

ActiveXperts Network Monitor

Centralized monitoring of Windows, Novell,
Linux and Unix servers

White Paper

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Summary

ActiveXperts Network Monitor is an advanced and easy tool for monitoring LAN and WAN networks, network servers, workstations and TCP/IP devices. The program offers support in all aspects of network monitoring, ranging from CPU usage, disk spaces, event logs to very advanced database monitoring. It facilitates and automates intensive inspection of all aspects of IT Administration, while its user interface and its powerful multi-threading architecture streamline monitoring and dramatically improves the availability of network resources.

The software particularly focuses on monitoring medium and large corporate networks; however, it also works well in smaller networks.

Administrators can monitor enterprise-wide network from a single console. As a result, ActiveXperts Network Monitor significantly reduces both time and costs required to effectively monitor the network, boost network availability and reliability, as well as positively impact infrastructure life-cycle.

System Requirements

ActiveXperts Network Monitor runs on Windows 2008 (x86/x64), Windows 2003 (x86/x64), Windows 2000 Server (and Professional) (x86), Windows Vista (x86/x64) and Windows XP Professional Edition (x86/x64) platforms.

Before you install ActiveXperts Network Monitor, ensure that your system fulfills the following system requirements:

	Windows 2008	Windows 2003	Windows 2000	Windows Vista	Windows XP Pr.
CPU	1 GHz (x86) or 1.4 GHz (x64)	x86 550MHz or higher	x86 133MHz or higher	x86 800MHz or higher	x86 233MHz or higher
Memory	1GB or more	256 MB or more	128MB or more	512MB or more	128MB or more
Service pack	-	SP1 or higher	SP4 or higher	-	-
Free disk space	50 MB	50 MB	50 MB	50 MB	50 MB

ActiveXperts Network Monitor supports custom VBScript checks. To run VBScript checks, Windows Scripting Host 5.5 or higher is required. Windows Scripting Host 5.5 is part of Internet Explorer 5.5SP2, or can be downloaded from the Microsoft web site.

Introduction

In today's dynamic world of information technology, computer networking has become a cornerstone of employee productivity and any business success. As a result, network administrators and IT managers face a task of efficient monitoring and managing their increasingly complex networks to ensure maximum availability. When a desktop PC crashes, it usually means a loss of a few minutes. When the same happens to a server being used by a few hundred individuals, many employees risk losing hours of work.

One of the biggest difficulties in monitoring a wide range of network servers and computers is the necessity of handling several different programs, each with its own user interface and features. ActiveXperts Network Monitor incorporates the most useful monitoring functions for each server. This eliminates the hassle of using multiple programs on the server and workstation.

ActiveXperts Network Monitor is an advanced all-round tool that offers IT Administrators a large set of techniques to monitor all aspects of a network. When an emergency situation occurs, the software will first try to take a corrective action. It will notify by e-mail, SMS, pager, network message or SNMP trap, so that the IT Administrator can immediately locate the problem.

ActiveXperts Network Monitor works in a Windows environment. The engine runs as a 'service' on a Windows Server platform (Windows 2008 x86/x64, Windows 2003 x86/x64, Windows 2000 x86) or on a Windows Workstation platform (Windows Vista x86/x64, Windows XP x86/x64). The friendly User Interface affords an excellent insight on what the engine is doing, providing information about the network configuration and the network status and providing information about individual servers, workstations and IP devices.

When ActiveXperts Network Monitor detects a failure, it can send notifications to the IT administrators. Notifications include e-mail messages, SMS messages, pager messages, network popup notifications and SNMP trap notifications. It will also try to take corrective actions.

ActiveXperts Network Monitor allows you to view the status of the network from anywhere in the world using the Web Interface. IT Administrators can use a normal browser for it, but can also use small handheld devices (for instance, Windows Mobile).

Architecture

In brief, ActiveXperts Network Monitor can be divided in the following modules:

Network Monitor Engine - runs as a service on a Windows 2000 Server or higher computer; it enables monitoring of all Windows, Novell, UNIX and LINUX based platforms as well as IP devices. The module is also generates for reports, notifications, actions and logging and generates dynamic web pages regularly.

Network Monitor Manager - this 32 bit Windows application affords an insight on what the engine is doing, providing information about the network configuration and the network status and providing information about individual servers, workstations and IP devices. It also allows IT Administrators to change the configuration. The Manager is installed on the Engine's machine by default, and can be installed on any subsequent IT Administrator's PC.

Web Interface - this web interface provides the same interface as the 'Manager' application, and can be run from any browser in the network. The web interface is based on XML and XSL data format, and can be fully customized. It does not require Java.

