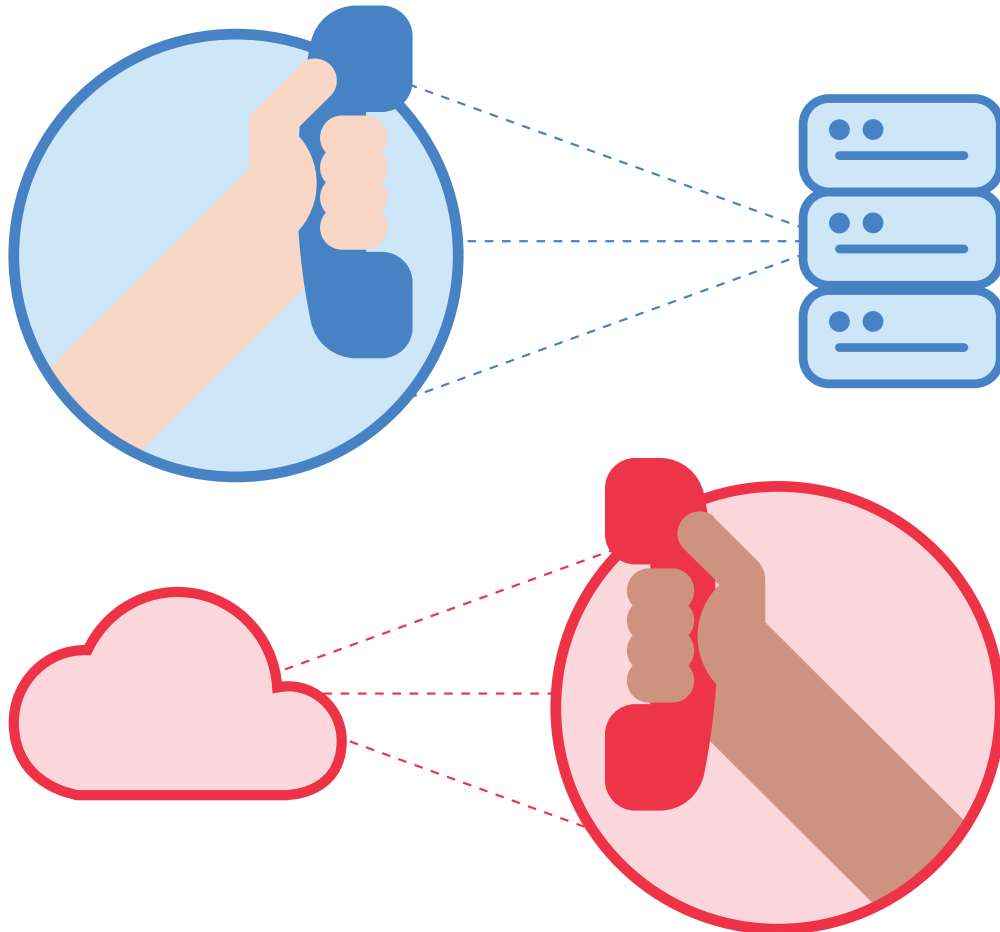# Factors to Consider When Choosing Your Next SIP Trunk Provider

twilio

As popularity of SIP Trunking grows, so do provider options

In the time since reliable broadband connections became mainstream, a second type of connectivity has emerged to compete with Primary Rate Interface (PRI). Session Initiation Protocol (SIP) transmits analog audio signals over the internet, enabling a particular type of phone call, known as voice over internet protocol (VoIP). In contrast to PRI, which uses the Integrated Services Digital Network (ISDN) to deliver multiple lines of voice and data through one physical line of a business's Private Branch Exchange (PBX), SIP uses a service, SIP trunking, to connect a PBX to the public switched telephone network (PSTN) over the internet.

What's inside

- Building your SIP infrastructure

- The top challenges around SIP Trunking

- The seven key factors for choosing a SIP Trunk provider

- SIP Trunking for every organization

And unlike the traditional lines, SIP trunks have unlimited channels, including multimedia messaging and video conferencing, and allow you to make concurrent calls as needed. Practically speaking, it means you don't have to maintain two separate networks, one for data and another one for phone calls.

According to IHS Markit, the SIP Trunking market grew 9% YoY in 1H19 to $4.1B with the majority of sales coming from North America. The popularity of SIP Trunking has brought more providers into the market. Before signing up with a provider, it is important to understand the technology and ecosystem behind SIP Trunking, as those factors can significantly impact your success during installations, troubleshooting, scaling, and more. Also, this may require integrating with various vendors. In this guide, we share seven key factors for choosing the right SIP Trunk provider.

Building your SIP infrastructure

There are a few ways you could build your SIP infrastructure.

