

Web-Based Problem-Management for the New Millennium

The Magic Total Service Desk Solution

An IDC White Paper

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Introduction

The role of IT problem management has clearly evolved from being a simple problem-tracking and trouble-ticket function to one that makes an attempt at providing automated problem diagnosis and support. However, few tools have effectively made that transition, and of those that have, too many are difficult to manage and use.

This paper explores the IT problems that are driving this demand for improved help desks, the shortcomings of current solutions, and the requirements of the IT departments of the future. Magic Total Service Desk (TSD) from Network Associates, Inc., the industry's first 100 percent browser based help desk, addresses those problems and improves upon current solutions.

Problems Driving Help Desk Demand

User support is typically one of the leading expenses in information technology (IT) organizations. This large outlay may be attributed to IT labor shortages, corporate infrastructure complexity, and the seemingly limitless support expectations of IT customers. To address these problems, IT managers can now turn to modern Web-based help desk solutions that not only reduce user support expense, but turn the help desk from a cost into an investment.

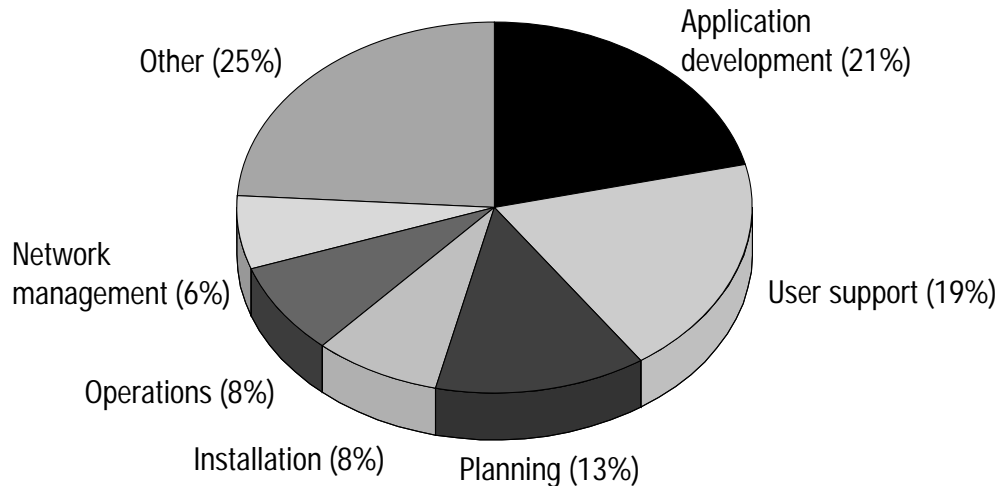
IT Resource Constraints

Of the factors that compose a PC's total staffing cost, user support is the second largest cost (see Figure 1). For that amount of spending, organizations do at least feel that end-user support is an area that is better addressed than other IT management areas. Unfortunately, managers also respond that end-user support tools are one of their greatest needs.

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Part of the problem has been that tools have commonly been either optimized for the workgroup or the enterprise. A help desk that addresses both ease of use and scalability would improve help desk efficiency and decrease employee frustration and turnover, which are especially important considerations in today's tight labor market.

Figure 1
Distributed Environment IT Staffing Costs



Source: International Data Corporation, © 1999

Infrastructure Complexity

As companies grow in hardware and software sophistication, so does the opportunity for infrastructure failure. Consequently, help desk requests increase. Moreover, these calls not only expand in number and frequency, but in complexity as well.

This situation exists because IT groups tend to become specialized and dissociated from each other. Resolving cross-functional problems is then difficult for help desk analysts because an incident's root cause is hidden in an IT infrastructure "stovepipe."

