



How next generation data centres help enterprises digitally transform

by Michele McCann, Teraco Data Environments

Connecting Africa to the Cloud

“The influx of technologies like Artificial Intelligence, Big Data, IoT and ML have rendered traditional businesses redundant. Rapidly changing customer needs force firms to evolve and adapt. Digital transformation is the new paradigm, that helps them stay ahead of the competition. Firms leverage the support of the cloud to set up robust digital transformation frameworks.

Cloud fuels innovation – and hyperscale data centres power the cloud.”

HashedIn Technologies, 2019

TERACO[™]
AFRICA'S DATA CENTRE

TERACO IN THE BEGINING



TERACO CT1, CAPE TOWN
circa 2009



TERACO DB1, DURBAN
circa 2012



TERACO TODAY



20MVA

TERACO JB1, ISANDO CAMPUS
circa 2017



24MVA

TERACO JB2, BREDELL CAMPUS
circa 2018



TERACO JB3
ISANDO CAMPUS
Johannesburg: 2019

60MVA

THE CLOUD IS HERE



TERACO SELECTED AS MICROSOFT AZURE EXPRESSROUTE PARTNER

2 November 2017

Teraco Data Environments, Africa's largest neutral data centre, today announced it will be a Microsoft Azure ExpressRoute Connectivity partner, providing clients high performance private network connections to Microsoft Azure and other Microsoft Cloud Services. Teraco will be one of the first companies to offer access to the Microsoft Azure ExpressRoute sites in Africa, when Azure becomes generally available in 2018.



CONNECT TO THE GOOGLE CLOUD PLATFORM VIA PEERING AT TERACO'S ISANDO CAMPUS IN JOHANNESBURG

1 May 2019

Teraco Data Environments, Africa's largest neutral data centre, today announced access to Google and Google Cloud features over VPN or the internet, while cutting egress fees. If you can meet Google's requirements, connect directly with Direct Peering, or choose a partner with Carrier Peering.



TERACO IS AN AMAZON CLOUD ON-RAMP FOR SUB-SAHARAN AFRICA

11 July 2018

Amazon Web Services (AWS) Direct Connect is now live in South Africa and located at Africa's only vendor neutral data centre, Teraco. AWS Direct Connect enables clients to directly connect to their AWS resources in an AWS region. The service is accessible via a direct cross-connect within Teraco or from the Teraco Cloud Exchange platform in Johannesburg and Cape Town.

WHERE ARE AFRICA'S CLOUD INTERCONNECTION LOCATIONS?



DEPLOYMENT OPTIONS

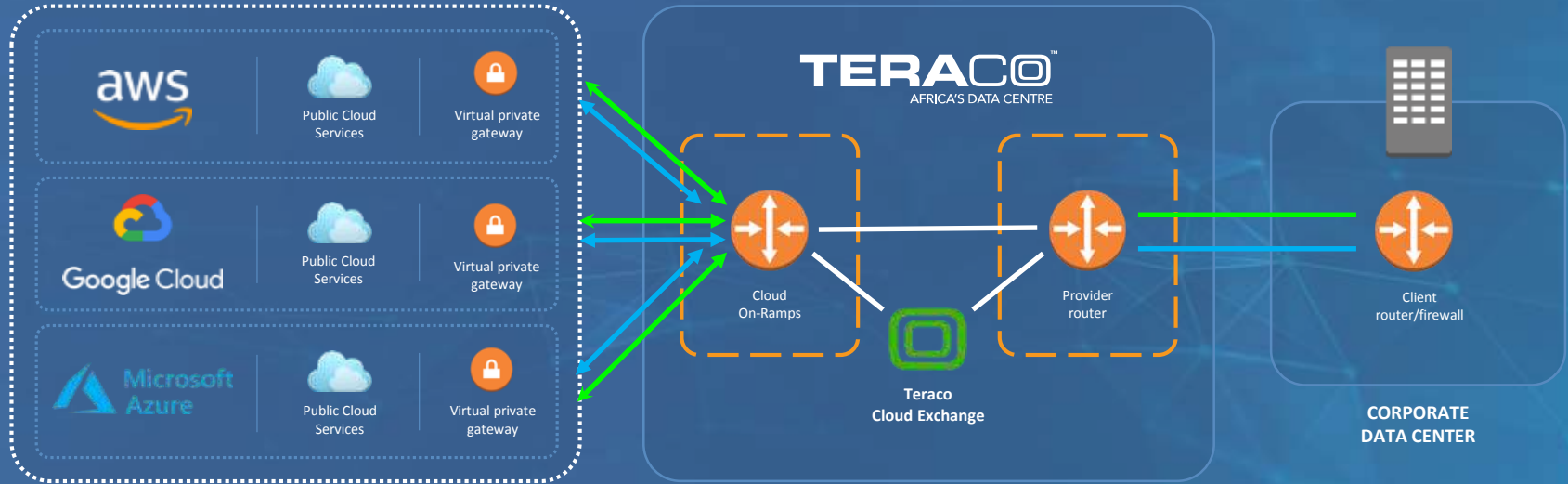
THREE WAYS TO WORK WITH CLOUD PARTNERS:

Different trade-offs between complexity and control over the network equipment/configuration

