

# THE TOP VDI TEMPLATE CHALLENGES & THEIR BUSINESS IMPACT

Building your golden image for deploying desktops is both an art and a science. The ideal balance between performance and end user needs must be achieved.

*Use this to content to guide you along the way:  
strategic objectives and tactical objectives*

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**CHALLENGE** Determining Stateless vs Persistent VDI

**IMPACT** User productivity, IT Support, Host Density

**SOLUTION** Do users need to install apps on their own? If yes, then persistent, otherwise, stateless.

**CHALLENGE** Storage Placement

**IMPACT** Performance, Density

**SOLUTION** Media type (RAM, SSD, NVME) will drive the performance of the desktop host density. For performance, RAM is best, followed by NVME and lastly SSD.

**CHALLENGE** Determining ideal number of templates

**IMPACT** IT Support scalability

**SOLUTION** Plan around your organizational personas and types of applications needed for each group. Try to minimize templates by overlapping some groups if possible, without risking application cost and internal compliance.

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**CHALLENGE** Calculating optimal VDI density per host

**IMPACT** Performance, Risk

**SOLUTION** Determining the right vCPU: CPU overcommit will keep your desktops performing well and allow you to hit those density goals. Office task workers are typically sized using 8:1 as a guide, whereas those requiring a bit more power in their desktop would benefit from a more conservative 6:1.

**CHALLENGE** Automated Windows Updates causing issues

**IMPACT** Host Density, Performance

**SOLUTION** Limiting the disk growth is key to optimizing performance and host density. Disable Windows Automatic updates and downloads. Update your template instead. Be certain to update your templates monthly or as critical updates are released.

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**CHALLENGE** Managing disk clean up

**IMPACT** Host Density, Performance

**SOLUTION** Removing unnecessary space from the Template disk will keep the Host Density optimized while limiting the capacity of VDI media consumed. Windows Disk cleanup followed by sdelete does a great job.

**CHALLENGE** Optimizing the OS

**IMPACT** Performance, Host Density

**SOLUTION** The impact is much greater when using a stateless deployment. Optimizing the template removes unwanted applications, services, and keeps VDI disk growth to a minimum. Keep your eye on the delta disk growth as it is the key contributor to guest performance and host density.

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**CHALLENGE** Application performance

**IMPACT** Performance, User Experience

**SOLUTION** While applications will install using multiple methods, check for a VDI specific install for certain applications (i.e. antivirus, user collaboration tools) to get the best possible performance.

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**CHALLENGE** High CPU Utilization

**IMPACT** Performance

**SOLUTION** High CPU utilization is frequently associated with VDI overload – trying to run too many guests on your infrastructure. However, it can also be traced to an update to or new application added to a template. Be certain to ALWAYS test your templates prior to rolling into production. This includes both updated and new templates.

**CHALLENGE** Page File causing issues

**IMPACT** Performance, Host Density

**SOLUTION** When deploying stateless VDI, enabling page file only adds to the media capacity. This will impact performance when paging kicks in. Therefore, do not enable page file on stateless VDI.

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