



**breakfree**  
*with a software based PBX for Windows*



## **Whitepaper**

# **The Top 10 Advantages of a Windows Based PBX**

## **Why Your Next Phone System Should be Software Based**

This whitepaper outlines the top 10 advantages of choosing a Windows based PBX as your next phone system, why it makes sense to move away from proprietary solutions such as Nortel, Mitel, Avaya, Alcatel and Siemens, and go straight to a REAL software based solution. It will also show why it should be running on Microsoft Windows!

## Introduction

### The PBX business is clearly fast asleep...

Not much has changed in the proprietary phone system world. The phone system of the 1970's is almost the same as today's, as in they look and do almost the same thing as each other. That's a vast contrast to what has been happening in the IT business over the last 40 years, where we have seen lots of progress and massive reductions in cost!



Clearly, the PBX business has a lot to catch up on. We need to see more innovation, and it is software, as opposed to hardware, that can make that happen.

#### **Pure Software Based PBX – Not an Appliance!**

A key point is that a software PBX is PBX software running on a mainstream operating system that can easily be managed by the average administrator. Therefore, a software PBX is not yet another appliance running some custom, self-made version of Linux! Administrators want to break free from black boxes and move over to Windows in order to take control of their phone systems.


## The Top 10 Advantages

1. Easily Manage extensions & phone lines yourself
2. Software based cost less to buy and expand
3. Easier to administer and control
4. Use existing hardware and make enormous savings
5. More features by leveraging Windows technologies
6. Hardware & Vendor independent – no vendor lock in
7. Better fault tolerance through easy backup of your PBX
8. A Windows based PBX is more scalable
9. Better Integration with other business applications
10. Easily build voice applications that increase productivity

## The Advantages Explained

### 1. Easily Manage Extensions & Phone Lines Yourself






**Edit Extension-100**

 Edit Extension settings and click OK or Apply to save changes.

General | Forwarding Rules | Phone Provisioning | Other | Office Hours



User Information

Specify extension number, name, and email address for voicemail notifications and fax delivery.

Extension Number	<input type="text" value="100"/>	
First Name	<input type="text" value="Andreas"/>	
Last Name	<input type="text" value="Achilleos"/>	
Email address	<input type="text"/>	
Mobile Number	<input type="text" value="017772525805"/>	

Authentication

The authentication ID and Password are used by the phone to authenticate with 3CX Phone System and mac number.

ID	<input type="text" value="100"/>	
Password	<input type="password" value="***"/>	 ***

With a software based system it is much easier to manage your extensions and phone lines. It's Windows based, so it has an easy to use, intuitive, user interface, unlike that of a traditional PBX or Linux appliances. Add extensions with a few mouse clicks or setup new

phone numbers and call routes easily. There is no need to call up consultants and pay exorbitant rates!

## 2. Software Based Costs Less to Buy and Expand

A great advantage of a software based VoIP system, such as 3CX, is that it is far less expensive than a traditional phone system. The table below compares the cost between a Siemens PBX and a 3CX PBX with similar feature sets. The Siemens is more than twice the price and this is just the initial purchase cost! As you expand your business, you will find that expansion modules and maintenance on a traditional PBX are much more expensive. You will outgrow your PBX at some point and require a totally new system. A software based PBX is cheaper and gives you more features, such as being able to connect remote offices & extensions and provides unified communications.

Siemens	3CX
100 Extensions	3CX Software: \$3,950
30 Lines	Patton Gateway: \$2,600
CTI Software	100 IP Phones: \$8,000
Voice Mail	Voice Mail, Auto Attendant
Auto Attendant	Fax & Bridges & More: \$0
Cost: \$40,000	Cost: \$14,550
Expansion Cost: \$∞	Expansion Cost: Minimal

## 3. Easier to Administer and Control

A software based phone system is easier to administer and control because it's just another Windows server application. There is no need to learn how to update or troubleshoot yet another 'black box' and you can avoid having to learn how to update Linux, which can be problematic. Instead, you use familiar controls for services, logging etc. to check that your system is up and running. Upgrading to a new version is a simple process: download the latest version and re-install – the upgrade will be done in a matter of 5-10 minutes.

