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GUIDE TO
Cloud Phone Systems for Business

How a new cloud VoIP phone system can help your IT team tackle:

- An increasingly mobile workforce
- Legacy PBX equipment
- Poor call quality and reliability

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Intro to VoIP

Voice Over Internet Protocol (VoIP) is any voice service that uses an IP network to transmit phone calls.

"Cloud VoIP"(sometimes called Hosted PBX, Virtual PBX or Cloud PBX) specifically refers to a fully hosted VoIP solution in which a service provider maintains PBX functionality in an off-site data center.

As we'll discuss in this guide, cloud VoIP has many advantages for IT teams looking to streamline equipment management and support modern, mobile workforces.

IS IT FINALLY TIME TO BREAK UP WITH YOUR PBX?

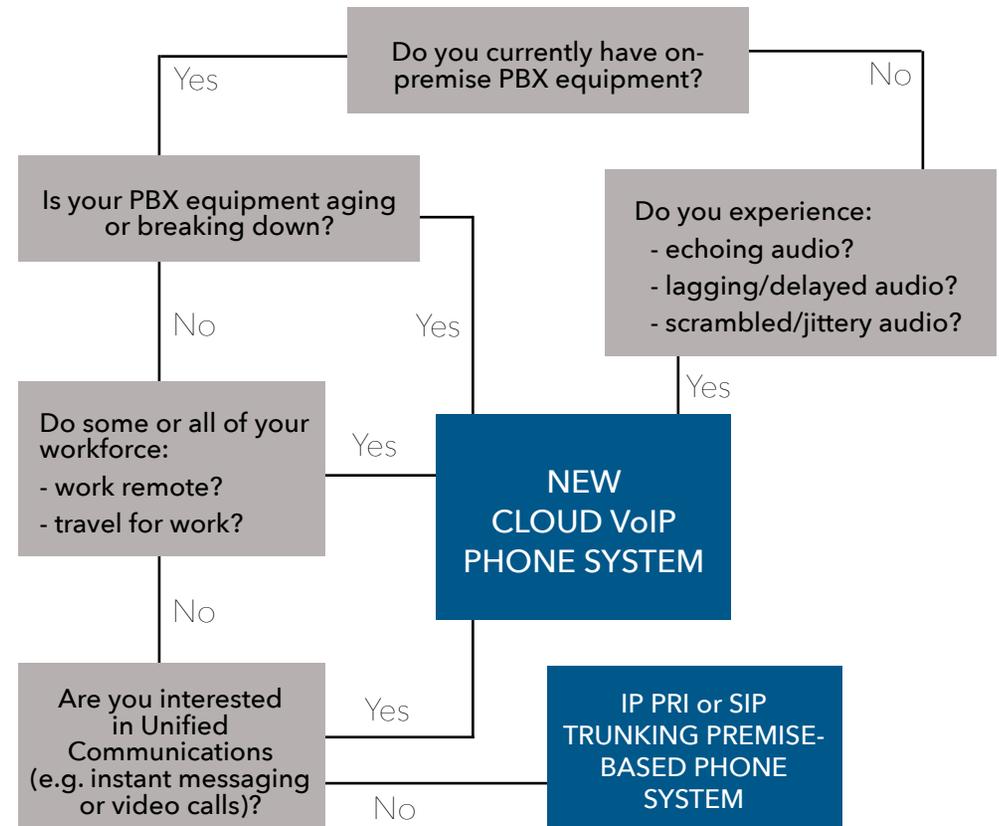Determining the right VoIP solution depends on your relationship with your PBX.

Reasons to Migrate to a Cloud-Based Phone System

- Your PBX equipment is aging or breaking down.

- You are tired of having to maintain and manage on-premise PBX equipment.

- Your organization's workforce is increasingly mobile and frequently work remotely.

- Your organization is looking to expand its communication and collaboration capabilities (e.g. instant messaging or video).

- You need enhanced business continuity.

Reasons to Keep Your On-Premise PBX

- You've recently paid upfront for PBX equipment and want to get as much use out of it as possible.

- You want greater control over your phone system.

So you're thinking about a new office phone system....

Do you currently have on-premise PBX equipment?
— Yes / No

Is your PBX equipment aging or breaking down?
— No / Yes

Do you experience:
- echoing audio?
- lagging/delayed audio?
- scrambled/jittery audio?
— Yes

Do some or all of your workforce:
- work remote?
- travel for work?
— Yes / No

Are you interested in Unified Communications (e.g. instant messaging or video calls)?
— Yes / No

NEW CLOUD VoIP PHONE SYSTEM

IP PRI or SIP TRUNKING PREMISE-BASED PHONE SYSTEM

GOING FULLY CLOUD

A cloud VoIP phone system provides more functionality and reduces IT overhead.

Cloud phone system adoption has grown rapidly in the past few years – in fact, more SMBs already use cloud VoIP (36%) than any other type of voice service1.

The fully hosted nature of cloud VoIP makes life easier for IT teams due to:

- **Less equipment and maintenance** without an on-premise PBX.

