LEOSTREAM™

How A Connection Broker Simplifies Hosted Desktop Environments

5 Reasons Why an Independent Connection Broker is the Way to Go

A Publication by Leostream Corporation

Introduction

When moving resources into the data center, whether you are looking to host physical systems or build a virtual desktop infrastructure (VDI), you have a lot of things to think about. Storage, networking, hardware, the list goes on and on. With all the moving pieces you're juggling, the connection broker is probably the last thing on your mind.

And, truthfully, in the grand scheme of a hosted desktop environment, the connection broker is a small piece of the puzzle. But, it happens to also be a very important piece, and waiting until you've designed the rest of your data center to consider the connection broker can be detrimental to the overall usability of your system.

Tip: Throughout the eBook you will notice that certain topics have supplemental resources marked with a star. You can click to download these resources to learn more!

First, What is a Connection Broker?

A connection broker is at the heart of any hosted desktop environment. It ties all of the pieces of your data center together, ideally providing a single pane of glass for you to manage all of your hosted resources and providing end users with a single login to access all of their allocated systems.

Using a connection broker, you define rules that indicate which resources (virtual machines, RDS, applications, physical workstations) a user may access, based on the user's identity and the location of their client device. To log in, a user provides their credentials to the connection broker, which then uses your authentication servers to verify the user's identity.

The connection broker uses a display protocol to connect the user to their offered resources. The display protocol you instruct the connection broker to use depends on what operating system the user is connecting to and the desired level of performance.

