



InMage for Exchange

Disaster Recovery Coupled with High Exchange Availability

- Simple disaster recovery solution for Microsoft Exchange that also eliminates backup impacts and handles Exchange failover/failback
- Centrally managed, disk-based recovery which supports rapid, reliable Exchange application and data recovery either remotely (for disaster recovery) or locally (for backup)
- Provides an Exchange-aware solution leveraging simple installation templates, the Windows VSS API, and other Exchange-specific functionality
- Single solution that can replace backup, replication, and clustering agents and products for streamlined data protection operations

InMage provides better Exchange recovery than native tools.

E-mail is a critical application for most businesses, and Microsoft Exchange is the most popular e-mail platform today. As Exchange's criticality has increased, so has its recovery requirements, and many organizations are challenged to cost-effectively meet evolving recovery point (RPO) and recovery time objectives (RTO) as well as maintain appropriate levels of Exchange availability. Conventional data protection approaches that use tape-based infrastructure impact production operations, can be very manually intensive, and do not meet stringent RPO/RTO requirements very well. And if a company has disaster recovery (DR) requirements or if Exchange availability is a concern, additional products (over and above backup) need to be implemented to meet requirements, increasing complexity and cost.

InMage for Exchange: Single Solution for DR, Backup, and Application Failover

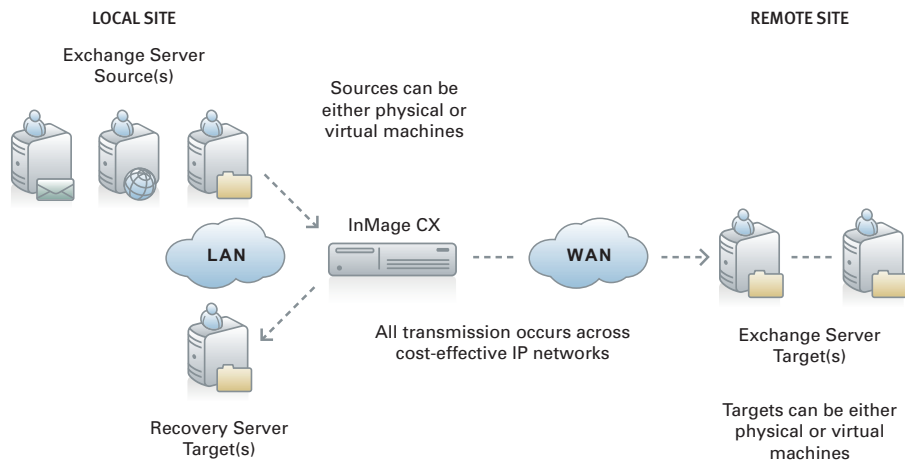
InMage provides a software-based solution that leverages the advantages of disk-based data protection to eliminate backups and provide Exchange recovery that can meet remote and/or local requirements. InMage provides a comprehensive DR solution that does not require manual intervention to recover Exchange data and/or application services. Using unique hybrid recovery technology, InMage for Exchange captures changes to Exchange databases in real time as they occur and offers flexible recovery to any previous point in time, a feature which ensures fast, reliable recovery even when Exchange databases are corrupted. Automated recovery of Exchange services can be configured to meet either remote or local requirements, going above and beyond the protection offered by replication, conventional backup, and clustering products.

Simple, Scalable DR for Exchange

Recovering Exchange using native Exchange tools like CCR, SCR, and Exchange transaction logs can be a complex, time-consuming process that is fraught with risk. InMage for Exchange captures data as it changes, using minimal bandwidth to protect even large Exchange servers. InMage's asynchronous replication supports long distance DR solutions, while its integrated Exchange failover/failback capabilities support the automated restart of Exchange services at designated remote locations. Our granular recovery capabilities ensure that those recoveries can occur from the optimum point for data or the entire application, depending on the failure scenario.

Eliminate Backups While Moving To Faster, More Reliable Recovery

With InMage for Exchange, there's no wasted time attempting recoveries from unmountable images. As InMage captures data from production Exchange servers, it tracks it so that administrators can retroactively select AppShots – application-consistent recovery points – from which to base recovery operations. Because InMage for Exchange uses the Windows Volume Shadowcopy Services (VSS) API and an included VSS requester to mark AppShots, they are reliable, proven-recoverable images that are



Data taps

Figure 1. Exchange data is granularly collected from Exchange servers as it is created and sent to a local CX, which can then store the data locally and/or remotely (using InMage's asynchronous replication). If bi-directional and/or one-button application failover is desired at the remote site, an optional second CX would be deployed there. Note that in InMage's unique architecture, data is replicated between servers, not between appliances or storage arrays. Exchange target servers can store the data using SAN, DAS, or iSCSI, providing significant configuration flexibility.

immediately available for recovery – the lengthy process of running *eseutil* for validation against these recovery points is not required. When a recovery is required, an administrator may view the entire continuum of available recovery points and select the most appropriate point to meet recovery requirements. Because they represent application-consistent points in time, AppShots will support the fastest recovery times, but all other points (each of which represents crash-consistent points in time that support reliable recovery) are available as well and may provide value to administrators performing root cause analysis against failures.

Supporting High Exchange Availability

InMage's granular, disk-based recovery provides a strong foundation on which to build a solution that can meet the highest Exchange availability requirements. InMage for Exchange provides a reliable, high availability solution without the cost or complexity of Exchange clustering, and includes a productized, documented, and fully supported solution for flexibly managing Exchange failover/failback to either a remote or a local server target that does not require a running copy of Exchange at the target location. This fully automated recovery capability not only

speeds the recovery of application services when it is required, but can also be used to simplify DR testing by providing non-disruptive, one-button Exchange service migration. Using InMage for Exchange to automate DR testing and failover also improves the reliability of recovery processes by removing room for operator error and providing a baseline from which to incrementally improve failover processes over time.

Flexibility That Fits Your Recovery Requirements

Flexibility is one of InMage for Exchange's strongpoints, allowing you to work with hardware and software you already have, as well as use various recovery modes to meet specific requirements. InMage for Exchange supports heterogeneous storage subsystems, enabling source/target definitions between not only storage of any kind but storage architectures of any kind (DAS, SAN, iSCSI, FC). It supports Windows 2000 or later, Exchange 2000 or later, and Outlook 2000 or later. For data recovery, customers can use native Exchange recovery tools such as recovery storage groups, or third party recovery tools like Quest Recovery Manager for Exchange or Kroll Ontrack PowerControls (two tools which support an abbreviated

brick-level recovery process that supports extremely rapid recovery). In providing the recovery foundation underneath these different approaches, the key advantage InMage offers is its ability to retroactively choose the optimum point from which to start immediate recovery operations.

For application recovery, InMage supports native DR mode and a fully automated, one-button failover process which transparently updates Active Directory as part of the application recovery, as well as clustered Exchange servers (using either Microsoft Cluster Server or Windows Server Failover Clustering). This flexibility preserves existing investments in server and storage hardware, backup software (in cases where InMage for Exchange is used to insulate production environments from data protection operations and improve recovery granularity), and processes.

Scalability

InMage's unique hybrid recovery technology lends itself to cost-effective, low end configurations as well as larger configurations that support tens of thousands of Exchange mailboxes company-wide. Configurations with only a few Exchange servers can be deployed very cost-effectively, yet our largest production installs today are approaching 100,000 Exchange mailboxes, all managed centrally from a single InMage console (from an application and data recovery point of view). Installations of this size generally have a number of Exchange servers distributed geographically, but InMage for Exchange can manage all of these from a single, secure, central location through a web browser-based console.