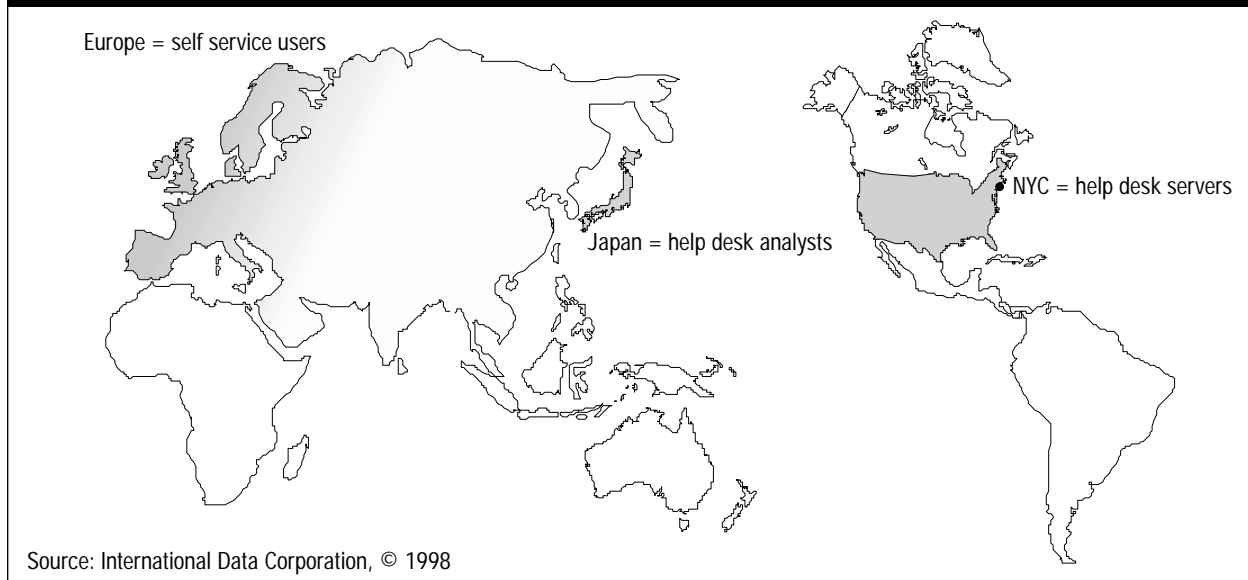
Users can be separated by distance as well as function. IDC studies show that large U.S. companies have an average of 16 domestic sites and 22 international sites (see Figure 2). These sites need help desk support regardless of time zone or on-site IT staff availability.

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Figure 2
Geographical Distribution of a Typical Help Desk Organization



End-User Dissatisfaction

Wherever users are, their support expectations, if left unmanaged, can be unreasonable. As users become increasingly dependent on their applications, they want faster call resolution, 24 x 7, without any more IT expense taken out of their budget. So, the help desk needs tools that not only address those concerns, but also shows customers how much service the help desk can provide given limited resources. Having such a view is important for the broadening base of managers who are shifting their focus from reactive fire-fighting to proactive service-level management.

Traditional Help Desk Approaches and Requirements for the Next Millennium

Traditional client/server help desk approaches have not provided easy solutions to infrastructure complexity, resource management, and end-user satisfaction problems. If a new problem-management application is to better address those issues, it should meet certain ease-of-use, integration, and scalability requirements.

Ease of Use

Traditionally, help desk interfaces have been proprietary with difficult-to-customize agents. Now users want lightweight browser clients that reduce training requirements, are simple to manage, and are fully customizable. With an easy-to-customize-and-use interface, self-service users and IS workgroups (i.e., network, security, and applications administration) are more likely to use the tool. Furthermore, data consistency improves, and IS roles become better defined. However, effective customization requires more than just a browser front end.

Integration

What is required is that the underlying object-oriented architecture should encapsulate rules, organizational sets, and assets. By capturing business processes, such objects may be reused by other applications, thus reducing the need for extensive scripting.

Scalability

Ideally, a problem-management solution should be both performance scalable and management scalable. Performance scalability is the quality of being able to carry out operations without overburdening the network or systems. Management scalability means that an application's administrative overhead does not outweigh the solution's benefits. Scalability features should not make the solution cost prohibitive to small and medium-sized businesses.

