

SIP Trunking

The line is virtual. The benefits are real.

Savings, scalability, and service for any business



What is SIP trunking?

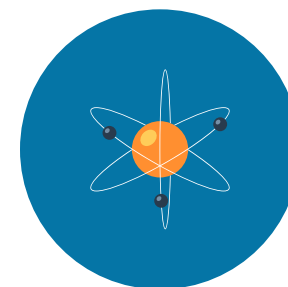
In the days before the internet, a 'trunk' was the name for a dedicated line that connected a business directly to its traditional phone service provider. Trunks still exist, both in the traditional form and in a newer incarnation, that of the SIP trunk. A SIP trunk provides that same direct connection between a business and its Internet Telephony Service Provider (ITSP), delivering voice, text, video, enhanced 9-1-1, and other media streams in real-time without requiring an IP-PSTN gateway.

This matters to companies because SIP trunking is easier to configure and less expensive to operate than traditional connections. Another layer of savings occurs because ITSPs deliver services at lower rates than traditional carriers. The result is a fast and significant ROI on SIP trunking.



But what is SIP trunking *really*?

SIP stands for Session Initiation Protocol. It is a lightweight signaling protocol used to control communication sessions, such as voice and video calls using Internet Protocol (IP). The SIP protocol can be used to create, modify, and terminate two-party (*unicast*, like regular phone calls) or multi-party (*multicast*, like video conference calls) sessions. Sessions may consist of one or several media streams.



SIP is the preferred protocol for telephone calls over the internet. A SIP trunk is one way that SIP is used to transmit media streams. To a caller, a SIP trunk is the same as a traditional analog line. But the SIP trunk doesn't use a physical line; it is a virtual phone line that uses the Internet to transmit calls. It works by using a data circuit to connect an enterprise's phone system to its network. ITSPs provide the calling capabilities that enable this transmission of data over the Internet.

How does SIP trunking benefit your business?

Speed, agility, and leanness are guiding principles for companies that need to stay competitive today. And in order to support those principles, businesses need technology that supports them as well. Compare SIP to traditional phone services and the advantages are clear.

SIP delivers significant savings. Traditional analog circuits are costly because they have to be designed, configured, maintained, and upgraded. SIP trunking provides the same call quality as traditional line, but since it runs over the Internet, it doesn't require any special design or configuration, and the maintenance and upgrades to the network would be necessary whether SIP trunking was being run through them or not.



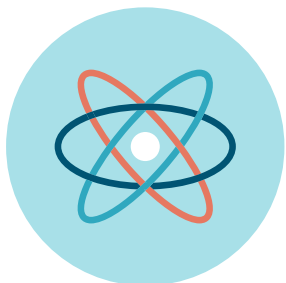
The infrastructure costs for SIP trunking are lower because SIP eliminates the need for primary rate interfaces (PRIs), which require enterprises to buy lines in bundles of 23. PRI customers who need 10 lines have to buy a bundle of 23, leaving 13 unused. SIP, however, can be purchased in whatever number of units a business requires, so if 10 lines are needed, exactly 10 lines can be purchased.

More savings are realized by converging local and long distance onto a single circuit with dynamic bandwidth allocation. Long distance, local inbound, and termination services can be included, providing another opportunity to save costs.

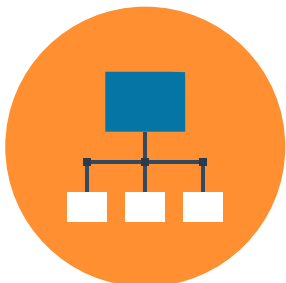
SIP trunking delivers cost savings as great as 60% over traditional methods. And savings are not the only benefit.



SIP offers mobility. Traditional transmissions go only where the copper goes. SIP goes anywhere the Internet goes. And Bandwidth's internet goes everywhere. Bandwidth owns a nationwide, all-IP network and interoperates with the most reliable IP PBX vendors in the world.



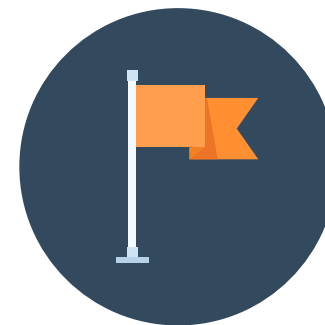
SIP integrates widely. While analog and digital circuits afford few integration options, SIP trunking offers many. SIP is an IP-based service so it can work with existing infrastructure, as well as with enterprise software and other applications.



SIP is reliable. When an analog circuit goes down, a human has to call the provider's support department to arrange for call forwarding. SIP relies on servers that can automatically failover to redundant systems in any number of ways.

Is SIP here to stay?

With all the advantages that SIP trunking offers, why do any companies still use traditional services? It's simple. Traditional telecom has been in existence for over 100 years. Over its lifetime, copper has been widely adopted, of course, and it's the telephone technology that most of us grew up using. The short answer is: it was the best option that businesses have had until recently.



SIP trunking is only about 10 years old. That means it was purpose-built to work in today's business environment. Since the advent of SIP trunking as business tool, nearly 70% of decision-makers have adopted SIP, and of those adopters, 96% report satisfaction with call quality. ¹

A protocol can only achieve widespread adoption when it's based on consistent standards. The guidelines for how a SIP trunk should work and interoperate with a phone system are defined and guided by the SIP Forum, an organization of telecom experts who work toward the continual improvement of SIP standards.

¹ Harris, Daniel. *Top Considerations for Selecting and Implementing a SIP Provider*. Industry research, Stamford: Software Advice, 2015.

