



capacity
cloud
content
hosting
peering
scalability
data
ixp
network
performance

Global African Presence
Local Business



AS 37468



ABOUT US

Angola Cables is an internationally established ICT and digital solutions and network services provider and has been ranked as the most interconnected operator* on the Africa continent. Through our integrated IP networks and data centres, we provide extensive, low latency, direct access connectivity to the largest IXP's, Tier 1 operators and global content providers.

Through our owned, high-capacity SACS, Monet, WACS and third-party submarine cable networks, the company directly connects to more than 20 Points of Presence and Internet Exchange Points in the Americas, Africa, Europe and Asia.

Angola Cables also operates two data centres, AngoNAP Fortaleza Tier III (Brazil) and the data centre, AngoNAP Luanda (Angola), and manages PIX in Brazil and Angonix Angola - one of the largest Internet Exchange Points (IXP's) in Africa.

Through our partners and resellers in selected markets we offer advanced and secure connectivity solutions and services to a range of customers across multiple industries.

WHY ANGOLA CABLES?

We provide reliable connectivity and redundancy solutions with low latency to the main international routes.

From CAPE to London, From Cape to New York, from Cape to Singapore. WACS + SACS + MONET provides the most effective routes from Africa to hyperscalers, content and financial markets.

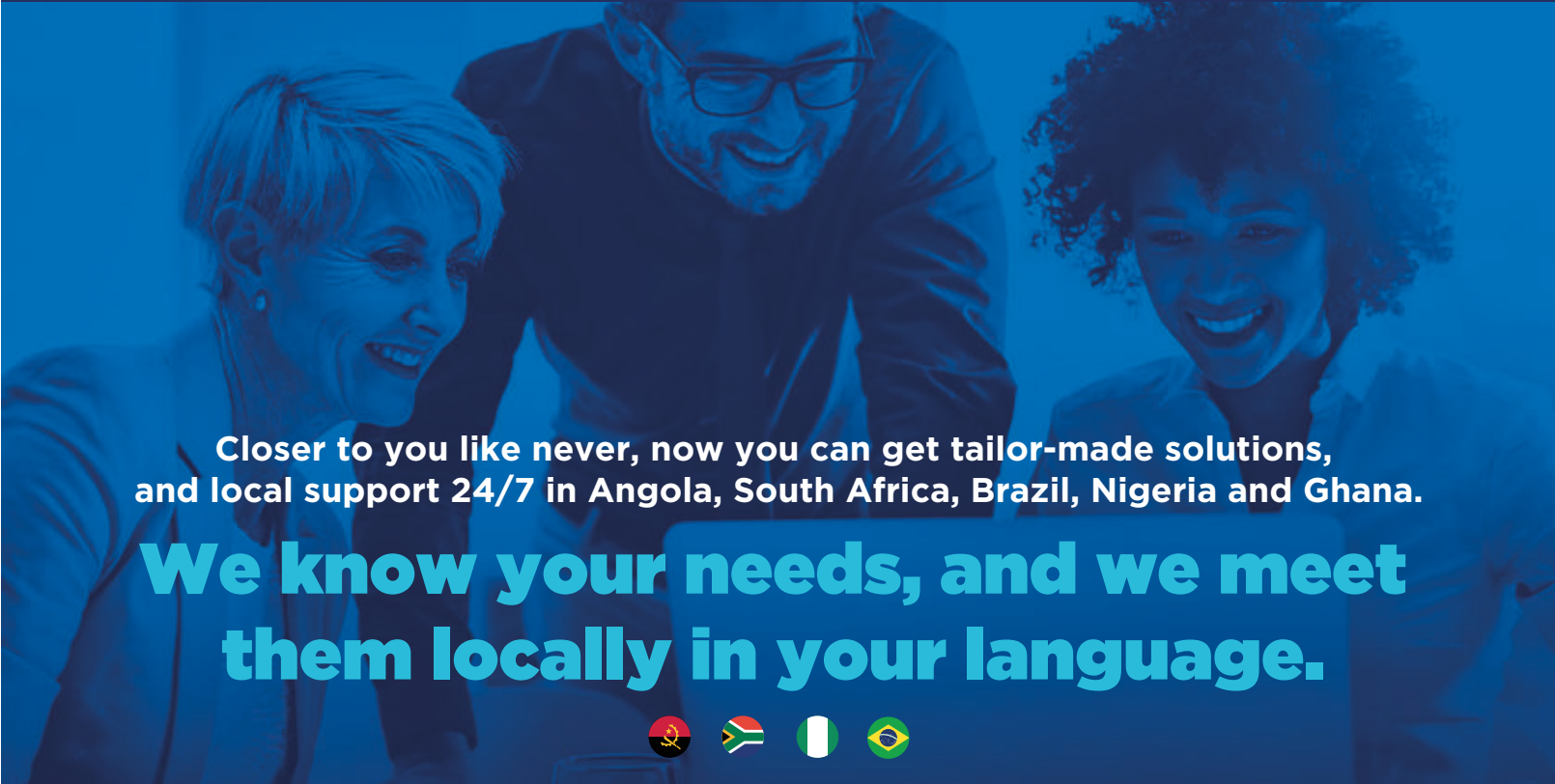
Data Center AngoNAP Fortaleza is a TIER III data center interconnected to the SACS and Monet submarine cable networks providing a digital bridge between Africa, Latin America and North America.

Angola Cables is the **number 1 Interconnected African Operator (by AS RANK/CAIDA) to the largest IXP's and Tier I networks in the world.**

Besides **Euroring** - point of presence - in Europe, the company also operates in strategic locations in the **USA, Latin America and Africa.**

Angola Cables' network provides **remote peering service with exclusive links to English and Francophone countries.**

Angola Cables is much more than a **wholesale carrier** and international **ISP**. The company also has a wide range of services from **colocation to Cloud Solutions.**



Closer to you like never, now you can get tailor-made solutions, and local support 24/7 in Angola, South Africa, Brazil, Nigeria and Ghana.

We know your needs, and we meet them locally in your language.



WHY ANGOLA CABLES?



Offices in:

- Angola
- Brazil
- South Africa
- Nigeria



Presence: + 20 countries



+ 26 PoPs



Across 5 continents



Carrier Neutral



Metropolitan network in Brazil, South Africa and Angola. Other regions available



Access to 66 Data Centers in the Transatlantic Region



-300 m² of colocation space



2 Owned Data Centers - AngoNAP Luanda (Angola) and AngoNAP Fortaleza (Brazil)



Shields2Africa



Clouds2Africa

PIX E ANGNIX

Internet Exchange Point (AngoNIX and AngoPIX)



Robust undersea cable infrastructure



Extensive Layer 2 network in Africa, the Americas, Europe and Asia



MPLS Network supported by SACS | WACS | MONET | with routings also available on other systems



Full ring Atlantic Connectivity



3 Submarine cables: +30.000 kms

OUR NUMBERS

+21
IXP Connected

+5000
Peering Agreements

2
Connected Data Centers

10
Hosted CDN/OTT services

SINGLE POINT OF CONTACT - GLOBAL SOLUTION



ANGOLA CABLES GLOBAL NETWORK

- ANGOLA CABLES ROUTES
- ROUTES ON OTHER SYSTEMS
- SOUTH ROUTE
- ELLALINK 
- BACKHAUL
- CLS
- ▣ DATA CENTER
- ◆ POP
- ⊕ VIRTUAL ROUTER

➤ LOW LATENCY
➤ EXPRESS ACCESS TO GLOBAL CONTENT
➤ ROBUST NETWORK



#1
 INTERCONNECTED
 OPERATOR IN AFRICA
ASRank
 #33 CAIDA Ranking

Internet Exchange Point



AS: **327788**
 Peering: **public or private**
 Ports: **1GE and 10GE**
 Protocol: **BGP**
 IP details: **IPv4 and IPv6**

Data Center Connection to everything







Hosting space: **160 m² (Phase 1)**
 Rack dimension: **45 U**
 Redundancy: **2N + 1**
 Power supply: **A + B + C**
 Service availability: **99,99%**



Hosting space: **134 m²**
 Rack dimension: **42 U**
 Redundancy: **N + 1**
 Power supply: **A + B**
 Service availability: **99,95%**

SERVICES

 <h3>ICT</h3>	 <h3>Data Center</h3>	 <h3>Internet and IXP</h3>	 <h3>Transport</h3>
<ul style="list-style-type: none"> Anti_DDoS Storage / Backup Go Gaming VPN Virtual Router SD-WAN Anti_DDoS Reseller AC Cloud IAAS Reseller Clouds2Africa Anti_DDoS L4 Anti_DDoS L7 Shields2Africa BGP Flowspec Firewall as a Service Host2Africa 	<ul style="list-style-type: none"> Power Colocation Cross Connect Managed Services InnerDuct Inter Connection Remote Hands Smart Hands Warehouse Outdoor Colocation 	<ul style="list-style-type: none"> IP_Gamer PIX, AngoNIX IP_Flex DIA IP Transit IP Exchange Smart IP IP_Cache 	<ul style="list-style-type: none"> Dark Fiber Spectrum Remote Peering AC Cloud Connect GDI - Global Data Center Interconnection

SACS

"The first, ultra-low latency Trans-Atlantic cable to connect Africa to South America"

WACS

"Africa's major connectivity access point."

ANGONIX

"Angola's top Internet Exchange Point and one of the largest in Africa."

MONET

"The cable of the Americas"

ANGONAP

"Multi-continental connectivity point."

PIX ANGOLA CABLES

"A Point for Internet Exchange able to connect your network to more than 194 providers".

INNOVATIVE SOLUTIONS

Clouds2Africa

Federated Edge

Shields2Africa





CLOUD SERVICES



Easily deploy compute and storage services across the world's largest edge cloud to power any workload, store any data type with flexible and local payment.



INFRASTRUCTURE AS SERVICE (IAAS)



STORAGE (STAAS) AND BACKUP (BAAS)



VIRTUAL MACHINES (VM)



DR - DISASTER RECOVERY

Clouds2Africa is a flexible, secure and scalable cloud platform that guarantees cost reduction, increased performance and availability for your business



BENEFITS

- Differentiated Support
- More efficient management of IT resources
- Cost reduction, availability and data security
- Cloud zones and content installed in Africa, with coverage also in many other countries in the world
- Flexibility and Scalable Infrastructure
- Integration with non-Cloud environments (Hybrid)
- Payment in local currency
- Compliance with the main data protection laws (LGPD and GDPR)

AVAILABLE SERVICES

- Computing, Backup, Disaster Recovery(DR) and Containers
- Possibility of storage in Block, File or Object, compliance with multiple communication protocols and no charge for traffic or data movement in the architecture
- Virtualized disks at different speeds that allow better adaptation to your application and cost reduction
- Availability of Operating System licenses
- Customized solutions with integration of other Hypervisors and different databases
- Public, private or hybrid cloud

+300
Cloud Zones

+24
Countries

99,5%
Computing
Availability

99,999%
Storage
Availability

RECOMMENDED SERVICE FOR:

Systems companies (ERP, software and application developers), Internet Service Providers (ISP's), and various business lines, namely Oil and Gas, Academic and Scientific Networks, Corporate Market, E-Agriculture, E-Commerce, Gaming etc.

CLOUDS2AFRICA CONNECTED TO MORE THAN 400 CLOUDS IN THE WORLD



WE CARE ABOUT YOUR PRIVACY



+400

CLOUDS

+24

COUNTRIES





ON-NET CIRCUIT

Global Data Center Interconnection (GDI)

Direct connection to the most important international Data Centers



DEDICATED LINK



INTERNATIONAL COVERAGE



MULTIPOINT

Global Data Center Interconnection is a multipoint service that consists of a dedicated service that connects Points of Presence (PoPs) within the Angola Cables network.