Application Service Providers

The next millennium will see a new way to deliver applications: the applications service provider (ASP). ASPs provide access to and management of packaged applications, delivering benefits from both the application hosting and outsourcing service models. IDC predicts that the ASP market (all applications) will reach \$2 billion by 2003 (see *Worldwide Application Service Provider Review and Forecast, 1998-2003*, March 1999, IDC #18664).

If problem-management tools can meet the above-mentioned market requirements (ease of use, integration, scalability, and browser/thin client), ASPs may, for example, provide help desk managers with a cost-effective way to off-load user support requests to Web-based self-service desks that allow end-users to submit and track trouble tickets and resolve simple end-user problems.

Microsoft Windows as a Platform for Help Desk Applications

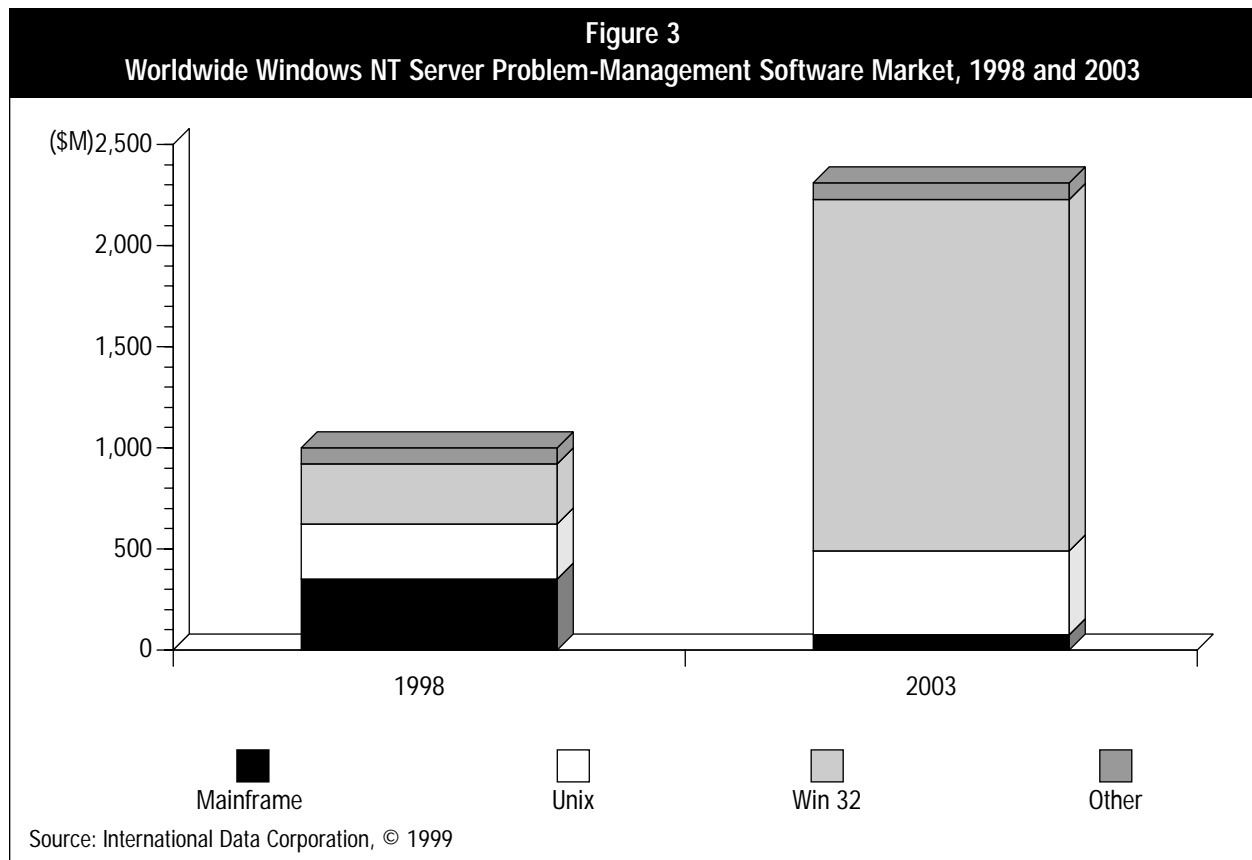
Microsoft Windows is an attractive platform for Help Desk applications like Magic Total Service Desk because Windows is low in cost, easy to use, readily integratable, and scalable.

