The business case for SIP

Technical considerations every business needs to know

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Times, they are a changin’

Over the past few decades, cultural and technological trends have dramatically transformed the workplace. Today, flexible working is a way of life. Employees now have greater control over their work-life balance than ever before, and employers understand that productivity is not confined to a desk. As such, adopting technology that enables a mobile workforce has become a business prerogative.

Yet this need for new mobile tools is often at odds with other business demands. While many senior management teams are keen to stay ahead of the competition, they also want to keep costs down.

Every investment is scrutinised, and new equipment or systems purchased today must adequately cope with depreciation and tech innovation long into the future.

SIP trunking is a future-forward solution. Because it enables business agility, scalability and can bring about immediate cost savings, it is the ideal answer to these conflicting sets of business demands.

This eGuide looks at how SIP can help businesses cope in a changing world – taking into consideration the technicalities of installation, and how preparation is key for seamless telephony success.

Three questions, same answer

All businesses have different priorities. Some may be voice-critical, with the smallest period of downtime leading to disastrous results. Others may beheavily influenced by seasonal demands, so telephony systems must be easily scalable. Or, they may simply need to keep costs down.

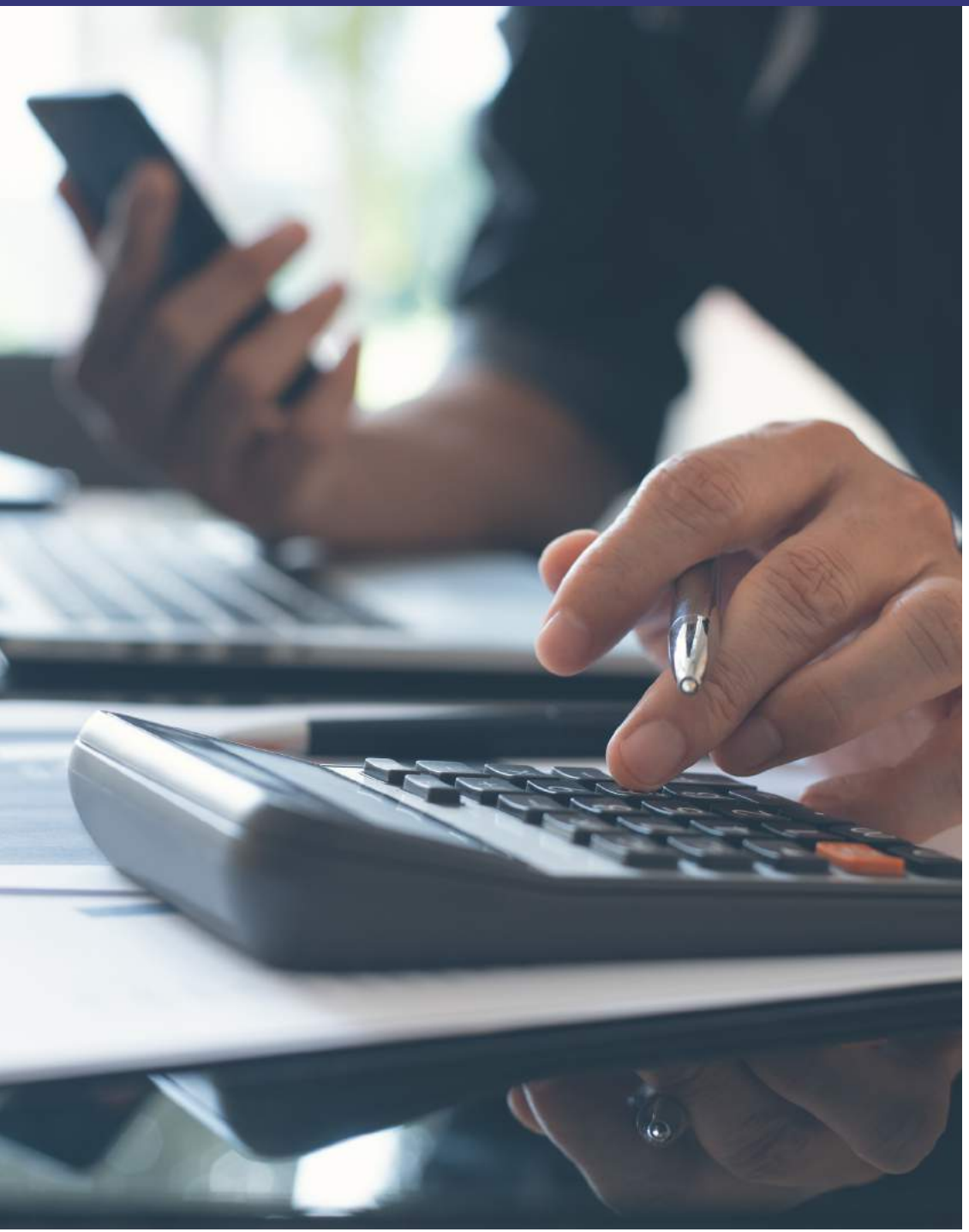
Whatever the situation, SIP has something to offer.

No physical lines

Because SIP trunking uses virtual lines rather than physical wires, businesses have greater control over their telephony infrastructure. This means having the power to consolidate voice and data over a single network, increase resilience, and put in place flexible inbound call routing (i.e. to mobiles or alternate office sites) so that calls are never missed.

Highly scalable

SIP trunking's virtual nature means it is easy to scale the network to match demand. If a business requires more phone lines, it's simply a matter of asking the provider to activate more channels. And if or when demand decreases, trunks can easily be removed with a simple software configuration.



