PiperJaffray®

INDUSTRY NOTE
January 6, 2015

Technology, Media & Telecom

2015 Piper Jaffray CIO Survey

CONCLUSION

Results from the fourth annual Piper Jaffray CIO survey showed continued expectations for IT spending growth, with 65% of respondents (*from 66% in 2014*) indicating their IT budgets will increase more than 2% in 2015, while only 10% expected a decrease (*from 18% in 2014*). As with 2014, Security remained the least discretionary item in this year's CIO survey, with 75% of respondents expecting to increase spending in 2015, followed by Mobile (62% *increasing*). Throughout the remainder of this report, we will go into greater detail as to the specific ramifications of the survey on the various PJC covered companies and sectors.

- **2015 CIO Survey Demographics** - We surveyed 112 CIOs across 8 different industries. The survey demographic was primarily North American (85%) and ~25% of respondents reported annual IT budgets in excess of $50 million. The Technology, Retail and Restaurant sectors were most represented in our survey, accounting for 47%, 17% and 11% of the total responses respectively.

- **Budget Expectations Point to Improved Spending Environment** - After growing an estimated 2.6% in 2014, up from roughly flat in 2013, we expect global IT spending to continue growing on the heels of GDP growth, low interest rates (relative) and pent up demand. A relatively high 33% of respondents indicated their hardware IT budgets will increase >5% in 2014, compared to 38% and 27% in 2014 and 2013. Meanwhile, Gartner predicts IT spending growth of 3.9% (vs. an estimated 2.6% in '14).

- **Security the Top Spending Priority** - Security was the #1 spending priority, with 75% of CIOs expecting to increase spending in 2015 (59% in 2014). Network (firewall) and Endpoint security were the top two segments of the market expected to see an increase in spending. SYMC, CSCO, PANW were the top preferred vendors, while FEYE and PANW had the highest votes for "plan to work with in 2015."

- **Enterprise Software Spending Looks Very Healthy in 2015** with cloud budgets up 6% y/y and on-premises spending up 2% y/y. Strategic projects like ERP and infrastructure upgrades are top priorities, while apps continue to move to the cloud. MSFT and ORCL look to be the big winners.

- **Storage Fading as a Top Priority** - In 2015, 51% of CIOs expect to increase spending on Storage, down from 54% in 2014. NTAP and EMC were the top preferred storage vendors, while NMBL had the highest votes for "plan to work with in 2015."

- **Cisco, F5 Networks & Aruba Networks Among Top Networking Vendors** - WLAN and Switching & Routing came in #6 and #7, respectively, with 41% and 38% planning to increase spend, and for both only 9% planning to decrease spend. We asked CIOs to rank their preferred networking vendors based upon current relationship. To no surprise, CSCO scored the top spot in both Networking and WLAN sectors, with 47% and 62% share, respectively, while ARUN was #2 in WLAN with 13% of the primary vote and FFIV was the #3 networking vendor with 10% naming it a top vendor.

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Related Companies:	Share Price:
AAOI	10.65
AAPL	106.25
BRCM	42.35
CAVM	58.16
CRM	58.17
CSCO	27.06
CVLT	50.39
EMC	29.24
FEYE	32.01
FFIV	129.76
FNSR	18.92
FTNT	30.52
IMPV	49.05
IPHI	19.34
JDSU	13.67
MSFT	46.33
NMBL	27.48
NTAP	40.05
ORCL	43.59
PANW	123.73
SYMC	25.23
VMW	81.03

RISKS

A prolonged period of economic slowdown would adversely affect IT spending.

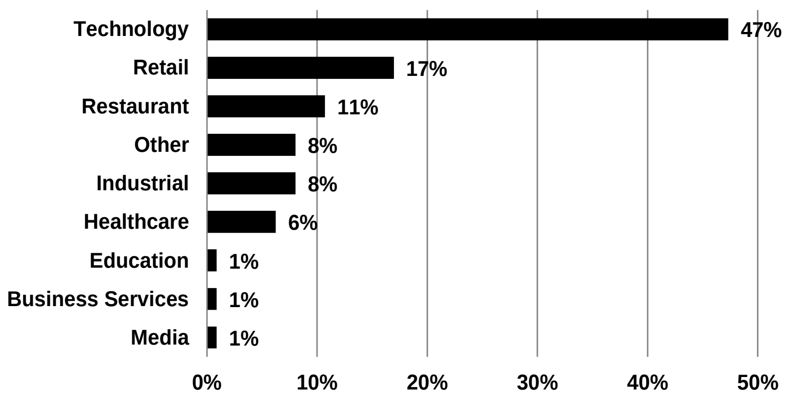
2015 CIO SURVEY- SURVEY RESULTS SUGGEST CONTINUED IMPROVEMENT IN ENTERPRISE SPENDING LED BY SECURITY, MOBILE AND OFF PREM SOFTWARE

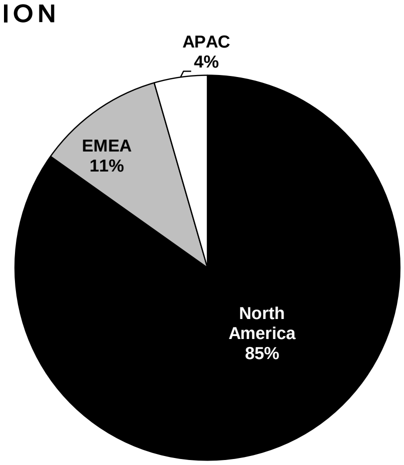
Survey Demographics

In the fourth annual Piper Jaffray CIO Survey, we surveyed 112 CIOs across 8 industries. The survey demographic was primarily North American with 85% of the respondents reporting the region as their primary business domicile with the remaining 11% and 4% coming from EMEA and Asia-Pacific, respectively. We observed a slightly less diverse response mix when compared to prior years, with four different industries accounting for at least 7% of the total survey participants (*down from 6 in 2014*). Similar to previous years, Technology (47%), Retail (17%) and Restaurants (11%) made up the largest concentration. The exhibit below highlights the survey demographics with respect to geography and industry classification.

Exhibit 1

PARTICIPATING INDUSTRIES AND GEOGRAPHIC DISTRIBUTION





Source: Piper Jaffray 2015 CIO Survey, N= 112 (left), N= 112 (right)

2015 Survey Distributed Across Wide Array of Budgets

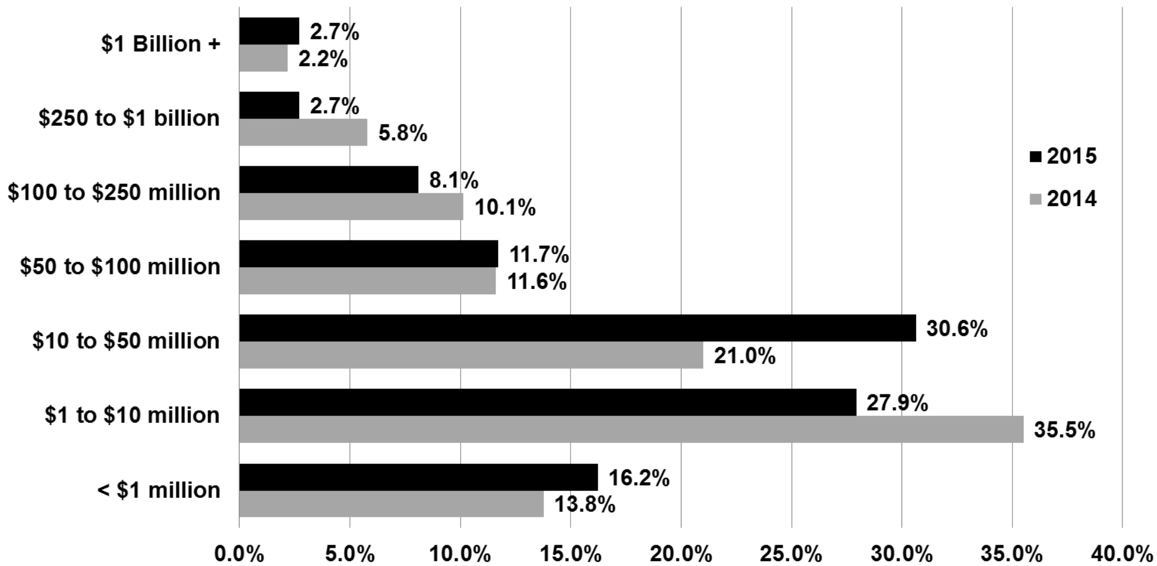
In 2015, roughly 25% of survey participants reported annual IT budgets in excess of $50 million, compared to 30%, 13% and 14% in 2014, 2013 and 2012 respectively. Our 2015 survey includes ~14% of participants who reported annual IT budgets in excess of $100 million, versus ~18% in 2013. Roughly 59% of participants reported budgets in the range of $1-$50 million, with the remaining reporting an annual IT budget below the $1 million threshold. In total, we estimate that this survey represents roughly $9 billion in annual IT spend, but realize the dispersion could be quite extensive given our assumption uses a mid-point weighted average calculation.

Range of Responses Provides Unique Insight into Spending Patterns

As we have noted in the past, the survey is certainly skewed towards small to medium sized corporations (*by market cap*). That said, we believe it is a timely read on forecasted IT spending for 2015, given the wide range of budgets and broad industry representation. We believe the favorable combination of both larger, multi-billion dollar corporations (IT budgets in excess of $100 million) and smaller companies (<$50 million) provides us with a unique viewpoint. Smaller and medium sized corporations tend to be more agile in their commitments, for better or worse, and thus a better read on incremental growth in corporate IT budgets. On the other hand, given the dollar contributions for some of the larger respondents, we believe this provides incremental insight into spending patterns from some of the largest organizations (*which tend to be more affected by the macro*). The following exhibit details the breakdown in IT budgets when compared to last year.

Exhibit 2

ANNUAL IT BUDGET BREAKDOWN- 2014 VS. 2015



Source: Piper Jaffray 2015 CIO Survey, N= 138 (2014) N= 111 (2015)

BUDGETS & SPENDING INTENTIONS

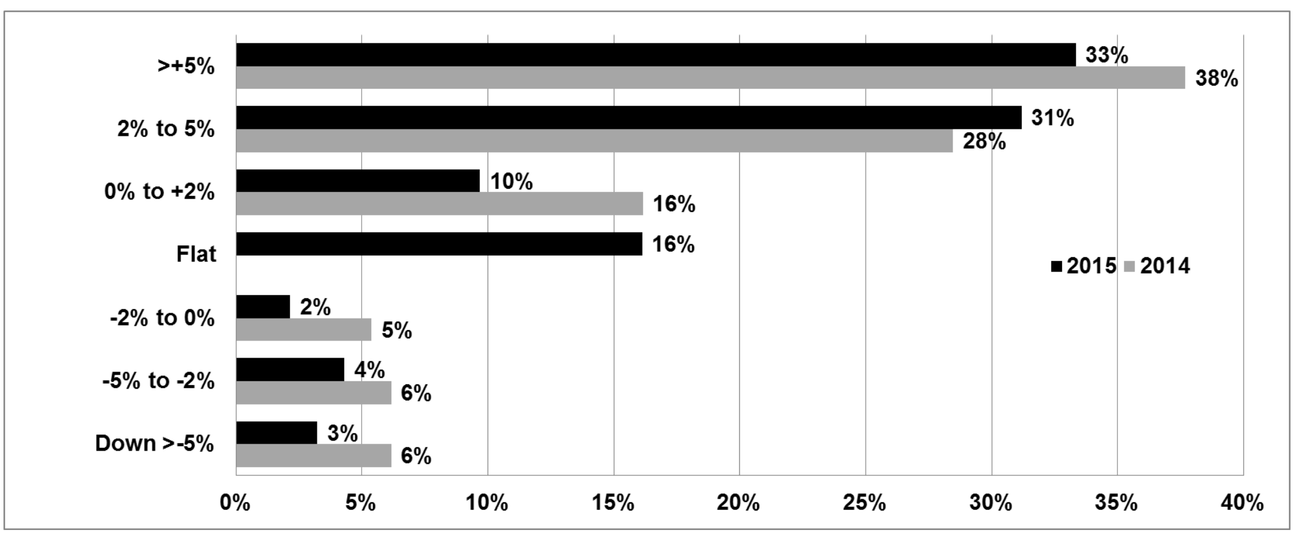
2015 CIO Budget Forecast Points to Confidence

As of its most recent report, Gartner predicts IT spending grew roughly 2.6% in 2014 compared to a flat spending environment in 2013. While visibility into the macro remains somewhat limited (*and continues to weigh on spending budgets*), we believe a renewed level of confidence in GDP growth, coupled with low interest rates and pent up demand will result in further improvements in the spending environment. To highlight, Gartner now forecasts 2015 Global IT spending growth of 3.9% on a year/year basis, led by growth in Software, Devices and IT services, which are expected to grow 7.4%, 6.4% and 4.1%, respectively.

