



Cisco ONE Software Delivers Better Business Outcomes

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Executive Summary

Digitization has transformed almost every part of the IT ecosystem and shifted the role of the network from being a tactical resource used for ad hoc connectivity to becoming a strategic enabler of business change. The changing nature of the network has created the need for a new, agile network infrastructure—one that is simple to purchase and manage, and one that enables customers to add new features or upgrade platforms without having to deal with huge “spikes” in network spending.

Cisco ONE Software provides a flexible way for customers to buy software for their wide area networks (WANs), access networks and data centers. It improves the procurement and management of the network devices and software at each phase of the product lifecycle by decoupling the acquisition of network software from the underlying hardware.

This paper investigates the total cost of ownership (TCO) for network infrastructure using a traditional “à la carte” acquisition model and compares it to the Cisco ONE Software model for multiple scenarios.

The following costs/returns are used in the models:

- Up-front cost of acquisition
- Ongoing technical support service
- Ongoing acquisition of new capabilities
- Device refresh costs
- Savings from the key underlying technology (where applicable)

Exhibit 1 presents the results for the different scenarios.

In every case, the Cisco ONE Software model realizes a double-digit savings over the traditional à la carte model—from 10.15% to 55.50%. Cisco ONE Software has been able to deliver that savings due to “better together” pricing, access to ongoing innovation and software license portability. It is the right purchasing model for today’s digital era because it helps customers better manage their network. Cisco ONE Software enables businesses to purchase the software capabilities necessary to address their needs today and offers them investment protection in the future.

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Exhibit 1: TCO Comparison of Traditional Purchasing vs. Cisco ONE Software

SCENARIO	TCO LENGTH	À LA CARTE	CISCO ONE	SAVINGS FROM CISCO ONE
50-Site WAN – Cisco Traditional vs. Cisco ONE	6 years	\$3,100,700	\$2,815,000	10.15%
1,000-Access Point Wireless Network Cisco Traditional vs. Cisco ONE	5 years	\$671,035	\$501,285	25.30%
30-Server Data Center Enterprise Cloud Suite	4 years	\$822,600	\$366,060	55.50%

Source: ZK Research, 2015

Introduction: It’s Time for a New Network Software Model

Today, the networking industry finds itself in the midst of a major revolution. The digital business era is being driven by several megatrends including mobility, cloud computing and the Internet of Things (IoT). These trends shift IT from being compute centric to being network centric (Exhibit 2), which increases the value of the network. In fact, the

network will ultimately determine the success or failure of these network-centric transformations. For example, businesses will spend more than \$50 billion on cloud services in 2015, according to the ZK Research 2015 Global Cloud Forecast, but the network almost exclusively determines the performance of cloud-based applications. The network should now be considered a strategic business enabler rather than a tactical, best-effort resource.

Exhibit 2: Digital Transformation Shifts the Role of the Network

ERA	MAINFRAME	CLIENT/SERVER	INTERNET	DIGITAL
Connected Endpoints	Thousands	Hundreds of thousands	Millions	Billions
Management of Network	Simple	Low complexity	Moderate complexity	Highly complex
Role of Network	Direct connections	Basic connectivity	Intelligent connectivity	Business enabler

Source: ZK Research, 2015

Businesses will spend more than \$50 billion on cloud services in 2015, according to the ZK Research 2015 Global Cloud Forecast, but the network almost exclusively determines the performance of cloud-based applications. The network should now be considered a strategic business enabler rather than a tactical, best-effort resource.

As today's networks have grown in importance, they have had to take on an increased level of functionality. This has driven up the complexity of buying, deploying and managing the software needed to run a network. The digital era requires the network to become a dynamic, agile resource.

The process of managing network software is plagued with the following issues:

- **Complexity of ordering and managing licenses:** IT organizations buy, manage and upgrade hundreds or even thousands of separate software licenses. This makes ongoing management extremely challenging. Also, the wide variety of network software features are typically sold à la carte, meaning customers must determine the right set of features for every point in the network. This can lead to inconsistent features across the network, which can be particularly problematic when implementing features network-wide to optimize application traffic or secure the network.
- **Lack of software agility:** Typically, each network device has its own software license, meaning the software is tied to the hardware and is not portable. Because of this, when the hardware is upgraded, a new software stack is purchased. Historically, most organizations ZK Research interviewed regarding this issue chose to delay upgrades—but they expressed concern that doing so could cause businesses to miss out

on new opportunities in this digital era, in which speed and agility create competitive advantage.

- **Lumpy IT spending patterns:** The periodic refresh of network infrastructure leads to spikes in capital expenditures. This makes IT budgets difficult for the business to plan, as network spending is highly inconsistent.

A new software model for the network is required if organizations are to become agile entities, capitalize on digital transformation and leapfrog the competition.

