3.4 NON-DOMESTIC SERVICES (L.34.1.3.4)

> *Qwest uses a combination of owned assets and strategic international alliances to deliver non-domestic services—ensuring that providers with local knowledge are leveraged.*

Qwest's international coverage extends to ███████████████████ ██. This extensive breadth of coverage is due to Qwest's long-standing strategy to satisfy the voice and data connectivity requirement of our global customer base and to provide world class service with a high level of quality and reliability. We do so by:

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This enables Qwest to supply Agencies with best-of-breed service, network connectivity, and mature, well engineered and planned services. These services include well established technologies such as ███████ ██
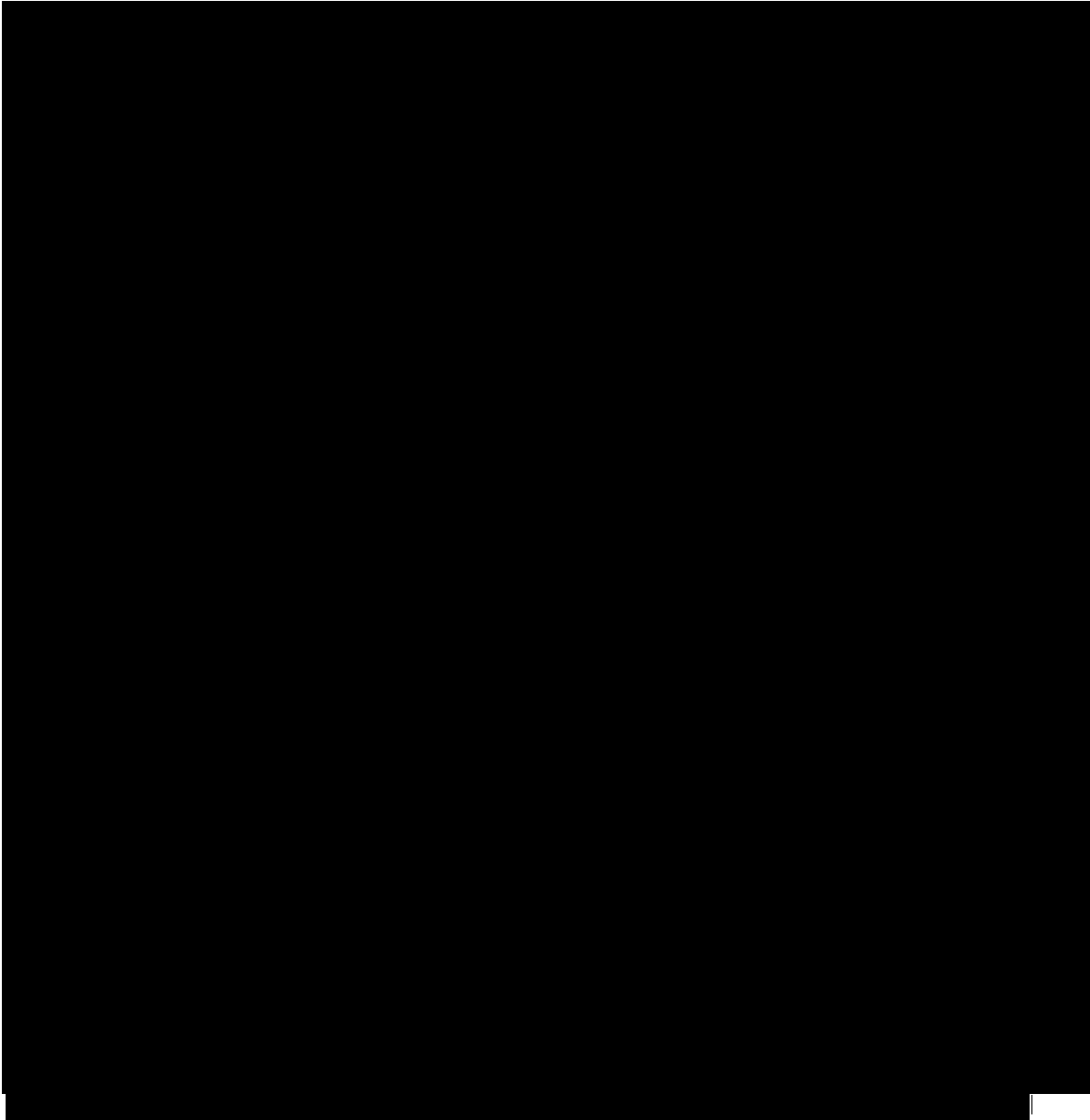
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Qwest has:

- Points-of-Presence (POPs) in key markets in

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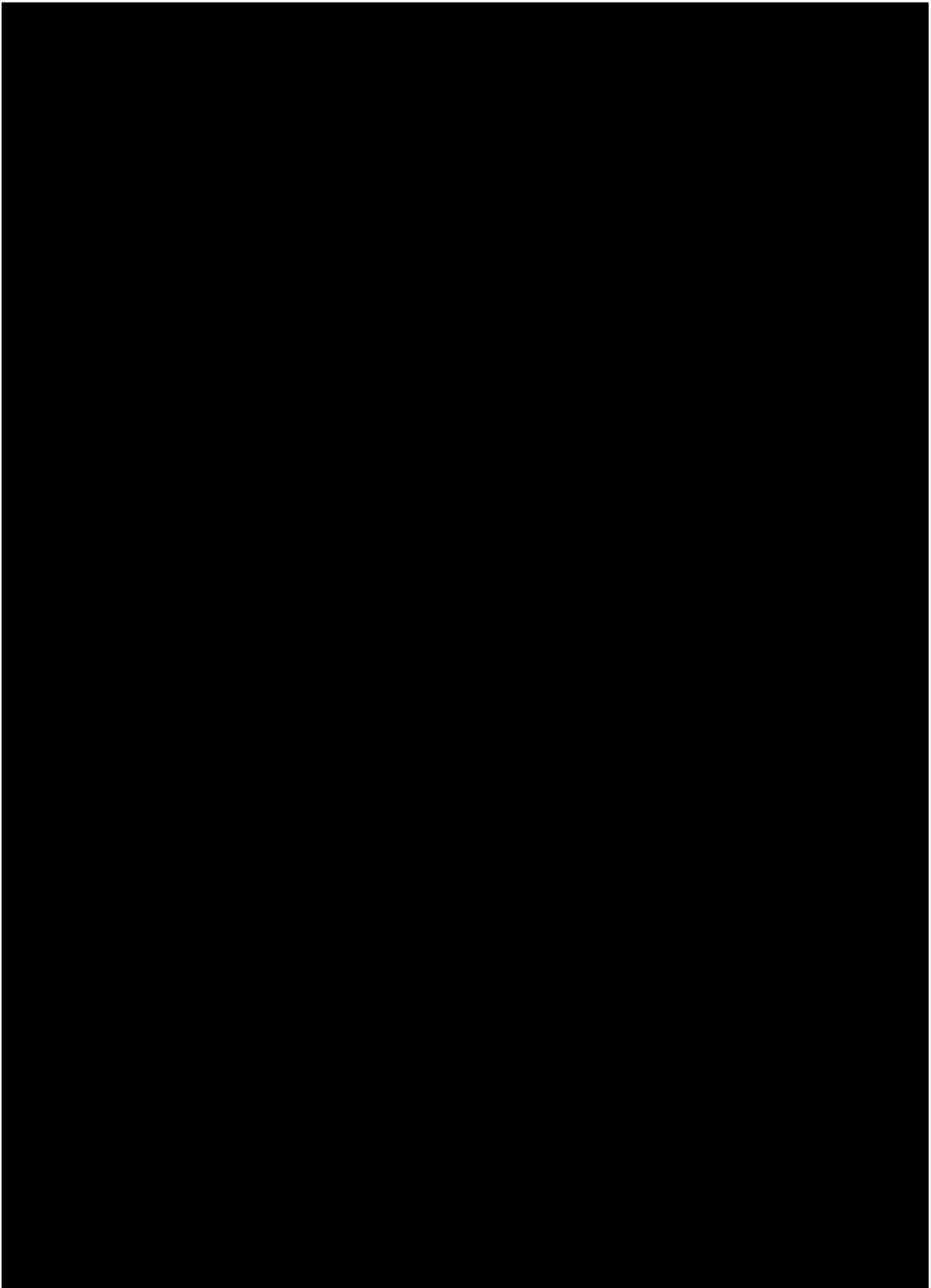
Through arrangements with other carriers, Qwest is able to deliver service to areas not directly served via ████████████████████████

