

Improving storage performance for virtual desktops

Organizations of all types are considering virtual desktop deployments for their security, manageability, and ability to support remote workers. However, these deployments have unique performance characteristics that can drive up the cost of storage far beyond what organizations have budgeted for or can afford. Storage is often the most expensive component in a VDI deployment, and without proper investments in infrastructure, performance suffers and bad user experience results in slow adoption rates.

Infinio provides an alternative to expensive hardware-based solutions to address VDI performance problems. Infinio builds a distributed caching layer that improves performance exclusively from RAM, meaning no SSDs or flash is necessary. Infinio's scale-out architecture makes it scalable for environments as small as a few hundred users up to many thousands of users.

The cornerstone of Infinio's architecture is a sophisticated content-based directory, which enables global data deduplication across an entire cluster. In VDI environments, this deduplication is incredibly effective, often creating an effective cache size that is five to eight times the physical memory allocated to Infinio.

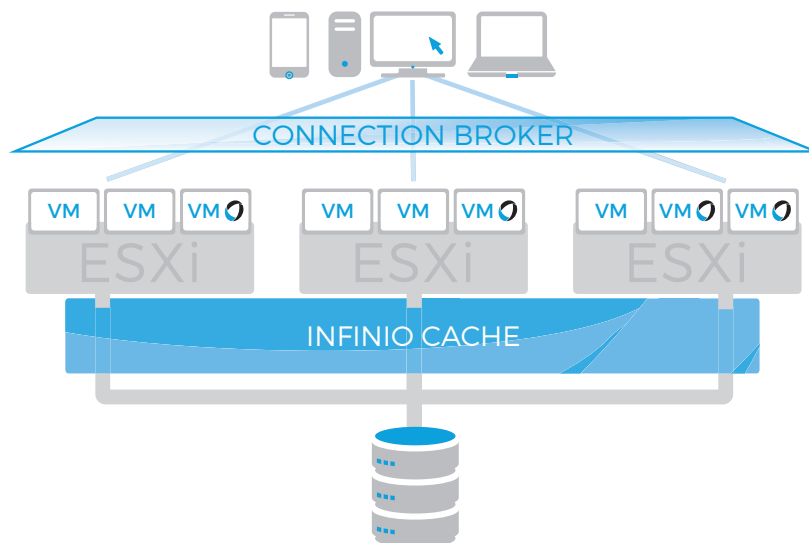
WHY INFINIO FOR VIRTUAL DESKTOPS

- Improvement in end-user experience during both, steady state operations and peak load times.
- SSD-class performance without any additional hardware.
- Reduced storage costs per desktop.
- 30 minute non-disruptive deployment with no downtime.
- No changes to the existing environment.

Common files and blocks across desktops can be shared from the Infinio cache, independent of which physical host they are located on. This scale-out architecture transparently shares the load evenly across the entire cluster.

Improving user experience

As IT decision makers know, poor user experience can be the top reason for VDI project delays or failures. If virtual desktops are perceived as less responsive than the physical desktops being replaced, user complaints



Infinio installs in your VMware vSphere environment in minutes. Using RAM already in your servers, Infinio creates a shared caching layer. Content-based and globally deduplicated, it holds common files across desktops, including gold OS images, application executables and user files.

will stall the rollout. And user experience is most directly tied to interactive responsiveness: if it takes Microsoft Word too long to open, or it takes too long to send an email, then users will put pressure on IT to revert to physical desktops.

Another area of frustration for users is virtual desktop slowdowns during coordinated events. Activities such as booting up, logging in, and anti-virus signature updates and scans can overload storage systems, resulting in slow performance for desktop users. For users accustomed to opening a laptop and getting to work in a matter of seconds, these kinds of delays can be fatal to virtual desktop adoption.

Infinio improves the user experience both during steady state operations as well as during peak load times. By serving many I/O requests out of cache, Infinio is able to provide much faster access to data than what a user would experience from the storage system. During peak times, Infinio is able to offload enough workload to reduce the latency spikes that can otherwise translate into bad user experience.

Fixing stalled deployments

After a small pilot, organizations may embark “guns blazing” on large-scale VDI deployment projects only to find that their design isn’t scaling as they add additional users. IT decision makers then face a difficult choice: abandon the project until the next budget cycle, or go “back to the well” for more funding to complete deployment.

With Infinio, performance issues can often be resolved without any investment in new hardware. A free 30-day evaluation can help organizations determine if Infinio will improve their performance problems, without any downtime to users or changes to operations. A cost-effective term licensing model means that if Infinio works, it can often fit into an operational budget.

Leveraging existing storage investments

For organizations that are just beginning to evaluate VDI, there are myriad options for storage architectures. Some choose to invest in new, dedicated hardware, while others want to reuse and even share existing

infrastructure. However, many classic storage arrays are optimized for server workload transactions and not the interactive nature of VDI environments. Thus the pilot or POC process is a lengthy sequence of testing different hardware models to determine which is most appropriate for their user workload.

Infinio can be added to any phase of a POC seamlessly and without any disruption. Some organizations find that with Infinio, they can purchase less expensive storage and still reach their performance requirements. Others find that their existing storage hardware is adequate and can even be shared with other workloads once Infinio is deployed.

Conclusion

Storage is one of the most critical – and most costly – components of a virtual desktop infrastructure. The most common pitfall facing organizations during VDI deployment, poor user experience resulting in low adoption rates, can often be attributed to insufficient storage resources. Infinio offers a solution that increases storage performance in virtual desktop environments, without any new hardware or changes to the environment. The 30-minute non-disruptive deployment, coupled with inexpensive term licensing, makes Infinio an obvious option for organizations seeking a solution to their VDI deployment concerns.

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