

Enabling Digital Growth Anywhere, Anytime

WHITE PAPER

Knowledge, standardization and automation are keys to establishing operations in the most remote and challenging parts of the world.

In today's digital economy, opportunities beckon from every corner of the globe. Businesses that move quickly into new markets are likely to gain an edge over competitors. But setting up operations means establishing internet access: With it, a business can operate nearly anywhere; without it, business is virtually impossible regardless of location.

Establishing a reliable, high-bandwidth internet connection might seem an unsolvable puzzle in many spots around the world. Even so, some of the greatest opportunities are to be found in the most challenging locations. These include:

Developing countries. Uneven infrastructure is one of the most common obstacles to building commercial operations in developing countries. For example, electrical power might not reach every village, and telecommunications networks might be of poor quality. Despite these hurdles, developing countries can be extremely attractive for many businesses for several reasons:



Custom Media



- **Factories.** The workforces of many developing countries are capable of delivering the important advantage of low-cost production.
- **Emerging markets.** As a consumer economy takes root, companies that establish a presence will gain the first-mover advantage.
- **Farms.** Developing countries are often located in climates that are ideal for certain desirable commodities such as chocolate, coffee, cotton and other crops.
- **Mines.** Rare and strategic metals are frequently found in remote locations where setting up extraction operations can be particularly difficult.

Disaster and war zones. Natural calamities and human conflicts are unfortunate facts of life. People faced with these circumstances often need help. Organizations such as the United Nations and Non-Governmental Organizations (NGOs) provide peacekeeping forces, first-responder units

and benevolent services to populations that might be under extreme stress. These organizations need internet connectivity to perform their work, but where disaster or war has struck, infrastructure is among the first casualties.

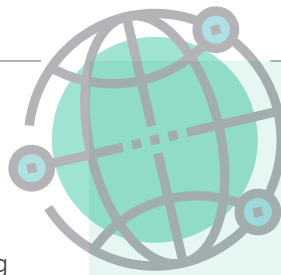
Sanctioned countries. Due to the policies of national governments, many countries face sanctions that are intended to restrict trade. To set up operations in such countries, special knowledge and skills are needed to understand the purpose and scope of sanctions and to facilitate legitimate commercial transactions between buyers and sellers.

PROBLEMS AND SOLUTIONS

Here are the most common obstacles to global operations and how to overcome them:

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OPEN SYSTEMS— THE GLOBALIZATION EXPERTS

Problem: Importation barriers

IT equipment is essential to establishing operations and internet access, but there can be many barriers to importing it, such as customs, embargoes or sanctions. All countries have customs regulations, but sometimes these can be complex and frustrating. Meanwhile, some countries have prohibited trade with certain other nations—thus banning IT equipment made in those countries. Sanctions might prohibit a country from receiving the tech equipment it needs. And documentation requirements, such as those of China, mandate that imported equipment earn a special certificate based on design and content.

Solution: Knowledge of countries' practices

Because every country is different, awareness of the different procedures, laws and regulations of each country is essential. Some countries have erected particularly challenging customs barriers, while other countries have established content requirements for equipment brought into the country. For example, components made in a sanctioned or embargoed country cannot be included in IT equipment. While the certification requirements of China are complex, once mastered, the barrier they present is manageable. Awareness of the ins and outs of every country, particularly those with difficult regulations, takes time and practice. However, repetition of processes leads to optimized execution.

Problem: Lack of skilled IT staff

Most IT operations rely on trained IT professionals to get up and running. But in remote locations where population is sparse, there is little chance of finding individuals with the IT skills needed to deploy and manage such IT infrastructure as servers, storage equipment and routers.

Solution: Automation

When IT administrator tasks can be executed as automated routines, equipment can be installed with minimal user involvement. Many tasks can be executed remotely, enabling a “zero touch” approach. In addition, administrators in global operations control centers can track local performance, remotely troubleshooting and resolving issues, optimizing application flows and managing bandwidth utilization.

- Open Systems has the right knowledge, experience and technology to enable organizations to establish a global presence quickly. Open Systems understands most procedures practiced globally because of its experience in virtually every region of the world, including Southeast Asia, Eastern Europe, Latin America and Africa.
- Open Systems implements global security policies such as end-to-end encryption but allows for local exceptions, such as China’s Great Firewall.
- Open Systems implements SD-WAN networking technology to enable faster implementation at lower costs than MPLS.
- Open Systems hardware expedites deployments.
- Standardized SD-WAN edge routers.
- Automated devices are preconfigured.
- Open Systems allows flexibility in the choice of carrier.
- Open Systems monitors over 400 ISPs across all customer WAN deployments to gain knowledge of ISP performance.
- Open Systems NOCs in Zurich and Sydney provide global mission control according to ISO 27001 standards.
- Open Systems provides a single point of contact for 24/7 year-round network service.

Problem: Rollouts take too long

Because windows of opportunity open and close quickly, organizations must move with agility to launch operations. One typical cause of delay is the time-consuming nature of MPLS deployments. Sometimes, MPLS providers simply cannot connect locations in certain countries or cities to their MPLS network. Another common source of delay is the use of non-standard equipment. Gear that is out of the mainstream is likely to require special expertise and extra time to set up and operate.

Solution: Software-defined wide area network (SD-WAN) and standardization

Unlike MPLS, SD-WAN traffic can run over a wide variety of transport layers, including direct internet access lines, broadband, 4G and satellite. This flexibility makes SD-WAN technology particularly well suited to global rollouts because internet connectivity is simpler and links can be established faster at lower cost. With regard to delays due to non-standard equipment, the remedy is straightforward: using standardized equipment streamlines deployment tasks.

Problem: Uneven ISP service

Although internet access may be available in many different countries, the ISPs that connect customers to the internet often provide widely varying levels of service. Some might deliver good connectivity, while that provided by others might be unacceptable. A customer venturing into a foreign realm for the first time would not know which ISP to choose. Finding the right ISP could take time, delaying the launch of operations and adding expense.

Solution: Knowledge of ISPs

There is no substitute for the familiarity with different ISPs that can only be gained through on-the-ground experience in many remote corners of the world. Experience teaches which ISPs are reliable and which can deliver additional services such as LAN-WAN integration.

CONCLUSION

In a global, digital economy, many organizations face the pressing need to set up worldwide operations. For businesses, challenging locations often offer the greatest opportunities. Humanitarian organizations, meanwhile, must venture into regions fraught with obstacles to carry out their missions. To establish a global presence, reliable internet connectivity is essential. But launching IT operations and internet connectivity can be difficult, and sometimes, seemingly impossible.

To get up and running, knowledge of the hurdles that must be overcome in each region is essential. Open Systems has the understanding that comes from years of helping organizations set up operations in the most difficult localities. Without that know-how, organizations will find it difficult to justify the time and cost of doing business in many remote locations. By providing essential guidance through an efficient single point of contact, Open Systems is an expert partner that can make all the difference.

About Open Systems

Open Systems is a leading global provider of a secure SD-WAN that enables enterprises to grow without compromise. With assured security, AI-assisted automation and expert management that free valuable IT resources, Open Systems delivers the visibility, flexibility and control you really want with the performance, simplicity and security you absolutely need in your network.