

# CONNECTING AZURE EXPRESSROUTE

SES delivers the Microsoft Azure intelligent cloud and intelligent edge platform to any global end-point

**SES**▲

According to recent survey research from IDG<sup>1</sup>, the proven benefits of public cloud services increase as adoption of those services grows. The survey reveals that enterprises with 50 percent or more of infrastructure and applications in the cloud are far more likely to realise key benefits—including cost savings, productivity gains, and new technology adoption—than those enterprises with 30 percent or less in the cloud.

If cloud services can reach the whole enterprise, regardless of where it operates, then the benefits realised from those services increase. If users in hard-to-reach sites can take advantage of the same applications as everyone else, and if IT managers no longer need to maintain as many legacy systems and applications, the entire organisation is more cost efficient and productive.

## Azure ExpressRoute partnership

As an Azure ExpressRoute launch partner, SES is joining forces with Microsoft to bring the Azure cloud platform to any global end-point, whether in the air, at sea, or in underserved areas on land. Now, Azure customers everywhere are just one hop away from their most essential intelligent cloud and intelligent edge applications, and one step closer to bringing the whole enterprise to the cloud.

With SES as an ExpressRoute partner, Azure users in underserved areas can use our global, multi-orbit satellite fleet and terrestrial backbone to gain connectivity to Azure data centre and edge compute facilities. Getting connected is simple. End-users simply select SES as an ExpressRoute solution provider from the Azure portal, which then activates the provisioning of an SES satellite connection from the remote site to the closest Azure data centre.

SES will work with telcos and other connectivity partners to create a dedicated, end-to-end ExpressRoute circuit over IP or Ethernet, as ExpressRoute connections are not provisioned over the public internet. This allows ExpressRoute to deliver more reliability, faster speeds, lower latencies, and better security than internet-based connections.

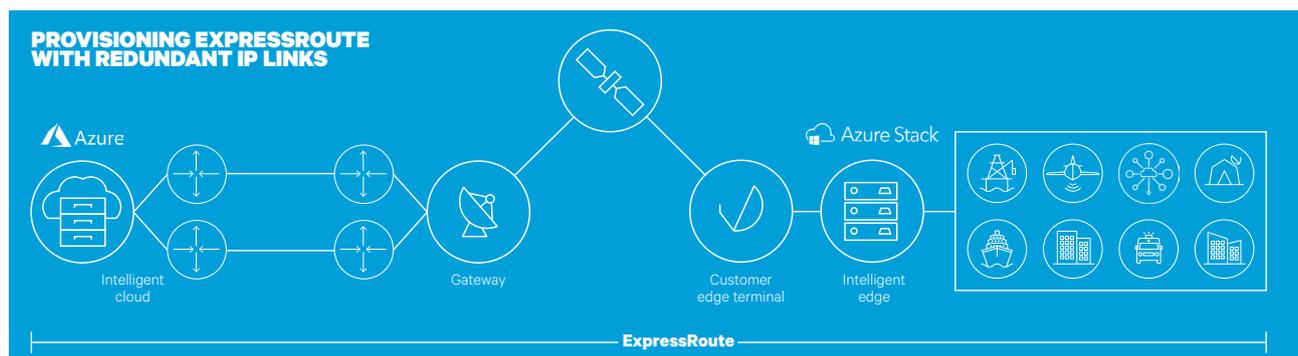
## Global, multi-orbit reach

As the only satellite-enabled network services provider with a commercially proven multi-orbit fleet, we afford ExpressRoute customers more opportunities to optimise cloud and edge connectivity from remote and underserved areas. ExpressRoute can be provisioned over dedicated Medium Earth Orbit (MEO) or Geostationary Earth Orbit (GEO) links, or a combination of the two, enabling end-users and our connectivity partners to match the right technology to specific enterprise requirements, including throughput, latency, availability, and coverage. Our multi-orbit fleet also affords end-users more ways to take advantage of multi-cloud solutions, understanding that many enterprises and government agencies require connectivity via ExpressRoute and other direct-connect services.

## Cloud-optimised service level agreements

By connecting to our O3b MEO fleet, ExpressRoute customers gain high-throughput, low-latency performance ideal for an increasing number of cloud workloads where very large data sets need to be transferred. O3b MEO based services are MEF certified, simplifying extension of Ethernet services over our network and providing the same MEF-defined SLAs as are offered in terrestrial networks.

We also provide connectivity through our GEO satellites and Skala Global Platform, our high-throughput Ku-band ground system solution, which is well suited for a wide variety of applications that are more tolerant of latency but require expansive coverage and simple VSAT remote terminal connectivity. As a result, we can provide robust service level agreements with MEO or GEO based services, covering availability, throughput, latency, and coverage from Azure data centres or edge compute nodes to any customer end-point.



