



Hosted Telephony Services

White Paper

Abstract

The purpose of this paper is to investigate why commercial customers should consider using hosted telephony as opposed to the more traditional on-site PBX approach.

2005 saw the majority of large telcos and business ISPs launch hosted PBX (IP Centrex) services. These solutions feature hardware that is located away from a client's premises and is owned and managed by the supplier, rather than by the customer. Since then, the uptake of hosted services has experienced significant growth on a global scale, with hosted revenues in the US expected to reach \$2 billion by 2010 (In-Stat, Jan 2007). The European marketplace is likely to mirror this trend, with shipments of hosted solutions accounting for more than 10% of the marketplace by the year 2010 (Frost and Sullivan, Feb 2007)

This paper will outline how a hosted service operates and what advantages it can offer over client-purchased, on-premises PBX solutions. It will also investigate what types of customers are most likely to adopt a hosted approach, as well as establishing whether there remain certain scenarios that are best addressed by more traditional on-site PBX telephony.

Introduction

Businesses in need of a telephony system had, until quite recently, little choice. A PBX or 'switch' would be installed at each office location and this would be designed to service the requirements of the staff at the time of installation. Each solution would be proprietary and would come with restrictive and costly maintenance contracts. These systems were also inflexible, with any new business requirements, such as changes of number allocation or additional lines, often requiring involvement from the vendor's engineering specialists.

Companies involved in mergers and acquisitions typically found that they became the 'proud' owners of a variety of incompatible telephony systems that could not communicate efficiently. Opening each new regional office would require a new PBX and businesses looking to expand into larger premises would find the cost of taking their 'switch' with them prohibitive and would be forced into purchasing a new PBX to go with their new premises.

The advent of low cost, application rich hosted telephony services has changed this landscape forever. Businesses can adopt an alternative flexible, inexpensive and scalable approach.

With IP Centrex hosted solutions, all of the necessary hardware is located at the IP provider's facilities rather than on a customer's own site. The service is robust, flexible and scalable and is delivered to customers over an IP network. The solution provider invests in a softswitch which resides on its own network and customers then use an IP VPN connection to receive their telephony services from this softswitch.

With a hosted IP Centrex solution, the only equipment deployed at a client's site is the actual phones themselves. Each 'seat' requiring connectivity to the telephone system needs either an IP phone, an analogue phone connected to an IP adaptor, or a soft phone running on a PC connected to an IP network.

The hosted telephony system is administered locally using a PC via a web portal. New users can be added at any time and individual employees on the hosted system can configure their own preferences, for features such as speed dialling and call forwarding, quickly and easily.

As well as providing requisite telephony services, the hosted solution provider will also deliver provisioning and billing platforms, system monitoring and administration portals for improved overall business performance.

The hosted service offers a set of IP telephony applications bringing many applications into the hands of the small and mid size organisation that would previously only have been available to the larger corporate user. This approach brings the sophisticated functionality of professional, enterprise-level telephony systems within the reach of smaller companies and contributes significantly to 'levelling' the commercial playing field.

Target Market and the Requirements of the Customer

All companies have similar telecommunications needs: streamlined communications, improved responsiveness to customers and increased employee productivity - whilst constantly looking to reduce their cost base.

A hosted service can satisfy these requirements and brings 'corporate' service and functionality levels within the reach of smaller organisations. This is possible because applications in a hosted solution are housed on a resilient and redundant server architecture that would normally be beyond the budget of a smaller business.

More specifically, there are several factors which could have a significant bearing on whether a company would benefit from hosted telephony.

Flexibility is a key factor, with the likelihood of relocating a business, being involved in merger or acquisition scenarios, or opening additional premises all being triggers to considering a hosted solution. Customers want solutions that incorporate an element of future-proofing and have the ability to adapt quickly and easily to their changing fortunes and circumstances.

With customers increasingly needing to justify return on investment (ROI), cost savings are another primary requirement, in terms of initial outlay on any telephony system as well as ongoing operational expenditure.

Because inbound and outbound voice traffic is nearly always business-critical, customers demand continuity of service. In an increasingly litigious society, they also need calls to be transported safely and securely. With these factors in mind, companies are becoming increasingly willing to pay a premium for robust and secure, commercial-grade solutions.

Traditional PBX systems have evolved to be feature-rich and businesses considering a hosted solution as an alternative will be reluctant to sacrifice any functionality. IP Centrex systems must, therefore, be able to replicate a client's existing telephony feature-set and ensure that the quality of their customer service is not compromised.

