



The Future of the Data Centre

The Missing Link.....

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The hottest topic in town today is.....

Cloud Computing



As we all know.....

Cloud Computing services live in Data Centres

Today's Data Centre based Cloud Services Include

- " SaaS
- " Centralised Corporate Servers
- " Server Virtualisation
- " Desktop Virtualisation
- " PaaS
- " Network Based Storage
- " Hosted Voice
- " Financial Trading Exchanges
- " Disaster Recovery Services

What do they all have in common?



Dynamic disruption and applied innovation

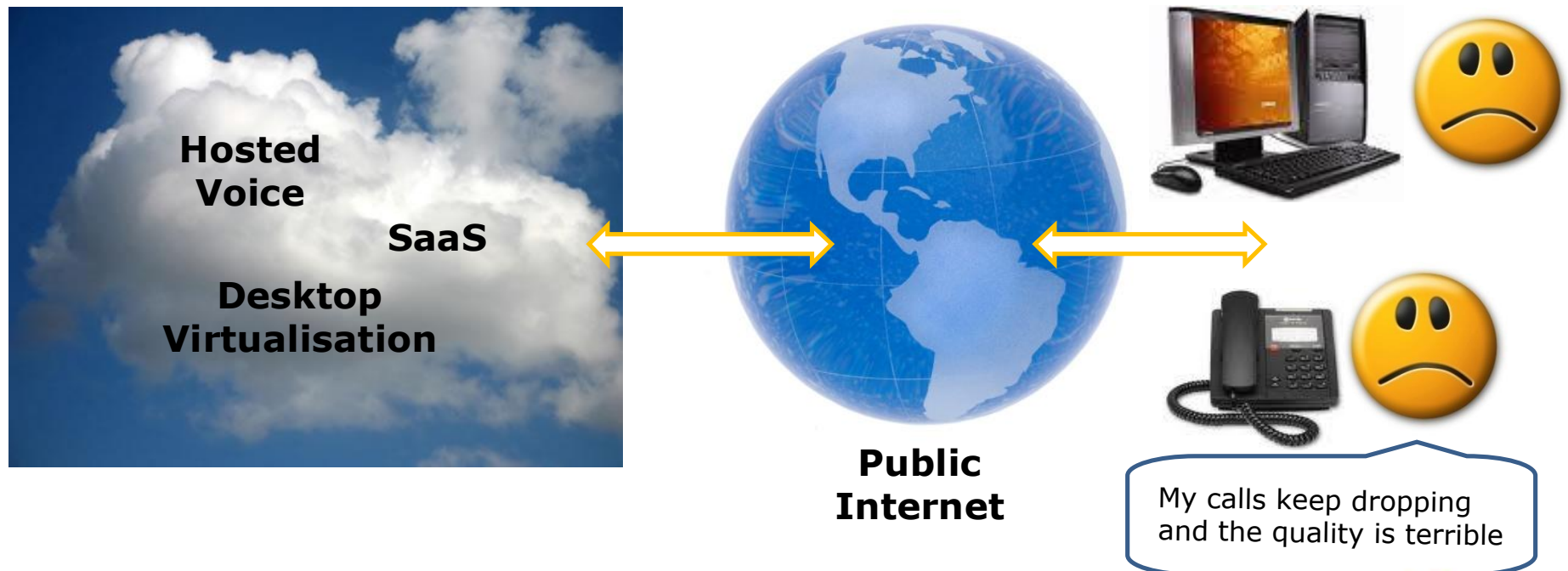
The customer experience is totally dependant on the network connectivity that links Data Centres to end users

. . . .But there is a problem!