Download Infographic:
How A Connection Broker Manages Users

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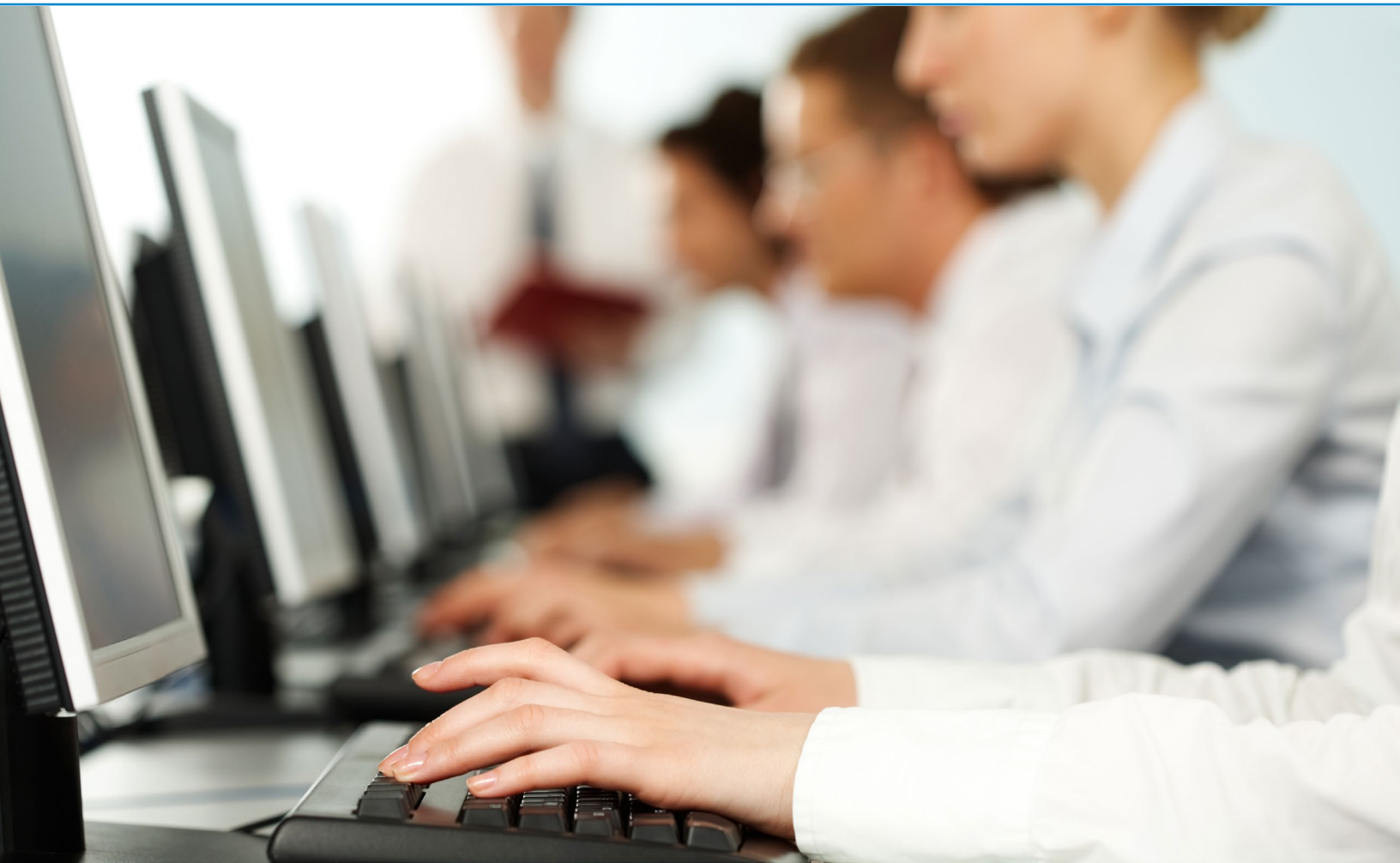
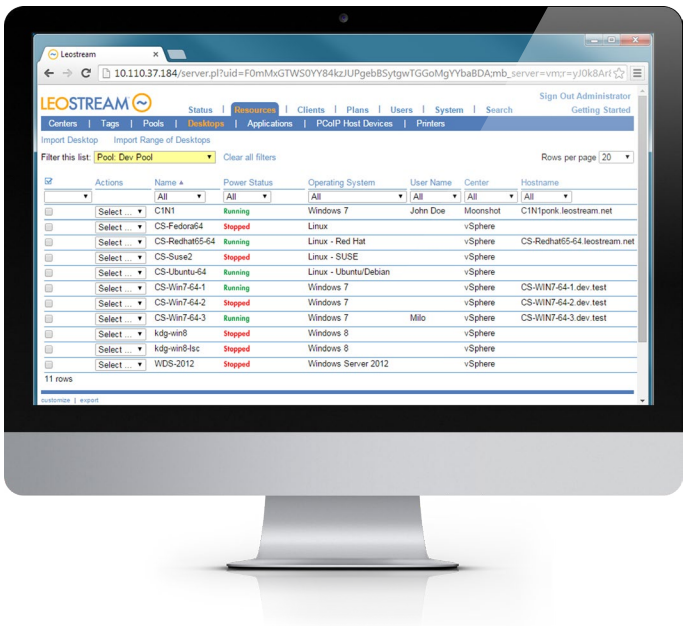


Second, why use a connection broker?

After you move your desktops to the data center, you have to address the challenge of how users connect to those desktops. You could hard-assign desktops to users and create links or shortcuts that the user click to access their desktop, but that solution will never scale. Plus, hard-assigning desktops to a user doesn't help you maximize resource usage, if you are trying to share applications and desktops.

A connection broker solves all the complex problems associated with how users connect to hosted desktops, and how those desktop connections are managed. Using a connection broker, you can easily scale Windows and Linux VDI, or create pools of high-performance workstations that are shared by users that need access to graphic-rich applications.

Most virtualization stacks provide a built-in connection broker. However, in many cases, including an independent third-party connection broker into your design from the get-go can future-proof and improve your hosted desktop solution. This eBook describes five reasons you should consider adding an independent connection broker to your design.



What Challenges Can a Connection Broker Solve?

- Manage hosted desktops running on HP Moonshot Systems, workstations and blades
- Support Linux operating systems in the datacenter and manage Windows and Linux desktops side by side
- Leverage the performance of a wide variety of display protocols, including those used for graphic rich applications
- Support BYOD and mobile initiatives enterprise wide through secure, remote access.
- And much more!

1 Support Mixed Virtual and Physical Environments

When most people think about a connection broker, they think about VDI. The different virtualization vendors all provide a built-in connection broker that is more than adequate for managing their single stacks. If you are thinking about hosting resources, however, you should think beyond virtual desktops.

