

TECHNICAL USE CASE

Creating solutions with ThinLinc!



ThinLinc provides remote desktops and HPC access in a North American government organization - "Works remotely, but feels like you're on site"

GOVERNMENT - HPC

LINUX DESKTOPS, WINDOWS LAPTOPS MATLAB, DIVERSE LOCATIONS

PRE-CONDITIONS

Decentralized applications.

PURPOSE

To provide HPC resources to the users, including applications such as Matlab, and other in-house developed.

RESULTS

ThinLinc was implemented to provide the server-based Linux Desktops to the users. Users access mainly Matlab, and other inhouse applications through ThinLinc. It is accessed from different devices and locations.



ADDITIONAL INFORMATION & OTHER POTENTIAL USES:

Organizations looking for a solution to offer access to HPC resources and Linux remote desktop for the final users may employ ThinLinc.

CASE DESCRIPTION / STORY

ThinLinc provides remote desktops and HPC access in a North American government organization - "Works remotely, but feels like you're on site"

Most professionals working in areas of climate forecast and physical process modeling usually require the use of advanced computational capacity, both storage and data processing. The daily work includes calculations of complex equations involving a large number of variables. Data is assimilated from various sources to integrate into the modeling process. Allowing professionals to access advanced computing resources - "HPC" - from any workstation and any geographic location is possible for a government organization in North America through the Linux-based Remote Desktop solution called ThinLinc from Cendio. Users access the ThinLinc clusters from Windows laptops and Linux-based workstations.

ThinLinc is employed in several server clusters with different large-scale configurations, as an example, many complex HPC data visualization clusters are designed with 2 master servers, and multiple compute nodes as agents. Also, the configuration is being expanded continually to support other departments. Ubuntu is run on the server, and KDE Desktops are distributed to users, researchers, and others involved in daily weather forecasting. Matlab is one of the primary applications, but the goal is to provide users with a complete desktop, which includes other in-house scientific applications used by scientists and researchers. This cluster was implemented and is maintained by the customer. According to one user, the experience "works remotely, but feels like you're on site."

It is essential to highlight the flexibility of users' access to the system. The varied geographical location of users does not prevent them from using the full capacity of the HPC computing resources. The clusters are being maintained and operated in one city. While some users work locally at the site, work from home is becoming increasingly common, as the time to commute sometimes is long. Tests with connections through ThinLinc between two distant cities, located more than 4000 km far one from the other, proved to be satisfactory for the organization.

The benefits extend beyond the users, as this type of solution adopted in combination with ThinLinc provides centralization of the country's HPC resources, and can save system administration resources as well as make more efficient use of data processing capacity.

The expression "ThinLinc Desktops" means the distribution of Linux Remote Desktops through ThinLinc, Cendio's Remote Desktop solution widely used in HPC environments around the world. Noteworthy is the use of ThinLinc in the education and research sectors, defense and creative industries for both private and government clients. To learn more about how ThinLinc can support the use of HPC environments, contact us at www.cendio.com.









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