Wireless Technologies and VoIP

Information Guide

CloudCall

Introduction

The purpose of this document is to cover commonly used internal/external wireless technologies and the effect these can have on VoIP services. This will hopefully act as a guide and assist you in making an informed judgement when deciding the most appropriate solution for your business.

The configuration of your network and internet connection is fundamental to ensuring your calls are clear, consistent and reliable. Giving this the necessary attention will ensure you are able to fully benefit from the advantages of your CloudCall service.

We would always recommend an end to end hard wired connection for optimal performance, stability and reliability wherever possible. Unfortunately, this is not always practical or cost effective, or you may find that your options are limited given your location.

Wireless Internet Service Providers (WISP)

WISP's are internet providers who use wireless technologies to provide internet to the premises rather than the conventional wired connection. This can take one of two forms outlined below.

GSM/3G/4G

This type of wireless connection is a non-focused wireless signal delivered using the mobile phone network. The provider will be broadcasting the signal with no fixed end point in mind which allows the receiving antenna to be moved and is used in such devices as mobile phones and laptops. As a result of the generalized nature of this solution, it is nearly impossible to predict the quality of a connection at any given point (think how your mobile phone signal can change in just a few steps). It should also be noted that there is often no guarantee of the level of service by the provider, and as a result we would only recommend this be used as a failover of last resort and not as your primary connection.

Point to Pont Wireless / Directional Wireless

These services use highly directional transceivers to act as a wireless "bridge" between two locations. This type of connection often gives greater bandwidth than other wireless technologies but loses the freedom to move the endpoint receiver.

Wireless Internet Service Providers offer a solution to provide service in situations where there may be no other alternative, or where a fixed line is cost prohibitive.

These can offer a more stable wireless connection than the generalized solutions mentioned previously but can still be subject to disruption from a variety of factors including weather, birds, debris or other transmitters. It has been known for adverse weather to disrupt these connections, and new transmitter installations nearby to lead to ongoing connectivity issues. You may find that this is included in a disclaimer in the provider's T&Cs which could potentially limit your recourse.

Such solutions are a good alternative for general data where the negative points can be mitigated by caching or re-requesting data. The limitations of these connections can be exposed when using latency sensitive real time data such as voice, which can present as poor call quality and, in some cases, a disrupted service.

While we have customers, who have had no issues while using such services, CloudCall cannot guarantee quality over WISP connections due to the many factors that affect them. In all cases a disclaimer would be required when such connections are in use.

Internal Wireless Connected Devices (WiFI)

In recent times it has been commonplace for offices to favour internal wireless networks (WiFi) over the traditional wired solutions. This can be for several reasons ranging from aesthetics to practical installation considerations.

If choosing such a solution in a commercial setting, several considerations will need to be made as a reliable wireless environment is the result of careful planning, design and provisioning. Simply enabling wireless on your router or adding a wireless access point may be adequate for a small number of users in some situations, but if this is to be your primary connection in anything but the smallest of settings you will need to build this into your network from the outset.

It is beyond the scope of this document to suggest any solution, as these would be unique to any given location, however we would always suggest that a competent network engineer with experience in WiFi is consulted during the planning and implementation stages.

Potential Issues with Wireless (WiFi) Solutions Even the best engineered wireless network can experience disruption from several sources, some of which may be outside the direct control of the company's IT provider or support contractor. One of the most common issues customers experience when using WiFi is external networks causing interference which can be localized to one area or affect the office, as a whole. In many cases this may be an adjacent business installing their own solution, or transient factors such as mobile phones or rogue access points.

There are many potential causes of service affecting disruption which could appear/disappear without warning. As such, CloudCall cannot guarantee call quality/reliability over WiFi due to the nature of the technology. Once again, some of our customers use this without issue, but your choice to use this solution will require a disclaimer when such connections are in use.

In Conclusion

While we fully appreciate that the use of wireless technologies can be both aesthetically pleasing and convenient (at times even necessary), there are potential issues that need to be considered when opting to use latency sensitive services such as voice over this type of infrastructure. Although the technology is improving constantly, it's still no match for an optimized wired network solution.

We can only advise, as it will be your decision as to what best suits your business environment and requirements. It is our hope that this document has given you the information required to make an informed decision with regards your network infrastructure when planning your move to CloudCall services.

Our network team will be happy to clarify any points in this document and give general advice, but any final decisions should only be made following consultations with your own network contractor/local IT team.

Contact Us

If either you or your service providers have any questions or wish to discuss matters further, please contact the following:

For implementation queries, please contact the Service Delivery Team:
Telephone: +44 (0) 116 424 4000 (Option 2) Email: uk.provisioning@cloudcall.com

For any technical information or to discuss specific configuration issues, contact the Support Team: Telephone: +44 (0) 116 424 4000 (Option 2) Email: uk.support@cloudcall.com

Alternatively, for any other concerns, please contact your Account Manager, who will be happy to assist you or direct you to the right team.

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