Physical desktops hosted in the data center present advantages above and beyond VDI. HP Moonshot Systems, for example, provide dedicated CPU, storage, and other resources for each user, all in a space and power saving form factor. On the other hand, users that require more power, for example traders in a financial institution, may need an entire dedicated workstation in the data center.

And then, no matter how many virtual or physical desktops you try to host in the data center, there will always be some users that require a personal laptop or desktop. Why not wrap that machine into your hosted desktop environment, as well? By brokering even personal desktops, you can provide users with access to their data when they roam away from their desk and, for example, into a conference room.

The key is that you may find you want to broker everything. To do so, look for a connection broker solution that can manage virtual and physical systems side-by-side, and connect users to each environment using the best display protocol for the job.

Download Guide:

Leostream Connection Broker 8.0 supports HP Moonshot Systems. Download our "Getting Started" guide to learn more.

Download Now

About Physical Desktops Hosted in the Data Center

A hosted desktop infrastructure (HDI) removes the virtual requirement from a hosted desktop solution, relying instead on dedicated hardware in the datacenter for each user. Leostream manages hosted desktops running on HP Moonshot Systems, workstations and blades. Using HDI, you can provide end users with the performance they need while securing their data in the data center.

2 Retain Investment in Existing Infrastructure

Your data center consists of more than just your hosted desktops, and your selected connection broker solution needs to take other pieces of your infrastructure into account. Consider where users will log in from, what systems will authenticate them, and what resources they ultimately need.

Some of the main advantages of a hosted desktop environment are that it allows you to support a BYOD (bring your own device) initiative and a mobile workforce. Doing so requires that you understand what those devices may be (iPads, laptops, thin clients, web browsers, etc.) and where they could be located. Will you have remote users that need to access their desktops through your corporate SSL VPN? Do users need to redirect certain USB devices to get their job done? Did you find a fleet of laptop that you want to repurpose as client devices? You want to find a connection broker that supports all of the devices your users may have, plus provides you with location-based control to provide the right resources and level of access based on where the user logs in.

For authentication, do you have existing Microsoft Active Directory authentication servers, or does your organization use a combination that also includes Novell eDirectory, OpenLDAP, or even NIS authentication servers? Are your users accustomed to using a particular smart card or proximity card solution? Independent connection brokers often offer support for the widest range of authentication systems, allowing you to leverage the systems you already have in place and to keep the user-experience consistent.

What resources are you moving into the data center? Are you hosting applications that run only on a Linux operating system? Will you host Windows operating systems, as well? Try to list all of the different operating systems and applications that you need to host, to ensure that you select a connection broker that can provide access to everything.

