

# VIRTUALIZATION

## VIRTUALIZATION AS PART OF THE INFRASTRUCTURE SOLUTION



CSC  
NORTH AMERICAN  
PUBLIC SECTOR

*Energy, downtime, maintenance, floor space, applications, upgrades and security are significant cost drivers for your IT infrastructure. The answer to reducing your costs and increasing capability can be found in virtualization. Having been involved in some of the largest virtualization projects in the world, CSC is an experienced partner in the world of virtualization. CSC can properly evaluate your environment and implement a virtualization solution in your workspace to reduce many of the associated IT costs, produce greater capability and manage your IT needs with greater dexterity.*

### Virtualization Benefits:

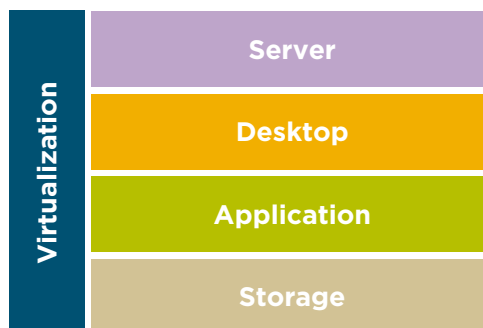
- Reduced capital costs
- Lowered operational costs
- Higher availability and performance
- Improved disaster recovery
- Better business continuity
- Greater flexibility
- Rapid provisioning
- Integral to the Green IT solution

### Why CSC:

- A trusted industry partner
- Serving the U.S. government for nearly 50 years
- Only Tier 1 IT infrastructure solutions provider with carrier legacy (>100 years)
- Over 90,000 employees
- Global reach
- Certified: ISO, CMMI, ITIL and Six Sigma
- Industry recognized leader in Green IT management

### The Virtualization Solution

Virtualizing your infrastructure can help you solve cost issues while providing better IT services. Benefits of virtualization include server consolidation, streamlined system deployments and high availability. These enable you to minimize downtime, increase efficiency, reduce operational costs and lower your carbon footprint. The challenge lies in finding the right virtualization solution or solutions that fit your organization's needs. From server consolidation to software as a service, we have successfully deployed virtualization solutions for both commercial and government customers throughout the world.



CSC assesses your organization's existing environment and IT infrastructure goals to recommend an effective virtualization solution. Our methodology ensures the shift from your as-is environment to a virtualization state is transparent to end users.

This methodology employs processes to address security enhancement recommendations, backup strategies, data recovery and administration. CSC's Enterprise Network Managed Services Center of Excellence (COE), coupled with our global test laboratories, provides us with the ability to test and evaluate tools and systems in order to determine their applicability to your solution. This ability to test prior to fielding helps reduce risk and realize significant cost savings.

### Server Virtualization

By sharing one physical server's computing power and dividing it into multiple virtual machines (VMs), you can run several operating environments and applications simultaneously. This allows a greater use of the servers' computing capacity. In comparison, dedicated servers frequently only achieve utilization levels of 20 percent or less. Server virtualization also improves agility and flexibility in infrastructure utilization. Each VM can be rapidly and easily moved from one physical server to another. Virtualization facilitates quick provisioning for short lead time projects and readily lends itself to data recovery and business continuity. Benefits of server virtualization include:

- Reduced capital and energy costs
- Reduced floor space and cooling area
- Minimized disruption, resulting in high availability
- Trusted applications and new services, without the need for a dedicated server
- Reduced manpower requirements for server administration

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## Desktop Virtualization

Using desktop virtualization, latency is no longer a factor in transmitting data to and from servers to workspaces. Thin, or thinner, clients can be used to provide employees access to their virtual desktops, applications and information. End users will interact with their thin client as if they were using a desktop PC.

Security is also a key factor in virtualization. With our virtualization solution, critical business or agency information remains in a secure data center environment. Access to a user's virtual desktop can also be made secure from a mobile device or PC with Internet access.

CSC has been developing, testing, evaluating and deploying virtual desktop solutions using the latest in software and hardware technologies. Through desktop virtualization, organizations can realize savings from reduced hardware and power costs, as well as increased security capabilities.

Benefits of desktop virtualization include:

- Reduced desktop hardware costs
- Centralized management
- Reduced application deployment costs
- Enhanced data security
- Simplified software updates

## Application Virtualization

Applications running on VMs or servers will provide your employees with whatever is needed to accomplish the job. Application management is simplified because your technicians won't have to upgrade each machine, just the application installed on the VM or server. In addition, applications can be thoroughly tested prior to fielding, and legacy applications can continue to be maintained and used by those who still need them.

Additional benefits of application virtualization include:

- Centralized application management
- Reduced time for application delivery
- Reduced application license costs
- Greater availability of applications
- Greater security

## Storage Virtualization

In a typical data center environment, there are Storage Area Networks (SANs) from various vendors, and each is managed using different proprietary software. With our virtualization solutions, you can use one system to manage your multivendor storage infrastructure so that it seems as if it is one single block of storage.

Storage virtualization technology brings new flexibility and utilization levels to storage, which enables the movement of data seamlessly between tiers of storage to free valuable primary capacity, without application outage; redeploing of aging assets for archive or other low performance applications; and bringing dynamic provisioning and replication to all classes of storage.

Benefits of storage virtualization include:

- More efficient use of storage infrastructure capacity
- Reduced downtime
- Reduced operational expenses
- Improved security
- Improved manageability

## Management of Your Virtual Environment

Guided by the IT Infrastructure Library (ITIL), CSC focuses on a comprehensive, holistic approach that ties together mission, costs, regulations, strategies, architectures and services. Without proper management, virtualization can be difficult to administer, and can even lead to increased costs. To avoid this risk, our solution includes providing the management tools needed to achieve the best service for your organization.

We can provide you with unparalleled service from start to finish, ensuring your satisfaction.