Similarly, the results from our 2015 CIO survey point to growth, as 65% of respondents expect to increase spending on IT hardware at least 2% versus 66% and 53% in our respective 2014 and 2013 surveys. While those expecting over 2% growth was 1 percentage point lower for 2015, only 10% of the survey respondents expect negative budget growth for 2015, compared with 18% in 2014 (*note: 2015 included the addition of the 'Flat' category in 2015*). Both the results from 2015 and 2014 paint a fairly optimistic picture when compared to 2013, when 24% of survey participants reported budget declines heading into the New Year. Though we are unable to precisely quantify the expected IT budget growth in 2015, we believe that on average the survey yields a forecasted annual growth rate of 2-3%. The following exhibit highlights the projected annual growth of respondents' IT hardware budgets in 2015 versus responses collected in 2014 (*note: the variance in number of responses below the chart*).

Exhibit 3

HOW DO YOU EXPECT YOUR 2015 IT HARDWARE BUDGET TO COMPARE RELATIVE TO 2014?



Source: Piper Jaffray 2015 CIO Survey, N=130 (2014), N=93 (2015)

Security the Top Spending Priority in 2015

Security was once again cited as the #1 spending priority in this survey, with 75% of CIOs expecting to increase spending in 2015, up from 59% in 2014. CIOs clearly have heightened concerns from the many security breaches that occurred in 2014, resulting in an inflection in overall security spending. The #2 category CIOs expect to increase spending on is Mobile devices (62% of responses), which was a new category in the 2015 survey. Off-Premise Enterprise Software (59%), Storage (51%) and Servers (45%) rounded out the top five 2015 spending priorities.

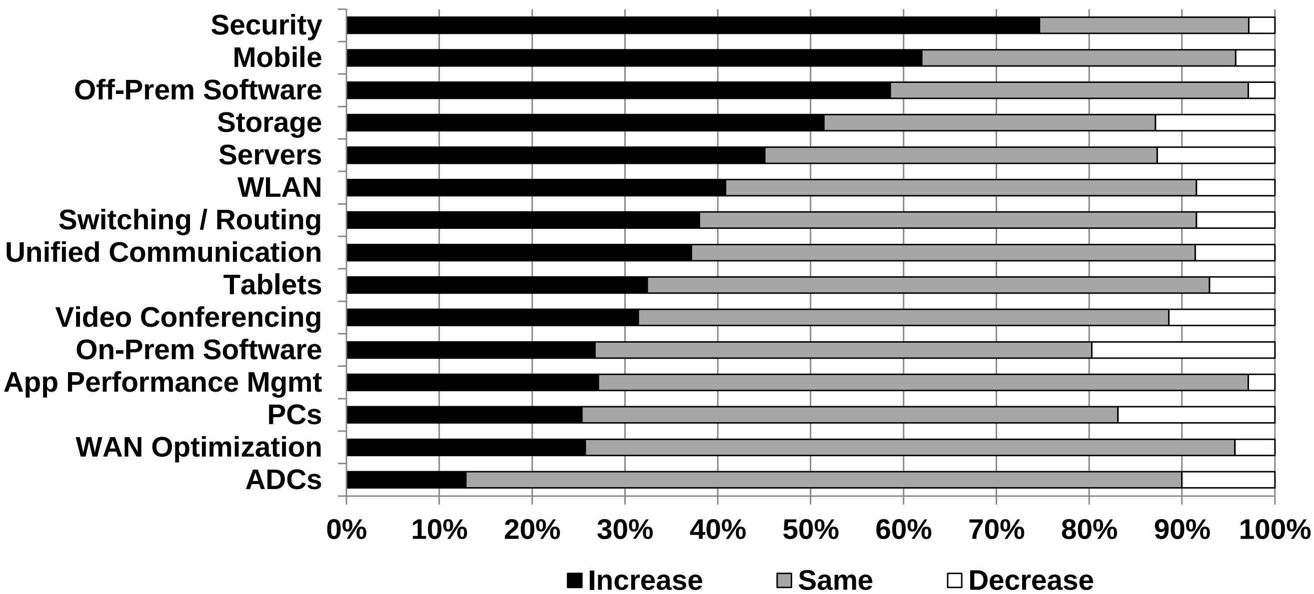
ADCs and WAN Op Most Discretionary

Application Delivery Controllers (13%), PCs (25%) and WAN Optimization (26%) ranked the lowest among the top spending priorities for 2015. **This is the second consecutive year that ADCs and Wan Optimization products ranked at the bottom of the priority list, likely reflecting the discretionary nature of these products.** The following exhibit highlights the list of top spending priorities for 2015 identified by CIOs in this survey.

Exhibit 4

WHICH TECHNOLOGIES WILL YOU INCREASE/DECREASE SPENDING ON IN 2015?

Security the top spending priority for 2015; 75% of CIOs expect to increase spending on Security.



Source: Piper Jaffray 2015 CIO Survey, N= 71

Comparison to Last Year's Survey

The top four spending priorities for 2015 are Security (75%), Mobile (62%), Off-Premise Enterprise Software (59%) and Storage (51%). Mobile and On- and Off-Premise Enterprise Software are new categories to this year's list of spending priorities. **This is the second consecutive year that Security captured the top position.** Storage dropped from #2 to #4 as Mobile moved into the #2 position; we note this was a new category in the 2015 survey. Application Delivery Controllers (13%), PCs (25%) and WAN Optimization (26%) products have consistently ranked among the lowest spending priorities in each of the last three surveys. Tablets dropped from the #3 position in the 2014 survey, down to #9. The following exhibit highlights the spending priorities for each of the last three years.

Exhibit 5

TOP SPENDING PRIORITIES OVER THE LAST THREE YEARS

Security, Mobile and Off-Premise Enterprise Software the top 3 spending priorities for 2015.

Rank	2013	2014	2015
1	Storage	Security	Security
2	Security	Storage	**Mobile**
3	Servers	Tablets	**Enterprise Software - Off-Prem**
4	Tablets	**Enterprise Software**	Storage
5	WLAN	Servers	Servers
6	Unified Communication	Switching / Routing	WLAN
7	Switching / Routing	WLAN	Switching / Routing
8	Video Conferencing	Unified Communication	Unified Communication
9	PCs	WAN Op	Tablets
10	WAN Op	PCs	Video Conferencing
11	ADCs	Video Conferencing	App. Performance Mgmt.
12		ADCs	**Enterprise Software - On-Prem**
13		**App. Performance Mgmt.**	WAN Op
14			PCs
15			ADCs

Source: Piper Jaffray 2015 CIO Survey, 2015 n=71, 2014 n=87, 2013 n=66

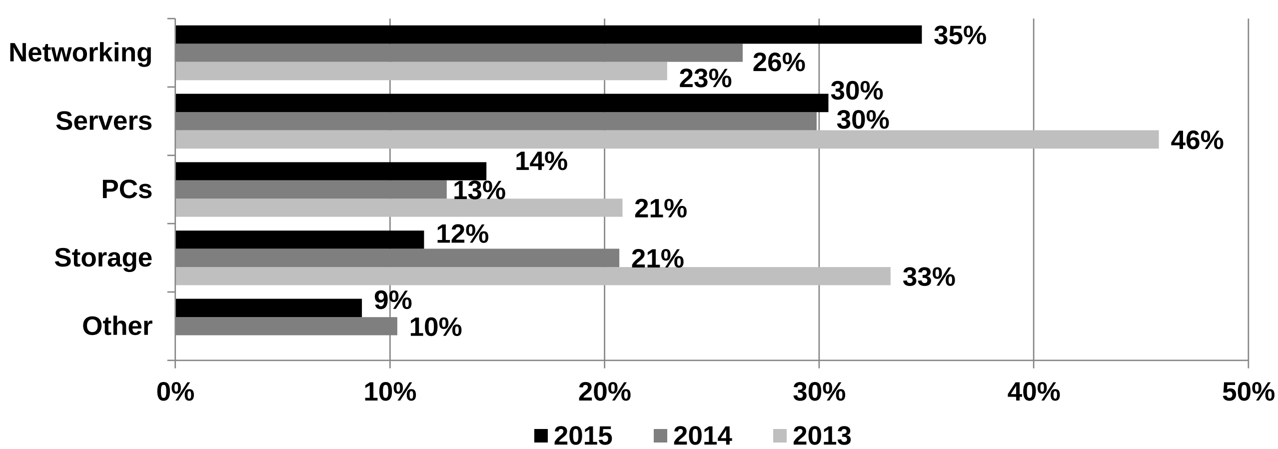
Networking Most in Need of a Refresh in 2015

In last year's survey, servers were identified as the one area within the datacenter most in need of a refresh. This year, 35% of CIOs cited networking as the area most in need of a refresh, up from 26% in 2014. **This marks the third consecutive year networking has increased in the list of areas most in need of a refresh.** Conversely, Storage continues to decline in the list, with just 12% of CIOs citing it as the area most in need of a refresh. We note that is down from 21% in the 2014 survey and 33% in the 2013 survey. The following exhibit highlights the top areas most in need of a refresh.

Exhibit 6

WHAT AREA OF YOUR DATA CENTER IS IN MOST NEED OF A REFRESH?

CIOs cite Networking as the area most in need of a refresh in 2015.



Source: Piper Jaffray 2015 CIO Survey, 2015 n=69, 2014 n=87, 2013 n=48

Cost Still the Primary Factor in Vendor Selection

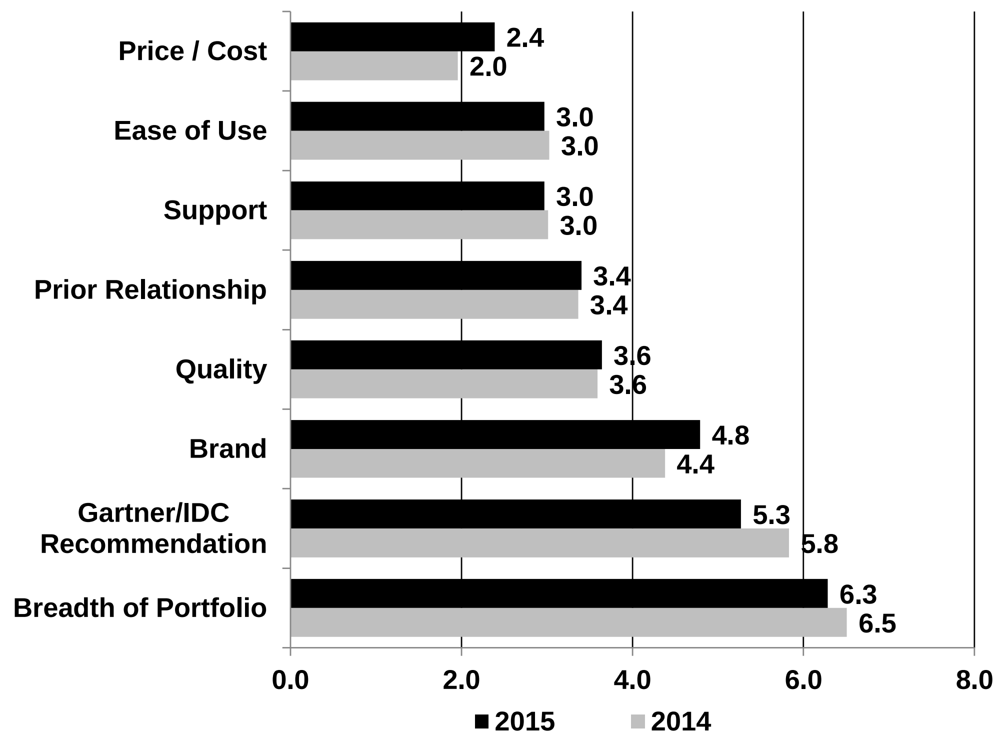
We asked CIOs to rank the most important factors they evaluate when selecting a vendor and similar to last year, cost was cited cost as the top factor. Ease of use and Support/Services tied for the second most important factor. Interestingly, the order of the entire list of decision-making factors did not change in the 2015 survey, as compared to the

2014 survey. The following exhibit highlights the top eight factors in a CIO's decision-making process.

Exhibit 7

WHEN CHOOSING A VENDOR, WHAT ARE THE PRIMARY FACTORS IN YOUR DECISION-MAKING PROCESS?

Price/Cost still the primary factor during vendor selection process.