- **Improved affordability** due to reduced maintenance fees and converged network costs (using your Internet circuit for voice and eliminating your PRI line).

- **Enhanced functionality** that enable modern workers to be productive in and out of the office with mobility and collaboration features.

- **Improved business continuity** provided by off-premise phone data storage.

Keeping Your PBX With Premise-Based VoIP

If you're invested in your on-premise PBX equipment, but still want the cost-savings of network convergence, both IP PRI and SIP Trunking services use your company's existing PBX technologies to converge voice and data on the same circuit.

The general differences are:

- **IP PRI** = "Internet Protocol Primary Rate Interface" allows customers with legacy ISDN PRIs to connect to a VoIP network using existing PBX hardware.

- **SIP Trunking** = "Session Initiation Protocol Trunking" lets customers with SIP-enabled PBXs receive native IP call delivery.

MEETING THE NEEDS OF YOUR VARIED WORKFORCE

Match the right Cloud VoIP solution to your user profiles.

A "one-size-fits-all" approach to your phone system isn't helpful with your evolving workforce – some staff is on the road, some work from home, some are in-and-out of the office and others are at their desk full-time.

Because cloud VoIP phone systems offer varying levels of mobile connectivity and collaboration, you have the opportunity to select bundled voice features matched to each user's needs.

USER PROFILE	DESCRIPTION	SAMPLE ROLES	VOIP NEEDS
Always In	Works in the office at their desk full-time	Administrative office staff	Fully-featured desk phone
In and Out, Flex User	Balances days at the office with days at home or on the road	Sales reps	Fully-featured desk phone, softphone, collaboration features
Road Warrior	Based in the office, but often travelling for work	Business travelers, field technicians	Fully-featured desk phone, softphone, collaboration features, hoteling features
Fully Remote	Work at home or off-site full-time	Teleworkers, geographically-dispersed teams	Softphone, collaboration features
Power Users	Require specialized functionality to perform their work	Receptionists, executive assistants, executives	Web-based portal, fully-featured deskphone with expansion "sidecars", video-capable deskphone

CONSIDERATIONS WHEN CHOOSING IP PHONES

How to choose the right IP phone equipment.

A major consideration factor for a new cloud VoIP system is whether to buy new phones outright, lease new phones from a provider, or keep your existing phones.

When selecting desktop phones, options include:

- Color and/or touch screen

- Video calling capability

- Bluetooth support

- Headset compability

For IP conference phones, consider:

- Audio quality

- Microphone range

- Expansion microphone compatibility

CONSIDERATION	BUY NEW	LEASE	KEEP EXISTING
Cost	Larger upfront CapEx cost	Lower monthly amortized costs	n/a
Ownership	Own phone outright	Return phones at end of contract	n/a
Replacement	Broken phone replaced under warranty	Broken phone replaced by lender	Pay for replacement phone need out of pocket
Compatibility	Phones will be optimal for cloud system	Phones will be optimal for cloud system	Phones may or may not be compatible with cloud system
Scalability	Purchase additional phones as workforce grows	Add additional leased phones as workforce grows	Purchase or lease additional phones as workforce grows

ENSURING CALL QUALITY WITH VOIP

Not all VoIP systems are created equal. Here's how to maximize call quality.

Because VoIP works by dividing calls up into packets that travel through IP networks to be reassembled at the destination, some commonly seen call-quality problems with VoIP service include echo, choppiness, and delay, caused by network variables such as:

- **Latency** (amount of time it takes for voice packets to arrive from speaker to listener)
- **Jitter** (variations in arrival time of incoming packets)
- **Packet loss** (packets lost in transit)

However, a properly configured and managed voice network can mitigate these issues to ensure Quality of Service* (QoS) by:

- **Tagging and prioritizing voice traffic:** At the network edge, voice traffic is marked as part of the 'voice' class, which should be given highest priority at queues along the network path, which results in more predictable performance.

- **Designing the network for maximum performance:** A network configuration that uses quality equipment, reduces "hops" (Ethernet switches and IP routers) where traffic queues and minimizes potential latency, maximizing voice performance.

- **Monitoring circuit utilization:** It is critical that sufficient data bandwidth exist for each concurrent call. If not, call quality degrades or calls fail. Monitoring can identify over-utilization and pinpoint areas for additional bandwidth.

*How Using the Same Provider for Your Voice & Data Network Ensures Optimal Quality of Service (QoS)

Call quality for VoIP is dependent on the quality of the underlying network. A VoIP provider who also delivers and manages the circuit for your voice system will be able to configure the network for optimal call quality and have visibility into the network for troubleshooting.

A "Bring Your Own Bandwidth" (BYOB) environment occurs when the underlying circuit for your voice system is provided by a different carrier than your VoIP provider. In this scenario, your VoIP provider cannot control the Quality of Service (QoS) of the connection, and calls might be subject to quality degradation, bandwidth over-saturation, or blocking at the client firewall.

