PRODUCT OVERVIEW

DOUBLE-TAKE® AVAILABILITY

Ensure the availability of critical systems with real-time replication and failover

Application Availability for Windows Servers

Double-Take® Availability provides continuous data replication over any distance so you always have access to a current copy of your data, applications and operating system (OS). Double-Take Availability monitors changes to all protected files and replicates only the bytes that change. You can replicate to a disaster recovery site as far away as you would like, over standard IP networks, for maximum protection against data loss and improve performance by compressing the protected data before sending.

Choose between application-level or full-server failover to configure an alternate system to take over for the production server in the event of an outage. Double-Take Availability protects Exchange, SQL Server®, SharePoint® and more.

### Cluster Availability for Windows Failover Clustering

The GeoCluster™ feature of Double-Take Availability lets you implement failover clusters without shared storage or geographic limitations – eliminating the single point of failure and giving you the freedom to locate cluster nodes wherever you want. A software approach encouraged by Microsoft, Double-Take Availability provides the technology you need to ensure maximum availability for your Windows Server® clusters.

Virtual Machine Availability for vSphere and Hyper-V

Consolidating workloads with Windows Server 2008 Hyper-V™ or VMware® vSphere saves serious time and money. However, if a host server goes down in a disaster it can take several workloads, plus profit and productivity, with it. Double-Take Availability

can replicate virtual machines from one virtualization host to another in real time and automatically failover those virtual machines to the second host in the event of an outage or disaster.

How Double-Take Works
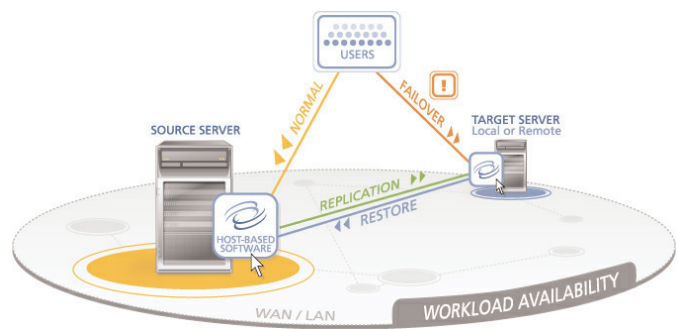
Application– and Platform–Independent Availability

Double-Take Availability supports any application running on Windows and works either on physical or virtual servers. It is also possible to replicate entire virtual machines from one host to another for vSphere and Hyper-V environments; regardless of the application or platform, you can ensure critical workloads are always available.

Platform support:

Windows Server 2003/2008 Standard/Enterprise/Datacenter Editions (32 and 64-bit)

Windows Server 2003/2008 Storage Server Edition

Windows Server 2003/2008 Small Business Server Edition

VMware vSphere

Windows Server 2008 Hyper-V

Microsoft GOLD CERTIFIED Partner

Windows Server 2008

vmware® technology alliance PARTNER

Defend Your data – anytime, anywhere

Continuous, asynchronous byte-level replication over any distance. Double-Take Availability monitors changes to all protected files or virtual machines and replicates only the bytes that change to a disaster recovery site as far away as you would like, over standard IP networks, for maximum protection against data loss.

Open-file mirroring and replication. Double-Take Availability processes and replicates open files without taking them offline; applications remain online and users stay productive.

Data Integrity and Write-Order Consistency. On Windows Server hosts or within Windows-based virtual machines, Double-Take Availability uses its patented STAR (Sequential Transfer Asynchronous Replication) technology to ensure the integrity of replicated data, which is especially important in the case of transactional databases such as Microsoft SQL or Microsoft Exchange. When replicating vSphere VMs, Double-Take Availability uses VMware APIs for virtual machine snapshot functionality, ensuring that VMs are in a known and consistent state, readyfor recovery at any time. (See figure 1.)

Flexible bandwidth scheduling. Impose higher or lower network usage limits during those times when most appropriate for your business. Limit network use of Double-Take Availability during busy work hours and increase or remove these limits during non-peak times for efficient replication with the least amount of impact on production resources.

Protects Exchange, SQL Server, Oracle, SharePoint, and more. Double-Take Availability is hardware and application independent, allowing you to use the hardware and software that suit your business.

