

Virtualisation in Citrix

A case study of Citrix and BVN



Who are we

BVN - Architectural practice

- 250 staff
- 3 offices in Australia + a few abroad.

We do **everything architecture**
single dwellings through to hospitals and defense.

We have a **technology** focused culture



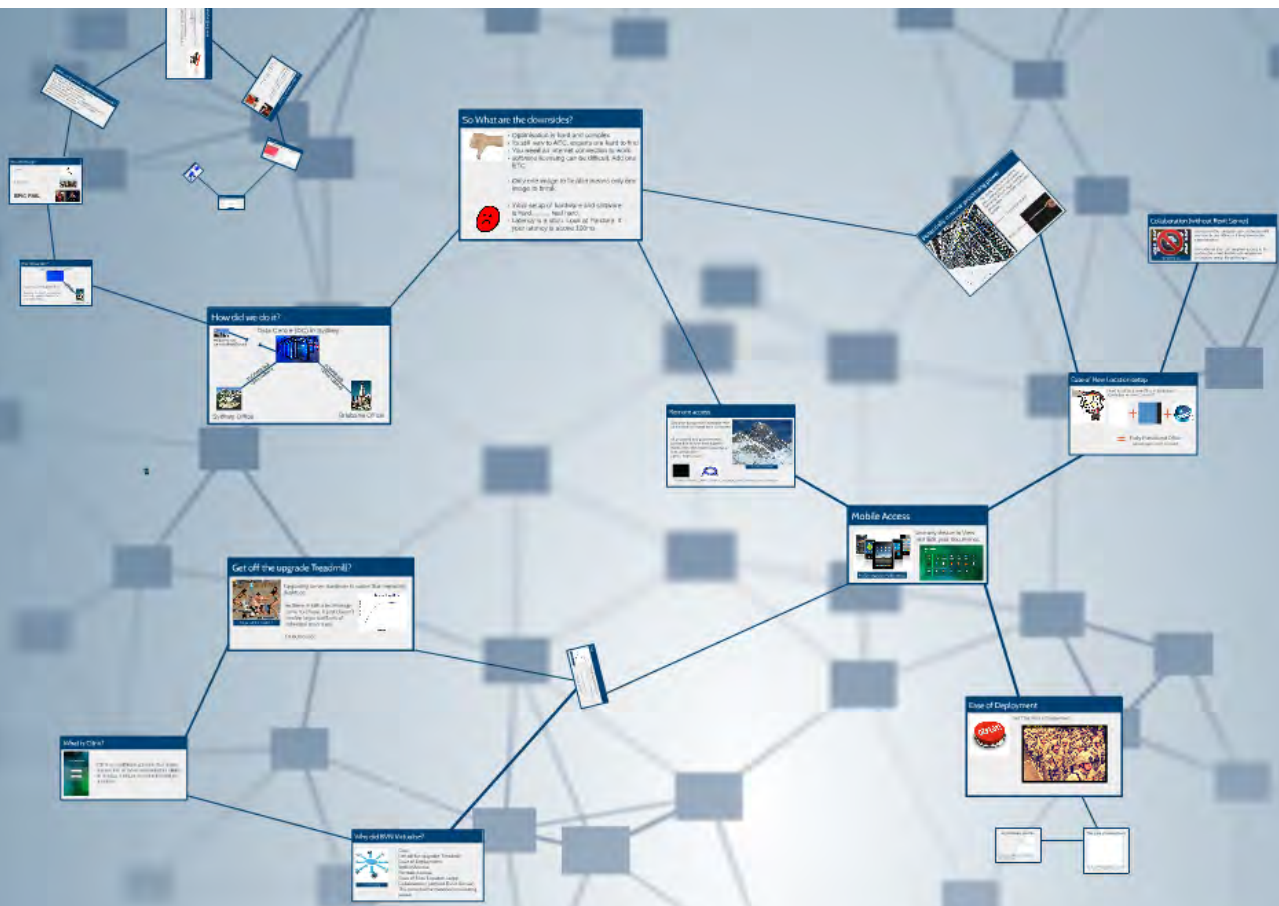
Who am I

Joe Banks, National Design Technology
Coordinator for BVN.

Revit Guru, Tech Enthusiast , Podcaster and Facial
Hair Enthusiast.

www.facedtechnology.com

Shameless plug  www.thearchitechshow.com



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What is Citrix?