Windows NT's performance scalability is helped by low-cost "Wintel" CPUs, memory, and disks. Management scalability is helped by Windows' low training overhead and large installed base of Microsoft administrators.

In IDC's 1999 Windows NT Server Adoption Study, over 40% of respondents named NT Server as the platform that most easily integrates into an existing IT environment. Not surprisingly, users expect that by 2003, NT use will increase in every IT business category. Because the help desk is a central integration point for network and systems management applications, users will continue strong demand for NT-based help desks because of easy integration into expanding NT infrastructures.

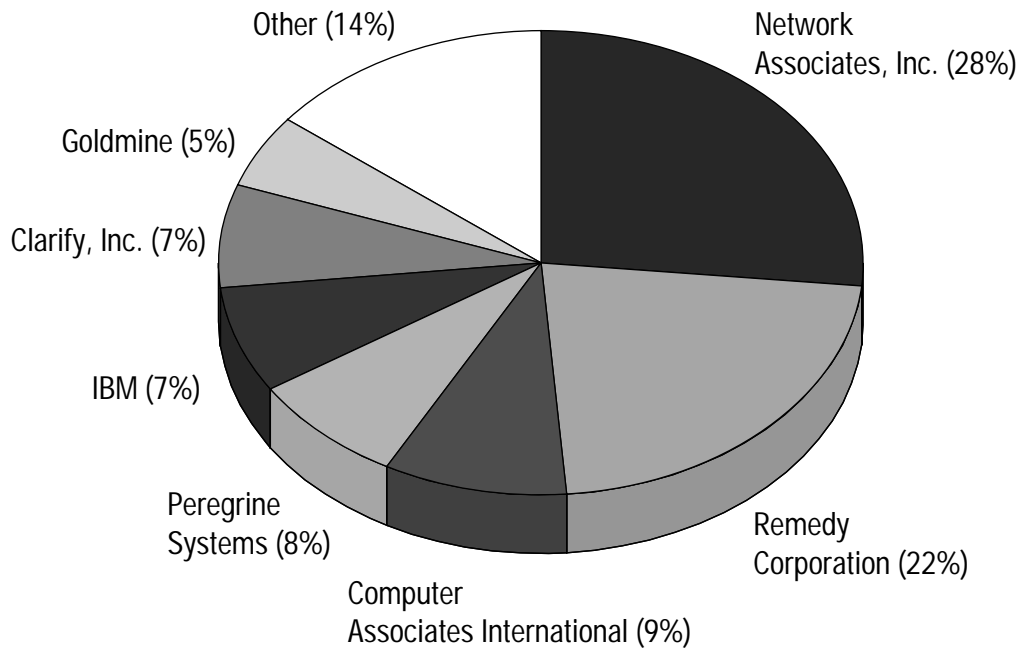
Windows has seen strong uptake by small and medium-sized businesses. The NT Server Adoption Study also showed that smaller organizations perceive a greater need for systems management than do larger organizations. So, one can see why problem management on NT is important to the large number of small and medium-sized companies.

As a result, Windows NT has been rapidly increasing its share as the underlying OS for the problem-management market. In 1998, Windows was tied with Unix as the leading problem-management platform. IDC expects that NT's growth in this market will continue to outpace other operating systems, and by 2003, Windows NT/2000 will command almost three-fourths of the problem-management market (see Figure 3).



