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FROM YOUR PROPRIETARY PBX



Whitepaper

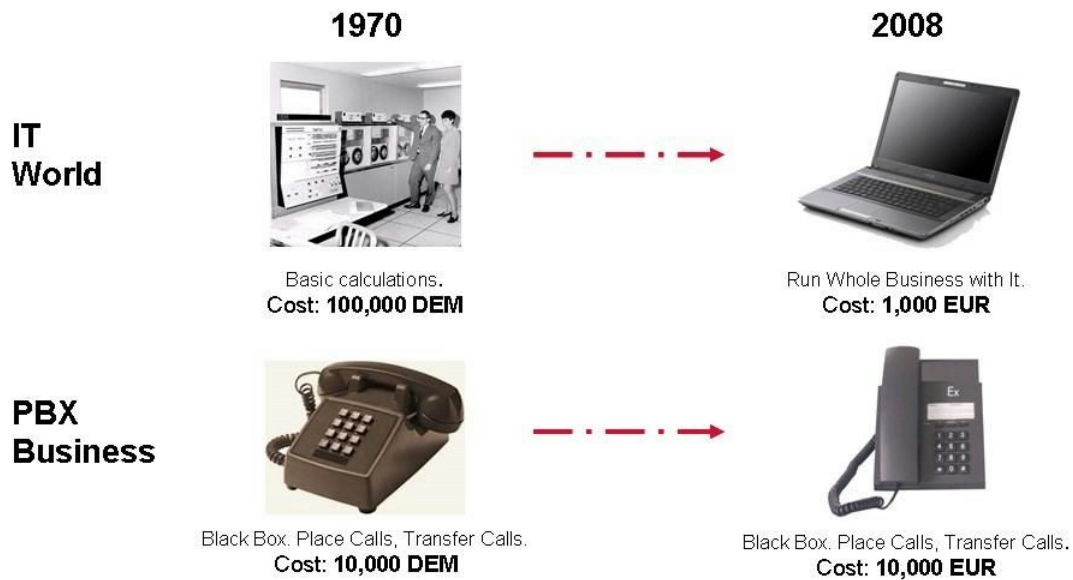
The Top 10 Advantages of 3CX Phone System

Why your next phone system should be software-based and by 3CX

This whitepaper outlines the top 10 advantages of choosing 3CX Phone System, 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, skip low performance appliances running Linux and open source and go straight to a REAL software-based, commercially supported solution. And why it should be running on Microsoft Windows!

Introduction

The PBX business is clearly fast asleep...



You don't need a time machine in the traditional PBX vendor world. The phone system of 1970 is the phone system of today. They look and do almost the same! This is very different from what has been happening in the IT business over the last 40 years, where we have seen lots of progress and a REDUCTION in cost!

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

3CX A Pure softwarebased PBX – not an appliance!

The lack of progress and innovation in the PBX industry has been largely caused by the fact that the traditional PBXs run on a proprietary and limited operating system, which has only archaic development tools. A software PBX for Windows will leverage the latest operating system features and modern development environments such as .NET, allowing Windows developers to reuse features and quickly add new functionalities to the PBX.

A key point is that a software PBX for Windows runs on a mainstream operating system that is supported and maintained and can easily be managed by the average administrator. So NOT yet another appliance running some custom, self made version of Linux! Administrators want to get away from black boxes, move it on to Windows, and take CONTROL!

The Top 10 Advantages of 3CX

1. Windows is much easier to manage than Linux or an appliance
2. Use existing hardware or virtualize and save!
3. Easily provision and manage gateways, trunks and phones from 3CX
4. Slash PBX and telecom costs
5. Softphones included for Windows, Mac, Android and iOS
6. Leverage mobility and increase productivity
7. Easily Manage extensions, PBX features and phone lines yourself!
8. A Windows-based PBX scales much better!
9. Hardware and Vendor independent – no vendor lock in!
10. Easy Integration with business applications for increased productivity and better customer service

The Advantages of 3CX Explained

1. Windows is much easier to manage than Linux or an appliance

A Windows-based software PBX is much easier to manage than a solution running under Linux or worse, an appliance. Its just another Windows server application so there is no need to learn how to update or troubleshoot yet another 'black box'.

Applying OS patches to ensure security is quick

Most system administrators are familiar with Windows and will be able to maintain the underlying OS easily, including configuring security and applying patches. Linux based systems will require Linux administration skills to apply often problematic Linux patches. Unless your company already has other Linux based systems and administrators that know Linux, stick to Windows.

The worst choice is a so called appliance which takes a custom version of Linux and bundles in the open source PBX. These custom versions of Linux are impossible to manage and the vendor will not release security updates in a timely fashion, leaving your phone system vulnerable to attack!