Source: Piper Jaffray 2015 CIO Survey, n=67

Less Emphasis on Personnel, More on Software, Hardware and Outsourcing

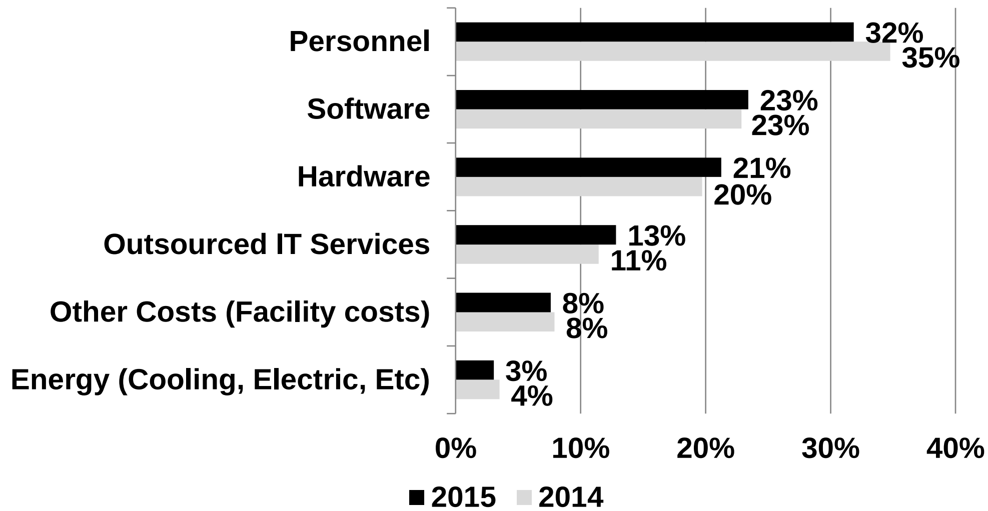
When asked about the composition of their IT budgets, CIOs indicated they plan to spend the largest percentage on personnel, followed by software and then hardware (Exhibit 8). This mirrors the ranking in our 2014 survey. Most CIOs in our survey expect to increase their personnel budgets while software and hardware, in the second and third spots, should also see net increases (Exhibit 9). However, spending on personnel is expected to be down 3%, falling from 35% on average in 2014, to 32% on average in 2015 as a percentage of the overall budget.

It's not surprising to see personnel as the biggest area of spend, since much of IT is in-house development, integration, management, maintenance, and end-user support. Given that it's the biggest area of spending, it makes sense to us that CIOs would want to decrease personnel costs. Employees and contractors also have much higher overhead than technology, leading to more leverage when staffing costs are reduced. The 3% less that is expected to be spent on personnel in 2015 might be reallocated to software, hardware and outsourced services, where spending is expected to grow 1-2% y/y.

Outsourced services, facility costs, and energy costs, which together comprise about a quarter of the average IT budget, are expected to be funded at the same rate as in 2014. Only outsourced services could see an uptick in budget allocation, which makes sense because outsourcing is generally cheaper than employees and increased automation opens up the possibility for improved efficiency, security and reliability.

Exhibit 8

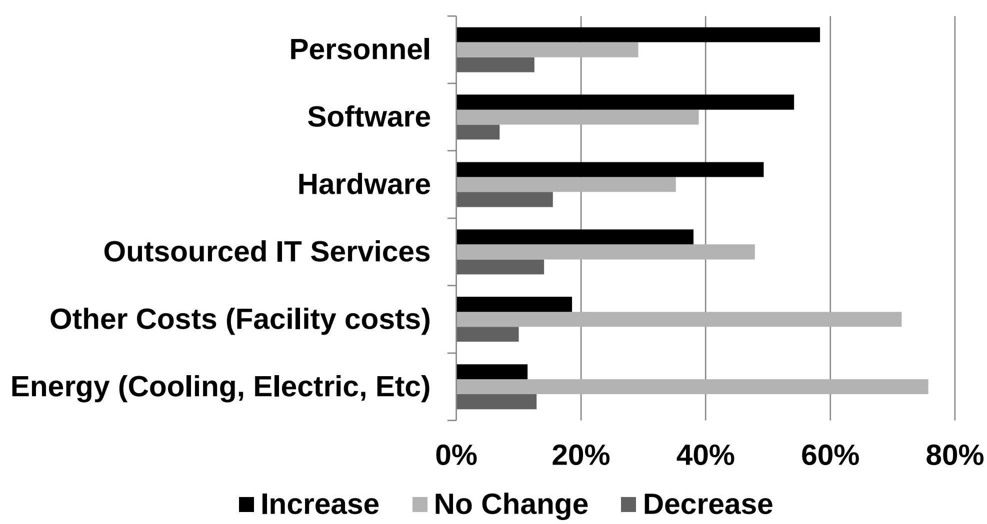
PLEASE INDICATE WHAT PERCENT OF YOUR YEARLY IT BUDGET IS SPENT ON THE VARIOUS BUCKETS LISTED BELOW.



Source: Piper Jaffray 2015 CIO Survey. N=78

Exhibit 9

PLEASE INDICATE WHETHER YOU PLAN TO INCREASE OR DECREASE SPENDING IN 2015 RELATIVE TO WHAT YOU SPENT IN 2014 FOR VARIOUS AREAS OF YOUR IT BUDGET



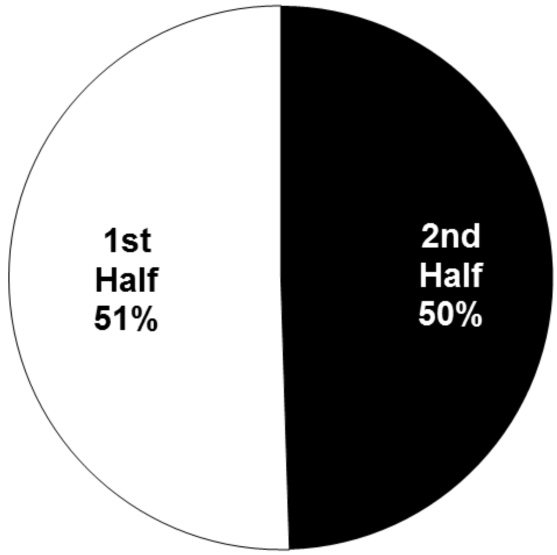
Source: Piper Jaffray 2015 CIO Survey. Personnel and Software (N= 72), Hardware and Outsourced IT Services (N=71), and Other Costs and Energy (N=70).

Lack of Seasonality in Budgets is a Bullish Sign.

Our survey indicates that CIOs expect half of their budgets to be spent in the first half of 2015 and half in the second half (Exhibit 10). This 50/50 split indicates some bullishness in our view despite the broader growth concerns cited in the survey (see "Top Concern of CIOs: US Economic Growth"). If CIOs were more anxious about the possibility for potential cuts to their budgets, we believe spending would likely be more heavily weighted to the second half of the year, providing some cushion if revenue does not develop as expected during the year. This is the first time we have asked CIOs about budgetary seasonality.

Exhibit 10

HOW DO YOU EXPECT TO ALLOCATE YOUR 2015 BUDGET?



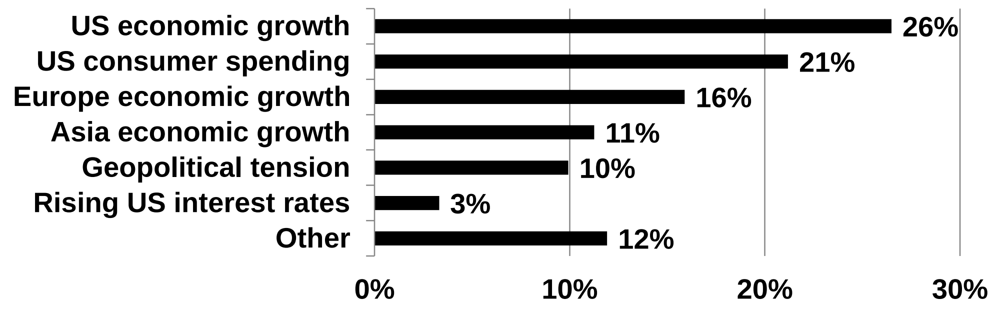
Source: Piper Jaffray 2015 CIO Survey. N=95.

Top Concern of CIOs: US Economic Growth

To help understand what would cause a reduction in 2015 IT budgets, if that were to occur, we asked the CIOs about their top current business concerns (Exhibit 11). With about 85% of the CIO respondents working for companies with the primary residence in North America, it is not surprising that the top concerns are related to U.S. economic growth and U.S. consumer spending. Multiple responses were allowed, but these top 2 concerns, along with rising U.S. interest rates, aggregated to 50% of the responses. Economic growth in Europe and Asia and geopolitical tension were key areas of concern accounting for 37% of the responses. Other concerns included government policy such as new IT security laws, competition, market conditions, and foreign exchange rates.

Exhibit 11

WHAT ARE YOUR TOP CONCERNS FOR YOUR COMPANY'S BUSINESS IN 2015 THAT POTENTIALLY COULD NEGATIVELY IMPACT YOUR IT BUDGET?



Source: Piper Jaffray 2015 CIO Survey. Respondents could select multiple answers. N=151.

SECURITY

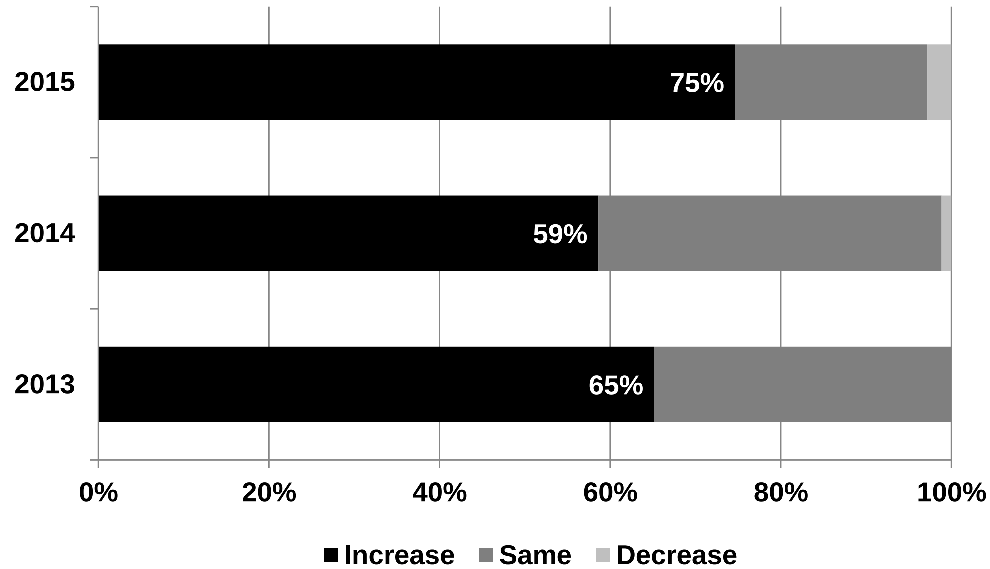
Security the Top Spending Priority in 2015

Security was once again cited as the #1 spending priority in this survey, with 75% of CIOs expecting to *increase* spending in 2015, up from 59% in 2014 as shown below in **Exhibit 12.** **CIOs clearly have heightened concerns from the many security breaches that occurred in 2014, resulting in an inflection in overall security spending.** From a vendor perspective, **Symantec, Cisco and Palo Alto Networks** topped the list of most Preferred Security Vendors. The remainder of this section will discuss the results from the security-related questions we asked CIOs.

Exhibit 12

PRECENT OF CIOS PLANNING TO INCREASE SPENDING ON SECURITY

75% of CIOs plan to increase spending on Security in 2015, up from 59% in 2014.



Source: Piper Jaffray 2015 CIO Survey, 2015 n=71, 2014 n=87, 2013 n=66

Symantec Tops the Preferred Vendor List

We asked CIOs to rank their preferred security vendors and any vendors they plan to work with or refuse to work with in 2015. **Symantec topped the list of preferred security vendors, capturing 21% of responses** as shown below in **Exhibit 13. Cisco and Palo Alto Networks tied for second**, with each capturing 10% of the votes. These results closely align with the overall market share within the Security market, in which Symantec holds the lead with a ~20% share of the market, according to Gartner and IDC. **When asked which vendors CIOs plan to work with in 2015, 25% said FireEye while 17% said Palo Alto Networks.** These results suggest the next-generation vendors are chipping away at the stronghold legacy vendors still have on the security market. The following exhibit highlights the Preferred Security Vendor results from our survey.

Exhibit 13

WHO IS YOUR PREFERRED SECURITY VENDOR?

Symantec is CIOs' preferred vendor, though FireEye and Palo Alto are chipping away at this lead.

