

The benefits of using Cloud computing in VoIP Cloud services: a minor technological advancement, a revolution for VoIP wholesale business

by *Konstantin Nikashov Nikashov, CEO, ALOE Systems Corporation*

Recent years have seen a return to the hosted service model which existed in the pre-PC era, now with the variety of options - Infrastructure-as-a-Service (*IaaS*), Platform-as-a-Service (*PaaS*) and Software-as-a-Service (*SaaS*). The SaaS model can be applied to many applications, even to a VoIP softswitch that can be served from the Cloud. VoIP business can be started and run without making large initial investments. A hosted softswitch saves carriers the costs of licences and the burden of staff to maintain the software. The elasticity of the Cloud allows efficient transport of VoIP traffic volumes that are changing constantly. However, carriers are still cautious about adopting VoIP SaaS. They are concerned about data security, although the same risks are present for in-house softswitches. Hosting service providers should provide appropriate security systems and configure their systems to meet the needs of every supported carrier-customer.



Konstantin Nikashov is CEO of ALOE Systems, a leading vendor of class 4 and 5 VoIP-switching solutions and server platforms. Mr Nikashov became CEO of ALOE Systems in 2000 and shaped the company's strategy for development of successful VoIP products and their adaptation to the needs of regional markets. Currently Mr Nikashov is working on broadening Cloud technologies' implementation in VoIP infrastructure.

Konstantin Nikashov earned his MSEE degree and later his PhD at the State University of Technology in Nizhny Novgorod, Russia.

It is difficult to overestimate the impact that Cloud computing has had on the IT sector over the past few years. One could draw a parallel between the development of Cloud services and the creation of a personal computer - both have revolutionised the industry.

In a certain way, Cloud computing existed in a pre-PC era more than half a century ago: up to the middle of the 1950s few companies could afford to

own a computer, so they were rented. Computing started out as a service which somewhat resembled the modern SaaS model. For years IT outsourcing was a dominant scheme in the market, until PCs came into play in the 1980s.

The 2000s saw IT companies - including the telecom sector - returning to IT outsourcing and beginning to explore the potential of the Cloud as we know it today. Cloud computing incorporates a

number of fundamental architectures - development framework, Web 2.0, open-source software, etc., which fall into three relevant categories: infrastructure-as-a-Service (*IaaS*), Platform-as-a-Service (*PaaS*), and Software-as-a-Service (*SaaS*). In relation to the VoIP sphere, Cloud services enable carriers and service providers to offer network infrastructure and application platforms to customers at a relatively low cost and on-demand. Host carriers offering VoIP

Cloud services enter the market with a set of offerings designed to meet the requirements of their target audience. This article is focusing on the Software-as-a-Service (SaaS) model in more detail.

Establishing a network infrastructure and organising its future maintenance lead to high expenses for a VoIP traffic carrier. Because of this, softswitch solutions can be delivered in accordance with the 'hosted service provider' model. Client carriers use the network infrastructure that is managed by a host carrier and deliver services to their peering partners without purchasing their own servers.

Softswitch management is conducted over the Internet via web browsers. The host carrier guarantees necessary characteristics of the rented software, such as flexibility to adjust to the client's needs, security, and reliability. Security policies, which are implemented by the SaaS provider, minimise a network's vulnerability to fraud. Adequate protection from DDoS (*Distributed Denial of Service*) attacks, detection of hijacked IP addresses or domain addresses, unauthorised traffic, etc. is given thorough consideration in Cloud VoIP.

Although not widely adopted yet, VoIP Cloud services open a wealth of new opportunities to telecom businesses of all sizes and types. Imagine that a small venture wants to start its business in VoIP traffic transit. If the entrepreneurs choose to follow the traditional buy-it-all model, the company will have to purchase server equipment and build network infrastructure from scratch. Instead of buying and maintaining a VoIP infrastructure, entrepreneurs can choose the alternative way of VoIP SaaS. The hosted softswitch model has gained momentum recently because of the many benefits it has to offer VoIP businesses of all sizes and types.

Today VoIP business can be started and run without making large initial investments. There are several reasons to opt for Cloud-hosted services instead of traditional in-house applications: - more frequent server software updates, higher level of service and significantly lower cost. As hosted softswitch is a service offered by a host carrier who already owns the necessary infrastructure, client carriers do not have to purchase

softswitch licences, which leads to lower initial costs. Research conducted by our analysts recently revealed that, typically, monthly rent fees for softswitch services are almost 80 times lower than the purchase price. Since software is subscribed to and not purchased, there are no expenses to pay in advance.

Hosted softswitch services include maintenance and support. Carriers can save significant costs by subscribing to hosted softswitch services instead of hiring additional VoIP specialists for server maintenance. You rent software that is ready to go.

By outsourcing software functionality, client carriers will benefit from cost savings in infrastructure establishment and be able to use more funds on personnel training and boosting productivity of other services they offer.

The volume of traffic that passes through VoIP networks is changing constantly due to such factors as time, day, date, location of the network, peering partners' policies, etc. Using the hosted softswitch model can help the carrier to implement flexible schemes to distribute network resources in accordance with existing policies and conditions and derive maximum revenue from such performance.

Last but not least, Cloud VoIP is a contribution to green technology. With more servers shared by carriers less electricity is spent, and existing equipment gets to be used more efficiently.

A few words should be said about the difficulties that Cloud VoIP evolution is facing. The VoIP SaaS model is still relatively new and potential clients are cautious to outsource their softswitch services to remote servers located outside their companies. The main reason that VoIP Cloud services are not widespread is possibly that client carriers are unsure whether hosting service providers will be able to provide a stable service with the necessary data security level. At the same time, few really understand that data security is also not guaranteed when the softswitch operates on the equipment owned by carriers themselves. Large initial investment in data security is needed, whether the server is located in the carrier's office or in the Cloud.

Poor customisation of rented softswitches by hosting server providers is yet another issue that may prevent a carrier from moving to the hosted softswitch model. Every client carrier (be it a start-up or an established venture) is unique, and hosting service providers should configure their systems to meet the needs of every carrier-customer. ●



Connect-World now on Facebook & Twitter

Connect-World, the world's foremost discussion forum for leaders in the ICT industry, is now available on Facebook and Twitter.

The world's top ICT decision-makers express their opinions in *Connect-World*. They use clear, non-technical, English to discuss how ICT helps shape regional and global development. The articles essentially examine the influence that ICT products and services have on the way people live and do business. With separate editions for each of the world's regions, the reports highlight the most important ICT trends and issues influencing socio-economic growth.

Connect-World is now available to follow on Twitter (<http://twitter.com/#!/ConnectWorldICT>) and Facebook (<http://www.facebook.com/connectworld.ict>)

Also, it is still possible, for FREE, to directly access all past and present *Connect-World* articles, ICT Industry press releases, eLetters, ICT News and more at www.connect-world.com.