Cost-effective

For businesses that rely on ten or more channels of ISDN, switching to SIP can deliver immediate cost savings. SIP channel rentals and calls are typically up to 40% cheaper than traditional ISDNs, and businesses have the extra benefit of consolidating their voice and data services into one single line for further savings.

High quality audio

Over the past few years, bandwidth capabilities have exploded, giving way to high quality speech audio. Depending on the audio codec used, SIP can deliver speech quality that is on par, or better than, ISDN. G.711 codec delivers high-definition digital audio and is recommended whenever bandwidth allows for it. G.729 delivers compressed mobile quality audio and is used when there are bandwidth restrictions.

Make the switch to SIP

Having a thorough understanding of your current tech situation will give you a better idea of how the migration process will carry out. And, asking your SIP provider he right questions will ensure a smooth transition and give you peace of mind.

WHAT TO ASK YOURSELF

Is your network up for the task?

Before embarking on SIP trunking installation, check that all routers and switches are up to date. Look out for congestion points that can cause latency problems and degrade call quality. Most importantly, make sure your IP PBX or legacy PBX supports SIP.

What are your time constraints?

Be sure to schedule SIP deployment appropriately. The process of porting existing numbers and building SIP trunks takes up to 25 working days to complete. This period can be used to educate users about the additional features of the new system and get the workforce up to speed.

How much bandwidth will you need?

SIP requires a steady, high bandwidth internet connection. To calculate your capacity requirements, consider how many simultaneous calls you will need and multiply this by the speed of your chosen codec. G.711 requires around 100 kbps per call, and the compressed G.729 requires around 30 kbps per call.

How business-critical is voice to your organisation?

If your business depends heavily on voice communication, you might want to consider a resilient, high availability solution that will ensure lines remain live in the event of a network failure or emergency. Choosing a provider who can offer robust SIP trunking is a key part of this. However, this can further be strengthened by having both ISDN and SIP trunking operating alongside each other.

WHAT TO ASK YOUR SIP PROVIDER

Is a native or direct connection to your PBX possible?

If this isn't possible, ensure the provider guarantees their media gateway or session border controller (SBC) will connect with your PBX. A quality provider should have a list of compatible PBX models available that can help you speed up the overall installation process.

Is there a Quality of Service guarantee?

Whereas emails can wait, calls are naturally fleeting. Because of this, it's important to make sure your provider allows voice to be given priority over other types of data across the network. If you are voice-critical or have strong audio quality requirements, then you might want to consider using a dedicated Ethernet connection, Multi-Protocol Label Switching (MPLS) or Virtual Private LAN Service (VPLS), which can support traffic separation to meet specific service level agreements (SLA) on latency and downtime.

What is the provider support like?

Looking out for quality customer service should be an important part of your decision making process. A provider that is knowledgeable and responsive to your requirements will be invaluable, both in the day-to-day running of your telephony and in times of critical need, such as downtime or peak demand.

Can you use third party connections?

Having an internet connection and SIP trunk coming from the same provider can be advantageous, especially if there is ever a need to troubleshoot. However, it's possible that your business is tied up to an internet provider in a lengthy contract. As such, ensuring the SIP provider can work seamlessly with third party connections is crucial.

Technical SIP Steps

There are a number of ways businesses can adopt SIP, with the most common approach starting with ISDN migration. From there, it's a simple three-step roadmap to benefitting from a modern telecoms system.

Transfer out the old

The SIP provider takes over existing ISDN lines using a like-for-like transfer. This gives the provider control of the telephony estate and the overall migration process. SIP is configured to the network by connecting the SIP trunk to your IP PBX/PBX gateway.

The SIP PBX sits inside a firewall with a private, non-routable IP address. As Port 5060 needs to be opened, it's important to use a SIP capable firewall or an Enterprise Session Border Controller (E-SBC) that is designed to properly handle SIP.

Build the SIP trunks

The SIP provider puts a port request towards the previous ISDN provider. While that happens, trunk are built using dummy numbers and the system is continuously checked. Trunk registration, call quality, two-way audio, code alignment, firewalls and LAN networks are tested for success.

Port numbers

When trunks are ready, the numbers are ported across. Businesses can either use traditional analogue phones with a SIP adopter, or SIP softphones that come built with SIP-specific features. From here, users can instantly start to enjoy the business benefits of SIP.

The SIP trunk checklist

Does the provider own the network?

If not, be sure they allow for third party SIP connections.

How mature is the provider as a business?

Established businesses have experience of deploying and running SIP.

Have they conformance tested their vendor equipment?

Ask for a list of compatible PBX devices to save time during the scoping phase.

Can they offerround-the-clock support?

Being able to quickly recover from downtime is essential for any business.

Do they offer thorough technical support?

While systems should be inherently user-friendly, having help readily on hand will ensure you have SIP up and running with minimal effort.

While your provider's engineer will take care of the nitty-gritty aspects of SIP installation, having an overall understanding of current capabilities and the migration process can help speed up the path to full SIP trunking implementation.

Enable your business's future today.

Learn more about how SIP trunking can help your business achieve telephony success.

Ring in a new era

As the way we communicate becomes more complex – texts, images, video and voice all intertwined – SIP trunking can offer the ideal telecoms solution moving forward.

It gives you the flexibility you need to cope with fluctuating demand, and the resilience that is essential to ensure business continuity. All the while, it gives your business the competitive, future-facing edge you need to see you well into the coming years.

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