Most Cloud-based services rely on the Internet for connectivity



The Quality of Experience Factor



You know what's going on in the Internet



- “ *Social networks overtake Google in UK web hits*”
- “ BBC iPlayer and other IP TV (now in HD)
- “ Film downloads
- “ You Tube
- “ The World Cup live streaming
- “ Major world news events
- “ Skype
- “ Spam
- “ iTunes
- “ Superfast Broadband from the home
- “ ...and endless new uncontrolled traffic

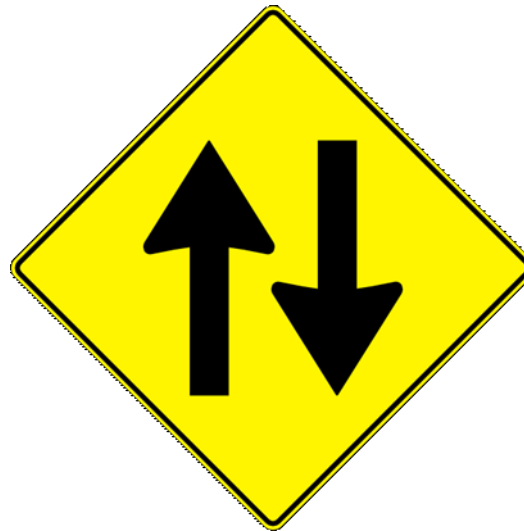
Virtualised Storage / Block mode Transfer

Remote storage solutions need to use block mode orientated protocols in order to achieve maximum performance.

Block mode protocols rely on low latency and even more importantly extremely low, preferably zero packet loss.

Remote or virtualised corporate storage projects that rely on the Internet for connectivity are likely to fail!

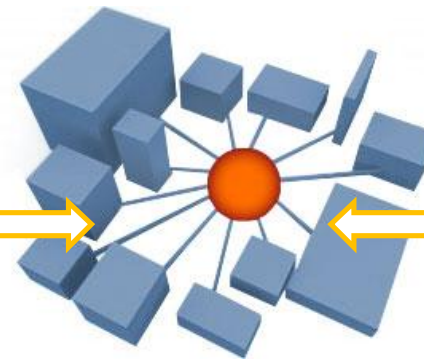
There is another way. . . .



A Business Grade NGN is the missing link between
Cloud Computing and Quality of Experience



Cloud Computing Across Carrier Class Networks



Wow! I'm getting sub-second responses

I can hear you perfectly!

A collection of icons and text boxes. At the top is a speech bubble with the text 'Wow! I'm getting sub-second responses'. Below it is a computer monitor and keyboard, and a yellow smiling emoji. At the bottom is a business class telephone and another yellow smiling emoji. A speech bubble at the bottom contains the text 'I can hear you perfectly!'.

What is a Business Grade NGN?

Well it sounds obvious but...

A Business Grade NGN has been designed and built to deliver business grade network performance and functionality to Enterprises.

Business traffic is the dominant or exclusive load carried across the network.



What is a Business Grade NGN?

The business world has moved to Ethernet, therefore a 21st Century Business Grade NGN is going to be “*Carrier Ethernet*” based.

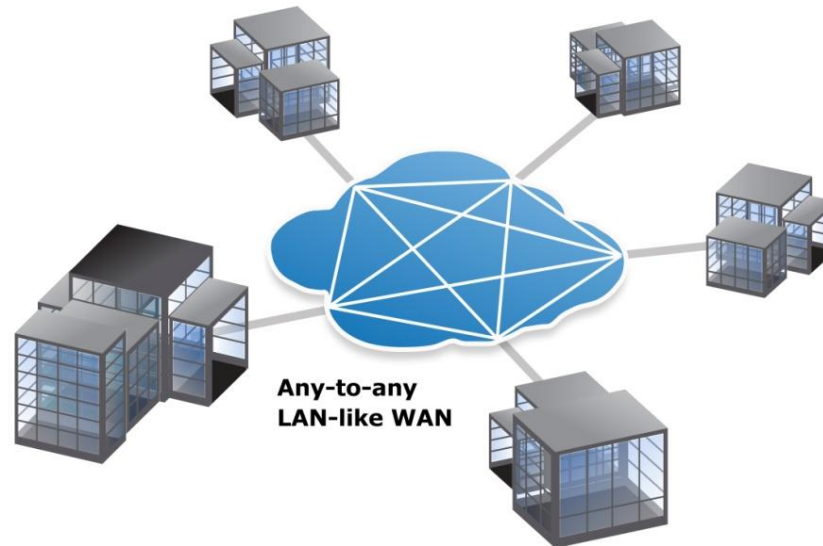
Multiple cloud services are insulated, secured, prioritised and assured which is in direct contrast to the public Internet.

