

## Cisco Catalyst 4500E Series Switches

Cisco's new Catalyst 4500E Series Switches are the leading switches for borderless access and price/performance distribution deployments. They are already transforming campus switching for customers in financial services, education, telecommunications and more. The continuous support of our customers is the best demonstration of the quality of our switches.

### Catalyst 4500E with Supervisor Engine 8-E

The Cisco Catalyst 4500E Supervisor 8-E delivers Cisco Unified Access on the world's most widely deployed modular access switch - Cisco Catalyst 4500E. It brings the best of wired and wireless technologies together while preserving investment on existing wired infrastructure. It supports full wireless LAN controller functionality and common features across wired and wireless networks. Read what some of our customers say about the Supervisor 8-E:

"NHS Greater Glasgow and Clyde (GG&C) are building one of Europe's largest new hospitals and we have chosen Cisco Catalyst 4500 switches for the LAN access layer. The Catalyst 4500 switches will be deployed with the latest generation of supervisor modules, the SUP8E. The capabilities within the SUP8E will allow us to explore the convergence of wired and wireless traffic, gives us greater application visibility and provide the performance we require for instant access to huge medical images from anywhere across our hospital campus. The Catalyst 4500 switches will also provide high levels of resilience and availability, which are key in an acute hospital environment providing services 24/7."

- Calum Morrison, Network Manager

"Citrix Systems - Online Services Division. The Online Services Division of Citrix provides cloud-based collaboration solutions to help customers save time, get more done and connect to others around the world. We have evaluated the Cisco Unified Access solution including the new Catalyst 4500 Series Switches with Supervisor Engine 8-E, Catalyst 3850 Series Switches, Energywise, Cisco Identity Services Engine, and Cisco Prime Infrastructure. These advanced products and technologies can help us build our state-of-the-art campus and accelerate our business goals with robust and converged wired and wireless access, consistent policies and centralized management while providing investment protection for our existing Cisco infrastructure."

- Anshuman Kanwar, Director of Services Operations

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“SCL is building new Saint Joseph Facility Hospital and has chosen Cisco Catalyst 4500e with Supervisor 8 engine for their access layer connectivity. Wireless is a very important and growing part of SCL networks as they provide more mobile, continuous patient care across a large divers facility. The Sup-8 gives us QoS, Flexible Netflow, Medianet for wireless at improved wireless bandwidth and scale across the network. The SCL network must be able to provide patient safety, patient care, in a stable failover environment that reduces downtimes, vulnerabilities, and data loss. Access to the patients EMR is a critical part of supplying services thus choosing the Sup-8 was in part due to its ability to offer a more fault tolerant, manageable, network. The Sup-8 gives SCL exactly these advantages making network anomalies less impactful. Maintaining a more resilient network makes the TCO more desirable by utilizing staff more effectively, having more cost effective maintenance plans, and reducing revenue loss during times of outages.”

- Noel Hover, Network Infrastructure Design & Architecture Engineering

### Catalyst 4500E with Supervisor Engine 7-E

The Supervisor Engine 7-E delivers on four fronts: high availability and reliability, energy efficiency and flexibility, and security with deep-packet inspection delivered with Flexible NetFlow, and superior services to drive new services to enterprise customers.

#### Highly Available and Reliable Network Services

Continental AG, one of the largest automotive suppliers in the world leverages a highly available and flexible network infrastructure to solve business challenges in a global environment. Supporting effective and efficient usage of the installed equipment through easy integration of new technologies and services is the basis for a sustainable IT infrastructure.

“With the Supervisor Engine 7-E based Catalyst 4500E, Cisco provides a scalable switching and routing platform for all layers of our network design - LAN edge, distribution and core. This flexibility enables seamless transition within growing network environments. With VSS capability it is now possible to operate the network without spanning tree and enables the virtualization of two physically separate chassis into a single logical entity for simplified configuration, management, network design and packet forwarding. This will meet our demand for highly available network services while increasing the total performance of the system. The platform also provides high investment protection with support for evolving edge security requirements through Cisco TrustSec and IPv6 First Hop Security.”

- Thomas Schmidt, Corporate Infrastructure Strategy, Network, Continental AG

“ThyssenKrupp Elevator (CENE) Infrastruktur GmbH relies on IT infrastructure to deliver competitive advantage by supporting the company's business objectives. Towards this end, we evaluated Cisco Catalyst 4500E, and decided to deploy it in our mission critical infrastructure.

