



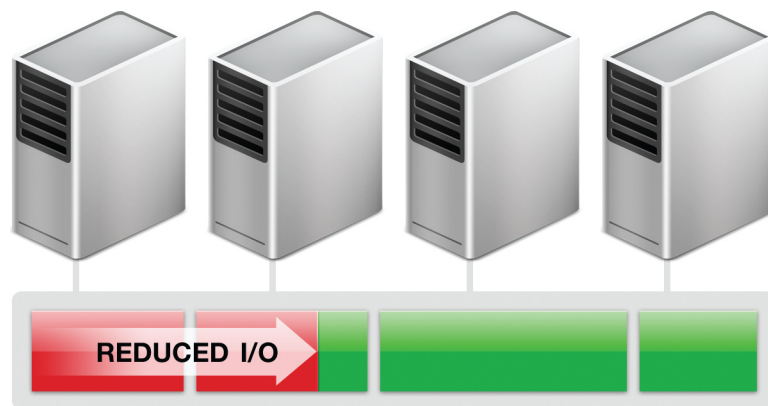
# Best Practice Protocols: Optimization of VMware Systems



Optimally managing disk I/O is a paramount concern for Storage & Virtualization Administrators in maintaining a high service level agreement. Despite the innate benefits in efficiency when moving from physical/Direct Attached Storage to a virtual model, there are new challenges and issues introduced. When bottlenecks do occur in a shared storage infrastructure, the entire shared platform can be affected – not simply the source OS. Disk optimization has become more pressing than ever before in preventing service drops and maintaining persistent resource availability.

In a resource-sensitive virtual environment, the ability to ensure contiguous files and eliminate unnecessary disk I/O traffic without any added overhead is essential. With the introduction of IntelliWrite® technology, a unique and proprietary solution is now available in V-locity® virtual platform optimizer. IntelliWrite optimizes file writes so that data access to files occur with the minimum of I/O resource requirements.

*“Defragmenting a disk is required to address problems encountered with an operating system as a result of file system fragmentation. Fragmentation problems result in slow operating system performance.”*  
– VMware KB article, [Defragmenting a Disk](#)



*Resource distribution in a shared storage infrastructure can vary from moment to moment; and due to the nature of a shared pool, a bottleneck in one location can impact resource availability elsewhere.*

V-locity provides the only hierarchical solution to address wasted disk I/O across the multiple layers in a virtual infrastructure, where I/O needs to be as efficient as possible. Implementation across the guest level not only assures increased I/O efficiency at each layer, the benefits to each virtual component resonate across the shared platform in the form of overall I/O saved for resource allocation.

A virtual guest is natively unaware of its position or resource allocation in a shared infrastructure, leading to the possibility for processes on an individual OS to negatively affect the entire shared infrastructure. The new InvisiTasking® technology allows V-locity to communicate between layers, permitting synchronous resource usage. As a result, each V-locity component within each OS has zero impact on any other virtual or host system – improving performance and allowing for greater density of Virtual Machines.

V-locity is 100% compatible with Dynamic/Thin Disks, Continuous Data Protection systems (Snapshots), Differencing Disks, Linked Clones, as well as Storage Area Networks (SANs). Fragmentation prevention with IntelliWrite assures that platform optimization occurs without image bloating or resource overhead.



*V-locity Guests: Optimizing disk I/O at the virtual level is critical for resource efficiency, not only individually but for the overall shared platform.*

Guest OS optimization is a VMware-recommended best practice for peak performance: “Defragmenting a disk is required to address problems encountered with an operating system as a result of file system fragmentation. Fragmentation problems result in slow operating system performance.” – VMware KB article, *Defragmenting a Disk*

V-locity was the first VMware-ready certified optimization solution on the market.

## Getting started is simple.

### Installation is very straightforward:

- Deployment of V-locity Guest component on each virtual machine

### Configuration is even easier:

- You're done. After installation, all components will begin synchronizing immediately in order to maximize resource efficiency while enhancing I/O efficiency.
- Provisioning note: As your environment changes, V-locity dynamically adjusts its configuration to ensure full compatibility and optimal I/O performance.

### Maintenance is intuitive:

- Utilize the V-locity Virtual Disk Compaction feature, which provides a simple GUI showing how much space can be saved by eliminating the free space gaps in any Thin/Dynamic Disks. One click begins the compaction process.