As a generalisation, the greater the number of offices/sites a company has (or is likely to have) and the more distributed their employee base, for example, with numbers of home workers, then the more likely they are to be interested in the flexibility of hosted telephony. A hosted solution can be equally applicable to a small to medium sized enterprise or a larger multi-national with small remote offices.

Advantages of Hosted Services

As we alluded to earlier, hosted telephony can help to improve the performance of companies in the SME market space, by providing capabilities that were traditionally beyond their reach. The main advantages of hosted services in relation to the traditional on-site PBX approach are cost savings and increased flexibility, but this section outlines each potential advantage in more detail.

Set-Up Savings (CAPEX)

The initial costs of adopting a hosted IP Centrex solution are comparatively low, because there is no hardware 'switch' requirement and the only on-premises equipment that is needed is the IP phones themselves. These cost savings increase cumulatively with multiple-site customers and the low CAPEX requirement is particularly attractive to businesses that are starting-up, moving premises or looking to expand, because these are all costly scenarios and any reduction in CAPEX requirement is likely to be welcomed.

Flexibility and Scalability

Traditional PBX telephony systems utilise ISDN cards, with the 'switch' needing new cards (and an engineer's visit) as new staff join the company. Companies needing in excess of 8 'lines' previously needed to purchase an ISDN 30 card and have, in effect, been charged for additional capacity that they may never need (i.e. capacity for 30 lines, when they may have required just 10).

Hosted telephony represents a far more flexible approach and can react rapidly to changing customer requirements by simply expanding or contracting the solution in line with demand. These systems are fully scalable and clients only pay for the lines they require at any given time; there is no wasted OPEX on redundant capacity or hardware upgrades.

Similarly, because hosted IP Centrex solutions are based on layered architecture, they are designed to allow the smooth transition from basic to more advanced service delivery, as and when businesses have a requirement.

Ongoing Cost Savings (OPEX)

In addition to the CAPEX savings outlined above, hosted telephony offers several opportunities to make ongoing cost savings to operational expenditure.

Call charges are likely to fall significantly. All inter-site and inter-company calls originate and terminate within the customer's IP VPN and so can be made free of charge, irrespective of geographical location or call duration. Meanwhile, calls to the wider 'public' network breakout from the IP Centrex provider's switch directly onto the PSTN network without incurring charges to the local carrier. This means that the costs associated with contacting external customers and suppliers also reduce significantly.

Hosted telephony can centralise a client's previously disparate communication infrastructure. In so doing, the internal and external call savings outlined earlier will be further enhanced, because telecoms spend can then be aggregated, enabling the customer to attain a more attractive tariff than had previously been possible.

Reduced maintenance and support costs are another significant advantage of hosted telephony. Hosted services are, typically, covered by a 1-3 year contract, compared to a traditional PBX contract of 5-7 years, so business tie-in is reduced and, in a market where prices are falling, this can prove extremely attractive. Because hosted telephony is administered locally via a web portal, physical 'call outs' are reduced and the price of maintenance and support per annum is, accordingly, much less.

The cost of changing, adding or removing an extension on a traditional PBX ranges from \$75 to \$135 (source: Cisco). With hosted IP Centrex, this process involves little more than activating or de-activating a 'per seat' licence and is, therefore, a quicker, easier and much less expensive process.

In addition to actual cost savings, a hosted telephony solution provides the customer with a known cost of ownership. This means that ongoing OPEX is pre-defined, making for easier budgeting and better overall financial control.

Workforce Mobility

A hosted IP PBX can route any call to any employee irrespective of their whereabouts, as long as they are able to plug in their IP handset. This makes office telephone numbers portable and gives employees much greater freedom to work from home or at satellite offices. This can, in turn, lead to improvements in workforce productivity without compromising the client's customer service provision.

Continuity of Service

If a traditional on-site PBX, or the lines coming to and from it, become damaged, then the customer is in grave danger of losing inbound and outbound voice provision. With a hosted solution, there is no physical hardware at a client's premises and, therefore, no equipment to sustain damage. Any difficulties with the IP network can be overcome by re-routing voice traffic to alternate locations, so that, in the event of a disaster, business continuity is guaranteed.

Improved Allocation of Resources

A hosted IP Centrex solution is a fully supported service offering; there's no need for special in-house skills or dedicated onsite engineering support and there are no extensive training requirements. Less effort needs to be channelled toward planning and implementation of telephony and this frees up personnel to focus on their core business.

Aside from human resource requirements, a hosted solution doesn't require dedicated, configured office space with power, heating and ventilation. This capacity can, therefore, be put to better use.