In addition, 3CX Phone System exposes critical administration information via well-known Windows interfaces:

- Monitor status, processor and memory usage of 3CX services.
- Restart services automatically if needed.
- Monitor the number of calls, registered phones & ports via performance counters
- Check for critical system events such as failed registrations via the Windows event log.

It's easy to monitor your PBX using your existing network monitoring solution.

## 4. Use Existing Hardware and Make Enormous Savings!

Because modern servers have ample processing power, a software based PBX can run on an existing server with other applications, saving on hardware costs, energy consumption and administration costs!

The table below shows the processor and memory usage of a busy Small Business Server with 3CX handling 16 continuous calls. Because of 3CX's low processor and memory usage it can be run safely on an existing Windows server (including Small Business Server) that is running other applications.

Machine specs	Intel Core 2 Duo CPU, E 4500 @ 2.20 GHz, 8 Gb of RAM, 50 Gb Hard disk SATA and a 1GBps Network connection
Operating system	Small Business Server 2003 R2
Other applications installed	IIS, Exchange Server, DNS, DHCP and Active Directory
Simulated Exchange load (using Exchange Load Simulator)	25 users making heavy use of Exchange (Sending of mail, scheduling meetings, checking inbox etc)
Processor time used by Exchange Server	10-15%
3CX Phone System	V10
3CX simulated call load	16 simultaneous calls continuously.
Call rate	0.5 calls/second equalling 2000 calls per hour.
Processor usage of all 3CX Services	Less than 15% CPU.
Total Memory usage of all 3CX services	300 megabytes (including Abyss)
Peak processor usage	30-40%

Alternatively, you can run 3CX as a virtual instance using Hyper-V, which is included in Windows 2008. Hyper-V is a great virtualization platform for 3CX, since it is a Hypervisor, which allows for better I/O performance of virtual machines. The improved I/O makes virtualization possible even for larger environments (up to 250 extensions). In addition, Hyper-V does not incur costs for an additional operating system license (you have up to 4 instances of Hyper-V, depending on the Windows server version, included in the cost of Windows).

## 5. More Features by Leveraging Windows Technologies

*More features,  
better integration  
and thus more  
productivity*

The lack of progress and innovation in the PBX industry has been largely caused by the fact that traditional PBX's run on a proprietary and limited operating system, which has only archaic development tools. Running on Windows, we can leverage the latest development technologies such as .NET and thus can achieve much faster development cycles. We can also re-use all those functions already available in Windows – we don't need to re-develop them. This also means we can leverage many of the technologies we use every day to manage our IT environment, such as network monitoring, backup and virtualization.

A good example of fast turnaround of versions and features is 3CX Phone System for Windows version 6\*. We added 10 significant features in the space of only 20 weeks: Call Conferencing, Paging, Intercom, Fax and more. We could develop, integrate, test and release all these in only 5 months! Additional features can be unleashed with the 3CX Call Center Module which provides advanced call center features such as queue strategies and Listen In, Listen and Whisper and Barge In options.

Customers can upgrade to a new version in a matter of minutes. This is the power of software based PBX – and it will drive many new features and productivity enhancements for businesses.

**\*3CX Phone System 10 is the current version**

## 6. Hardware & Vendor Independent – No Vendor Lock In

A software PBX is a standards based and vendor independent. Because of the SIP standard, it's future proof and you will not get tied to a particular vendor. You choose what VoIP hardware and providers you want to use (and mix and match at will). You can even use Skype for inbound and outbound calls!

## 7. Better Fault Tolerance through Easy Backup of Your PBX

Software based also means that you can easily back up your whole PBX. 3CX includes a backup function that backs up all system data with a few mouse clicks. In the event of a hardware failure, you can restore your phone system to another Windows machine in a matter of minutes.

If you are running your PBX virtually, you can use the Hyper-V Backup function to save a complete copy of your PBX to disk. If it's small enough you can even burn it to a DVD!