The lowest possible latency with zero packet loss is the dominant design objective of a business grade NGN.



Overview of Carrier Ethernet over VPLS

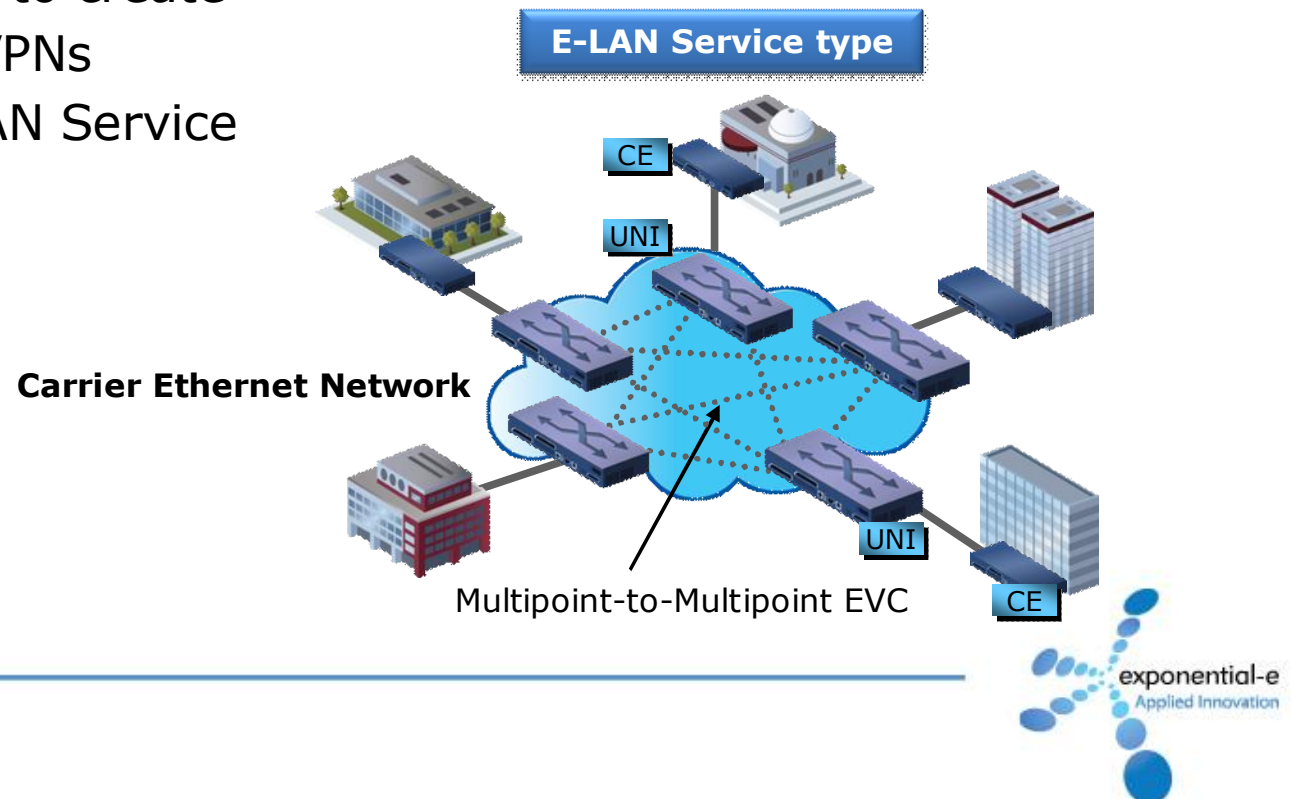
- “ Switched network to minimise latency
- “ Ultra low jitter
- “ Transparent Layer 2 services
- “ End-to-end QoS; intelligent dynamic distribution of bandwidth
- “ No consumer traffic



