Trends Report

Top 5 Desktop Virtualization Trends to Look for in 2016

By Leostream Corporation
Introduction

With each passing year, the longevity of desktop virtualization innovations are put to the test. As we wind down 2015, it’s time to assess which trends are here to stay. More importantly, what emerging innovations are in store? With the new year upon us and the industry eager for something fresh, here are the top five technology trends you can expect to see in 2016.
The virtual desktop market has long been a classic duopoly, with two major players — VMware and Citrix — reigning over all. Fortunately, IT now has access to technology that can help mitigate the cost of propriety stacks. The solution comes bundled in an open source wrapper called OpenStack and is poised to become VDI’s newest darling.

OpenStack is an open source cloud operating system that allows IT to manage compute, storage, and networking in their datacenter. Organizations can improve resource utilization and manage OpenStack VDI/Desktops-as-a-Service (DaaS) at scale through a strategic combination of hypervisor, display protocol, and connection broker technologies.

Why OpenStack VDI/DaaS?
Flexibility and cost control are the two major draws to selecting OpenStack over a full-stack virtualization platform.

With OpenStack, you can choose from a number of hypervisors, including free or open source versions. You can pick the appropriate connection broker and display protocol and manage both Windows and Linux operating systems. Sure, full-stack virtualization solutions simplify your choices, but that's not always a good thing. OpenStack allows you to gather the best-in-breed component for each use case, and you can mix and match those components as required.

Second, consider the licensing fees VMware and Citrix require to implement VDI in their stacks. The various OpenStack projects provide, for free, functionality that VMware and Citrix license, not just for brokering connections to desktops, but for desktop provisioning, as well. The prospect of implementing VDI without expensive licensing is destined to open up VDI discussions in organizations that may otherwise have decided to do without.

No matter if you are an enterprise or an MSP, OpenStack is a technology to keep an eye on. With its strong open source community, and corporate backers, OpenStack VDI and DaaS could be the wave of the future.

Resources
When it comes to leveraging OpenStack clouds to host desktops, there’s a lot to think about and several moving parts. To give you a head start, we’ve put together several resources on how to execute OpenStack VDI and DaaS that are complimentary to download:

- **eBook**: Building OpenStack VDI and DaaS
- **Webinar**: How to Make OpenStack VDI and DaaS a Reality
- **Guide**: OpenStack VDI with Leostream
In the early 90s, when Linux was first getting started, many wondered if it would get off the ground. Here we are, 25 years later, and it’s no secret that the operating system has grown a huge fan base among developers. Sometimes you just can’t beat Linux. Across many high-tech fields, power users utilize graphic-intense applications and Linux is king.

As Linux gains a toehold in new industries, support for OS diversity starts to play an important role in the overall virtual desktop strategy.

Linux VDI has made headlines recently, with both Citrix and VMware announcing their support for the operating system — leaving some questioning whether 2016 will be the year of the Linux virtual desktop.

There’s no denying that these announcements breathe new energy around the topic, but Linux VDI is certainly not a novel concept. In fact, hosting your Linux applications in your datacenter, and even sharing them between multiple users, has been an option for a while. To say Citrix and VMware are late to the Linux VDI game is a bit of an understatement.

Many hosted desktop vendors have been supporting Linux for years. There are several well-established and industry-tested, feature-rich solutions at your fingertips.

Looking ahead to the coming months, do we think that more organizations will get on board with hosting Linux applications? Absolutely, and 2016 could very well pan out to be a big year for Linux virtual desktops. But the way we see, Linux VDI isn’t new, so why is your VDI solution?

**Resources**

- [Whitepaper: Key Considerations for Delivering Linux Hosted Desktops](#)
- [Webinar: Simplifying Linux VDI – Delivering Virtual Desktop on Demand](#)
The mobility movement is in full swing. Every user these days wants, and maybe even requires access to their computing resources from wherever they go, and from whatever device they have. For some users, such as those running graphics rich programs, 3D CAD, or mission critical applications, providing mobile access seems a bit trickier. How do you enable these users to be mobile, or secure their data in your datacenter, when they typically have a workstation sitting below their desk? Historically, your options for running graphic-rich applications in the data center were limited to dedicated hardware. Just a few years ago, the thought of migrating GPU intensive workloads into the datacenter was too complex and expensive for most IT departments to justify.

Thankfully, recent advancements in workstation and hypervisor technology have made it possible to host even the most graphics-demanding applications. This is a big win for organizations in industries such as oil and gas, multi-media design, gaming, semiconductor design, aviation, and architecture/engineering which often rely on GPU intensive applications.