Section II: Introducing Cisco ONE Software

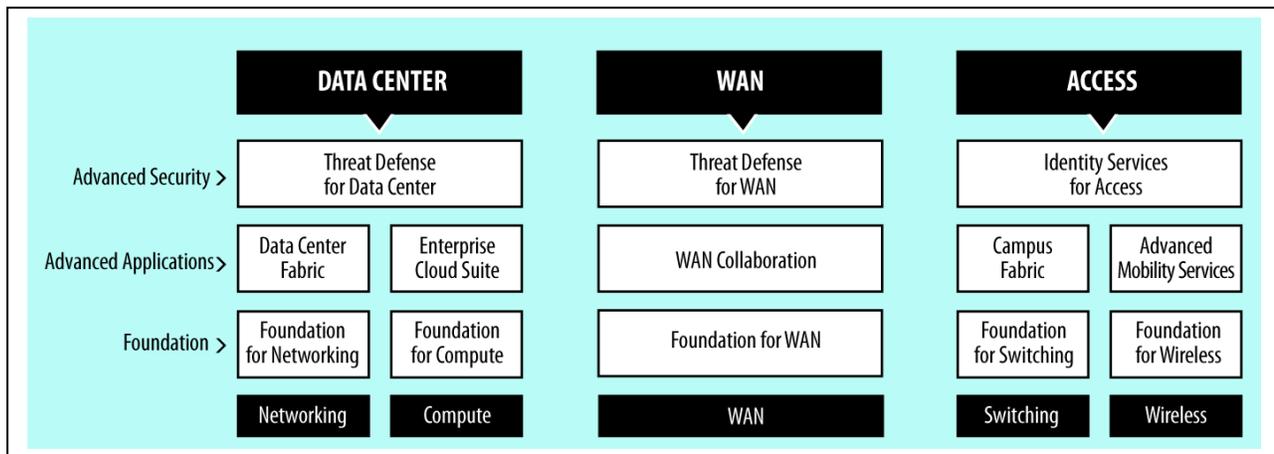
Cisco ONE Software provides a flexible way for customers to buy software for their data centers, WANs and access networks. It improves the procurement and management of the network software at each phase of the product lifecycle. This model decouples the acquisition of the software from that of the underlying hardware platforms.

Cisco ONE Software simplifies network management by enabling customers to buy all the feature licenses in one package and then turn on what is required when needed. It offers a greater value to customers through reduced complexity, investment protection, ongoing innovation and flexible buying models.

Cisco ONE Software is organized into three distinct domains: Data Center, WAN and Access. Each is available in three different feature sets: Foundation, Advanced Applications and Advanced Security (Exhibit 3).

Cisco ONE Software provides solutions to the most relevant use cases such as unified access, intelligent WAN and next-generation branches. Cisco ONE's Software Support Service gives customers benefits such as access to software upgrades, new features and capabilities, and license portability. With license portability, customers can refresh their network hardware and port Cisco ONE Software to the new hardware without having to purchase the same software licenses again. Details of Cisco ONE Software for the different domains can be found at www.cisco.com/go/one.

Exhibit 3: Cisco ONE Software Provides Breadth and Depth to Customers



Source: ZK Research, 2015

Section III: Quantifying the Benefits of Cisco ONE Software

This section focuses on quantifying the cost/ROI¹ of Cisco ONE Software using some examples comparing traditional software models and Cisco ONE Software for wireless access, WAN and the data center. We use the following costs/returns in our models:

- Up-front cost of acquisition
- Ongoing technical support service
- Ongoing acquisition of new capabilities
- Device refresh costs
- Savings from the key underlying technology (where applicable)

Also, list prices were used to calculate the TCO comparisons.

Cisco ONE for WAN

For the WAN, this paper compares the cost of an à la carte purchase of 50 Cisco ISR 4451 routers with AX bundle versus the same purchase of 50 routers made with Cisco ONE Software.

Exhibit 4A shows the details of the 50-site WAN purchase and features included with a traditional purchasing model (AX bundle) compared to Cisco ONE. The exhibit shows that the Cisco ONE Software model provides more value by offering a comprehensive set of features for the branch WAN.

As examples, Prime and vNAM provide network lifecycle management, service assurance, visibility and analytics. EnergyWise helps reduce the energy costs of connected devices, and vWAAS optimizes WAN bandwidth for virtualized environments. When purchased à la carte, all these features would cost more.

Typically, most customers refresh their WAN infrastructure on a five-year cycle. The price comparison has been extended through one full replacement cycle to compare the year-over-year TCO. The model also assumes a scenario where the organization adds a new WAN feature or application in Years 1, 3 and 5. One example of a new feature is the Intelligent WAN (IWAN) Application for the Application Policy Infrastructure Controller - Enterprise Module (APIC-EM). The average cost of new WAN features is \$600 per device or \$30,000 for all 50 devices, so this price was carried through the model. Exhibit 4B shows the detailed TCO comparison.

Cisco ONE Software gives customers access to ongoing innovation such as the IWAN App, part of Foundation for WAN, that automates IWAN deployment.