Upgrading is easier

Upgrading to a new version is a simple process with 3CX: download the updates and have them applied automatically. Upgrades will be done in a matter of 510 minutes. This is often not the case on appliances or other open source based systems, which will cost you a lot of additional administration and down time.

Monitoring your PBX

With a Windows PBX you can use familiar controls for restarting of services, reviewing logs to check that your phone system is up and running. 3CX 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 and ports via performance counters
- Check for critical system events such as failed registrations via the Windows event log.

So, it's easy to monitor your PBX using your existing network monitoring solution and knowledge.

Fault tolerance through easy backup of your PBX

Software-based also means that you can easily backup 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 on to another Windows machine in a matter of minutes. If you are running your PBX virtually, you can use the HyperV or VMware Backup function to save a complete copy of your PBX to disk.

If you are running a black box / Linux appliance style PBX, you will be without PBX until you can get a physical replacement which will require reconfiguration!

2. Use existing hardware or virtualize and save!

Because modern servers have ample processing power, a software-based PBX can run on an existing server with other applications, saving on hardware cost, energy consumption AND ADMINISTRATION costs! There's no need for a dedicated machine or a low powered appliance!!

Low processor usage

The table below shows the processor and memory usage of a busy Windows 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 that is running other applications.

Machine Specs	Intel Core 2 Duo CPU, E 4500 @ 2.20 GHz 4 Gb of RAM, 50 Gb Hard disk SATA and 100Mbps Network connection
Operating System	Windows Server 2012 R2 Essentials
Other Applications Installed	IIS, Exchange Server and Active Directory
Simulated Exchange Load (using Exchange Load Simulator)	25 users making heavy use of Exchange (Sending mail, scheduling meetings, checking inbox etc.)
Processor Time used by Exchange Server	10-15%
3CX Phone System	v12
3CX Simulated Call Load	16 simultaneous calls continuously
Call Rate	0.5 calls/second equalling 2,000 calls per hour
Processor usage of all 3CX Services	Less than 15% CPU
Total Memory usage of all 3CX Services	300 megabytes
Peak Processor usage	30-40%

Virtualize with 3CX

3CX is the only software-based PBX that fully supports virtualization. You can run 3CX as a virtual instance using Microsoft's HyperV or VMware. HyperV or VMware are great virtualisation platforms with superior I/O performance which allow you to virtualize your PBX, even for larger installations. In the case of HyperV you might not incur additional license costs depending on your version of Windows Server. 3CX has partnerships with both VMware and Microsoft to ensure full compatibility and guaranteed support.

3. Easily provision and manage gateways, trunks and IP phones from 3CX

3CX Phone System is not just easy to manage as software, it also automatically configures popular IP Phones, SIP trunks, VoIP Gateways, softphones and mobile phone clients, enabling you to quickly install and deploy 3CX Phone System and save you countless hours of learning how to configure new hardware. Importantly, it can automatically upgrade IP Phone firmware and make ongoing management easy. These features will save administration time, eliminate down time and save your company money.

4. Slash PBX and telecom costs with 3CX competitive pricing

3CX is much less expensive than a traditional phone system or other IP Phone Systems. The table below compares the cost between a Digium Appliance and a 3CX PBX. The Digium appliance is 4 times more expensive and this is just the initial purchase cost! As you expand your business, you will outgrow your PBX appliance at some point and require a totally new phone system. A software-based PBX is cheaper and gives you more features (inbuilt fax server, connect remote offices and extensions etc.)

Digium Switchvox	3CX
Switchvox 360 \$15,850 (including maintenance and licenses for 100 extensions)	3CX Software: \$2,500
Digium T1 Gateway \$1314.50	Patton T1 Gateway: \$1,495
90 Digium* Desk Phones \$18,711	90 Desk Phones: \$5,400
10 Digium* Executive phones \$3,289	10 Executive phones: \$1,200
No Softphones, CRM, Fax included	Fax & Bridges, Softphones and more: \$0
Online Enduser training \$995	Online Enduser training \$0
Cost: \$40,160	Cost: \$10,595
Expansion cost: \$?	Expansion cost: Minimal

Note: Using SIP standard phones and not Digium phones will require you to buy phone feature packs for each phone.

In addition to the PBX purchase and maintenance cost, 3CX bundles softphones with integrated SBC (Session Border Controller) functionality which makes using the extension from anywhere in the world both easy for the user and very manageable for the administrator, plus the roaming and mobile phone cost savings will be immense!

