



## Network Manager: the sequel

An effective Network Helpdesk depends on special skills, especially in support of the ITIL framework. Michael Jannery, CEO of Entuity explains why the renaissance of the Network Manager is about to commence

Life is full of highs and lows, punctuated by periods of jubilation and periods of despondence. Careers are no different, particularly those in high technology and especially for those in support of that technology. What was once an envied position in a glamorous area of IT suddenly becomes mundane, archaic and even taken for granted.

So it is for network management. Once considered the domain of the brightest staff in IT, network management gave way to more 'exciting' technologies such as VoIP, applications management, Web services management, configuration management, user provisioning and identity management. In the last few years, a properly operating network has become part of the furniture: an assumption, much like phone lines and running water.

But those times are changing. What is normally taken for granted suddenly assumes huge importance when it fails. The customer doesn't realise how much they rely upon the network until it is unavailable. If there is no dial tone, suddenly the current state of the phone lines becomes interesting again. It's only after the water is shut off that we realise how thirsty we are.

Companies are also starting to

appreciate how much those exciting, modern technologies rely on the network. As Dennis Drogseth of the analyst firm Enterprise Management Associates put it, "the network is an instrumented ocean upon which applications, systems and storage devices all float. It touches everything."

Take, for example, Voice over IP: very exciting stuff. It should be obvious to anyone that putting voice traffic over the same lines as the data will probably stress the network, but it can be difficult to establish what problems this might cause. Companies need to establish if they have got the necessary network capacity available and how it will be affected if they need to add extra devices and bandwidth, or both.

One thing is clear: if the user picks up the phone and waits 30 seconds for a dial tone, they will not be happy. Conversely, if they get a dial tone, but their Internet-based applications are now three times slower than before you implemented VoIP, they will know where to direct blame.

The company needs people who can operate the necessary tools to understand what they have now in terms of capacity and what the network can cope with, yielding the capability to operationally manage in

between. They need to be able to assess how much more bandwidth will be required and how much headroom they have. And they must be capable of tracking it in real time, forever. Suddenly the network manager's skills are back in demand, and far more visibly than before.

The same could be said for Web-based applications or distributed Web services-based architectures. The network is the computer, as Sun Microsystems pointed out a few years ago and, contrary to the popular wisdom that bandwidth is no longer an issue, the network is being stressed more than ever with new technologies and larger emails, and the trend will accelerate.

This is supported by three laws <sup>(1)</sup> of computer science:

1. Wirth's Law: Software gets slower faster than hardware gets faster;
2. Spector's Law: The time it takes a critical application to complete a given task will double with every software revision of that application;
3. Nathan's Law: software is a gas: it expands to fill its container. And that container is the network.

A fourth observation would be that the easier you make it for people to communicate, the more they will do

## MODERN NETWORK MANAGEMENT TOOLS - KEY FEATURES

### Automated Discovery and Continuous Re-discovery

How you populate the network inventory database is important - the more automated the better. The true value of discovery, however, is when it is continuous, maintaining an up-to-date view of the network. A snapshot is far less useful and, in enterprise-sized installations, it is inaccurate and counterproductive.

### Topology as well as Inventory

All network management tools by definition keep an inventory of the devices. But equally - if not more - important, are the connections and dependencies between the devices. The dependencies and topological relationships enable the most effective root cause analysis, and allow the most insightful performance analysis.

### Real time and Historical Perspective

Previous-generation network management tools could tell you how the network is performing now, but not how that compares to previously. This prevented forensic analysis and made capacity trending difficult. Current management tools maintain a persistent repository of inventory, topology, event and performance data, helping to distinguish incidents from recurring problems. The vast majority of network issues arise when something changes. Having a history of versions and connections for every piece of network gear is invaluable.

### Reporting

All network management tools come with a set of standard templates to report service levels, but some also allow you to design your own reports, for specific devices, locations and so on, which many users find invaluable.

### Plays well with others

As management tools converge in the coming years, it will be important that your network management system can integrate with other products, either by exporting its data in batch, incremental, and real-time, or, to take in data from other management products and to integrate it in a single view. The ITIL CMDB (configuration management database) is currently the most promising and embraced technology in this area, and these management tools are the best long-term option.

so: technologies such as mobile phones and Blackberries prove this.

Configuration management is exciting technology, but how can you provision, configure, enforce policy, and manage the configurations, if you don't know what you have or where it is on the network? They need somebody to keep track of it. Application management tools are also exciting technology, but how will they explain to a performance-challenged end user, that everything seems to be OK at the application level, and maybe they should call the network group?

Lastly, we're finally emerging from a long economic rough patch, and many companies are now considering upgrading or replacing some of the old equipment they have had to keep running for four or five years. But the days of 'request and bequest' are over. IT managers are now required to justify every purchase and explain why they want to replace a specific device, or

upgrade one area of the network, rather than another. They may be asked to measure which purchase will address the biggest bottleneck or deliver the highest return on procurement. More than ever, network management professionals must deliver detailed, informative, actionable reports and justifications, whether or not they are held to service level agreements or implementing ITIL best practices.

As the network is upgraded, it is changing, but that's nothing new. An enterprise-scale network is not a static entity: it is a fluid architecture, constantly shifting with or without the administrator's knowledge and permission. But in this age of compliance, auditing, and increased security needs, the administrator must know the current state and structure of the network.

The good news is that there are tools to help with all of this that can provide real-time and historical information

about the structure of the network, its performance, and significant, business-impacting events. Though this technology has been around for years, new generations of it are now available to enable network managers to more easily and quickly resolve problems; conduct forensic analysis; generate proof of services delivered and performance achieved; and prepare reports and analysis for trending, forecasting, and budgeting purposes. These tools allow network managers to be more informed than ever before.

Suddenly, the network is visible and is increasingly coming back into vogue. This means the network manager is being relied on more than ever - and they can be confident they have the tools and data to prove their professionalism. As long as they deliver and lead, that is. **NC**

(1) Source: [www.sysprog.net](http://www.sysprog.net)

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