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All Qwest international service, regardless of the provider, will be provided to Networx users in the context of a consistent service delivery and assurance environment. Qwest will be responsible for all service delivery, including service ordering, notifications, acknowledgements, and service assurance functions such as repair, configuration management, and trouble handling. In ██

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Qwest's key international relationships, shown in ██████████ were established based on a rigorous evaluation process that rates a potential alliance based on previous track records of performance, network architecture, network quality, coverage, product set, pricing, customer care, and brand recognition. Only best-in-breed network alliances are chosen to extend services for our domestic-based customers.
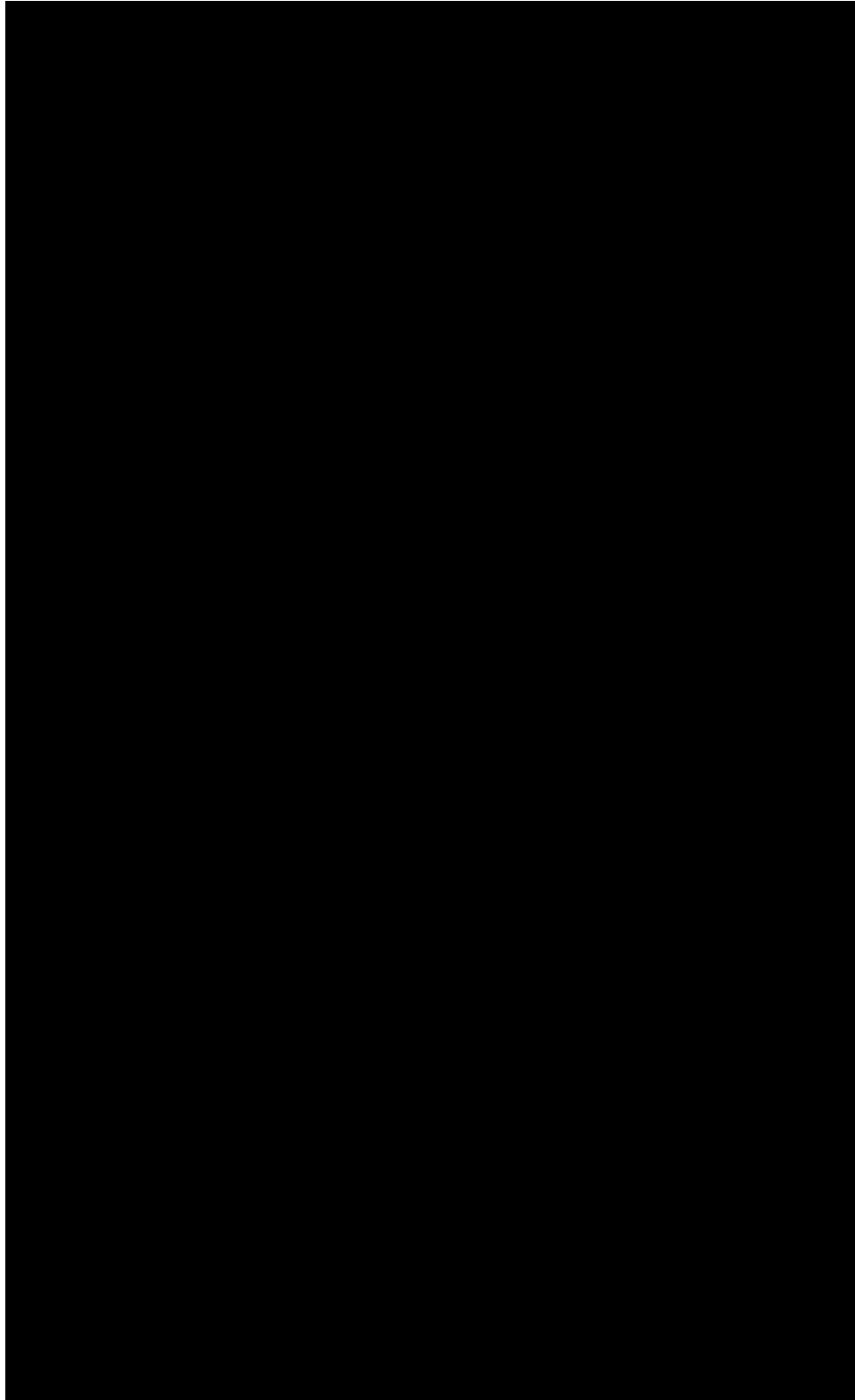
Qwest continuously monitors and reviews the performance of our international alliances and is able to respond quickly to any trouble issues by leveraging our relationships with the carriers. The international long distance network is based on geographically diverse and redundant network architecture. With multiple carriers on each international route, Qwest is able to switch route providers in real-time.