KEY DECISION FACTORS

There's more to cloud VoIP vendors than just calling features and functionality.

INSTALLATION: Look for a provider that offers a dedicated Project Manager for implementation. It is critical that the installation of your new phones and the cutover to the new system is seamless and efficient, so that it minimizes impact on your business operations. Ask that you are provided with a clear timeline of installation activities, vendor roles and responsibilities, and clear lines of communication.

USER TRAINING: Ask the provider if they offer customizable training sessions to ensure that your employees effectively learn how to use the new phone system. Find out if they provide live instructor-led trainings, either on-site or via web conferencing. Ask if you will have access to guides and tutorials post-training, in case your users need a refresher.

SUPPORT: Does the provider have a Network Operations Center (NOC) where you can reach a live support technician? Do they have multiple channels to request support, such as phone, email and web forms? Ask for testimonials or referrals from other clients, to find out how knowledgeable and fast their support team is at solving issues. And most importantly, does the vendor offer a Service Level Agreement (SLA) to guarantee uptimes and provide compensation should your system go down?

SECURITY: Calling fraud is unfortunately an assumed risk in the telecommunications arena, but a good vendor will implement strategies to minimize risk, as well as inform clients of their security responsibilities. Ask if the vendor monitors the network 24/7 and has a fraud detection system in place.

BUSINESS CONTINUITY: Because cloud phone systems are hosted off-site, they have better system recovery in the face of an outage. Cloud VoIP also enables a company to move locations on the fly in case of a power outage or natural disaster.

IMPLEMENTATION CHECKLIST

Steps to take when choosing and implementing a new cloud-based phone system.

YOUR RESPONSIBILITIES	PROVIDER RESPONSIBILITIES
CURRENT SYSTEM EVALUATION	**PLANNING**
☐ Document current call flows, users and devices.	☐ Kickoff Call with provider Project Manager to review timeline, deliverables and important documents.
☐ Compile an accurate list of all phone numbers needing porting.	☐ Site Survey by provider technician to conduct a physical inspection of cabling facilities and space
☐ Gather recent phone bills and customer service records.	☐ System setup planning for phone number assignments, user configurations and call flows.
PRIORITIES ASSESSMENT	☐ Technical requirements review with provider Project Manager and Data Engineer.
☐ Identify additional communications functionality needed.	
☐ Review your business continuity plans.	**INSTALLATION**
☐ Evaluate your security needs.	☐ Onsite visit by provider technicians to install equipment and/or migrate services.
☐ Assess your support expectations.	☐ Live cutover with provider technicians onsite for Day 1 support.
VENDOR CONSIDERATION	**TRAINING**
☐ Assess calling feature bundles to meet the needs of your workforce.	☐ Set up training sessions for end users, to show how to use new phones and communications features.
☐ Check for an SLA to guarantee QoS and uptime.	
☐ Review the level of technical support offered.	
☐ Evaluate the available phone hardware.	
☐ Request a demo of Unified Communications capabilities.	

GLOSSARY OF VoIP CALLING FEATURES

Get to know common VoIP calling features & functionality.

Soft Phones	VoIP "soft phones" provide a business phone and Unified Communications interface via desktop, tablet, or mobile phone. Soft phones allow users to place and receive business calls, chat with and see the presence status of other users and manage call settings.
Unified Communications	Integrated communication tools, such as audio calls, instant messaging, user presence status, video calls, and screen sharing.
Find Me - Follow Me	This feature lets users set a sequence of devices and numbers on which incoming calls ring. For example, incoming calls ring their desk phone for the first 4 rings, then their cell phone for the next 3 rings, then finally go to voicemail. Users won't miss incoming business calls, even if they're on the road.
Remote Office	This feature lets users receive and place calls from their home or mobile phone using their business number, so that the caller ID will appear to the other person as if they are in the office.
Hoteling	This feature lets users sign into any desktop phone in the office with their business number to use for the day. This is great for employees who are primarily remote and don't need a dedicated workstation, but come into the office a few times a month and need a place to to work for the day.
Voicemail-to-Email	This feature sends voicemails as .WAV audio files to the user's e-mail address, which makes it convenient and easy to access and archive voicemail messages.
Shared Call Appearance	This feature typically used by admistrative assistants lets users manage additional phone lines.

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NEED SOME GUIDANCE ON A VOIP SYSTEM FOR YOUR OFFICE? WE'RE HERE TO HELP.

In addition to being the Washington DC Metro Area's most highly regarded data provider, Allied is also an experienced voice service provider. We've helped hundreds of local businesses modernize from legacy PBX systems to cloud-based phone systems.

Allied has tailored our AllCloud VoIP solutions to meet the unique needs of modern, mobile workforces. Our solutions are flexible and scalable to support a high Quality of Service (QOS) with features that meet the demands of every type of worker.

For over 20 years Allied has been distinguished by the expert, full service care and support we provide to every client – no matter how big or small. We'd love to match you with the right VoIP solution for your business needs.

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