



InMage for SAP

Disaster Recovery, Local Operational Recovery, and High Availability

- A single solution which combines remote disaster recovery, local operational recovery, and application failover/failback for SAP on a single, centrally managed platform
- Leverages next generation data protection technologies to meet the most stringent recovery requirements
- Supports comprehensive and automated recovery for SAP configurations based on Windows, Linux, or Unix platforms running physical server, virtual server, or mixed environments
- Replaces multiple existing products to provide a simpler and lower cost SAP recovery solution that works the same across all platforms

As a business intelligence solution, SAP provides the foundation on which enterprises worldwide rely to track and manage their customers and business. For many of these enterprises, SAP provides business critical application services on which they depend every day. Any outages can potentially impact revenue generation or customer service, as well as back end planning activities that impact daily operations. To ensure that the business can continue to operate efficiently, enterprises must be able to rapidly and reliably recover SAP services and data to meet everything from daily operational recovery to remote disaster recovery requirements.

Conventional data protection approaches are based around periodic backups. Regardless of whether they are based on tape or disk, the use of discrete backups as recovery points lead inevitably to data loss on recovery in SAP environments. Data loss means business impacts, as well as additional administrative overhead incurred in attempting to re-create lost data (if it can in fact be recovered at all). The explosive data growth rates being experienced by most SAP environments further complicates the matter, since 12 hours of lost data now equates to significantly more lost information than it did just one year ago. Additionally, business and regulatory mandates are driving increasingly stringent recovery requirements, both locally for backup as well as remotely for disaster recovery, and conventional data protection approaches just aren't keeping up.

InMage: A Comprehensive Recovery Solution for All Your SAP Needs

InMage provides automated recovery of SAP environments.

InMage for SAP provides a software-based solution that leverages next generation recovery technologies like continuous data protection (CDP), heterogeneous asynchronous replication, application failover/failback, and WAN optimization to ensure rapid, reliable recovery for SAP environments both locally and remotely.

InMage's unique hybrid recovery architecture provides an extremely low overhead approach to providing application-consistent recovery in SAP environments, making it ideal for both physical and virtual server environments. Automated recovery of SAP environments (not just data) can be configured to meet either remote or local requirements as well, going above and beyond the protection offered by multiple separate conventional backup, log shipping, file-based replication, and clustering products.

Scalable, Cost-Effective Data and Application Recovery Locally and Remotely

InMage for SAP leverages CDP technology to capture writes in real time as they occur across back end database servers in an SAP environment. These writes are kept in the appropriate order as they are recorded in a disk-based journal which can be kept on server targets locally, remotely, or in multiple locations simultaneously. When data recovery is required, the administrator selects the desired recovery point from a continuum which includes any previous points in time, choosing from points which include not only the most recent point in time but prior application-consistent recovery points as well, and performs the type of recovery required – file level or system level, local (for operational recoveries) or remote (for disaster recoveries).

InMage for SAP enables the implementation of cost-effective DR configurations that leverage asynchronous, IP-based replication to support long distance DR solutions. All replication is performed at the block-level, capturing changes from the database back end and replicating them to one or more defined recovery server targets. All network traffic is WAN optimized by technology built into InMage, keeping bandwidth requirements to a minimum. This results in a fully functional, exact replica of the source SAP environment's data on the target side that requires no manual updating (to reflect system configuration, database schema, security changes, etc.), and supports fully automated SAP environment recovery (leading to much shorter RTOs).

Comprehensive recovery capabilities can include the ability to fail over the SAP database back end and any or all of the application servers to a remote site at the push of a button, automatically updating AD and DNS entries as the failover occurs. This allows dependent applications to continue to operate transparently after the failover. This fully automated recovery capability not only speeds the recovery of SAP services when it is required, but can also be used to simplify DR testing by providing non-disruptive, one-button SAP central instance failover. Failover/failback can be defined at the database server or the named instance level, providing additional flexibility in accommodating existing configurations.