Primary Vendor		Secondary Vendor	
Symantec	**21%**	**Symantec**	**15%**
Cisco	10%	Cisco	15%
Palo Alto Networks	**10%**	Intel/McAfee	15%
Intel/McAfee	10%	Barracuda Networks	12%
Trend Micro	9%	**Palo Alto Networks**	**8%**
FireEye	**6%**	Trend Micro	8%
Other	6%	**FireEye**	**8%**
Proofpoint	6%	IBM	8%
Juniper	5%	Proofpoint	4%
Check Point	4%	Juniper	4%
Barracuda Networks	4%	Check Point	4%
EMC	**2%**	**EMC**	**0%**
Imperva	**2%**	**Fortinet**	**0%**
IBM	2%	HP	0%
HP	2%	**Imperva**	**0%**
Fortinet	**2%**	Other	0%

Plan to Work With		Refuse to Work With	
FireEye	**25%**	Cisco	20%
Palo Alto Networks	**17%**	**Symantec**	**20%**
Cisco	8%	Intel/McAfee	20%
Barracuda Networks	8%	Juniper	20%
Proofpoint	8%	Check Point	20%
Other	8%	Barracuda Networks	0%
EMC	**8%**	**EMC**	**0%**
Imperva	**8%**	**FireEye**	**0%**
Fortinet	**8%**	**Fortinet**	**0%**
Check Point	0%	HP	0%
HP	0%	IBM	0%
IBM	0%	**Imperva**	**0%**
Intel/McAfee	0%	Other	0%
Juniper	0%	**Palo Alto Networks**	**0%**
Symantec	**0%**	Proofpoint	0%
Trend Micro	0%	Trend Micro	0%

Source: Piper Jaffray 2015 CIO Survey, Primary n=126, Secondary n=26, Plan to Work With n=12, Refuse to Work With n=5

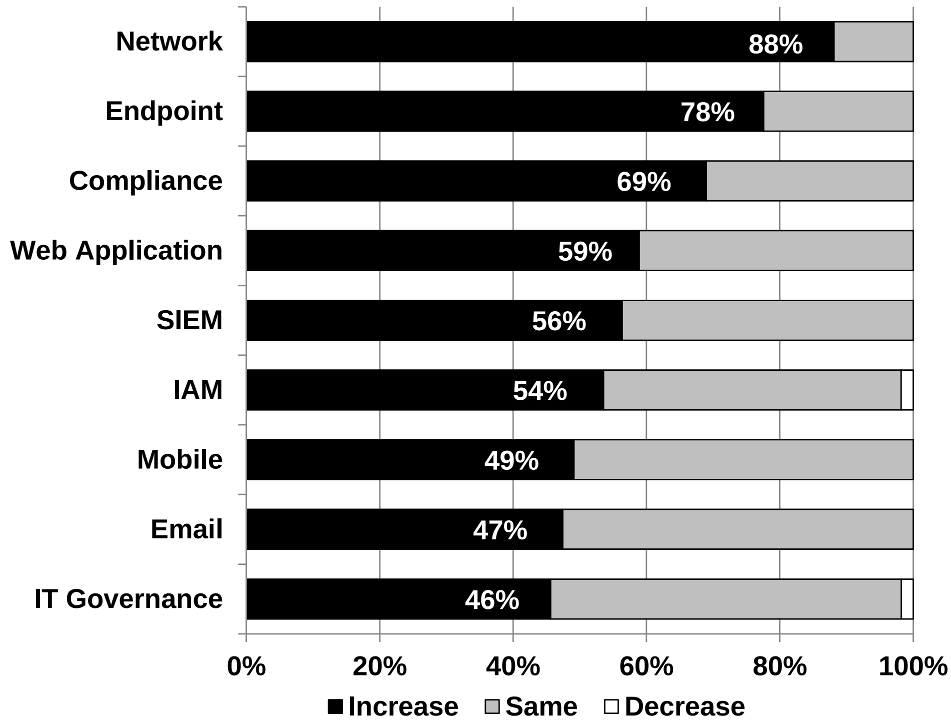
Network Security the Highest Security Spending Priority in 2015

Network security was identified as the top area within the security market that CIOs plan to increase spending on in 2015. **Approximately 88% of CIOs cited Network Security as their top priority for 2015 and 78% cited Endpoint Security as the top priority.** We believe this bodes well for **Palo Alto Networks** given their portfolio now includes an endpoint solution that is integrated with advanced threat protection and their firewall. The following exhibit summarizes the top spending priorities within the security market, as identified by the CIOs in our survey.

Exhibit 14

WHICH SECURITY TECHNOLOGIES DO YOU PLAN TO INCREASE OR DECREASE SPENDING ON IN 2015?

Networking and Endpoint Security are the two highest Security spending priorities in 2015



Source: Piper Jaffray 2015 CIO Survey, n=59

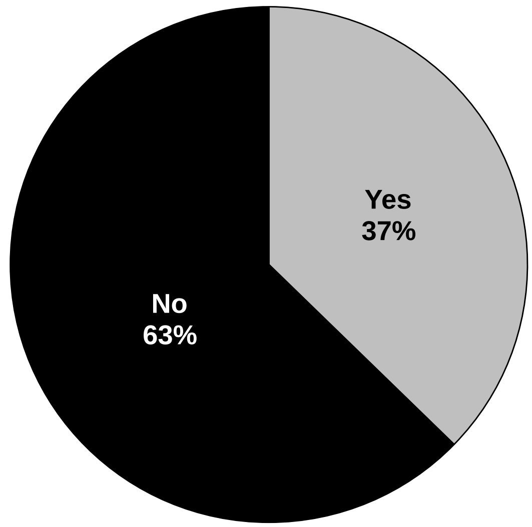
37% of CIOs Plan to Leverage a Managed Security Offering

We asked CIOs if they plan to leverage a Managed Security Service (MSS) offering in 2015 and **37% of CIOs said yes**. Since this is the first time we asked this question, we do not have any historical data to compare it to, but note that the results are consistent with commentary we received from our channel contacts regarding a shortage of security engineers. CIOs also listed several providers of managed security service offerings that they are considering, including **Cerdant, Dell SecureWorks, FireEye Mandiant, FishNet Security, Symantec** and **Verizon**. The following exhibit summarizes the results of the Managed Security question.

Exhibit 15

DO YOU PLAN TO LEVERAGE A MANAGED SECURITY SERVICE OFFERING IN 2015?

37% of CIOs plan to increase spending on a managed security service offering in 2015.



Source: Piper Jaffray 2015 CIO Survey, n=59

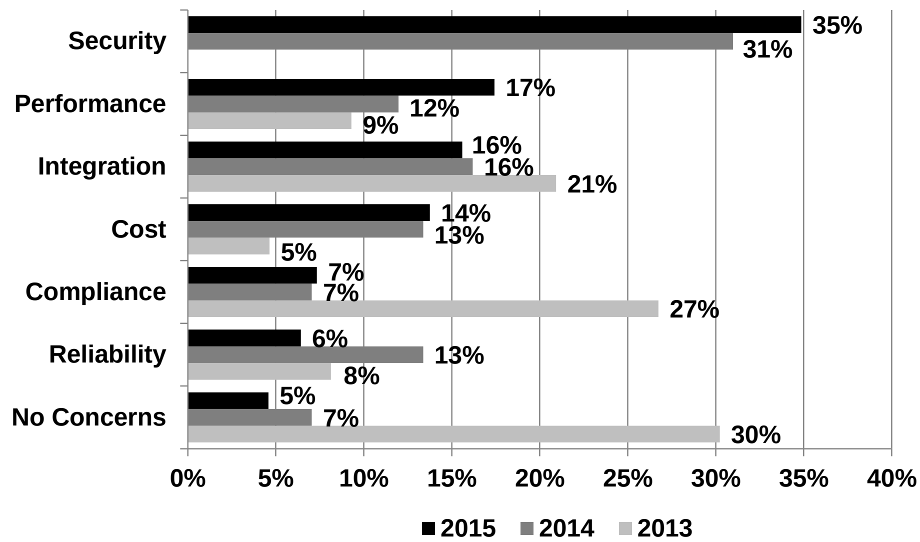
Security Concerns Within the Public Cloud Increasing

CIOs remain concerned with the security in the public cloud as **35% of CIOs cited it as the primary reason for keeping data on premise.** We note this was up from 31% in our 2014 survey, likely reflecting the significant increase in cyber-security breaches over the last twelve months. **Concerns regarding performance also increased significantly** in our survey this year, with 17% of CIOs citing as their top reason (up from 12% last year). In light of the increasing number of security breaches, we believe the movement of data and workloads to a public cloud provider will likely remain muted in 2015. The following exhibit highlights the top CIOs' concerns with regard to moving data/workloads to a public cloud provider.

Exhibit 16

WHAT IS YOUR PRIMARY CONCERN WITH REGARD TO MOVING DATA TO THE PUBLIC CLOUD?

Security remains the top concern.



Source: Piper Jaffray 2015 CIO Survey, 2015 n=109, 2014 n=142, 2013 n=86

Semi Takeaways from Security Group

With respect to semiconductors, we believe Cavium (CAVM) will continue to benefit from the increasing focus on security as its network and security processors have and continue to hold market leadership position, by a wide margin, at the top security appliance vendors. Over the next 12-months, though, we believe that much of the good news for CAVM relative to the security area (and for other core segments of CAVM's business) appears to be priced into shares, which currently trade at 33x versus its semiconductor peer average of 19x. For CAVM, as well, our survey indicates that a move to ARM based server technology is not likely imminent with only 6% of our respondents planning to deploy ARM based servers into data center workloads in 2015. While we expect CAVM to benefit longer-term from certain hyperscale applications where power consumption is a top priority, the ramp to meaningful volumes is still a few years away, in our view.

MOBILITY

Mobility the #2 Highest Spending Priority

Mobility was cited as the #2 spending priority in this year's survey with 62% of CIOs expecting to increase spending in 2015. We note this was a new category in the survey this year, though it quickly vaulted to the #2 ranking. Meanwhile, WLAN was the #6 ranking with 41% expected to increase spending. We asked CIOs who their preferred Wireless LAN (WLAN) vendors are and who they plan or refuse to work with moving forward. We believe this provides a timely read on who will benefit within this growth sector over the next several years. To no surprise, 62% (vs. 62% in '14) of CIOs noted Cisco (including Meraki) as their primary WLAN vendor, placing them #1 on the list. A combined 34% indicated they plan to work with Cisco in the future, while one CIO responded that they refuse to work with the market leader. One interesting note is that in 2014, the breakdown of Cisco's 62% primary vendor score was 59% Cisco and 3% Meraki. This year, we saw Cisco at 54% and Meraki at 8% indicating some mild cannibalization by the Meraki product.

In-line with recent market share data, 13% of CIOs noted Aruba (*vs. 11% in '14*) as their primary vendor and 24% (*vs. 19% in '14*) indicating them as a secondary vendor. Looking at Aerohive, 2% and 6% of respondents indicated them as primary or secondary vendor, a slightly improvement compared with 2% and 4% in 2014, while 33% (*2/6 responses)* indicated plans to work with them in the future. Also noteworthy is that no respondents indicated that they refuse to work with Aruba, Aerohive or Ruckus. In all, we believe the survey results bode well for Aruba (*ARUN*) within our universe and while Cisco (CSCO) clearly remains a leading vendor we do expect the company's market share in WLAN to decline over time.

Exhibit 17

WHO IS YOUR PREFERRED WIRELESS LAN PROVIDER?

Primary Vendor		Secondary Vendor	
Cisco	**54%**	**Juniper**	**24%**
Aruba	**13%**	**Aruba**	**24%**
Juniper	**8%**	**Cisco**	**18%**
Meraki (Cisco)	**8%**	HP	12%
D-Link	5%	**Aerohive**	**6%**
Fortinet	3%	D-Link	6%
Other	3%	Motorola	6%
HP	2%	Meraki (Cisco)	6%
Aerohive	**2%**	**Ruckus**	**0%**
Ruckus	**2%**	Fortinet	0%
Ubiquiti	2%	Ubiquiti	0%
Motorola	0%	Entrasys	0%
Entrasys	0%	Xirrus	0%
Xirrus	0%	Meru	0%
Meru	0%	Other	0%

Plan to Work With		Refuse to Work With	
Aerohive	**33%**	**Cisco**	**50%**
Cisco	**17%**	Motorola	50%
Aruba	**17%**	**Juniper**	**0%**
Motorola	17%	HP	0%
Meraki (Cisco)	**17%**	**Aruba**	**0%**
Juniper	**0%**	**Aerohive**	**0%**
HP	0%	D-Link	0%
D-Link	0%	**Ruckus**	**0%**
Ruckus	**0%**	**Meraki (Cisco)**	**0%**
Fortinet	0%	Fortinet	0%
Ubiquiti	0%	Ubiquiti	0%
Entrasys	0%	Entrasys	0%
Xirrus	0%	Xirrus	0%
Meru	0%	Meru	0%
Other	0%	Other	0%

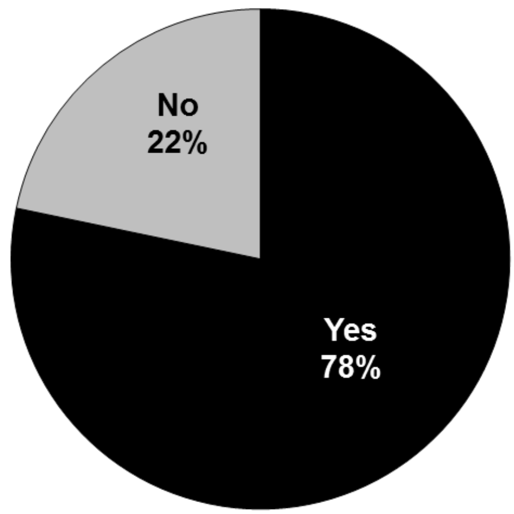
Source: Piper Jaffray 2015 CIO Survey, Primary n=63, Secondary n=17, Plan to Work With n=6, Refuse to Work With n=2

Expect Continued WLAN Deployments

With the continued deployment of Enterprise Tablet solutions, it is no surprise that Wireless LAN spending is expected to continue growing (44*% increase, 9% decrease*) in 2015 as this remains the primary network connectivity solution for a mobile workspace. Despite recent growth in tablet adoption and other wireless enabled devices, roughly 23% of CIOs noted that their organization is yet to deploy an enterprise grade wireless solution. We expect this will change over the next several years as Gartner forecasts enterprise wireless device growth of roughly 28% through 2017. Combining this with the ongoing adoption of Bring-Your-Own-Device (BYOD), we believe CIOs will be forced to upgrade current Wireless Infrastructures (*along with Greenfield deployments*), including improved Access Point Density, Controller Functionality, Device Management Software and, most importantly, Security. The exhibit below highlights the results from our 2015 CIO survey.