BENEFITS

- Access to content and companies present in the major global data centers
- High network availability
- Quick activation through existing connections
- Flexibility for different capacities

SERVICE FEATURES

- Ethernet
- SDH, OTN
- EoMPLS, VPLS, VPWS
- Lambdas

+66

Data Centers

+8

OTTs / CDNs

+21

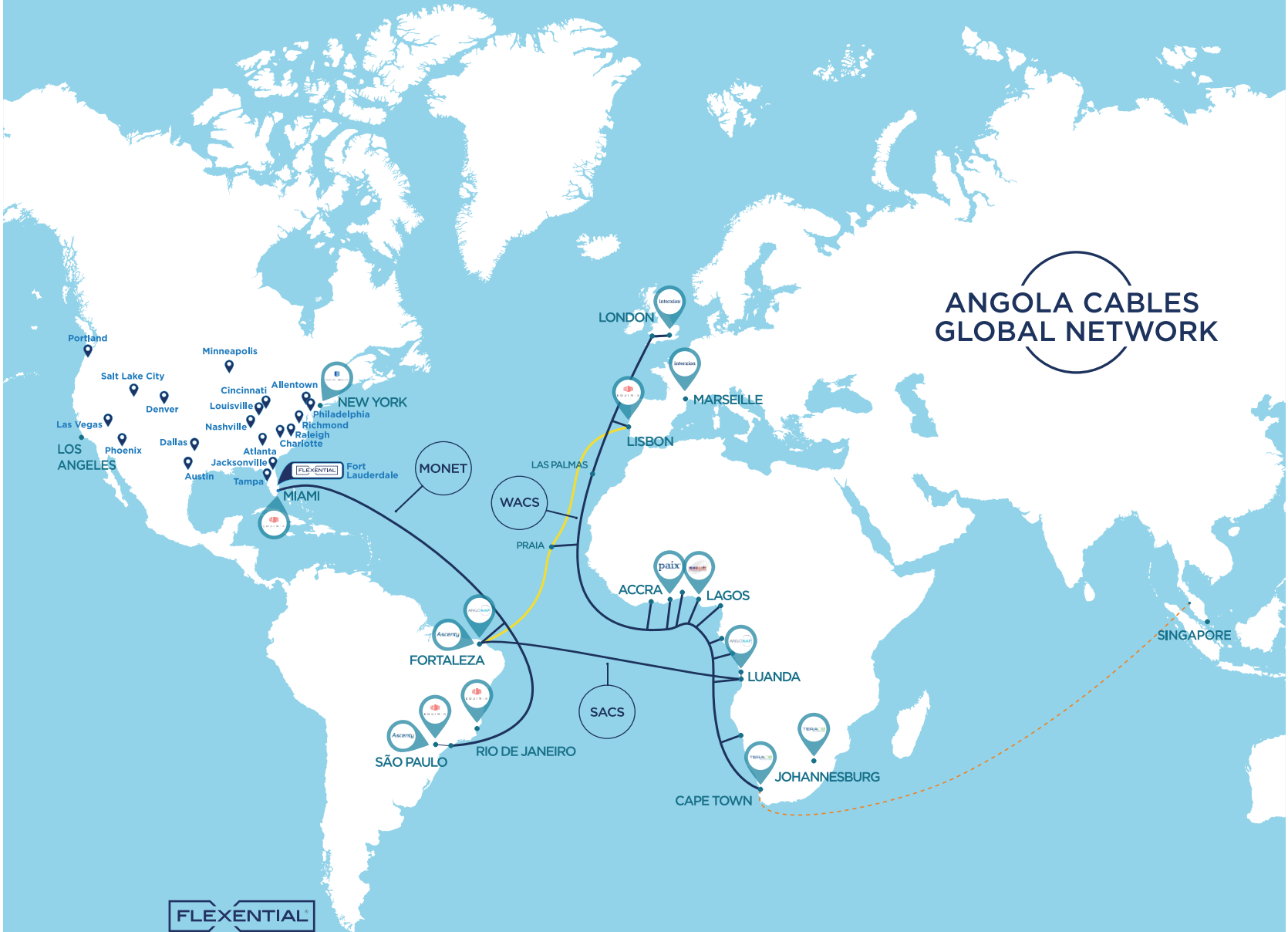
IXPs

RECOMMENDED FOR:

ISPs, carriers, multinational enterprises for the corporate and financial markets to streaming and gaming service providers or any other network operators wishing to connect to the main international hubs and data centers

GDI eligible Data Centers

EUROPE	Equinix Lisbon LS1	Interxion Marseille MRS1-3	Interxion London LON1-3	EUA	Equinix Miami MIA1	Equinix Miami MIA3	Digital Realty New York NYC1	
BRAZL	AngoNAP Fortaleza	Ascenty São Paulo São Paulo 1	Ascenty São Paulo São Paulo 2	Ascenty São Paulo São Paulo 3	AFRICA	AngoNAP Luanda	Medallion Lagos	PAIX Accra
	Equinix São Paulo SP 2	Equinix São Paulo SP 3	Equinix São Paulo SP 4	Equinix Rio de Janeiro RJ 2		Teraco Cape Town	Teraco Johannesburg	



FLEXENTIAL

Datcenters in GDI (USA)

Phoenix
(PHX01)

Austin
(AUS01)

Dallas
Downtown (DAL01)
Richardson (RCH01)
Plano (DFW01)

Tampa
North (TPA03)
West (TPA01/02)

Cincinnati
(CIN01/02)

Las Vegas
Downtown (LAS03)
(LAS05)
North (LAS04)

Denver
Aurora (DEN03)
Englewood (DEN1)
LoDo (DEN01)
Centennial (DEN05)
Downtown (DEN02)

Minneapolis
Chaska (MSP01)

Portland
Hillsboro (PDX01)
Hillsboro 2 (PDX02)

Fort Lauderdale
(FLL01/02)

Atlanta
Norcross (ATL01/02)
Alpharetta (ATL03/04)

Charlotte
South (CLT01/02/03)
North (CLT04/05)

Philadelphia
Collegeville (PHL01)

Jacksonville
(JAX01/02)

Louisville
East (LOU05)
Downtown (LOU02/03/04)

Richmond
(RIC01/02)

Nashville
Brentwood (NAS01/04)
Cool Springs (NAS02/03)
Franklin (NAS05/06)

Raleigh
(RAL01/02/03)

Salt Lake City
Downtown (SLC04)
Cottonwood (SLC05)
Fairpark (SLC07)
South Valley (SLC09)
Millcreek (SLC10)
Lindon (SLC03)



CONNECTIVITY

IP Transit - AS37468

Grow with Angola Cables, benefit from multiple local and international routing options for Tier 1 networks, content distribution network (CDNs) and main IP points of attraction (IXP's).



LOW-LATENCY



ACCESS TO GLOBAL CONTENT



ROBUST NETWORK

Angola Cables provides local and international connectivity to content providers (CDNs) and access to major ISP's (Tier 1). With a variety of strategic traffic exchange agreements, Angola Cables' IP Transit offers high performance in accessing the largest international IXP's, ensuring a robust infrastructure.



BENEFITS

- Reliability
- Low latency
- Customized solutions
- High availability
- Autonomy in traffic management via the BGP Community
- Redundancy for main routes (WACS, SACS, MONET and other subsea systems)

SERVICE FEATURES

- **Interfaces:**
 - Ethernet: 1GE, 10GE and 100GE
 - Multi-port aggregation
- **Billing:**
 - Flat rate
 - Burstable (95% percentile)
 - Flex (limited to 3 months)
- **BGP Community:**
 - Full Routing table
 - Partial routing table
- **Complementary services:**
 - Managed Services
 - ACloud Connect (Express Route)
 - Remote Peering
 - GDI

24/7/365

NOC and Technical support

+21

IXP's connected

+26

Points of presence (PoP's)

99,95%

Availability

Recommended for:

Entities from multiple sectors interested in internet access with flexible capacity within a global, efficient and low latency network. Simplify your business and solidify the trust placed by your customers.

THE POWER OF A TIER 1 NETWORK



MEETING PoPs:

USA

Equinix
Miami
NAP of America
MI1

Digital Realty
New York
DECIX New York ●
NYC1

Equinix
Miami
NAP of America
MI3

Digital Realty
New York
NYIIX ●
NYC1

CoreSite
Los Angeles

EUROPE

Equinix
Lisbon
Equinix Lisboa
LS1

Interxion
Frankfurt
Decix Frankfurt ●
FRA 1-15

Equinix
Madrid
Equinix Madrid
MD2

Interxion
Marseille
France IX ●
MAR 1-3

Interxion
London
Linx ●
LON 1-3

BRAZIL

AngoNAP
Fortaleza
ix.br ●

Ascenty
São Paulo
ix.br ●
São Paulo 2

Equinix
São Paulo
ix.br ●
SP2

Equinix
São Paulo
ix.br ●
SP4

Ascenty
São Paulo
ix.br ●
São Paulo 1

Ascenty
São Paulo
ix.br ●
São Paulo 3

Equinix
São Paulo
ix.br ●
SP3

Equinix
Rio de Janeiro
ix.br ●
RJ2

AFRICA

AngoNAP
Luanda
Angonix ●

Rack Africa
Accra

Medalion
Lagos
IXPN

Teraco
Cape Town
NAP Africa ●

Teraco
Johannesburg
NAP Africa ●

ASIA

Equinix
Singapore
SG1 ●

● Remote Peering Services



CYBERSECURITY

Anti_DDoS

Maximize your network security and protect your server, services and infrastructure from cyber attacks.



MONITORING 360



DETECTION 24/7



MITIGATION 100%

Angola Cables cyber attack solution is a robust, tailor-made service to efficiently protect any content or company connected to the internet.

Up to
100%
Protection until **layer 7**
powered by Kentik + Cloudflare
NEW!

BENEFITS

- Mitigation at the source of the attack
- Zero Day attack protection
- Real-time automatic response
- Native integration (Kentik + Cloudflare)
- Coverage of 100% of cyber attacks
- Distributed protection (Europe, Africa, America, Asia)

LAYER

7	APPLICATION	HTTP, DNS
6	PRESENTATION	SSL
5	SESSION	N/D
4	TRANSPORT	SYN
3	NETWORK	UDP
2	DATA LINK	N/D
1	PHYSICAL	N/D

ATTACK VECTOR

HTTP, DNS

SSL

N/D

SYN

UDP

N/D

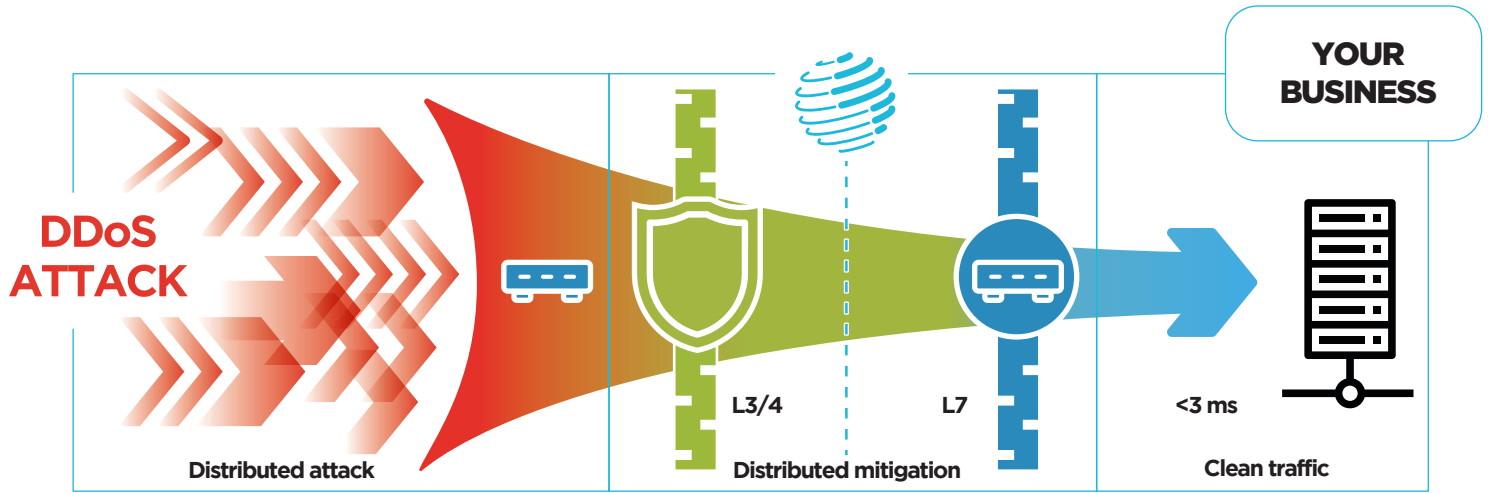
N/D



RECOMENDED FOR:

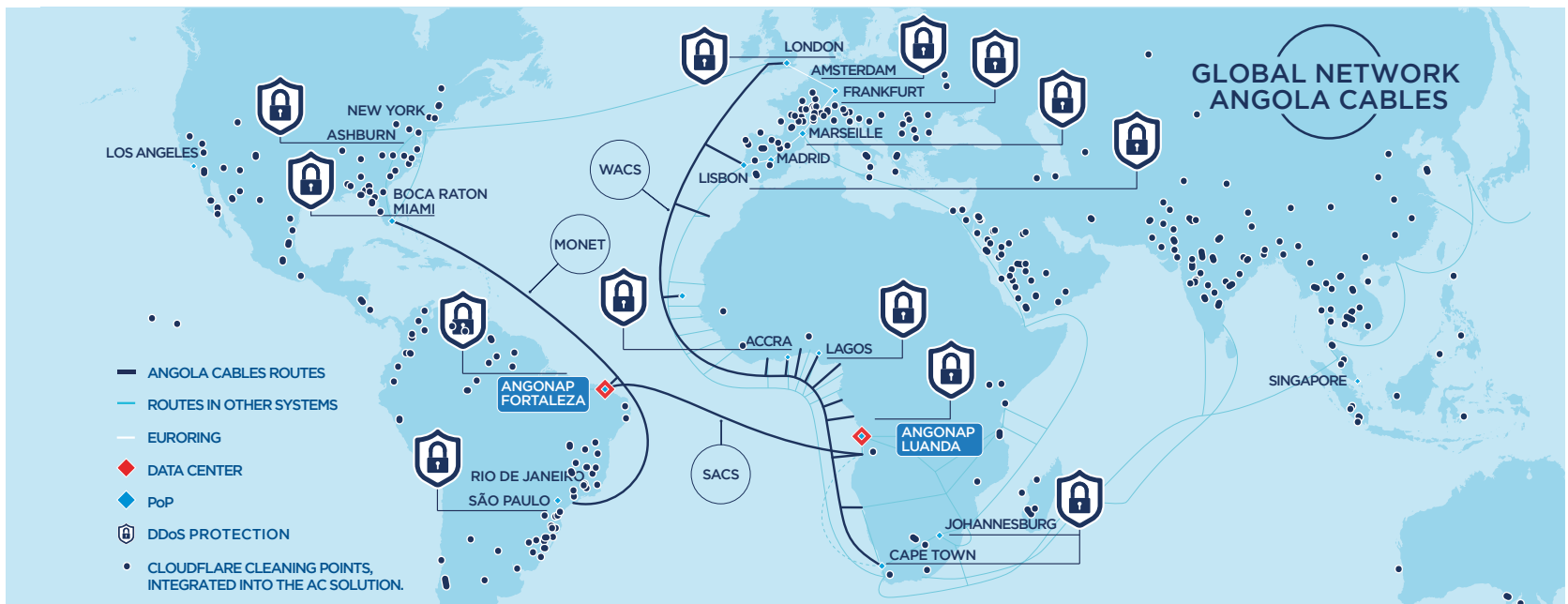
Entities looking to protect any hosted in the internet content that wants to ensure complementary layers of security in their services and additional levels against cyber attacks using an intelligent, automated and distributed solution tailored-made to emerging threats from the online environment.

