# Cisco Systems: Unsurpassed Productivity Gains

## Introduction

Technological skills are best learned through hands-on experience.   Toolwire provides companies with experiential learning products and services, including hands-on labs. This case study is an example of how Toolwire delivers tangible, measurable business benefits.

## Cisco Systems – The Worldwide Leader in Networking

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Today, networks are an essential part of business, education, government and home communications, and Cisco Internet Protocol-based (IP) networking solutions are the foundation of these networks. Since the company's inception, Cisco has relied on field engineers and channel partners for the deployment of internet infrastructure. Cisco has more than 40,000 channel partners worldwide and 433,000 systems engineers generating and supporting billions of dollars in revenue.

Cisco relies on its channel for more than 92 percent of its annual revenue; therefore, the company takes the development of its ecosystem workforce very seriously. To this end, Cisco has created the Partner E-Learning Connection (PEC).

## The Challenge –
## Maximizing the Productivity of the Cisco Ecosystem

The Partner e-Learning Connection was created specifically to increase Cisco ecosystem productivity and revenue generation, with tools that enhance skills and promote better, faster service worldwide. Cisco relies on partner training organizations to author and deliver authorized Cisco training for the PEC.

Cisco soon discovered that technological skills are acquired most effectively through hands-on experience. Learners had several requirements supporting their need to engage with real Cisco equipment as part of their learning experience:

- The *variety and complexity* of Cisco devices meant there was no substitute for real-world scenarios and live, hands-on access to real equipment. The stakes were too high to risk learning only on the job, with production equipment, or in simulations.

- With *rapidly changing technology*, the key success factor was to keep the nearly half million professionals up to date on the latest developments and ensure excellent retention.

- Every hour in a learning environment had to return substantial *productivity gains* since time out of the field was costly.

- A *globally distributed* audience meant the learning had to be scalable, easy to access, and easy to consume.

### CISCO SYSTEMS

### Organization
- Cisco Systems

### Business
- Networking Equipment

### Challenge
- Increase revenue generation capabilites of globally distributed partner ecosystem

### Results
- Greater field readiness at lower cost with LiveLabs from Toolwire

> "I've seen a lot of lab vendors. Toolwire is one of the lab vendors at the top of the list, providing some of the best online lab capabilities in terms of usability. The user interface is fantastic."
>
> Leslee Mesick
> Channel and Partner
> Readiness Manager
> Cisco Systems, Inc.

## The Innovation – Hands-on Labs

Cisco identified hands-on labs as an ideal means of delivering experiential learning quickly and efficiently. Labs allow remote hands-on access to Cisco routers and switches, coupled with real-world challenges.

Labs are most appropriate for Cisco technical training because networking professionals typically have some experience but are looking to build new skills through practice with live equipment. From simple mastering of Cisco IOS commands to troubleshooting complex routing configurations, live equipment became a requirement because it is virtually impossible to replicate the millions of possible real-world outcomes in simulations.

## The Decision – LiveLabs from Toolwire

Cisco used several criteria for selecting live, hands-on labs for its Partner e-Learning Connection, including:

- Usability – user interface design and intuitive navigation
- Quality and quantity of labs available
- Bulletproof operations – 24/7 remote hands-on access to Cisco routers and switches
- Vendor stability and shared vision

Cisco selected Toolwire based on its high marks on all criteria. Ease of use stood out due to simple navigation, from lab guides, to the telnet window for controlling real equipment, to the network topology diagrams.

This "three-pane GUI" allowed trainees to keep all relevant training elements on-screen simultaneously. Other vendors' products typically require the user to shuffle through multiple telnet windows and documentation screens, making the process far more cumbersome and less user-friendly. Other Toolwire features, such as the ability to save/restore and email configurations, were viewed as key enhancements to the learning experience.
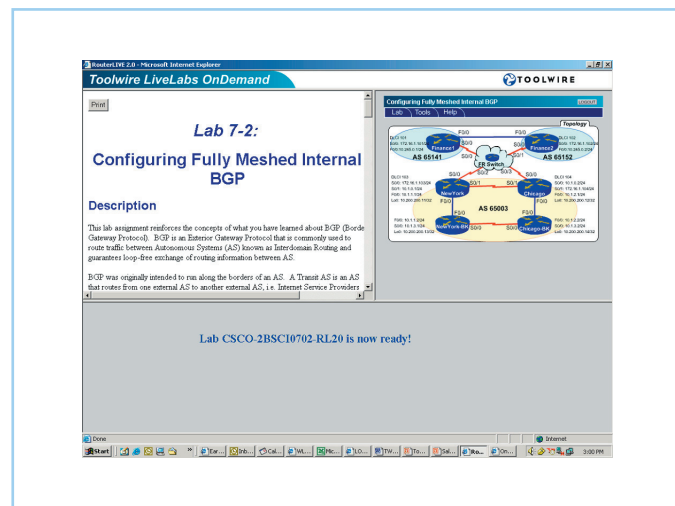