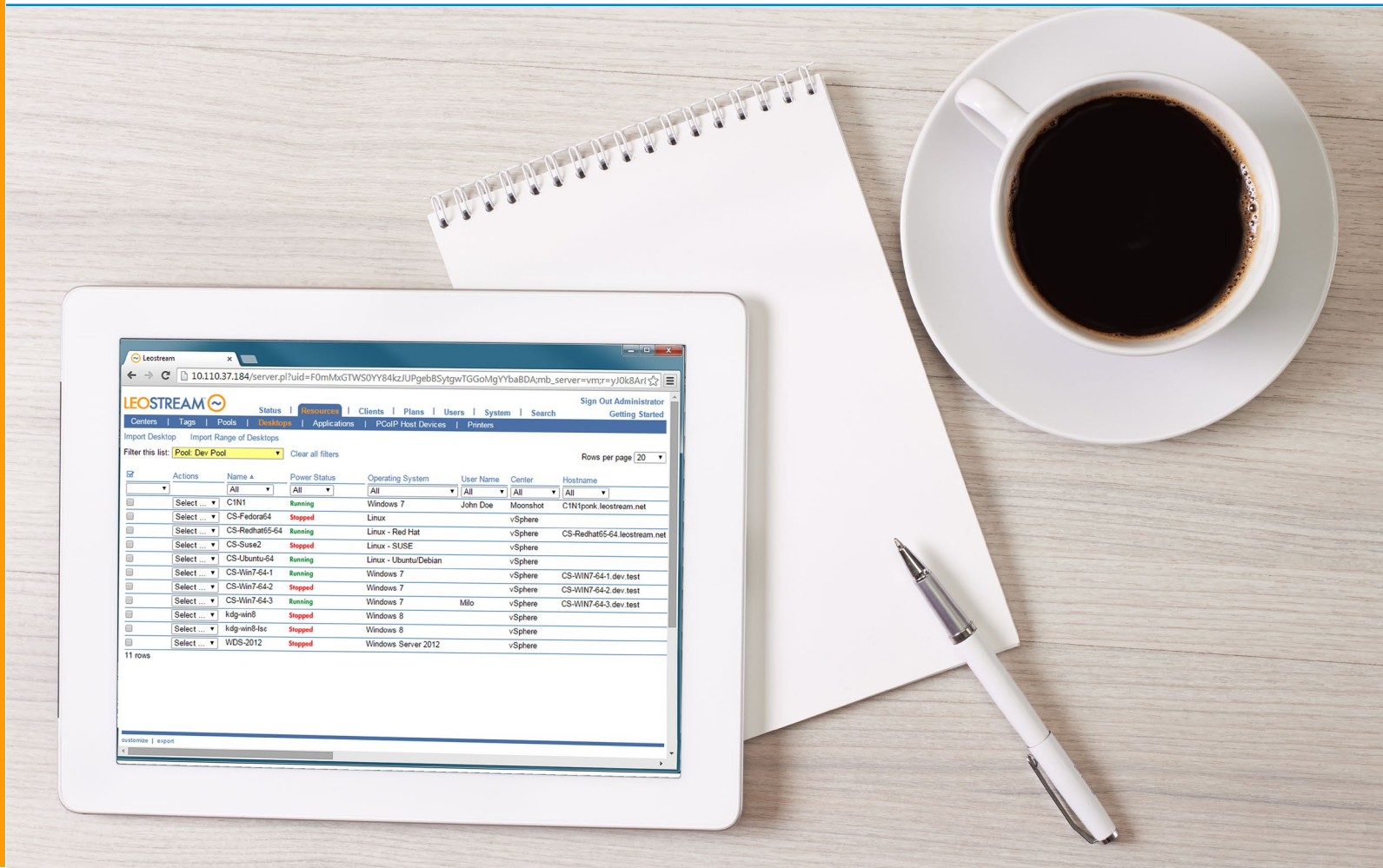
When moving to a hosted environment, you will be building out enough new systems, already. To save your sanity, find a connection broker that requires you to rebuild as little of the remainder of your infrastructure, as possible.

3 Risk-free and Easy Migration Between Solutions

If you already virtualized your servers, it's likely that you have VMware in your data center, so maybe you're considering building your virtual desktop infrastructure using VMware Horizon, as well. If you do, will you always want to use that solution? It's a difficult question to answer. As with any technology, virtualization and hosted desktops solutions are constantly shifting. New players and products hit the market as older less-viable systems vanish with the wind. How can you protect your investment against these changes? The simplest way is to start with a design that isn't tied into a particular stack.

Independent connection brokers typically support the widest range of hosting solutions, both virtual and physical. And, because they are provided by companies that focus only on the brokering aspect of a hosted desktop solution, independent connection brokers are better at keeping abreast with new technologies in the data center.

