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SDN:

WHAT WE CAN LEARN FROM CLOUD COMPUTING

ANALYST FIRM IDC PREDICTS THAT BY 2020 30% OF THE TOP FIRMS IN EVERY BUSINESS SECTOR WILL NOT EXIST, AS WE KNOW THEM TODAY. FIRMS HAVE BEEN REACTING TO THESE PREDICTIONS FOR ABOUT THE LAST 18 MONTHS.

For most, the process involves a shift in management thinking and structures that are currently steeped in traditional silo based methodology to a new and collaborative way of working that is enabled by the right mix of technology, applications, and management ethos.

Networks are not designed to meet today's business challenges

Analyst firm IDC predicts that by 2020 30% of the top firms in every business sector will not exist, as we know them today. They will be replaced by new firms, will have merged, will have not kept pace and declined, or will simply not be relevant any more to the business needs of the day.

Firms have been reacting to these predictions for about the last 18 months – some even anticipated this sea change and began their own business transformations earlier.

Increasingly the term 'Digital Transformation' has been entering our business lexicon, but what does it mean?

For most, the process involves a shift in management thinking and structures that are currently steeped in traditional silo based methodology to a new and collaborative way of working that is enabled by the right mix of technology, applications, and management ethos.

Underpinning the concept of achieving a Digital Transformation is the desire to create an agile business; one that can deploy new collaborative applications very quickly and change these new applications in any direction – bigger, smaller, different locations etc. – as the business need is identified.

Current networks are not designed to meet these challenges. Typically networks are supplied as long lead-time, fixed bandwidth circuits with expensive, long-term contracts – almost the exact antithesis of what enterprises of today need.

What is required is a 'liquid infrastructure', a network not constrained by CPE components but more virtualised or software defined (SDN). Imagine network requirements being provisioned in minutes rather than the typical 25-30 days business has had to endure for so long.

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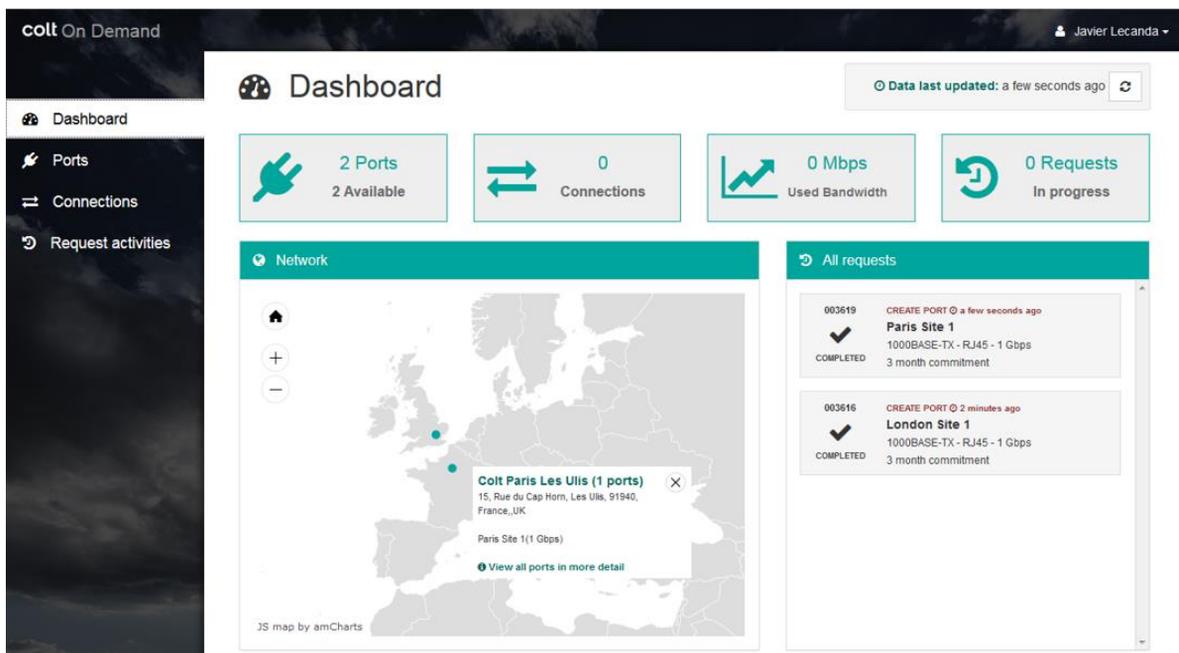
1. Build or Buy? Rent!

