A dark grey horizontal bar with a white triangle on the left side pointing to the right.

Connect the Dots between the Service Desk and IT  
Operations for Improved Business Service Delivery

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## Introduction

Over the past decade, a number of factors have intensified the challenge of providing *quality* information technology (IT) support. Specifically, the number of users and applications continues to expand dramatically; the IT environment is becoming increasingly complex; reliance on IT for business-critical operations is escalating; and budgetary constraints limit the ability to leverage new technologies.

Organizations increasingly avail their IT systems to internal and external users such as employees, customers and business partners. IT continues to permeate business processes, and the number of applications in the IT environment continues to grow, further increasing the burden on IT staff. As the number of interdependencies in this extended business architecture increases, the system complexity makes problem resolution more difficult.

Resultantly, IT services have become so critical to the business that service interruptions can erode productivity and customer confidence. This translates into a loss in revenue that ultimately jeopardizes overall business success.

Today's IT staff is bombarded with so many demands on their time that differentiating between what is *urgent* and what is *important* is difficult at best. In the normal course of operations, in a large-scale IT environment with dozens of monitoring solutions in place, there are typically more events generated on a daily basis than can truly be handled. Although most IT groups now use some level of correlation to reduce down the amount of symptomatic events to a "root cause," that alone does not help an IT staff member prioritize which events to first address. That determination must be made based on the actual impact the event has on the business. To properly assess and prioritize resources and workload based on cost and value to the business, IT needs information based on accurate, intelligent incident reporting.

This paper discusses ways that IT organizations can better manage service events to ensure business availability and provide support for overall business health. The paper further reviews how IT staffs can gain insight into the true business impact caused by certain events and then intelligently prioritize problem resolution.

## Business Impact Management and IT Infrastructure Event Management

Many organizations have invested in tools to monitor business impact and IT infrastructure event management, with the intent to identify conditions in the environment that may interfere with business operations. Integrating these tools with the service desk ensures that events affecting the IT infrastructure automatically trigger the generation of incident tickets, ensuring that the appropriate people are notified and the appropriate action is taken swiftly.

Integration with business impact management solutions provides the ability to create or modify incident tickets and enables a bidirectional flow of information between the impact management tool and the service desk application. Integration with event management tools offers the ability to open and track incidents instantly in the service desk application and provide detailed IT infrastructure information for any incoming event alerts. Providing first-line support technicians with detailed information on IT infrastructure events and business impact associated with new incidents helps expedite resolutions and increases resolution rates, often before end users experience service degradation.

Without an organized, single point of contact to assist users when problems arise, businesses cannot respond quickly and efficiently to threats to the quality and timely delivery of IT services. When these threats continue, or result in failures or outages, their control, resolution and prevention become even more critical.

The IT organization needs to ensure the best use of resources to support the business. A service desk provides a focal point for recording incidents, assessing their impact, prioritizing, classifying, routing and escalating the incidents, and tracking them through to resolution.

## Using Technology to Bridge IT Operations and the Service Desk

The types of tools used across a business infrastructure vary according to the business function of any given group. Whereas the IT operations team uses *real-time event management* products designed to ensure business availability, the service desk uses *service management* products designed to provide IT services support. To effectively support the business, IT and the service desk must align their tools, workflows, people and processes to the business. Further, these two groups must align their tools, workflows, people and processes to *each other*. This integration of real-time IT operations with service management support is important in order to:

- > Provide a truly comprehensive view of IT management by combining user reported problems with IT components and quality-of-service (QoS) events
- > Streamline the workflow between the service desk's management of user incidents and IT operations' management of asset outages
- > Address business demands and deliver a complete service level report, including IT-asset and QoS-availability events, and performance metrics
- > Identify how many end users were impacted and how much end-user productivity or service delivery was lost for any given event
- > Determine the costs associated to the resources expended (time and manpower) while users waited for business service to be restored

IT operations and service desks need to seek out software technologies that provide the flexibility and functionality to adapt to their company's business. With greater tool flexibility, the operations staff and service desk staff are not constrained by rigid unforgiving processes. Richer functionality between tools streamlines processes, increases efficiency and productivity, and improves interaction—all of which helps connect the dots between the service desk and IT operations.