Citrix is a software solution that allows a basic PC or Wise terminal (thin client) to access a virtual machine hosted on a server.

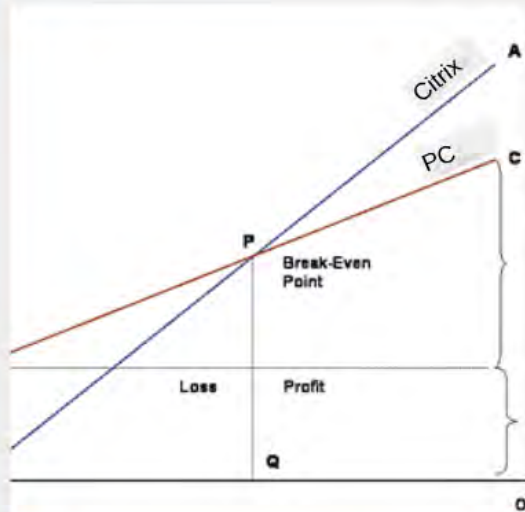
Why did BVN Virtualise?



- Cost
- Get off the upgrade Treadmill
- Ease of Deployment
- Mobile Access
- Remote Access
- Ease of New Location setup
- Collaboration (without Revit Server)
- The potential for massive processing power

Cost

It's all about the R.O.I.



Break Even Point

Citrix Licence + Wise Terminal + ((server \$+IT) / users/server)= \$/Citrix user

Vs

PC + (server costs+IT / users)= \$/user

For us this was about 18 months based on refreshing the PCs every 3 years.

Get off the upgrade Treadmill?

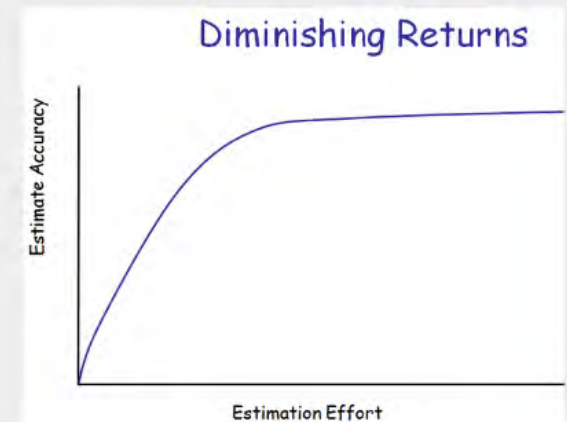


he got off the Treadmill

Upgrading server hardware is easier than replacing desktops.

so there is still a technology curve to chase, it just doesn't involve large numbers of individual machines.