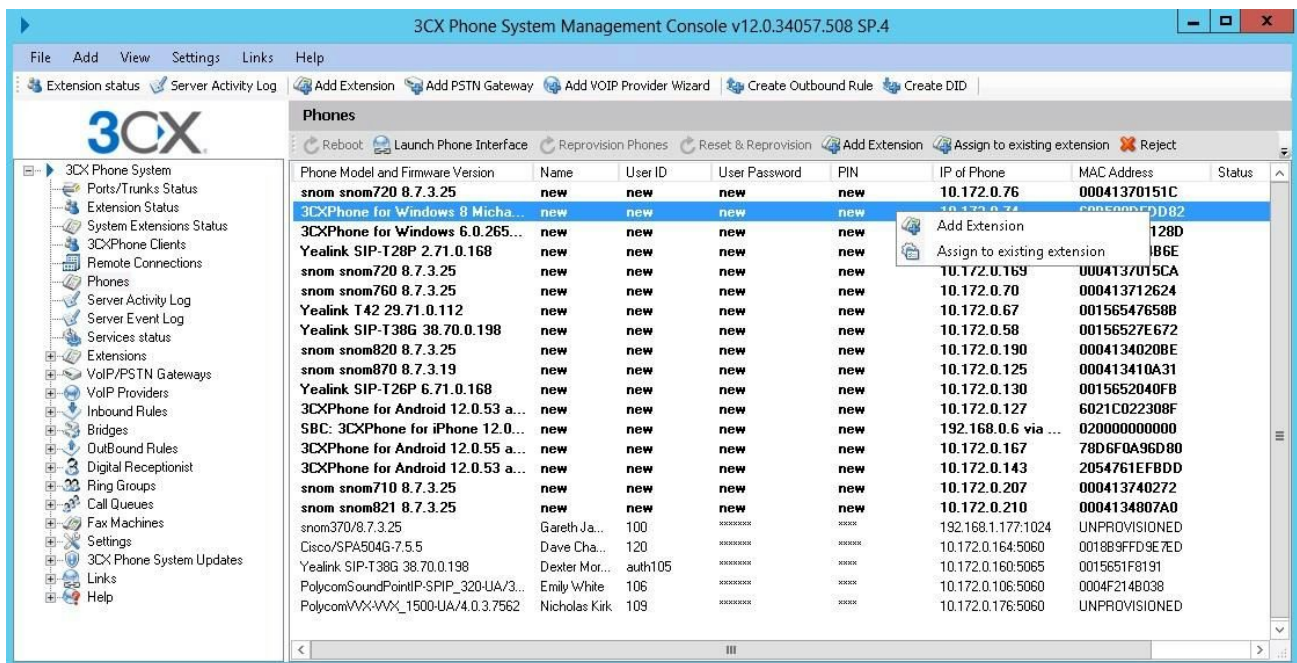
5. Softphones included for Windows, Mac, Android and iOS

A major advantage of an IP Phone system is the ability to leverage softphones on the desktop and allow usage of the phone system via smartphones. 3CX includes softphones for all major operating systems at no charge. Furthermore, because they are built specifically for 3CX, they are easy to use, include full Unified Communications features and are easily managed by the administrator from the main administration console.



Automatically provision and configure settings from the 3CX Management Console

With 3CX, administrators can easily configure the softphone remotely, including user preferences and passwords. Being able to easily change the password allows you to keep the system much more secure. The ability to automatically provision the softphone and configure the settings will save your helpdesk countless hours of helping users configure their softphone.



6. Leverage mobility and increase productivity with unique inbuilt SBC

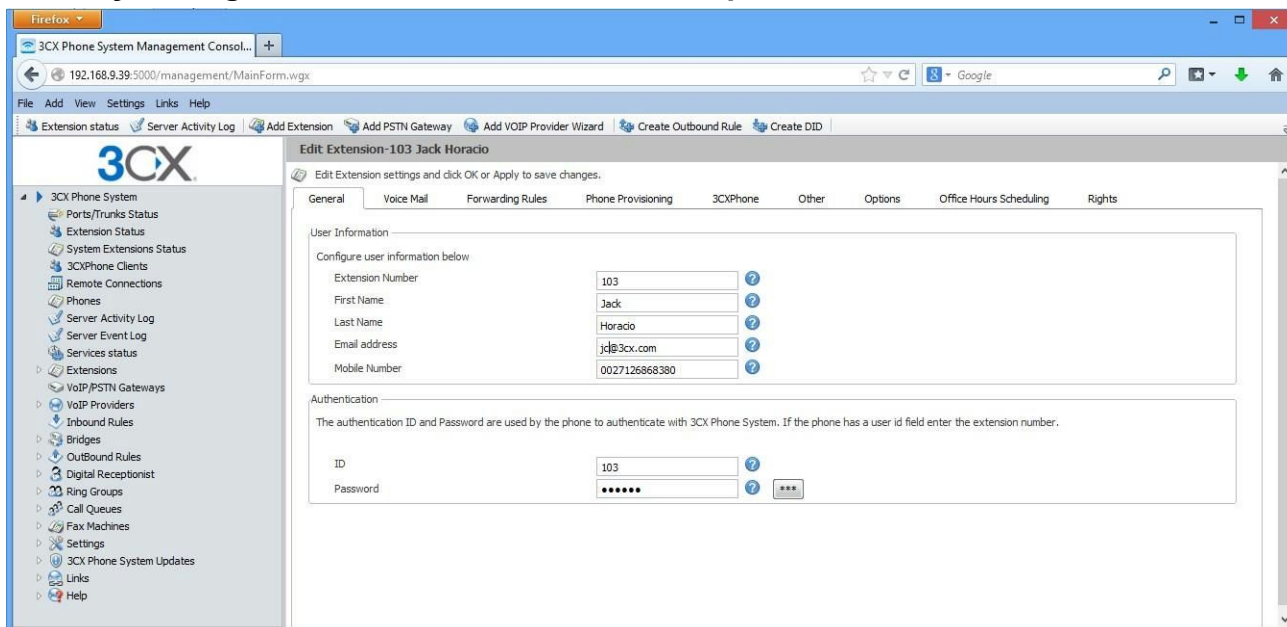
A major issue with VoIP and SIP is that they do not easily traverse firewalls. Remote firewall configurations, and even telecom providers blocking VoIP deliberately can cause support nightmares for administrators. Not so with 3CX.