The Cisco Catalyst 4500E with Supervisor Engine 7-E was an easy choice for upgrading our campus network in one of our main factory locations. Virtual Switching System (VSS) on Catalyst 4500E adds high-availability, fast convergence and a reduction in network management overhead. The VSS capability also brings us in position to get a smooth migration in our access layer. Future demands such as VDI and Video can be easily deployed on this platform with capabilities such as Cisco UPOE. Additional features such as Cisco EnergyWise will help us further reduce costs while meeting corporate sustainability mandates.”

- Philipp Neidlein, Senior Network Engineer (CCIE #32305), ThyssenKrupp Elevator (CENE) Infrastruktur GmbH

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"Nebraska's largest electric utility customers depend on us for reliable service. Cisco Catalyst 4500E Switches with Supervisor Engine 7L-E form the foundation of our campus access network because the modular chassis offers exceptional high availability, industry leading innovations around Application Visibility (Flexible NetFlow), and energy efficiency (EEE). The In-Service Software Upgrade (ISSU) technology, integrated Wireshark, and additional SPAN ports minimizes maintenance downtime for greater efficiency, cost savings, and improved service delivery. Support of higher bandwidths for current and future data and video needs was an important consideration for us, and we recognized that Supervisor 7L-E will enhance our capabilities to support employee and contractor collaboration at the desktop with minimal network impact in the access to aggregation network connections."

- Matt Schnell, Telecommunications Supervisor, Nebraska Public Power District

"Beijing General Research Institute of Mining and Metallurgy has long been a proponent of a resilient and intelligent IT infrastructure. Cisco's new Catalyst 4500E switches, which we deployed for campus access, deliver enterprise-class reliability even in our challenging closet environment with high operating temperatures. They enable faster deployment of new business applications with intelligent features such as PoEP, EnergyWise and Auto Smartports."

- Xiuli Fan, Director of IT, Beijing General Research Institute of Mining and Metallurgy

"Cisco's new Catalyst 4500E with Supervisor 7-E delivers on our need for maximum uptime for IP telephony infrastructure with unmatched In Service Software Upgrade capabilities. Flexible NetFlow with Embedded Event Manager integration provides deep application visibility and optimization with no performance overhead. We have been using the Catalyst 4500 platform for a number of years, and Cisco is continuing its tradition of making the new products backward-compatible, which protects our existing investments on this platform."

- William Moran, Network Engineering Lead, California State University, Northridge

### **Energy Efficiency and Flexibility**

"We are upgrading our campus access networking infrastructure to Cisco Catalyst 4500E Supervisor Engine 7L-E. We chose this platform because it provides integrated Layer 3 routing capability, advanced troubleshooting with Wireshark, and application visibility with Flexible NetFlow. Additionally, the modular chassis provides superior power efficiency and power management capabilities compared to our previous implementation. UPOE support on the platform will enable us to future-proof our network for VDI."

- Kevin McNamara, Director of Instructional & Support Technology, Canandaigua City School District, NY

"As a provider of 24/7 technical support attending to tens of thousands of calls daily from consumers and small businesses worldwide, iYogi requires a network with high performance and high availability. Cisco Catalyst 4500E Switches provide us a resilient foundation, and the integrated UPOE (Universal Power Over Ethernet) technology offers 60W of power for valuable redundancy in the wiring closet. As we expand our operations in India to handle larger call volume, UPOE gives us the flexibility to reduce energy consumption even as we power new virtual desktop clients with UPOE. We are saving both time and money by avoiding laying additional cables to each virtual desktop client, leading to an overall reduction in our total cost of ownership (TCO)."

- Sarvesh Goorha, Member of the Board of Directors and Group CIO, iYogi Technical Services Pvt. Limited, India

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"We are exploring how to maximize our efficiencies in energy utilization, while minimizing the university's overall energy costs. Because of this, we are looking to deploy the new Cisco Unified Communications network powered by Cisco Universal Power Over Ethernet (Cisco UPOE) which will provide us with the most comprehensive support for the power requirements of wide range of client devices we manage. The Cisco Catalyst 4500E Series offers scalability and brings value to our organization, as we can take advantage of the benefits of lower energy costs with Cisco EnergyWise. With this functionality, we can add high-bandwidth trunks where and when needed, and still meet our energy-reduction goals."