NETWORK TOPOLOGY



WE PROTECT ANY CONTENT CONNECTED TO THE INTERNET.

SERVICE COVERAGE



Up to
140 Tbps.

+280
Cleaning points

Up to
100%
automation

+Cloud
Scrubbing Center

* Global mitigation capacity
** The bandwidth varies according to POPs



REMOTE PEERING

Remote Peering

Angola Cables network brings you the most wider range of Internet Exchange Points reach ever to your network access across our transport infrastructure



LOW-LATENCY



MAIN IXP's ACCESS



FLEXIBLE PORT AND CAPACITY

Remote peering services provide customers with the ability to peering without a physical presence, using instead a remote peering provider (in that case Angola Cables) to connect to Internet Exchange Points (IXP's). Angola Cables is a remote peering provider and enables your network the advantage to connect to diverse peering points with a cost-effective, agile solution.



BENEFITS

- A cost-effective and efficient opportunity for additional routing option;
- Low-latency, directly connecting the major Internet Exchange Points;
- Enables a fast deployment in new markets;
- Autonomy to peer with multiple entities in the Internet Exchange Point.

SERVICE FEATURES

- Technology: Ethernet;
- Ports: 1GE and 10GE;
- Single physical port: Many services running (different VLAN's).

99,95%

Availability

24/7

Technical support and security

+21 IXP's

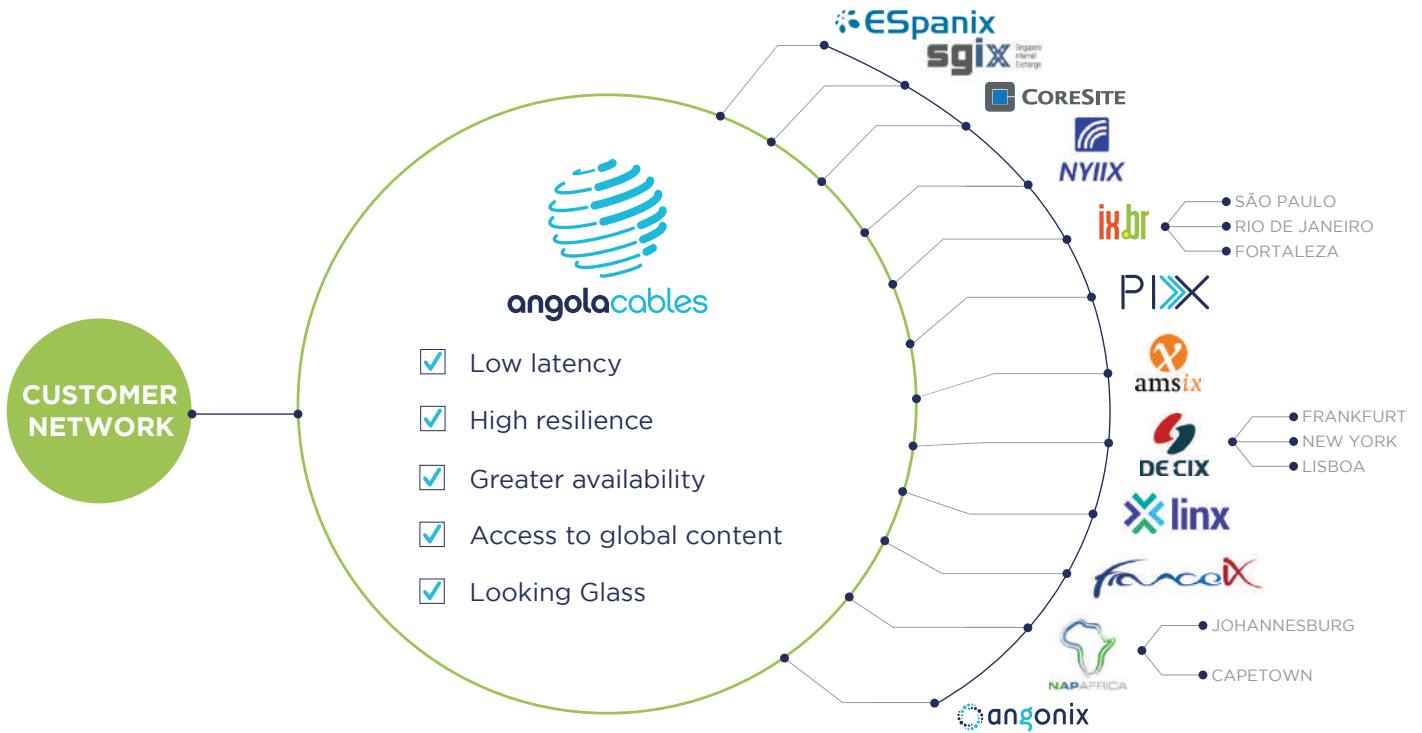
Available for bundle

RECOMMENDED FOR:

Entities looking for a cost-effective and efficient opportunity to increase connectivity to the major IP Hubs.

NOTE: ASIA - New Zone for Remote Peering

NETWORK TOPOLOGY



GLOBAL NETWORK | REMOTE PEERING

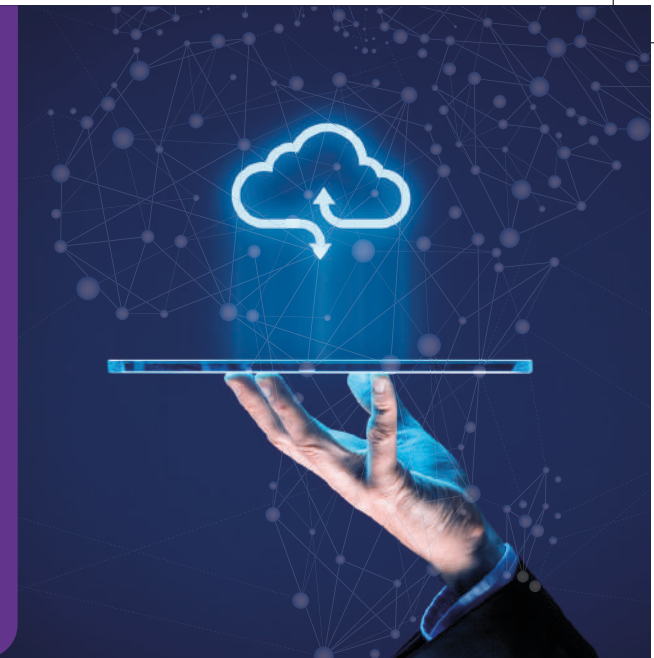




TRANSPORT

A Cloud Connect

Safe, high-capacity access to premium cloud service providers



PRIVATE CONNECTIONS

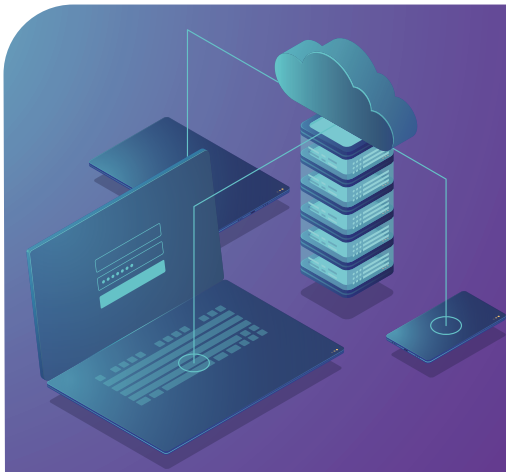


CUSTOMIZED SOLUTIONS



ROBUST NETWORK

A Cloud Connect is a dedicated connectivity service provided by Angola Cables which is characterized by a high level of performance and safety. This service is designed for enterprise customers and ensures predictability of applications hosted in the cloud. In a single interface, the customer has access to multiple private connections globally (MS Azure, AWS, Oracle, Google Cloud Platform and IBM).



BENEFITS

- Low latency: optimizes the use of data and applications hosted in the cloud
- Direct connection: dedicated to leading cloud providers
- Protection against Internet vulnerabilities: private connection in layer 2, avoiding exhaustion of layer 3.

SERVICE FEATURES

- Protected or unprotected circuits
- Option to split content across multiple locations
- Capacity: 50 MBPS to 1000 MBPS
- On Request: 2 GBPS to 10 GBPS
- Technology: Ethernet
- Interface electrical (GigE)
- Optical (1GigE and 10GigE)

24/7

Technical Support and Security Services

+21

IXP's connected

+26

Points of presence

99,95%

Availability

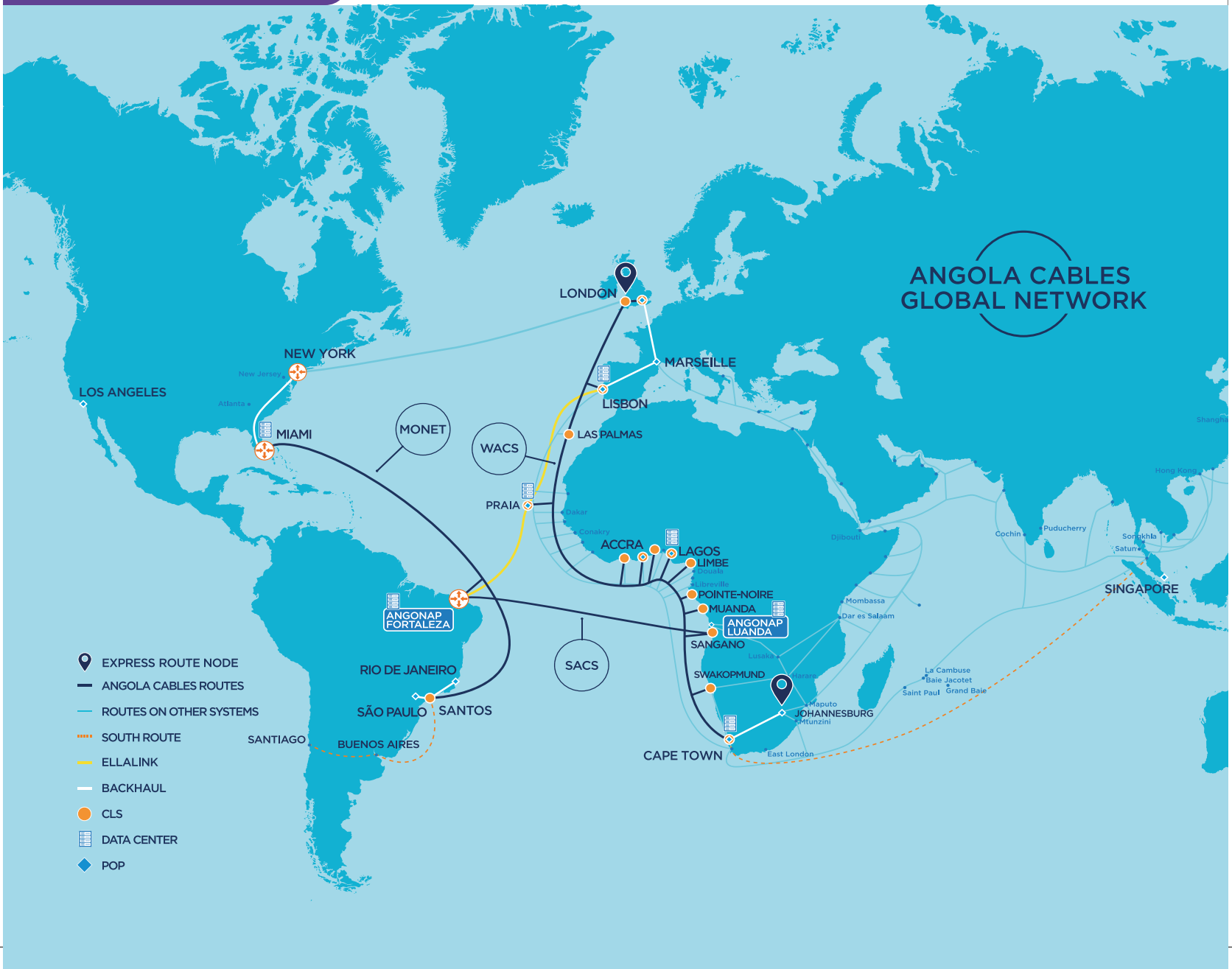
RECOMMENDED FOR:

Entities requiring private and direct connectivity to improve the performance of their applications deployed in the cloud. This solution is backed by the leading cloud providers and Angola Cables.