Continuous, full-server replication. There's more to protecting your systems than just protecting the data. Double-Take Availability hardware-independent full-server protection protects the OS, applications and data for easy recovery to another physical or virtual machine regardless of make, model or configuration

Point-in-time recovery. Double-Take Availability integrates with Microsoft Volume Shadow Copy Service to allow you to schedule and recover from up to 64 point-in-time copies of data on your Double-Take Availability target when running on a physical server or within a virtual machine.

No shared storage; no single point of failure for Windows clustering. Maintain a separate, continuously updated copy of clustered data resources on each cluster member for seamless recovery from any node, application or storage failure. Plus, with Double-Take Availability you're not limited to Windows Server Failover Clustering – certified storage – you can use any storage hardware, regardless of vendor, model, or interconnect.
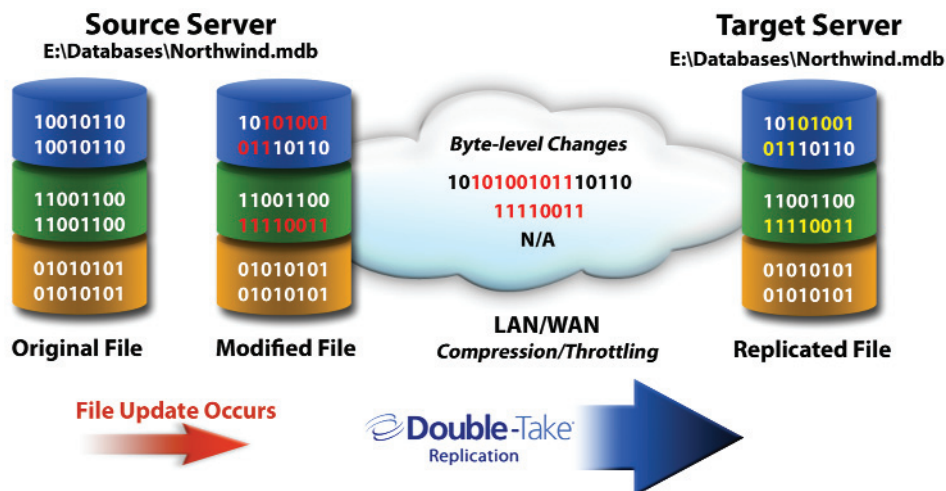
Figure 1: Byte-level replication with Double-Take Availability

Supports clustered deployments on Windows servers. Protect up to eight nodes in a single cluster; replicate to or from MSCS clusters of up to 16 nodes, and automatically respond as cluster resources move from node to node.

Shared/Replicated data verification. Verify and report that Double-Take Availability targets are synchronized with sources. Also, the GeoCluster™ feature of Double-Take Availability guards against data corruption by keeping clusters from failing over to a node that has suspect data. Users have the option to verify data on the target before putting it online, revert to the last known good snapshot of the shared data, or force the resource offline.

Double-Take Cargo® The Cargo feature optimizes the storage on your file servers by removing older data from production systems and replacing it with pointers to copies of that data on a Double-Take Availability target. Optimizing file server data in this way can both reduce storage requirements and improve the performance of backup and disaster recovery.

Exclusive resource planning tool. Using the Double-Take Availability TDU (Throughput Diagnostics Utility), it is possible to simulate the amount of replication traffic generated by data changes in your environment and estimate the bandwidth you'll need to go live*.

Downtime is your enemy. Choose your weapon.

High availability and failover. Choose between application- or virtual machine-level or full-server failover to configure an alternate system to take over for your production server in the event of an outage. The Full-Server Failover feature of Double-Take Availability provides full server protection and failover, providing hardware-independent system state protection with monitoring and failover for critical systems. For vSphere and Hyper-V machines, replicating entire VMs ensures that you can recover quickly with one-click failover and restore.

