



## Success Story: VMware Infrastructure 3 Environment

### Summary:

TerpSys enabled its client to cope with a shrinking IT budget by streamlining and upgrading its existing hardware infrastructure while increasing the range and quality of services to end users.

### Client: National Cancer Institute (NCI)

NCI is a federal government medical research agency with more than 5,000 end users housed in over 20 buildings spread across a 40-mile radius, not counting additional researchers around the world.



### Objectives:

- Cut infrastructure costs by consolidating functions in less (but more capable) hardware
- Downsize data center energy footprint, including power and cooling requirements
- Streamline application deployment process while speeding up new server provisioning
- Minimize application and service downtimes due to hardware maintenance
- Expand scope and quality of development, testing and hosting services

### Challenge

NCI needed to achieve a number of apparently incompatible goals at the same time. These included replacing end-of-lifecycle hardware, maintaining existing service levels, increasing service availability and uptime, and implementing a range of entirely new IT services.

These technical challenges were compounded by severe economic constraints. By the time TerpSys became involved, the budget to implement the needed changes had already been cut significantly, and would likely be trimmed again.

Thus, TerpSys had to devise a robust, versatile, yet cost-effective solution combining a maximum of technical capability with value-conscious purchasing.

### Solution

TerpSys worked closely with NCI to identify its needs and goals and a range of possible solutions to meet them. Ultimately, TerpSys designed and deployed a VMware Infrastructure 3 Enterprise environment for the agency's IT management branch.

The VMware Infrastructure 3 is a proven "all-around" platform that offers superior performance at a reasonable cost. When combined with clusters of ESX Servers enabled for VMware High Availability (HA), Distributed Resource Scheduler (DRS) and VMotion, it allowed the client to significantly increase its range of service offerings and capacity.

Because the TerpSys VMare solution replaced aging, energy-inefficient, and increasingly unreliable hardware with fewer but more eco-friendly and technically capable units, NCI obtained the major system enhancements it sought while simultaneously cutting overall costs.

### Results

- Achieved server consolidation ratio in excess of 23:1
- Increased substantially both server memory and processor resource utilization
- Improved provisioning time of new server to 48 times that of previous server
- Saved thousands of dollars annually by reducing data center power consumption
- Freed up significant amounts of data center rack space
- Reduced downtime due to hardware failure & maintenance
- Enhanced range of options for disaster recovery and business continuity plans