## The Results – Unsurpassed Productivity Gains for the Ecosystem

Since its inception almost four years ago, Cisco's Partner e-Learning Connection has delivered to the Cisco ecosystem more than 100,000 Toolwire LiveLabs in more than 100 countries. As a result, more than 5,000 systems engineers have been certified, and the revenue generation capabilities of the field have increased by $168,000 per person per year. Equally important, Cisco has consistently improved its customer-satisfaction metric (CSAT) due to better prepared engineers and more effective implementations. Over the past four years, Cisco's CSAT has increased from 3.78 to 4.34 on a scale of 5.

Beyond better top-line results, the lab-enabled Partner e-Learning Connection has saved more than 120 hours of training time per person per year. This translates to a cost savings of more than $7,000 per person per month for Cisco's ecosystem workforce.

The results are clear: engineers are more productive, and better prepared, which means more revenue, lower costs, and higher customer satisfaction: a win-win-win for Cisco, its partners, and its customers.

# Documentum: Train Without Travel

## Introduction

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## Documentum
### The Enterprise Content Management Leader

Documentum, a division of EMC Corporation, is the leading provider of enterprise content management solutions, serving more than 2,500 of the world's largest companies. With a single platform, Documentum enables people to collaboratively create, manage, deliver, and archive business content – from documents and discussions to e-mail, Web pages, records, and rich media.

Documentum's worldwide education services division delivers product education services to thousands of global partners and customers. This for-revenue group also serves as a key source of software license deployments; the more Documentum customers that are trained on Documentum applications, the more licenses the company can sell throughout the enterprise.

## The Challenge – Growing Revenue in a Tough Economy

In 2003, after the technology industry downturn, software companies, such as Documentum, were grappling with new ways to drive demand for their products and services.

Historically, Documentum's training services, like most companies', had been delivered in a live classroom format, requiring expensive travel and employee downtime. However, with the sluggish economy and a general aversion to air travel after 9/11, companies with training profit centers needed to explore alternatives to classroom training.

## The Innovation – Train Without Travel

Documentum identified remote training via the Internet or "virtual classroom", as a means of achieving greater productivity and less downtime, as the best way to capture training revenues without requiring student or instructor travel. The company formulated a cost-saving initiative under a new program dubbed "Train-Without-Travel".

Documentum's classes are technical in nature utilizing the step-by-step, hands-on practice that is recognized as essential to effective learning. Hence, full remote access to instructor lectures and realistic, hands-on labs became a requirement for this new program.

Because Documentum was also very concerned about the consistency between remote and onsite training; every student in a given class needed to be exposed to the exact same lecture and lab content, regardless of the mode of training. Instructors also needed to be able to collaboratively "shadow" remote students to monitor their progress and provide assistance.

### Organization
- Documentum

### Business
- Enterprise Content Management

### Challenge
- Provide effective alternatives to classroom training

### Results
- Greater revenue and reduced costs with virtual classes featuring Toolwire LiveLabs

> "By eliminating the cost and time needed to travel to a training site, Documentum's distance learning options provide all of the benefits of traditional classroom training, while helping companies make the most of limited time and resources."
>
> Rob Louks
> Vice President
> Worldwide Consulting and Education services
> Documentum

**TOOLWIRE**
... because experience matters.

## The Decision – LiveLabs from Toolwire

Documentum evaluated solutions based on scalability, reliability, cost-effectiveness, ease of instructor/student use, and performance.  Toolwire's LiveLabs were chosen for the remote labs portion to meet Documentum's requirements for:

**1) High Performance Accessibility**
LiveLabs allowed students to access labs online, remotely from anywhere in the world and the performance was as good as or better than physical classroom delivered labs.

