



WHITE PAPER

Driving Better Business Outcomes in the 3rd Platform Era of IT: Cisco's Software Strategy

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IDC OPINION

The world of technology is changing, and Cisco is changing with it. We are well into what IDC refers to as the 3rd Platform of computing, in which cloud, mobile, social, and Big Data are eclipsing the client/server model of distributed computing in the 2nd Platform. In the 3rd Platform, flexibility, adaptability, and user centricity are key. Business models have also shifted to align technology purchases more closely with customer experiences and to support successful business outcomes. This trend has had a strong impact on the software industry, with revenue growth in subscription models outpacing that of perpetual license models. More than 90% of net-new software offerings in 2015 are being built solely for cloud delivery, and the majority of software innovation today is being built into cloud services that extend to mobile devices and offer consumption-based pricing options.

Cisco has historically had a large presence in the software market and is focused on strengthening this presence through investments in software technology and business strategies. To complement its portfolio of technology solutions and help make customers and partners more successful, Cisco is putting software at the heart of its strategy, working to migrate more offerings to the cloud, and adopting a more flexible and open approach to software. IDC believes that Cisco has already made great strides in this transition, with a focus on solutions addressing relevant business problems, improved integration across its software products, and the migration of a significant number of services to the cloud; the challenge is that the market has been slow to recognize this shift within Cisco, with many customers still thinking of Cisco primarily in a hardware context.

Transformations of this nature can require a significant investment in time and resources. Products and technologies must be acquired or developed to fill out the portfolio. Partners must adapt to the new business model. Often a big obstacle is institutional resistance to change, particularly from the sales and product teams. But the benefits to the customer – and ultimately to the entire Cisco ecosystem for building software and bringing new innovation – can be significant. By providing more solution-based offerings, flexible approaches to service offerings, and pricing models in a more user-centric approach, Cisco is positioning itself to recognize greater value and superior differentiation and deliver better business outcomes for its customers.

SITUATION OVERVIEW: CUSTOMER CHALLENGES WITH TRADITIONAL SOFTWARE SOLUTIONS

For years, IDC has been describing a fundamental transformation in the information technology (IT) industry. The previous 2nd Platform model of computing is falling by the wayside; in this model, software is created by publishers, tested and compiled, delivered via channels to customers, deployed in the datacenter, and accessed via client/server computing. Updates happen every 12-24 months and often require a complicated schedule of rollouts that ensure the IT organization would have to support a landscape of different software clients. In its place, the 3rd Platform technologies of cloud, mobile, social, and Big Data are fundamentally breaking this software delivery model while simultaneously providing users with greater flexibility and an improved experience and making it easier for businesses to "rightsize" their investments to suit their needs. Figure 1 illustrates some of the customer challenges associated with traditional software solutions.

FIGURE 1

Customer Challenges with Traditional Software Solutions



Source: IDC, 2015

User Experience

Previous enterprise software and/or hardware solutions, designed for specific use cases, were often closed, regimented, and sometimes inflexible. Captive users had no choice in software, and vendors had relatively low incentive to invest in the user experience. But with the consumerization of IT trend of the past three to four years, employees are now deciding for themselves which devices and applications to use to get their work done – providing them with an improved experience and forcing both IT vendors and enterprise IT departments to adapt.

The result is a shift to better user experience in software development. Ecosystems of developers have emerged that are accessing mobile and cloud platforms and operating systems and building applications and rolling them out – all with an eye to providing a better end-user experience.

More Flexible Licensing and Consumption Models

Another aspect of the current revolution in enterprise software is more flexible licensing and consumption models. The old paradigm in which enterprise software was financed through large, up-front capital expenditures, plus ongoing annual maintenance fees, is being replaced by clear, transparent, and more flexible pay-as-you-go licensing subscription models.

Greater flexibility in software licensing and consumption can add value to the entire hardware/software stack. Life cycles of hardware and software are often different, but it's the software that often adds value in addressing customers' specific use cases. Providing greater flexibility in software ownership and licensing can make it easier for users to scale their solutions to larger hardware deployments or switch to new generations of hardware when the previous generation is phased out. It can also make trying out new solutions less risky and create new buying opportunities for customers that can use operating budgets to acquire software functionality.

Cloud – A Paradigm Shift

These trends of better user experience and more flexible licensing and consumption models are being driven to a large extent by the shift to cloud services. The cloud model has opened customers' eyes to the advantages of flexibility in how they pay for and manage software and can provide granularity so users pay for only what they consume. Likewise, the provider has greater visibility into customer usage and activity and can add or modify functionality to its offering on an ongoing basis, as market needs evolve.

