

SIP Trunking vs. PRI: The Debate's Not as Dead as You Think



By EVAN WADE - Contributor

To a lot of experts, the SIP trunking vs. PRI debate has long been settled. If you ask, they'll tell you SIP trunking is the best choice in many cases. For businesses with existing phone branch exchange (PBX) or other supported hardware in place, SIP trunking's virtual connection to the public switched telephone network (PSTN) offers flexibility, scalability, and other advantages that the older PRI can't touch. Throw in the sheer number of businesses choosing or migrating to SIP trunking solutions and it's easy to see why some experts feel that way.



SIP trunking vs. PRI: The debate is far from over. Some organizations will find greater value in the security of PRI, while others enjoy flexible SIP benefits. Which category do you fall into? Find out.

As with many long-lived biztech debates, however, the true answer to the debate may not be as clear as it initially seems. While a growing number of businesses have moved away from PRI, both solutions have advantages and drawbacks that need to be considered. Here's a look at SIP trunking, PRI, and a few situations in which both solutions excel.

SIP Trunking vs. PRI: PRI Basics

To some degree, the endless chatter has gone on so long because it's an apples-to-oranges comparison. While both offer businesses roughly the same result — a connection from the business's internal phone systems to the larger PSTN — the way they go about reaching this goal vary enough to warrant discussion and consideration.

Further, these differences go a long way toward explaining why some people consider PRI outdated. Most U.S.-based customers deploy PRI over a dedicated T1 line. The same rough idea applies in Europe, where PRI is most frequently deployed over a dedicated E1 connection. While T1 and E1 are still used in business settings and offer benefits over standard internet connectivity, there's little question that they've fallen by the wayside in an era where public internet offers faster speeds and lower costs. This can immediately cast suspicion on the value and longevity of PRI in certain IT circles.

Because PRI primarily uses the two connectivity types, the need for T1 or E1 is arguably this solution's greatest drawback. The respective connections offer a set number of channels for voice (24 for T1, 30 for E1) and only allow exactly that number of simultaneous voice calls. For example, if you're using PRI in the U.S. and your location needs to place 35 concurrent calls, you would require two physical PRI connections. This scenario will also leave 13 channels unused, unless there's a rare circumstance that you need more active calls than your usual maximum number.

It's important to note here that active calls are not the same as active phone numbers. A company using PRI with direct inward dialing could effectively have hundreds of phone numbers, but still support only the preset number of active calls.

Additionally, connectivity also accounts for PRI's biggest strength. If call uptime and quality are of the absolute highest priority for you — as in, even a small hiccup or single dropped call can cause an office catastrophe — PRI's stability and tendency to come with consumer-friendly SLAs means you may have less to worry about. In fields like healthcare where call quality is a top-tier concern, that's certainly worth considering.

Ultimately, the SIP trunking vs. PRI debate depends on your business's communication needs and physical location.

Exploring SIP Trunking

SIP trunking represents a virtualized take on the same basic need. It works over a data connection, meaning companies can transmit their calls and multimedia messages over a suitable internet connection. For companies looking to move away from a standard PBX, gateways and other specialized hardware can be used to keep much of the infrastructure in place. Otherwise, a company may choose newer, higher-tech softphones and other updated infrastructure points.

That last point is especially important when considering one of the biggest SIP benefits: multimedia communication. For companies keen on unified communication and collaboration tools, SIP trunking represents the easiest, most scalable path to services like digital voice and video conferencing, alongside higher-tech tools. If your organization makes heavy use of services such as desktop sharing, you're probably already using SIP trunking.

Turning back to scalability, SIP trunking's virtualized nature gives it obvious advantages over PRI's comparatively restrictive architecture. Where PRI's allowed number of active calls is effectively "hardwired," a SIP trunk is largely limited by the number of lines a carrier offers and the amount of bandwidth available to the customer location.

The same differences make SIP trunking a better choice for companies dependent on international calls. In much the same way VoIP drastically cut the price of international calls over standard landline calling, SIP trunking makes outbound international calls far more

affordable as compared to PRI. Additionally, SIP trunking generally represents lower month-over-month costs, especially if the alternative would be multiple PRI connections.

Which is Best for You?

Ultimately, the SIP trunking vs. PRI debate depends on your business's communication needs and physical location. Smaller organizations in rural locations that may not have internet service with sufficient bandwidth for SIP trunking may find value in PRI. Meanwhile, larger enterprises in areas with better connectivity options may find SIP trunking a better choice. This is especially true if they require a large number of active calls and could make good use of advanced unified communication and collaboration features.

It's clear that SIP trunking represents more scalability, flexibility, and functionality than PRI. If these are factors you need from your communication system, the newer solution may be your best bet. If technical limitations hamper your location's connectivity options — and you don't see your company needing more advanced features because of or in spite of it — PRI may be for you.

Not sure which solution you need? Let Vonage Business help you find a perfect fit.