
AppAssure Software: Assuring E-mail Accessibility

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Abstract: E-mail has become the single most utilized form of communication within businesses of all sizes, and one of the most important business applications that companies depend upon. Like it or not, Exchange-based e-mail systems are mission-critical and require a data protection solution that provides near instant recoverability in the event of an inevitable outage—and one that can be managed simply whether you are the largest of the Fortune 500 or the dentist office down the street.

E-mail: The New Alpha Dog

E-mail has grown in prominence in all size businesses, from huge international companies with hundreds of thousands of employees to small startups with less than ten. E-mail, which includes contact and calendar management functionality, has risen to the top of the business application food-chain because it is a convenient collaboration tool that allows for quick communication at a relatively low cost. It also serves as a central repository for a wealth of information and valuable content which provides a reference point for e-mail addresses, documents, links and even a history of past e-mail exchanges.

Look around the next time the e-mail server “goes down.” Employees stare at each other aimlessly wondering what to do and ponder whether they should even stay or just go home for the day. People are constantly checking messages at work, but thanks to mobile devices, e-mail now has 24x7x365 requirements. In other words, e-mail has become a mission-critical application. There are still cell and office phones, voicemail and instant messaging, but e-mail is king. In fact, the latest release of Exchange 2007 will make e-mail the primary retrieval method for both voicemail and faxes, further reducing the dependence on other communication mediums—and further increasing the reliance on e-mail systems.

Since e-mail is such a simple and convenient communication and collaboration tool, massive amounts of data pass in and out of e-mail servers on a daily basis. This is great from a user perspective. However, behind the scenes, it is yet another headache with which already overburdened IT staffs must deal. Not only is IT required to store, protect and manage their organization’s messaging ecosystem, but now they must also satisfy maximum uptime and response time levels, all while keeping messages protected from outside eyes.

These problems are compounded by the fact that traditional data protection solutions face limitations when applied to e-mail. Even with traditional applications tape-based backup and recovery is often a painfully slow process that does not always guarantee full data recuperation. This is even worse with regard to e-mail since recovering from tape can lead to data corruption or a failed recovery. Not only does this waste valuable time, but it increases the odds of data loss.

For these reasons and others, disk-based backup is quickly replacing tape as the preferred data protection platform—not only does it provide faster backup and recovery times, but it is also much more reliable. But even disk-based backup is not an optimal solution for e-mail environments because of its lack of granularity and integration at the application level. The e-mails of any leading worldwide business may contain information that make them, taken as a group, perhaps the largest corporate asset of those businesses. As such, they require specialized solutions that not only provide maximum uptime and reliability, but also lightning-fast recoverability when necessary.

AppAssure Software

AppAssure Software, located in Northern Virginia, was founded by software professionals who understand the importance of protecting mission-critical applications that run on Windows servers. The company founders previously started W.Quinn, the leading Windows-based quota management product, which was acquired by

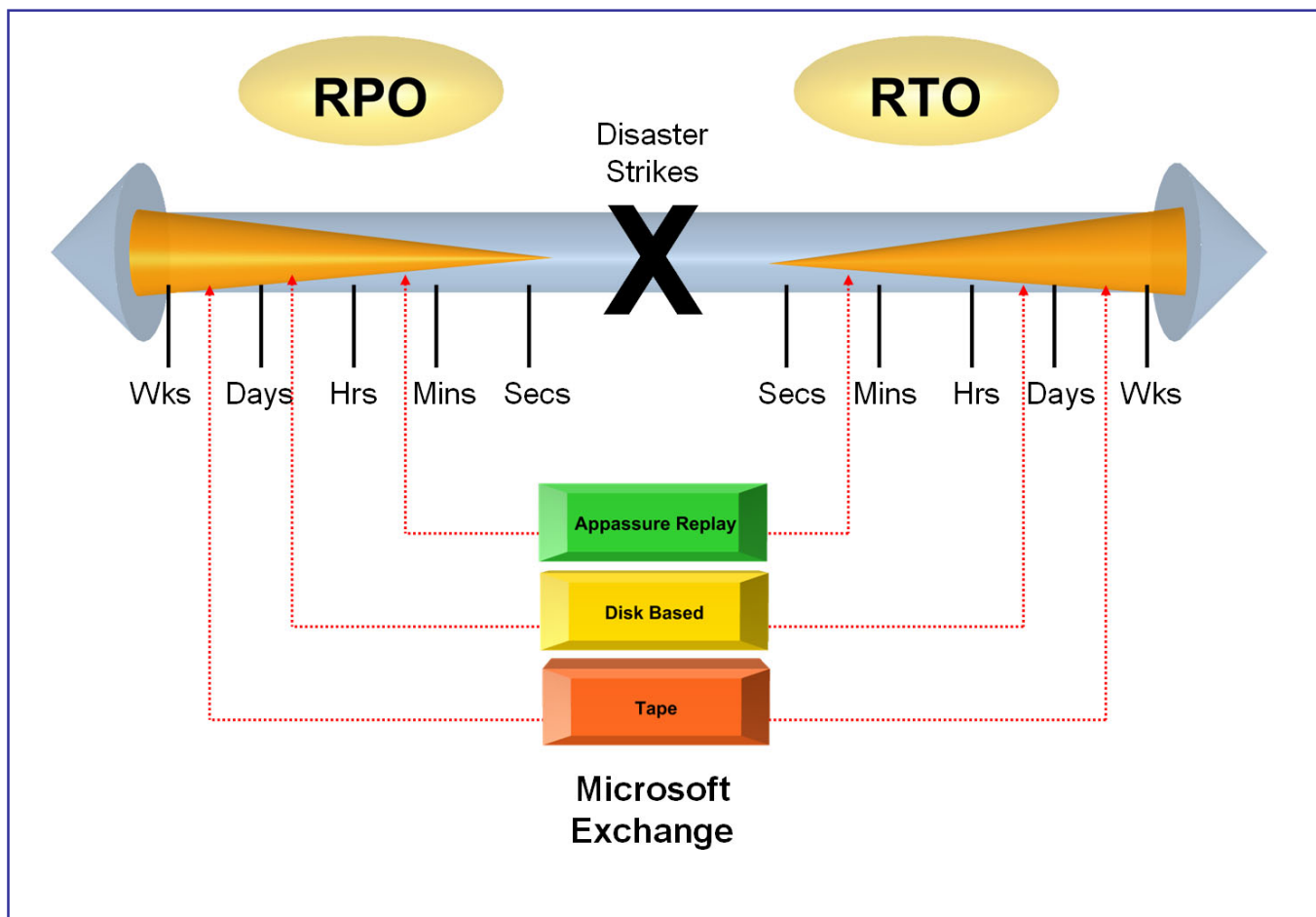
Veritas/Symantec several years ago. Hundreds of thousands of copies of their software have been sold to over 4,000 companies worldwide. The company has a rich history of effectively tailoring solutions to Microsoft applications and users.