## Service Impact Management— Correlating an Event to the Impact on the Business

Service Impact Management solutions link diverse technologies to the key goals of the business. Within this architecture:

- > Business and IT leaders identify critical business services and define service level agreements
- > The service model enables mapping technology to the business services
- > Enterprise management solutions deliver robust monitoring and management of infrastructure components
- > IT service management solutions help to manage the workflow around service level agreements and optimize application performance

The configuration management database (CMDB) contains all relevant details of each configuration item (CI) as well as details on the relationship between the CIs. This can also contain information about end-user consumers, business services, and service level objectives and agreements (see **Figure 1**).

By linking event and performance management tools to the business, via the service model, the IT staff continues to monitor and manage different components of the IT environment. Events are automatically detected and routed to the service model, where the events are correlated to their business service impact. The result is that when a component fails, the business relevance is already identified. The systems are then in place to seamlessly resolve issues, based on the priority of the business service that is affected.

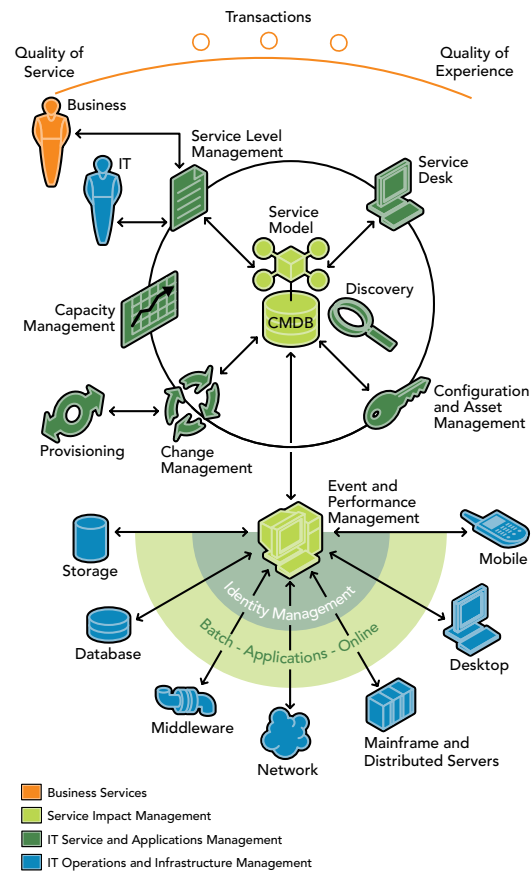


Figure 1. The concept of a CMDB is critical to ensure the sharing of important data between IT operations tools and the service desk tools.

## Understanding the Impact to the Business

The following examples depict the value that comprehensive incident reporting can add to IT service support.

### Example 1:

#### Service Provider → Customer → Consumers

In this example, a service provider offers transaction-processing services to its customer in the financial industry. The customer likewise processes transactions for its own customers, the end-user consumers.

The service provider's customer has myriad consumers with which it transacts business. In this example, the service provider's service level agreement (SLA) ensures the customer that end-user consumers can execute financial transactions 24/7 with absolutely no service downtime.

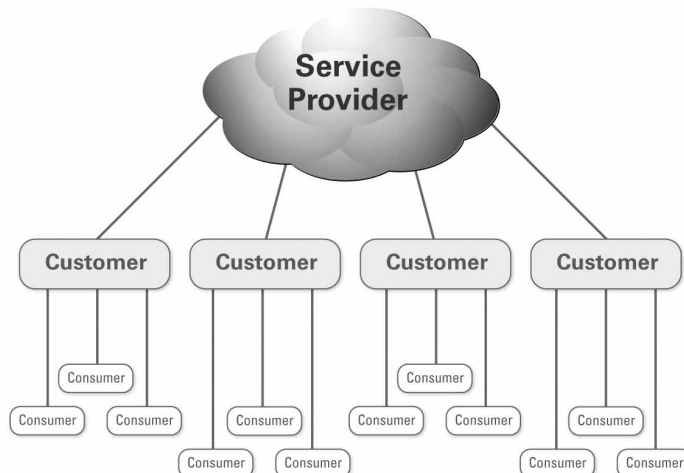
Part of the SLA states that the service provider incurs a per-minute penalty, per end-user consumer, during downtime periods. The penalty accrues for the duration the service is unavailable. The penalty can be reduced by half, however, if the service provider is able to notify the end-user consumer of the service outage within a defined window of time and provide an estimated time of repair.