SERVICE TOPOLOGY



IP NETWORK MAP





VIRTUAL ROUTER

Virtual Router

More efficiency, less costs.
The easy way to expand your footprint.



AUTONOMY



COLOCATION - HARDWARE FREE



24/7 ACCESS

Virtual Router is a cost-effective solution allowing your company to expand their presence with minimum investment in logistic and Data Center resources (colocation, hardware and power). Overall the customer has remote access (anywhere, anytime) and total autonomy to manage the equipment.



BENEFITS

- Reduction of investments, costs and time to expand your business
- Efficiency and economy of scale in resource management
- 24/7 monitoring

SERVICE FEATURES

- Logical platform partitioning
- Fault isolation on the routing plane
- Multiple user access (management separation)
- Scalable routing separation
- Partial and Full Routing Table
- IP details: IPv4 and IPv6
- Ports: 1GE, 10GE and 100GE (on-demand)
- Availability:
 - USA: Miami - Boca Raton (Mi3),
 - New York (NYC1)
 - Brazil: AngoNAP Fortaleza

99,5%

service availability

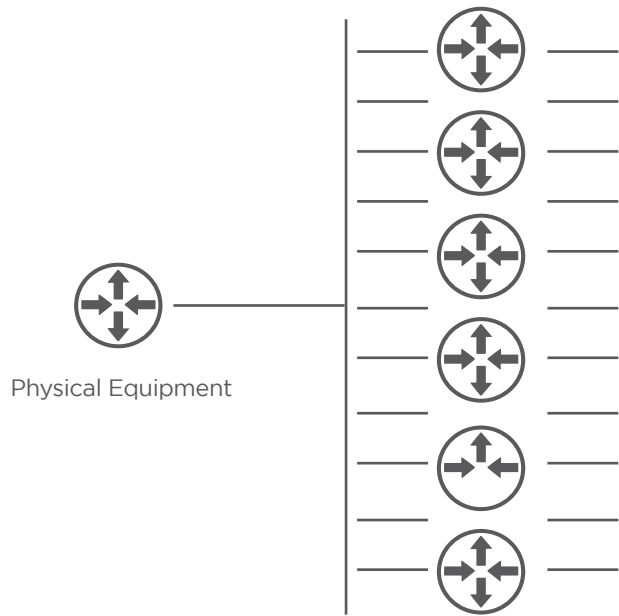
POWERED BY:

JUNIPER
NETWORKS

RECOMMENDED FOR:

Internet Service Providers with interest to expand their networks to the largest IP nodes with minimal investment and logistics. Internet Service Providers with interest to expand their networks to the largest IP nodes with minimal investment and logistics.

Multiple Virtual Equipment



Locations / Destinations





CONNECTIVITY

IP Exchange

AS37468: YOUR INTERNET GATEWAY

Direct access to over 21 ixp's and 6000 global operators , CDN's, OTT's and cloud service providers



➤ LOW-LATENCY

➤ ACCESS TO GLOBAL CONTENT

➤ ROBUST NETWORK

IP Exchange is a custom solution that enables your network to exchange traffic with multiple operators through a single connection. IP Exchange provides seamless connectivity to more than 21 traffic exchange points (IXP) in Africa, Brazil, the United States and Europe - and more than 6 000 networks worldwide.



BENEFITS

- Efficient access to multiple networks
- Increased traffic exchange capacity
- Easy routing management
- Cost effective
- Technical Support - 24/7/365
- Monitoring (NOC) - 24/7/365

SERVICE FEATURES

Port Range:

- TDM/SONET
- Ethernet (1GE, 10GE and 100GE)
- Multi-port aggregation

Billing models:

- Flate rate
- Burstable (95% percentile)

IP Transit AS37468:

- Full routing table and
- Partial routing table

Additional Services:

- IP_Gamer
- IP_Cache

99,95%

Availability

+26

Point of Presence (PoP's)

+21

IXP / PTT in a single service

RECOMMENDED FOR:

Entities from multiple business segments interested in internet access with flexible capacity within a global and efficient network with low-latency connections.



POPS

AFRICA

- ANGOLA - ANGONAP DATA CENTER, LUANDA
- SOUTH AFRICA - TERACO DATA CENTER, JOHANNESBURG
- SOUTH AFRICA - TERACO DATA CENTER, CAPE TOWN
- NIGERIA - MEDALLION DATA CENTER, LAGOS
- GHANA - RACKAFRICA DATA CENTER, ACCRA

ASIA

- SINGAPORE - EQUINIX DATA CENTER

SOUTH AMERICA

- BRAZIL - ANGONAP DATA CENTER, FORTALEZA
- BRAZIL - ASCENTY DATA CENTER, FORTALEZA
- BRAZIL - EQUINIX DATA CENTER, SÃO PAULO SP2
- BRAZIL - EQUINIX DATA CENTER, SÃO PAULO SP3
- BRAZIL - EQUINIX DATA CENTER, SÃO PAULO SP4
- BRAZIL - EQUINIX DATA CENTER, RIO DE JANEIRO RJ2
- BRAZIL - ASCENTY DATA CENTER, SÃO PAULO, SÃO PAULO 1
- BRAZIL - ASCENTY DATA CENTER, SÃO PAULO, SÃO PAULO 2
- BRAZIL - ASCENTY DATA CENTER, SÃO PAULO, SÃO PAULO 3

NORTH AMERICA

- USA - EQUINIX DATA CENTER MIAMI, MIA1
- USA - EQUINIX DATA CENTER MIAMI, MIA3
- USA - DIGITAL REALTY DATA CENTER NEW YORK, NYC1
- USA - CORESITE DATA CENTER NEW YORK, NYC1

EUROPE

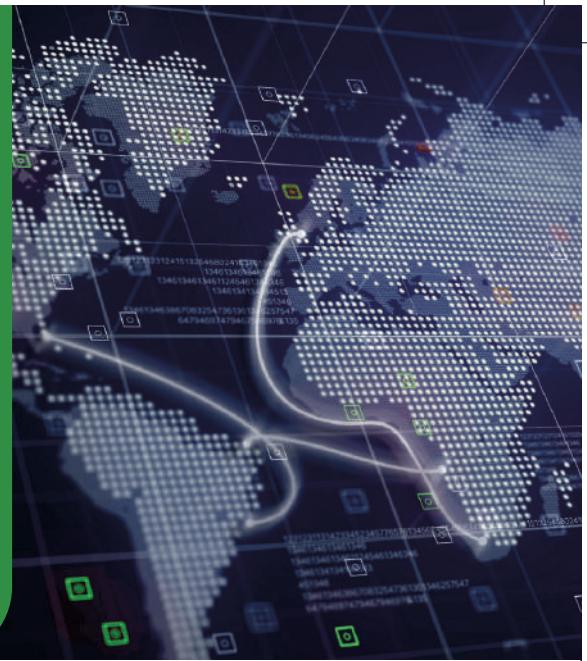
- PORTUGAL - EQUINIX DATA CENTER, LISBOA, LS1
- ENGLAND - INTERXION DATA CENTER, LONDON, LONI-3
- FRANCE - INTERXION DATA CENTER, MARSEILLE, MRS1-3



CONNECTIVITY

Smart IP

The most cost-effective IP Solution to flavour our network.
Low Latency, low cost, global access.



- LOW-COST
- AGILE GO TO MARKET
- CONNECTIVITY
- GLOBAL CONTENT

Smart IP is the entry-level solution in Angola Cables' IP Services portfolio, which guarantees connectivity to global TIER 1 networks, low latency and excellent cost-effectiveness.



BENEFITS

- Low latency
- Unlimited traffic
- Dedicated IP prefix
- real-time monitoring
- Dedicated bandwidth (1:1)
- Symmetric service (upload & download)
- High redundancy (WACS, SACS, MONET and other systems)

SERVICE FEATURES

- Interfaces / Ports:
 - Ethernet : 1GE, 10GE and 100GE
 - Multi-port aggregation
- Billing Options:
 - Flat rate
 - Burstable (95% percentile)
 - Flex (limited to 3 months)
- Complementary services:
 - Anti_DDoS
 - Managed Services
 - ACloudConnect (Express Route)
 - Remote Peering
 - GDI

+26
point of presence (PoP's)

+21
IXP's connected

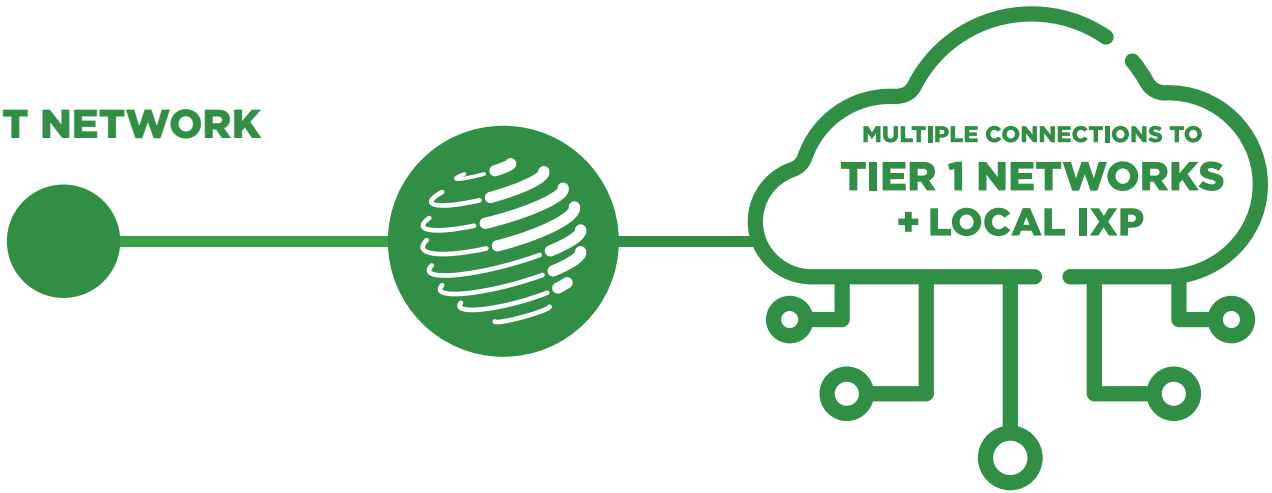
99,95%
avaiability

RECOMMENDED FOR:

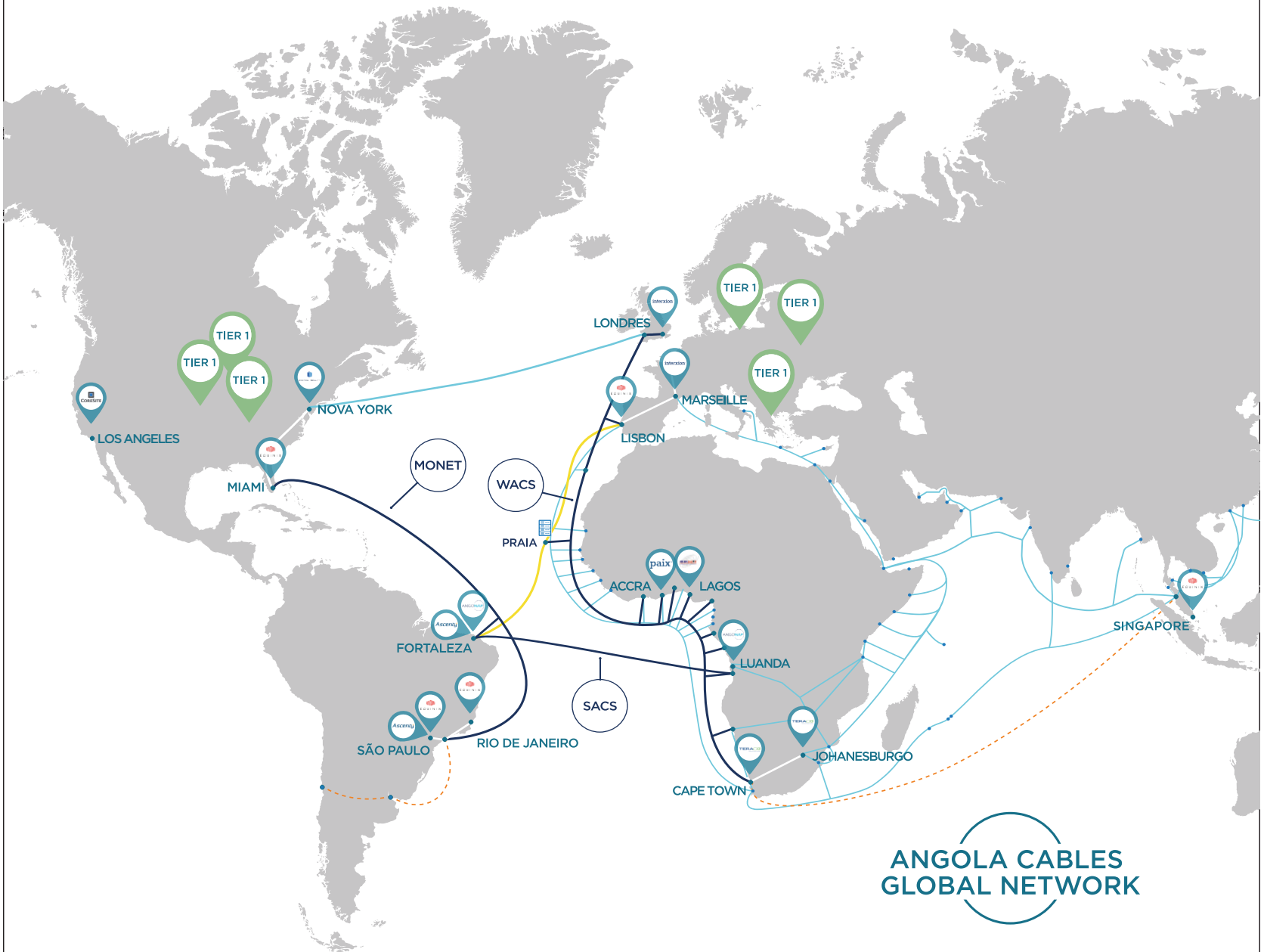
Entities from multiple business segments interested in accessing a flexible, cost effective solution capable of guaranteeing high capacity connectivity through an efficient global network with low-latency connections.

NETWORK TOPOLOGY

CLIENT NETWORK



SERVICE COVERAGE



IP GAMER



THE BEST GAMING EXPERIENCE WITH LOWER LATENCIES TO MAIN GAMING SERVERS

SUITABLE FOR NEW CUSTOMERS/ACTIVATIONS.

BENEFITS

ISP

- ✓ Greater efficiency in accessing gaming servers (BGP Community)
- ✓ Multiple gaming content

GAMER

- ✓ Optimized command response (Better Ping)
- ✓ Excellent streaming experience (GamePlay)

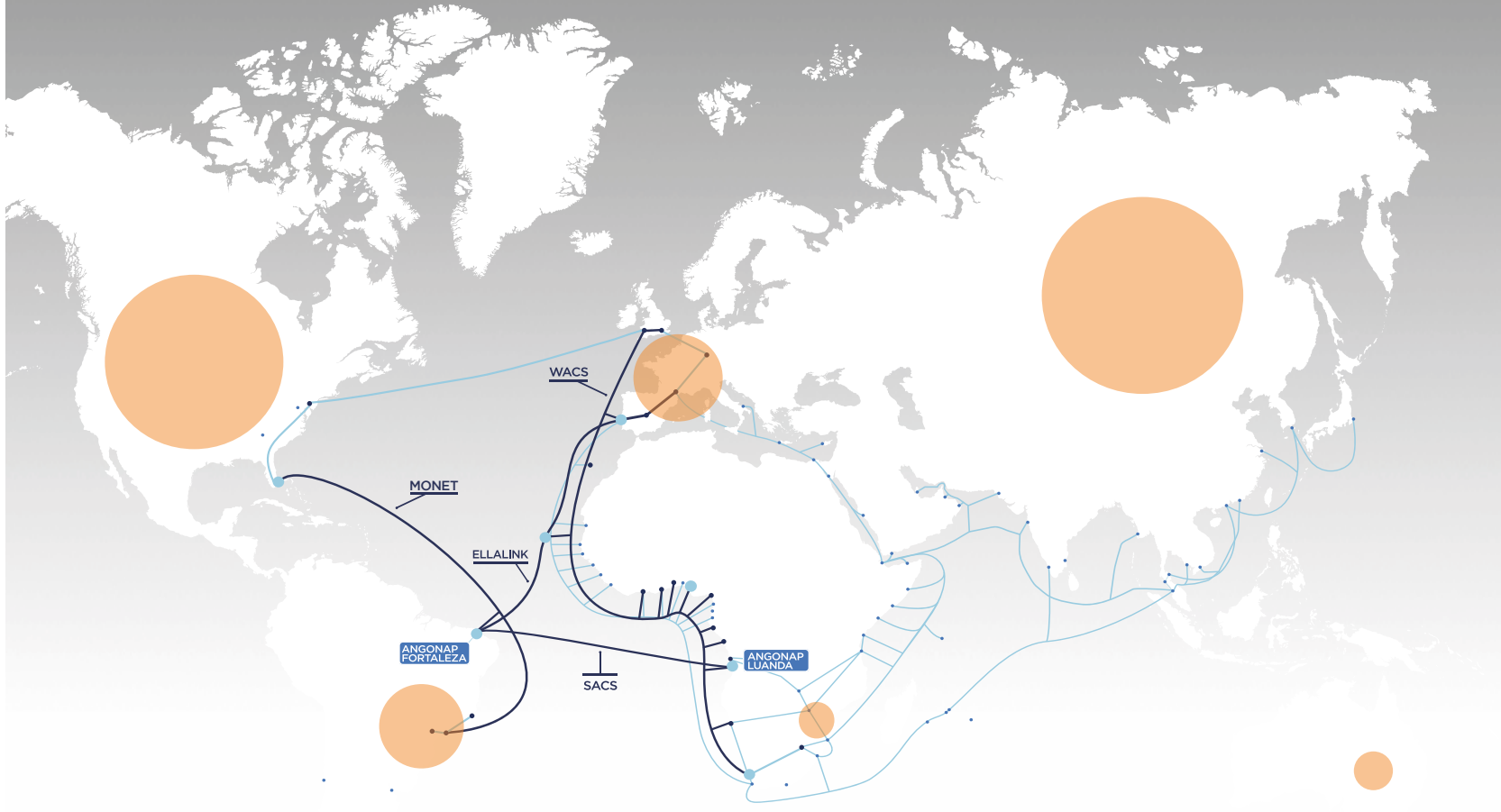
NETWORK TOPOLOGY



SERVICE FEATURES

- Ethernet ports (1GE, 10GE and 100GE)
- Multi-port aggregation
- IPv4 and IPv6

Experience the most engineered routing table to worldwide gaming nodes learned from professional gaming usage.



- ANGOLA CABLES ROUTES
- ROUTES IN ANOTHER SYSTEMS
- GAMING SERVERS (APPROXIMATE DENSITY)

UP TO **20** % IMPROVEMENT TO MAIN GAMING NODES

* REACH US. OUR TEAM WILL PROVIDE GREATER DETAIL ABOUT THE IMPROVEMENT GRANTED IN YOUR SPECIFIC LOCATION.



OPTIMIZED LATENCY (~ms)
CONNECTION TO MULTIPLE GAMING DESTINATIONS!

Africa - Europe		Africa - North America		Africa - South America		Others	
Cape Town - London	163	Cape Town - Miami	190	Cape Town - São Paulo	140	São Paulo - Fortaleza	45
Cape Town - Frankfurt	172	Cape Town - New York	163	Cape Town - Fortaleza	100	Fortaleza - Boca Raton	64
Lagos - London	96	Lagos - Miami	178	Lagos - Fortaleza	115	Boca Raton - New York	33
Luanda - London	128	Luanda - Miami	153	Luanda - São Paulo	106	São Paulo - Miami	104
Luanda - Frankfurt	138	Luanda - New York	125	Johannesburg - Fortaleza	125	New York - London	79
Ghana - London	100	Ghana - New York	176	Ghana - Fortaleza	232	Boca Raton - London	106
		Ghana - Miami	305				



GO GAMING

GO GAMING VPN

Go Gaming VPN is a high performance solution using multiple IP routers simultaneously, resulting in a significantly improved gaming experience.



Plug & Play



New Streaming Solution



Latency Reduction

Go Gaming VPN is a solution for Windows PC that operates as a GPS for the internet. It combines redundancy of IP routings to reduce latency and improve performance and the overall gaming experience.



Up to 70% reduction in latencies (Ping)

Up to 99% reduction of Packet Loss

Access to more than 500 servers across the world.

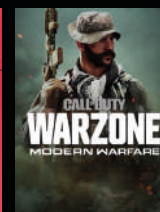
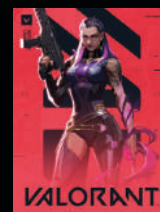
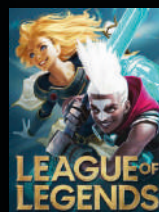
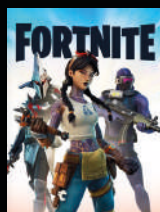
Supported by IP_Gamer and the Angola Cables global network

BENEFITS

- + Product in portfolio
- + Increase in Average Revenue Per User (ARPU)
- + Customer acquisition
- + Customer loyalty
- + Product management autonomy

SUBSCRIBE TODAY AND GET ACCESS TO MORE THAN 600 GAMES

Play any game online with optimized Ping!



RECOMMENDED FOR

ISPs and other service providers looking for additional product revenue streams especially within the growing global gaming market.

BENEFITS

FOR GAMERS AND OTHER END USERS



Real Time Optimization

IP_Gamer seeks out the best traffic routings in real time. This ensures that gamers and other players always benefit from the best routings. (Optimized Ping!)



Boosted Performance

Improve the response time of system peripherals to reduce system latencies.



Multipath Connections

Connections are simultaneously forwarded through different routings increasing the guarantee of packet delivery.



Supported by a Global Network

IP_Gamer utilizes a set of strategically located servers around the world, connecting to some of the largest IP huubs to provide optimized connections from anywhere to anywhere.



Multi Internet connection

It is possible to use two simultaneous accesses to the internet that will ensure connection even if one of the providers fail.

GLOBAL GO GAMING VPN NETWORK





CONNECTIVITY - IXP



AS 327788 where networks interconnect



NEUTRAL PLATFORM

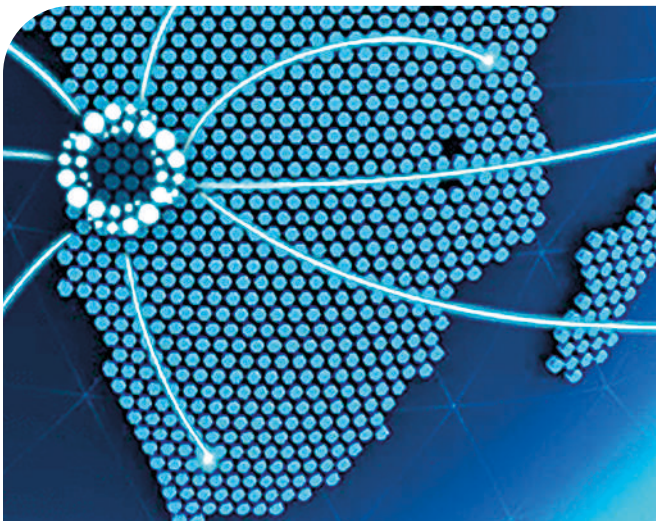


TRAFFIC EXCHANGE



LATENCE REDUCTION

Angonix is a neutral internet traffic exchange platform located in Luanda, Angola. This service minimizes distances between internet users by aggregating and distributing digital content between internet operators at regional and international level.



BENEFITS

- The platform enables the traffic exchange between ASNs;
- Low latency accessibility to national and international content;
- Ease of traffic exchange between networks in the ecosystem.
- Keep local-local traffic.