Or outsource



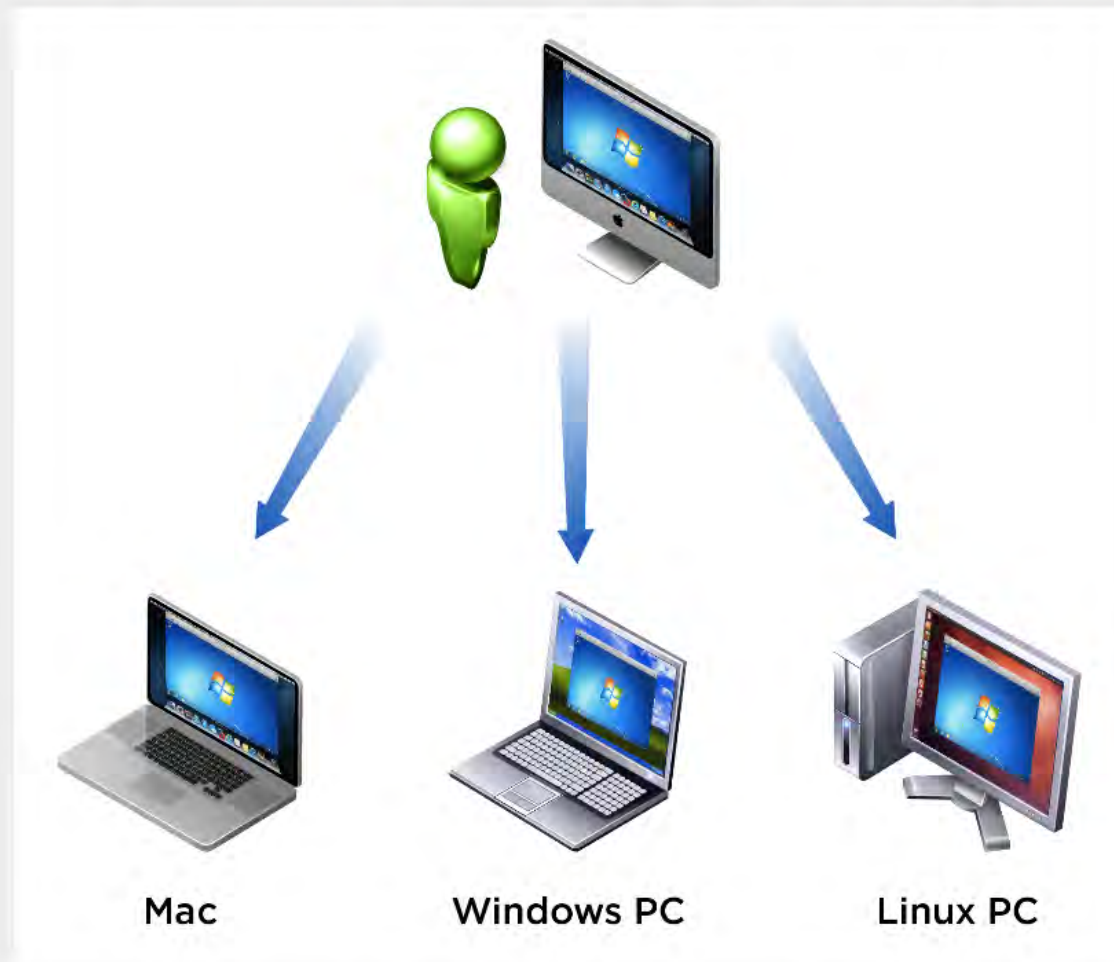
Ease of Deployment



Not That Kind of Deployment



This Kind of deployment



The IT department has to update 1 or a few computers images to deploy to all users.

any software you like



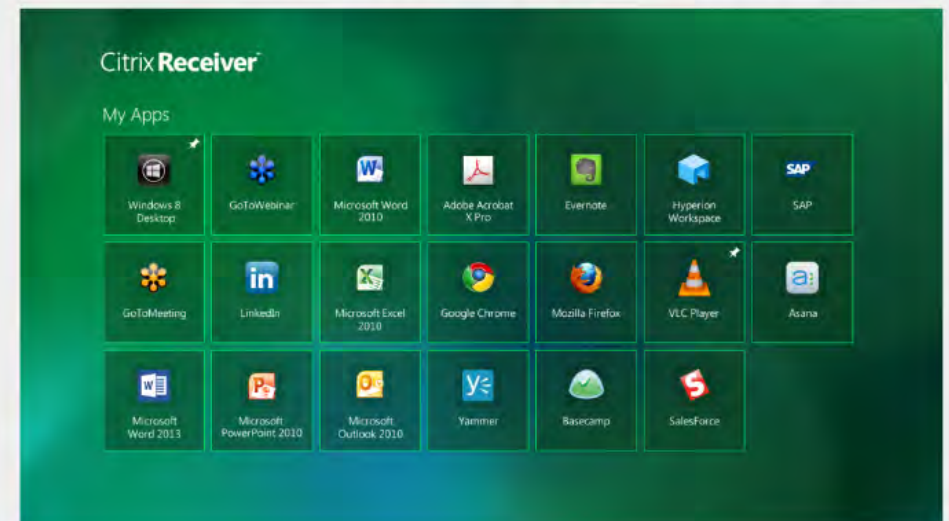
There are no packages that can't run on Citrix.
(but performance varies and optimization is required)
Sorry, No Mac OS yet.

Mobile Access



Platform Agnostic Mobile Access

Use any device to View and Edit your documents.



