



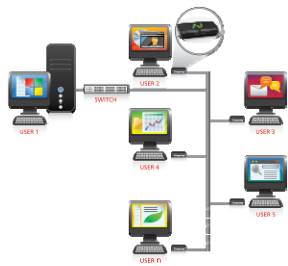
## Today's PCs have more power than most users need

The NComputing solution is based on a simple fact: today's computers are so powerful that only a small fraction of their capacity is required for the vast majority of applications. NComputing taps this unused capacity by enabling up to 30 simultaneous users to run their own applications (all from the same computer), for as little as US\$70 per additional user. With NComputing, customers get the most out of their investment in PCs and servers.

Save <b>75%</b> on hardware	Save <b>75%</b> on maintenance	Save <b>90%</b> on energy
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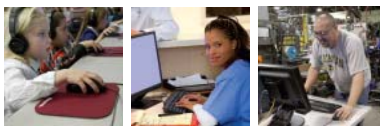
## NComputing slashes computing costs by sharing the extra power

NComputing reduces hardware costs by at least 75% and maintenance costs by 75% so that organizations can quickly and affordably provide computing access to their users. It is also the greenest computing solution on earth—NComputing access devices use as little as 1 watt of electricity (compared to 110 watts for a regular PC). They also drastically reduce e-waste (access devices only weigh 150 grams, compared to 9.6 kilograms for a PC).



## Software and hardware combine for a simple and reliable solution

NComputing's vSpace™ virtualization software shares the excess processing power of a computer (PC or server) and transmits the signals between the shared computer and each user. Each user's monitor, keyboard, and peripherals connect to a small NComputing access device that then connects to the shared computer. The access device is inexpensive and highly reliable because it has no CPU, memory, or moving parts. The solution is easy to deploy and maintain.



## NComputing makes sense everywhere

NComputing's virtual desktops have been installed everywhere from home offices to large enterprises. They save money in schools and small businesses, slash maintenance calls in enterprises, provide security in hospitals, and withstand extreme conditions in factories. Only NComputing *scales down* to be economical for as few as two users, and efficiently *scales up* to tens of thousands of users in conjunction with machine virtualization solutions.



## NComputing dominates the desktop virtualization market

NComputing stands alone in the desktop virtualization market. Only NComputing has an end-to-end solution that includes the virtualization software, next generation communications protocol, and low-cost access devices. For this reason, only NComputing can deliver virtual desktops for less than US\$100 per seat. And only NComputing has broad market success, with over 2,000,000 seats sold in over 140 countries.

## Learn more online



- 2-minute video introduction:  
<http://www.ncomputing.com/ncomputingoverviewvideo.aspx>
- Green whitepaper:  
<http://www.ncomputing.com/GreenComputing/Greencomputing.aspx>

## Why customers love NComputing

Some of the reasons they cite are:

- The purchase cost is very low. As low as \$70 per user.
- It works with standard software. There is no need to buy specialized applications or retrain technical staff or users. The solution works on Windows and Linux operating systems<sup>1</sup>.
- This is the biggest leap forward in green computing. NComputing access devices draw as little as one watt (maximum 5) of power for each user versus 110 watts for a typical PC—a 90% reduction.
- NComputing technology reduces e-waste. The access devices are tiny and do not need to be replaced every upgrade cycle.
- It's easy and fast to deploy and support. An NComputing solution can be implemented in minutes.
- Ongoing operation and maintenance costs are extremely low. Since the access devices do not have CPUs, memory or moving parts, their reliability is very high. Also, with fewer computers to support, maintenance costs decline dramatically.
- Upgrade cycles are easy and economical. With NComputing, a single PC upgrade increases performance for every virtual desktop connected to it.

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<sup>1</sup> Please refer to the Microsoft operating system licensing requirements and technical details at [www.ncomputing.com/mslicensing](http://www.ncomputing.com/mslicensing). Specific Linux support information is available in the NComputing Knowledge Base.