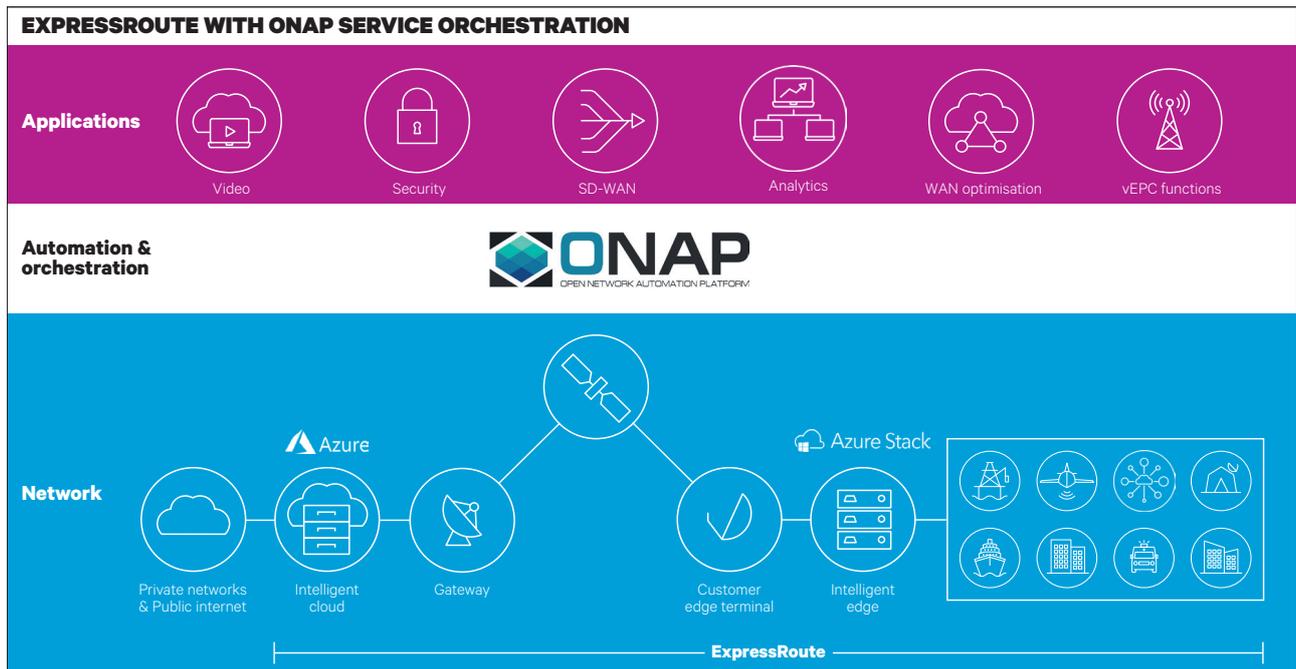
1. "Enterprise Cloud Computing Unlocks Deep Strategic Value Through Increased Business Agility," IDG Research Services.

## Unmatched flexibility and scale with O3b mPOWER

Launching in 2021, our O3b mPOWER communications system will deliver multi-gigabit, low-latency services with dynamic bandwidth allocation of forward and return path capacity, ideal for optimising ExpressRoute for variable, “bursty” cloud workloads and high-throughput applications. O3b mPOWER also affords ExpressRoute customers unmatched flexibility to route user traffic from any remote site to any O3b mPOWER gateway, making it simpler to connect to the closest Azure data centre, reducing latency and improving application performance.

## Automated, cloud-scale operations

Operationalising an end-to-end ExpressRoute service must be simple and automated, which is the aim of our partnership with Microsoft and Amdocs to host and develop an open, standards-driven service orchestration solution based on Open Network Automation Platform (ONAP). As the first satellite operator to adopt ONAP on Azure, we are designing an agile, cloud-scale operational environment in which ExpressRoute customers can activate high-impact virtualised network functions (VNFs) quickly and easily. Examples of VNFs that can be made available to ExpressRoute customers include security, WAN optimisation, and SD-WAN, among many others.



## Hybrid networking with SD-WAN

Software-defined wide area network (SD-WAN) is a key enabling technology that can be used to create hybrid, multi-access network services, intelligently prioritising and steering cloud application traffic over the optimal connection, whether MEO, GEO or other access technologies, including fibre. With SD-WAN, ExpressRoute customers can combine MEO and GEO links into one logical connection and define policies to determine how each application is routed over the network. For enterprise end-users such as cruise lines, energy companies, and government agencies, an SD-WAN based multi-access service improves uptime, maximises bandwidth efficiency, improves application performance, and reduces cost per bit of transport.



### Intelligent Cloud, Intelligent Edge Delivered Anywhere

Enterprises and government agencies with operations in remote and underserved areas require dedicated, high-performance connectivity to public cloud services such as Microsoft Azure.

As an Azure ExpressRoute launch partner, SES is using its unique multi-orbit fleet to deliver unrivaled global reach, scale and performance to connect end-users to the intelligent cloud and intelligent edge, no matter the location.

# CONNECTING AZURE EXPRESSROUTE

For more information about  
the services available from SES,  
please visit [ses.com](http://ses.com)

## SES HEADQUARTERS

Château de Betzdorf  
L-6815 Betzdorf  
Luxembourg

## REGIONAL OFFICES

Accra | Ghana  
Addis Ababa | Ethiopia  
Bogotá | Colombia  
Bucharest | Romania  
Dubai | United Arab Emirates  
The Hague | The Netherlands  
Istanbul | Turkey  
Kiev | Ukraine  
Lagos | Nigeria  
London | UK  
Manassas | USA  
Mexico City | Mexico  
Miami | USA  
Moscow | Russia  
Munich | Germany  
Paris | France  
Princeton | USA  
Riga | Latvia  
Rio de Janeiro | Brazil  
São Paulo | Brazil  
SES GS, Reston | USA  
Singapore | Singapore  
Stockholm | Sweden  
Warsaw | Poland  
Washington DC | USA

Published in September 2019.  
This document is for informational purposes only  
and it does not constitute an offer by SES.

SES reserves the right to change the information  
at any time, and assumes no responsibility for any  
errors, omissions or changes. All brands and product  
names used may be registered trademarks and are  
hereby acknowledged.