Remote access

Use your actual work computer with all the stuff you need from anywhere

All you need is a good internet connection to start working from home, from site, from basecamp 2? from anywhere?
(about 2mb/s/user)

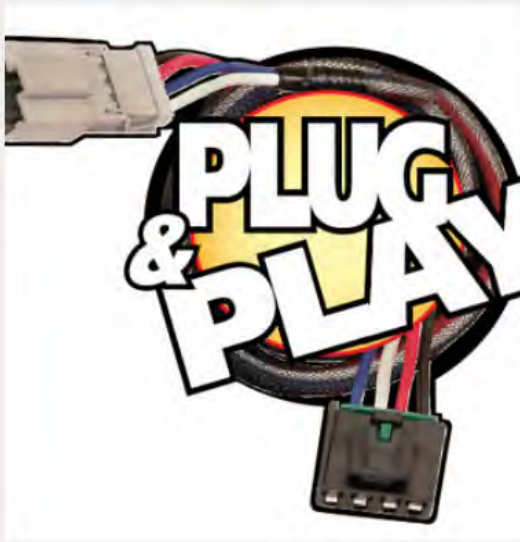


Very Remote Location

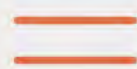


Wireless will work, Ethernet is better. I am using 0.26mb/s at home and it's still workable.

Ease of New Location setup



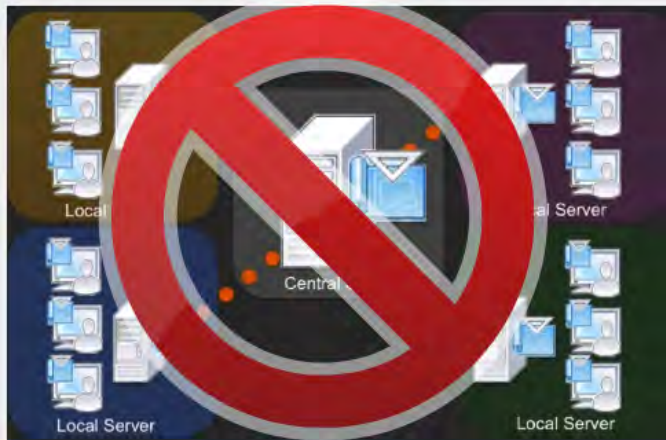
Need to set up a new office in Bangalore?
Azerbaijan or even Canada?



Fully Functional Office

Assuming no latency issues

Collaboration (without Revit Server)

