arcserve®

ARCSERVE

unparalleled protection of

HIGH

business-critical systems

AVAILABILITY

HIGH AVAILABILITY
SOLUTION BRIEF

Arcserve®
High Availability

The cost of losing critical applications has been estimated by experts at more than $5,000 per minute, and for most organizations, the question is not if a disaster or outage could happen, but when it will occur, and how severe it will be[1]. To reduce the risk of significant impact to your business, staff productivity, and overall reputation, organizations must be able to fulfill demanding service-level agreements (SLAs) to strengthen their business continuity and disaster recovery plans.

The big question is how.

There are a host of disaster recovery options available, but in many cases, organizations find that their backups and replicas of data aren't recoverable after an outage. This isn't surprising considering that more than 60% of survey respondents to the The State of Global Disaster Recovery Preparedness Annual Report indicate they don't have a fully documented recovery plan. Of those that do have disaster recovery plans in place, more than 65% admit they don't pass their own tests![2]

Without testing and verification of disaster recovery protocols, most companies have no idea whether they can fully recover their systems in the event of data loss or an outage. However, one this is clear: both intentional and accidental threats to IT systems continue to accelerate, and organizations must be better prepared to validate that they will recover within Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs).

One option, high availability, is considered a standard for any organization that depends on consistent availability and continuous protection of its critical systems, applications, and data. High availability can be measured relative to "100% operational" and can mean the difference between lost customers, lost revenue, and damage to your company's productivity and reputation. Whether you protect a single server or virtual machine, or thousands, it's critical to find a solution that not only provides continuous data protection, but also reduces system downtime and data loss to help you meet demanding service level agreements and business continuity strategies.

[1,2] The Sate of Global Disaster Recovery Preparedness 2014 Annual Report. (2014). Retrieved July 9, 2015 from http://drbenchmark.org/wp-content/uploads/2014/02/ANNUAL_REPORT-DRPBenchmark_Survey_Results_2014_report.pdf

Data that's always available: **Arcserve High Availability**

Uptime is Peace of Mind.

Reducing system downtime and data loss has never been easier. Arcserve High Availability software helps you ensure business continuity with innovative features that have one common purpose: to keep things simple, efficient, and up and running! Working in conjunction with Windows®, Linux™ and UNIX® servers, you get continuous system, application, and data availability for physical and virtual servers to mitigate risk of lost sales and service – all from a single, unified management console.

Arcserve High Availability makes streamlining your data protection strategy easy, with a single solution for critical third-party and custom applications as well as for your Microsoft applications (Exchange™, SQL Server®, SharePoint®, and Internet Information Services®) – removing the need to use different solutions for each application. Further, it's quickly deployable on-premise, off-premise, and in the cloud giving you the control and flexibility you need while reducing complexity, cost, and training.

When your systems go down, all eyes are on you.

Trusted by thousands of customers worldwide, Arcserve High Availability helps you minimize system and business downtime, and data loss caused by accidental and malicious damage, administrator error, unplanned and planned system outages, and natural and man-made disasters. You'll be in a much better position to meet demanding SLAs that traditional backup and recovery solutions alone can't satisfy. Plus, it complements whatever backup solution you use today, delivering a high-performance business continuity and disaster recovery solution that you can count on. Whether you protect a single server or thousands, you get system scalability that grows with your business. You can end those frantic 2:00 a.m. and weekend calls, because you'll be protected 24 x 7 x 365.