If the service provided becomes unavailable because of poor performance or a component failure, the resulting incident

report needs to contain more than just the alert to the failed component. In this example, the incident report must contain information that identifies:

- > Component that failed
- > Customer affected
- > Consumers affected
- > Impacted service
- > Service level objectives (SLOs)
  - Cost per minute of service unavailability
  - Time window for notification (using the consumer list)
  - Escalation policy for impacted service and consumers
  - Any penalty reduction based on meeting SLOs

By creating an incident report with more comprehensive information, the service desk can assign the correct repair technician based on the priority of this incident, and can also notify consumers within the designated window of time, thus reducing the overall cost of the incident. Creating an incident report that only identifies the failed component—as is the case in most IT organizations today—will not be enough to ensure rapid response and the lowest possible financial penalties.



**Example 2:**

**Network with multiple domains and two specific failed routers**

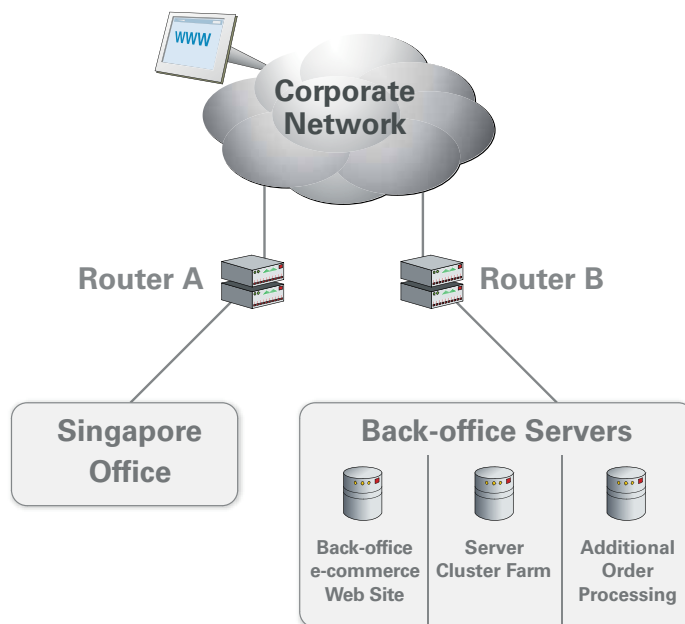
In this example, two failed router events occur, representing two identical components in the environment. Router "A" fails, and within a few moments router "B" fails, generating two separate alerts that indicate both routers are down. Whether or not IT is using automation to create incident reports directly in the service desk software, there would still be two separate reports created, one for each router.

In most situations, the router technician assigned to resolve these events gives priority to the first reported incident (router A), and then addresses the second incident (router B). In this example, however, router A connects the Singapore office to the corporate network, while router B more importantly supports the back-office databases that are used for processing orders from the company's e-commerce Web site. The service

desk needs to prioritize the incidents based on actual business impact. To do so, each incident report must contain information that identifies:

- > Failed router
- > Impacted service
- > Impacted consumers
- > Severity of impact based on time of day *at site of impacted customers*

By creating separate incident reports that identify the impacted service, site and end users, the service desk can dispatch a technician to first resolve the incident of higher cost to the business. In this scenario, the second failed router (B) is actually more business critical than the first failed router (A), because it directly supports the company's e-commerce Web site and the profits generated by the site.



