

Active Directory: Maintaining a Healthy Network with Quest

Written by
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Abstract

Active Directory is the heart of your IT infrastructure, and requires two kinds of tools to ensure its continued good health. First, you need to monitor Active Directory continuously and have tools and procedures for isolating and resolving problems that arise. Second, you need effective backup and recovery tools for severe problems in Active Directory.

This paper explains how two tools from Quest Software can help:

- Spotlight on Active Directory Pack enables you to monitor and understand Active Directory performance and infrastructure so you can resolve problems quickly.
- Recovery Manager for Active Directory enables you to efficiently back up your Active Directory data and to quickly and accurately restore individual attributes, objects, or an entire domain, without taking your domain controllers offline.

Available together as Quest Availability Suite for Active Directory, these two tools provide the protection you need for your Active Directory environment.

Introduction

Today's IT organizations refer to Active Directory as the "heart" of their infrastructure. Active Directory sits at the center of a Windows-based environment, and without it, the entire network can become useless. Because Active Directory is the key to the authentication and authorization functions that grant users access to nearly every resource they use throughout the day, an impaired Active Directory can cause performance, security, and availability problems throughout the network.

To manage Active Directory successfully, you'll need tools to monitor its health and detect impending problems, as well as tools that can help correct those problems and even help you recover from a failure.

This paper explores some of the key capabilities you need to maintain a healthy Active Directory infrastructure, and examines techniques and technologies that can help recover from a failure, mistake or other problem condition.

Schedule a Checkup for Active Directory

IT professionals are accustomed to dealing with performance data, such as the counters provided by the Windows System Monitor tool. Unfortunately, raw performance data can be difficult to interpret. Understanding the health of your Active Directory requires applying intelligent thresholds to the raw performance data and determining whether it indicates a properly functioning system or one that is experiencing problems.

Similarly, high-level Active Directory metrics can be used to identify a problematic infrastructure, but determining the root cause of a problem requires a great deal of deep digging and significant technical expertise. If user logons are slow, for example, it could be because of an overburdened domain controller, an improperly-configured DNS server, replication problems, database issues, or other reasons. Spotting the exact cause so that you can apply a fix requires a lot of technical experience and a thorough, consistent troubleshooting process. In environments where problems are rare, troubleshooting and correcting problems that do occur can take longer, simply because your IT team may get out of practice.

Choosing the Right Tool: Spotlight on Active Directory Pack

Automated tools and references like Quest Spotlight on Active Directory Pack can help you diagnose problem conditions within Active Directory and perform more detailed troubleshooting; they can also help you follow a more consistent diagnosis process and apply best practices.

Spotlight on Active Directory Pack brings together everything you need to diagnose Active Directory, providing intuitive, graphical displays of AD performance and infrastructure. Rather than relying on what you *think* Active Directory looks like and is doing, you get to see what's *really* happening, making it easier to spot problems and moving you closer to solutions.

Understanding the Health of Each AD Component

Spotlight helps you monitor the flow of data within Active Directory by tying each performance metric to a set of thresholds. You can instantly spot poor performance in any Active Directory subsystem or component, as well as monitor data flow, performance, and more from a single intuitive console, as shown in Figure 1:



Figure 1. Spotlight enables you to assess the health of Active Directory at a glance

Understanding Your AD Infrastructure

Spotlight also automatically discovers and analyzes the elements of your Active Directory infrastructure and creates graphical displays of your replication and site topology. Key Active Directory elements, such as your site and replication topology, will be visible, and include indicators for good and poor health.

