

PRODUCT FAMILY BRIEF: CA XOSOFT

# CA XOsoft™ Replication and CA XOsoft™ High Availability to Support Flexible Business Continuity Over Any Distance

## CA Recovery Management

Backup

Replication and High Availability

Continuous Data Protection

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## CA XOssoft

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CA XOssoft Replication

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CA XOssoft High Availability

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CA XOssoft™ Assured Recovery™ Option

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CA XOssoft™ Rewind CDP Technology

In the event of a single failure or major disaster, the CA XOssoft Replication and CA XOssoft High Availability Product Family helps your organization deliver seamless availability of business-critical IT resources.

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## Overview

IT systems and resources are playing an increasingly important role in organizations. And, should a single failure or even major disaster render any of these IT resources unavailable, your company could lose large amounts of information and money — possibly crippling the business.

The CA XOssoft Replication and CA XOssoft High Availability Product Family ensures that you have immediate access to your most critical applications and data in the case of an emergency.

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## Benefits

Through comprehensive multilayered protection of applications, databases and files, the CA XOssoft Replication and CA XOssoft High Availability Product Family ensures near instantaneous failover and restoration of IT resources after a loss or disruption — regardless of the distance between locations. Plus, you can rest assured that you'll be prepared in the face of an actual threat because of your ability to proactively test your disaster recovery resources.

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## The CA Advantage

As a market leader in IT-enabled business solutions, CA offers industry-leading protection of critical business applications and information, even under the harshest conditions.

The CA XOssoft Replication and CA XOssoft High Availability Product Family is based on our vision of Enterprise IT Management (EITM). Through this, we help you unify and simplify management of your enterprise's IT resources to maximize their value to your business.

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## Flexible Business Continuity Over Any Distance

### Addressing the Broad Array of IT Challenges to Achieve Business Continuity

Today, organizations of every size and type conduct business electronically, and as a result are dependent on reliable, continuous access to their applications and information to do business.

At the same time, threats to IT resources are growing in number, type and severity. These include everything from viruses, “malware” and data corruption to application failures and natural disasters. Plus, IT departments face a plethora of recurring challenges, such as consolidating, migrating or virtualizing servers and the resources they host without disrupting operations or damaging resources.

Also amplifying the pressure on IT is the need to do business at an increasingly faster pace with greater volumes of critical data. Fifteen years ago, losing connection to an e-mail server may have been nothing more than a nuisance for many organizations, but today the same issue might result in a tremendous loss of productivity, customer satisfaction and public image.

All of these factors translate into an ever-important need to protect the business against disruption of personnel and physical operations *and* from the loss of access to IT resources. Moreover, in the case of a disruption, it’s imperative that IT resources are restored to a current, usable state as rapidly as possible.

### CA Technology to the Rescue

The CA XOssoft Replication and CA XOssoft High Availability family provides a single, seamlessly integrated, high-performance response to address these challenges. Through the comprehensive replication of applications, databases and files, this package of products ensures near instantaneous failover and restoration of IT resources after a loss or disruption — and over any distance. Plus, the CA XOssoft™ Assured Recovery™ Option offers proactive, automated testing of disaster recovery resources to help ensure readiness in the face of actual threats.

However, to be truly prepared for an emergency, it’s critical that recovery applications augment more traditional data protection methods. That’s why the CA XOssoft Replication and CA XOssoft High Availability Product Family easily integrates with the CA ARCserve Backup Product Family — joining forces to make up CA’s powerful Recovery Management offering. Of course, each application can be used independently, with other complementary third-party products or in an integrated fashion, depending on your organizational needs.