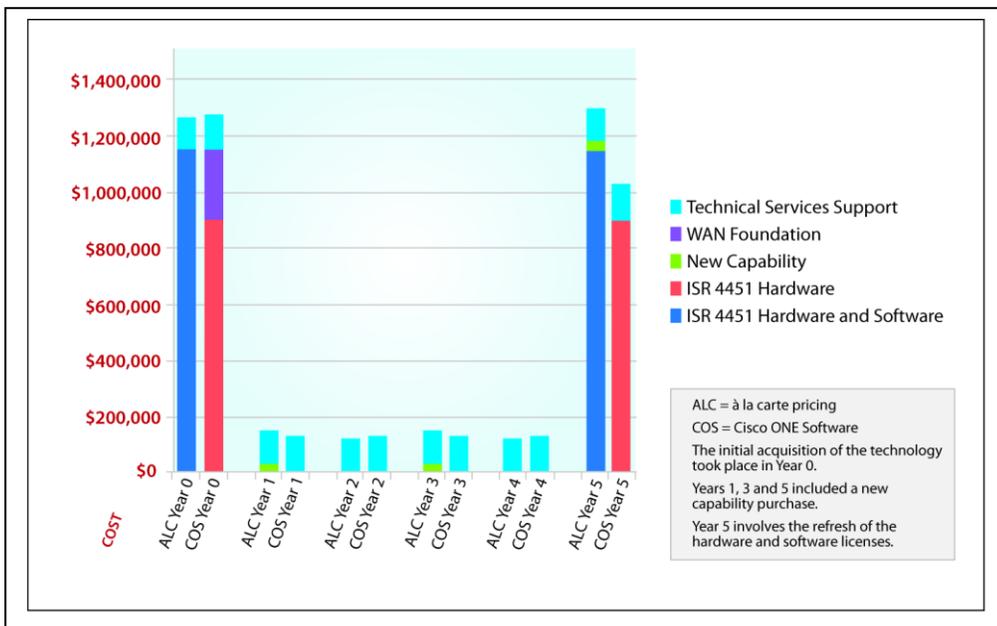
¹ Some of the ROI numbers may vary depending on the actual costs incurred by the customer.

Exhibit 4A: ISR 4451 AX Bundle vs. Cisco ONE Foundation for WAN

PRODUCT	TRADITIONAL MODEL (AX BUNDLE)	CISCO ONE
AppX License	✓	✓
Security License	✓	✓
Wide Area Application Services (WAAS) for 2,500 Connections	✓	✓
Virtual Wide Area Application Services (vWAAS) for 1,300 Connections		✓
Prime Infrastructure for Lifecycle and Assurance		✓
Virtual Network Analysis Module (vNAM) Software 6.0 and 150 Mbps License		✓
EnergyWise Management - 200 End Points		✓
Connected Analytics Network Deployment - 1 Device License, 1 Year		✓
Unit Price	\$23,000	\$23,000
Products Subtotal for 50 Routers	\$1,150,000	\$1,150,000
Technical Services Support (Unit Price)	\$2,369	\$2,550
Total Technical Services Support for 50 Routers	\$118,450	\$127,500
Total Hardware, Software and Support	\$1,268,450	\$1,277,500

Source: ZK Research, 2015

Exhibit 4B: Year-over-Year Spending Comparing à la Carte Purchasing to Cisco ONE Software for WAN



Source: ZK Research, 2015

Cisco's Intelligent WAN (IWAN)

Cisco's IWAN provides significant cost savings and should be at the top of every IT and business leader's priority list. For example, consider a business with 50 WAN branch locations, each with dual MPLS circuits. Based on ZK Research's 2015 WAN Survey, the average cost of an MPLS WAN connection is \$975 per location, whereas the average cost of a business-class Internet connection is \$485. If the customer chose to use a consumer-grade broadband service, the price of Internet connectivity would fall to less than \$100 per month.

Using the business-class pricing, Exhibit 4C shows the savings gained by evolving to IWAN, where one MPLS connection would be deployed for mission-critical traffic and the second replaced with an Internet connection for best-effort traffic.

The exhibit shows the difference between a configuration for dual MPLS connections for all 50 branches compared to a configuration that has 25 branches with dual Internet connections and 25 with one Internet and one MPLS connection. The savings from moving to a hybrid WAN enabled by IWAN is \$8,820 per month. This would be even higher if the business used an all-Internet WAN.

Exhibit 4C: Cisco IWAN Hybrid WAN vs. MPLS Deployment

NUMBER OF SITES	AVERAGE MPLS COST/ MONTH	AVERAGE INTERNET COST/ MONTH	
50	\$975		
		Monthly	Annual
Total Cost per Branch for Dual MPLS for 50 Locations		\$97,500	\$1,170,000
Total Cost for Dual Internet Connections in 25 Locations, and 1 MPLS and 1 Internet Connection in 25 Locations		\$60,750	\$729,000
Total Savings with IWAN		\$36,750	\$441,000
Total Savings per Site		\$735	\$8,820

Source: ZK Research, 2015

In Year 0, Cisco ONE Software is at a slight premium, but in every subsequent year, it provides a savings to the customer. The cumulative spend over the six years (Year 0 plus five years) for Cisco ONE Software is \$2,815,000—a 10.15% savings over the \$3,100,700 for the à la carte purchasing method. License portability lowers the cost of refresh because the same Cisco ONE licenses can be ported over to the new hardware, thus realizing the savings in Year 5.

As the sidebar discussion on the previous page shows, Cisco ONE also provides a more financially efficient path to Cisco’s Intelligent WAN, which enables businesses to shift to an Internet or hybrid WAN architecture. Because the software needed to make the transition to IWAN is included, organizations can move to this next-generation WAN model as aggressively as necessary without the financial concerns that may arise with traditional software models.