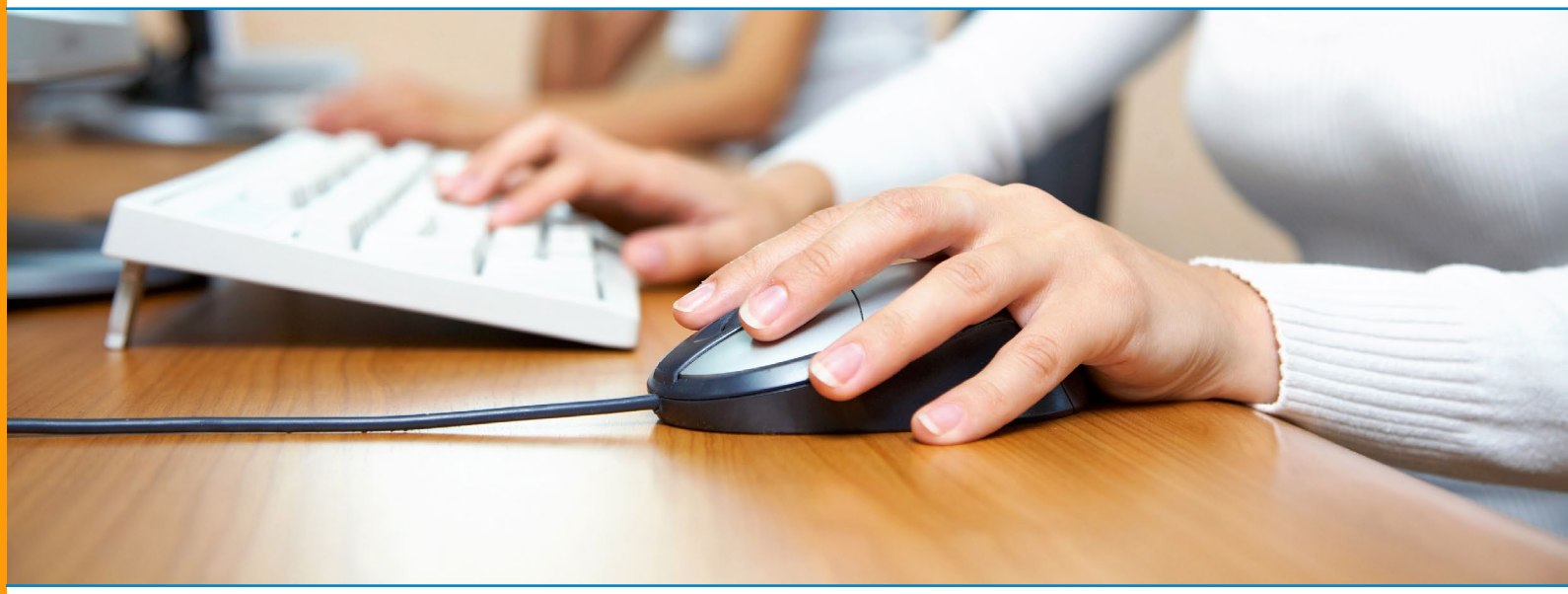
Look for solutions that allow you to try out new technologies as they come to market, using them side-by-side until you can seamless migrate, as needed. Thinking ahead isn't always easy, but a little foresight can help you future-proof your hosted desktop solution.



4 Support a Wider Range of Users and Use Cases

Hosted desktop solutions are not like T-shirts. There is no "one size fits all" solution. Describe all of the different types of users that you want to satisfy with your hosted desktop solution, and then think about the best, least expensive solution you can build for each of them.

Task workers, such as administrative workers or front-line call center workers who perform repetitive tasks using a small set of applications, can be satisfied with a less expensive and sophisticated solution that a power worker who needs access to a high-performance workstation and CPU-intensive application. A knowledge worker's computing needs lie somewhere in the middle.



Independent connection brokers are designed to integrate different levels of solutions into a single management layer, from Remote Desktop Services, to VDI, to virtualized workstations, to high-power dedicated workstations. In addition, independent connection broker provides the level of access control needed to ensure that all resources are used to their maximum potential.

Do you want to monitor idle sessions so you can automatically log out users who forget to do so themselves? Do you want to pool resources so you can minimize the number of licenses you need for expensive applications? The more use cases you can enumerate before you design your solution, the more chances you'll pick a connection broker that delivers the policy control you need to achieve them.

5 Scale to Meet Any Needs While Providing High Availability and Disaster Recovery

Maybe your hosted desktop solution worked for a small proof-of-concept, and even for a slightly larger pilot program but, if you fail to consider how large your final deployment may become, you could find yourself with a design that chokes on the load. You want to design a hosted desktop solution that is such a success it becomes a model to push out across your organization, and an independent connection broker can help.

