MAPS

Unleash 40%+ Cost Efficiency on Microsoft Connectivity







In an increasingly interconnected and digitalised world, Microsoft's suite of cloud offerings has become the go-to solution for enterprises seeking enhanced productivity and seamless collaboration.

Many enterprises continue to rely on multiple options like the public internet and ExpressRoute to access Microsoft cloud such as 365, Microsoft Dynamics, and Microsoft Azure. However, these alternatives fall short in terms of risks, performance, reliability, and cost-efficiency.

In this eBook, we will discuss why Epsilon's solution for Microsoft Azure Peering Service (MAPS) stands out as the ideal choice for enterprises grappling with application performance challenges. More importantly, we will explore its importance in achieving optimal cost-efficiency, particularly as the volume of data transferred from the Microsoft cloud increases.



# The Public Internet: Where Drawbacks Abound

Microsoft 365 has been designed to allow customers across the globe to access its suite of applications, including Outlook Online, SharePoint Online, and Teams, through an internet connection.

While Microsoft consistently optimises its network performance of its cloud applications, both in terms of architecture and features, there are still areas where it may be lacking in meeting the stringent security standards, reliability, and optimised performance required by most enterprises. In addition, organisations are often taken by surprise when confronted with unexpectedly high egress costs when data leaves the Azure environment. These costs not only compound their concerns but also create financial challenges in managing their cloud infrastructure.





# **Egress Costs: The Invisible Drain on Your Finances**

While inbound data transfer to Microsoft Azure data centres is free, additional charges known as egress costs, are incurred when data is transferred from a Microsoft network to external networks or destinations outside the cloud environment.

Egress costs are often overlooked as they are typically billed retrospectively. This means that costs can accumulate behind-the-scenes as applications continue to extract data.

These costs vary based on various factors, such as the volume of data being transferred and the destination (note that cross-continental transfers can significantly increase cloud expenses). Furthermore, routing traffic or data through the internet incurs higher egress costs, thereby augmenting the overall cost. These variables make planning and budget forecasting a challenge.





Microsoft ExpressRoute: Is it the Optimal Choice for Enterprises?

Maximise Your ROI: Unleash 40%+ Cost Efficiency on Microsoft Connectivity

Larger organisations or those with specific requirements, such as regulatory needs, often adopt Microsoft ExpressRoute, a dedicated and private network connection to the Microsoft backbone network. It provides private peering to connect to the private endpoints of the IaaS deployment.

It also offers **Microsoft Peering services** to connect to the public endpoint of SaaS services within the Microsoft network, such as Office 365 and Teams.



ExpressRoute is the most optimal method for connecting to the Microsoft Global Network in the following scenarios:

- When SaaS clients are concentrated in a geographical location, or
- When SaaS clients are concentrated in multiple global locations, and each location has a dedicated ExpressRoute connection



However, there are situations where SaaS clients are widely distributed across a region or dispersed globally. In these cases, connections are geo-pinned to a specific location, forcing the clients' location to be further away from the geo-pinned location. This can result in increased network latency, leading to suboptimal network and application performance.

In such scenarios, it is recommended not to geo-pin connections or enforce traffic through an ExpressRoute circuit in a specific peering location. This approach mitigates unnecessary network latency, ensuring overall superior performance for clients.

### Unveiling the Lesser-known Drawbacks of Microsoft ExpressRoute

While ExpressRoute enables a public connection to the cloud-based Microsoft 365 through a Microsoft Peering service, it comes with its fair share of disadvantages, including:



#### **High Egress Costs**

Just like utilising the public internet, adopting ExpressRoute for data transfer outside the Azure network also incurs additional charges that can significantly impact the overall costs.



#### **Design Constraints**

The hub-and-spoke architecture of ExpressRoute concentrates all traffic through a single egress point, often leading to traffic concentration, security risks, and potential bottlenecks.



### **Access Restrictions**

In scenarios where internet connectivity becomes unavailable, the usability of Microsoft 365 and other applications such as Exchange Online, OneDrive, Teams, and Yammer are severely affected, as these apps have been specifically designed for internet access.



# MAPS Enhancing Business and User Experience

Maximise Your ROI: Unleash 40%+ Cost Efficiency on Microsoft Connectivity

The ideal connectivity option to Microsoft Azure and Software as a Service (SaaS) applications

Epsilon delivers Microsoft Azure Peering Service (MAPS) by partnering with Internet Exchanges (IXs) such as LINX to provide high-perfomance public internet connectivity to enterprise users accessing Microsoft SaaS such as Office 365 cost-efficiently.