**2) Functionality and Scalability**
Toolwire provided all of the functionality that Documentum needed, including LiveLabs and instructor shadowing capabilities. Overall, Toolwire's solution was considered to be highly user-friendly, without requiring cumbersome installs or modifications. Moreover, LiveLabs were viewed as being fully scalable, to meet Documentum's planned growth.

**3) Services and Support**
Toolwire was seen as superior in terms of solution development and implementation services and support. Company support representatives were always available to resolve issues that arose during the proof-of-concept phase and full deployment. Toolwire was proactive and responsive, and provided very strong overall support.

## The Results – Revenue Growth via Hands-On Labs

In the first eight months, more than 135 live Train-without-Travel sessions had been conducted to more than 800 students.  Students surveyed in the virtual classroom ranked the lab-enabled "Train Without Travel" solution as high or higher than traditional class delivery.  The performance and usability gave Documentum confidence that they could now deliver remote labs in virtual classrooms without compromising on the learning experience.

Initially, Documentum was concerned that the addition of online classes would result in a "cannibalization" of their instructor-led classroom courses. However, the enrollment rate for the instructor-led classes has remained consistent while enrollment for online classes has increased.

> " Our Toolwire experience has been a positive one. Toolwire is a high- quality, professional company. They're very committed to our success, and their expertise, excitement and enthusiasm all show. "
>
> Gail Schilling
> World Wide Director of Customer Education
> Documentum

As a result of this program, virtual classes featuring Toolwire labs have become a large share of Documentum's training within a 12-month period.  According to Becky Nelson, Delivery Manager for Documentum, "We're giving our customers more choices by offering them more opportunities to take our training when it's convenient and affordable to them. This last quarter, 15 percent of our (training) revenue overall was achieved through that (live online) delivery channel. We're headed in a direction where that figure could be potentially as much as 30 percent. That's the arc that we're on."

The "Train Without Travel" initiative has proven to be an unqualified success with Documentum's customers and partners and remote labs have helped Documentum to raise training and software revenue beyond pre-9/11 levels. Toolwire's labs now account for a significant portion of Documentum's overall customer education revenue stream and accordingly, Documentum has extended its commitment to Toolwire's LiveLabs.

# Xilinx: Flawless Performance, 4x Training Growth at Less Cost

## Introduction

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## Xilinx - The World Leader in Programmable Logic

Xilinx is the world leader in programmable logic, a semiconductor technology that allows end users to program devices anytime, anywhere, in the lab or in the field. Xilinx is a $1.6 billion company and is enjoying double digit growth.

The Xilinx Educational Services Group delivers instructor-led training to their worldwide user base in both physical classroom settings and Web-based virtual classrooms. Xilinx customers pay for instructor-led training just as customers of enterprise software companies do today.

## The Challenge – Worldwide Training on Xilinx Design Software

Xilinx must roll out new products, technologies, and software rapidly to remain competitive. This means educating 50,000 worldwide users on new design methodologies and on using Xilinx design software to select and configure the best Xilinx chip for a given application.

In 2000, Xilinx was training more than 2,500 people every year. The training business set a goal of doubling their training capacity, while reducing training costs. Well-trained users require fewer support resources, and they tend to recommend Xilinx to others.

The challenge was to deliver hands-on labs cost-effectively, while preserving the high-performance training customers expected.

The current approach was inefficient, involving loading the company's design software onto expensive laptops and shipping them to training locations worldwide. Each laptop had to be prepped, shipped to the training location, and then shipped back to Xilinx to be prepped for the next training event. Laptop shipping costs alone were approximately $1,500 per class, and roughly one quarter of the machines were lost or damaged in shipping each year.

Xilinx had six full-time employees configuring training laptops and testing course software. The company also had eight classroom facilities, for which it also had to maintain the course software. Moreover, instructors had to be flown to training locations, and trainers and sales engineers had to be onsite to make sure the laptops and software were operating correctly.

The process was costly, labor intensive, and unreliable. Xilinx needed a better way to deliver hands-on labs.