Looking Ahead at the Future of the WAN

The WAN is constantly evolving, and businesses need the ability to quickly add new features to optimize and secure the environment as things change. The Cisco ONE Software model supports the WAN solution journey without the customer having to incur significant upgrade costs in the future (Exhibit 4D).

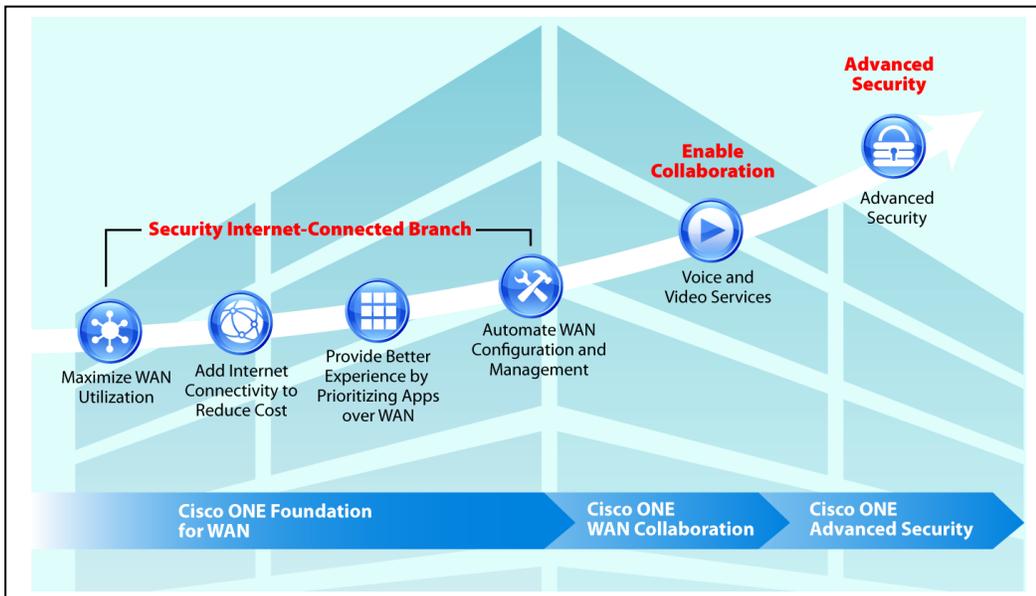
Cisco ONE for Wireless

This scenario profiles the deployment of a Cisco wireless access network using a Cisco 8500 Wireless Controller for 1,000 access points (APs) with traditional à la carte pricing and Cisco ONE Software over a four-year refresh cycle with a five-year TCO comparison.

Exhibit 5A shows the initial acquisition cost for the wireless deployment using à la carte pricing and Cisco ONE Software. At acquisition time, the Cisco ONE price is higher than the à la carte price, but Cisco ONE comes with many additional features not found in the traditional purchasing model. The Prime Infrastructure Device License and Cisco Identity Services Engine (ISE) can help organizations better manage, optimize and secure the wireless network. These alone can add tens of thousands of dollars to the cost if purchased independently. Mobility Services Engine Base offers location tracking for wireless devices. In sum, Cisco ONE Foundation for Wireless has the features to connect, secure and manage a business-class Wi-Fi network.

The average upgrade time for wireless infrastructure is typically four years. Because of this, the TCO study was done over a five-year time frame (Years 0 through 4), with the equipment refreshed at the four-year mark. Exhibit 5B shows the year-over-year comparison of an à la carte purchasing model compared to Cisco ONE Software.