When 'The Cloud' began to gain traction as an attractive, cost effective and flexible deployment model for delivery of business applications, there were many firms that decided the cloud was the right way forward for their business and that the best way to start that journey was to build their own cloud infrastructure.

It was a mistake that most recognised pretty quickly as unrealistic goals hit hard against limited in house skill sets and resources. But it is a lesson learned and a lesson that applies equally to self-build, liquid infrastructure software defined network build outs.

Understanding the investments in the time needed to design and deploy the technology is therefore leading firms to undertake their Digital Transformations in partnership with a service provider that already has in place these network capabilities and is ready to make them available for enterprises in a simple yet comprehensive form.

So we believe that rather than build your own network the solution is to 'consume' ready-made carrier grade services that can be customised, tailored and configured rapidly to meet the changing nature of user needs.



2. Self-service does not equal on-demand

A pre-requisite of a Digital Transformation is to deliver speed to market. Time is a commercially critical commodity and a self-service provisioning portal for deploying network services on demand is central to achieving that goal.

On demand and in near real time is the gold standard for network provision. The ability for Enterprises to select data port locations, choose the required bandwidth over the circuit and have the service up and running in minutes rather than weeks is now available.

The portal thus becomes the network management hub; adding, changing and upgrading circuits and port locations as the business need changes. Of course management controls and measurements are built in.

For example, an activity history log and full integration to the supplier billing engine for accurate invoices are just the required essentials in the portal feature list. Instead of the time taken to specify requirements and then waiting to obtain quotations for different service options from your supplier the connection, rental and usage charges are displayed on the portal screen. This means, for example you can immediately see the implications of upgrading a circuit between say Berlin, London or Paris from 1Gbps to 10Gbps.

And say you need to upgrade that circuit bandwidth for just a month in anticipation of a short-term business need. Now, instead of planning weeks ahead, ordering the upgrade and then being landed with an inflexible, longer term than you need contract, you go to the portal the day you need the uplift and select your bandwidth requirement and press the button. Minutes later you have what you want, know your cost and know you can switch it off when it is no longer required without penalty.

That is what on demand means. Why would you settle for anything less?

Charge type	Current	Selected
Bandwidth	100 Mbps	-
Hourly	£92.15	-
Monthly	£67,269.50	-

3. Look at benefits not technology

We have mentioned a few of the benefits of an on demand network service model already; the rapid provision time measured in minutes rather than weeks, the responsiveness of services you can turn on and turn off as well as turn up and turn down and the cost benefits of not being locked in to long term contractual obligations.

Additionally I used the phrase 'consume ready-made carrier grade services' and this needs further explanation.

One of the benefits of the cloud based deployment model is that organisations can have costs based upon the number and quantity of applications and services they use over an agreed period of time – say a month. Why should on demand network services be any different?

If you only use an average 500Mbps on a 1Gbps circuit it would seem right that you only pay for 500Mbps wouldn't it? We think that makes sense too so that is what the cost will be based upon - what you consume rather than the capacity.

All of this makes sense for a fast, flexible and very cost effective service.

The screenshot displays the 'colt On Demand' web interface. The top navigation bar includes the user name 'Javier Lecanda'. The left sidebar contains menu items: Dashboard, Ports, Connections, and Request activities. The main content area is titled 'Connections' and features a search bar and an informational message: 'From this screen you can create and manage connections between your Ports - remember you can also change the bandwidth of an existing connection at any point! Click here to learn more.' Below this is a table of connections with columns for 'Bandwidth' and 'Hourly' cost. A single connection is listed: 'LDN-PAR link' with Service ID: 0000000008. The 'From' field is 'Open Port London Site 1' and the 'To' field is 'Open Port Paris Site 1'. The bandwidth is 100 Mbps and the hourly cost is £92.15. Action icons for edit and delete are visible for this connection.

Don't underestimate the business impact

Digital Transformations are being undertaken by businesses because they recognise they need to change; they need a different approach to working, in order to become more responsive in getting products and services to market.

On Demand services will automate tasks that had previously required a team of skilled networking personnel to conceive, plan and execute. It provides customers with flexible, on-demand Ethernet services (on-net) across over 50 European pre-wired data centres with a further 50 data centres to come on line in 2016.

