

Brochure



# HP Client Virtualization SMB Reference Architecture for Windows Server 2012

Easy to deploy and manage, with a leading  
price/performance ratio

## Flexibility versus control

As business demands continue to evolve, you may be re-evaluating your IT environment through the “productivity lens.” And that means doing whatever it takes to support an increasingly mobile workforce.

Using a right-fit combination of mobile devices, your employees are online and active at any hour of the day or night, logging in from virtually anywhere that offers a connection. Mobile workers demand more than just access—they need a fast, Always-On, consistent experience across devices. And as each “latest new thing” hits the market, they want your IT to support it—with the ultimate goal of continuously improving productivity and success.

But the challenge doesn't stop there. Underlying all the technology requirements are the business needs to:

- Maintain compliance
- Control costs
- Minimize user downtime
- Secure confidential corporate data
- Streamline provisioning of corporate resources

While this may seem like an impossibly long list of “must haves,” HP and Microsoft® can address them all with a single solution—delivered as a simple, complete, cost-effective, and fully tested reference architecture for deploying desktop virtualization.

## Run with confidence

Based on the HP ProLiant DL380p Gen8 servers, HP Thin Clients, and industry-leading software from Microsoft, the HP Client Virtualization small and medium business (SMB) Reference Architecture (RA) for Windows Server 2012 (HP CV SM RA for WS2012) removes the guesswork and risk from deploying a desktop virtualization solution. And because the design of the HP CV SMB RA for WS2012 leverages the knowledge gained during extensive performance tests, you can deploy the RA with confidence.

## A high-performing, cost-effective solution

The HP CV SMB RA for Windows Server 2012 makes it simple for businesses of any size to deploy a high-performance virtual desktop solution without a high price tag. Why should you select the HP CV SMB RA for Windows Server 2012?

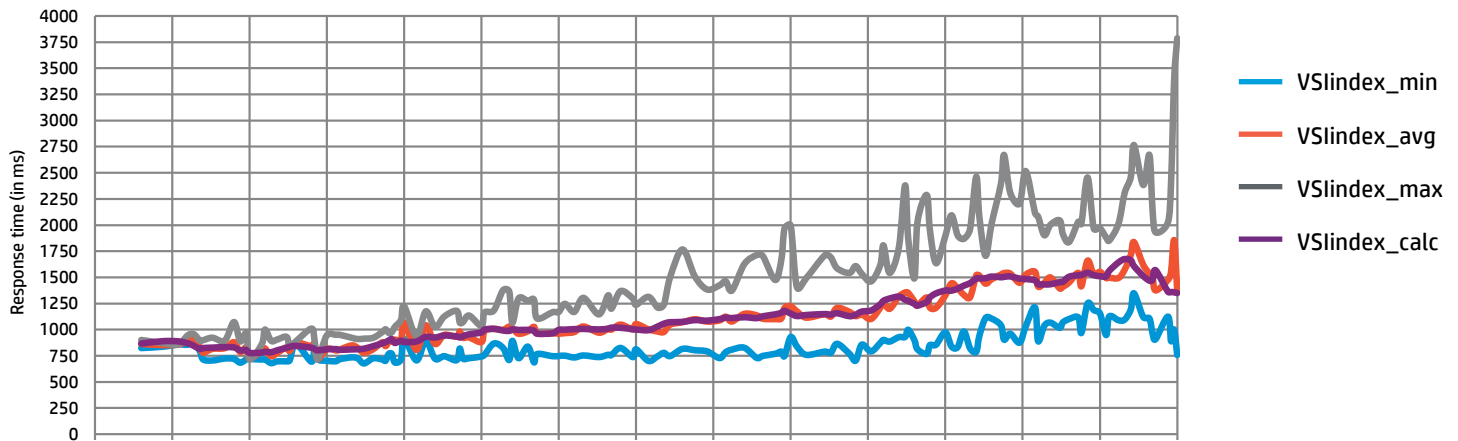
- **Provides leading performance** – Benchmark testing, confirms that the HP CV SMB RA for Windows Server 2012 can support at least 175 virtual desktops per host server with excellent response time. In addition, customers can benefit from performance advancements with HP ProLiant Gen8 servers, ensuring that the solution can comfortably meet the needs of their organizations.
- **Makes deployment easy** – It is easy to set up the HP CV SMB RA for Windows Server 2012 solution on the HP ProLiant server and configure the desktop images, so virtual desktops can be quickly delivered to users. Because all of the software comes from Microsoft, there is no need to work with a third-party vendor, and licensing costs are kept to a minimum. Customers can start with the sample bill of materials included in the reference architecture, and then tailor the solution to meet their unique needs.
- **Includes everything you need** – With the HP CV SMB RA for Windows Server 2012, there is no additional infrastructure to deploy—no need for additional management servers, databases, or storage area networks (SANs), and no need for additional virtualization or management software. Everything needed is included in the solution.