If you are running a black box / Linux appliance style PBX, you will be without a PBX until you can get a physical replacement which will also require re-configuration as well as additional expenses!

## 8. A Windows Based PBX is More Scalable

*Scale easily - add lines, phones & gateways without touching the box*

A software based PBX can scale to an almost unlimited capacity by leveraging modern server hardware. Appliances, on the other hand, are limited by the number of telephony ports they have and by their limited processing power and memory.

Your appliance will run out of steam as soon as you start adding more lines, phones, and making use of more processor intensive functions such as conferencing.

## 9. Better Integration with Other Business Applications

*Automatically pop-up the customer record when receiving a call*

Another major advantage of a Windows based PBX is that it integrates with your Windows business applications. It's no longer a black box sitting in the corner refusing to talk to the rest of your network. With this integration, we can gain features and thus increase productivity.

3CX Phone System easily integrates with Microsoft Outlook as standard. The 3CX CRM Module provides further integration with other CRM packages such as Salesforce, Microsoft Dynamics, SugarCRM and Sage ACT! Integrating your phone system and customer relationship management software delivers productivity gains for your sales and customer service departments. In addition, you will improve customer service levels.

Optionally integrate with Exchange 2007. The 3CX CRM API makes it easy to integrate 3CX with other business applications.

## 10. Easily Build Voice Applications that Increase Productivity

A Windows based PBX runs on your Windows network and can talk to your Windows applications; therefore, it's easy to take the next step: build voice applications that automate everyday business processes, improve customer service and save costs.

For example, automate collection of customer numbers, survey responses and more. Using 3CX's visual editor, companies can build powerful voice applications with a few mouse clicks.

## Conclusion

In conclusion, a Windows based PBX offers:

- Easy Installation
- Easy Management
- Better Integration
- Lower Cost.

With application integration and voice applications we can finally start to see some innovation in the telephony area too. Its time to change!

Experience the advantages of a Windows based PBX. Download your copy from <http://www.3cx.com/phone-system/download-phone-system.html>

## Become a 3CX Reseller

The 3CX Channel Program is open to all IT and telecoms solutions providers and gives an excellent opportunity for resellers to leverage their Windows skills so as to tap into a completely new market.

3CX Partners generate profitable recurring income as they resell 3CX products and their own services to existing customers, whilst also targeting new customers. The roll-out involves software / hardware sales and provides the opportunity for consultancy.

Benefits of the 3CX Partner Program include access to free products and technology. Numerous free partner training events held worldwide each year and direct access to the 3CX Support Team assists 3CX Partners so that they can, in turn, assist their customers.

Take advantage of the VoIP PBX boom by reselling 3CX Phone System. Companies are switching to 3CX as it allows them to make huge savings on their monthly telecoms bills and provides rich features. 3CX is a 100% channel company and provides all the tools needed for its channel partners to be successful.

Sign up today by visiting <http://www.3cx.com/partners>

## About 3CX

3CX is the developer of 3CX Phone System – an open standard unified communications platform for Windows that works with standard SIP phones and replaces a proprietary PBX. 3CX is more manageable and can deliver substantial cost savings besides increasing productivity. Leading companies worldwide such as Caterham F1, Boeing, Ohio State University, MIT and RE/MAX use 3CX Phone System as it is a high-value, low-cost PBX.

3CX has been listed as a CRN 2011 Emerging Vendor. 3CX Phone System for Windows has earned Windows Server Certification and has received numerous awards, including the Windowsnetworking.com Gold Award, the Windows IT Pro magazine 2008 Editor's Best Award and a Best Buy Award from Computer Shopper Magazine. 3CX has offices in the UK, USA, Germany, Cyprus, Malta, Australia and Hong Kong. For more information visit: <http://www.3cx.com> and our Facebook Page, <http://www.facebook.com/3CXPhoneSystem>



*3CX is a registered trademark in the US, UK, Europe and other countries. Microsoft Windows is a registered trademark of Microsoft Corporation. This whitepaper is copyright of 3CX Ltd.*