Exhibit 18

DOES YOUR ORGANIZATION SUPPORT AN ENTERPRISE WIRELESS SOLUTION?



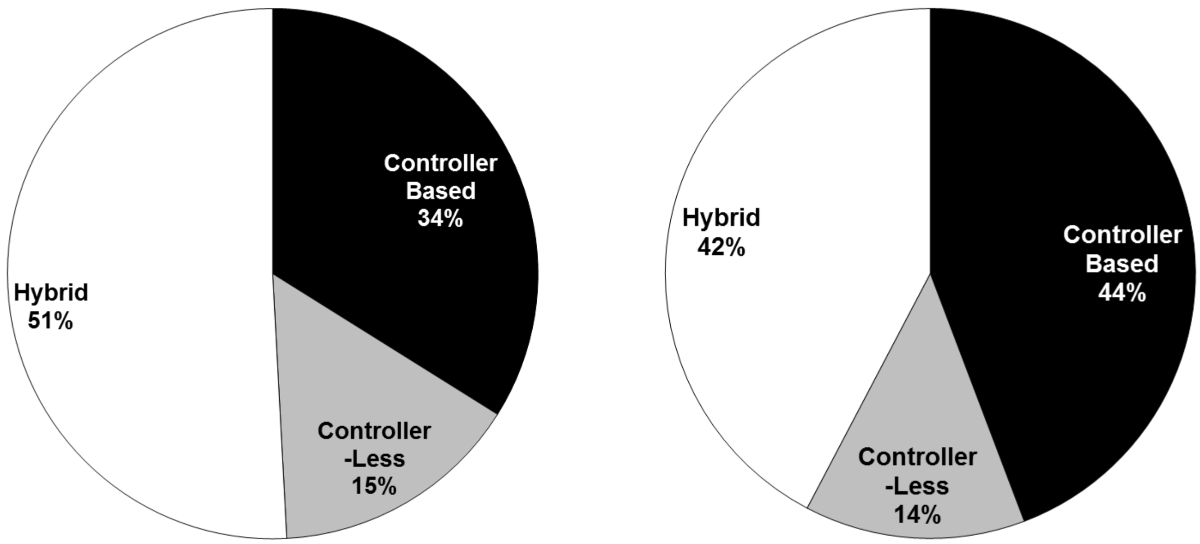
Source: Piper Jaffray 2015 CIO Survey, N= 69

Controller Based Architectures Remain in the Majority

One unexpected result from the survey is that 44% of respondents indicated a controller based solution, which was an increase of 10 percentage points from 34% in 2014. Similarly, 73% of respondents indicated that they manage their wireless network on premise, up from 65% in the previous survey. Our expectations would be that both controller-less solutions and cloud managed architectures would be increasing as a percentage. Our opinion is that the increases are unlikely to indicate a reversal in the trend towards cloud managed and controller-less Wi-Fi, but instead point to the shift happening less quickly and also indicating that controller based solutions will remain a large piece of the WLAN puzzle for the foreseeable future. The next two sets of graphs highlight preferred architectures and management for WLAN deployments.

Exhibit 19

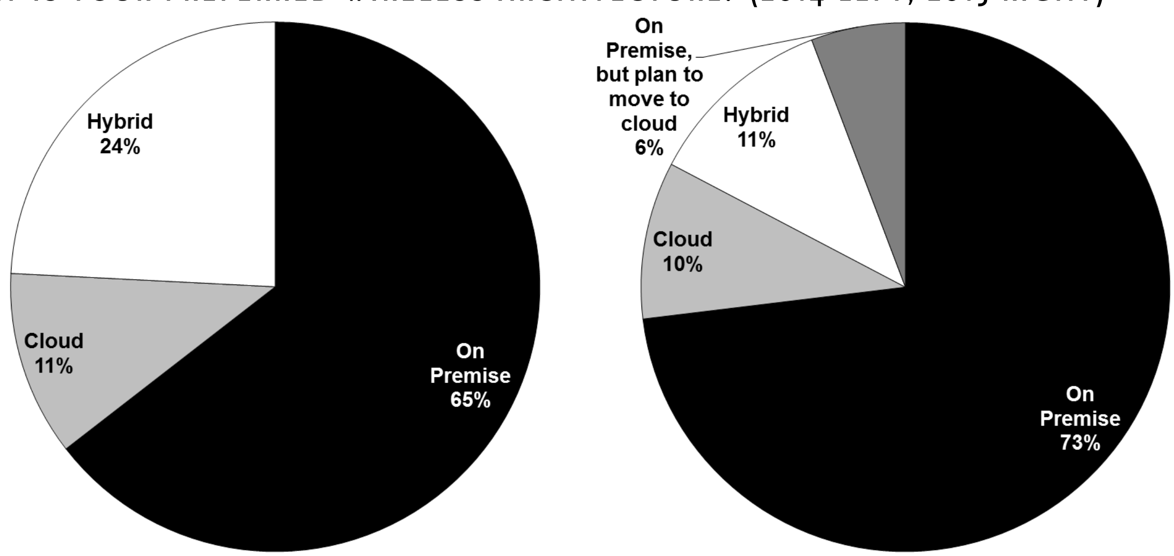
WHAT IS YOUR PREFERRED WIRELESS ARCHITECTURE? (2014 LEFT, 2015 RIGHT)



Source: Piper Jaffray 2015 CIO Survey, n=52 (2015) n=59 (2014)

Exhibit 20

WHAT IS YOUR PREFERRED WIRELESS ARCHITECTURE? (2014 LEFT, 2015 RIGHT)



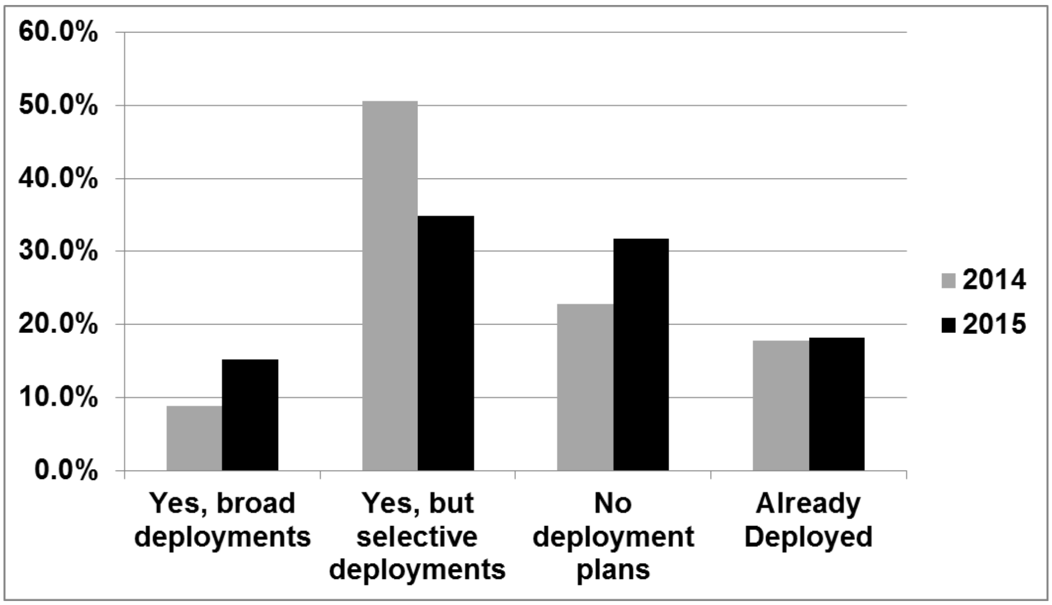
Source: Piper Jaffray 2015 CIO Survey, n=52 (2015) n = 62(2014)

Positive Outlook for Tablets in 2015

Enterprise tablet penetration remained at 18% in terms of current deployments based on our survey. Looking ahead to 2015, our survey suggests that 50% of organizations expect some tablet deployment during the year, down from 60% in 2014. We find the slight decrease in expected tablet deployments interesting and it could potentially be due to continued development of ultralight notebooks and phablet mobile devices. Despite this data, we would expect tablet penetration to continue to increase among enterprises given the sub-20% penetration currently. We continue to view it as an opportunity for tablet manufacturers, most significantly Apple, which we believe, has the largest share of enterprise tablets.

Exhibit 21

DO YOU PLAN ON DEPLOYING AN ENTERPRISE TABLET SOLUTION IN 2015?



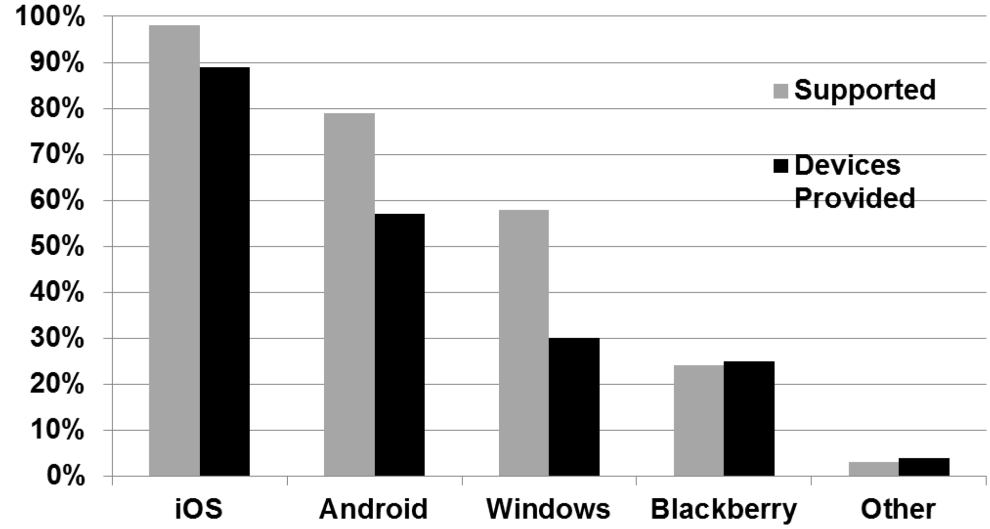
Source: Piper Jaffray 2015 CIO Survey, N=66

Apple Leading Enterprise Support

In terms of current enterprise mobile device support, Apple is unsurprisingly the leader. Our CIO survey data suggests that 98% of enterprises currently support iOS compared to 79% for Android, 58% for Windows, and 24% for Blackberry. Apple also leads in terms of device provision with 89% of enterprises stating that they provide employees with iOS based devices, 57% Android, 30% Windows, and 25% Android (rounding causes the support/provision difference). We believe that actual market share of Apple devices is likely lower than the 89% of enterprises that provide employees with Apple devices given the likely two plus year upgrade for enterprise devices. Over time, we expect iOS share in enterprise to exceed overall smartphone market share given cost is likely less of an issue at the enterprise level and is now the biggest reason consumers do not choose iPhone given the larger screen iPhone 6.

Exhibit 22

CURRENT ENTERPRISE MOBILE DEVICE SUPPORT/PROVISION



Source: Piper Jaffray 2015 CIO Survey, N=62

STORAGE

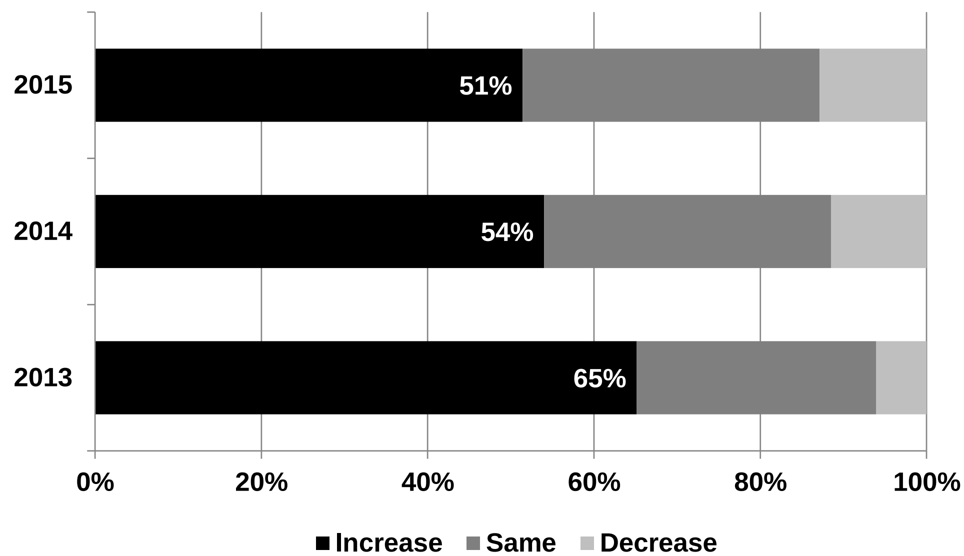
Storage Continues to Fade as a Top Spending Priority

For the last three years, Storage has *declined* in the list of top spending priorities. In this year's survey, **only 51% of CIOs expect to increase spending on Storage,** down from 54% last year. This decline is consistent with the belief that enterprises continue to "sweat their storage assets" longer than normal, diverting spending to more urgent areas such as security. The remainder of this section will discuss the results from storage-related questions, including preferred vendors, backup storage, converged infrastructure and scale-out storage adoption.