Figure 3.4-4. Non-Domestic Carrier Overview

Non-Domestic Data and Voice	Non-Domestic Roaming Partners

3.4.1 Describe Arrangements with Non-Domestic Carriers (L.34.1.3.4(a))

Global coverage includes delivery of service from domestic Service Delivery Points (SDPs) to non-domestic SDPs, from non-domestic SDPs to domestic SDPs, and from non-domestic SDPs to non-domestic SDPs. It is critical to our business to have well defined alliance relationships where performance and quality standards are maintained and adhered to at the highest level. These relationships are maintained by our Carrier Management Organization that is exclusively dedicated to managing the relationships with all international providers; Carriers; and Postal, Telegraph, and Telephones (PTTs). This team's core responsibilities are to:

In addition, a team of dedicated professionals from Network Operations monitors the Service Level Agreement (SLA) performance of our international alliances around the clock, are able to act quickly to any outages or other factors that may affect customer services, and request for credits when service metrics are not met. Most of our contracts are performance based with our alliances, which further ensure consistent quality of services and high reliability. Our international alliances monitor their core networks 24x7x365 and are held to the highest standards of quality and reliability in serving our global customer's needs.

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Data contained on this page is subject to the restrictions on the title page of this proposal.

Qwest connects to our international alliance networks, shown in

Figure 3.4.1-1. International Data Network

Region	Europe, Middle East, Africa	Asia Pacific	Canada	Latin & South America
Provider				
Features				

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Region	Europe, Middle East, Africa	Asia Pacific	Canada	Latin & South America
Support	██████████ ██████████	████████ ███████	███████ ██████	████████ ██████

For Internet service, Qwest, both in the U.S. and abroad with its international providers, rates as one the best connected Internet Service Providers in the world as reported ████████████████████

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██████ This ensures network performance in one of the classic bottlenecks in communication networks—the undersea links connecting continents.

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Qwest's International Long Distance Network is built upon geographically diverse and redundant network architecture. The network is designed to provide two classes of international long distance voice service: premium and standard. The gateway architecture ensures that there will be no traffic contention between premium and standard services and allows the highest quality of service to premium customers. Qwest will provide premium class of service to Agencies.

The international long distance network is designed with redundancy and failsafe measures. Each route has a back-up route to a different voice switch to ensure call completion. For every route, there will be up to seven alternative carriers to complete traffic should the first carrier in route become congested. Alternative carriers are added to the originating voice switches in case the international gateway is congested or down.