Notwithstanding any potential advantages, customers considering a hosted service will certainly not want to incur any disadvantages when compared to on-site PBX provision. The value-added voice applications common to traditional PBX telephony are replicated on IP Centrex solutions, so there's no loss of functionality. Examples include hunt groups, forking, message waiting and calling line identity (CLI) capability. With hosted solutions, users can customise auto attendants to intelligently route calls to the proper extension, get their voicemail forwarded to their email and download call logs for reporting purposes.

Exceptions to the Rule

Even taking into account the numerous advantages of a hosted telephony solution, it would be incorrect to state that this is the recommended route – a panacea - for each and every customer. There are certain businesses for which a hosted PBX system may not be ideal and an on-site 'switch' remains the better alternative.

Very large companies often have a significant depth of internal IT resources which makes on-premises IP PBX a viable solution, because it can be serviced and supported in-house.

If a company's employees are all physically located in the same building, with no branch offices and negligible home-working, and the corporate PBX is already installed and paid for, then the potential savings that a hosted solution could offer are reduced.. An organisation that has reached a finite mass and has no plans to expand, may well have satisfactory 'switch' provision and would not, therefore, benefit so much from the scalability and flexibility that hosted IP Centrex would provide.

Finally, if a company's call volume is minimal, then they are more likely to make do with their existing telephony solution, because any additional outlay could not be justified from an ROI perspective.

Aside from these organisational nuances that make a hosted service less attractive, some businesses simply want to own a dedicated service that is not shared in any way. Although this can be expensive in terms of CAPEX, they are willing to pay a premium for a secure and protected environment. Having hardware on site also enables integration into other applications and can provide back up services to the hosted solution in case their ISP suffers an outage.

In some instances, a 'half way house' may be the best solution for any given customer. Here, the hardware is located at the client's premises but is run by the provider as a managed service. The service can be either fully or partially managed, removing the need for the customer to resource the administration and support. Similarly, some businesses may not be ready to make a quantum leap straight into hosted telephony. In cases such as this, selected offices can have their telephony hosted by way of a trial, and voice gateways can be used to provide connectivity between the hosted IP and conventional telephone networks.

Conclusions

Until recently, the majority of UK businesses had been limited in choice to inflexible and traditional phone systems or on-site IP-PBX with high start up costs and stringent ongoing, operational costs.

The advent of hosted IP Centrex services represents an attractive alternative. No skilled on-site support is necessary at the client's premises, the cost savings can be substantial and the added flexibility can deliver a true competitive advantage.

However, despite these not insubstantial advantages, there are situations where a client's business model is better suited to either a traditional on-site PBX or an approach that brings together elements of both the on-site and remotely hosted solutions. The key to understanding which alternative is best in any given circumstance is to understand the customer's individual requirements as a business, both now and moving forward. Only then can an accurate decision be made as to the most applicable solution. TeleWare understands this approach and has significant experience in both on-premises and hosted PBX solutions, so our advice is impartial and objective.

TeleWare Hosted Service is designed to allow customers to focus on their business goals rather than worrying about the ownership and support of their telephony network. The service is delivered to the customer's site from a high-availability and fault tolerant multi-tenancy platform, over any carrier IP network.

A hosted service from TeleWare is simplicity itself; a flexible solution with multiple applications – all from one supplier and run on one platform.

For additional information on the applications available from TeleWare as part of our hosted services offering, visit www.samsunghosted.com or www.hosteddirect.com

About TeleWare

TeleWare is a privately owned PLC registered in Thirsk, North Yorkshire.

The company is the leading supplier of intelligent telephony solutions provided as packaged and tailored application software. TeleWare's applications provide local and wide area unified communications capabilities to businesses, improving communications contact with individuals and teams and providing full multimedia messaging services.

TeleWare Hosted Services is the Centre of Excellence for the delivery of TeleWare's IP Softswitch and multiple applications portfolio in a hosted environment. The TeleWare telephony services are delivered across TDM or IP networks. The Hosted Services can be delivered from TeleWare's hosted environment in Thirsk, from its IP hosting centre in London or from a Service Provider's own hosted environment or approved co-location facilities.

Website – www.teleware.com

Abbreviations

PBX	Private Branch eXchange	CAPEX	CAPital EXpenditure
ISP	Internet Service Provider	OPEX	OPerational EXpenditure
Centrex	CENTRAL Exchange	PSTN	Public Switched Telephone
VPN	Virtual Private Network	Network	
ROI	Return On Investment	TDM	Time Division Multiplexing

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