Exhibit 23

PERCENT OF CIOS PLANNING TO INCREASE SPENDING ON STORAGE

51% of CIOs plan to increase spending on Storage, down from 54% in 2014.



Source: Piper Jaffray 2015 CIO Survey, 2015 n=71, 2014 n=87, 2013 n=66

EMC & NetApp the Top Storage Vendors

We asked CIOs to rank their preferred storage vendors and any vendors they plan to work with or refuse to work with in 2015. **NetApp and EMC were ranked as the top preferred storage vendors**, capturing 30% and 25% of the vote, respectively. Both vendors recently refreshed their portfolios, which likely contributed to the favorable rating. **Nimble Storage** (29%) **and Pure Storage** (29%) **tied for the top spot as the vendor most CIOs "plan to work with" in 2015.** Similar to the Security market, these results suggest the next-generation vendors are chipping away at the stronghold legacy vendors still have on the security market. **We note that a stunning 67% of CIOs cited IBM as the one vendor they *refuse* to work with in 2015.**

Exhibit 24

WHO IS YOUR PREFERRED STORAGE VENDOR?

NetApp, EMC are CIOs' preferred storage vendors; Nimble is the vendor CIOs most plan to work with

Primary Vendor

	2015	2014
NetApp	**30%**	**25%**
EMC	**20%**	**25%**
Dell	18%	27%
IBM	11%	10%
HP	8%	5%
Oracle	4%	2%
Other	4%	3%
Nimble Storage	**3%**	**0%**
Pure Storage	3%	0%
Hitachi	0%	3%

Secondary Vendor

	2015	2014
EMC	**23%**	**27%**
NetApp	**19%**	**12%**
Dell	19%	18%
HP	16%	12%
IBM	7%	6%
Hitachi	7%	3%
Oracle	2%	3%
Other	2%	12%
Nimble Storage	**2%**	**0%**
Pure Storage	2%	6%

Plan to Work With

	2015	2014
Nimble Storage	**29%**	**11%**
Pure Storage	29%	11%
EMC	**14%**	**0%**
Dell	14%	0%
Oracle	14%	22%
Hitachi	0%	0%
HP	0%	0%
IBM	0%	0%
NetApp	**0%**	**22%**
Other	0%	33%

Refuse to Work With

	2015	2014
IBM	67%	14%
Dell	33%	14%
EMC	**0%**	**0%**
Hitachi	0%	7%
HP	0%	7%
NetApp	**0%**	**0%**
Nimble Storage	**0%**	**7%**
Oracle	0%	7%
Other	0%	36%
Pure Storage	0%	7%

Source: Piper Jaffray 2015 CIO Survey; 2015 Primary n=74, 2015 Secondary n=43, 2015 Plan to Work With n=7, 2015 Refuse to Worth With n=3; 2014 Primary n=93, 2014 Secondary n=33, 2014 Plan to Work with n=9, 2014 Refuse to Work With n=14

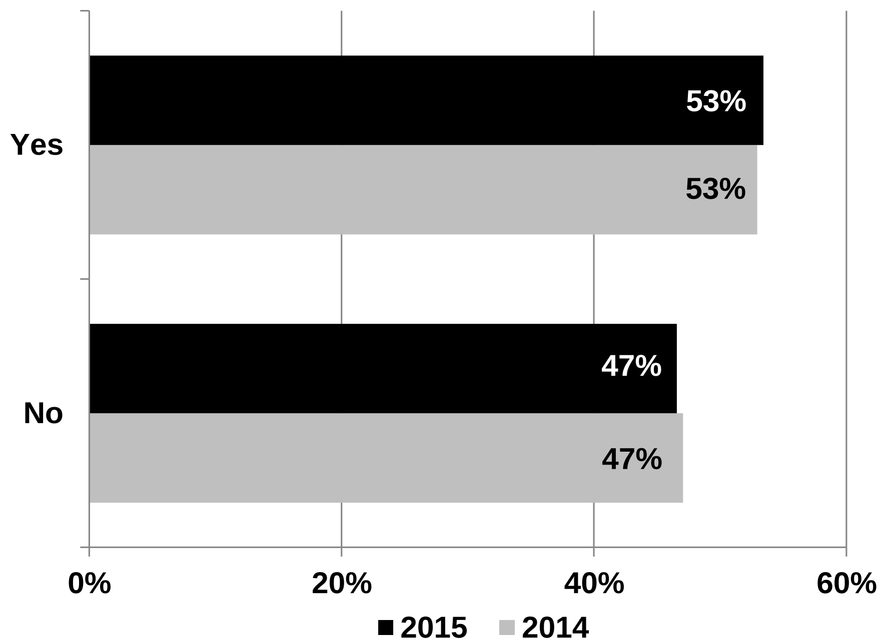
Backup Storage Spending Intentions Consistent With 2014

Consistent with 2014, approximately **53% of CIOs expect to increase spending on backup storage products in 2015**. While the data suggests no change in spending patterns in 2015 within the backup storage market, we remind investors that this market is outpacing the growth of the overall storage market. According to IDC, the Worldwide Data Protection and Recovery Software market is expected to reach $7.9 billion by 2018, increasing at a 7.1% CAGR. This largely outpaces the 3.8% CAGR of the total External Disk-based Storage market.

Exhibit 25

DO YOU EXPECT TO INCREASE SPENDING ON BACKUP STORAGE IN 2015?

Consistent with last year, 53% of CIOs plan to increase spending on backup storage.



Source: Piper Jaffray CIO Survey, 2015 n=73, 2014 n=102

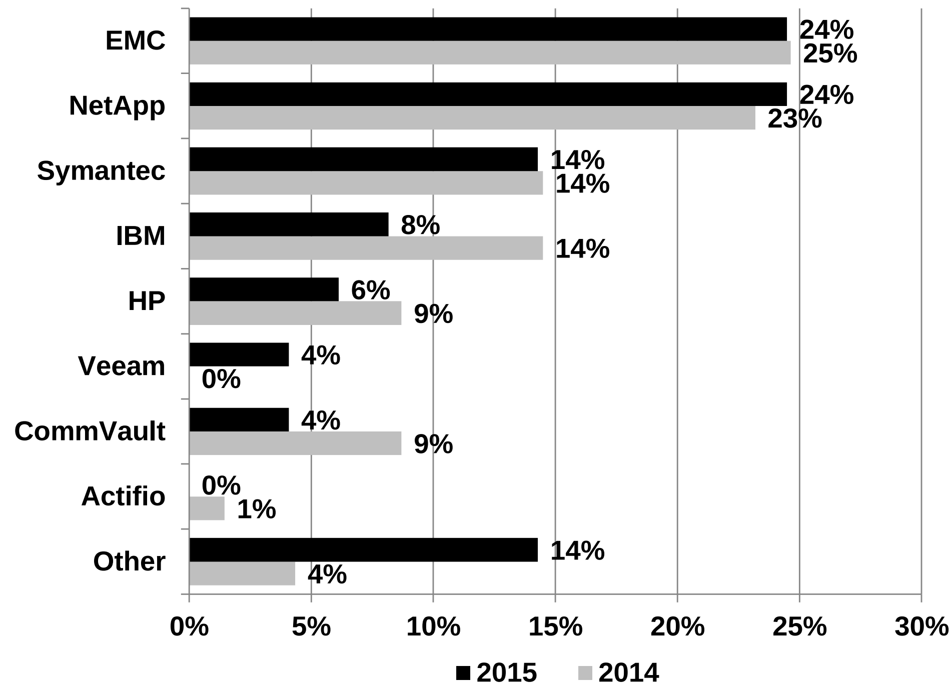
EMC & NetApp Also the Top Backup Storage Vendors

Similar to the preferred primary storage vendor, **EMC and NetApp ranked the highest among all backup storage vendors** as shown in **Exhibit 26. Both EMC and NetApp captured 24% of responses, while Symantec came in third for a second straight year at 14%.** EMC still has one of the most comprehensive backup portfolios in the industry (Data Domain, Avamar and Networker) and NetApp recently augmented its backup portfolio by acquiring the SteelStore products from Riverbed. Surprisingly, **CommVault only captured 4% of the vote, down from 9% in the 2014 survey.** We note that is well below the 7.6% market share CommVault held in 2013, according to IDC. The following exhibit highlights the backup storage results by vendor.

Exhibit 26

WHO ARE YOUR PREFERRED BACKUP STORAGE VENDORS?

EMC and NetApp remain the preferred vendors for backup storage.



Source: Piper Jaffray 2015 CIO Survey, 2015 n=49, 2014 n=69

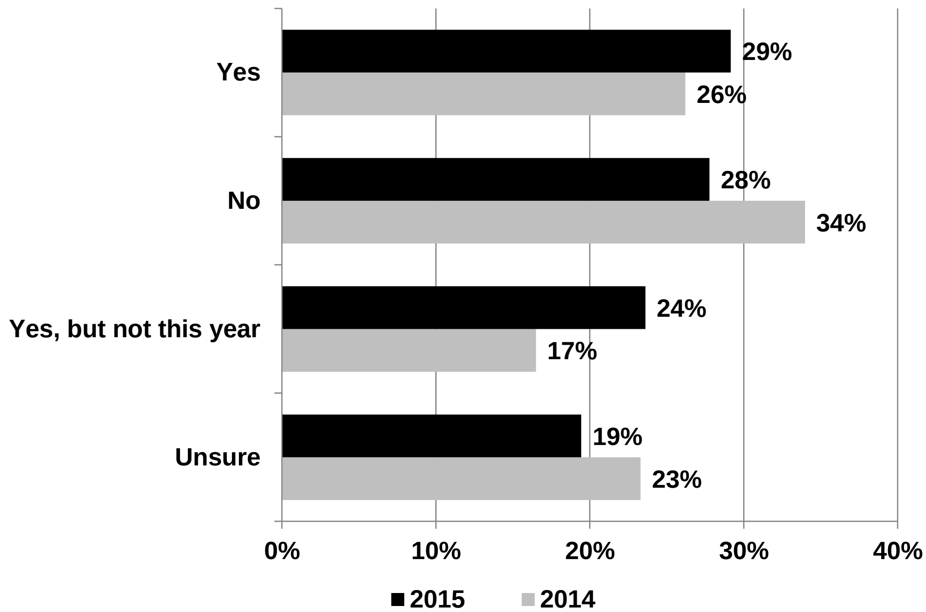
Converged Infrastructure Gaining Traction

Converged infrastructures, consisting of servers, networking and storage components, provide CIOs with flexibility to support multiple workloads on a single platform. Additionally, they provide linear scalability to add compute power and/or storage capacity. Finally, converged infrastructures provide enterprises with a "single throat to choke" for technical support. As such, these platforms have quickly gained traction within the enterprise over the last few years. **In this year's survey, 29% of CIOs indicated they are planning on deploying a converged infrastructure platform in 2015, up from 26% in 2014,** as shown in the exhibit below. Another 24% indicated they are planning on deploying a converged infrastructure, though not until after 2015. The following exhibit highlights the results from the survey regarding converged infrastructures.

Exhibit 27

IS YOUR ORGANIZATION LOOKING TO ADOPT A CONVERGED INFRASTRUCTURE IN 2015?