Exhibit 4D: The Ongoing WAN Journey



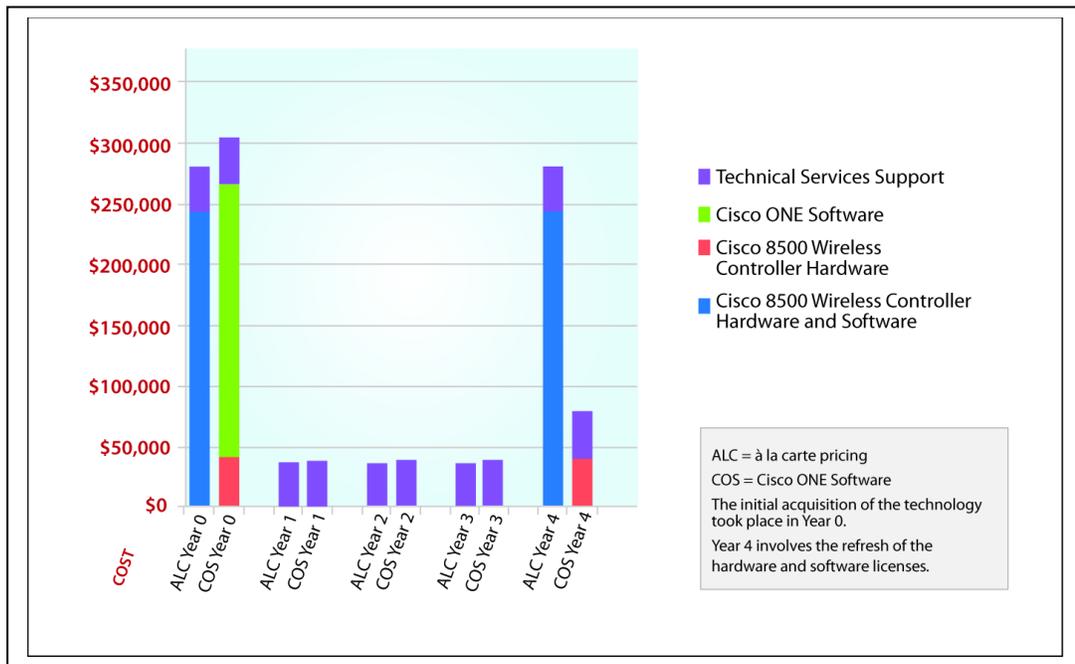
Source: ZK Research, 2015

Exhibit 5A: Traditional vs. Cisco ONE Foundation for Wireless (Configuration to Manage 1,000 Wireless Access Points)

PRODUCT	TRADITIONAL MODEL	CISCO ONE
1,000 Access Point Licenses for Cisco 8500 Wireless Controller	✓	✓
Prime Infrastructure Device License for Lifecycle for WLAN	✓	✓
Prime Infrastructure Device License for Assurance for WLAN		✓
Identity Services Engine 25 End Point Base License		✓
Mobility Services Engine Base Location		✓
Connected Analytics Net Deployment - 1 Device License, 1 Year		✓
Products Subtotal	\$244,095	\$265,095
Technical Services Support Subtotal	\$36,569	\$39,219
Total Hardware, Software and Support	\$280,664	\$304,314

Source: ZK Research, 2015

Exhibit 5B: Year-over-Year Spending Comparing the à la Carte Purchasing Method for Cisco Wireless LAN to Cisco ONE Software



Source: ZK Research, 2015

The model shows that the price for Cisco ONE Software is at a slight premium to à la carte purchasing at the time of initial acquisition, and then the cost is similar each year until the upgrade cycle. At Year 4, when new hardware and software is required, Cisco ONE provides a significant price benefit and smoother IT spend because of license portability. The five-year cumulative TCO is shown in Exhibit 5C. Cisco ONE's TCO is \$501,285, which is a 25.3% savings on the \$671,035 cost of à la carte pricing.

Looking Ahead at the Future of Mobility

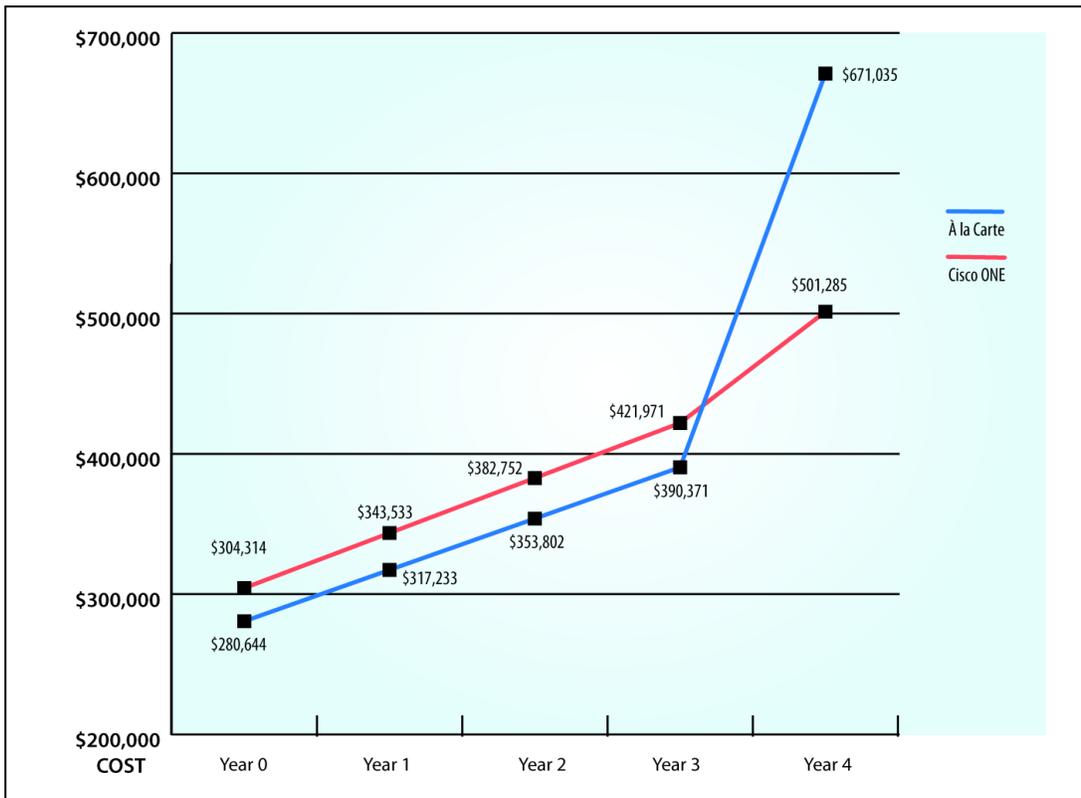
Mobile solutions continue to evolve, and businesses need the ability to quickly add new features to enable a richer mobile experience. The Cisco ONE Software model supports the mobile solution journey without the customer having to incur significant upgrade costs in the future (Exhibit 5D).