The NT problem-management leader is Network Associates, with 28% of the market (see Figure 4). Although other help desk vendors support NT, Network Associates has had the fastest growth on that platform. Competitors have traditionally been geared toward non-NT platforms, while Network Associates' problem-management solutions have always been dedicated to Windows and so have not required porting from other operating systems.

Figure 4
Worldwide Windows NT Server Problem-management Market, 1998



Source: International Data Corporation, © 1999

Magic Total Service Desk

Background

Network Associates improved its technology leadership in the help desk market in 1998 with the acquisition of Magic Solutions. Network Associates traditional help desk strengths have been desktop management, call management, and application integration. Magic Solution's proficiency has been in ease of use, change management, knowledge management, and customization. Magic Total Service Desk has been rearchitected as a browser-centric solution, built around Microsoft's Distributed interNet Architecture (DNA).

Components and Architecture

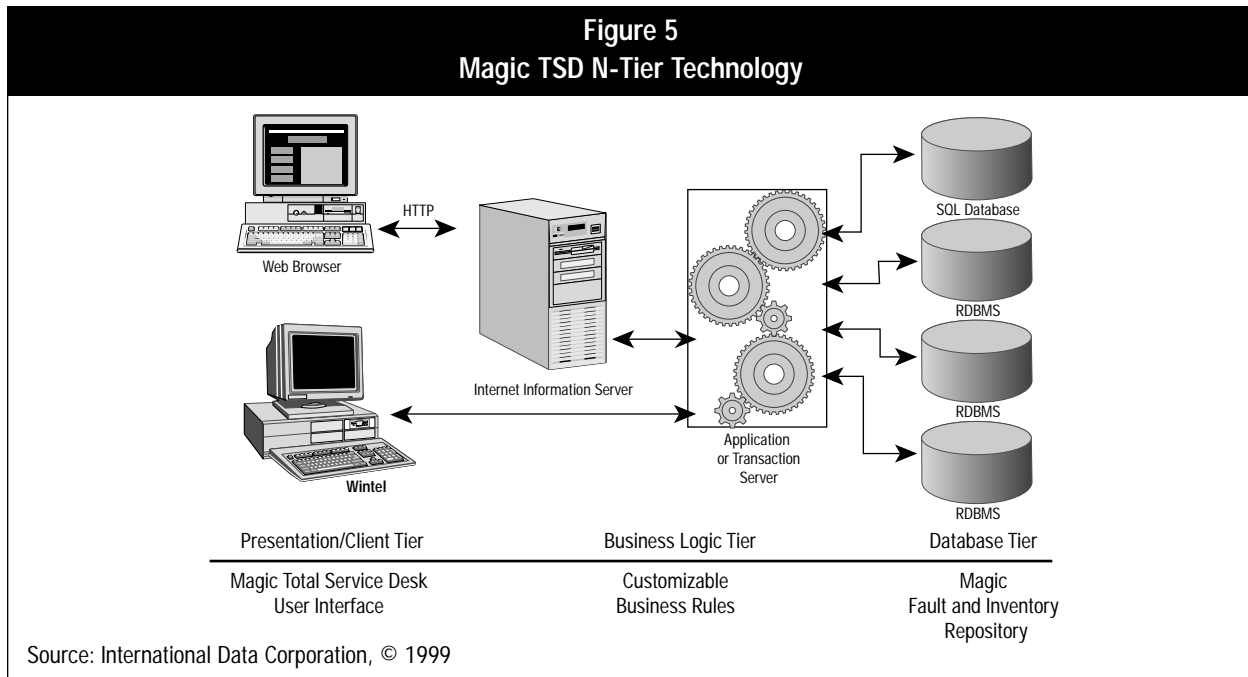
The Components

Magic Total Service Desk comprises:

- Magic Help Desk (Web browser client, mail server, escalation server, statistical information retrieval [SIR] server, asset management, administrator tools, and Crystal Reports)
- Zero Administration Client (desktop management, and remote control)
- PC Medic (integrated PC system healing tools)
- Event Orchestrator (event automation)

The Infrastructure

Magic Total Service Desk's n-tier architecture may be viewed in terms of data (SQL Database), business logic (Transaction Server), and presentation (Microsoft Internet Information Server and Web browser) layers (see Figure 5).