CA helps keep critical, IT-enabled business resources continuously available and reliable, so users are productive and protected from the broadest array of threats — even the most severe. We do this through a combination of:

- Real-time replication
- True continuous data protection (CDP)
- Application monitoring
- Application failover/failback
- CA XOssoft Assured Recovery for automated DR testing
- Backup integration

The CA XOssoft Replication and CA XOssoft High Availability Product Family includes:

**CA XOssoft REPLICATION**, which provides WAN-optimized, real-time data replication and rewind (CDP) technology for data availability. This helps reduce the recovery-time objectives (RTO) and recovery-point objectives (RPO) associated with disaster recovery and data protection across virtually any type of data. It supports cross-platform, Windows (server or cluster), UNIX and Linux, and also is an excellent data migration tool. With CA XOssoft Replication, you can migrate from live servers and stay in sync until you are ready to cut over to the new system.

**CA XOssoft HIGH AVAILABILITY**, which offers increased protection for Windows file and application servers or clusters and is the flagship product in this family. In addition to the CA XOssoft Replication product features this product also monitors the health of protected applications, and notifies the appropriate IT administrator when something is wrong. This can either trigger an automatic failover or allow the administrator to perform “push-button”, single-click failover or failback. The software also moves file shares if appropriate and helps ensure that users maintain access to authorized applications and data without any client-side changes.

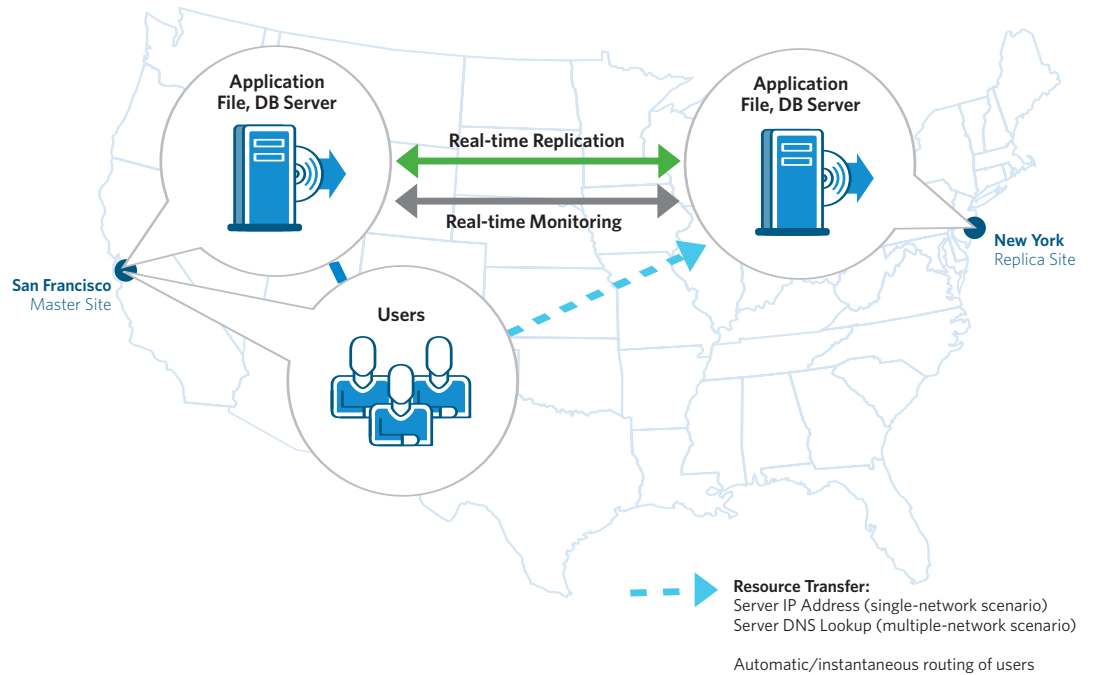
**CA XOssoft ASSURED RECOVERY OPTION**, a unique technology that enables comprehensive, automated and application-aware testing. As such, it regularly tests actual standby applications and data without disrupting your production servers or interrupting real-time data protection. Because of this, it automates and streamlines several very critical component-level DR tests. In fact, you have the ability to perform application-level tests by running the standby application, thereby modifying data without impacting your production environment or IT staff and while maintaining constant protection.

