

# Migrating from Intel to AMD-based Servers with Near-Zero Downtime or Risk

Moving virtual workloads to new systems can be tricky, but the right tool can virtually eliminate the potential for downtime and failure.

WHITEPAPER



**Migrations are always challenging, even between similar physical platforms from the same manufacturer. If you change brands of hardware, hypervisor, or CPU architecture, however, there is an added level of complexity and risk.**

When sourcing new servers to host Win/Lin-based apps or VMs, buyers flock to hardware vendors who provide the best value for their dollar. For many these days, a good value comes in the form of AMD-powered servers. AMD-based servers are powerful, stable, consume little power, and are typically offered at a more competitive price point.

Need proof? Here are two similarly performing mainstream server SKUs:

Manufacturer	Processor	Pricing (1KU)
AMD	AMD Opteron™ 6272	\$523
Intel	Xeon E5-2640	\$885

Now, imagine how the savings per CPU add up as you begin to consider the acquisition of hundreds or thousands of new servers. You can bet the unyielding pressure to get more out of your datacenter investment is blurring the distinction between CPU makers.

## Migration Pitfalls

Once your new servers make it off the loading dock and into the datacenter the real work begins. Applications, Data, and System Settings must be moved to the new system, so it functions just like the old system. If problems occur, either during the migration process or after, productivity will suffer.

Migrations are always challenging, even between similar physical platforms from the same manufacturer. However, if you change brands of hardware, hypervisor, or CPU architecture, then there is an added level of complexity and risk.

This speaks to the chief concern of any IT organization planning a migration. Migration failures consume valuable resources. Failures can occur for a number of reasons. Specifically, IT organizations who have switched from Intel CPUs to those manufactured by AMD may experience a unique set of challenges.

You also can experience major migration setbacks when you encounter something as simple as a locked file or network disruption. Minor events can force you to restart the migration and many people do not have time for that.

## Migration Tools

Migration technologies can greatly reduce the amount of time needed to migrate to a new server and virtually eliminate end-user downtime and risk.

Electronically replicating an entire server environment from one system to another eliminates many of the pitfalls associated with traditional migration methodologies. Since replication occurs at the disk-level, any dependencies associated with hardware compatibility are negated.

Double-Take Move® migrates data while it's still accessible to users, without adversely impacting production systems. Simply select the data to migrate through an easy Explorer-like interface and Double-Take Move does the hard work, migrating data and metadata such as permissions and attributes.

Solutions with bi-directional migration capabilities are especially useful in instances where, after a few trial runs, your applications simply don't perform well enough (or at all) under production loads. Left with only the option of returning the production workload back to the old server until the problem can be resolved, two-way replication can offer a big advantage over uni-directional migration methodologies.

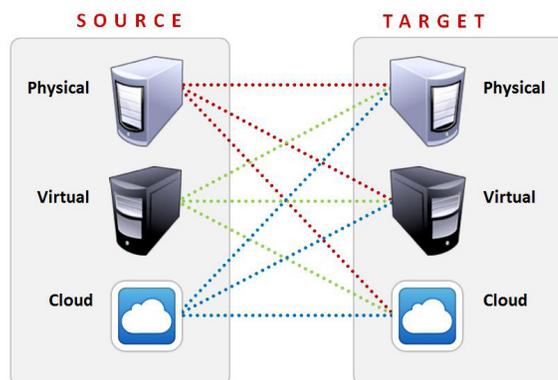
## Double-Take Move®

Double-Take Move is a widely used migration solution based on a patented replication engine that provides real-time, asynchronous, byte-level, replication resulting in an excellent RPO and no need for any re-synch from source to target prior to cutover to the new server. This is because Double-Take Move maintains a persistent replication connection from the source to the target.

With Double-Take Move, installation, configuration, and synchronization are typically handled with no downtime. Migrations are managed more effectively, and cutover to the new server can now be scheduled by the end user. With the advanced migration functionality in Double-Take Move, server migrations take just a few minutes from the beginning of the cutover process to the new server being online and available.

You also can mix and match storage configurations (Fiber RAID 10 to SATA RAID 5) and replicate just the actual data and not the entire LUN. This further helps you to flexibly migrate data and storage by eliminating configuration boundary constraints imposed by other migration methods.

In addition to eliminating challenges sometimes associated with migrating from Intel to AMD-based systems, Double-Take also eliminates the risk of moving between servers with a mix of hypervisors and OEM brands. This is because Double-Take Move is server and storage agnostic, making it possible to migrate between the following topologies (see graphic on right).



## Disaster Recovery and Failover

Double-Take Move is a migration specific tool and is built on the same replication engine that the Double-Take Availability product uses, and actually is the same installation binaries. Licensing and configuring a server with Double-Take Availability allows the end user to protect a server to a target server, be it to a local LAN based target server or to a remote WAN based target server. Once again, the X2X protection scenario applies.

Armed with adequate knowledge and the right tools migrating VMs between CPU vendors is not complicated or risky. Double-Take Move from Vision Solutions is one such tool.

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## About Vision Solutions

With more than 25,000 customers globally, Vision Solutions is one of the industry's largest providers of business continuity and information availability solutions for Windows, Linux, IBM i, AIX, and Cloud environments. Vision's MIMIX, Double-Take and iTERA brands keep business-critical information continuously protected and available. With an emphasis on affordability and ease-of-use, Vision products and services help customers achieve their IT protection and recovery goals, which in-turn improves profitability, productivity, regulation compliance, customer satisfaction and quality of life.

Vision Solutions oversees a Global Partner Network that includes IBM, HP, Dell, Microsoft, VMware, Citrix and a countless number of Reseller Partners and System Integrators. Vision Solutions, Inc., is privately held by ThomaBravo, Inc., Vision Solutions is headquartered in Irvine, California with development, support and sales offices worldwide.

For more information call: 1-800-957-4511 (toll-free U.S. and Canada)  
1-801-799-0300 or visit [visionsolutions.com](http://visionsolutions.com).

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Vision Solutions Blog: <http://blog.visionsolutions.com/>

Demo Video can be found on these links: <http://www.visionsolutions.com/AMD>  
<http://www.amd.com/virtualization>



15300 Barranca Parkway  
Irvine, CA 92618  
800-957-4511  
888-674-9495  
[visionsolutions.com](http://visionsolutions.com)