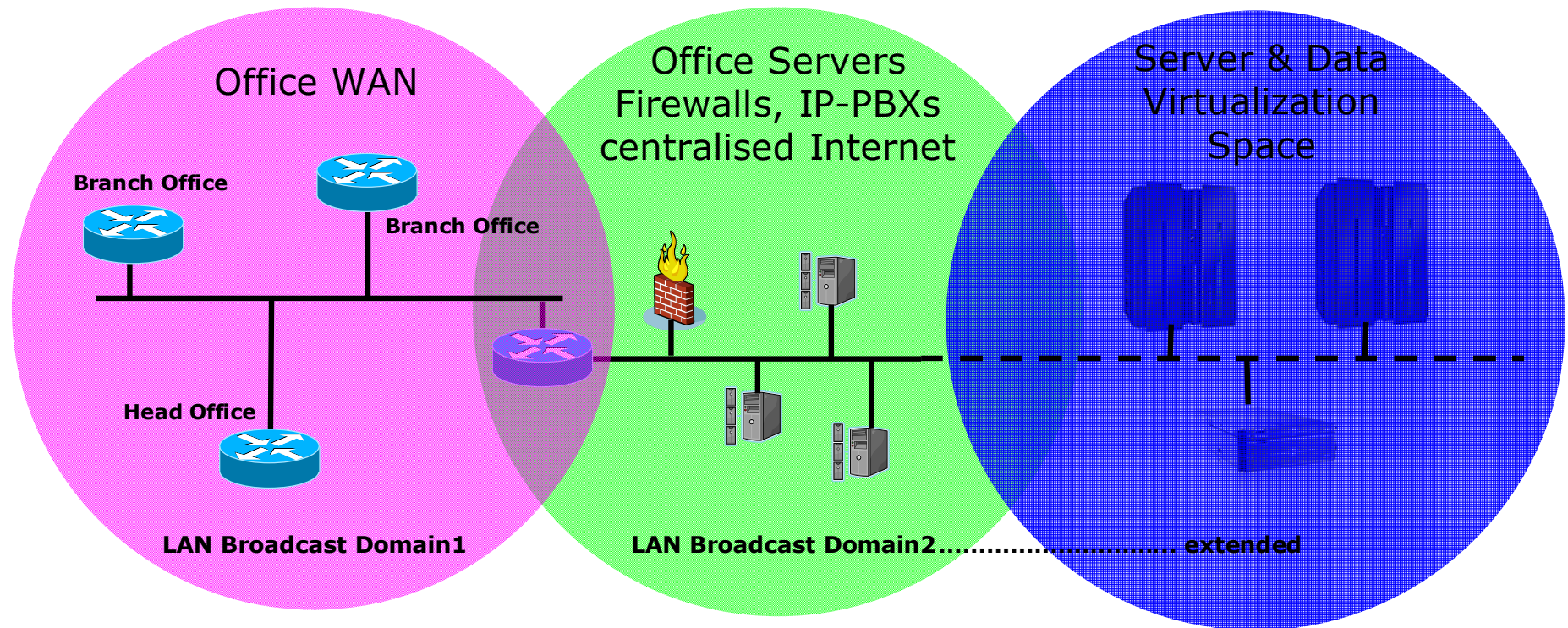
Virtual Private LAN Services

The **MEF** METRO ETHERNET FORUM terms it E-LAN

- E-LAN Service used to create
- Multipoint L2 VPNs
 - Transparent LAN Service



Dynamic disruption and applied innovation



Conclusions

The success of Cloud Computing for the Datacentre rests on the Network Infrastructure

Datacentre Service Providers:

To unlock the true potential of Cloud Computing and maximise ROI you need business class Network Infrastructure to connect to your customers

Customers:

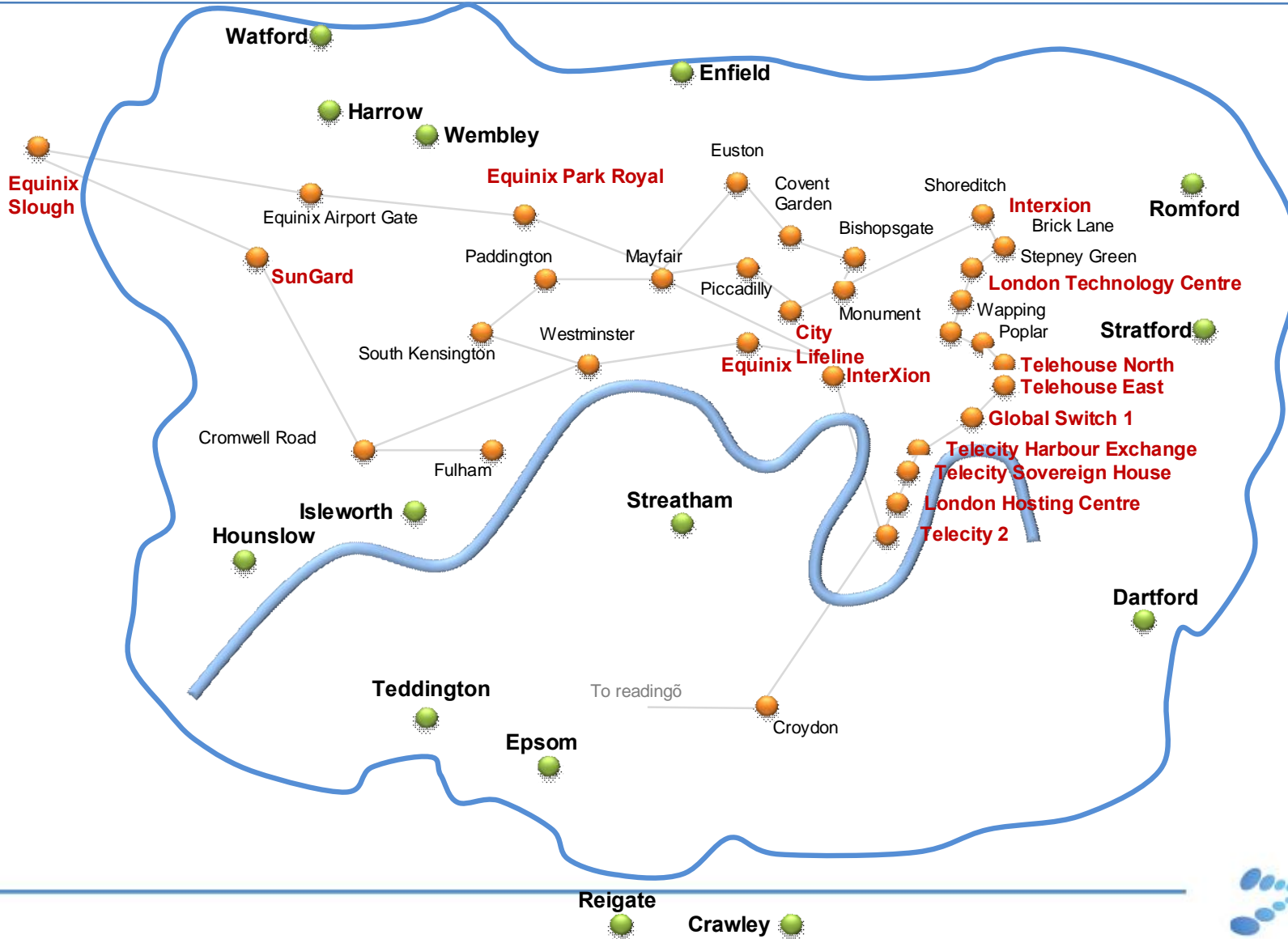
To get business-class performance for Cloud services, you need Business class network services



Who is Exponential-e?

- “ Innovative Next Generation carrier
- “ Deployed one of the first UK Ethernet networks in 2002 and is seen as an “*Ethernet thought leader*”
- “ Rolled out next generation VPLS network in 2006
- “ Presence in 21 UK Data Centres
- “ 100’s of enterprise customers using centralised firewalls and servers, hosted voice services and various forms of virtualisation
- “ Averaging 40% year-on-year growth





Exponential-e introduces....

vpplsplus

*Dynamic disruption
and applied innovation*

Industry Award



What The Industry is Saying



"Exponential-e unveils new A³ managed service for Businesses"



"Exponential-e releases illegal content blocker as Antidote to the Digital Economy Bill"



"Exponential-e brings application policy control to the **mass market**. Exponential-e is aiming to change the world with its revolutionary approach to application policy control"



Polled by Analysts as the most interesting technological innovation at Light Reading's Ethernet Europe event 2010



**Dynamic disruption
and applied innovation**

Thank You



**Any
Questions?**



exponential-e
Applied Innovation