Cisco ONE for Data Center Compute

For the data center, this paper compares the traditional à la carte pricing model with that of the Cisco ONE Enterprise Cloud Suite (ECS). Exhibit 6A shows the configuration and initial pricing for 30 Unified Computing System (UCS) servers.

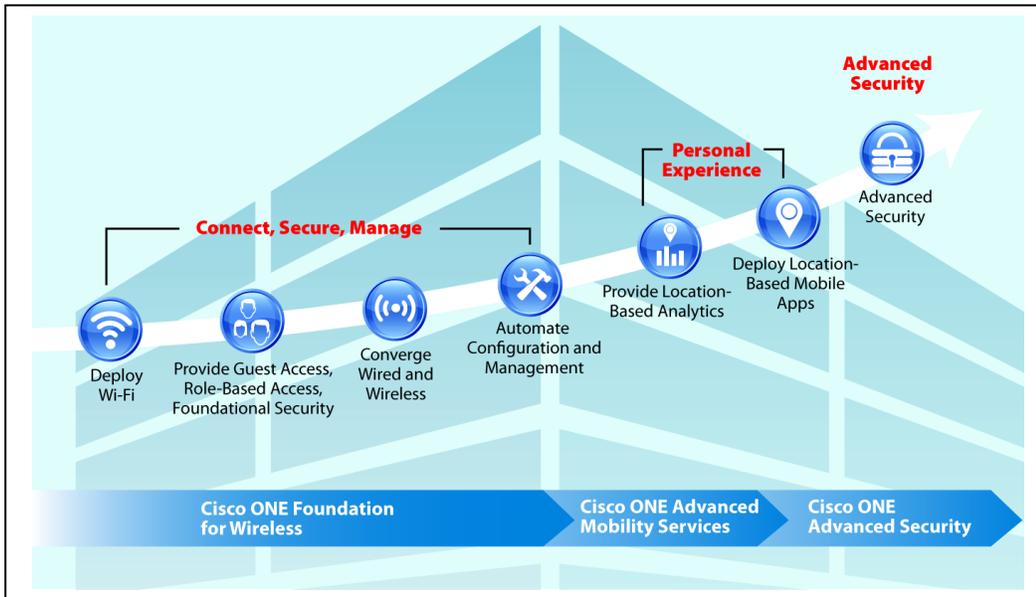
For ECS, the Cisco ONE pricing configuration provides a hefty 47% savings at time of acquisition and includes several additional features, such as Cisco EnergyWise to reduce energy use of connected servers, Virtual Application Container Services for virtual services and workflow automation, and UCS Performance Manager, which will provide even more savings. In essence, Cisco ONE Enterprise Cloud Suite provides all the features necessary for a hybrid-ready private cloud.

Exhibit 5C: Cumulative Cost Comparison of à la Carte Pricing vs. Cisco ONE Software for a Wireless Deployment with 1,000 APs



Source: ZK Research, 2015

Exhibit 5D: The Mobility Solution Journey



Source: ZK Research, 2015

Exhibit 6A: Cisco Traditional vs. Cisco ONE Enterprise Cloud Suite

PRODUCT	TRADITIONAL MODEL	CISCO ONE
Cisco UCS Director (per Server License)	✓	✓
Cisco Intercloud Fabric for Business	✓	✓
Cisco Prime Service Catalog 10.1	✓	✓
Cisco Virtual Application Container Services		✓
Cisco UCS Performance Manager Infrastructure Edition		✓
EnergyWise Management - 200 End Points		✓
Cisco UCS Central (per Server)		✓
Products Subtotal for 30 UCS Director Licenses, 30 Prime Service Catalog Licenses and 120 ICFB Licenses	\$331,000	\$172,500
Technical Services Support Subtotal for 30 UCS Director Licenses, 30 Prime Service Catalog Licenses and 120 ICFB Licenses	\$46,640	\$25,890
Total Hardware, Software and Support	\$377,640	\$198,390

Source: ZK Research, 2015

Exhibit 6B compares the year-over-year price of the two pricing models for a four-year period (Years 0 through 3). The model assumes that at Years 1 and 3, the business chooses to add new features at an average cost of \$3,200 each for the 30 licenses, for a total of \$96,000 in each of the years. Each time services are added, the support costs increase for the à la carte model.

As stated earlier, the initial acquisition price of ECS using Cisco ONE is \$198,390, which is significantly less than the \$377,640 for à la carte pricing. Over the four-year period, the TCO advantage for Cisco ONE increases. At Year 3, the cumulative total for Cisco ONE is \$366,060, which is 55.5% less than the traditional pricing model of \$822,600 (Exhibit 6C).