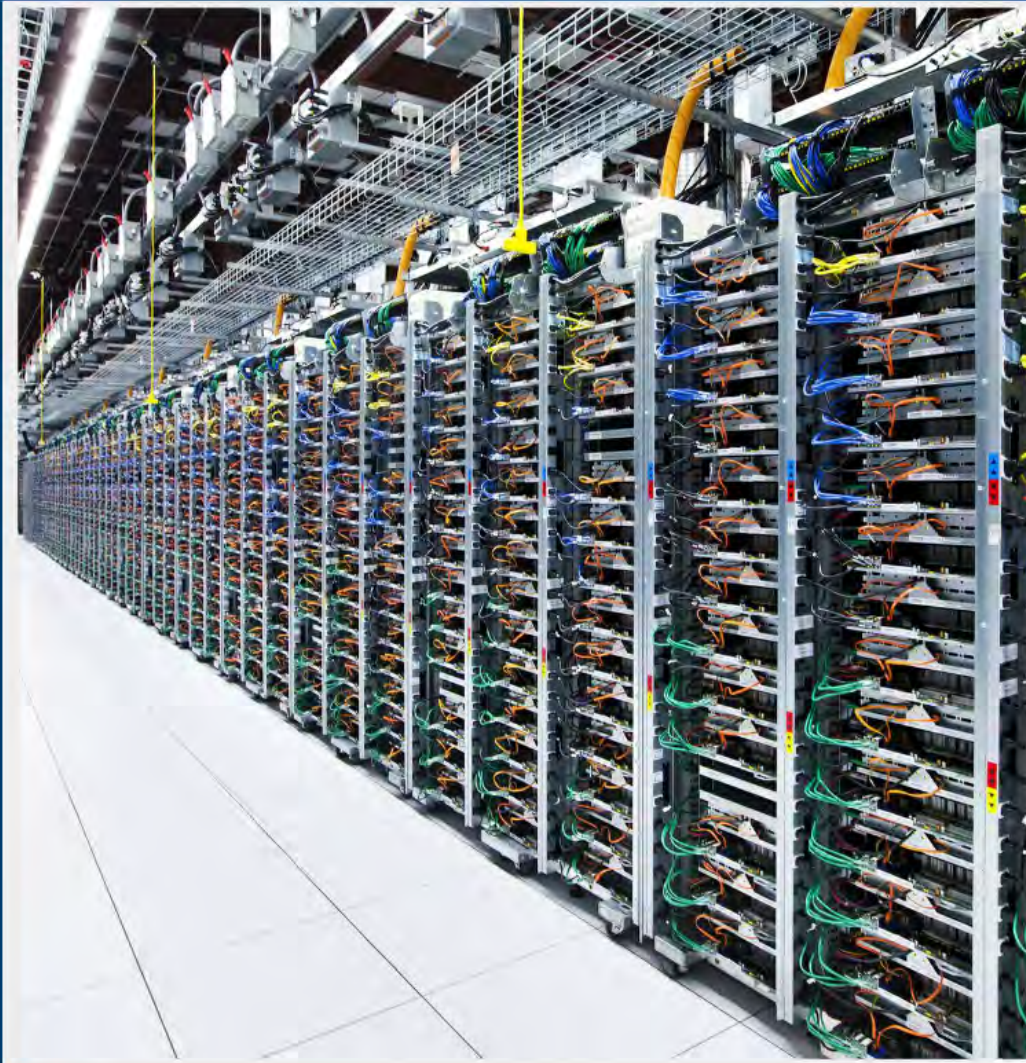


No Revit Server

Any user in the company can collaborate with any user in any office as if they were in the same location.

Any external user can be given access to the system (for a fee) for live collaboration or collaborate using file exchange.

Potentially massive processing power



The ability to share available processing power and perform functions across huge numbers processors is only limited by your budget.

← The power of this

From this →



So What are the downsides?



- Optimisation is hard and complex
- Its still new to AEC, experts are hard to find
- You **need** an internet connection to work.
- software licensing can be difficult, Add ons ETC

- Only one image to fix also means only one image to break



- Initial setup of hardware and software is hard..... real hard.
- Latency is a bitch. Look at Panzura. if your latency is above 100ms

How did we do it?



Melbourne not connected yet (5 users)

Data Centre (DC) in Sydney



1000MB link
<3ms Latency

500MB link
<15ms Latency



Sydney Office



Brisbane Office

How did we do it?

Data Centre (DC) in sydney



First we did the Brisbane office

We were moving offices and also needed to upgrade all the PCs so it made sense.

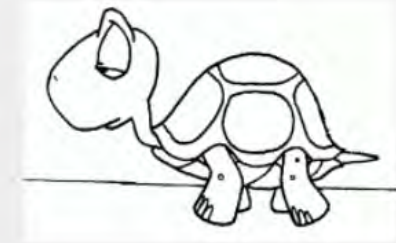
500MB link
<15ms Latency



Brisbane Office

How did that go?

Slow



Catastrophic



EPIC FAIL



What could you do to avoid the same issues?

- Engage experts for the entire process
- Get the best hardware available
- Test, test and then test under load
- Make sure all the drivers are compatible and up to date
- Planned a iterative rollout to minimise disruption, one team at a time perhaps?
- have a fall back solution in place

How's it going now

Not too bad.

User Experience is 90-95% of Desktop PC.

IT Team is optimistic of 110%-120% of PC experience



How do the users feel about it.

Well it's been a hard 6 months

users experience is getting better all the time but it is super important to manage expectations

With technology we can never take a backwards step without feeling like we have leapt back in time.