- Ed Mahon, Vice President for Information Services and CIO, Kent State University

"As a global leader in offering IP technology and domain expertise to create and operate technology centric, next generation financial markets for multi-asset class spanning across the pre-trade, trade and post-trade transaction lifecycle, Financial Technologies is looking forward to evaluating Cisco's Universal Power Over Ethernet solution to bring network power resiliency and comprehensive power management to our virtual desktop and trading floor deployments. This will also help us to power the new breed of video devices such as Personal TelePresence. Cisco's UPOE will enable an 'always-on' infrastructure for our organization."

- Neehar Pathare, AVP IT, Financial Technologies (India) Limited

"As one of China's leading Internet gaming developers and providers, Perfect World requires a high performance, secure, green and intelligent network to meet customer demand. We have standardized on Cisco Catalyst 4500E because it delivers on all these requirements. The workspace environment of Perfect World is experiencing tremendous growth in the number of PoE devices. Cisco Catalyst 4500 PoE+ technology provides compelling PoE+ port density and reliable network power. Moreover, the new Cisco UPOE technology on this platform will greatly simplify our virtual desktop and personal video conferencing deployments. Together with Cisco EnergyWise, UPOE can help us achieve our energy efficiency and green workspace goals."

- Bryan Huang, VP, Beijing Perfect World Software Co. Ltd.

"Cisco Catalyst 4500E Supervisor Engine 7-E is our strategic switching platform of choice for our medium to large access aggregation points. It provides us with compelling return on investment and low operating expense. It also provides the high levels of resiliency, security and scalability needed to deliver enterprise wide mission critical services. Features such as ISSU, PoE+, 802.1x, EnergyWise, and Smartports along with increased bandwidth and switching capacity make the decision to use this platform an easy one. Given our future plans for VDI deployment along with plans to expand our VoIP and our TelePresence deployments, Cisco's UPOE has the potential to lower our costs dramatically. We could potentially lower electrical wiring costs in new construction or renovations, while lowering overall energy costs by using Cisco UPOE in conjunction with Cisco EnergyWise."

- Ryan Nobrega, Director of Enterprise Systems and Infrastructure, Connecticut State University

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### **Security and Deep-Packet Inspection with Flexible NetFlow**

"When Mount Olive College decided to refresh its entire network infrastructure, one of the top priorities of the network team was to select a core that would give us the ability to accurately characterize traffic patterns. We selected Cisco's Catalyst 4500E with Supervisor Engine 7-E because Flexible NetFlow gives our team the ability to deeply monitor packets. NetFlow has definitely helped us effectively identify and troubleshoot anomalies, analyze the network impact of deploying new applications, and validate our QoS parameters for VOIP."

- Kenneth M Davis, Jr., Director of Technology (Chief Information Officer), Mount Olive College

"Man has chosen the Cisco Catalyst 4500E Supervisor 7-E as the strategic Campus Switching platform of choice for our medium to large office locations. New features such as Flexible NetFlow will give our Operations team an insight into the use of the network at the edge that previously was not possible. During testing we have been particularly impressed with both the performance and reliability of the ISSU feature, as well as the maturity and flexibility of the 802.1x feature set. We also believe that the exponential increase in hardware resources from previous models within this platform provides the ability to support new features in the future and offers excellent investment protection."

- Steve Brookman, Global Head of Communications, Man Investments

### **Performance to Drive New Services to Enterprise Customers**

"Raiffeisen Bank demands efficiency, performance and resiliency from its IT infrastructure. Cisco's new Catalyst 4500E with Supervisor 7-E fits the bill, and will be our strategic Enterprise-class switch for end-to-end campus deployments. Catalyst 4500E helps us lower total cost of ownership with unmatched capabilities such as single software train, common sparing and EnergyWise. With more than 2.6x the bandwidth of the previous generation, we can deploy more applications in the same space and power envelope. Flexible NetFlow provides deep application visibility, which helps us optimize applications. The built-in redundant components and In-Service Software Upgrades make this a true enterprise-class switch."

- Adrian Vlada, Team Leader Network Infrastructure, Raiffeisen Bank Romania

"Swisscom looks at its network infrastructure as a competitive differentiator to drive new services for its subscribers. We evaluated Cisco's new Catalyst 4500E switches with Supervisor 7-E and are excited about the performance, resiliency, and control of this platform. 4-port 10GE uplinks, and 48Gbps/slot bandwidth will help us in fulfilling the increasing demand for bandwidth. The increased port density lowers our operational costs. In Service Software Upgrades will help us keep the network running while doing upgrades."

- Matthias Nyffeler, Senior Technical Platform Manager, Martin Gysi, Senior Network Development Engineer, Swisscom



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Cisco Systems, Inc.  
San Jose, CA

Asia Pacific Headquarters  
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