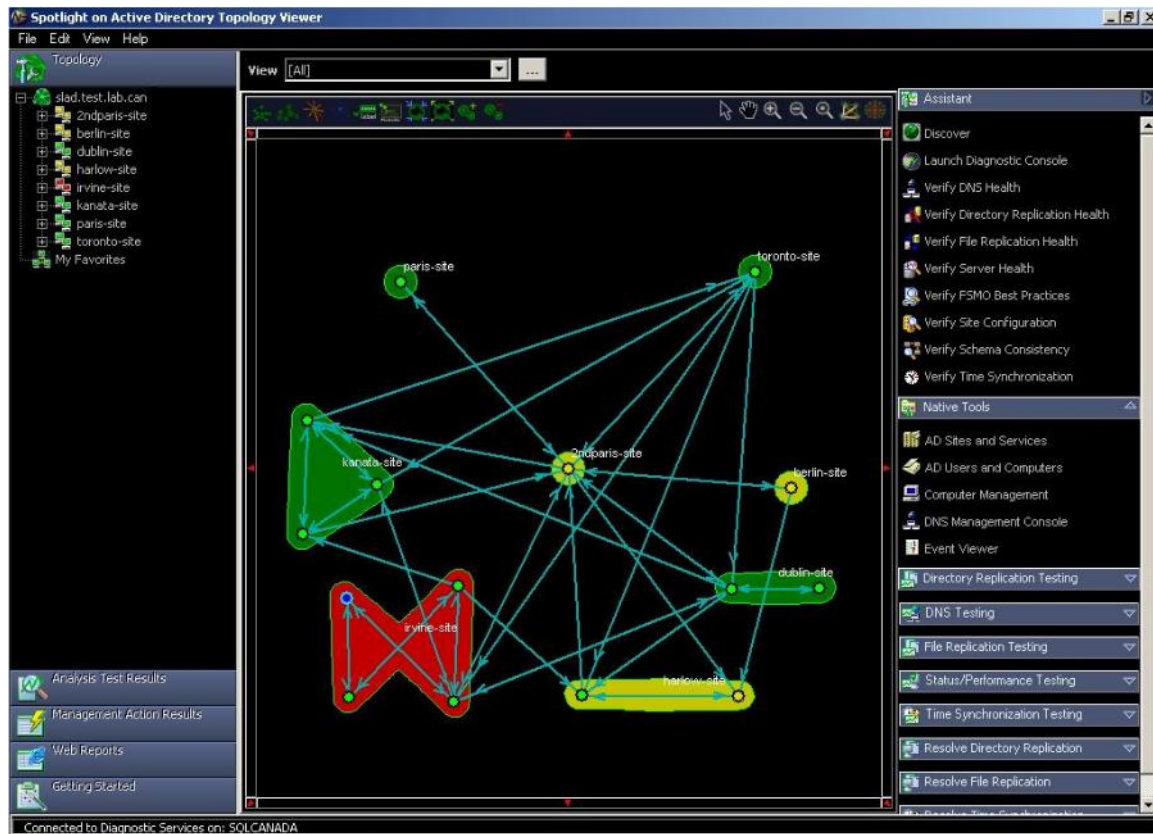


Figure 2. Spotlight's Topology Viewer helps you view your site topology

Expert Advice

Spotlight on Active Directory Pack includes a complete knowledge base built from Quest Software's years of Active Directory expertise. It provides real-world, practical information and advice to enhance your knowledge of Active Directory operations; it's like having a built-in Active Directory consultant to take the mystery and uncertainty out of Active Directory monitoring. Spotlight provides a detailed explanation of each process and counter on your domain controllers, explains in detail what each health alarm means and helps you diagnose and correct the problem.

Faster Troubleshooting

Spotlight supplements your administrators' expertise and productivity with a battery of automated, consistent troubleshooting tests that quickly pinpoint root causes. In many cases, Spotlight automates repairs for replication tuning, metadata cleanup, and user account management. Spotlight also goes beyond native Active Directory, providing tests and monitoring for support systems such as operations masters, DNS, global catalogs, and more. Spotlight even provides specialized views that highlight how Active Directory is impacting Microsoft Exchange Server performance.

You can be more efficient –you will have access to more than 100 built-in tests that can be customized as needed, as well as make accurate and fast repairs with automation. Because Spotlight monitors Active

Directory continuously and alerts you when problems begin to surface, you will often be able to identify, diagnose and repair many problems before they negatively impact your users.

And, because performance isn't the only thing you care about in Active Directory, Spotlight even includes reports for related configuration concerns, including Active Directory security configuration.

Restoring Active Directory Back to Health

Sometimes Active Directory can become seriously damaged. For example, if an entire organizational unit (OU) is deleted, user accounts are accidentally changed, or Group Policy objects (GPOs) are lost or damaged, you may find yourself reaching for the latest backup tapes and hoping for the best.

Active Directory's native repair capabilities are limited and can be time consuming to use. Your business can't simply "take it easy for a few days" and hope that Active Directory "heals itself;" you need rapid corrective action that minimizes disruption for your production users. That's when you need the advanced, automated recovery capabilities of Quest Recovery Manager for Active Directory.