## Value of Integrating Service Impact Management and Event Management into the Service Desk

An effective incident and problem management solution provides a focal point for recording incidents, assessing their impact, prioritizing, classifying, routing, and escalating them, and tracking them through to resolution. The ability to manage all incidents and problems using consistent, repeatable processes based on best practices, such as those described by the IT Infrastructure Library (ITIL), is crucial to ensuring successful incident and problem lifecycle management. While some aspects of lifecycle management could be handled manually—because automation eliminates time-consuming, redundant and error-prone steps that consume valuable IT resources—automating these processes should be the ultimate goal. Automatic ticket routing via service impact management and event management, which directs requests to the appropriate support area or specialist using built-in skills inventory matching, is a key capability.

Automatic workflow management is also essential because it keeps resolution processes moving forward to help ensure that service level commitments are met. Automated workflow includes escalation and notification of trouble tickets to notify the appropriate people when delays occur in the resolution process. These capabilities speed incident response and resolution times. A built-in knowledge base is highly valuable because it can also speed diagnosis. A knowledge base gives support staff information on known errors and historical resolutions, as well as temporary solutions or workarounds that enable them to return users to full productivity quickly. The knowledge base can also be made available to employees, customers and partners to provide self-service capabilities that improve user satisfaction and reduce the burden on the service desk and technical support staff.

An effective solution supports ongoing dialog with users to keep people apprised of the status of service events, such as opening and closing of tickets, progress reports, expected time to resolution, and escalations. Keeping users informed such as by automatic notifications, helps eliminate callbacks, saving time for the support staff.

Finally, an effective solution automates management of user requests across all channels—Web browser, email, fax and telephony integration—and manages the status of all requests through to resolution, regardless of origin. Support for multiple channels ensures continuity and consistency regardless of the contact channels.

### CHOOSING AN INTEGRATED SERVICE DESK WITH SERVICE IMPACT MANAGEMENT AND EVENT MANAGEMENT

Organizations can achieve greater efficiency and higher return on investment by choosing a solution that can tap into a centralized repository containing rich information on the IT resources in the infrastructure, including the configurations, interdependencies, and relationships to business services shared between IT operations and service support teams. Access to this information expedites the resolution process. For example, when a service desk agent opens a trouble ticket, the trouble ticketing system can pull data regarding the user's hardware and software and automatically populate the appropriate fields in the trouble ticket. Thus, the need to obtain this information from IT is eliminated. Additionally, information on the interdependencies between elements and their relationships to business services permits the support staff to determine lines-of-business or business processes that are affected by incidents. This permits the support staff to establish priorities based on business impact.

## Benefits of an Integrated Service Desk

The high-end benefits of providing a solution that enables management of event information from discovery to recovery aligned to service levels are enormous and create an environment that is totally in tune, measurable and aligned with the needs of the business.

These benefits include:

- > Prioritizing incidents and resources based on direct impact to the business
- > Reducing downtime (mean time to repair [MTTR])
- > Finding problems before they impact the business (reducing time to detect)
- > Finding the root of the problem (reducing time to diagnose)
- > Repairing problems faster (reducing time to fix)
- > Reducing failure frequencies (increasing mean time between failures [MTBF])
- > Discovering problems before the customer is aware of them (increasing problem awareness)

## Summary

A comprehensive integrated solution provides the advantage of capturing data regarding specific incidents and using the data to identify underlying problems that require attention. By identifying these problems and leveraging incident data for root-cause analysis, the IT support staff can help eliminate recurring incidents that drive down user productivity. The ideal solution includes a variety of tools that facilitate the evaluation of incidents to determine whether they are likely caused by defects in the IT infrastructure.

Effective incident and problem management through the integration of service impact management and event management into the service desk helps drive business success by keeping critical systems available to all business-critical end users, including employees, customers, and partners.

#### **About BMC Software**

BMC Software is a leading provider of enterprise management solutions that empower companies to manage their IT infrastructure from a business perspective. Delivering Business Service Management, BMC Software solutions span enterprise systems, applications, databases and service management. Founded in 1980, BMC Software has offices worldwide and fiscal 2004 revenues of more than \$1.4 billion. For more information about BMC Software, visit [www.bmc.com](http://www.bmc.com).