## The Innovation – Remote, Hands-on Training

Xilinx needed an automated, remotely accessible system that would allow one person to

### Organization
- Xilinx

### Business
- Programmable Logic

### Challenge
- Unwieldy and expensive lab setups

### Results
- Greater reach and reduced deployment time by leveraging Toolwire LiveLabs

> " Setting up a class in any given city used to take up to 18 hours. With Toolwire, I can set up a class in any city in two minutes. "
>
> Dick LaForge
> Training Director
> Xilinx Inc.

turn every class around the globe on and off. It needed the system to make sure that the computers used for training students would be prepped correctly, made accessible during the class, then prepared for the next event after the class was over.

Xilinx also needed a way for users to see and control hardware boards with Xilinx chips, to put their training to practice. Users had to be able to see the actual chips and control the design process as if they were sitting in front of the actual devices. Previously, the only way to accomplish this was to send boards along with the laptops. The high cost of the boards—as much as $7,000 each—limited the number of trainees and still cost Xilinx hundreds of thousands of dollars every year.  A remote, hands-on training solution would directly address these issues.

## The Decision – LiveLabs from Toolwire

Xilinx selected Toolwire's LiveLabs solution because it satisfied their need for remotely accessible, hands-on training. Toolwire even provided realistic remote access to the hardware boards. LiveLabs allows a single administrator to set up every course around the globe, eliminating the cumbersome laptop setup and shipping process. According to Patrice Anderson of Xilinx, "To have a solution that's focused, where you only have to load the software once, you don't have to ship anything or have all those logistical problems, and you don't have to assign the people to manage it—that is a huge advantage."

Xilinx design software is graphically complex and running these applications over the Internet was therefore a major challenge. Toolwire provided dedicated bandwidth and infrastructure to enable world-class performance anywhere in the world.

## The Results – Flawless Performance, 4x Training Growth at Less Cost

Xilinx was able to re-deploy their six IT staff and it no longer needed to lease the 100+ laptops or send out equipment or personnel to training locations, saving thousands of dollars.

Xilinx saved enormous capital expense and maintenance costs by replacing high-end workstations in its classrooms with low cost Internet terminals. "You can rent classrooms that have PCs that are not necessarily powerful enough for

> *Toolwire helped Xilinx quadruple training capacity from 2,500 to 10,000 per year while driving down capital infrastructure and personnel costs. Xilinx also saved thousands of dollars in shipping costs, and eliminated 100 laptops and 50+ workstations in capital expense. Now Xilinx can deliver the same training, in the same environments, across the globe, around the clock.*

the Xilinx software. You're using the processor at Toolwire, and that's a big advantage because Xilinx software can require pretty heavy compute resources that not every facility provides," says Xilinx's Patrice Anderson. Remote access to hardware boards also saved Xilinx hundreds of thousands of dollars per year.

To date, Toolwire's system has performed flawlessly.  In the past, classes were often cancelled because of shipping problems or set-up glitches. Since adopting Toolwire's solution, Xilinx has not had to cancel a single class.

As Xilinx Training Director Dick LaForge put it, "This is the tool that I'd been seeking for 10-15 years as a training manager. It's a tool that let me set my software up and my partners' software up once. And if something happened—if I had a change of rev[ision] of any of our software, all I had to do was set it up on their machine."

The Toolwire system helps Xilinx maximize the amount of training they can deliver, while minimizing infrastructure requirements. Xilinx has doubled its initial goal, quadrupling the number of people they train—from 2,500 to 10,000 per year—at a time when the rest of the electronics design automation tools market has scaled back training by approximately 40 percent. Xilinx went from training in a handful of company-owned facilities and customer sites, to 70+ pre-qualified locations in North America alone.

Before Toolwire, 50 percent of the Xilinx market was untapped because of travel logistics and expense. Now there's no need to travel, no prohibitive travel expense; therefore, many more users are going to training.

Xilinx used to take several weeks from the time a customer requested training to delivering the training. With Toolwire, this timeframe was reduced to as little as one day. Time to training delivery from point of customer demand has been reduced by several weeks on average and proximity to customer locations has increased significantly. This has enabled the company's Education Services business unit to increase revenues by adding more customers.

To experience the Toolwire difference visit www.toolwire.com or just call toll free at 866.935.8665