29% of CIOs indicated they plan to deploy a converged infrastructure platform in 2015



Source: Piper Jaffray 2015 CIO Survey, 2015 n=72, 2014 n=103

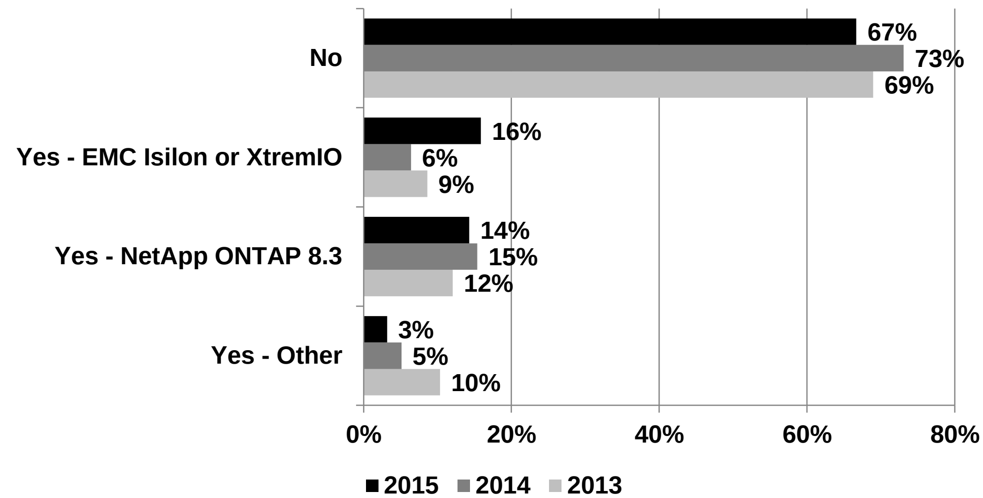
EMC Gaining Traction in the Scale-Out Market

We asked CIOs if they planned to deploy a scale-out or clustered storage architecture in 2015. Approximately 67% of CIOs said they are *not* planning a scale-out deployment, though that was a modest improvement from 2014, in which 73% said they are not deploying a scale-out architecture. **Of the remaining 33% of CIOs that do plan on deploying a scale-out architecture, approximately 16% said it will be with EMC, while 14% cited NetApp.** The following exhibit summarizes the responses from CIOs regarding scale-out storage deployments.

Exhibit 28

DO YOU PLAN TO DEPLOY A SCALE-OUT STORAGE ARCHITECTURE IN 2015?

EMC gaining the most traction in the scale-out market with 16% of CIOs deploying an EMC array.



Source: Piper Jaffray 2015 CIO Survey, n=63

NETWORKING

Networking Preferred Vendors Positive for Cisco, F5 and Arista

Networking was #1 area of the data center most in need of a refresh and as expected, **Cisco captured 47% (*vs. 45% in '14*) of the vote for the most preferred vendor, ranking it well ahead of legacy competitors Dell, HP and Juniper.** Only 7% of CIOs responded that they refuse to work with Cisco, which compares favorably to Huawei and Dell, who captured 60% and 13% of the vote, respectively. While just 3% of respondents indicated Arista as their primary vendor, 17% noted they intend to work with the challenger in the future, which compares with 2% and 20% in our 2014 survey. As shown in **Exhibit 29** below, F5 Networks came in as the #3 preferred vendor with 10% (*vs. 13% in '14*) of the responses (for primary vendors) and an additional 11% indicating F5 as a secondary vendor. Most importantly, 17% of CIOs indicated they plan on working with F5 Networks and one CIO responded they refuse to work with the ADC vendor. **Based on these results, we believe Cisco and F5 Networks are poised to capture increasing share of the networking spend in 2015.**

Exhibit 29

WHO IS YOUR PREFERRED NETWORKING VENDOR?

Primary Vendor		Secondary Vendor	
Cisco	**47%**	**Juniper**	**26%**
Dell	13%	**Cisco**	**14%**
F5 Networks	**10%**	HP	14%
Juniper	**6%**	Dell	14%
HP	6%	Brocade	11%
Brocade	5%	**F5 Networks**	**11%**
Other	5%	Alcatel Lucent	3%
Alcatel Lucent	3%	Arista	3%
Arista	3%	Other	3%
Huawei	0%	Huawei	0%

Plan to Work With		Refuse to Work With	
HP	17%	Huawei	60%
Brocade	17%	Dell	13%
F5 Networks	**17%**	**Cisco**	**7%**
Dell	17%	HP	7%
Arista	17%	Alcatel Lucent	7%
Other	17%	**F5 Networks**	**7%**
Cisco	**0%**	**Juniper**	**0%**
Juniper	**0%**	Brocade	0%
Huawei	0%	Arista	0%
Alcatel Lucent	0%	Other	0%

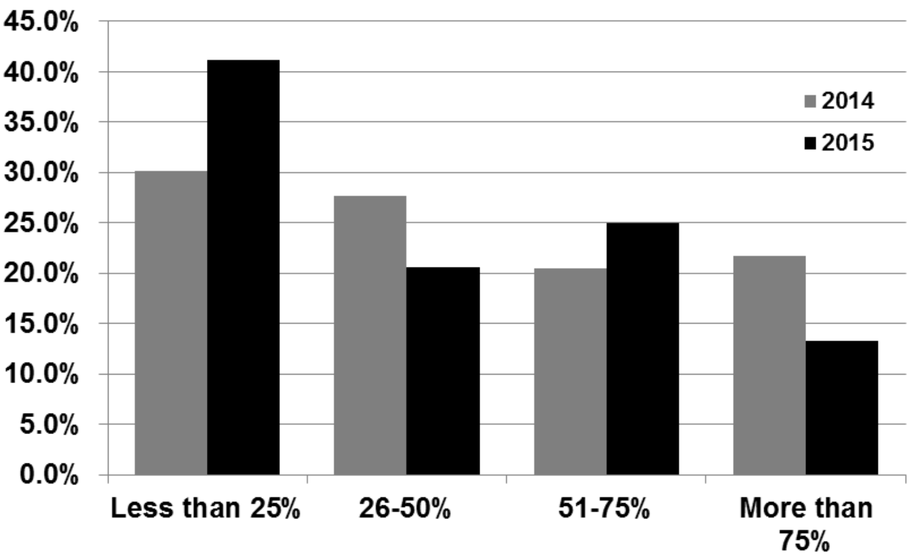
Source: Piper Jaffray 2015 CIO Survey, Primary n=93, Secondary n=35, Plan to Work With n=6, Refuse to Work With n=15

Most Servers Still Not Supported By ADCs

Over the last several years of our survey, ADCs have consistently ranked towards the bottom of spending intentions. **This comes despite the fact that survey data from the last two years has shown that for most companies, over 50% of their servers are not supported by Load Balancers or Application Delivery Controllers.** While we view it as unlikely that all servers eventually become supported, we believe it indicates the industry still has room to grow and that while the overall spend isn't growing it is maintaining, (*77% indicate they will maintain ADC spend*). Further, in the case of F5, despite a slow growth environment its leading position allows it to take share and with the addition of its security modules creates room for the company to continue to growing in the double digits.

Exhibit 30

WHAT PERCENTAGE OF YOUR SERVERS ARE SUPPORTED BY LOAD BALANCERS OR APPLICATION DELIVERY CONTROLERS?



Source: Piper Jaffray 2015 CIO Survey, N= 68

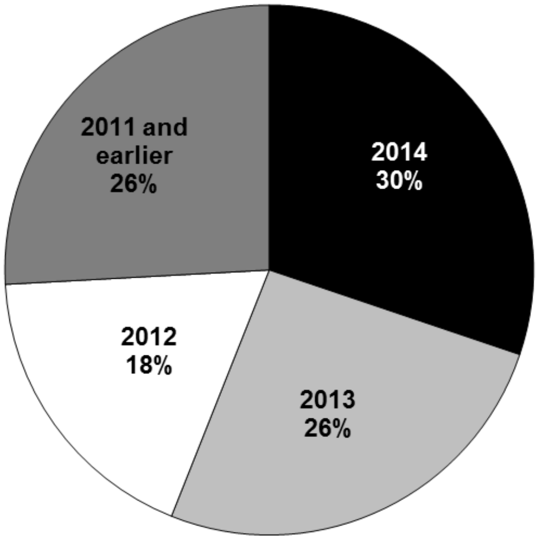
Data Suggests Continued Growth in Switching

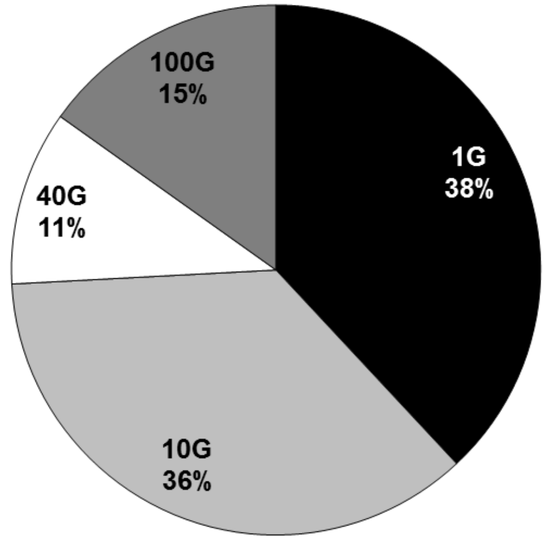
In our view, the results from our CIO survey (*budget & refresh sections*) point to respectable growth in traditional enterprise network equipment, including switches and routers. Though Gartner estimates switching revenue growth to decrease to 1.0% in 2015, versus 3.4% in 2014, we believe there is room for upside to this driven by the ongoing transition from Copper to Fiber based optical ports as companies aim to deploy 10G, 40G and even 100G data speeds.

In our survey, 38% of CIOs indicated their organizations' Data Center switches remain at 1G, with 36% reporting speeds of 10G, while 26% indicated speeds over 10G, up from 16% in our 2014 survey, but still indicated room for further penetration. Furthermore, 26% of CIOs indicated that their organizations' Data Center switches were last upgraded in 2011 or earlier, leaving a sizeable market poised to increase spending over the next two years. In our view, the majority of these upgrades will consist of 10G or higher port speeds, as Gartner now forecasts 10G and 40G switching revenue growth of 8.5% and 48.1% in 2015, respectively. We view market leader Cisco (*65% of 10G market share*) as the primary beneficiary of this upgrade cycle, with Juniper (4%) also sharing in the growth. For component suppliers, we believe Finisar (FNSR), JDSU and Applied Optoelectronics (AAOI) are best positioned within the datacenter optical markets. The exhibit below highlights the results from our 2015 CIO survey with respect to Enterprise Switching.

Exhibit 31

LAST SWITCHING UPGRADE (LEFT) AND CURRENT DATA CENTER PORT SPEED (RIGHT)





Source: Piper Jaffray 2015 CIO Survey, N= 116 (left- includes core and aggregation data), N= 68 (right)

Semi Takeaways from Switching Strength

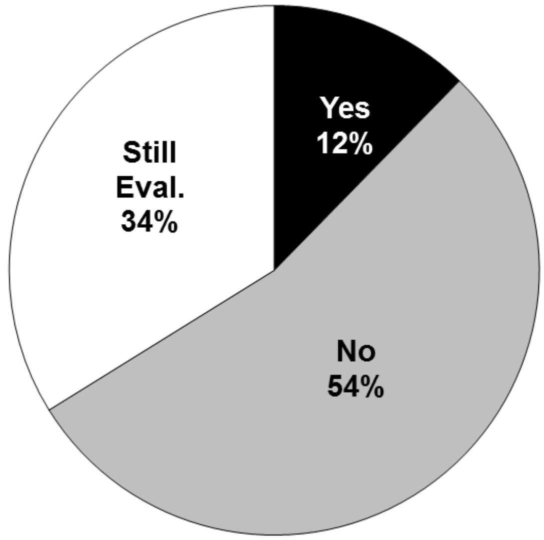
From a semiconductor perspective, Broadcom (BRCM) and Inphi (IPHI) are the two companies within Piper coverage that are best positioned to benefit from network equipment spending and upgrades. BRCM's recently introduced 3.2Tbps switch product, Tomahawk, appears well received by top-tier data center hardware OEMs. Data Center Ethernet switch revenue is expected to increase at a 12% CAGR over the next three years as forecasted by independent research group Crehan Research. Cavium (CAVM) could also benefit from this trend longer-term, given its recent expansion into the Ethernet switching markets. With respect to IPHI, the company's positioning as a high-speed interconnect specialist (10/40/100G), particularly given its recent acquisition of IP and assets from privately held Cortina, should enable continued faster than market growth as its TAM continues to expand. Intel (INTC) could also be a longer-term networking beneficiary as the company places more emphasis on this sub-segment of its Data Center Group (DCG). Of course, INTC should also benefit from increasing demand for compute capacity in the data center, particularly in 2015 as the company's latest server platform, code-named Grantley, ramps meaningfully after its September 2014 launch.

Little Adoption of SDN Suggests Hype Still Ahead of Reality

While we do not discount the fact that Software Defined Networking (SDN) will likely change the traditional IT hardware landscape as we know it, we believe adoption, and ultimately deployment will be vastly different and slower than expected. When asked about SDN deployment plans, just 12% of respondents indicated they plan on utilizing some variation of SDN technology in 2015. The majority (54%) of respondents indicated they had no deployment plans and the remaining 34% noted they are still evaluating. Consistent with Cisco's message at its 2013 analyst day, actual cost saving remains in question (perpetual software license + commodity switch). Given the infancy of SDN and lack of deployments on which to base a concrete opinion, we believe it is too early to speculate the actual impact, uptake rate, and most importantly the winners and losers of this major market transition. We will note however, that legacy vendors such as Cisco and Juniper seem to be taking a proactive approach to SDN, leading us to believe 1) the technology is real and here to stay and 2) represents a sizeable risk to traditional high margin enterprise hardware business models. The exhibit below highlights the results from our CIO survey.