## Fully tested, ready-to-run

The design of the HP CV SMB for Windows Server 2012 is based on extensive scalability testing conducted by a Microsoft team in Redmond, Washington. The final design was tested using the industry-standard Login VSI performance and scalability testing tool to ensure that the RA meets all HP and Microsoft performance requirements.

The results of the Login VSI tests were very impressive, confirming that the HP CV SMB for Windows Server 2012 can easily support at least 175 virtual desktops with excellent response time. The following graph shows Login VSI test results for a two-host server configuration of the solution, with a single Microsoft Windows Server 2012 connection broker and a 350 pooled virtual machine desktop collection using a user profile that is expandable to 5 GB.

## Login VSI user response time with the number of user logins, over time, for the recommended RA



## Why Microsoft Windows Server 2012

An exciting new operating system that helps you move beyond virtualization and reach for the cloud, Microsoft Windows Server 2012 is the right choice for desktop virtualization because it offers many important benefits:

- **One platform** – Microsoft Windows Server 2012 provides a single platform to deliver any type of hosted desktop, making it simple to deploy and easy to manage. Because all the software in the HP CV SMB RA for WS2012 is from Microsoft, you have only one vendor to work with, and licensing costs remain at a minimum.
- **One experience** – Receive a rich user experience, no matter what type of virtual desktop is being accessed, or from where it is being accessed.

And to make your CV solution ever better, Microsoft Windows Server 2012 also includes:

- **Efficient management** – The Remote Desktop Services (RDS) administration console has been greatly simplified in Windows Server 2012, so your IT admins have a wider range of options for setting up and managing users, sessions, and virtual machines—all from a single console. Intelligent patching and scanning through task randomization ensures that no single server is inundated with requests at any time.
- **Best value for virtual desktops** – Designed to host even the largest VDI deployments, Hyper-V provides an enterprise-grade hypervisor platform. In addition, RDS supports various lower-cost storage options such as server message block-based file shares or direct-attached storage, eliminating the need to rely on expensive SANs.

## World's most intelligent, self-sufficient servers

Adding to the benefits of the HP CV SMB RA for WS2012 is the server platform—namely, HP ProLiant DL380p Gen8 servers. Backed by the HP ProActive Insight architecture, HP ProLiant DL380p Gen8 servers continuously analyze thousands of system parameters to optimize application performance and proactively improve uptime, while also providing insight into every aspect of the IT infrastructure.

Re-engineered with more than 150 design innovations, HP ProLiant DL380p Gen8 Servers speed serviceability, increase quality, and reduce the potential causes of unplanned downtime. HP ProLiant DL380p Gen8 servers enable:

- 3x increased administrator productivity with HP Smart Update
- 6x performance increase for demanding workloads
- 70% more compute per watt
- 66% faster problem resolution with industry's first comprehensive, cloud-based management and support portal

## Thin clients with superior capabilities

Critical components in any client infrastructure are the access devices. For the HP CV SMB RA for WS2012, one line of thin clients stands above the rest—HP's. For accessing anything from financial services data to top-secret government information, thin client computing is a proven alternative to traditional PC computing.

Depending on your needs, you can choose from:

- **Smart Zero Clients** – Keeping it quick, simple, and flexible is the goal of HP Smart Zero Clients. No need to worry if the backend software changes. HP's Smart Zero Clients operate like zero clients, but are intelligent enough to reconfigure themselves to Microsoft protocols. Simply plug your Smart Zero Clients in, turn them on, and they work.
- **Flexible Thin Clients** – HP understands that the key to growth is remaining flexible and secure. HP Flexible Thin Clients meet those needs by providing options to grow and expand combined with the security you need now and in the future, delivered with PC-like performance. Thin clients are secure by nature, but HP made top-level security a priority. In fact, the HP t610 PLUS Flexible Thin Client meets National Institute of Standards and Technology security recommendations.

## Services you need, when you need them

Implementing a CV solution can be a complex task. You must correctly size numerous workloads to meet the needs of many different kinds of users. The professionals at HP can help. Together, we can determine the best virtualized client infrastructure for your unique business needs.

To facilitate the installation of your CV solution, HP highly recommends these services:

- **HP Proactive Care Service** – Provides an additional level of support for organizations managing complex IT environments. The service features remote and onsite support, proactive scans and reports, regular consultations with advanced technical specialists, and rapid problem resolution.
- **HP Consulting Services** – Accelerate the planning, design, and integration of CV systems with services ranging from strategy and assessment to design, pilot, implementation, and transition to support.

## Let's get to work

Contact your HP representative or HP reseller today. Arrange for an assessment of your IT environment. Discover how HP CV SMB RA for WS2012 can help you:

- Enhance worker productivity
- Contain costs
- Streamline desktop support
- Mitigate risk
- Boost business agility

For more information, you can also visit:  
[hp.com/go/clientvirtualization](http://hp.com/go/clientvirtualization)



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