CLOUD-SCALE OPERATIONS ANYWHERE

Choosing the right path to enterprise-wide cloud connectivity

PLANNING GUIDE



Public internet or dedicated cloud-connect—which is the right service for you?

For enterprise and government sites, connectivity to cloud applications and services on platforms such as Microsoft Azure and Amazon Web Services (AWS) takes the form of either a public internet connection or a private, dedicated connection. Examples of dedicated "cloud-connect" services, which bypass the public internet, include Microsoft Azure ExpressRoute, AWS Direct Connect, IBM Cloud Direct Link, and Google Cloud Interconnect, among others.

Determining whether you require public internet or dedicated cloud-connect services will depend on the types of cloud applications and workloads you need to support.

HOW DO I KNOW WHICH IS THE BEST FIT?



Public internet

The most common hosted enterprise applications serving a large, distributed workforce—such as Office 365 and Dynamics 365 from Microsoft—typically require a robust, enterprise-grade public internet connection to meet performance and security requirements. These software-as-a-service (SaaS) applications usually need to reach a relatively large number of sites and users, and have been designed and optimised to perform reliably with robust internet connectivity that is simple and cost effective to manage.



Dedicated cloud-connect

Increasingly, enterprise and government network planners are turning to dedicated cloud-connect services to support high-value, mission-critical cloud workloads requiring deterministic performance, high availability, flexible routing, and robust security that bypasses the public internet. As an organisation expands its use of the cloud beyond SaaS to include platform-as-a-service (PaaS) and infrastructure-as-aservice (IaaS) solutions, the need for dedicated cloudconnect services increases.

Cloud service type is a key factor in selecting the right cloud-connect solution



WHICH KEY INDUSTRIES DEMONSTRATE RISING DEMAND FOR DEDICATED SERVICES?

A growing number of industry sectors are adopting new digital technologies and IT and operation technology (OT) environments that are transforming their organisations. As cloud and edge applications are fundamental enablers of digital transformation, dedicated cloud-connect services are often required to support the high-value workloads underpinning these initiatives. Here are a few of the many industries where dedicated cloudconnect services are on the rise.



Offshore energy

By leveraging Industrial Internet of Things (IIoT) and artificial intelligence (AI) applications, oil and gas companies can reach new thresholds of operational efficiency. Inferences gained at edge compute nodes on offshore rigs can be aggregated at cloud data centres, where advanced analytics and machine learning algorithms generate actionable insights to support more efficient, cost effective exploration and production. To ensure real-time processes and workloads run smoothly, energy companies need the scale, low-latency performance, and secure environment afforded by dedicated cloud-connect services.

Business outcomes:

- Efficient exploration
- Extraction automation
- Regulatory compliance
- Predictive maintenance
- Facility optimisation
- Crew welfare & training



Commercial shipping

Cloud-enabled IIoT is disrupting the commercial shipping industry on a wide scale. Solutions like real-time cargo tracking and monitoring, route management for improved fuel efficiency, and analytics processing for diagnostics and predictive maintenance are paramount to service differentiation and operational efficiency. To gain an edge, shipping companies are re-designing their networks, requiring more secure, reliable, and high-performance connectivity to the cloud via dedicated services.



WHICH KEY INDUSTRIES DEMONSTRATE RISING DEMAND FOR DEDICATED SERVICES?



Mining

According to Accenture, 82 percent of business leaders in the mining industry expect investment in digital transformation to increase over the next three years, with 81 percent of mining companies planning to increase adoption of cloud technologies. The era of "smart mining" embraces real-time, cloud-driven data visualisation, analytics, and virtual and augmented reality to improve safety, efficiency, and profitability. Reliable, deterministic network performance via dedicated cloud-connect services is a key enabler of this transformation.



of business leaders expect organisations' investment in digitalisation to increase in the next three years



of mining companies planning to adopt cloud technologies



of mining companies are planning to merge IT and OT departments



Government: Intelligence, Reconnaissance and Surveillance (ISR)

As expectations grow for cloud technologies to transform operational architectures and military information systems, ISR technology is rapidly improving. Equipped with an increasing number of high-fidelity sensors, modern airborne ISR assets can execute a wider variety of tasks with reduced need for human intervention. As the volume of data generated on ISR missions proliferates, current Processing, Exploration, and Dissemination (PED) capabilities require scalable, reliable, and secure cloud connectivity best served by a dedicated service.



HOW DO I CHOOSE THE BEST PARTNER TO DELIVER CLOUD SERVICES EVERYWHERE?

Selecting a partner to enable cloud-scale public internet and dedicated cloud-connect services everywhere—including in hard-to-reach and underserved areas—should focus on the following five criteria:

Reach

To ensure the whole organisation benefits from the cloud, it is not enough to extend cloud connectivity to urban sites. Enterprises and government agencies with operations in remote and underserved areas require cloud-grade performance with global reach, serving end-users in the air, at sea, or in hard-to-reach areas on land.

Ecosystem

No one service provider can offer cloud-connect services on their own. You need a partner with deep cloud expertise and global operations that has done the hard work to certify its services, integrate its back-office systems, and inter-connect its network with the most vital cloud platforms worldwide.

Performance

Cloud and edge applications require high performance, whether you're connecting via the public internet or through a dedicated cloudconnect service. Mainstay satellite services that are over-subscribed, limited in scalability, and lack a lowlatency capability will fall short of your requirements—and limit your organisation's potential.

Service Level Agreements (SLAs)

It's one thing to claim high performance, it's another altogether to back it up with an SLA suitable for cloud-based operations. Look for—in fact, demand—SLAs that set a new benchmark for throughput, availability, and latency, the key performance attributes of robust cloud-connect services.

Roadmap

Research firm NSR forecasts cloud data traffic over satellite networks to increase at a 34 percent compound annual growth rate (CAGR) from 2019 to 2029. To keep pace with this demand, you will need a partner that has invested in the next generation of communications systems, one that has designed its roadmap from the outset to optimise cloud services.



Satellite cloud data traffic forecast

Head to ses.com/networks/cloud

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