These factors are driving increased demand for software delivered via the cloud. IDC forecasts the market for public cloud alone will grow from \$45.7 billion in 2013 to \$122.1 billion by 2018.

Emergence of the "as a Service" Cloud Model for Infrastructure

As the market gradually embraces the "cloud" and "user experience" market transition, IT organizations are beginning to look more favorably at emerging cloud-managed IT deployment models, which by definition include software infrastructure – on-premises or in the cloud. This applies to various networking technologies and security, as well as the communications and collaboration domains. As an example, early stage deployments of Cisco Meraki, termed by some as "wireless as a service," provided enterprise IT with several benefits, especially in terms of optimizing remote-site rollouts. Relying on a cloud-based platform allowed Cisco to bring forth the choice of an opex option to infrastructure deployments, including LAN, WAN, and security.

In parallel, we are also seeing a similar market transition in the video and unified communications and collaboration (UC&C) market, where several "UC as a service" solutions – cloud managed – are now available.

Cloud-managed IT and networking software bring the usual benefits of embracing cloud services and applications – faster time to market, efficient provisioning and operations, greater flexibility and ability to adapt to changing business applications, and so forth. Specifically, multisite rollouts of network infrastructure, without requiring truck rolls, are a key differentiation of cloud-managed network/IT.

CISCO'S SOFTWARE STRATEGY

Cisco's software strategy is to use software and software-defined solutions to help customers realize more value from their IT investments across their organizations. To achieve this, Cisco is working across its broad portfolio of products including open APIs to support third-party innovation to address customers' business outcomes.

Software Footprint

Cisco's software spans a wide range of offerings, from on-premises solutions to hybrid and public cloud. They include:

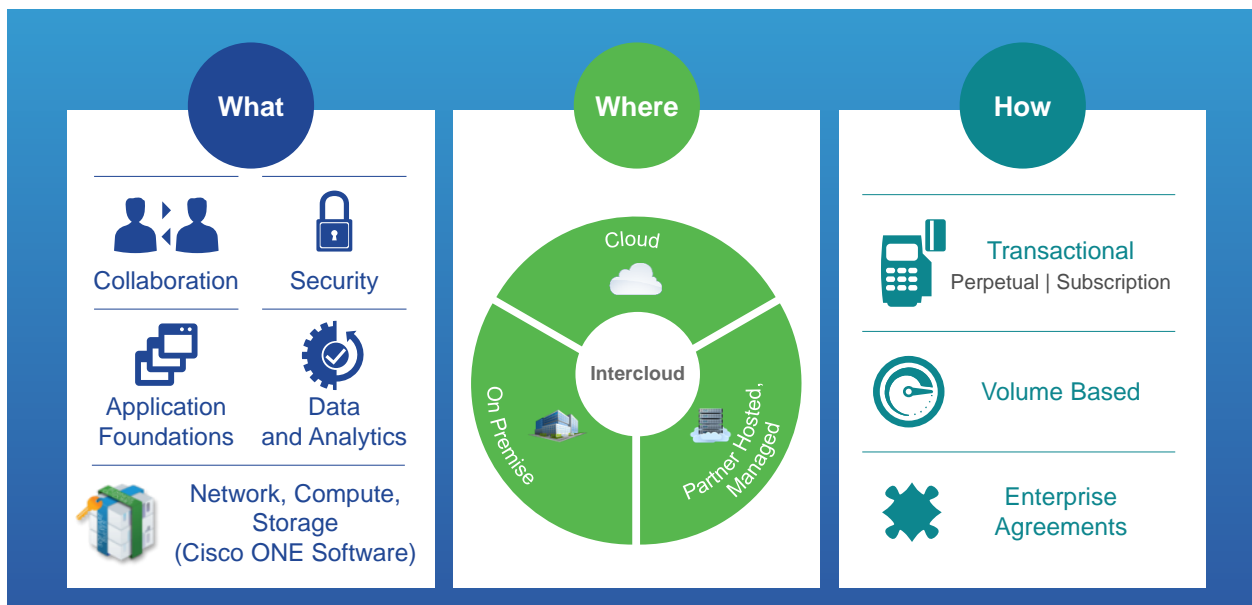
- **System software.** Software that runs on dedicated networking and infrastructure devices; includes software to provide advanced systems capabilities and management (e.g., switch and router software)
- **On-premises (packaged) software.** Standalone software that runs on a server (e.g., collaboration, datacenter management software, and analytics)
- **Hybrid cloud (hybrid SaaS).** Software that has both on-premises and cloud footprints (e.g., Meraki and Sourcefire)
- **Cloud (SaaS).** Cloud-delivered software (e.g., WebEx and Cisco Cloud Web Security [CWS])