## Interesting Facts

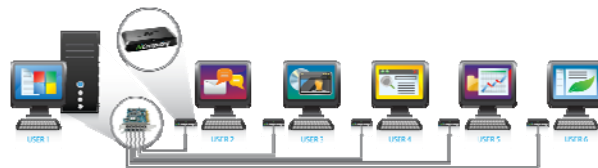
- There are approximately 850 million PC users around the world, but experts estimate that another one billion people would take advantage of computing if it were more affordable.
- Over 2 million NComputing seats have been sold worldwide.
- Over 40,000 organizations in 140 countries use NComputing every day.
- NComputing has already captured approximately 15% of the US K-12 desktop computing market.
- The Republic of Macedonia installed 160,000 NComputing seats in every K-12 school in the country. This is the first nationwide deployment of computing for every student.
- A typical PC consumes 110 watts of electricity. NComputing devices consume from 1 to 5 watts. If the NComputing installed base of 2,000,000 seats were regular PCs, they would consume 350 million watts of power (versus less than 63 million watts for NComputing devices).
- In the Indian state of Andhra Pradesh, NComputing has been installed in 5,000 schools and provides computer literacy training to over 1.8 million students every day.
- NComputing was awarded the prestigious Wall Street Journal Technology Innovation Award for the most innovative new solution in computing systems. NComputing has also received awards from Gartner, Deloitte, CeBit, Frost & Sullivan, the Silicon Valley Tech Museum, CES, and many others.

## Three product lines to choose from

NComputing's breakthrough desktop virtualization technology is available in three product families: the NComputing X-series, U-series, and L-series. All of them enable standard PCs and servers to share their resources for no-compromise computing at unprecedented low prices. They differ in how the clients connect to the shared computer.

### The NComputing X-series

The X-series comes with PCI cards with either three or five connectors. The device connects directly to the PCI cards via standard cables (up to 33 feet long). The X-series provide a rich PC experience that includes widescreen resolutions and full screen video.



### The NComputing U-series

The U-series' USB plug-and-play simplicity makes it the easiest way to connect users to a shared PC. Install the vSpace software, connect your keyboard, mouse and monitor to the U170, plug the U170 into the PC or a USB hub and you are all set.



### The NComputing L-series

The L-series connects to the shared computer via standard Ethernet networks. Up to 30 users can connect to a standard PC or server. Up to 200 users can connect to a mid-range server.



## Frequently Asked Questions

### **Where does NComputing make the most sense? Are there applications that don't make sense?**

NComputing excels at all mainstream tasks such as office applications, email, and Internet browsing. It works quite well with the majority of PC software in use today. It is not intended for processor-intensive applications such as video editing, 3-D games, and scientific computing—although we do hear from users who are very happy with some high-end applications such as CAD. Most of our customers are businesses, schools, libraries, internet cafés, manufacturing plants, and various public-access computing sites. Other ideal environments include nonprofit organizations, police stations, eldercare, and government offices. Over 40,000 organizations have deployed NComputing in over 140 countries.

### **What is the price?**

Pricing varies by region and reseller, but the X-series costs about US\$70 per seat. The L-series starts at \$149 each. These prices include the NComputing virtualization software (vSpace), but do not include keyboard, monitor, mouse, operating system, and application software, taxes and duties.

### **How does NComputing compare to traditional thin clients?**

The NComputing user experience rivals that of a PC, whereas thin clients have limited graphics capabilities. Traditional thin clients are still computers, with processors and a local OS, which add cost and complexity. With NComputing, all of the computing is done on the shared PC, so the access device is very small, very reliable and very inexpensive. When the traditional thin-client/ fat-server technology was developed, PCs weren't powerful enough to do what they can today. Also, NComputing vSpace software is very efficient in its use of host CPU resources, and the NComputing highly efficient communications protocol (UXP) is optimized for graphical performance.