Presentation Layer

Magic's 100% browser-based client design offers a true thin client architecture with all business logic and processing done on the server. The DHTML and Active Server pages provide extensive functionality and customizability. Users can modify the interface for style and can change fields by dragging and dropping. A customizable navigator bar acts as a portal for bookmarks to Magic templates and Internet or intranet sites. Customization promotes template improvement, which speeds request processing and controls consistency. Such flexibility allows different IS users to tailor help desk information flow to an analyst's needs.

Another browser interface benefit is that application maintenance is done at the server, virtually eliminating client maintenance, which is important if maintaining thousands of self-service users.

If many users are affected by an incident, it can be posted on a "White Board" that all Magic help desk analysts can see. Related calls are linked to the White Board incident, and trouble tickets are automatically created and closed on problem resolution, which reduces the number of tickets that must be managed as a result of widespread problems.

Business Logic

Magic's business logic resides in the middle levels of the n-tier architecture. Business rules can be set up as a single logical tier or several, logically separated tiers residing on one or multiple, distributed servers. Component-based DNA architecture makes it easy to update or add business rules using standard programming languages without disturbing other Magic TSD functions.

Separate Network Associates products, like McAfee VirusScan, Gauntlet Firewall, CyberCop Intrusion Protection, PGP Data Security and Encryption, and Sniffer Total Network Visibility, are integrated at the event, business logic, and data levels, enabling “canned” rules that, for example, will acknowledge McAfee Anti-Virus alerts and automatically quarantine the infected PCs (see Figure 6).

Such business objects are guaranteed transaction and data integrity through a Web application server such as Microsoft's Transaction Server, which provides a robust transaction environment for Microsoft server applications.

Figure 6
Integrated Event Management — Event Orchestrator



Source: Network Associates International, 1999

Data Layer

Magic Total Service Desk's fault, asset, and knowledge-base information is stored in either an Oracle or Microsoft SQL repository. Magic allows for adding user-defined columns to the database tables. Magic Total Service Desk 6.0 will add table, index, and base and group-view creation, modification, and deletion.

Applications and Integration

One of the most important new features in Magic Total Service Desk is the Event Orchestrator, which is a message bus for fault, asset, and third-party application data. Event Orchestrator associates SNMP and other events with actions that automate problem responses, such as trouble ticket creation, escalation, and notification. Event actions come predefined and can be extended using Visual Basic.

Problem resolution is enabled by Magic's SIR Search Engine, which includes ServiceWare's problem-resolution knowledge base. The SIR engine provides ranked resolutions to analysts and self-service users from resolved trouble tickets, indexed documents such as Microsoft Word and Excel files, and third-party knowledge bases.

Magic's Zero Administration Client (ZAC) provides desktop management and remote control. PC inventory history and device status, as well as Magic asset management data, automatically populate the Magic interfaces. The information also integrates with Work Order generator, which creates workflow for change management requests that otherwise would result in multiple help desk calls.

With Magic's remote control capabilities, a technician can remotely control a problem desktop from any open trouble ticket without the need for launching a separate remote control session. This feature is useful for managing remote sites or problems not easily resolved over the phone.

Reporting

Magic also comes with Crystal Reports, service level metrics, and real-time monitoring. Crystal Reports provides managers information to review help desk service quality and plan for future improvements. SLA metrics include requester's contract length, support hours and escalation policy. Real-time graphical reports track statistics from the system monitor, like the number of open calls, by subject. Reports are also available to PC users who can get a trouble ticket audit trail of case workers, actions, dates, and times.

