



The three most ESSENTIAL BENEFITS OF A Virtual Private Cloud (VPC)

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How many times have you heard service providers saying that they are a perfect fit for the cloud business because they are already providing the network?

What do they mean? How does your business benefit? Is network a critical component of your application or is it just a redundant item on the list? Let me answer these queries by explaining the three most important benefits of Virtual Private Clouds.

Before we get down to explaining the benefits of a VPC, let me define what a VPC is in the first place. VPCs are similar to public clouds yet somewhat different – they can be defined as a private cloud infrastructure provided within a public cloud. The resources are owned and operated by the cloud provider. However, unlike public clouds, that are Internet reachable, Virtual Private Clouds are Intranet reachable. So they look and feel like a part of a company's MPLS-based internal Wide Area Network. Coming down to benefits, the three most essential benefits of a VPC are:



Bandwidth Efficiency

Take a look at the figures below, do you spot the difference? Yes, in the figure on the left, the traffic that is destined for the cloud is being sent via the company data center or is being looped through the company data center. This leads to wastage of bandwidth, router, switch and firewall capacity. Your company will end up paying twice for bandwidth. How? - By paying for the primary WAN connection and then for the Internet. Not to mention network sizing – the very basis of a cloud is access to on demand resources. In this case your network must always be sized for peak traffic. How is that efficient?

Cloud Bandwidth Efficiency

The figure on the right hand side shows a Virtual Private Cloud set up. With the second set up, the bandwidth required to reach the cloud will be billed for on-demand and users will be able to take the shortest and a cost effective route to the application.

Forrester predicts the public cloud market will peak in 2014 and “then enter a period of significant commoditization, price deterioration, and margin pressure.” While the public cloud market declines, the VPC infrastructure services market will continue to grow, from US\$2.54 billion in 2012 to US\$21.04 billion in 2020. This sustained growth will largely be attributed to the “enterprise-nature” of VPC services, including higher levels of security, privacy, and control not offered by public cloud solutions, and not easily commoditized.



Application Performance

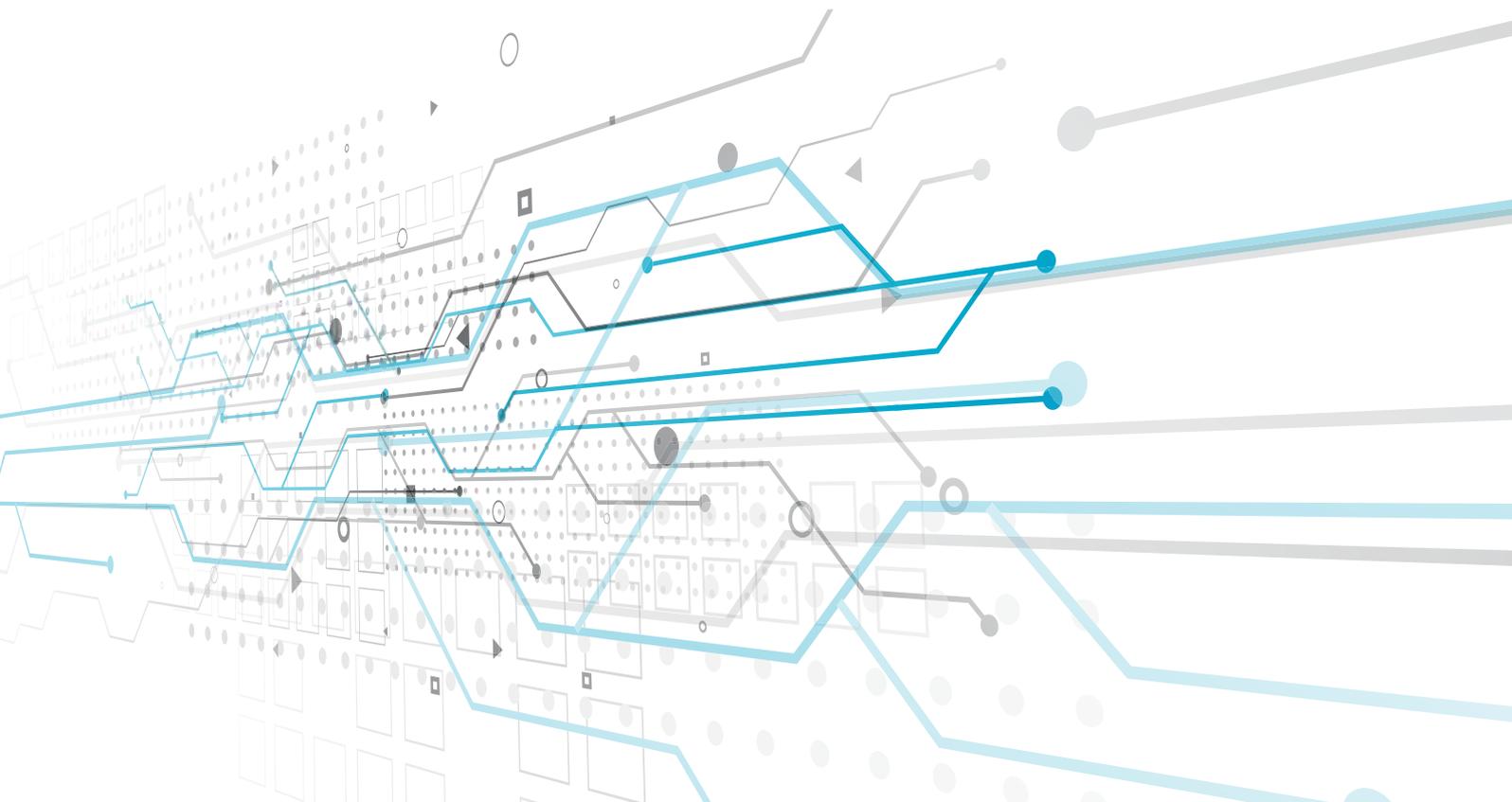
Congestion in the Internet can disrupt or slow down your application traffic. Even if you have sized your network for peak times, inbound congestion could hamper application performance and make applications run slow. The point of congestion is shown in the above figure.

With Virtual Private Cloud, the cloud resources are routed through the corporate MPLS based WAN. Thus, traffic with a high priority can be marked and delivered accordingly.

Security

Traffic to and from the Virtual Private Cloud stays within the corporate firewall without crossing the Internet. With routing policies companies can also specify which users are allowed to reach the Cloud resources and which are not.

With public clouds, encryption technology will be required to help secure the transmission across the Internet. Although encryption is generally secure it is still one more thing that needs to be managed by Corporate IT and it needs to be configured correctly. Furthermore, corporate IT will have no way to prevent users from attempting to access the Cloud resources.



A Word For Service Providers

The cloud service market is going to go through a sea change with significant market shifts in the coming years; hence, the cloud computing service providers must look at expanding their service offering through introduction of Virtual Private Clouds (VPC). They should look at crafting their VPC offering to meet the following criterion:

- › Emphasize “enterprise-strength” services with comprehensive security capabilities
- › Appropriately differentiate service levels and value-added services that go above and beyond basic compute capabilities
- › Accentuate the ability to provide true end-to-end cloud computing infrastructure and networking services, all covered by service level agreements (SLAs) from a single service provider (for example, covering not only cloud computing infrastructure availability, but network availability as well)
- › Properly balance service prices between the desire to be competitive and the desire to capture price premiums
- › Target the right customers and workloads