**CA XOssoft REWIND CDP TECHNOLOGY**, which is built into the data replication engine to provide true CDP to augment backups and snapshots. It does this by filling the in the protection “gap,” avoiding data corruption or accidental deletion between backups and snapshots. Acting in a similar manner to the rewind function on a VCR, this technology allows for granular data corruption recovery by giving you the ability to return back to seconds before the disruption event occurred. This option helps you avoid losing all data modified or created since the last backup or snapshot.

FIGURE A

CA XOssoft High Availability replicates across the WAN in real time while monitoring application availability.

CA XOssoft HIGH AVAILABILITY AT WORK



## Safety in Large Numbers of Integrated Capabilities

The CA XOssoft Replication and CA XOssoft High Availability Product Family offers:

- A strong multilayered approach to data and application availability through:
  - Automated, application-aware DR testing with easy-to-access VSS snapshots, which are perfect for quick day-to-day file recovery operations
  - Generic integration points for offsite or consolidated backups
  - Embedded rewind (CDP) technology that fills the gap in protection from data corruption or loss left by most replication systems
  - The triggering of the reboot or cluster node change from within the management system GUI or command line
  - Strict write-order integrity combined with many replication features ensures consistent replicated data, even in the face of real-world unpredictable failures
  - End-user accessible access to deleted Microsoft® Exchange™ items, such as attachments, notes and tasks without administrative involvement.
  - Full text indexing and searching sets this solution apart from lower-end offerings, which only allow searching by title or attribute rather than any text.

- Ease of use and deployment with:
  - Mature application awareness for Microsoft Exchange and SQL; Oracle; Microsoft IIS Web services; Blackberry Enterprise Server; and file servers, which make for very simple and automated configuration, monitoring, testing and failover/failback
  - A centralized and scalable web-based management system covering all product family functionality, which allows for a rich graphical experience without requiring a thick “Management Client” installation
  - Highly customizable web-based GUI and flexible server grouping capabilities, which are combined with dashboard and detail monitoring views in addition to a central report center
  - Intuitive wizards lower the learning curve and remove the need to memorize large manual
  - A powerful command line and scripting interface with many optional advanced features and scripting hooks, giving power users the ability to customize virtually every aspect of the product
  - Scenarios that can be run in assessment mode to benchmark network bandwidth impact before actually starting live data replication
  - Low profile and easy-to-understand reports that make for an excellent pre-deployment planning feature
  - No server reboot required for installation, updates or upgrades to the software — even on live data
  - Embedded remote installation capabilities in the configuration wizard or through the Remote Installation Wizard, which mean any number of servers updated or installed in a single step
  - A single installation, GUI and command line for the entire Product Family — the license key unlocks access to specific Products & Options for true integration and simplicity
- Transparent and automated high performance operation through:
  - Continuous, real-time, byte-level asynchronous replication of virtually any data type with optional compression, including open files and access control lists (ACLs)
  - Minimal IT support and no client side changes
  - A highly resilient network protocol that recovers quickly from connection losses and optimizes WAN performance via integrated tuning to avoid performance issues caused by latency
  - A newly updated architecture that provides the performance required to scale with today's most demanding native 64-bit applications, operating systems — and scalability to very large data sets with high change rates
- Cost-effectiveness achieved through:
  - A fully hardware-agnostic solution that supports replication and failover from any hardware platform or Microsoft Cluster to any physical or virtual platform
  - Lack of need for third-party clustering software
  - Protection from the broadest range of failures with one solution means a quick realization of ROI and the lowest total cost of ownership (TCO)
  - Highly scalable architecture, so deployments can start small and grow with need.
  - Flexible bandwidth throttling that enables limits on consumption of network resources
  - Compatibility with Microsoft & VMware™ virtual servers for consolidation, saving physical hardware, rack space, cooling, power, license fees and more

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## Taking Business Continuity Technologies to the Next Level

### CA XOssoft Assured Recovery Tackles DR Testing Challenges

In the IT environment, change is inevitable. Hardware components need to be replaced, software requires upgrades and people come and go. And, all these events can impact the performance of your disaster recovery systems.