Download Webinar:
Deploying Large-Scale Hosted Desktop Infrastructures and VDI with the Leostream Connection Broker

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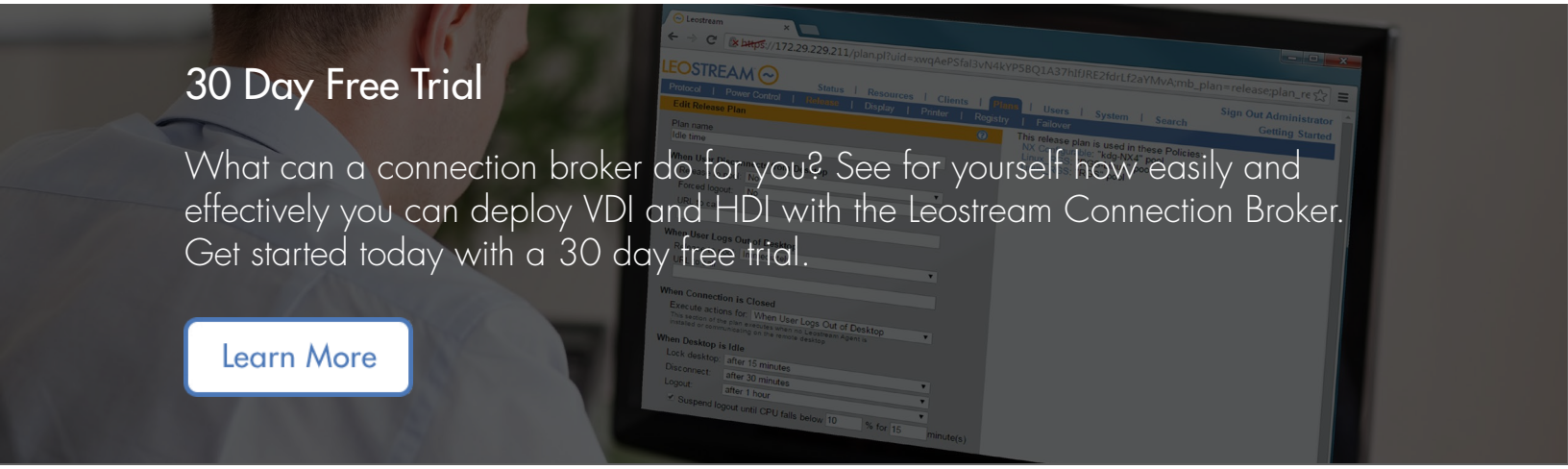
In a production environment, you must consider high availability, failover, and disaster recovery as providing anytime, anywhere access is key. The connection broker, as such a small piece of the stack, should never be the bottleneck that breaks your availability.

The connection broker's job is to process user logins, assign resources, connect users to their resources, and manage the life cycle of their remote connection. Make sure you select a connection broker that does not proxy the user's connection. By keeping the connection broker out of the data path, you ensure that the user's desktop connection remain established when any datacenter event occurs that compromises the connection broker.

In addition, the connection broker should never be a single point of failure. Look for brokering solutions with an architecture that is easy to cluster, providing multiple connection brokers that act as a single unit to process login and session management task.

Conclusion

With so much to think about when building a hosted desktop environment, you may be tempted to take whatever connection broker is handed to you. By spending a little time investigating the independent connection brokers that are on the market, you can ensure that you build an environment that maximizes resources usage now, and in the future.



Suggested Resources

Key Considerations for Delivering Linux Hosted Desktops
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Hosted Desktop Solutions with Pixel-Perfect Graphics
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Leostream as a Remote Access Solution
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Tip sheet: The top 5 considerations to address before deploying a large-scale VDI
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About Leostream

Leostream provides the critical connection broker technology required for enterprises to achieve successful large-scale desktop virtu- alization implementations. With Leostream Cloud Desktops, Leostream revolutionized the desktops-as-a-service delivery model, by providing easy-to-use, risk-free, cloud-based Windows desktops. Leostream Cloud Desk- tops supports public cloud providers including Amazon Web Services and HP Helion Public Cloud, as well as full integration with Cloud- Stack open API. Leostream is privately held and based in Waltham, MA.

To learn more about Leostream's solutions visit leostream.com and leostreamdesktops.com.

Contact Leostream

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