Features

The following is a brief description of the features of ActiveXperts Network Monitor

Enterprise class architecture

The product consists of a network monitoring service (the 'Engine') and a separate management interface (called 'Manager'). Administrators can monitor enterprise-wide networks from a single console where no agent software is required. The multi-threading architecture streamlines monitoring and dramatically improves the availability of network resources.

Monitor Web servers

ActiveXperts Network Monitor can monitor HTTP and HTTPS servers. Pass credentials if required. Optionally, configure a proxy server and proxy credentials to monitor through a proxy server.

Monitor Mail servers

ActiveXperts Network Monitor can monitor any SMTP/POP3 server, including Lotus Notes and Microsoft Exchange. The Network Monitor Engine analyzes responses and determines if server is working well. Monitors critical MS Exchange and Lotus Notes services and monitors critical performance counters.

Monitor IP based protocols

ActiveXperts Network Monitor can monitor a wide range of IP based protocols, including ICMP Ping, FTP, SNMP v1, SNMP v2c, IMAP, LDAP, NTP and NNTP.

Monitor Databases

ActiveXperts Network Monitor can check availability of all leading database management systems, including Oracle, MS SQL Server, Ingress, Paradox, SyBase, IBM DB2 and Informix. It depends on the type of database which access method is used; for instance, SQL*Net is used to access Oracle databases. For other databases, OLE-DB/ADO or ODBC is used.

Monitor Event Logs

ActiveXperts Network Monitor can check Windows event logs and filter specific event sources, event ID's and categories. It can look for errors, warning, failures, information events and other type of events. It can look for patterns in event log descriptions.

Monitor Disk Availability and Disk Space

ActiveXperts Network Monitor can monitor the physical status of a disk array or individual disk. It can monitor available and/or used space on a physical or logical disk.

Monitor Services, Processes, Memory Usage

ActiveXperts Network Monitor can monitor the status of a Windows service (started, stopped, paused, pending, etc.). It can also monitor check if a process is running on a remote machine, and check the amount of consumed memory of the individual process.

Monitor Users, Groups, Active Directory and Novell NDIS

ActiveXperts Network Monitor support for ADSI ('Active Directory Service Interfaces' allows you to monitor Microsoft- and Novell Directory Services, including Microsoft Active Directory and Novell NDS.

Monitor Environment

ActiveXperts Network Monitor requires an IT Temperature Monitor device from Sensatronics to monitor temperature, humidity, water leaks, noise, motion, resistance, smoke, door and more. A managed environment can reduce IT server, storage and network outages by 50% or more. With Sensatronics the application addresses issues beyond typical server CPU temperature as storage, network or telecom environmental issues are inclusive.

Custom Network Monitoring

ActiveXperts Network Monitor has a large set of built-in checks. You can add new checks by writing scripts. You can use VBScript (Windows) or SSH (Linux, Unix) for it. VBScript checks can use WMI and ADSI. WMI is an interface to a broad range of properties of a computer/OS/application. With ADSI, you can monitor Directory Services.

Reporting and Logging

Information about the Network Monitor Engine is written to the Windows Event Log. Monitoring information can be written to ASCII CSV text files, to an MS Access database, to an MS SQL database or to any other OLE-DB compliant database, including Oracle. You can select different logging levels.

ActiveXperts Network Monitor supports different types of Reports. The software reports ranging from plain text CSV files to the more sophisticated XML reports or even XML/XSL browser-based reports.

Web Interface

ActiveXperts Network Monitor allows you to view the status of the network from anywhere in the world using the Web Interface. IT Administrators can use a normal browser for it, but can also use small handheld devices such as an HP iPAQ or a Palm PDA device.

The Web Interface is based on XML and XSL technology. It requires Internet Explorer 6.x or other XML capable browser. XML stands for Extensible Markup Language. It's a markup language much like HTML. The big difference is that XML was designed to describe data; HTML was designed to display data.

XML tags are not predefined. ActiveXperts Network Monitor defines its own tags for their Web Views. The World Wide Web Consortium (W3C) started to develop XSL because there was a need for an XML based Style sheet Language. XSL can transform XML into HTML,

filter and sort XML data, define parts of an XML document, format XML data based on the data value, and more. This is exactly how Web Views work in ActiveXperts Network Monitor.

Conclusion

ActiveXperts Network Monitor is an efficient tool for monitoring LAN and WAN networks from a central location. The software does well in smaller networks but also in large networks where servers are usually located in separate subnets in different geographic locations. Inexperienced administrators will appreciate the simplicity of the Windows Explorer-like User Interface, which allows them to keep an eye on the network with any prior training. Advanced IT Administrator familiar with scripting for Linux/Unix/Windows will benefit of ActiveXperts' ability to process custom VBScript and SSH scripts, allowing to monitor virtually anything. The product is a real watchdog in daily network and server monitoring.