Integrated Session Border Controller avoids firewall problems and increases security

3CX integrates an SBC in the phone system and in the softphones to avoid any problems with remote firewalls and telecom providers. In addition, traffic is encrypted for additional security. With 3CX and its inbuilt SBC, users can safely and easily make calls from anywhere in the world. Just this feature alone justifies the purchase of 3CX administrators will save hours of help desk time and the reliability of calls will be much greater.

Therefore, 3CX extension users can really use their phone system from anywhere and be more productive.

7. Easily manage extensions, PBX features and phone lines!



3CX includes an intuitive and easy to use web-based console which allows administrators to easily create and configure extensions, call queues, SIP trunks and more. No need to call up the phone system people and pay exorbitant rates!

Role based administration

Furthermore, its role based administration system allows administrators to delegate basic extension configuration to department supervisors or junior admins, saving senior IT admin personnel a great deal of time.

8. 3CX scales easily to more than 1,000 simultaneous calls per server

A great advantage of a software-based VoIP system such as 3CX is that it is much easier to scale compared to a traditional PBX or an appliance. A software-based PBX can scale to almost unlimited capacity by leveraging modern server hardware. More importantly, 3CX has a very advanced architecture that can easily handle in excess of 1,000 simultaneous calls on one server.

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 and you will need to buy a new 'bigger' appliance.

In addition, 3CX Phone System includes a license for an unlimited number of extensions you can scale to thousands of extensions without incurring any additional licensing costs!

9. Hardware & vendor independent – no vendor lock in!

3CX is standards-based and vendor independent. Because of the open SIP standard, its future proof and you will not get tied up to a particular vendor. You choose what IP Phones and gateways you want to use and with which SIP trunking providers you want to work.

10. Easy integration with business applications for increased productivity and better customer service

Another major advantage of 3CX 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. And with this integration we can gain features and thus productivity.

3CX Phone System integrates OUT OF THE BOX with Microsoft Outlook, Microsoft Dynamics, Salesforce.com, and other CRM systems to deliver productivity gains for your sales force and customer service departments. In addition, you will improve customer service levels.

Integrate with Exchange Server or an LDAP or SQL database to automatically match a caller ID to a customer name. Help agents serve customers faster whilst improving customer service!

Conclusion

In conclusion, a Windows-based PBX offers:

- Easy installation
- Easy management
- Better integration
- Lower cost

And 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 Windowsbased PBX – download your copy from <http://www.3cx.com>

About 3CX

3CX is the developer of 3CX Phone System, which is an open standard Unified Communications platform for Windows that works with standard SIP phones and replaces any proprietary PBX. 3CX Phone System is more manageable than standard PBX systems and delivers substantial cost savings while increasing productivity. Some of the world's leading companies and organizations use the 3CX Phone System, including Boeing, the Caterham F1 Team, Intercontinental Hotels & Resorts, Harley Davidson, and MIT.

3CX was named a CRN Emerging Vendor in 2011 and 2012 and has been awarded CRN's 5Star Partner Program rating in 2013. 3CX has also been awarded Windows Server Certification and won the Windowsnetworking.com Gold Award, the Windows IT Pro 2008 Editor's Best Award and a Best Buy Award from Computer Shopper. 3CX has offices in the UK, the USA, Germany, France, Japan, Hong Kong, Australia, South Africa, Cyprus and Malta. A Visit us at: <http://www.3CX.com> and on Facebook at: www.facebook.com/3CX/.