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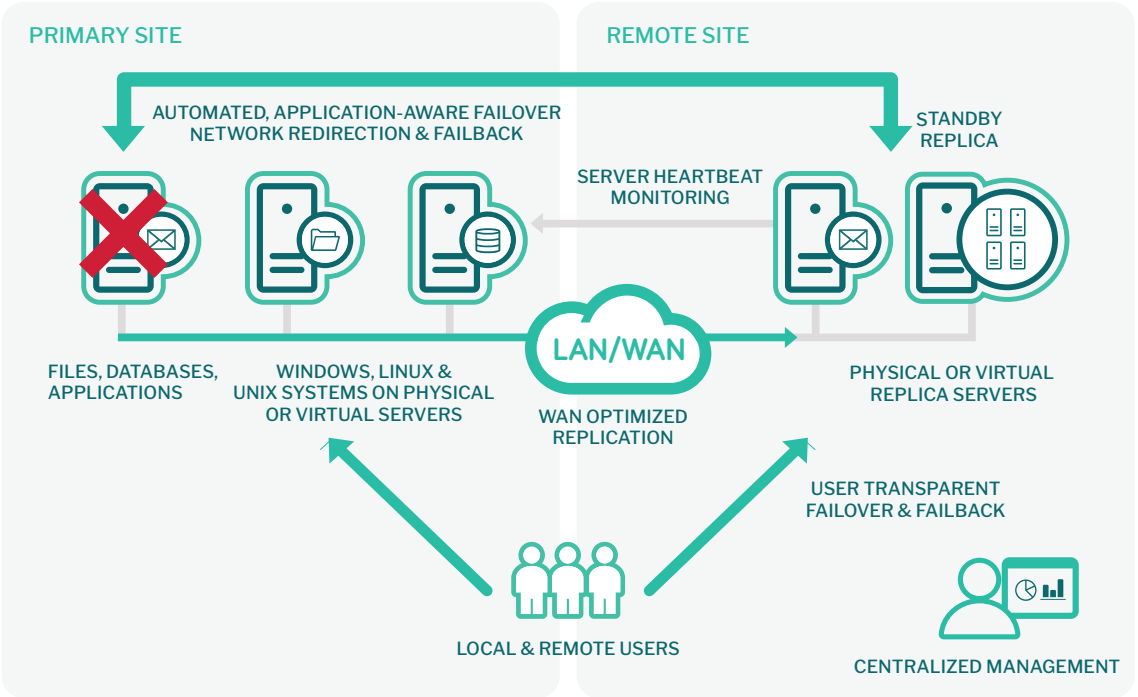
How it Works.

Arcserve High Availability first synchronizes the data on your Windows, Linux, and UNIX production servers and a second replica server (physical or virtual) that you provision locally, at any remote location, or in the cloud. Alternatively, for Windows environments, you can use the Full System Protection feature to automate the provisioning of your replica server (using a virtual server) to speed up deployment.

Once synchronized, Arcserve High Availability continuously replicates all ongoing byte-level changes from your production server to the replica server. It provides application-aware replication, which means automated configuration and transactional integrity for applications such as Exchange, SQL Server, SharePoint, IIS, Microsoft Dynamics® CRM, Oracle®, and BlackBerry®. You can protect other Windows applications by using the Custom Application Protection wizard or with a simple script (you can protect Linux and UNIX® applications with a simple script as well).

Arcserve High Availability provides real-time server and application monitoring, automatic and push-button failover, automated end-user redirection, and push-button failback functionality—all to help reduce system downtime. Unlike complex distributed cluster and storage area network (SAN) replication solutions, you get granular, application-aware protection, recovery, and availability for systems and data in one single solution—it doesn't get easier than that!

Arcserve High Availability Disaster Recovery Architecture



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Everything but the kitchen sink.

Arcserve High Availability is so jam-packed with innovative features that we're hard-pressed to include them all in one brochure, but we'll try.

Physical and Virtual Server Protection

Arcserve High Availability protects data on both physical and virtual servers. Users of VMware® ESX and VMware® vSphere™ get VM-level protection with built-in VMware® vCenter™ Server High Availability. Microsoft Hyper-V users get both hypervisor-level and guest-level protection, and Citrix® XenServer users get guest-level protection. You may also use any of these virtual server platforms for your replica servers to help reduce business continuity and/or disaster recovery costs.