As such, the dynamic nature of the IT environment makes it critical that system testing and personnel training occur on a regular basis and at the proper levels. Less disruptive, proactive tests can be carried out more frequently than more reactive, live ones. As a result, problems detected early cost less to fix and require limited downtime.

CA XOssoft Assured Recovery enables comprehensive and regular tests of your standby DR servers without any disruption to your production servers. Automating and streamlining several critical component-level DR tests, it does not interrupt real-time data protection.

In addition, CA XOssoft Assured Recovery allows you to perform a live test of your disaster recovery server by running the actual standby application without impacting your production environment or protection, even when modifying data. The Assured Recovery Option can be used with either CA XOssoft Replication or CA XOssoft High Availability and comes with out-of-the box support for Microsoft Exchange, SQL Server, IIS web servers, and Oracle database servers. Support for other applications or advanced customization can be added through simple scripts or even batch files. Both manual and fully automated scheduled testing is supported, all without disrupting production users or interrupting real-time data protection.

Yet, CA XOssoft Assured Recovery adds further layers of offsite protection with very simple and quick methods to recover deleted files or retrieve older versions of databases, such as the ability to take a Microsoft VSS snapshot of the data. Snapshots can be exposed as a folder or drive letter for easy access through the graphical or command line interface, and snapshot management quotas also can be set to ensure a proper balance between disk space usage and the number of stored historical snapshots.

Acting as an integration point with virtually any software solution, CA XOssoft Assured Recovery Option triggers a backup of the data through integration points that communicate via batch files or scripts. Again, all of this is done without disrupting real-time data protection or the production system.

### Filling In the Gaps with CA XOssoft Rewind CDP Technology

Real-time data protection achieved through replication is an excellent method for providing two copies of a data set at multiple locations. Should you lose the primary copy, an up-to-date copy is immediately available with little-to-no data loss.

This technology is very prevalent in DR solutions and provides the first level of protection. However, real-time data replication does have a weakness. If data is damaged on the source server, the corruption will most likely be replicated immediately to the target or standby server.

Corruption is unusable data and has a variety of causes, such as human error, application flaws or viruses. As such, the replication engine cannot determine that a specific piece of information is unusable, because it's simply doing its job by ensuring the target or standby server is constantly up to date.

If data corruption that real-time replication alone cannot address occurs, there is a gap in protection. Traditionally, recovery from such an event requires that you restore information from the last backup or snapshot, which is likely too many hours old.

CA XOssoft Rewind Technology provides true CDP that fills in the “gap” between backups and snapshots. Rewind technology is embedded as part of the core replication engine and continuously captures and stores all the information that has been overwritten on the target or standby server. This allows for the most granular recovery from data corruption possible — literally turning back the clock to seconds before the disruption, reducing the amount of lost information.

Because this technology is designed to augment backups or snapshots, disk space requirements are minimal. In fact, only the changes between backups and snapshots need to be maintained. If access to older data is required, you can utilize the existing backups or snapshots. And, rewind technology is embedded as part of the core product at no additional cost.

CA XOssoft Rewind CDP Technology is customized for database systems supported by CA XOssoft Replication and CA XOssoft High Availability, thereby allowing the administrator to revert to a specific known good database “checkpoint.” Application events displayed in the OS event log are also listed next to the checkpoints. By adding application awareness, the technology ensures data is returned to a known consistent state and makes it easier for the administrator to determine what to what point to return.

### Traditional Backups Still Play a Key Role

Not all applications and data need real-time replication or automated failover capabilities, and for this reason tape and/or disk backups are still critical to the overall business continuity plan. This traditional technology still provides the final layer of protection, as well as offering some additional capabilities, such as bare metal recovery and the storage of historical data per company or regulatory policy.