Continuing this legacy, AppAssure Replay provides non-stop protection for an entire Microsoft Exchange environment—including the operating system, Active Directory and all of the underlying data. Not only does the software have a negligible negative effect on performance, but network bandwidth and disk capacity are more efficiently utilized because recovery points are stored in a compressed and virtualized format. Replay offers proactive capabilities that validate recovery points and alert the appropriate personnel when necessary.

A number of other features and functions native to AppAssure will appeal to just about any sleep-deprived IT staff. It offers administrators the ability to not only access the contents of an off-line data store, but to actually recover e-mails from a corrupt database. InstantReplay, as its name might indicate, ensures that Exchange data stores are mounted at the beginning of recovery process allowing users immediate access to their mailboxes even while Exchange is still recovering data, making recovery nearly instantaneous.

The granularity of control allows for a broad range of recoverability, from bare metal restores down to the recovery of individual messages in minutes rather than hours. Furthermore, the continuous real-time block level capture enables users to roll back to any point in time, which provides them access to their e-mail during the recovery process itself. This means that AppAssure Replay significantly reduces both the recovery time objective (RTO) and recovery point objective (RPO) compared to both traditional tape and other disk-based backup solutions (Figure One).

Figure One: AppAssure Replay Protects Microsoft Exchange Server



Two of AppAssure's most significant claims revolve around performance and simplicity. In terms of speed, the company boasts a three minute rollback time to recover a 100GB storage group, which blows away tape and other generic disk-based backup solutions—in some cases, by an order of magnitude or more. Regarding ease of use, Replay allows users to recover to any level in an Exchange environment in just a few simple clicks.

Requiring no additional hardware or software, AppAssure Replay is a single solution that consists of three components: ReplayCDP, ReplayViews and ReplayLive.

- **ReplayCDP:** ReplayCDP is tightly integrated with Microsoft's Volume Shadow Copy Service (VSS) which serves to fortify AppAssure's already robust data protection capabilities. The dynamic block level images of the Exchange Server and supporting environment allow users the autonomy to determine the interval of mountable recovery points. After being transferred to a Replay Server, these images are then compressed, indexed and stored to await any incident that might require data restoration.
- **ReplayViews:** ReplayViews provide monitoring and automatic corruption detection of Exchange data stores, which guarantees that valid recovery points can be mounted instantly upon rollback. The interface allows access to content of recovery points in a form of virtual drives with a usual NTFS file system structure which facilitates data mining, allowing users to extract maximum value from all messaging content. In addition, this assists in both the backup processes and other Exchange maintenance functions, and allows administrators to browse and retrieve e-mail directly from any recovery point.
- **ReplayLive:** ReplayLive provides users with almost instantaneous access in the event of an Exchange Server failure. Specifically, once a rollback is initiated, both volume and storage groups are mounted at the outset of the recovery process. And as virtual infrastructure continues to evolve from a buzzword to a best practice, Replay's ability to seamlessly transfer an entire Exchange environment to a virtual server will make AppAssure's story even more compelling.

The Bottom Line

Virtual infrastructure is the hottest topic in IT right now and Exchange is one of the core applications being implemented "virtually". AppAssure has a tremendous opportunity to capitalize on this momentum. As e-mail continues its fast track to the top of the corporate application heap, SLAs will continue to tighten and those with virtual server environments will need solutions tailored to both virtual infrastructure and Exchange environments. This represents a great chance for synergy between like-minded vendors, like AppAssure and VMware, to help virtualization to be built into Microsoft Exchange best practices.

ESG cannot do this application justice with a product brief, nor have we completed a true hands-on lab analysis yet, but if this story pans out even marginally, Exchange administrators will be lining up to grab a copy.

AppAssure Replay is a brand new product with incredible upside potential. Though the immaturity of the product may be a source of concern to some users, it is worth noting that Replay's developers have a proven track record in developing solutions for Microsoft applications. The tight integration with Exchange merits classification as an enterprise-ready solution, and an affordable one even for the smallest of organizations. There is clearly a need for a specialized data protection platform for e-mail because the traditional backup and recovery methods aren't getting the job done. If the company can execute—and the software can be installed easily and works as advertised, Replay has a chance to become a true breakout winner.