Figure 3.4.1-2. International Voice Network

Region	Europe	Asia Pacific	Canada	Latin & South America
Provider				
Features				

Region	Europe	Asia Pacific	Canada	Latin & South America
Support	███████████	████████	███ ██	███████████
	███████	██████	█	████████
			███	
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Qwest has strict performance standards associated with each international alliance. This extends across all products from private line services through Internet access ████████████. As part of our bi-lateral agreement with each international alliance, Qwest negotiates a set of technical and operational performance SLAs. In general, the technical metrics of these agreements are based on best-commercial practices and tailored to the physical realities of the locations being served. These SLAs include, for example:

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International Customers

Qwest's international, Federal, and multi-national commercial Government customers are the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Combined, our international customers purchase millions of dollars of Qwest international service, including voice, private line, ATM/FR, Internet

Protocol Service, and Network Based IP VPN services originating and terminating in Qwest service areas around the world.

Qwest International Service – Federal Examples

Qwest provides a network in the Asia-Pacific region for a Government Agency:

3.4.2 Describe Security Measures with Non-Domestic Carriers (L.34.1.3.4(b))

All Qwest POPs and Foreign alliance POPs are physically secured using the following measures:

Network Interconnection Security –

3.4.3 Interoperability Between Domestic And Non-Domestic Locations (L.34.1.3.4(c))

All private line, ATM, FR, IP, and voice network interconnections begin with discussions with each foreign alliance carrier agreeing on network protocols (SDH/Synchronous Optical Network (SONET) interfaces), SLAs, speeds and locations of the interconnect, and scope of the network feature support. Once these basic parameters are agreed upon, provisioning and testing of the circuits and product sets takes place. Testing varies according to the services being offered; however, it generally includes Bit Error Rate testing, protocol testing, a circuit provisioning test, and a disaster recovery test. Once all the testing is complete, interconnect documentation is finalized and put under change control for maintenance purposes.

Specifically, Qwest uses a combination of multiplexing platforms to allow for the transport of E-1/E-3 (G.703) and T-1/T-3 (American National Standards Institute (ANSI)) signals through diverse media.

The loss of the framing overhead bits in this approach is seldom an issue in that the a-law and µ-law incompatibilities make the bits unusable under normal circumstances outside the confines of the originating country.

On the optical level, Qwest has built its transport network around only the latest and most advanced equipment.

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In key points throughout the globe, Qwest is able to offer end-to-end overhead bit-transparency. This is accomplished in higher-order optical hand-off situations where the Qwest transport node (Wavelength Multiplexer) interfaces directly to the end customer equipment on either side. This meets the needs of customers that require transparent Data Communications Channels across transport paths.

Voice signaling interworking is simplified to two core protocols████████

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████████████████████████████ Qwest only uses foreign alliances that are able to comply with one or both of those standards, leaving the in-country specific variant (Local ISUP or Telephone User Part) up to the terminating party. The streamlined commonality in our delivery allows for less complexity and thus better control over the overall routing and performance of the service.

Qwest has strict guidelines and procedures for the establishment of ██ These include requirements for multiple interconnection POPs with geographic diversity and protocol requirements████████████████████████████

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Qwest has a NOC-to-NOC relationship with every correspondent carrier. A process and procedures document is written, as well as a commercial interface document for both carriers. ████████████████

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Each alliance NOC has a list of Qwest escalation numbers, telephone numbers, email addresses, and contact personnel. Conversely, Qwest has the same information from each foreign alliance carrier. Also, each year the process and procedures document and network escalation plan are updated.

Additionally, Qwest and alliance carriers put into place the procedures and provisioning process—the submission of an order, managing the installation of an order, and ensuring the end-to-end testing of the customer circuit.

3.4.4 Plan For Extending Existing Arrangements and Creating New Ones (L.34.1.3.4(d))

Where using existing relationships is not a possibility, Qwest will evaluate, select, and implement new relationships to provide world-class communication services.

Qwest has several strategic goals for expanding capabilities internationally:

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Qwest has been very successful in building new relationships to provide services to some of the most demanding Agencies—███████████████

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