Continuous Data Protection (CDP)

The Data Rewind feature, combined with real-time replication, provide integrated continuous data protection to complement periodic backups. It also delivers fast data recovery, helping you to meet aggressive RPOs and RTOs. Just rewind the data stored on the replica server back to any known, good point in time and quickly recover lost files, data, and databases.

Automated Recovery Testing

Arcserve High Availability includes Assured Recovery™ for automated, non-disruptive recovery testing in Windows server environments. This enables you to schedule "lights-out" periodic testing of your failover environment without disrupting the production environment or ongoing replication. You can capture your testing history in a report for auditing.

Cascading High Availability

Gain more flexibility and a higher level of protection with cascading high availability, which allows you to configure a failover scenario to more than one replica server. This is especially useful when designing a combined local and remote failover strategy, and when combining local and remote/MSP resources.

Secure Communication

Arcserve High Availability provides AES256 encryption across the network, to any remote site, and the cloud without the need for a virtual private network (VPN) or IPSec tunnel, thereby reducing cost and complexity.

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Overcoming Bandwidth Constraints

For bandwidth-constrained and high-latency networks, Arcserve High Availability provides wide area network (WAN) optimization features including: compression, bandwidth throttling, multi-stream replication, periodic replication, and offline synchronization. To help you plan your network needs, you can leverage a built-in bandwidth estimator tool that simulates replication without affecting the production environment.

Storage Independence

Being storage-independent means that your systems and data are protected, no matter what type of storage you use – direct attached storage (DAS), network attached storage (NAS), or SAN. It also means that you reduce costs by leveraging your chosen storage vendor and device for your replica server, no matter what you use for your production environment.

Full System Protection

Full system protection replicates an entire system, including the Windows operating system, system state, application, and data to an offline virtual machine (VMware and Hyper-V) stored locally, at a remote site, and even in a public cloud like Amazon Web Services (AWS/EC2). It offers automatic and manual failover, as well as non-disruptive bare metal restore (BMR) failback. The feature automatically stands-up the replica server after automated or push-button failover and redirects end-users.

Amazon® AWS Integration

Integration with Amazon AWS enables the use of Amazon's data center and resources for the replica server. Using a pubic cloud allows you to benefit from having a remote site with a defined service level agreement for business continuity and disaster recovery, and you can convert CAPEX to OPEX. You receive full system protection with continuous system and data replication, using virtual cold standby. This helps reduce the cost of your cloud service as you only pay for storage and failover time used.

> Unlike complex distributed cluster and storage area network (SAN) replication solutions, you get granular, application-aware protection, recovery, and availability for systems and data in one single solution.

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Key Feature	Key Benefits
PHYSICAL AND VIRTUAL SERVER PROTECTION	Use a single solution to protect data on both physical and virtual servers
CONTINUOUS DATA PROTECTION	Complement periodic backups to meet aggressive RPO and RTO schedules
AUTOMATED RECOVERY TESTING	Schedule "lights-out" periodic testing of your failover environment without disrupting the production environment
WAN OPTIMIZATION	Leverage compression, bandwidth throttling, multi-stream replication, periodic replication, and offline synchronization
STORAGE INDEPENDENT	Supports your current storage type: direct attached storage (DAS), network attached storage (NAS), and SAN
FULL SYSTEM PROTECTION	Continuous real-time physical-to-virtual (P2V) and virtual-to-virtual (V2V) replication for your Windows servers
BARE METAL RECOVERY	Quickly and easily restore your production servers
PHYSICAL TO VIRTUAL MIGRATION	Migrate physical servers to virtual using full system protection for Windows
AMAZON AWS INTEGRATION	Amazon Cloud EC2 integration enables the use of Amazon's data center and resources for the replica server
AMAZON CONNECTION PROTOCOL	Configure the Amazon EC2 connection protocol - SSLv2, SSLv3, TLSv1, TLSv1.1, or TLSv1.2
AMAZON EC2 INTEGRATION	When provisioning Amazon EC2 replica, you can choose an instance with SSD and/or an Encrypted volume
VMWARE VSPHERE INTEGRATION	Choose a custom network adapter (such as VMXnet3) in a VMware vSphere target
SECURE COMMUNICATIONS	AES256 encryption to any remote site and the cloud without a virtual private network (VPN) or IPSec tunnel
CASCADING HIGH AVAILABILITY	Supports failover to more than one replica server, which is useful when combining local and remote/MSP resources
SQL SERVER FILESTREAM	SQL BLOB data is automatically discovered and replicated
EXCHANGE 2013	Supports application-aware byte-level replication, automatic and manual failover, and push-button failback for Exchange 2013
SHAREPOINT 2013	Full system protection scenario for SharePoint 2013 server/farm high availability
RHEL AND CENTOS SUPPORT	Supports source machines running RHEL 6.6, 6.7, 6.8, 7.2 and CentOS
WINDOWS 2016	Support for Windows 2016 environments *