1. On-premise infrastructure

   a.   Requires telecom expertise
   b.   Requires SIP & VoIP expertise
   c.   Heavy on CapEx investment
   d.   Requires upgrading to keep up with the market and new functionalities
   e.   There will be more than one 3rd party integrators
   f.   Contracts and SLAs
   g.   Regionalization requires all the above once again

2. Hosted/hybrid infrastructure

   a.   Requires telecom expertise
   b.   Requires SIP & VoIP expertise
   c.   Light on CapEx investment and more on OpEx investment
   d.   Contracts and SLAs
   e.   Regionalization requires all the above once again (depends)

3. Cloud infrastructure

   a.   Requires telecom expertise
   b.   Minimum SIP & VoIP expertise
   c.   No CapEx investment and only OpEx investment
   d.   Contracts and SLAs

The top challenges around SIP Trunking

You have two types of SIP Trunking providers to choose from:

1. On Premise Provider: traditional SBC (Session Border Controller) providers

For customers, there are three main challenges of relying on a traditional SIP provider:

Understanding the features and configuring SBC's are really complex. The typical setup requires anywhere in the range of 6-9 months based on your business needs.

Most can only provide service in one particular country or region, meaning customers have to setup coverage country by country.

Routine and unexpected downtime requires customers to contract with multiple providers to ensure redundancy in case of blackouts.

Adding new functionalities and/or scaling will require software and/or hardware upgrades. After any of those upgrades all your existing functionalities needs to be validated to avoid any business outages.

2. Cloud: Communications Platform as a Service (CPaaS) companies who aggregate and re-sell other providers' connectivity.

The top two challenges of cloud SIP providers are:

Call quality issues based on the internet connection.

By connecting over public internet security will be a concern for business.

The seven key factors for choosing a SIP Trunk provider

You don't need to be a networking or telecommunications expert to take advantage of SIP for your business. We recommend choosing a partner that will help walk you through the implementation process and support you as the needs of your business change over time.

1. Voice quality: Poor voice quality is one of the most common complaints among SIP Trunk customers. Look for a SIP Trunk provider that has at least one point of presence (PoP) in each of the regions you want to reach to ensure low latency and call clarity. Only Tier-1 carriers connect directly to the backbone of the internet for the highest possible call quality and reliability.

2. Global coverage: For those that need global coverage, they no longer have to work with individual carriers on every continent. Choose a partner that has the carrier relations that enable global deployment.

3. Reliability: Look for providers with redundant infrastructure and multiple carrier connections across geographies to ensure reliability. Reliable providers have a service level agreement (SLA) that offers near 100% uptime and credits their customers for any downtime.
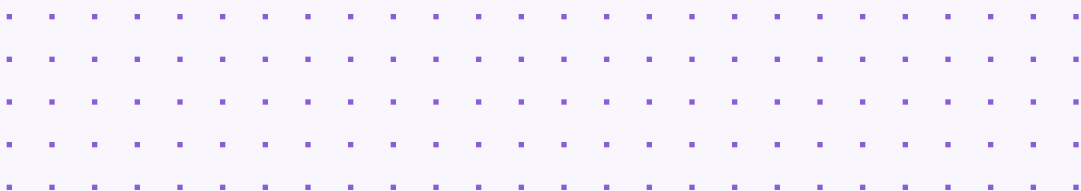
4. Cost: One of the main benefits of SIP Trunking is cost savings. Long-distance calling, including international calling, tends to be cheaper over SIP Trunks. Plus, pay-as-you-go pricing models give you the flexibility to pay for only what you need versus paying upfront for channels or bundles of service you may not need. Keep in mind that different SIP Trunk providers offer different costs and pricing models, so look for providers whose pricing varies depending on the scale and needs of your business. Some providers offer more flexible contracts, allowing you to adjust services as needed rather than being locked into undesirable terms.

5. Security: Consider how different SIP Trunk providers protect your network so that calls do not get intercepted. Encryption is essential to ensure that your call (signaling and media) is secured and protected.

6. Scalability and flexibility: You can move to SIP Trunking or easily add capacity to your existing VoIP system without investing in additional infrastructure. It should not require software and/or hardware upgrades just for adding more call capacity. Ideally, your provider includes virtual call recording, redirecting call, and transferring calls as standard features. Some SIP Trunk providers also allow changing phone numbers, adjusting services, adding IP access control lists and configuring softphone compatibility.

7. Interoperability: If your business has already invested in a phone network, you likely want to find a provider that offers interoperability with your existing infrastructure, rather than requiring a complete technology overhaul. A good SIP Trunk provider should provide interoperability with standard soft switches and IP-PBXs.

SIP Trunking for
every organization

These days, SIP is leading the way for organizations to reap the benefits of Internet-based communications, and it is the preferred choice for those that want to move their business communications to the Cloud. And while SIP Trunking is a well-established gateway to cost savings, reliability, and flexibility, SIP use cases can vary greatly across organizations. Depending on legacy equipment, network and communications providers, application footprint, IT staffing, and more, your organization's SIP needs are likely far different than anyone else's.

twilio

Thanks for reading.

Want to learn more about
transitioning to SIP Trunking?

Contact sales