Choosing the Right Tool: Recovery Manager for Active Directory

Centralized Management of AD Backups

When making repairs, you need to take into account the inherently distributed nature of Active Directory with its multiple domain controllers. Recovery Manager recognizes this and provides a central, consolidated location to manage the automated Active Directory backups that form the core of its recovery capabilities.

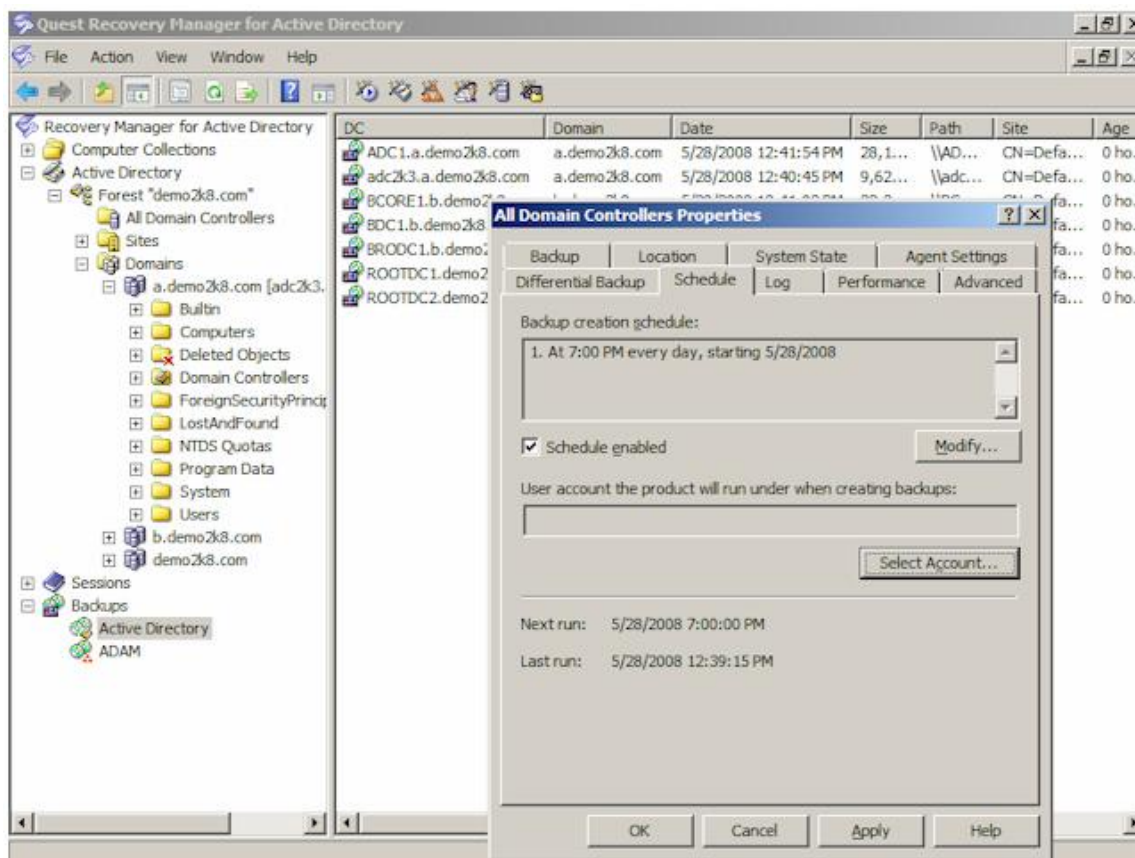


Figure 3. Spotlight automates and centralizes Active Directory backups across all of your domain controllers

Understanding What to Restore

When the directory is damaged or improperly changed, Recovery Manager makes it easy to quickly put things right. You can quickly analyze the differences between the current directory configuration and any backup, so you don't have to guess what a particular backup contains or if any unexpected differences might make the situation worse instead of better. Comparison reports clearly identify the contents of any backup:

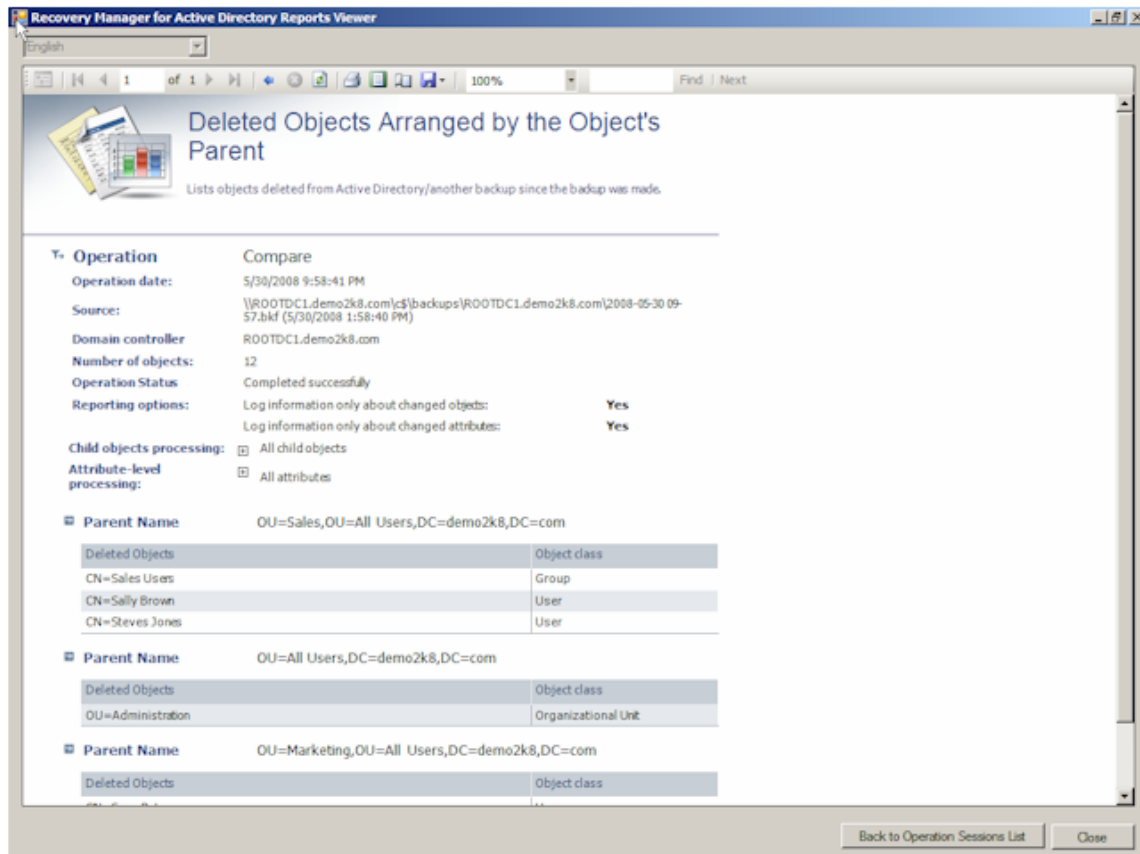


Figure 4. Comparison reports preview what will happen if you restore from a particular backup

Easy Granular Restore

Once you know what to restore, you can use Recovery Manager's intuitive graphical console to quickly restore individual objects or even an entire domain, all without taking a single domain controller offline. It even enables you to restore individual object attributes, providing pinpoint recovery capabilities with absolutely minimal—if any—negative production impact.

