



Network Management and Security Software: The Heart of a Thriving Network

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Being able to thrive, not to mention survive, in today's economy is all about speed, agility, and the ability to adapt. To succeed in this environment, organizations need an e-business infrastructure that is reliable, scalable, secure, and running 24x7x365. Perhaps the most critical aspect of one's e-business infrastructure lies within the network infrastructure, whether internal networks, extranets, LAN/WAN, wireless, etc.

This edition of *TrendSetter* is exploring network infrastructure solutions and how business can get the best value from them. So once you have the optimum cabling technology, communications hardware, and cable plant design, is there anything else you need? How about peace of mind, knowing that you have the optimum network management and security software so you can spend less time worrying about network infrastructure issues and more time focused on leveraging e-business for your organization's competitive advantage?

So let's explore four main areas of network management and security from a software perspective:

1. Enterprise networking software to effectively connect across multiprotocol networks
2. Network security software to provide protection against threats, viruses, and intruders
3. Network performance management software to ensure the availability of critical business systems and to provide rapid resolution of problems
4. Wireless middleware to enable access to applications in a pervasive computing environment

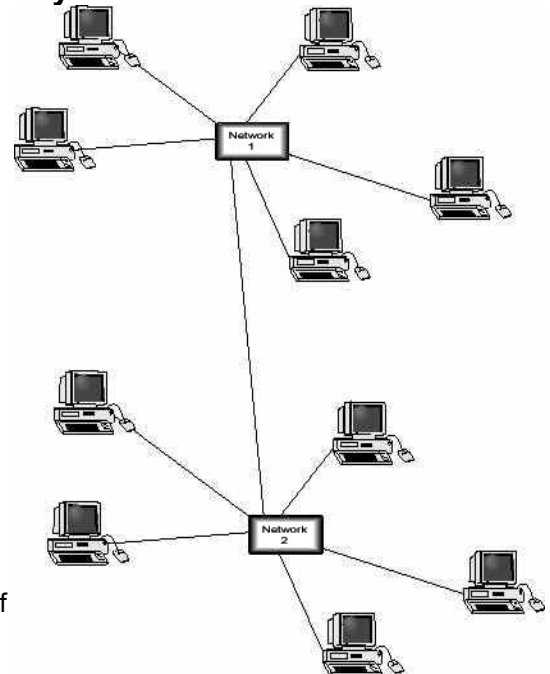
Connecting Multiprotocol Networks for Maximum Business Flexibility

To more effectively connect your employees, customers, and trading partners to their needed information and applications, independent of the underlying network, you need a software solution that enables interconnectivity between multiprotocol networks. When considering such a solution, be sure it can achieve these primary objectives:

1. Connects employees, customers, and trading partners as seamlessly as possible
2. Has the necessary security features, such as authentication and encryption
3. Provides peer-to-peer and workstation-to-workstation communications
4. Enables you to build new applications (via APIs) independent of networking protocol or hardware platform
5. Does not adversely affect network performance and has functions that manage network traffic to minimize congestion and maximize throughput
6. Simple administration over the Internet or an intranet
7. Other benefits such as connection awareness and error recovery

IBM is a good example of a communication software provider who knows how to make existing host, client/server, or distributed applications available through the Internet. Their Communications Server family of products has the full complement of functions and connectivity features based on industry-standard technologies, and tailored for a wide range of platforms, including client/server, UNIX, Windows, and Linux. With IBM Communications Server, you can leverage network assets already in place, while making the transition to Internet-based applications at your own pace.

Acting as a multiprotocol gateway, IBM Communications Server enables applications to run over multiple network protocols. Thus, it provides important business/productivity benefits such as information access, electronic commerce, and collaboration. You can also build client/server applications independent of networking protocol or hardware. Furthermore, Communications Server opens the door wide to protocol-independent networking with seamless support for workstations communicating across SNA and TCP/IP networks. This gives companies the freedom to be responsive to the changing demands of business applications, while minimizing network impact.



For more information on IBM Communications Server, visit <http://www-3.ibm.com/software/network/commserver>.

But IBM is but one example. No matter which software provider you consider, if you are in need of connectivity software that is protocol- or platform- independent, be sure you find a solution that accomplishes the primary objectives listed above. And once you do, you will bring enterprise-class networking to your organization's environment and begin to realize the business productivity benefits that deliver a clearly demonstrable ROI.



Securing Your Network Protects Your ROI

Protecting your network from internal and external threats means protecting your ROI at the most fundamental level, making a trusted security management software solution the cornerstone of e-business. A good security management solution should address two critical challenges: identity management and security event management.

Identity management is automating the management of user identities, access rights and privacy policies across your e-business infrastructure. *Security event management* protects the infrastructure by identifying and responding to security incidents, monitoring IT resources, correlating events, and automating actions in response to security incidents.