SERVICE FEATURES

- **Peering:** Public or Private;
- **Ports:** 1GE and 10GE;
- **Protocol:** BGP (Border Gateway Protocol);
- **IP details:** IPv4 and IPv6;

+ 33 Gbps

Traffic peak

99,95%

Service availability

24/7

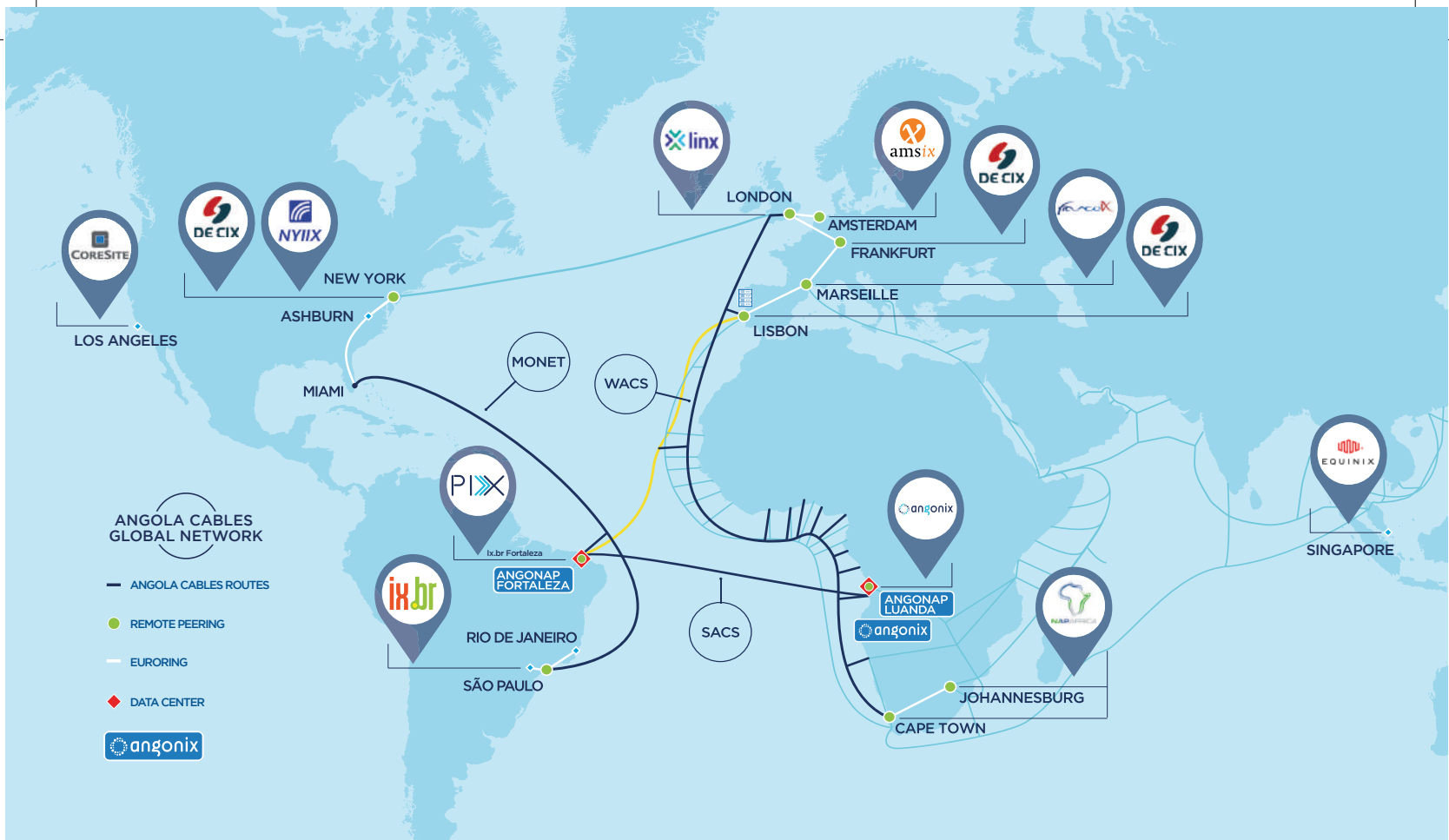
Technical support and security services

INSTALLATION REQUIREMENTS

- Customer with AS Number;
- Customer with registered AS-SET;

RECOMMENDED FOR:

Entities seeking connectivity with low latency in accessing digital content, namely: global networks, root servers, internet and content providers, research and education institutions and other entities looking to keep local-local traffic.



ENTITY	AS	ENTITY	AS
1. Angola Cables	37468	17. Microsoft	8075
2. Angola Telecom	11259	18. Movitel	37081
3. Banco Atlântico	327691	19. Multipla	328111
4. Banco BAI	36936	20. Mundo Startel	37011
5. Banco BIC	371471	21. Netspace	328154
6. Banco Nacional de Angola	37366	22. Nucom	36121
7. CMC Networks	25818	23. Packet Clearing House	42
8. Congo Telecom	37451	24. Packet Clearing House	3856
9. Connectis	327932	25. SAMCCR	52551
10. Eswatini Posts and Telecommunications Corporations	19711	26. SwitchCom	327833
11. Facebook	63293	27. Tsolnetworks	37533
12. G8/Multicast	28329	28. TV Cabo	36907
13. i3D.net	49544	29. Unitel	37119
14. Internet Technologies Angola	33763	30. Verisign	26415
15. IP2TEL SERVIÇOS DE COMUNICAÇÃO MULTIMÍDIA	61573	31. Vox Telecom	11845
16. LINK_BARATO	268331	32. ZAP	37645

About Angonix

In operation since March 2015, Angonix is ranked as one of the largest Internet Exchange Points (IXP's) in Africa. Located in Angonap Luanda Data Center in Angola, Angonix acts as a bridge between Africa and the rest of the world by providing a carrier-neutral Internet hub to interconnect global networks, operators, content providers and other entities with Autonomous System Number (ASNs).



CONNECTIVITY

PIX

AngoNAP Fortaleza increasingly connected and positioned as the best interconnection site in the northeast Brazil.



LOWER LATENCY



ACCESS TO MAJOR IXP's



FLEXIBLE PORT AND CAPACITY

PIX (Point for Internet Exchange) is a network solution able to receive customer traffic or reseller (CIX) from a given Internet Exchange Point. This element is part of the computing matrix that generates the IXP, meaning each PIX connects to other PIX or Central PIX.

With PIX AngoCables, you have available a Point for Internet Exchange integrated within AngoNAP Fortaleza Tier III Data Center, where you are able to interconnect your company to more than 194 providers. Besides, you have a direct link to 2 submarine cables, increased connectivity speed, and lower bandwidth consumption.



BENEFITS:

- Increased connection speed
- Interconnection to 2 submarine cables, IXP's, OTT's and international operators
- IP Transit access
- Cloud solutions
- Strategic geographic location
- Access to AngoNAP Fortaleza Data Center services

SERVICE FEATURES:

Technology: Ethernet

Ports / Interfaces:

-1Gbps LX/UTP

-10Gbps LR

-100Gbps LR4

24/7 Technical support and security

99,99% Availability

+500 Participants between Internet operators, Content companies, Cloud and CDN's

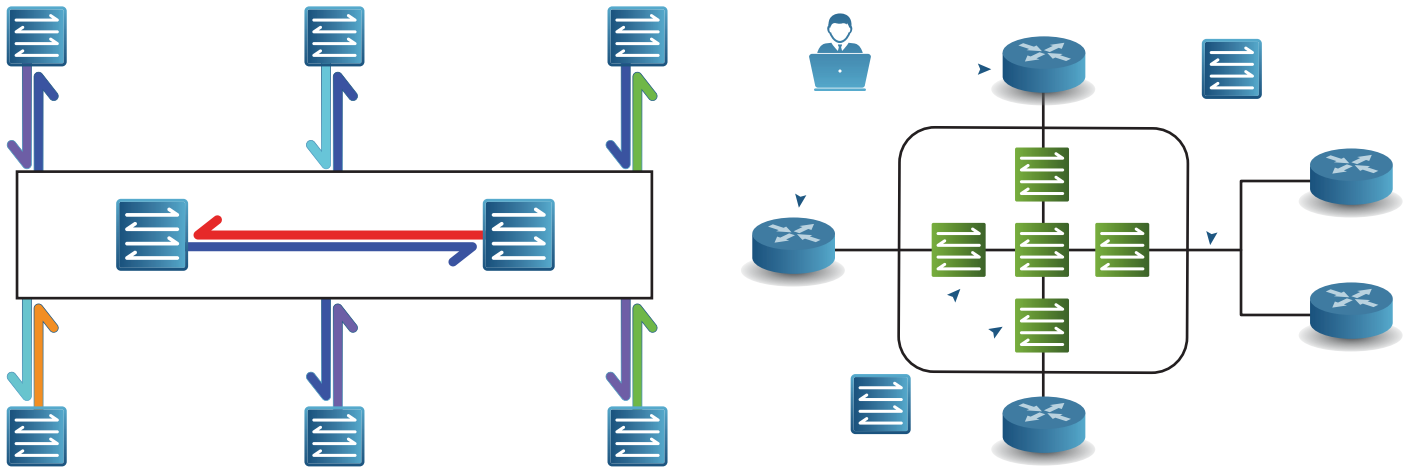
INSTALLATION REQUIREMENTS:

Customer with AS Number.

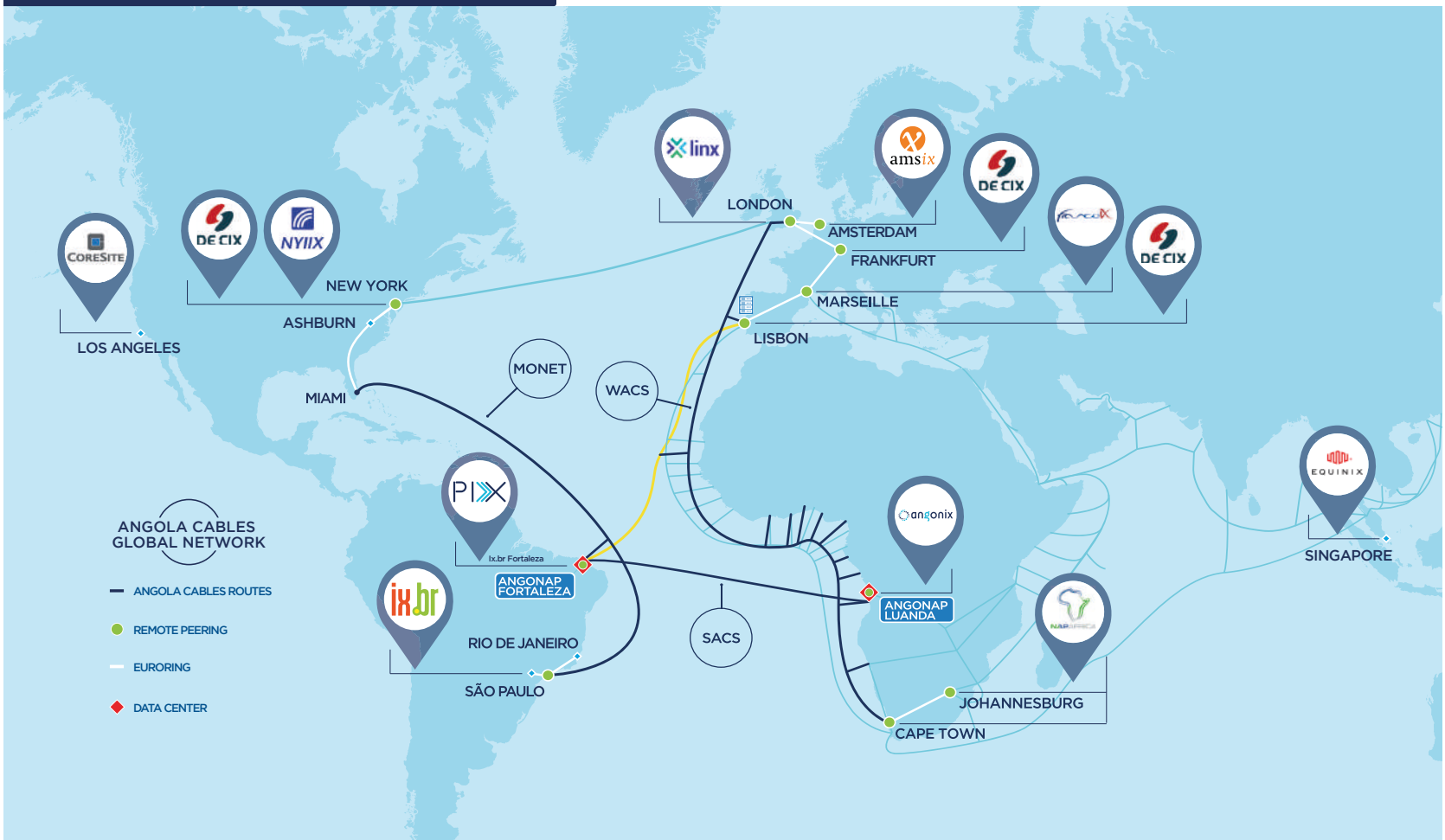
SUITABLE FOR:

Companies looking for connectivity to the major IP hubs.