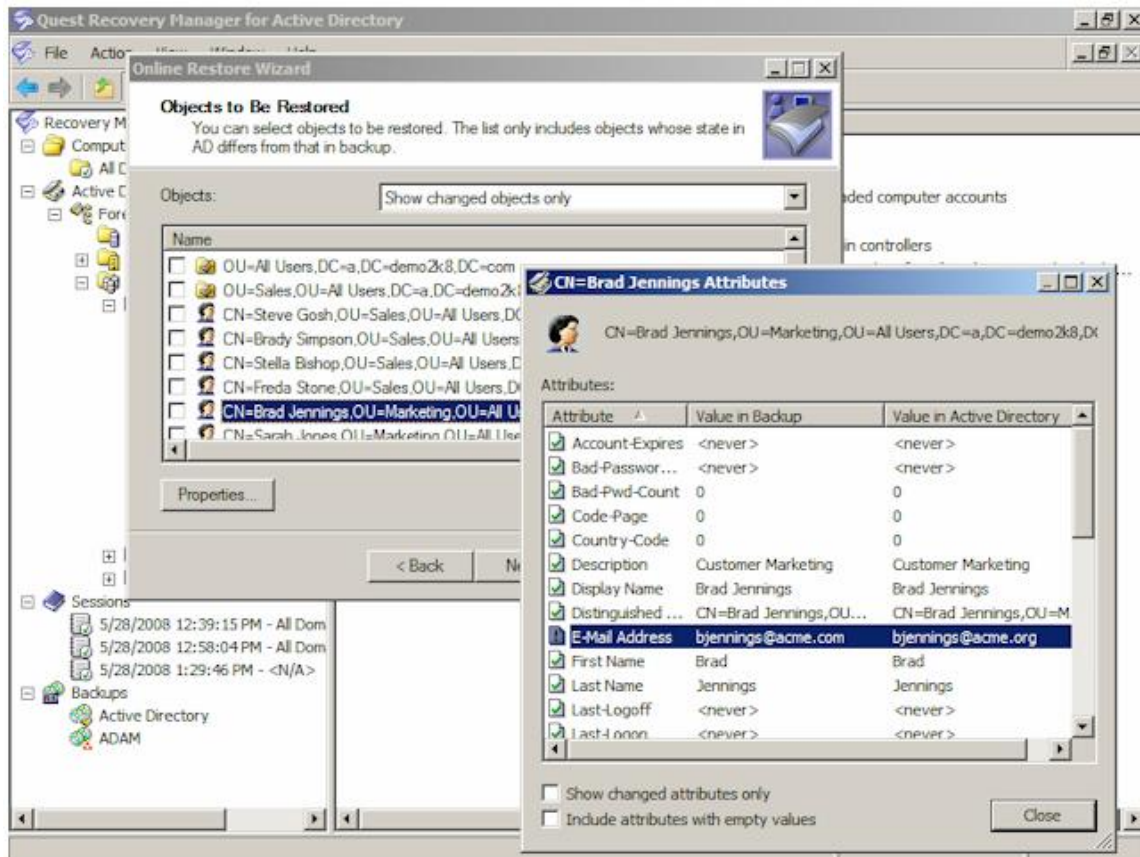


Figure 5. You can easily restore individual object attributes, entire objects, or entire sets of objects

Integration with Native AD Management Consoles

You won't have to learn an entirely new set of tools; Recovery Manager integrates directory into the native Active Directory management consoles. Intuitive, wizard-driven operations guide you through every step of the recovery process, helping you avoid mistakes and complete the restore successfully and quickly.

More Than Just Users and Groups

Recovery Manager can restore every key aspect of Active Directory, including users, groups, computers, OUs, GPOs, sites, subnets, configuration, and even Exchange Server storage groups. You can restore individual objects and attributes to remote domain controllers without taking them offline and without physically visiting the affected domain controller. Recovery Manager even supports Active Directory Lightweight Directory Services (AD LDS) and recovers deleted objects without interfering with AD LDS operations.

Recovery Manager also supports the use of unpacked copies of the AD database, which can be extracted from most third-party backup solutions or captured by Windows' native Virtual Shadow Copy Service (VSS); Recovery Manager integrates easily with your existing backup processes and tools.

Conclusion

Spotlight on Active Directory Pack enables you to monitor and understand Active Directory performance and infrastructure so you can resolve problems quickly, minimizing issues for end users. Recovery Manager for Active Directory enables you to efficiently back up your Active Directory data and quickly and accurately restore individual attributes, objects, or an entire domain, without taking domain controllers offline.

Spotlight on Active Directory Pack and Recovery Manager for Active Directory are available in a single, integrated solution: Quest Availability Suite for Active Directory. With Quest's monitoring, diagnosis, and repair functions in a single integrated offering, you can detect and repair almost any kind of Active Directory problem faster and more efficiently than ever before.

Active Directory downtime can be as costly, stressful, and painful as a heart attack. Protect yourself with Availability Suite for Active Directory's real-time health monitoring, efficient troubleshooting tools, and complete directory recovery capabilities.

About the Author

Don Jones is a co-founder of Concentrated Technology (ConcentratedTech.com), a Microsoft Most Valuable Professional Award recipient, and the author of more than thirty books on information technology. His consulting practice specializes in making the connection between technology and business, helping businesses realize more value from their IT investment, and helping IT align more closely to business needs and values. Don has been an IT journalist for more than eight years, and is currently a Contributing Editor for Microsoft TechNet Magazine. He is also a sought-after speaker at industry conferences and symposia, including Connections conferences, Microsoft TechEd, TechMentor Events, and others.

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