and active capabilities are valuable to ensure that processes are monitored and managed remotely.
- IDA and RAE capabilities provide remote process workflow status updates, process workflow issue data, process step confirmation, process step decision input, process step authorization, and the ability to initiate process starts and stops.

Not all alert notification tools have equal capabilities, especially when it comes to bidirectional communication that enables mobile devices to initiate an action (such as close a trouble ticket, initiate a device change or confirm ownership of an event). When assessing alert notification vendors, understand the notification delivery (IDA) and the bidirectional data (RAE) communication you need. Also ensure that the alert notification vendors can provide you with a road map on how they are going to continue to increase their IDA and RAE capabilities during the next two years or two major product releases.

## **RECOMMENDED READING**

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"Using Alert Notification Tools to Enhance IT Operations Management"

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