PIX INTERCONNECTION TOPOLOGY



GLOBAL NETWORK | REMOTE PEERING

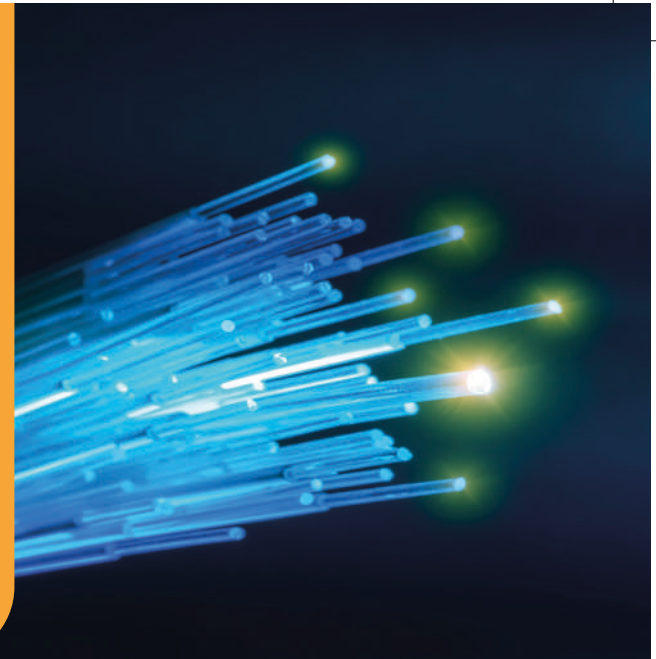




CONNECTIVITY

Transport Service

A robust network capable of ensuring continuous connectivity (EPLC & IPLC) and global interconnection



LOW LATENCY



HIGH CAPACITY



NETWORK RELIABILITY

The Connectivity Product (EPLC and IPLC) Angola Cables, allows for the diversity of point-to-point or multi-point connections, with high resilience and low latency for the main digital content sourcing destinations (Data Centers and Traffic Exchange Points - IXP's) in Africa, Europe, Brazil and USA.



BENEFITS

- ✓ Connectivity and global coverage
- ✓ Assured service delivery
- ✓ 24/7 technical support and security services

SERVICE FEATURES

- EPLC: Ethernet, MPLS, L2VPN, VPLS, VPWS.
- IPLC: SDH, DWDM, Spectrum, OTN.

+66

Data Centers

+8

OTTs / CDNs

+21

IXPs

WACS

4 fiber pairs
EPLC & IPLC

Route
11 countries in Africa
and 3 in Europe

SACS

4 fiber pairs
EPLC & IPLC

Route
Luanda (Angola)
and Fortaleza (Brasil)

MONET

4 fiber pairs
EPLC & IPLC

Route
Miami to Fortaleza
and saints

Network Partners

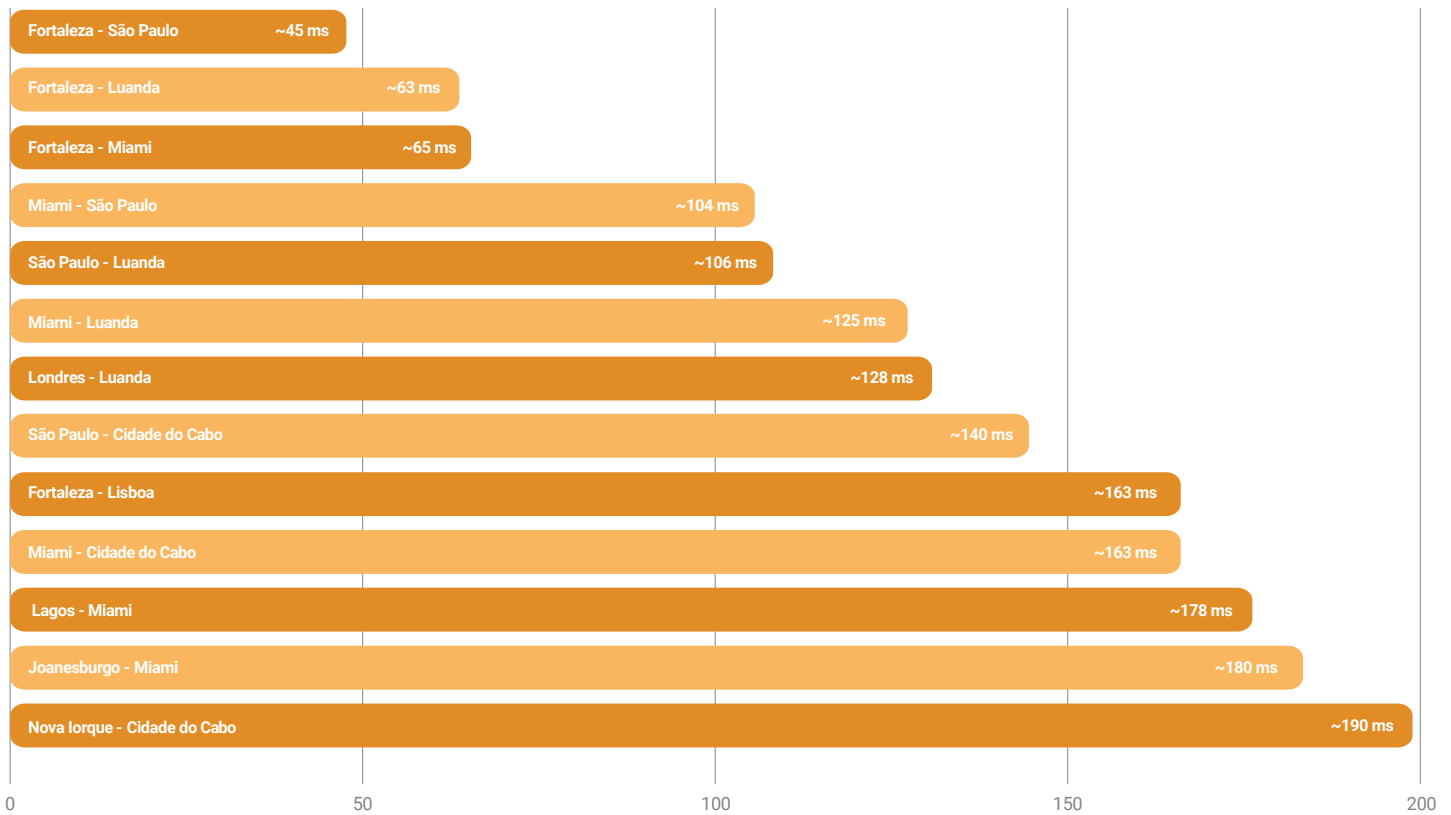
ELLALINK - CV Telecom
Djoliba Network

Recommended for:

This service is recommended for all operators that need to connect to the main telecommunication hubs and IP sourcing points. This includes: Carriers, ISPs, OTTs, multinationals, corporate and financial enterprises as well as gaming entities.

International Routes (RTD)

(Approximated values)





ICT

SD-WAN

The solution allows network management cost savings, in a simple, centralized platform supported by Artificial Intelligence.



- 360° NETWORK VISIBILITY
- COST SAVINGS
- BETTER QOS
- MORE RESILIENCY

AC SD-WAN is an Angola Cables service, that empowers networks with intelligence that maximises gains in the combination of connectivity (MPLS, LTE, Internet and other security features), providing centralized management, cost savings and increasing the security levels by incorporating real-time SSL inspection.



BENEFITS

- 360° network visibility
- Cost savings (CAPEX & OPEX)
- Optimizes the operation of the business assets
- Minimizes network downtime
- Acceleration of latency-sensitive applications
- Extensive programming and automation via modern APIs
- AI-driven solution

SERVICE FEATURES

- Centralize network visibility
- Next-Generation Security Firewall (NGFW)
- +5,000 apps secured by SSL solution
- Self-healing to maximize the quality of experience (QoE)
- Multiple QoS filters
- Aggregation of multiple technologies (MPLS, LTE, Cloud, safety)
- Zero-Touch provisioning

360° Network Visibility 100% Automatized ~30% Cost reduction

Up to **50** Hubs

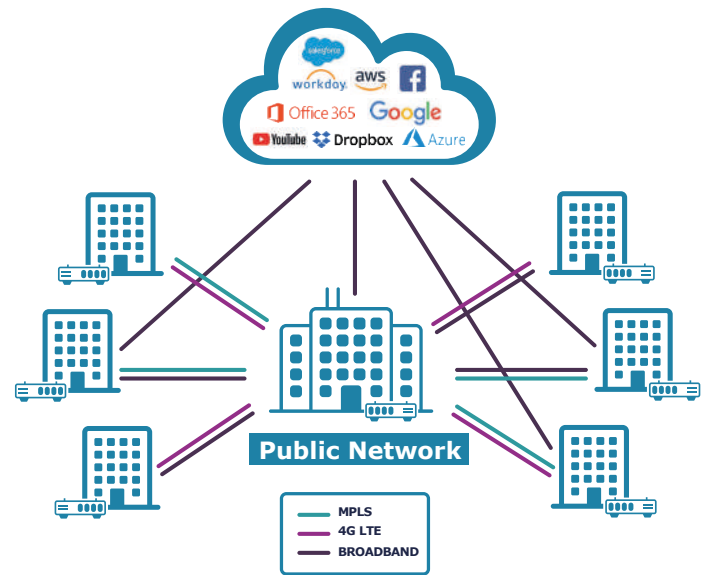
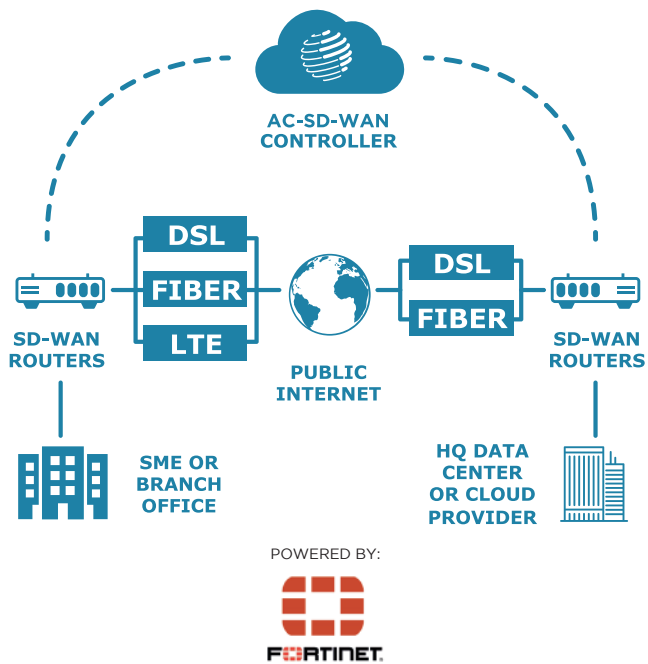
Up-to **48h** time to implement services

RECOMMENDED FOR:

The solution is recommended for companies looking for efficiency between cost and quality of service, adding automatism and artificial intelligence to the network.

NETWORK TOPOLOGY | WITH SD-WAN

NETWORK TOPOLOGY | WITHOUT SD-WAN



PACKAGES

ITEMS	PLATINUM	GOLD	SILVER
Easy configuration of multiple devices	✓	✓	✓
Full visibility of users, devices and applications	✓	✓	✓
Automation of provisioning	✓	✓	✓
Allowing, Denying and/or prioritizing access to applications and destinations	✓	✓	✓
Alerts	✓	✓	✓
Advancing routing	✓	✓	✓
Cloud integration	✓	✓	
Proactive blocking of recently newed attacks *Need license to each box.	✓	✓	
Reporting	✓	✓	
Fully managed Service	✓		
Analytics	✓		
Monitoring	CPE, Circuits usage reported monthly by report and all applications	CPE, Circuits usage reported monthly by report and VoIP	CPE
Support (24x7)	Telephone and Email	Email	Email during business days only
Advised for:	Customers with multiple site offices, in need of a single SDWAN solution to interconnect them securely, having full visibility (analytics) and connectivity redundancy.	Customers that require site-to-site SDWAN connectivity in order leverage the use of connectivity, while taking advantage of security features.	Customers after optimization of the use of their network and better experience with applications.



DATA CENTER

ANGONAP

Connection to everything

Infrastructure designed with high security standards, expansion capacity and energy redundancy capable of providing accommodation services and continuous connectivity.



NEUTRAL INFRASTRUCTURE



SECURITY



CONNECTIVITY



SCALABILITY



BENEFITS

- Neutral environment
- Relevant geographic location in the regional and intercontinental context
- Interconnection point with submarine cable systems, IXP's, OTT's and national and international operators
- 24/7/365 Surveillance and Technical Support
- High standards of energy redundancy
- 24/7 Remote Support (Manageable Services)

AVAILABLE SERVICES

- Colocation
- Cross Connect
- Remote Hands
- Cloud
- Smart Hands
- Angonix - *Internet Exchange Point*
- PIX IX.br Fortaleza

4

Subsea cable systems accessible via ANGONAP

99,982%

Service availability
TIER III certification

Recommended for:

Entities looking for multiple connectivity options, in an environment of high security, reliability and scalability. We boost the activity of local, regional and international entities by providing connections with the network of the main operators and providers of global content.

