Building an Agile **Cloud Core**

With Next Generation Interconnect



Cloud is the Core

of Enterprise IT

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Enterprises have adopted cloud computing as the core of their IT infrastructure to power digital transformation. An avalanche of survey statistics bears this out. According to the 2021 Flexera State of the Cloud report¹, 92% of enterprises say they have adopted a hybrid or multi-cloud strategy. Applications have led the way, with nearly 50% of all application spending now in the cloud. Netskope has tracked the growth of enterprise cloud application usage for years,² and their 2021 Cloud and Threat report reveals that organizations with 500 to 2,000 employees now use on average 690 distinct cloud apps per month. The pandemic has only accelerated cloud adoption. According to Gartner, the percentage of IT spending in cloud-shifted arenas will grow from 33% to 45% between 2020 and 2024³.





¹ Flexera 2021 State of the Cloud Report (<u>https://info.flexera.com/CM-REPORT-State-of-the-Cloud</u>)

² <u>https://www.netskope.com/netskope-threat-labs/cloud-threat-report</u>

³ Market Trends: Cloud Shift — 2020 Through 2024. 13 August 2020 - ID G00721225



Defining the Cloud Core: Mission-Critical, Hybrid & Multi-Cloud

The core of your cloud architecture is where mission-critical applications and data flow. These app-to-app and machine-to-machine flows drive processes that lie at the heart of the business. Examples include inventory management, payment and transaction processing, financial reporting, booking systems, aggregated employee and partner traffic accessing critical applications, and backbone traffic routing volumetric customer digital experience traffic to distributed app and service components.

Today, these workflows are distributed, with volumetric data sets moving between multiple cloud providers, multiple colocation data center providers, enterprise SaaS like Salesforce, and specialized cloud providers such as cloud adjacent storage, bare metal cloud, and backup providers. Enterprises are building hybrid & multi-cloud architectures in order to access best of breed capabilities, optimize cloud region and colo locations, and reduce concentration risk.

The criticality of workflows in the cloud core means that they need uncompromising performance, privacy, security, scalability, and reliability. After all, if these workflows stop, the business stops.

An Agile Cloud Core is Essential

Cloud-based IT solutions offer agility in their technical and consumption models. That agility is key to the enterprise cloud core being able to meet four distinct types of business demands:

1: Seasonal

Many businesses experience seasonal demands. The most obvious examples include retail, travel and hospitality, back-to-school, and tax seasons. But many other businesses experience cyclical demand patterns for IT workflows.

3: Ad Hoc

Innovation, digital transformation, disaster recovery scenarios, site migrations, and short-term business initiatives often create spikes in demand for critical IT workflows in the cloud core. Some industries extensively function on this basis, such as Media and Entertainment, where creative productions become distinct business entities that only last for 6 to 9 months.

2: Steady State

Every business has a baseline set of business processes and digital experience flows that generate a steady stream of demands on the cloud core. In most businesses, this demand is growing, but at a relatively predictable rate.



4: Disruption

Every organization faces unpredictable events that create unexpected demands for critical IT processing in the cloud core. The unavoidable example is the pandemic, which dramatically increased digital enablement needs for remote workers and shifted cloud traffic patterns away from offices. Yet, these disruptions can take many forms, including new market opportunities or threats, new regulatory requirements, and mergers and acquisitions.



In today's demanding digital business environment, the connectivity tying your cloud core together needs to deliver highly predictable performance and security while giving you the flexibility to shift resources on-demand to meet seasonal needs, power innovation, and address emerging opportunities and challenges.

Unfortunately, connecting your hybrid and multi-cloud core has historically meant choosing between traditional telecom and Internet options that come with serious tradeoffs in either speed and agility, or in security and performance. Traditional Connectivity **Doesn't Work** for the **Cloud Core**



Internet: Unpredictable, Insecure, and Costly

Internet connectivity is problematic for mission-critical cloud core flows. To begin with, Internet connectivity is simply not private or secure, and no VPN tunnel overlay can fundamentally change that fact. Performance is also problematic. The Internet is best effort, with no latency SLAs. Internet transit suffers from relatively high latency and latency variation over time, which cause unacceptable throughput and performance issues.

In addition, the volumetrics of cloud core workflows are at odds with cloud provider network consumption models that are built for serving applications to users and charge for network traffic egress on a usage basis. The result is that hybrid and multi-cloud Internet transport can be highly cost-inefficient.



The alternative to Internet connectivity for the cloud core has been limited to traditional telco connections. Sadly, while this option offers predictable performance backed by SLAs, security and privacy, and predictable bandwidth costs, it comes weighed down by a severe lack of agility in three dimensions. First off, traditional telco connections require a long-term, up-front commitment. Second, traditional telco connections require IT and telecom buyers to make these commitments based on peak anticipated capacity, and in too many cases, a major portion of that bandwidth gets wasted. Third, it can take quite a long time to engage, procure, and provision traditional telco connections.

When considered in the light of the four different demand types that the cloud core needs to meet in order to deliver value to digitally transforming organizations, the lack of agility in traditional telco connectivity is a non-starter.



Traditional Telco **Connectivity:** Slow, Wasteful, and Non-Agile

Next Generation Connectivity

for the Cloud Core

PacketFabric has developed the industry's first **connectivity cloud:**

A global, private, secure optical network that offers on-demand Layer 2 and Layer 3 connectivity between hundreds of colocation data centers, CSPs like AWS, Azure, GCP, IBM, and Oracle, major SaaS providers like Salesforce and Webex, and a broad ecosystem of Internet Exchange, SaaS, Disaster Recovery and Backup as a Service, and other providers.

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Purpose built for Hybrid and Multi-Cloud

PacketFabric is purpose built for hybrid and multi-cloud IT, designed to deliver all the agility, scalability, predictable performance, and flexible consumption that enterprises need from their cloud ecosystems. IT and telco buyers can connect ports at low cost to the network in colocation DCs, and create any number of virtual connections to other DCs, hosted cloud on-ramps, and other providers, at different terms from month-to-month and longer. If high performance multi-cloud connectivity is the requirement, it's even easier, with zero hardware and zero touch to connect at speeds from 50Mbps to 100Gbps.

The PacketFabric network is massively scalable and resilient, with redundant stacks and paths, and deploying 400G networking infrastructure based on Cisco Silicon One. Users can provision carrier-class point-to-point, hybrid cloud, and multi-cloud connectivity in minutes using a self-service portal, while DevOps teams can manage connectivity in real-time using a comprehensive REST API.





Meet the Cloud Connectivity Challenge

There are many ways to learn more about next-generation cloud connectivity. PacketFabric helps hundreds of enterprises meet the challenges of connecting their hybrid and multi-cloud core and maintain an agile digital business stance.

Visit <u>packetfabric.com</u> to watch our webinars and how-to videos. Read and subscribe to our <u>blog</u>. Learn more about our services including <u>point-to-point</u> connectivity, <u>hybrid cloud</u> connectivity, and <u>multi-cloud routing</u>.

Alternatively, contact us at <u>sales@packetfabric.com</u> and we'll be happy to arrange a consultative discussion with your team on how to overcome connectivity challenges and help you build an agile cloud core.