Whats Next

Transition from XEN app to Xen Desktop



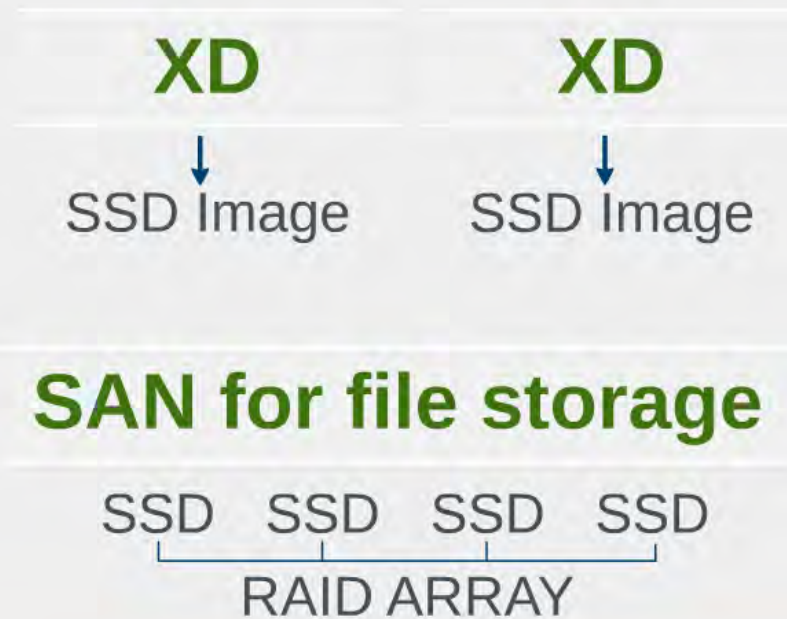
One image and shared resources for all



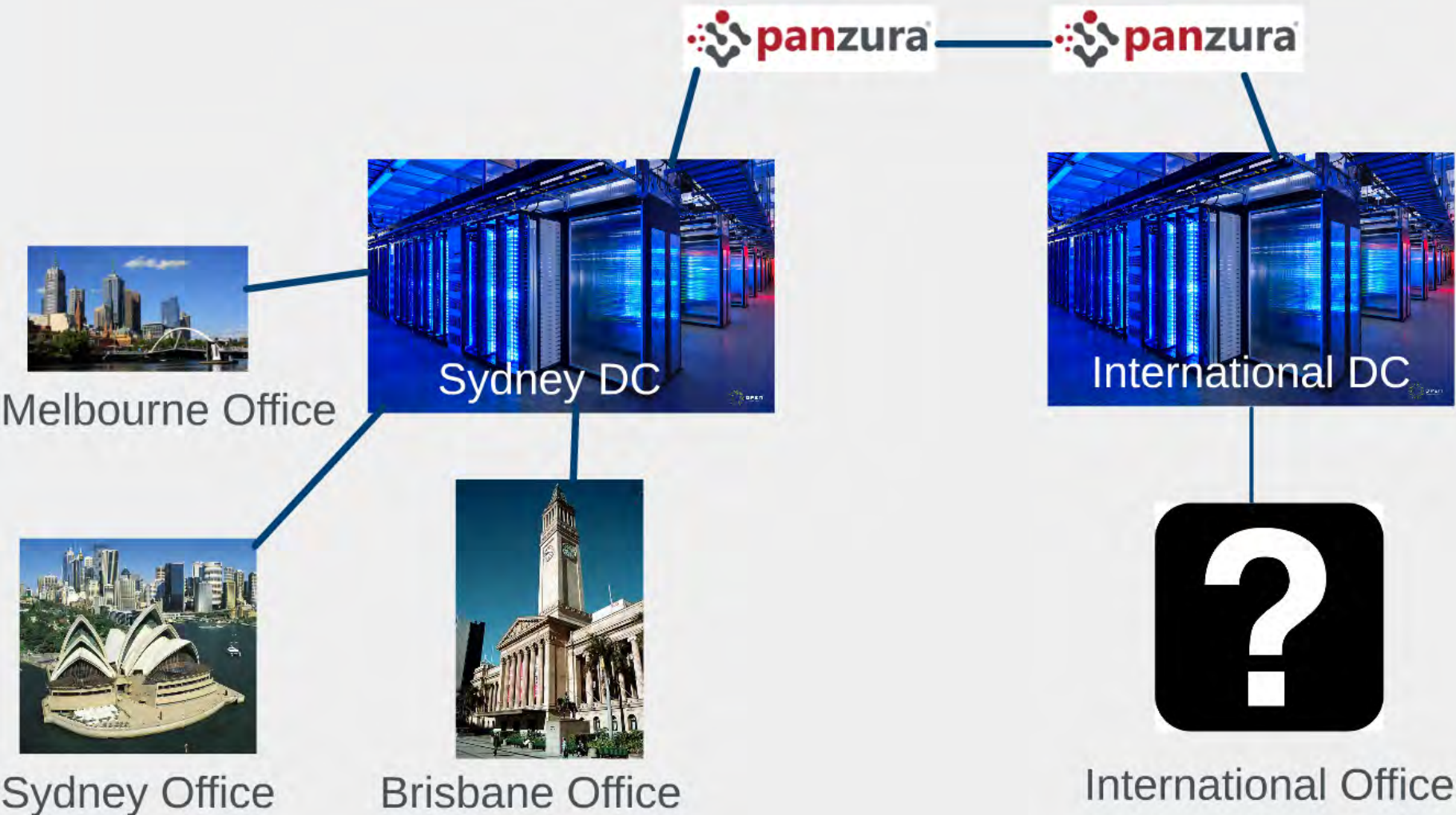
One image and dedicated resources per user + Difference Disk