Ethernet service connectivity can be to customer sites and to Cloud Service Providers such as Microsoft Azure and Amazon Web Services etc. With a goal to eliminate bottlenecks and reduce time to market, business applications for On Demand services will be wide and varied.

For example;

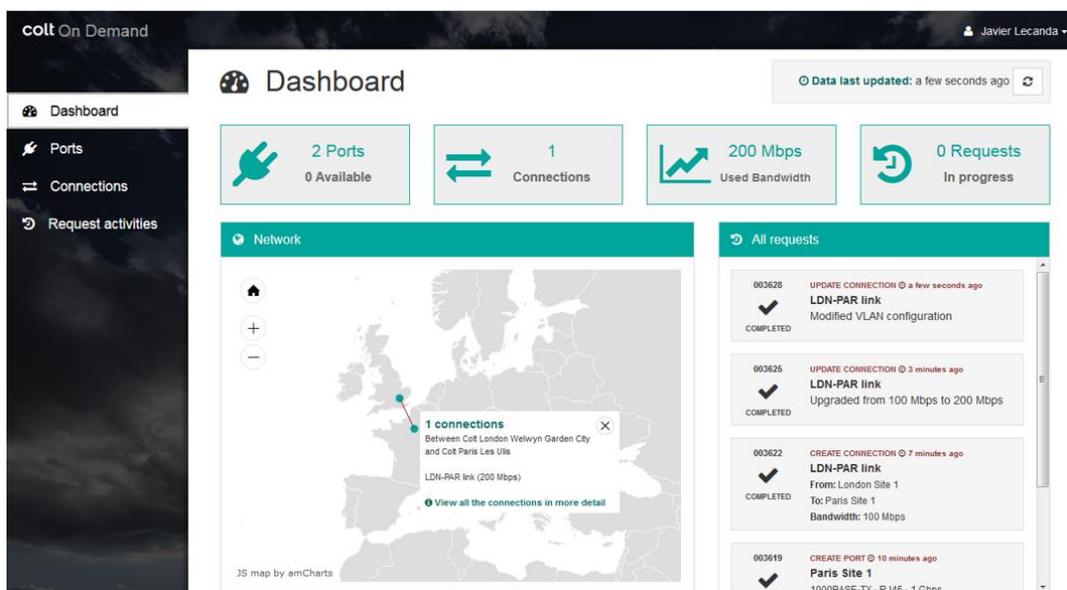
- Business Expansion: for organisations needing a cost effective solution to connect multiple sites having different bandwidth requirements DCNet On Demand supports expansion and cloud infrastructure deployment.

- Business continuity and Disaster Recovery solutions with remote backup for enterprise customers, for example web and video content replication and distribution across multiple data centres.
- Virtual desktop infrastructure (VDI), the practice of hosting a desktop operating system within a virtual machine (VM) running on a centralised server, can be enabled quickly and scaled to meet business demand. Servers will pre-emptively spin up when users login.

SDN network services must match what cloud computing does in delivering a dynamic service through a portal linked through open applications programming interfaces (APIs) to network resources.

In supporting IT tasks, a high bandwidth is needed to enable effective data backup, deployment of cloud applications as well as application workload balancing, video streaming, file transfer and software updates where bandwidth requirements are not predictable.

Overall it is the agility and simplification that will win the day; meeting the requirements of businesses needing fast deployment of services in new sites; in multiple countries; with simplified contract negotiation; connecting to multiple vendor neutral facilities.



Differentiate not commoditise

The big picture for Enterprises today is to achieve a 'liquid infrastructure' that enables business agility – the ability to deploy business applications and processes when and wherever they are needed for just as long as they need them, in order to better support their customers. Businesses are demanding an on demand, automated solution driven by a simple yet comprehensive web based user provisioning and management portal.

Colt's Ethernet services are based on the company's multi-award-winning Modular MSP platform (M-MSP) – a Carrier Ethernet Multi-Service Platform. This fully modular, open and vendor agnostic platform is designed to address the connectivity requirements of carriers and businesses that need to link their data centres and headquarters with hundreds or thousands of sites across the world.

M-MSP has software defined networking (SDN) and automation at its core, bringing carriers and Enterprises agility and flexibility to scale capacity easily as their bandwidth requirements change. What this delivers for businesses is a simplified and automated business agility.

It's time to plug in to that working solution now. Hopefully, you've dismissed all thoughts of building your own now haven't you?

For more on Colt's Software Defined Networking and On Demand services:

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