Current Software Strategy

Cisco's software strategy encompasses the company's software offerings, deployment models, and buying approaches (see Figure 2). It encompasses infrastructure software with Cisco ONE Software across WAN, Data Center, and Access with network security; collaboration; security; application platforms; and data and analytics. These offerings are available through different deployment models, including on-premises software, public/private/hybrid cloud, and partner-hosted managed services. Finally, Cisco offers multiple ways for customers to buy its software: transactional buy-as-you-go pricing, whether as a perpetual license or through a subscription model, and enterprise licensing agreements (ELAs), which provide flexibility and scale.

FIGURE 2

Cisco Enterprise Software Model



Source: Cisco, 2015

Enabling Cisco's software strategy are four core principles:

- **User experience first.** Breaking from past traditions in which Cisco pursued a technology-centric approach, the company is now committed to a user-centric approach, putting the user experience at the center of everything it does. It is working to provide a simple, consistent, and immersive experience across all of its offerings and to make the experience both cloud and xSP ready.
- **Everything cloud ready.** Cisco is putting its weight behind a cloud-centric model, encompassing virtualized services, cloud management, and Cisco and partner-provided clouds, all backed up by a more agile and open development model. Its goal is to provide cloud offerings tailored to the needs of individual customers through flexible deployment options. It is building out an ecosystem of partners and working to foster innovation through the OpenStack community. Importantly, through Cisco Intercloud, Cisco is providing policy and workload mobility across clouds and hypervisors, thus avoiding cloud provider lock-in. The advantage for customers is mobility across cloud providers, whether for public, private, or hybrid cloud.
- **Simplicity and openness.** Cisco is pursuing greater levels of simplicity and openness by working toward a common policy architecture through ACI. This architecture is application aware, crosses a converged hardware and software environment, and contains integrated security. It enables rapid deployment and flexible scaling to meet customer needs and supports a more consistent user experience. Open APIs support third-party innovation and enable Cisco's ecosystem of hundreds of ISV partners.
- **Consumption flexibility.** Cisco is giving customers the choice to buy and consume infrastructure software that is flexibly tailored to their budget and investment strategy. From on-premises to cloud, Cisco provides offerings via perpetual or subscription models, with an eye toward transparent and portable licensing. Cisco has simplified its infrastructure software with complete software solutions that can be purchased at a lower cost than à la carte offerings. This model provides greater flexibility to customers with the ability to optimize the mix of capital expenditures and operational expenditures or the mix of perpetual and subscription licensing. And software investment protection allows customers to take advantage of software license portability when refreshing hardware and to gain access to ongoing features and upgrades as Cisco rolls them into its software offerings.

Cisco ONE Software

Cisco ONE Software is Cisco's new infrastructure software offering across Data Center, WAN, and Access with network security. Cisco ONE Software is offered in three layers:

- **Foundation.** Cisco ONE Foundation offers consistent foundational networking, security, and systems software for Data Center, WAN, and Access needs.
- **Advanced Applications.** Cisco ONE Advanced Applications provide advanced capabilities including Data Center fabric, Enterprise Cloud Suite, WAN collaboration, campus fabric, and advanced mobility services.
- **Advanced Security.** Advanced Security software typically runs on dedicated appliances and includes threat defense for datacenters and WANs along with identity services for access.

Cisco is also rolling out multiple buying models for Cisco ONE with perpetual and subscription-based transactional pricing.

Cisco enables customers to receive access to ongoing innovation, including all major/minor software upgrades and new capabilities rolled into Cisco ONE. Cisco ONE Software also provides license portability; when customers need to perform a hardware refresh, they simply port their Cisco ONE Software to the new platform.

Cisco ONE Enterprise Cloud Suite

Cisco ONE Enterprise Cloud Suite, a software solution that is part of Cisco ONE for Data Center, makes it easier for organizations to build a hybrid-ready private cloud at their own pace.