An integrated security management solution should achieve these primary objectives:

- Rapidly achieve ROI by bringing users, systems, and applications online fast
- Effectively manage users, access rights, and privacy preferences throughout the identity lifecycle
- Enable administrators to actively monitor, correlate, and quickly respond to security incidents
- Scalable to the volume of users and events your organization needs

One example of a security management software provider is IBM Tivoli. IBM Tivoli security management solutions will achieve the objectives listed above, independent of hardware platform or operating environment. The product portfolio includes IBM Directory Integrator, IBM Directory Server, IBM Tivoli Access Manager, IBM Tivoli Identity Manager, IBM Tivoli Privacy Manager, and IBM Tivoli Risk Manager. For more details about these products and IBM Tivoli security management solutions in general, visit <http://www-3.ibm.com/software/tivoli/solutions/security>.

We all know that in today's economic climate, IT is constantly challenged to do more with fewer resources. As a result, effectively managing/provisioning users and quickly addressing security threats are even more difficult. Be sure that you carefully evaluate your options so that you select the security management solution that truly helps your business enforce security and privacy policies across the infrastructure, reduce overall security administration costs, realize rapid return on your investment, and ultimately, increase employee productivity and customer satisfaction.

Managing Your Network Performance for Maximum Availability

Today's networks are a combination of System Network Architecture and IP protocols at the application level and on the wire. Thus, to properly monitor and manage your network's performance, you may want to consider a software solution that allows you to gather, analyze and report information on your SNA systems and network components as effectively and efficiently as possible. Why? So that your organization can ensure the availability of its critical business systems and be able to rapidly resolve network problems. Some practical suggestions for selecting network performance management software:

- Be sure it supports TCP/IP, SNMP, SNA, and advanced peer-to-peer network technologies, so you can adapt to the many changes taking place in the IT industry
- Insist upon Web, Java-based GUI interfaces for ease of administration and, hence, lower administration costs
- Be sure it can manage from a variety of platforms, whether UNIX, Windows, Linux, mainframe, etc., and can integrate with devices from leading vendors (such as Cisco, etc.)



One example of network performance management software is IBM Tivoli Monitoring for Network Performance. The product combines IBM Tivoli NetView for TCP/IP Performance and IBM Tivoli NetView Performance Monitor. Together, these products discover networks, display network topologies, correlate and manage events and SNMP traps, maintain a device inventory for asset management, monitor network health, and gather network performance data, including trends and analysis. For more information on IBM Tivoli network management software, visit <http://www-3.ibm.com/software/tivoli/products/monitor-net-performance>.

So if you've acknowledged the need for network performance software, be sure to select a solution that meets your needs, enables you to properly and efficiently manage your networks, and provides the scalability and flexibility to manage all your mission-critical environments.



Enabling the Wireless Network for e-business

Once you've laid the wireless network infrastructure, what next? Clearly, the purpose of the infrastructure is to enable wireless applications and pervasive computing. Thus, you need to consider a middleware solution that provides the access point integration, enables data communications to and from a wide range of mobile devices, delivers Web pages and e-business applications to such devices, and provides tools for creating new conveniences for customers and mobile employees.

Also consider these solution requirements:

- Provide employees access to productivity data and enterprise applications from virtually anywhere at any time
- Connect, manage, adapt, and scale Web applications and legacy data into the pervasive computing environment
- Extend existing applications to mobile workers in the most cost-effective way possible
- Include built-in content development tools, customization services, and server integration
- Connect mobile and wireless applications with the enterprise using secure and dependable messaging middleware (especially important to fragile mobile and wireless networks to address the problem of intermittent network connectivity)
- Broad mobile device support
- Total network security (insist upon nothing less)
- Ability to create and manage service offerings while delivering an industry-proven infrastructure for broadband and dial-up service providers

From an IBM perspective, you may wish to consider the WebSphere Everyplace family of software for your wireless and/or pervasive computing applications. The product family includes WebSphere Everyplace Access, WebSphere Everyplace Server, WebSphere Everyplace Embedded Software, WebSphere Everyplace Subscription Manager, WebSphere Everyplace Connection Manager, and WebSphere MQ Everyplace. For more information about the WebSphere Everyplace family, visit <http://www-3.ibm.com/software/info1/websphere/index.jsp?tab=products/everyplace>.

Whatever wireless/pervasive middleware solution you choose, make sure your decision delivers the ROI you expect and demand, especially in the hard-to-measure realm of wireless environments. Check with peers at similar companies, peruse trusted white papers and case studies, and engage a full-service solution provider who will listen to your needs and deliver and support a solution that allows your customers and employees to access information and take action anywhere, anytime, using their choice of devices.

Conclusion and Summary

As you can see, an end-to-end networking solution involves more than just the physical infrastructure (wiring, network topology, communications devices, pervasive devices, etc.). An effective software solution is the heart of a thriving network. We explored four areas of network management and security from a software perspective, including enterprise networking across multiprotocol networks, security, network monitoring and performance, and wireless/pervasive application enablement. Your organization may be in need of any one or more (or all) of these solution areas.

As with anything else you consider, it's simply a matter of planning, prudence, and investigation. Inform yourself, seek internal and external advisors, explore your options, and most importantly ... establish measurable objectives and insist that candidate solution providers adhere to those objectives, understand your business, and listen to your needs. When you do so, you will position your organization to be the agile, adaptable, successful business it was meant to be.