While it's common for organizations to have solid backup, restore and security procedures in place at the datacenter or central office, the remote or branch offices (ROBOs) still tend to be problem areas. Backup hardware and physical media frequently are managed at the ROBO by less experienced staff — or run without the support of any IT staff. For these reasons many ROBOs tend to fly under the radar when it comes to monitoring backup success, testing restores and following security and maintenance. This leads to failure-prone recovery processes in the ROBOs and unnecessary administrative overhead.

CA Recovery Management offers an integrated product line consisting of the CA XOSoft Replication and CA XOSoft High Availability Product Family and the CA ARCserve Backup Product Family. While both families provide significant value on their own, or in conjunction with other 3rd-party vendors, the integrated CA Recovery Management solution is able to offer even greater levels of productivity and overall protection. Real value is found in your ability to manage more of the complete business-continuity IT footprint using one CA solution.

CA Recovery Management in the remote or branch office is one area where this technical integration can shine. Using CA XOSoft Replication or CA XOSoft High Availability, WAN-optimized, replication technology data can be efficiently consolidated to the datacenter or central office. This is where CA ARCserve Backup steps in to backup the data in a secure and properly managed environment.

CA ARCserve Backup is able to backup and restore data replicated using CA XOSoft Replication or CA XOSoft High Availability technology without complicated customization. Backup jobs of replicated data are scheduled and configured completely through the CA ARCserve Backup management system, and the technology recognizes the original source of the data if the data needs to be restored. This provides the administrator a choice to restore directly to the original server or restore to the central backup server and use the replication technology to move the data back to the remote or branch office.

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## The CA Advantage

The CA XOssoft Replication and CA XOssoft High Availability Product Family offers industry-leading protection of critical business applications and information, even under the harshest conditions. And, as a long-time market leader in IT-enabled business solutions, CA supports these innovations with proven industry experience.

The CA XOssoft Replication and CA XOssoft High Availability Product Family is based on our vision of Enterprise IT Management (EITM). Through this, we help you unify and simplify management of your enterprise's IT resources to maximize their value to your business.

And like our other offerings, the CA XOssoft Replication and CA XOssoft High Availability Product Family is built for easy integration and interoperability with other management and protection tools from CA and other third-party vendors. An example of this is the integration between the CA XOssoft Replication and CA XOssoft High Availability Product Family and CA ARCserve® Backup, which come together as part of CA's Recovery Management solution. Through this collaboration, CA provides a continuum of data protection, from traditional backups to application availability to disaster recovery.

In addition, all CA solutions are supported by a broad ecosystem of industry partners, as well as the power and talent of CA Technology Services™ and CA Education. This means that you will always have support with your IT management challenges — now and in the future.

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## Next Steps

You know how critical your IT resources are to your business and, therefore, how important it is to keep them available and up-to-date. The CA XOssoft Replication and CA XOssoft High Availability Product Family offers powerful, flexible and integrated replication and synchronization features that can help you protect those IT applications and systems. Such protection translates directly into greater agility and productivity for your company and its customers, employees and partners.

Learn how quickly and easily the CA XOssoft Replication and CA XOssoft High Availability Product Family can help you and your enterprise meet specific availability, replication and synchronization needs by taking the CA XOssoft Replication and CA XOssoft High Availability Product Family for a free test drive at [ca.com/trials](https://ca.com/trials).

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To learn more, visit [ca.com/recovery](https://ca.com/recovery).

CA (NYSE: CA), one of the world's leading independent, enterprise management software companies, unifies and simplifies complex information technology (IT) management across the enterprise for greater business results. With our Enterprise IT Management vision, solutions and expertise, we help customers effectively govern, manage and secure IT.

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Learn more about how CA can help you transform your business at [ca.com](https://www.ca.com)