SIP Makes Sense for Any Business, Big or Small

Smaller companies can save with SIP by converging networks

SIP trunking delivers savings of 40-60% over traditional telecom services. There are many aspects to how SIP trunking can reduce costs, but two of the most common are network convergence and PBX centralization.



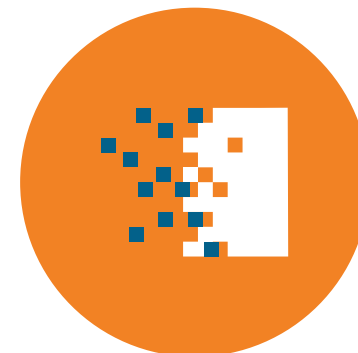
Network convergence means that a network can support multiple communication modes; simply put, telephone, data, and video can efficiently share the same infrastructure. This is important for single-location companies, because most of the savings they realize will come from converging the network and service components of their offices.

Before convergence, even small companies had to manage multiple networks, entailing costs in staffing, hardware, software, and licensing. Adding to that burden was the requirement of traditional providers that trunks be purchased in bundles of 23. If a company needed only 5 trunks or, worse, 24 trunks, it had to buy more than it needed, leaving a lot of unused or underused network assets on its books.

SIP makes converged networks possible because it is an application, not a service. In the same way that copper lines transmit signals rather than create them, SIP allows any endpoint to communicate with another, as long as the two endpoints agree to use SIP. That means that a single-location company can converge its networks, roles, and equipment into one system that meets all of its communication needs. Convergence offers concrete benefits, in that:

- ✓ Routers and switches are used more efficiently
- ✓ Combined roles are enabled, so endpoints can both send and receive voice, data, and video
- ✓ Networks can be mixed to integrate voice and applications
- ✓ Costs are reduced because SIP is a virtual infrastructure
- ✓ Capacity is used efficiently; adding bandwidth is a software change, and burst capabilities can be part of the service
- ✓ Fewer or even just one SIP provider must be engaged

A converged network delivers sizeable service and resource savings, simplified network design, less maintenance and fewer repairs, and simplified roles. For smaller companies, SIP trunking deployments are even easier because their networks are less complex.



Bigger companies can save and scale by centralizing PBXs

Companies that have 2+ locations realize cost savings from SIP trunking by centralizing their PBXs across locations. A PBX is a private phone network within a company. Companies with multiple locations used to need multiple PBXs, each one requiring at least one network connection, as well as dedicated equipment, maintenance, and service. All of these components add up to a lot of expense.



SIP solves that problem by enabling multi-location organizations to centralize their phone system infrastructure into consolidated environments. Only a SIP solution can achieve this, delivering the benefits of consolidation such as:

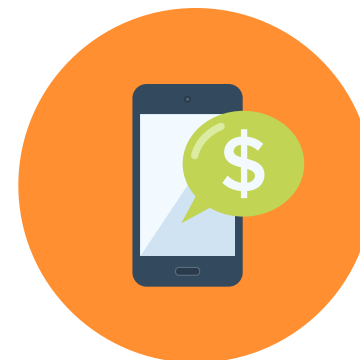
- ✓ Fast scaling; SIP is software and doesn't require any build-out
- ✓ Reduced travel and maintenance; SIP is software that can be managed from a computer
- ✓ End the PBX buying cycle of purchasing software upgrades, additional hardware, and engineering expertise, and then starting all over again in 4 years
- ✓ Capital expenses (CAPEX) are reduced
- ✓ Costs are reduced because SIP is a virtual infrastructure
- ✓ Capacity is used efficiently; adding bandwidth is a software change, and burst capabilities can be part of the service
- ✓ Fewer or even just one SIP provider must be engaged
- ✓ Scaling is as simple as a software change, not a complicated build-out. And businesses can ship phones, not PBXs

Centralizing PBXs results, above all, in maneuverability; significant reductions in CAPEX, service, and resources, combined with simplified network design, enable businesses to respond to changing needs with ease and speed.

Pricing and service options to suit companies of any size

Bandwidth offers unlimited inbound and outbound calling. Because we have over 7300 rate centers, we can provide nationwide telephone numbers, both new and ported. If you need toll-free service, we offer that, too. Plus, to make sure your international calls are both reliable and affordable, we have agreements with carefully-selected vendors and peering partners around the globe.

Bandwidth's services make us the ideal choice for both small offices with low calling needs and large enterprises with predictable usage. Whatever your calling needs, we can deliver them at prices that are 40-60% lower than other providers.



Bandwidth owns the network, and you have our number

Industry leaders such as Google Voice rely on Bandwidth because of our record of stability, innovation, and growth. And Bandwidth's reliability is exceptional. We are one of a limited number of companies trusted to provide e911 in the entire United States.



Bandwidth is able to meet these challenges because we're a Tier 1 carrier. We own the network; billions of minutes each year run over our Nationwide CLEC. Compare that to most SIP providers, who are resellers that rely on several carriers; when you call their help desks, all they can do is open a ticket with their carriers and wait. But when you call Bandwidth, you're talking directly to the people who can solve your problem—although, since we control everything on our networks, we already know about your problem and we're working on it before you've picked up your phone. But that won't happen too often; Bandwidth is committed to providing the best service and support to our customers.

Bandwidth is among the nation's largest and fastest-growing communication technology companies. We are the SIP provider you can count on to deliver to deliver affordability, scalability, and service.

Find out more about how SIP trunking can help your business save money and run more efficiently.

Call us today at 855.290.8135 | sales@bandwidth.com | www.bandwidth.com