Infraestructure	ANGONAP FORTALEZA	ANGONAP LUANDA
Design	TIER III Uptime Institute	
Hosting Space	Expandable up to 1000 racks	Expandable up to 400 racks
Rack Dimension	45 U	42 U
Fire Protection	Gas Novec e HSSD	Gas FM 200 e HSSD
Power and Cooling		
Redundancy	2N + 1	N + 1
Power Entries	A + B + C	A + B
UPS configuration	2N + 1	N + 1
Security		
Physical	✓	✓
Human	✓	✓
Electronic	✓	✓
Conveniences		
Work Stations	✓	✓
Wi-Fi	✓	✓
Meeting Rooms	✓	
Service Availability	Uptime defaults to an SLA of 99.982% for Tier 3.	99,89%



MANAGED SERVICES

Consulting Services

Consulting, auditing and set-up of network, datacenter, security and IT services



NETWORK DESIGN



PROJECT



BEST MARKET PRACTICES



RELIABILITY



OPTIMIZATION

The Consulting Services service is a customizable solution for your company that needs a team with extensive market experience to ensure best practices before, during and after implementation and/or changes made to your network.



BENEFITS

- Expert support
- Consultancy for more complex technical issues
- Support for scalable and sustainable network design
- Project mentoring and network changes
- General network health checkup

SERVICE FEATURES

- Customizable
- Reliable
- More than 10 years of market experience
- Team with industry-recommended international certifications

Availability

24/7/365



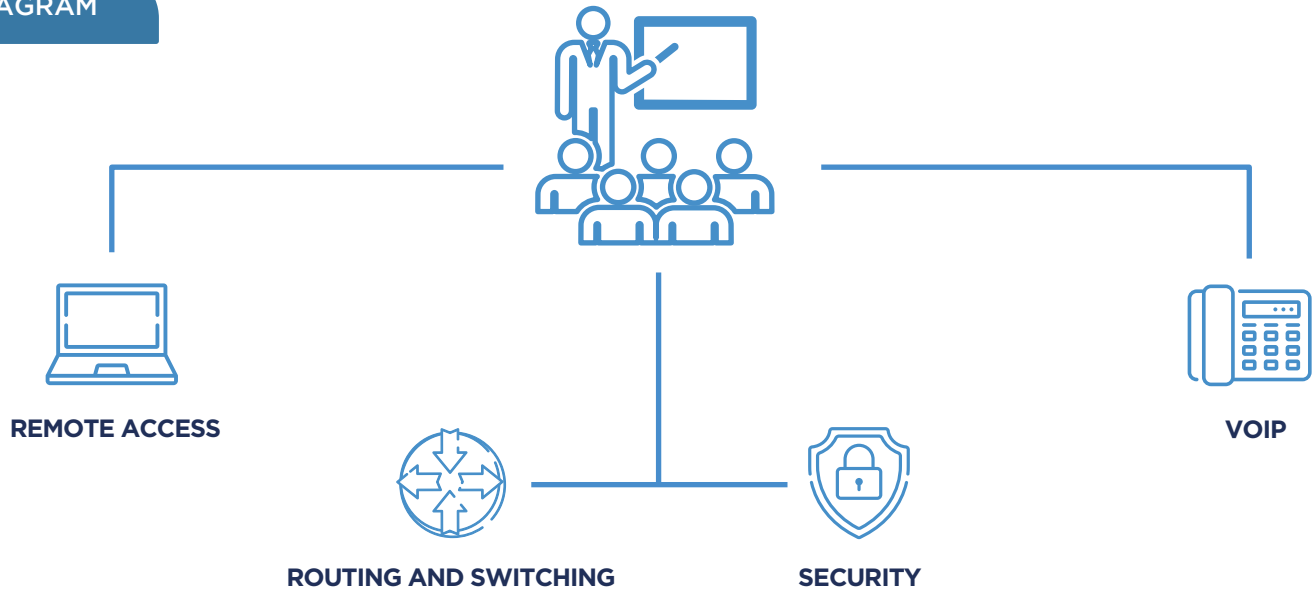
RESOURCES:

Team of certified engineers with extensive experience in the Telecom, IT and infrastructure sectors.

RECOMMENDED FOR:

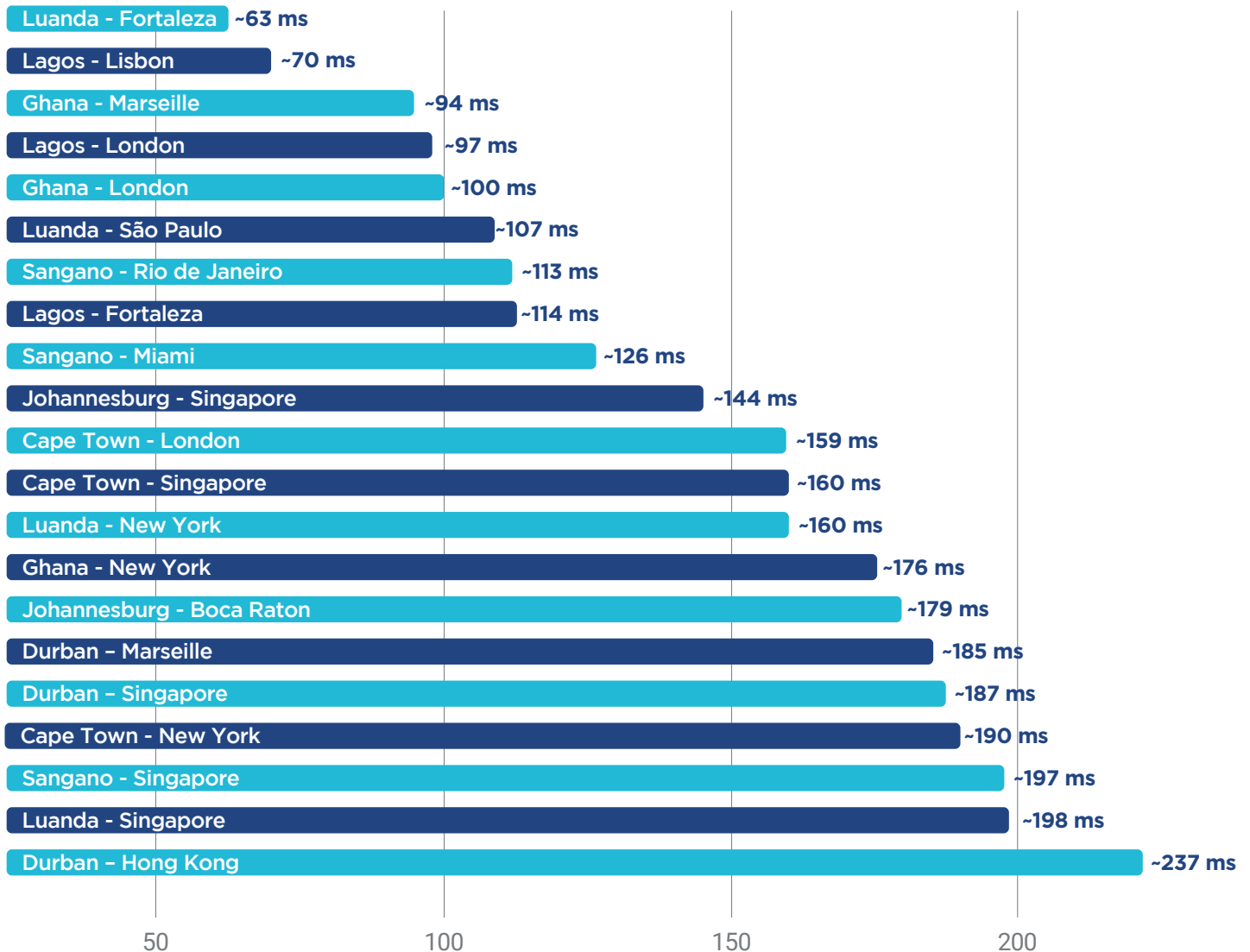
Companies that have a project to be implemented (from expansion, network updates or a new SOP) and need mentoring, consulting and/or verification of the current status to implement it with best practices.

DIAGRAM



Check our low latency Latencies From Africa to the World

(approximated values)





DATA CENTER

Managed Services

CONSULTING, AUDITING AND CONFIGURING SERVICES NETWORK, DATA CENTER, SECURITY AND IT.



EXPERTISE



EASY SET-UP



BEST MARKET PRACTICES



RELIABILITY

The Managed Services service allows your company to have support for items such as routing, switching, security, VoIP, infrastructure and others to be designed, implemented and managed by a team of specialists from Angola Cables, saving you from errors in your network or supplying the need for manpower to do so.



BENEFITS

- Expert support
- Consulting for more complex technical topics
- Support for scalable and sustainable network design
- Implementation and management of services

SERVICE FEATURES

Managed Services for:

- Traffic Engineering;
- Switching;
- Security;
- Network design;
- VoIP;
- Equipment configuration

24/7/365

Availability

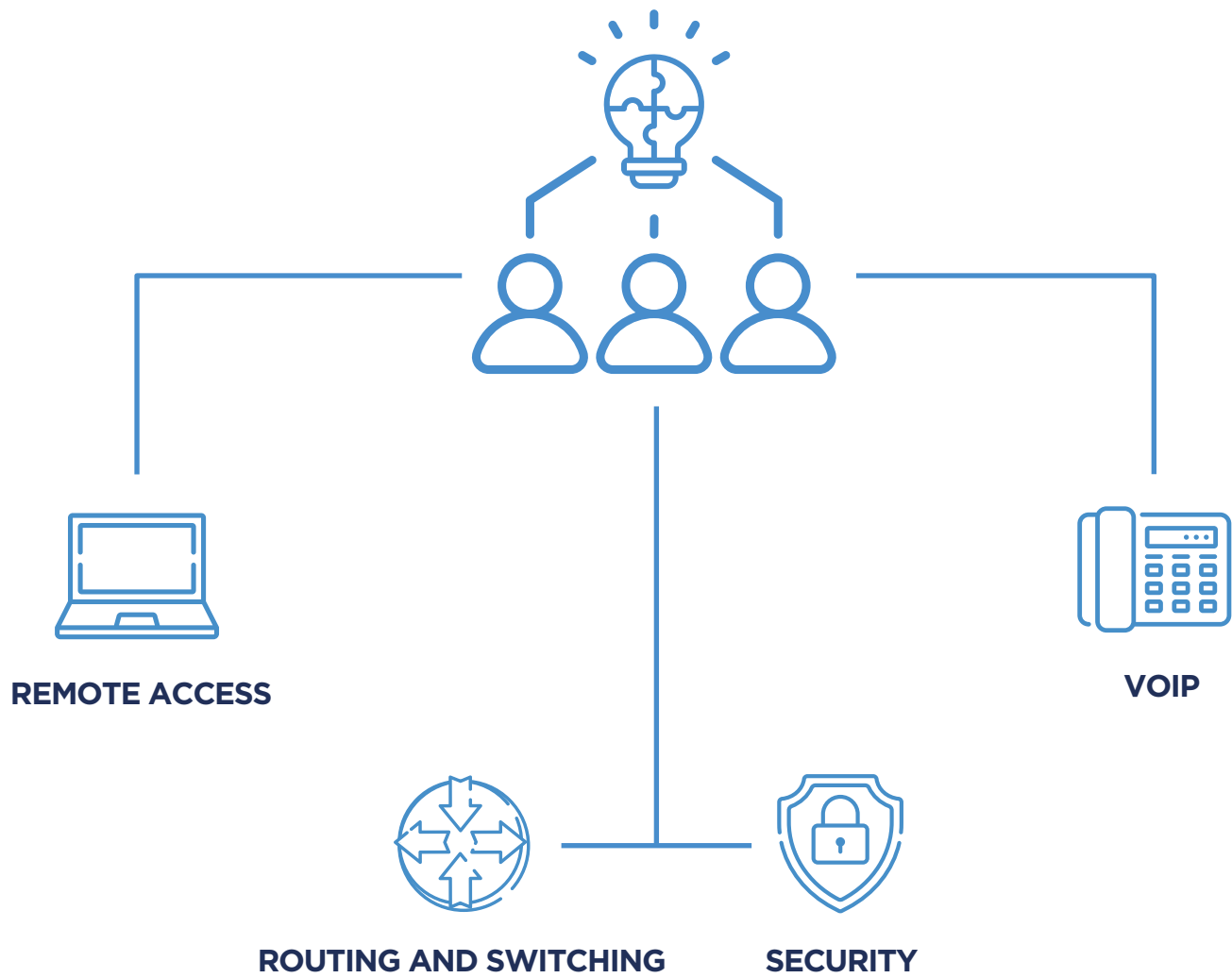
RESOURCES:

Team of certified engineers with extensive experience in the Telecom, IT and infrastructure segments.

Recommended for:

ISP's and corporate entities looking for a specialized service and fast set-up of routing services (internal or external), VoIP, security or switching.

SCHEME



CERTIFICATION



**Angola Cables has
the best connectivity
solutions for your
business.**

Talk to us!



angolacables

deepconnection

Contacts

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Sandton - 2191

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