Key takeaways:

* Application virtualization solutions that use an embedded virtualization model (ThinApp) deliver the best application throughput. Only ThinApp delivers the combination of excellent raw performance plus low overall CPU utilization, making it the better solution for organizations seeking to minimize the performance “hit” typically associated with virtualization technology.
* By contrast, solutions that employ a kernel-mode driver or service (App-V, SVS, XenApp) introduce additional layers of software complexity – including significantly higher kernel-mode activity – which translate into runtime overhead that slows the application and/or places an additional burden on the CPU. These agents also consume a considerable amount of memory, both directly – as part of the agent’s process – and indirectly, through expansion of the application’s working set.
* Agent-based solutions also introduce a new and potentially catastrophic single point of failure (kernel mode execution) that IT organizations must factor into the testing and certification of their desktop computing stacks. Functional limitations, such as the lack of support for locked-down environments and/or inability to run on specific Windows versions (x64), further complicate the application virtualization equation, forcing IT shops to invest additional resources into designing infrastructure around these planning and deployment hurdles.

**Bottom Line:** Customers wishing to maximize desktop performance while minimizing configuration and deployment headaches will want to give strong consideration to agent-less solutions like VMware ThinApp. ThinApp’s advantages in the areas of application compatibility, flexibility and performance make it the logical choice for IT shops seeking to leverage application virtualization to augment their existing configuration management and deployment strategy.