### **How do you compare to what companies like VMWare and Citrix do?**

NComputing hardware and software can inter-operate with—and improve the performance and economics of—a Citrix or VMware environment. The best architecture depends on your requirements.

### **What are the power savings?**

The X-series devices consume about 1 watt per added user. The L-series devices consume about 5 watts and the U-series about 2 watts. According to the US Energy Star web site, a typical PC consumes about 110 watts. The impact goes beyond the electrical cost savings: a room full of access devices does not have to be air conditioned, but a room full of PCs does. This is an added benefit in developing regions where electricity is scarce and may have to be generated locally. NComputing's solutions are an excellent way to lower the carbon footprint while delivering a rich desktop computing experience.

### **Are there any issues with application compatibility?**

Most common applications support multiple user sessions right out of the box. There are some applications that do not work well in a multi-user environment. We provide no-risk evaluation units so that customers can test their applications.



**How secure is the NComputing system?**

Since there is no data in the access device, it is very secure. The data can be securely managed on the shared PC or server so it is easy to maintain, protect, and back up. That reduces the burden on the users and IT staff, and is the same strategy that IT has found works best when they consolidate assets within data centers.

**Does it work over wireless networks?**

We recommend a 10/100 wired LAN connection from the L-series devices to the shared PC. Customers have deployed in wireless environments using off-the-shelf wireless bridges.

**How many seats have been deployed?**

We have sold over 2,000,000 seats in more than 140 countries.

## The Company

Winner of the Wall Street Journal's Technology Innovation Award, NComputing, Inc. was founded with the goal of making desktop computing affordable for everyone. Headquartered in Redwood City, CA, the company's patented technology lowers desktop computing costs, improves manageability, and reduces both energy consumption and e-waste.

## Management Team

NComputing is run by a highly experienced and innovative management team with deep roots in the computer hardware and software industry. NComputing management has led teams at companies like eMachines, Cisco, GE, AMD, Sun, McKinsey, Spansion and Wyse.



### **Stephen A. Dukker, Chairman and CEO**

Mr. Dukker has spent his entire career driving down the cost of computing. He brings more than 30 years of experience in computer manufacturing and retailing to NComputing. Prior to NComputing, he was the founder and CEO of eMachines, a company dedicated to making computers affordable. In its first year, eMachines achieved \$817 million in revenues and quickly became the third largest manufacturer of personal computers in North America.

Mr. Dukker previously held senior management roles at several technology manufacturing and retail companies, including senior vice president of merchandising and direct operations for Computer City, president of OPTi, Inc., and president of PC manufacturing and distribution for CompUSA. He was also the founder and president of PC Brand, one of the first mail order PC manufacturers in the industry, and is a member of the Board of Directors of Alorica and Digital Persona.



### **Kim Niederman, SVP**

Leading NComputing's global sales, Mr. Niederman brings more than 20 years of successful leadership in high-tech, having held senior executive positions at Polycom, Inc., Cisco Systems, FORE Systems, and Wang Laboratories. Most recently, Kim was CEO at Anagran, Inc. Just prior, as SVP worldwide sales at Polycom, he increased sales in 4 years from \$360M to a run-rate of almost \$1B. Mr. Niederman also was CEO of LongBoard, Inc., and CEO of Magellan Network Systems. Prior to LongBoard, he was VP Sales for RadioLAN and VP Sales at FORE Systems, where he doubled revenue within 12 months.

As a Cisco executive, some of Kim's responsibilities included worldwide sales and was promoted by John Chambers to co-manage Cisco's first business unit where he propelled sales from \$17 million to over \$350 million in a little over a year. Kim also held executive positions under John Chambers at Wang and served as CEO of Hallmark Industries.

Mr. Niederman has been a Board Member and Technical Advisor to several Silicon Valley startups. He holds a B.A. in political science from the University of Denver.