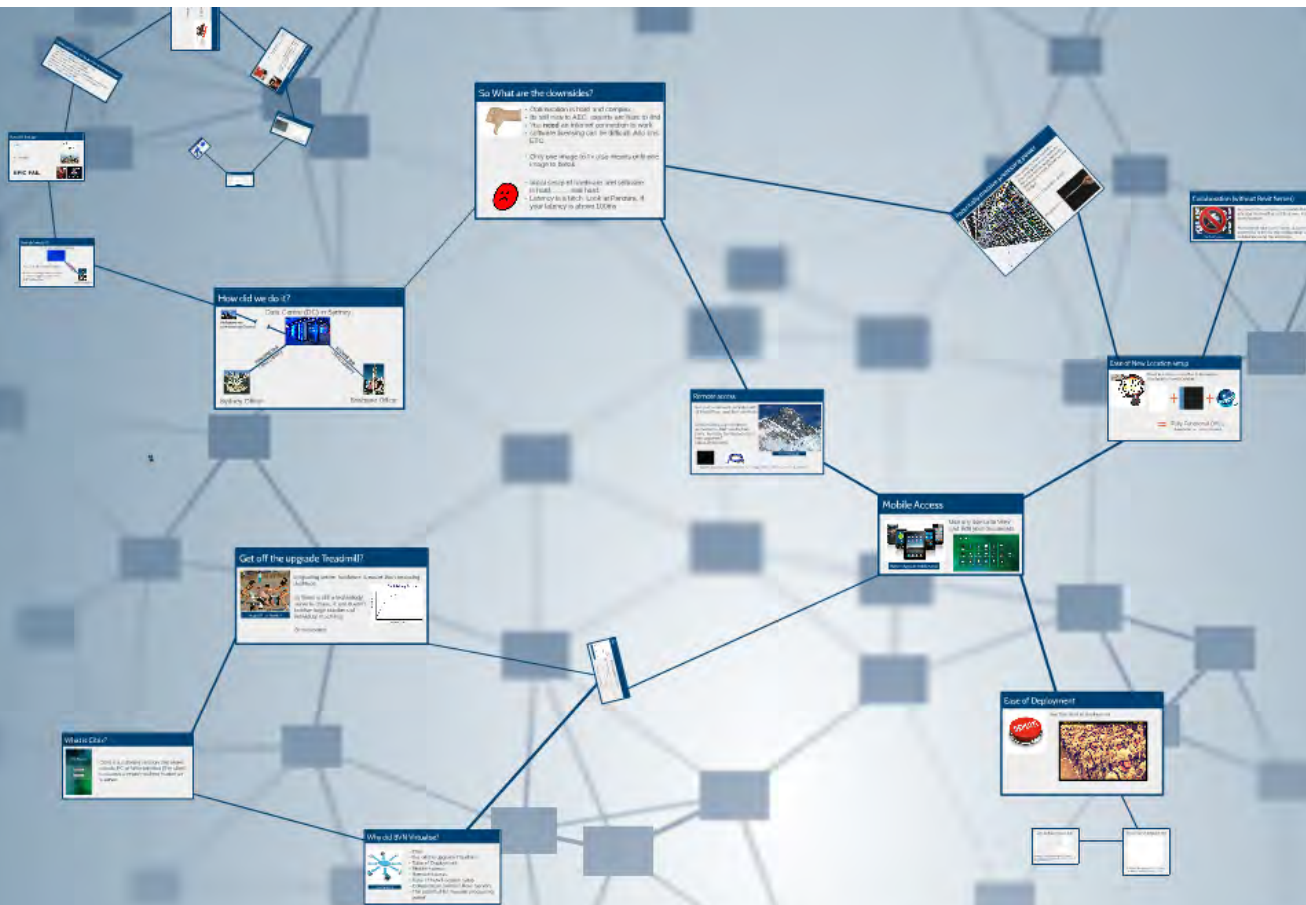
Whats Next

Sweet sweet SSDs (solid state Drives)



What's Next, International?





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