Looking Ahead to the Future of the Cloud

The cloud is one of the fastest evolving areas in IT today, and businesses need the ability to quickly

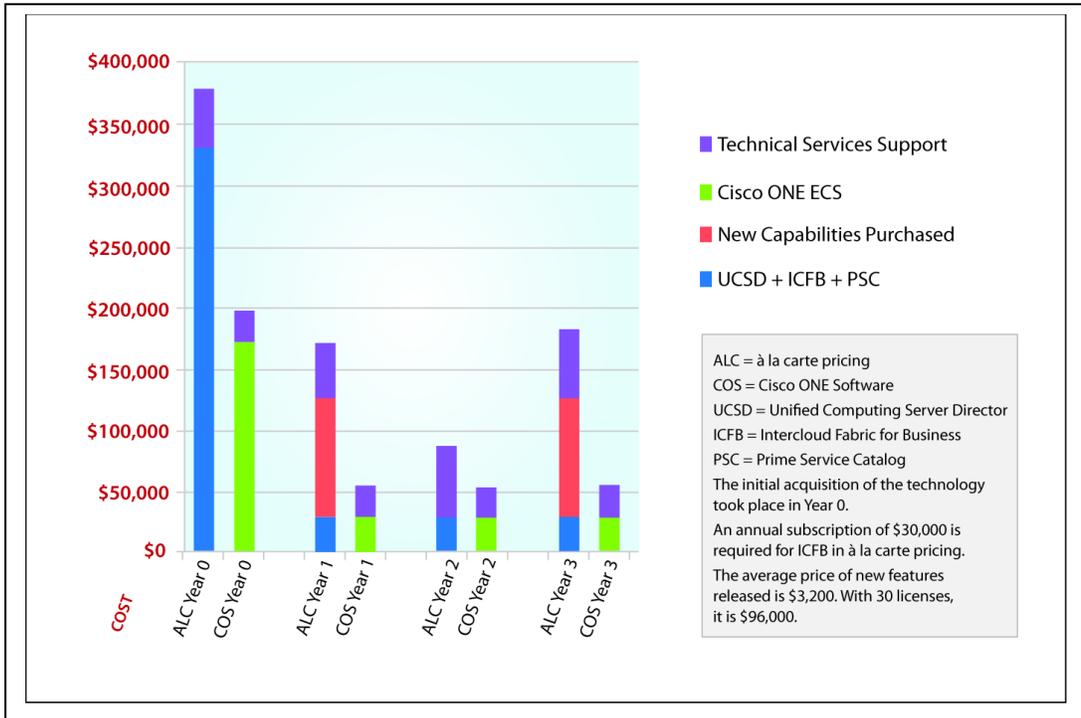
adapt to the changing environment. The Cisco ONE Software model supports the cloud journey without the customer having to incur significant upgrade costs in the future (Exhibit 6D).

Exhibit 7 provides a summary of all the TCO models discussed in this paper.

Cisco ONE Software clearly has a better ROI due to the following capabilities:

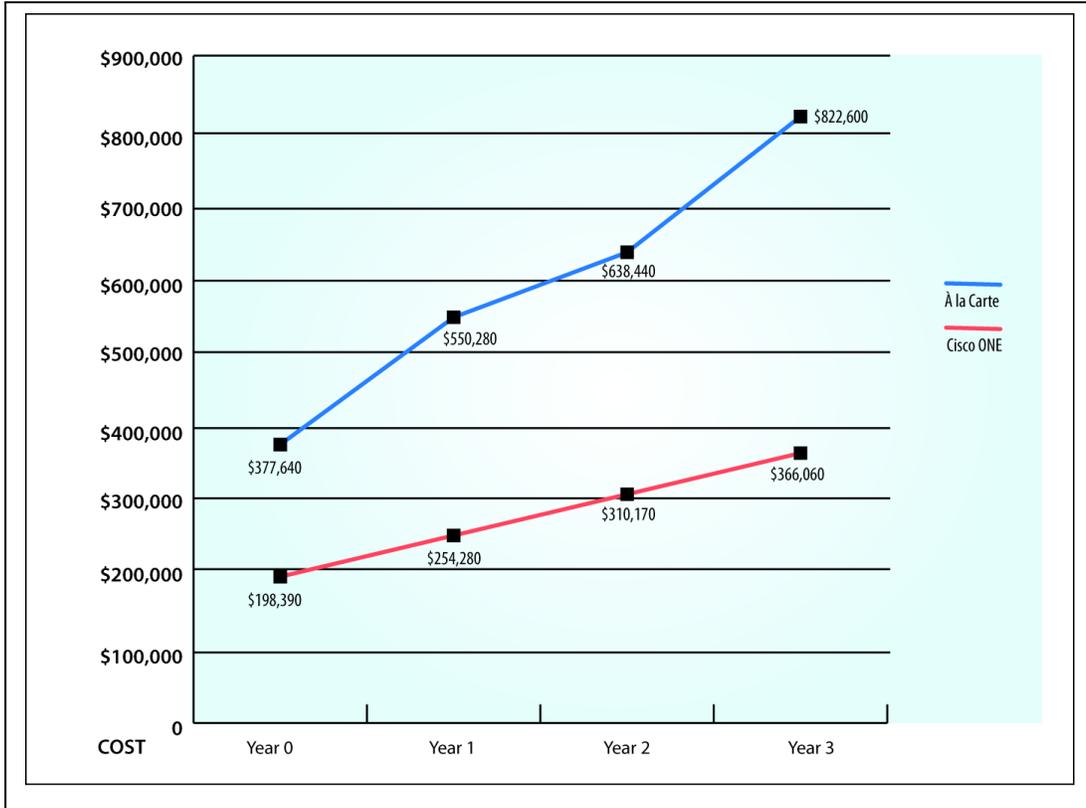
- **Simplicity:** It offers a suite of software features that are simple to purchase and are designed to tackle the most relevant use cases in Data Center, WAN and Access. The foundation provides a consistent set of functionality across the network.