**Raj Shah, Chief Marketing Officer**

Raj Shah is the Chief Marketing Officer of NComputing and leads the marketing and business development efforts. Raj brings 20+ years of business management experience spanning start-ups, growth stage companies and F500 corporations. Prior to NComputing, Raj was the CMO of ClearCube Technology, the pioneer in PC blade computing systems. Raj was the co-founder of SiteStuff, a leading e-procurement service, and served as VP of marketing of pcOrder.

Raj was also a senior manager at McKinsey & Company, a leading management consulting firm. Raj began his career at the Federal Reserve Bank of Chicago and GBC. Raj has an MBA from the Kellogg Graduate School of Management (Northwestern) and a Bachelor of Science in Accounting.

**Katherine Butler, Chief Administrative Officer**

Ms. Butler brings more than 20 years of experience to lead the finance, legal and human resources team at NComputing. Prior to NComputing, she served as general counsel and secretary for Software AG North America where she led the finance, legal, human resources and corporate services teams.

Ms. Butler also served as an attorney with General Electric in various locations including Paris, Milan, London, and Maryland. Early in her career, she was lead counsel for Software International Corporation in Andover, Massachusetts. She holds a Master of Laws (L.L.M.) from Boston University, a Juris Doctorate (J.D.) from Suffolk University and a Bachelor of Arts from Smith College.

**Bill Platt, SVP of Engineering & Support**

Mr. Platt brings more than 20 years of development and customer support experience to NComputing. He leads NComputing's global engineering hardware and software development organization as well as the worldwide customer support team. Before joining NComputing, Mr. Platt was executive vice president of products at Wyse Technology, a leader in thin client computing.

Prior to joining Wyse, Mr. Platt was vice president of the operating platforms group at Sun Microsystems, where he ran large organizations including Americas Customer Care, Asia Pacific Customer Services, and was a vice president of software responsible for the Java Enterprise System and Solaris products. He was instrumental in helping the company build its field service and support organization as Sun experienced enormous growth during his 15-year tenure. Mr. Platt earned a Bachelor of Science in Systems Engineering from the University of Pennsylvania and a Bachelor of Science in Economics from the Wharton School.

**Gabriele Sartori, SVP of Hardware Platform Development**

Mr. Sartori brings more than 25 years of technology and hardware development experience to NComputing. He leads the hardware platform development efforts for NComputing. Prior to NComputing, Mr. Sartori held executive positions at Spansion, Luxtera, and Advanced Micro Devices. At AMD, he was the driving force behind HyperTransport, the revolutionary bus used by the Opteron CPUs.

Before coming to the U.S., Mr. Sartori ran the R&D for Desktop PC and Workstations at Olivetti, Italy. He has several computer architecture patents and holds a degree in Electrical Engineering from the Technical Institute of Biella, Italy.

## **NComputing Co-founders**



### **Young Song**

Mr. Song has more than 17 years of management experience in running NComputing's day-to-day operations, including supply chain and manufacturing. Prior to co-founding NComputing, he was the founder and CEO of DoubleSight Displays, a company that delivered affordable and cost-effective dual displays to consumers.

Mr. Song also co-founded and was vice president of product marketing for eMachines, a pioneer in bringing affordable computing to consumers. He began his career as marketing director for both TriGem America Corporation and TriGem Computer, Inc. Mr. Song holds a Bachelor of Science in Electronics Engineering from Yonsei University in Seoul, Korea and sits on the NComputing board of directors.

### **Klaus Meier**

Klaus is the inventor of the multi-user architecture and concepts that are used in NComputing products. Previously the founder and CEO of Hydrapark GmbH and KaMai-Computersysteme GmbH, he teamed with Young Song to deploy the hardware and software technology solutions to a worldwide market. Maier builds on over 17 years of network computing knowledge and experiences to set NComputing's technology direction.

## **Contacts**

NComputing, Inc.  
1 Lagoon Drive, Suite 110  
Redwood City, CA 94065  
(650) 594-5800

David Rand  
Sr. Director of Corporate Marketing  
drand@ncomputing.com

**ncomputing.com**