* Limited support

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Bridging the Gap: Use Cases

Saving Money with High Availability and/or Disaster Recovery

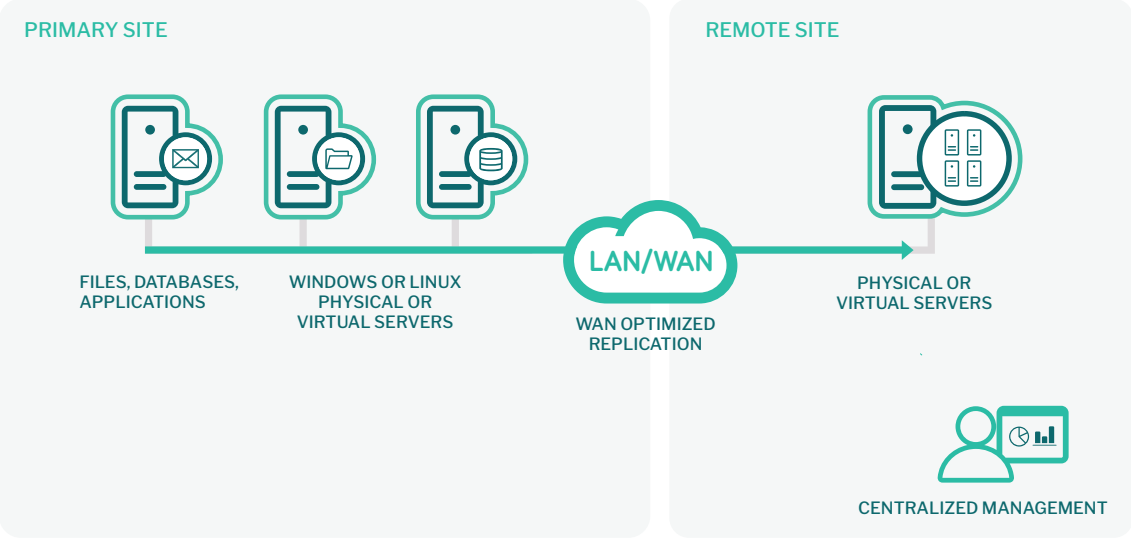
Arcserve High Availability fills up your piggy bank by delivering continuous data protection and system availability using virtual servers. You enjoy complete flexibility with the ability to use any combination of vSphere, Hyper-V, or XenServer. It's backed by an arsenal of all the advanced features you'd expect, including automated disaster recovery testing and/or push-button fail-over and fail-back, data rewind for CDP, WAN- optimized replication, and jumpstart data seeding for remote sites. Arcserve High Availability protects data on the storage platform of your choice, and comes standard with centralized management and reporting. Other cost-saving features include:

- Block-based, WAN-optimized replication for physical and virtual systems
- Up to four times improved performance for WAN-based replication scenarios
- Unidirectional communication via HTTP tunnelling, which eliminates configuration issues with NAT and firewalls
- Data compression, encryption, and global deduplication
- Concurrent data replication across multiple systems and sites
- Advanced scheduling and differential retention
- Restart of failed jobs at the last block

Simplify and Accelerate Physical to Virtual Migrations

One of the hidden secrets of Arcserve High Availability is its capability to simplify and accelerate physical to virtual migrations. You can replicate from old to new, regardless of the vendor, class of system, and type of processor virtual volume size (e.g. VHD to VHDX). Even better, the entire process is automated and non-disruptive to production systems, making full system replication and migration of Windows-based servers quick and easy.

Physical to Virtual Migration Architecture



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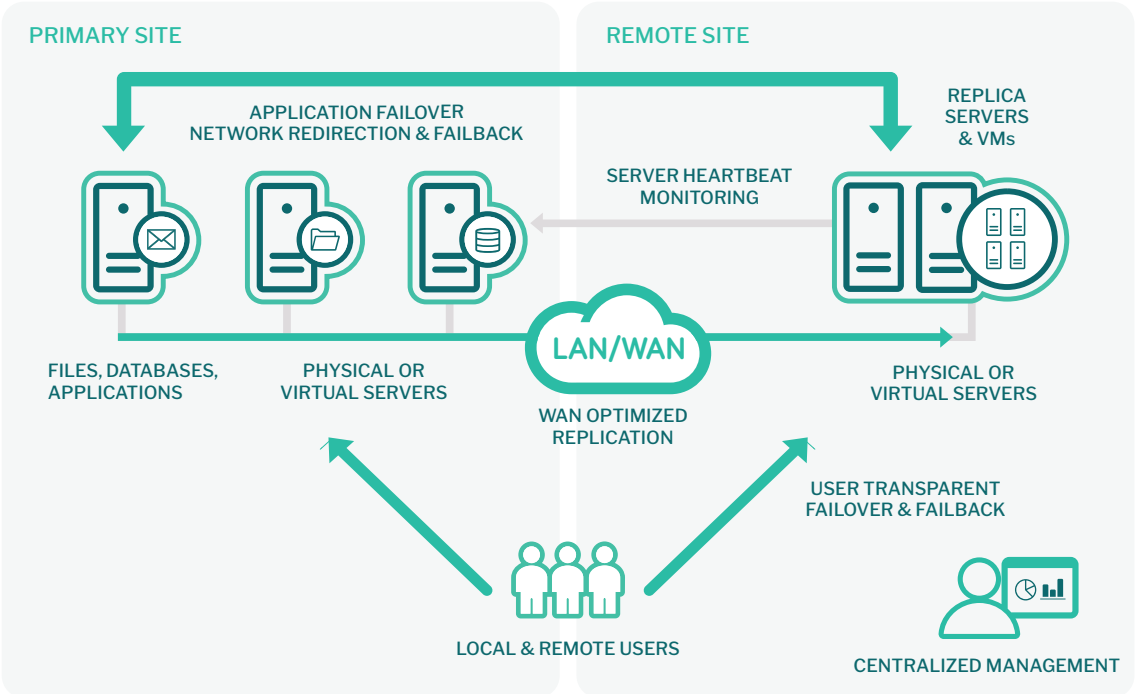
Reduce Disaster Recovery Testing Costs and Simplify Regulatory Compliance

Arcserve High Availability enables automated disaster recovery testing of business-critical systems, applications, and data on a separate physical, virtual, or cloud-based replica server. Recovery testing can be fully automated, or performed on a scheduled basis as needed, and Assured Recovery reporting provides evidence of system recoverability for compliance auditors.

Reduce System and Business-Critical Application Downtime

Does your business suffer due to application maintenance and the associated downtime? One of the benefits of Arcserve High Availability is its capability to simplify hardware maintenance and system upgrades. You're quickly able to perform push-button failover and failback, and the entire process is automated and non-disruptive to production systems. Further, it allows maintenance to be planned or scheduled for more convenient times (e.g. avoiding late nights or weekends).