This is done by reducing the round-trip time (RTT) from a user's site to the Microsoft Global Network. With Epsilon's MAPS, enterprise users gain direct, highly available connectivity, geo-redundant infrastructure, and optimised routing specifically tailored to Microsoft services.





# Epsilon's MAPS: A Cost-efficient Triumph

Compared to both the public internet and ExpressRoute, Epsilon's MAPS delivers significant cost savings on the Monthly Recurring Cost (MRC). One of the key advantages of MAPS is the elimination of egress costs. This is especially advantageous during periods of high outbound data transfer volume, which would otherwise result in an escalation in egress costs.

In the following page, we review the scenario of an organisation with an average monthly application data transfer volume of 10TB and 500Mbps internet access. By subscribing to MAPS, the organisation enjoys substantial savings of 41% compared to the internet and 46% compared to ExpressRoute.







### MAPS vs Public Internet

Access Type	1Gbps Port	500Mbps Access	10TB Egress	TCO MRC
MAPS	\$325	\$500	\$0	\$825
Public Internet Access	\$0	\$600	\$692	\$1,392
MAPS Public Internet Access	\$325 \$0	\$500 \$600	\$0 \$692	\$825 \$1,39



# MAPS vs ExpressRoute

Access Type	1Gbps Port	500Mbps Access	10TB Egress	TCO MRC
MAPS	\$325	\$500	\$0	\$825
ExpressRoute Microsoft Peering	\$325	\$300	\$862	\$1,517

The TCO (Total Cost of Ownership) calculation provided above is based on a specific scenario and should be considered as an estimation. Actual costs may vary depending on factors such as the chosen service provider, individual company usage patterns, and other variables.

# **Avoiding Productivity Loss**

Another key proposition of MAPS is the enhancement of network performance and reduction of latency. By leveraging the power of MAPS, enterprises can significantly improve their network's performance, leading to faster data transfer, minimised delays, and improved user experiences.

The benefits extend beyond mere speed. A reliable internet connection has the potential to save enterprises a staggering average of \$9,000 per minute in network downtime costs. This includes factors such as revenue loss, decreased employee and end-user productivity, business disruptions, and potential financial penalties. The actual amount varies across industry verticals, organisation size and business models, with some cases reaching as high as \$60 million per hour.



A reliable internet connection holds the potential for enterprises to save approximately

**\$9,000** per minute in network downtime costs. *Source: Ponemon Institute* 



*Source: Ponemon Institute* 

# The Power of MAPS: Benefits Beyond Cost Savings

Epsilon's MAPS also offers several compelling reasons that go beyond mere cost savings. It delivers significant improvements in network performance, security, and more, including:

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### **Reliable Uptime**

Experience enhanced connectivity and improved application performance by having your traffic routed to the nearest Microsoft cloud service location worldwide.

### Low Latency

Achieve optimised and responsive connectivity to public Microsoft cloud services by establishing direct links to prominent peering infrastructure providers on Epsilon's global network fabric.

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#### **Enhanced Security**

Gain robust enterprise security through highly secure network protocols, greater access control, controlled traffic routing, advanced security measures, trusted partnerships, and strict compliance.



### **Greater Insights**

Efficiently identify and rectify anomalies in internet BGP routes or latencies in various locations with comprehensive service monitoring that enables traffic and routing analysis.

# We Interconnect Your World

#### **Epsilon Telecommunications**

Epsilon is a leading global software-defined network provider that provides a comprehensive suite of end-to-end connectivity and communication solutions to hundreds of organisations, including some of the world's largest carriers and businesses. We are constantly innovating, and partner technology leaders to enhance our services with complementary capabilities for our customers' success.

With Infiny, our proprietary award-winning Network as a Service (NaaS) platform, procure, manage and optimise your global interconnectivity on-demand. Combined with a high-performance and far-reaching global network that spans across Europe, the Middle East, the United States, and Asia including mainland China and Korea, we empower you with complete agility and reach, truly interconnecting your digital world.

### LINX

LINX is a world-leading interconnectivity partner with over 950+ members spanning major cloud, data communications, telecommunications, financial, and enterprise companies across more than 85 countries. They provide robust, low latency peering services and cloud access to thousands of organisations, interconnecting partners, suppliers, and customers efficiently for improved control and performance.

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# Ready to discuss about MAPS?

Talk To An Expert →

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