Exhibit 6B: Year-over-Year Spending Comparison of the à la Carte Purchasing Method for Cisco Enterprise Cloud Suite and Cisco ONE Software



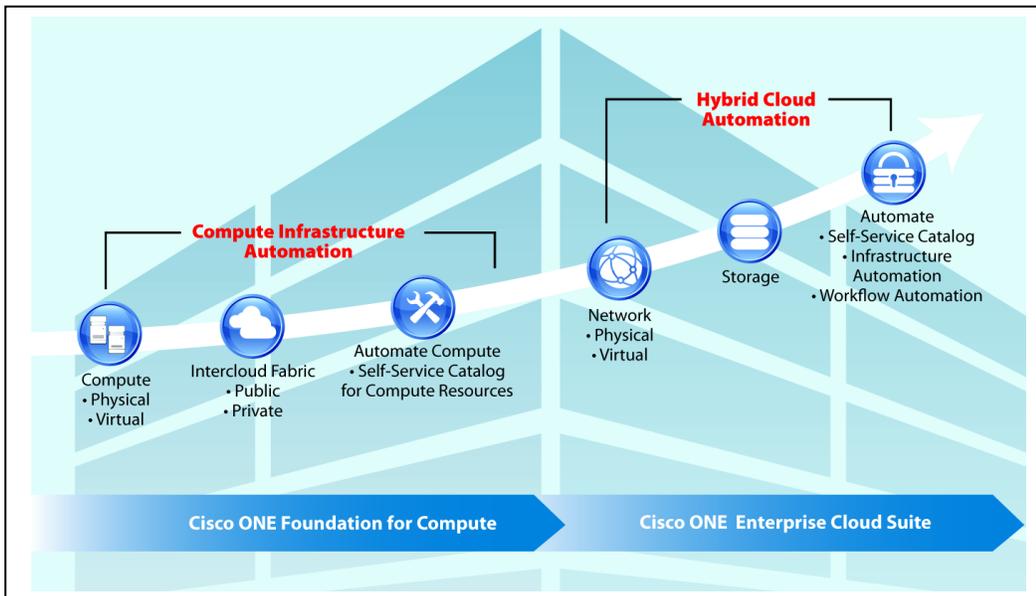
Source: ZK Research, 2015

Exhibit 6C: Cumulative Cost Comparison of à la Carte Pricing vs. Cisco ONE Software for Cisco Enterprise Cloud Suite



Source: ZK Research, 2015

Exhibit 6D: The Cloud Solution Journey



Source: ZK Research, 2015

Exhibit 7: Summary of Traditional Purchasing Method vs. Cisco ONE Software

SCENARIO	TCO LENGTH	À LA CARTE	CISCO ONE	SAVINGS FROM CISCO ONE
Cisco Traditional vs. Cisco ONE WAN	6 years	\$3,100,700	\$2,815,000	10.15%
Cisco Traditional vs. Cisco ONE WLAN	5 years	\$671,035	\$501,285	25.30%
Cisco Traditional vs. Cisco ONE ECS	4 years	\$822,600	\$366,060	55.50%

Source: ZK Research, 2015

- **License portability:** It lowers the network refresh costs by making the software portable to the new hardware.²
- **Access to ongoing innovation:** It offers access to software upgrades and new software features that support the customer's journey in Data Center, WAN and Access.
- **Aligned with business:** It provides a more predictable IT spend through license portability and a subscription buying model, and it makes the network a strategic asset for business growth and innovation.

Section IV: Conclusion and Recommendations

The digital business era is here, putting a premium on business agility. However, businesses are only as agile as their IT infrastructure—and historically, the network has been static and rigid and has caused organizations to miss out on new opportunities. What's required is a new network software model that can better address what businesses need.

Cisco ONE Software helps customers better manage their network by enabling businesses to purchase the right software capabilities to address their needs today while offering investment protection in the future.

The migration to a new network software model should be at the top of every business and IT

leader's priority list. Consequently, ZK Research makes the following recommendations:

- **Consider the network a strategic asset.** IT is shifting to a network-centric model, and the network will ultimately determine the success or failure of initiatives such as cloud computing, mobility and IoT. The network should be thought of as a strategic platform that can be the foundation for competitive advantage.
- **Minimize the number of vendors in the network.** Network complexity is at an all-time high, much of it driven by trying to get point product vendors to interoperate with one another. Businesses should shift to a deployment strategy in which the number of vendors is minimized to improve performance and simplify management. In fact, ZK Research estimates that a single-vendor network can cost up to 35% less to run compared to a mixed environment.
- **Customers should consider Cisco ONE software.** As demonstrated throughout this paper, Cisco ONE provides both cost and innovation advantages over traditional purchasing models. ZK Research believes Cisco ONE Software to be the right network purchasing model for the digital business era.

² Comparable family of hardware