Eliminate Backups While Improving Recovery

Using CDP technology, InMage captures changes to SAP data continuously as they occur, completely moving away from the "periodic" nature of conventional backup. InMage doesn't shorten the backup window, it completely eliminates it. And it does so in a way which actually improves data and application recovery capabilities. InMage's CDP foundation allows the selection of the optimal recovery point for any failure scenario, making recoveries simple, fast, and reliable.

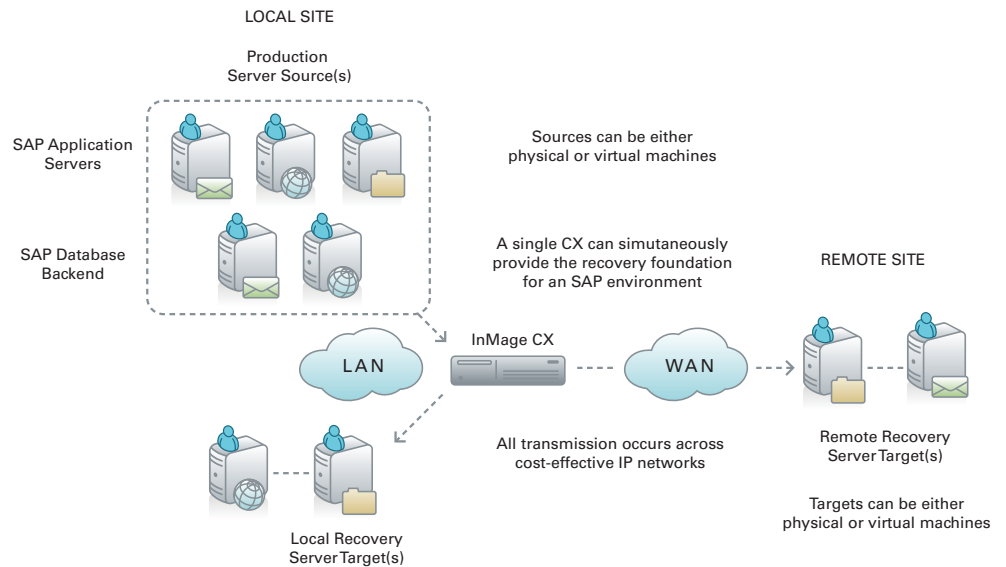


Figure 1. Data is granularly collected from all servers in an SAP configuration and sent to a local CX, which can then store the data locally and/or remotely (using InMage's asynchronous replication).

Application Awareness Supports Fast, Reliable, and Comprehensive Recoveries

InMage for SAP includes SAP-specific functionality that speeds deployment and enables recovery capabilities that are tailored for SAP environments but managed through the centralized InMage management paradigm. SAP-specific functionality includes installation templates, AppShot creation and usage, and automated SAP failover/failback processes. Out-of-the-box, InMage supports Windows, Linux, and Unix-based SAP installations, along with the key databases on each of those platforms.

As InMage captures SAP data, it tracks and labels it so that administrators can retroactively select AppShots from which to base recovery operations. InMage can use application snapshot APIs, such as the Windows Volume Shadowcopy Services (VSS) API, Oracle RMAN, and others in a very unique way to mark AppShots with lower overhead than any other application-consistent snapshotting solution on the market.

Flexibility to Support Heterogeneous Environments

InMage accommodates heterogeneous servers and all storage architectures.

InMage supports heterogeneous servers, including Windows, Linux, and Unix, as well as heterogeneous storage and storage architectures (DAS, SAN, NAS, iSCSI, FC, etc.). All data movement occurs across cost-effective IP-based networks. InMage is ideal for Windows-based SAP environments with its support for Windows VSS and SQL databases, and it provides that same support for popular platforms in Linux and Unix environments, such as Red Hat and/or SuSE and Oracle, or Solaris and Oracle. InMage also supports mixed physical and virtual machine environments, and offers the industry's best application-consistent recovery capabilities for virtual machine environments with a very low overhead solution that works the same across VMware, Citrix XenServer, and Microsoft Hyper-V environments.