Summary

The increasing complexity and volume of modern IT problems are driving demand for more sophisticated Web-based problem-management solutions. These solutions must enable service desks to work within diverse and complex IT environments and be able to answer requests even if the problem is buried in a remote IT stovepipe. Such service-desk operations must be cost effective, as IT resource (labor and tool) shortages inflate user support budgets. Moreover, end users are becoming impatient, as their reliance on applications grows. Faced with this environment, help desk managers are finding that it is not enough to work harder. They must work smarter, which includes finding better problem-management tools.

In doing so, IT is rapidly moving to Web-based help desk applications with Windows NT/2000 as the underlying platform. Browser-based clients offer flexibility and cost savings. Likewise, NT systems are inexpensive, so adding physical capacity is economical. The platform easily integrates into IT environments, thus reducing worry about system conflicts. Furthermore, there is a relatively large supply of NT expertise, which reduces hiring and training expense.

Network Associates, a longtime proponent of Web-based solutions running on the NT platform, has built Magic around the Microsoft Distributed interNet Architecture (DNA). Because of the n-tier browser-client design, Magic is flexible enough to quickly adapt to user requirements, scalable enough to support worldwide self-service users, and integratable enough to work with other IT applications. With Magic, Network Associates has solidified its leadership position in the Windows NT problem-management market. Magic TSD has combined the benefits of Windows DNA with the functionality of Network Associates' problem-management solutions to create a service desk that efficiently and effectively addresses the problems of today's help desk managers.

Appendix

Case Study: Configure Inc.

Configure Inc. is a northern-California value-added reseller specializing in WAN, network, and Internet implementations for small and medium-sized companies. Rudain Arafah, the company's president, was looking to expand into help desks. Mr. Arafah and his colleagues, long-time veterans of problem-management software implementations, are excited about their decision to go with Network Associates Magic because of the product's ease of implementation, scalability, and support.

Configure's first Magic implementation was for a global company with 200-300 employees and over 40 remote sites each without IT staff. The company was a mixed Novell and NT shop with a couple of Unix boxes.

The company had five first tier staffers answering calls, two second-line analysts (one for PC support and one for LAN/WAN and server issues), a manager who oversaw the help desk team and established SLAs, escalation policies, network architecture, and purchasing decisions, and a help desk administrator who was responsible for Magic's database and application administration. The company also wanted to give PC users a Web-based self-service desk.

The old help desk was a home-grown application. Major shortcomings included a lack of call tracking, which led to inadequate reporting and IT resource management. Although the company had well-defined help desk roles, haphazard escalation procedures prevented problems from being routed to the proper person in a timely manner. Solving

trouble tickets was highly dependent on analyst know-how, as there was no knowledge base to capture problem resolutions.

Configure and the client agreed that Magic was a solution that could not only address those immediate problems, but would be manageable and scalable for future growth.

Configure completed implementation on budget in five days. That included setting up Magic, NT server and service packs, Internet Information Server, and Microsoft SQL. Configure services included data migration and hardware conflict troubleshooting not directly related to Magic. Compared to other past help desk solution installations that generally took months, the implementation was extremely fast, which helped cut the client's consulting service cost.

A factor that helped speed implementation was the "very intuitive" GUI customization. The drag-and-drop interface helped Configure quickly set up different "super-user" help desk templates for the analysts, and two additional interfaces for novice and advanced PC self-service users.

Rudain likes the pure browser client because there is no other client software to be managed. Also, with a consistent interface, training is simplified, an important benefit in the high turnover world of help desk staffs.

Mr. Arafah feels Magic's best feature is the Event Orchestrator. He notes that it handles more than just SNMP traps, and it automatically recognizes Network Associates products and works with object-oriented rules so the need for script writing is minimized.

Configure appreciates the scalability and simple administration of Magic's Microsoft SQL database. The company sees no problems for companies preferring either a centralized or decentralized database.

Overall, Rudain has been "very impressed with the product and the support." Network Associates provided immediate access to tier one, two, and developer support. Furthermore, Network Associates is a large enough company to allay worries about ongoing support in the future.

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