Fast, simple configuration. The Application Manager feature configures and manages protection for Microsoft Exchange, SQL Server, Blackberry Enterprise Server, SharePoint Services and Windows File Services running on a physical server or in a virtual machine. It automates the setup and configuration of real-time protection and availability management for these business-critical applications. (See Figure 2.)
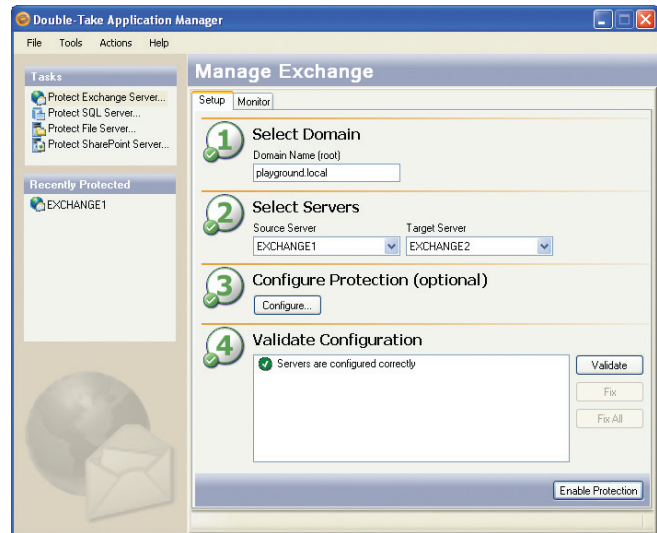

Figure 2: Double-Take Availability Application Manager

Failover testing. The Target Data Verification feature allows you to test replica data (as long as the target server is running Windows Server 2003 SP1 or later). Testing is performed against the replicated copy of data without the need to stop tracking changes on the source server or re-mirror the dataset. At the end of the test, changes to the replicated data are reverted using a snapshot performed at the beginning of the test and application of the replicated data in the replication queue is resumed.

On Hyper-V and vSphere platforms, the Double-Take Availability "undo failover" feature allows you to re-start the source virtual machine in the state it was in at the point of failover and discard any data changes that may have taken place on the target. The "test failover" feature allows you to start the target machine with no network connectivity in order to verify data integrity on the target while keeping the source machine available.

Comprehensive, streamlined management

Single-screen monitoring. The Double-Take Availability Dashboard provides the ability to sort, filter and monitor the health of your protected servers, the mirror status and event logs on one screen.

Centralized reporting and analysis. The Double-Take Availability Reporting Center* offers detailed, custom analysis and reports of your entire Double-Take Availability environment. The rich reporting and dashboard views of the reporting center make it easy to manage even the largest deployments.

Agent-less installation. On the vSphere platform, no agent software is required on the vSphere server or within any protected VM, providing easy management and rapid deployment of protection scenarios. In addition, replicating Hyper-V VMs from one host to another requires only an agent on the Hyper-V host and not within each protected VM, simplifying the configuration and management of protection for Hyper-V virtualized workloads.

Auto discovery and provisioning for Hyper-V virtual machines. Double-Take Availability integrates seamlessly with Hyper-V management interfaces to allow you to see a listing of all virtual machines in the environment and easily select which workloads to protect. Instead of manually selecting all of the necessary files required to protect and recover a VM, Double-Take Availability automatically discovers where the required files are and ensures they're replicated to the target Hyper-V host.

Integrated management for clusters. The GeoCluster™ feature of Double-Take Availability integrates seamlessly with Microsoft Server Failover Clustering, providing the administrators with one-step management of both data replication and cluster configuration/failover settings for multi-site clusters.

Email notification. Double-Take Availability can provide email event notifications that can be configured with different recipients for each server, with each having its own event notification level.

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*Does not apply to Double-Take Availability on ESX or vSphere

**Except Hyper-V and vSphere

SNMP counters and traps. Double-Take Availability allows you to forward replication statistics and events via SNMP to your enterprise management tools for simplified management.

Solutions and Pricing That Fit. Double-Take Availability capitalizes on the current investments you have in hardware, software and network connectivity and can seamlessly integrate to any configuration of physical or virtual machines you may have, allowing for a virtualized source, target, or both. Plus, in virtualized environments, the Datacenter Edition of Double-Take Availability allows you to protect an unlimited number virtual machines for one affordable price

System Requirements

- Windows Server 2008 Standard, Enterprise and Datacenter Editions (64-bit) (Double-Take Availability does not support clustering in a Hyper-V environment.)
- Microsoft .NET 3.5 SP1 (Installed on each Hyper-V host)
- VMs stored on a standard NTFS file system
- TCP/IP with static IP addressing or reserved DHCP addressing for Hyper-V hosts
- Microsoft® Windows® XP Microsoft Windows 2003
- VMware VirtualCenter 2.x or later
- VMware ESX Server 3.x or later

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