How does it work? The name of the game is GPU pass-through and it’s a convenient alternative to running dedicated hardware. In this scenario, each physical GPU in the workstation is passed through to its own virtual machine. The virtual machines are hosted on the hypervisor that is installed on the workstation.

With pass-through GPU, the operating system on each virtual machine has full and direct access to a dedicated GPU and can use the native graphics driver loaded in the VM. With this setup, each physical workstation hosts multiple operating systems, improving the density in the data center without compromising performance.

If you add special hardware to your data center you can take things a step further and virtualize the GPU. In this architecture, each physical GPU is shared by multiple virtual machines. The hypervisor provides additional technology that gives the virtual machine operating system direct access to the GPU, giving the performance of pass-through GPU while allowing greater density.

In today’s atmosphere of data consolidation and security, it’s important to know that you can store your corporate data in your corporate data center, and still provide users with the access and performance they need. As the demand for mobility and collaboration continue to increase, we’re sure to see more organizations jumping on the GPU pass-through bandwagon.

Resources

Webinar: Delivering Mission Critical Applications with Leostream and HP RGS

leostream.com
Trend #4
Shift Towards the Public Cloud and Hybrid Cloud Deployments

Hardware, software, real estate, power, staff. Building your own data center requires all of these things, sometimes in spades. For years organizations budgeted for these costs, but 2016 is shaping up as the year to break that cycle.

Surveys taken over 2015 show that the push towards a hybrid or public cloud approach is well underway. While a recent IDC report specifically focuses on manufacturing, the trend is occurring in other industries, as well.

Public clouds provide enterprises with a way to add capacity faster and cheaper than building out their data center. You pay only for what you use, when you use it, turning capital expenditures into operational expenditures. Enterprises become more agile and effective by introducing public cloud offerings into their portfolio.

But, what about the little guys? Building or renting a datacenter is a large, daunting, and sometimes impossible investment for smaller organizations. For the SMB market, particularly the “S”, utilizing a public cloud opens up a range of resources previously unavailable to them. Amazon Web Services, alone, includes a wide range of services. Tack on Microsoft Azure, and a small company can host nearly all of its applications in the cloud.

But, using a public cloud requires new IT skills, namely configuring and managing the services you use in that public cloud.

Here’s where OpenStack come in. Service providers are increasingly turning to OpenStack to build their managed cloud.

Smaller organizations can enlist the help of these service providers to deploy and manage the services they need, allowing them to take advantage of a public-cloud model, without getting into the business of learning how to use a public cloud.

Dare we say, has building your own datacenter become passé? With so many options available in 2016, the question is not if organizations will shift to a hybrid or public cloud model, it’s how much of their services they’ll move there.

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**Resources**

- Webinar: How to Make OpenStack VDI and DaaS a Reality

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Trend #5

Containers as a Compliment to VDI

People can’t stop talking about Docker, a San Francisco startup and makers of a new container technology for application development.

According to ZDNet, the technology is “hotter than hot because it makes it possible to get far more apps running on the same old servers and it also makes it very easy to package and ship programs”.

Over the past year, Docker has been quick to stake its claim in the world of enterprise application and infrastructure software, gaining attention from nearly every major player like Google, IBM, Red Hat, Microsoft, Rackspace and VMware.

Although the company hasn’t seen much activity on the VDI front, their popularity with server side apps could potentially transcend to desktop apps. Docker and its aggressive product roadmap is certainly a company to keep an eye on. In the coming months, container technology could prove to be a useful compliment to VDI.

Closing Thoughts

From Linux VDI and OpenStack DaaS, to public cloud deployments and container technology, these trends have the potential to turn heads. Of course, when it comes to desktop trends in the tech fishbowl, this is just the tip of the iceberg. 2016 is bursting with opportunity for organizations to take on new strategies to shake up the status quo.

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About Leostream

Leostream provides the critical connection-broker technology required for enterprises to achieve successful large-scale hosted desktop implementations. The Leostream Connection Broker is the industry’s most widely deployed vendor-independent connection broker, enabling enterprises to integrate the complex array of clients, back-end systems and protocols required for successful hosted desktop deployments. Hundreds of large enterprises in financial services, healthcare, government and other sectors rely on the Leostream Connection Broker to “make desktop virtualization work” and deliver the best end-user experience. Leostream is based in Waltham, Mass.

To Evaluate or Purchase the Leostream Connection Broker

To evaluate the Leostream Connection Broker, please visit leostream.com and click on the homepage link for a free trial. You can purchase the Leostream Connection Broker by contacting Leostream at +1 781-890-2019 x710 or by contacting sales@leostream.com.

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