



# IT Solutions, Inc.

Solutions That Connect

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## Server Consolidation with VMware vSphere 4

**Opportunity:** National Media Company has aging servers that require too much physical space, overheat the server room and are no longer covered by vendor support. The solution needs to be cost-effective and increase application uptime.

**Technology:** VMware vSphere 4, Dell R510 servers, HP P2000 Storage, Double-Take Move

**Project:** Design and implement virtual infrastructure; migrate physical servers to virtual machines

**Solution:** Performed virtualization assessment of physical server environment to determine virtual performance and storage requirements. The virtual infrastructure was designed to meet the customer's current business requirements, while allowing for additional growth. VMware ESXi was implemented on two Dell R510 servers and was managed by a separate VMware vCenter server. An HP P2000 storage area network (SAN) was implemented to provide shared storage using the iSCSI protocol. The P2000 was chosen due to its performance, scalability, and ability to replicate to another P2000 asynchronously for DR purposes; should the customer decide to add this functionality in the future. Double-Take software was implemented to move more than 3TB of server data from the physical source servers to target virtual machines. A project plan, with scheduled application downtime and a carefully created application validation methodology, helped ensure that the newly virtualized servers were fully functional. Migrated from the customer's physical servers to virtual machines during off-peak hours; minimizing business impact of the transition.

**Benefits:** Lowered the client's operational costs by reducing physical server count by 70%. Power utilization and ambient room temperature were reduced due to fewer physical servers in the server room. Shared storage allowed virtual machines to run on either physical host server; mitigating the risk of a single server failure. New virtual servers can be added in a matter of hours, instead of weeks, enabling quicker IT agility to meet business needs. All servers and storage are now covered by vendor support contracts, allowing for quick resolution of hardware issues. The ability to remotely manage virtual servers enables IT support needs to be handled by outside support organizations. As the client storage needs increase over time, data growth can be handled by simply adding disks and allocating more space where it is needed; which does not require downtime. The virtual infrastructure has allowed the customer to drastically increase uptime and, at the same time, decrease the time it takes to add additional capacity; important for a growing company.