Cisco ONE Enterprise Cloud Suite is an engineered modular solution that has a single deployment model and:

- Automates infrastructure and applications provisioning and deployment
- Integrates physical, virtual, cloud, security, and OpenStack infrastructure
- Helps accelerate application development with application developer tools like Stack Designer
- Provides a self-service portal for user, IT, and application developers with built-in analytics

OPPORTUNITIES AND CHALLENGES

IDC sees a number of opportunities and challenges for Cisco as it continues to establish itself as a software-centric company. Opportunities include:

- **Breadth of portfolio.** The sheer breadth of Cisco's software portfolio represents opportunity. From system software to collaboration and analytics, Cisco provides many software-based solutions that can add value for its existing and new customers.
- **Playing a leading role in private and hybrid cloud.** Cisco is operating from a point of strength in creating a service-enabled, subscription-based portfolio to satisfy the needs of its customers. It is leveraging its depth in system infrastructure capabilities to push the boundaries of the hybrid cloud delivery model. While the hybrid cloud market is still relatively new, Cisco is well positioned to play a leading role to help customers implement this "best of all worlds" model – housing those workloads best suited for on-premises deployment behind the firewall while leveraging the scalability and flexibility of cloud deployment where that makes the most sense.
- **Expanding offerings to new types of customers and partners.** New, more flexible, and more granular consumption models open the door for Cisco to attract customers it may not have traditionally appealed to. The traditional target for Cisco has been IT organizations in larger businesses, but Cisco's new model with flexible consumption options makes the company more attractive to smaller to medium-sized businesses that may not have previously been able to justify large capital expenditures. It also better enables Cisco to appeal to lines of business, which are increasingly controlling larger percentages of the IT budget and are looking to cloud models to satisfy their needs.

Challenges include:

- **Market perception and awareness.** Cisco has a long history of leadership in networking hardware – a tradition that continues today. Many customers, industry observers, and even some Cisco ecosystem partners still think of Cisco's strengths as hardware only. It will be a challenge for Cisco to be perceived as a major player in delivering user-centric and IT infrastructure software. Even in areas like conferencing where Cisco is a leader with its WebEx offering, the linkage between the Cisco brand and the separately branded offering may be weak in many customers' minds.
- **Integration of a broad software portfolio.** Cisco has typically added new technologies and products through acquisition; 86 of its acquisitions have been software based. Integrating this broad portfolio into a seamless user experience, with common governance and control models, is another challenge, albeit one that Cisco is actively addressing and improving upon. In fact, IDC notes that the level of integration shown in Cisco offerings has improved greatly, and with continuous investment and focus, Cisco can continue to improve integration.
- **Cultural shifts in the Cisco ecosystem.** Over the past several decades, Cisco has worked to perfect a business model based on integrated hardware and software, and echoes of this model can still be felt throughout its ecosystem. Adding the software-centric strategy in addition to the continuing traditional selling model won't happen overnight. It will require partners to retrain their sales organizations and reeducate their channel partners and customers. There will be a ramp-up period while the market adjusts to Cisco's software-centric strategy.
- **Infrastructure and controls to enable new consumption models.** Enabling the consumption model requires a different set of operational systems and controls to measure, view, and bill for customers' usage. These measurements and controls need to flow into service delivery, support, and billing systems and require a significant amount of investment. Cisco needs to ensure that it is putting into place the technology to provide transparency and control for its new consumption model, both for its customers and for Cisco's internal processes.

IDC GUIDANCE/CONCLUSION

As Cisco transitions to a more software-driven, cloud-centric approach, it not only will be able to provide new opportunities to customers and partners but also will face a new set of challenges. Its new, solution-focused and more flexible model enables customers to buy exactly what they need from Cisco ONE Software while opening new doors and revenue opportunities for Cisco and its partners. But successfully pursuing the strategy will require investment in market education, portfolio integration, and ecosystem partner enablement.

Customers should look to providers with a broad spectrum of capabilities that are committed to flexible, user-centric cloud delivery models. Customers need providers that offer flexibility in their service offerings and pricing, enabling them to get up and running quickly and easily, and provide a low-risk way to change course when needed. Importantly, just as customers don't want to be locked into a particular operating system or brand of infrastructure in their datacenter, the same applies in the cloud. Instead, customers should look for providers that offer the flexibility to change infrastructure stacks as they see fit. Given Cisco's size and position in the market, the company is well equipped to manage the many moving pieces necessary not only to make a transition like this happen but also to bring greater levels of value to customers as it does so.

About IDC

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