- 1 “I want to own and manage routers in the peering location”
– Cloud exchange colocation
- 2 “I only want to manage my on-prem routers”
– Ethernet point-to-point connection
- 3 “I just want to reach the cloud from my MPLS IP VPN”
– IP VPN connection (aka “any-to-any”)



HOW TO CONNECT FROM TERACO



REGION

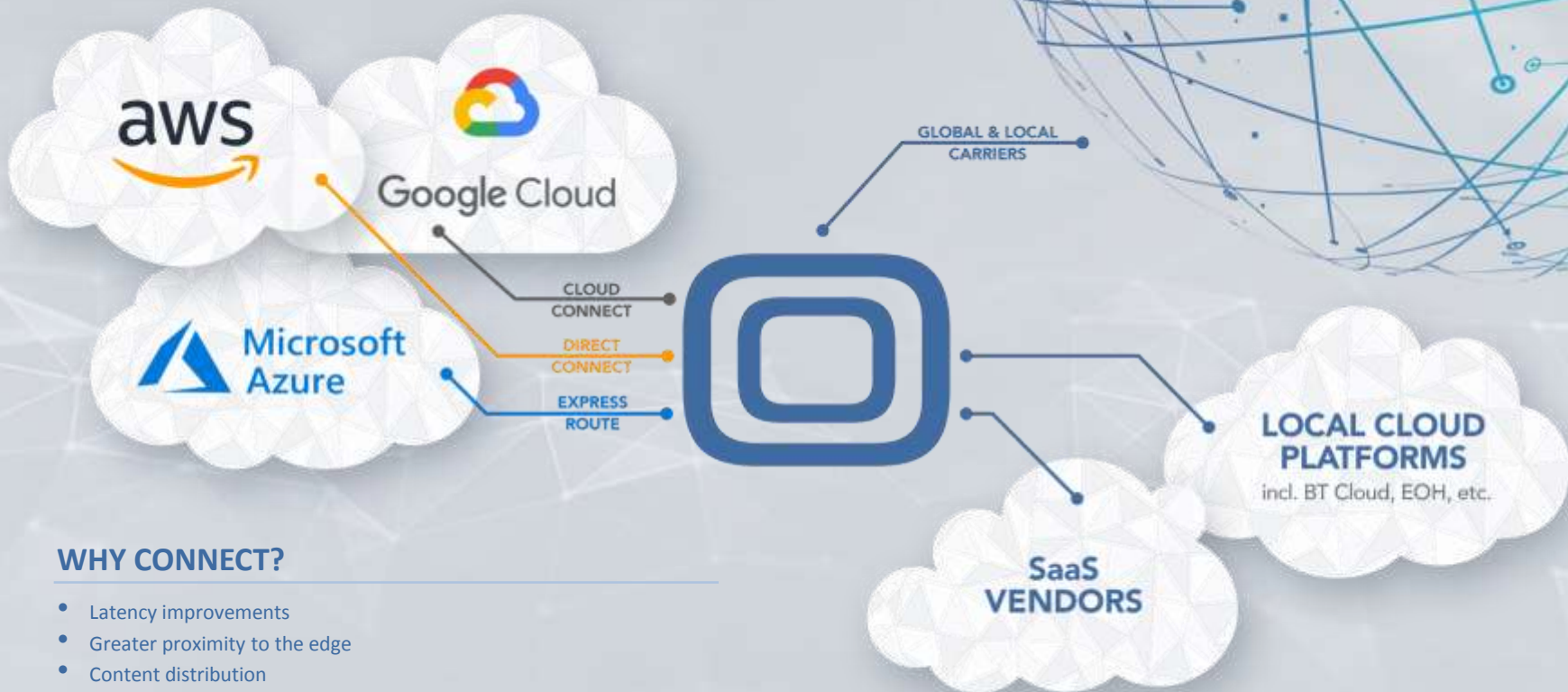
CLOUD ON-RAMP LOCATION (TERACO)

JB1 | Johannesburg CT1 | Cape Town

PRIVATE VIRTUAL INTERFACE

PUBLIC VIRTUAL INTERFACE

PHYSICAL CROSS CONNECT



WHY CONNECT?

- Latency improvements
- Greater proximity to the edge
- Content distribution
- Security @ the edge
- Local data sovereignty
- Easy migration from connected to interconnected

THE LATENCY DIFFERENCE

RTT (Round Trip Time) to resources deployed in the cloud from Teraco's Africa Cloud Exchange has improved from an average of 171ms down to less than 2ms.



KEY CONSIDERATIONS FOR NETWORK DESIGN

CONSIDER THIS WHEN CONNECTING TO CLOUD:

Highly available, fault-tolerant network connections are key to a well-architected system.

- Best practice to use dynamically routed, active/active connections for automatic load balancing and failover across redundant network connections;
- Leverage multiple dynamically routed, rather than statically routed, connections to cloud operators. This will allow remote connections to fail over automatically between redundant connections. Dynamic routing also enables remote connections to automatically leverage available preferred routes, if applicable, to the on-premises network;
- Avoid relying on a single on-premises device, even if you were planning to use multiple interfaces for availability. Highly available connections require redundant hardware, even when connecting from the same physical location;
- When selecting network service providers, consider a dual-vendor approach, if financially feasible, to ensure private-network diversity;
- Provision sufficient network capacity to ensure that the failure of one network connection does not overwhelm and degrade redundant connections.



THANK YOU



The world **connects here.**

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