Planned Application Failover and Failback Architecture



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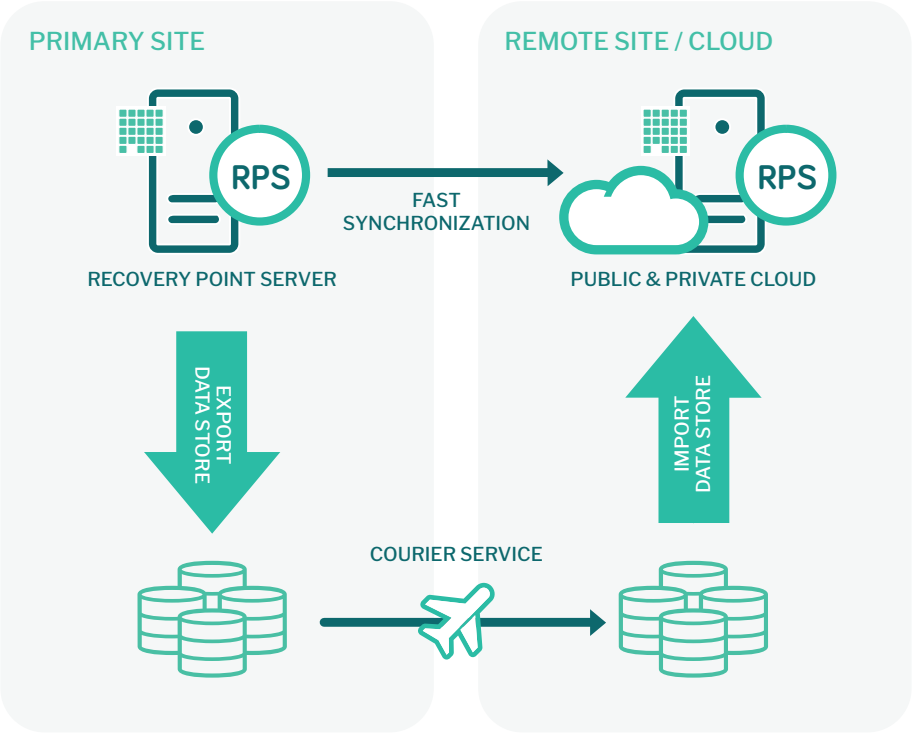
Simplify Development and Patch Testing

Creating system and application clones for development and testing is a chore that every IT Administrator loathes. Arcserve High Availability simplifies this time consuming process with push-button automation and replication of complete systems for testing purposes. Testing can be performed on replica systems locally or at a remote site, and it leverages WAN-optimized replication to reduce waiting time.

Jumpstart Data Seeding

Jumpstart data seeding is ideal for environments with limited bandwidth or charge-by-the-usage connections. It allows you to ship a full copy of the system and application on a portable disk drive to the remote site, where it is downloaded and synchronized with the source target. This offline synchronization accelerates deployment of remote recovery point servers and helps to optimize data transfers. Plus, the process is wizard-driven and supports public clouds such as Amazon, Azure, Rackspace, and others, who offer data import services.

Jumpstart Data Seeding Architecture



Get Started with Arcserve High Availability.

In order to meet today's demanding SLAs and business continuity and disaster recovery strategies, you need a solution that delivers system, application, and data availability along with continuous data protection capabilities. Arcserve High Availability complements any backup solution, and, when combined with Arcserve® Unified Data Protection (UDP), gives you high availability and comprehensive data protection to address demanding recovery time objectives (RTOs) and recovery point objectives (RPOs). You reduce downtime by maintaining access to key business applications and are able to keep data and information accurate with continuous data protection. As a single solution for Windows, Linux, and UNIX, it minimizes training and costs for IT staffs, as well as improves productivity through its centralized, automated management and reporting capabilities.

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