

SIP Trunking

VS

PRI



In the debate between using SIP trunking or PRI for delivering voice and data into businesses, the opinions of IT specialists can be rather polarised. Here is an easy to understand SIP versus PRI guide to readily compare between the two options.

What is it?

SIP (session initiation protocol) is used for establishing a voice communication session on a data network, e.g. over the Internet. An SIP session could be a regular VoIP phone call between 2 participants or a multi-party conference call. An SIP Trunk provides the same service as a traditional analogue phone line, except that it is a virtual phone line rather than a physical wire.



A PRI (primary rate interface) is a single line with 23 voice channels and a single data/control channel. It allows your business to hold 23 calls simultaneously, but this may not necessarily match the number of phone numbers that your business has. Even if your business has 50 phone numbers that are directed to come across a single PRI, you can still only hold 23 phone conversations at once.

How it works

There is a data connection (Internet) and an SIP trunk (your voice) running between your business and your carrier's data and SIP network. The carrier then provides a connection to a customer's phone.



There is a data connection (Internet) and a PRI connection (telephone) running between your business and your carrier, who in turn provides a connection to a customer's phone.

Circuits / Hardware

Connections are virtual. The number of available trunks is determined by bandwidth and not physical hardware or circuits.



Connections are physical. Each circuit requires a physical connection and termination hardware.



Scaling up can usually be done as easily and quickly as a software configuration change and can offer automatic burst capabilities.



Scaling up requires the installation of new circuits and additional termination hardware at specific increments.



Backup / Redundancy

Automatic IP rerouting capabilities allow for practical geographic distribution of PSTN connectivity to sites with minimal impact on the operation of the network.



Return on investment can be negatively affected by the need to provide sufficient backup circuits to remote sites.

Cost



SIP trunking costs are generally lower than PRI, relative to circuits and associated hardware. A multitude of pricing models are likely to emerge in the near future.

Cost



Cost is usually determined per circuit per month. If you require one or more voice channels than the fixed increment, the cost model for PRI is not very efficient.

Capacity Planning

Adding capacity can be as simple as a routine software change, although a certain level of planning is still recommended.



The addition of capacity needs to be planned well in advance, as a substantial amount of lead time may be needed to order and install new circuits and hardware.

Business Continuity

SIP trunking allows for automatic call rerouting to pre-defined locations in the event of the location going offline. Call diversity can easily be accommodated across multiple service providers.



PRI does allow for calls to be rerouted, but it is a complicated and expensive process. Also, call diversity across multiple service providers can be rather costly.

Quality of Service

SIP trunking does not have a guaranteed quality of service because with each voice connection sent like a packet, just as with any other piece of data, it can be subject to lags, delays or packet loss.



PRI circuits always have a guaranteed amount of bandwidth set aside for each call that cannot be used for anything else, thus assuring a high level quality of service.



SIP trunking is recommended if you need to quickly scale the amount of users or lines in your business.



It is also the better option if your existing PBX (private bank exchange) system is outdated and hence incompatible with VoIP gateways.



If you work with a streamlined staff base and little or no IT support, a hosted SIP solution is more ideal, as PRI trunks require in-house staff to keep them maintained.



Which is the better choice?

If your bandwidth is struggling to cope with numerous people using the phone simultaneously during peak hours, the reliability of PRI makes it a better option.



If your business prioritises the quality of service on calls over anything else, PRI is the better choice.



Can you combine the two?

Yes. With your business losing money for every second that your phones are offline, it is common for businesses to opt for the best of both SIP and PRI. They could have phone calls transmitted chiefly over an SIP trunk, and if that data line goes down, calls can be redirected by the carrier over a PRI line.