Exhibit 32

ARE YOU PLANNING TO DEPLOY A SOFTWARE DEFINED NETWORKING SOLUTION IN 2015?



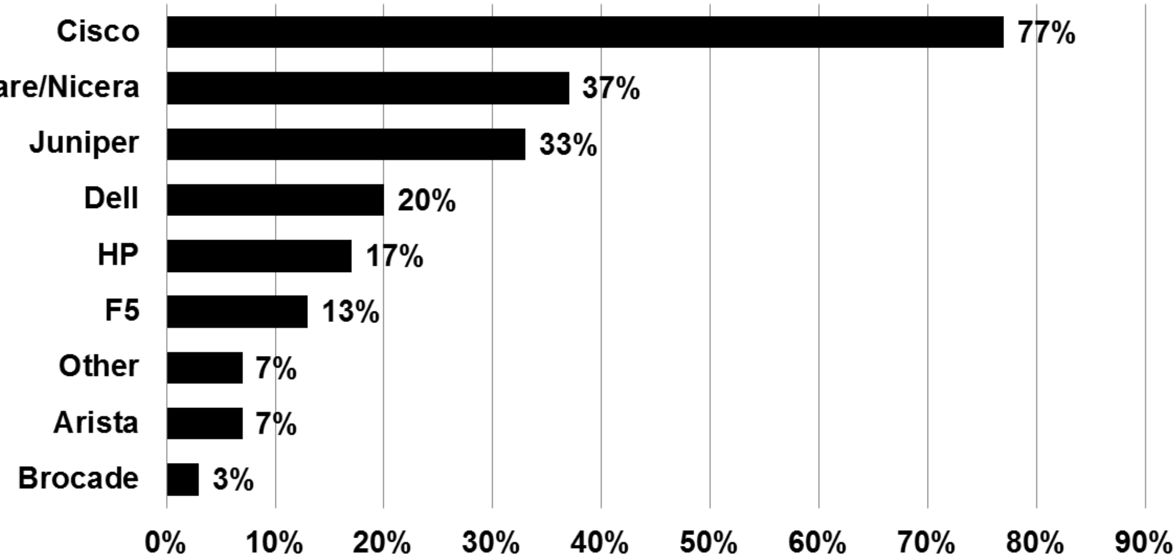
Source: Piper Jaffray 2015 CIO Survey, N= 76

Despite Little Adoption, Cisco Seems Well Positioned For SDN

Of the 30 respondents that indicated that they were going to deploy or were evaluating and SDN solution, 29 replied on the vendors they planned on using, and what we saw is that Cisco was the most widely selected vendor with 77% of respondents indicating that they planed to work with the company, followed by VMware/Nicera at 37% and Juniper 33%. In general, we don't see this as surprising given Cisco and Juniper representing two of the most preferred vendors in networking and VMware as the primary vendor of virtualization.

Exhibit 33

ARE YOU PLANNING TO DEPLOY A SOFTWARE DEFINED NETWORKING SOLUTION IN 2015?



Source: Piper Jaffray 2015 CIO Survey, N=29 (29 respondents, 64 responses)

SOFTWARE

#1 Preferred Vendor for Enterprise Software: Microsoft

When asked about preferred software vendors for 2015, Microsoft came out on top with 24% of the 165 CIOs who answered this question citing Microsoft as their preferred primary provider. This result is not surprising given Microsoft's long-standing leadership on the desktop, server and in the management infrastructure of key IT systems. Microsoft's leadership bodes well for the company as well, since Gartner forecasts worldwide software IT spend to increase 7.4% in 2015, an acceleration from 6.9% in 2014. We expect Microsoft to grow overall revenue at 9.5% in calendar 2015, down from 11.8% in calendar 2014. Microsoft's broad base of existing customers which helps to contribute to its high ranking also bodes well for contract renewals and new business, in our view.

#2 & #3 Preferred Vendors: Oracle and VMware

Oracle and VMware are also poised to benefit from their significant installed base, as these companies were cited as the #2 and #3 primary preferred vendors (**Exhibit 37**). Oracle, cited by 16%, or 26 companies in our survey, as a primary vendor and 5 CIOs as a secondary vendor, likely ranks high due to their on-premises solutions, which have a large installed base and enable some of the most critical systems in all of IT: database, middleware and ERP. We expect Oracle's revenue to grow ~4% in calendar 2014, up from flat growth in calendar 2013. The survey data gives us increased confidence in our growth expectations.

VMware is still the standard in compute (server) virtualization, despite years of attempts by other companies to penetrate their core market. Like Microsoft and Oracle, VMware owns technology that is fundamental to the functioning of IT, while the company itself is of a size and scale that makes reliance seem less risky. VMware, however, is in a different phase of life than Microsoft and Oracle. Coming off several years of hyper growth: 41% in 2010, 32% in 2011 and 22% in 2012, the 13% y/y revenue growth reported in 2013, guidance calling for 16% y/y growth in 2014, and our expectation of 12% revenue growth in 2015 shows a leveling off as VMware heads into a more mature growth pattern. VMware also does not have as large of a recurring revenue base as some other large enterprise software vendors, which makes their revenue stream lumpier and less predictable. Yet being cited as a top 3 primary vendor by the CIOs in our survey indicates that VMware is far from fading into irrelevance, despite the slowdown.

Salesforce's Inclusion as a Top Vendor Validates Cloud Systems as a Strategic Part of IT

Salesforce.com is the only pure software-as-a-service vendor to make it into the top 5 as a primary vendor. Salesforce is also the largest SaaS vendor. We view the company's inclusion in the top 5 as validation of the use of outsourced cloud services by enterprise IT, proving that multi-tenant models can be viewed with the same trust and reliability as on-premises solutions. Salesforce's inclusion as a primary vendor also helps bolster our confidence in our billings and cash flow estimates for 2015.

Exhibit 34

WHO ARE YOUR PREFERRED VENDORS FOR ENTERPRISE SOFTWARE?

Primary Vendor	2015	Secondary Vendor	2015
Microsoft	24%	**Citrix**	24%
Oracle	16%	**Splunk**	18%
VMware	16%	**Oracle**	15%
Salesforce	8%	**Red Hat**	9%
Citrix	7%	**Salesforce**	9%
SAP	7%	**VMware**	6%
Red Hat	5%	IBM	6%
ServiceNow	4%	**ServiceNow**	3%
Splunk	3%	**Workday**	3%
Workday	3%	SAP	3%
IBM	3%	Other	3%
Other	2%	**Microsoft**	0%
NetSuite	1%	**NetSuite**	0%

Source: Piper Jaffray 2015 CIO Survey. Primary Vendor (N=165), Secondary Vendor (N=33).

More information about software-specific spending can be found in a separate report published today, entitled “Enterprise Software – 2015 Piper Jaffray CIO Survey.”

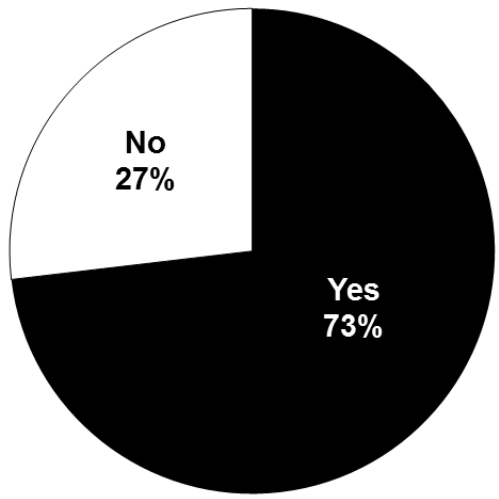
CLOUD

The Corporate March to the Cloud Continues

When asked about cloud spending, 73% of CIOs reported allocating budget to private, hybrid, or public cloud projects in 2015 (**Exhibit 34**). While 73% seems significant, this is the first time we've asked this question, so we can't yet trend the answer.

Exhibit 35

HAVE YOU ALLOCATED BUDGET FOR CLOUD-RELATED SPEND (PRIVATE, HYBRID, OR PUBLIC CLOUD) IN 2015?



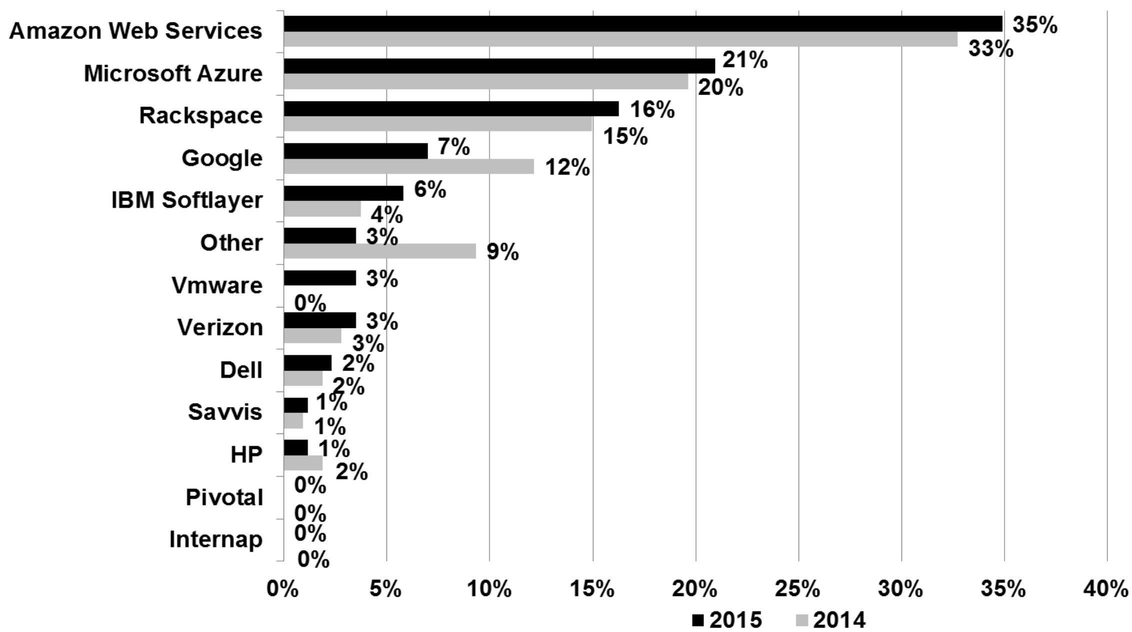
Source: Piper Jaffray 2015 CIO Survey N=67.

AWS, Microsoft Azure and Rackspace Top the List for Cloud Spending

The preferred public cloud providers are unchanged from 2014: Amazon Web Services (AWS), Microsoft's Azure, and Rackspace take the top 3 slots in this year's survey. AWS leads with 35% of those CIOs who plan to use public cloud services citing them as the preferred vendor. This is up from 33% in 2014. Microsoft's Azure and Rackspace maintained their second and third place rankings, garnering 21% and 16% of the votes, both up 1% y/y (**Exhibit 35**). For Microsoft, the results suggest to us that demand for Azure is likely to continue into 2015. In the September 2014 quarter, Azure revenue rose 121% y/y, and we are modeling Azure revenue to increase 107% y/y into FY15E. Increasing usage bodes well for premium Azure services, which were >50% in the June 2014 quarter, and >60% in the September 2014 quarter.

Exhibit 36

WHO IS YOUR PREFERRED PUBLIC CLOUD PROVIDER(S)?



Source: Piper Jaffray 2015 CIO Survey. 2015 (N=86), 2014 (N=107). Respondents could select more than one provider.

AWS, Microsoft and VMware are the Top Recipients of Private Cloud Spending

To get a fuller view of the surveyed companies' cloud initiatives, we asked the CIOs to indicate the magnitude of their planned spending on private cloud-related projects in 2015 (**Exhibit 36**). Of the 38 respondents who expect to fund private cloud initiatives in 2015, 89% of plan to increase spending vs. 2014. Amazon Web Services, Microsoft Azure, VMware vCloud Air, and Google look to be the beneficiaries of this additional spending, as greater than 50% of the CIOs in our survey indicated that they would increase spending with these vendors in 2015. In contrast, >50% of respondents indicated that Dell, Internap, Savvis, Pivotal, IBM Softlayer and HP would receive decreased funding in y/y in 2015. Rackspace and Verizon/Terremark's results were neutral on balance, with the same number of votes to increase as well as decrease the level of spend.

Exhibit 37

ARE YOU EXPECTING YOUR CLOUD SPEND TO INCREASE OR DECREASE IN 2015 VERSUS 2014?

	Number of Responses	% increase	% decrease
Private Cloud	38	89%	11%
Amazon Web Services	33	88%	12%
Microsoft Azure	23	70%	30%
VMware vCloud Air	11	64%	36%
Google	16	63%	38%
Rackspace	12	50%	50%
Verizon/Terremark	10	50%	50%
Dell	8	38%	63%
Internap	6	17%	83%
Savvis	6	17%	83%
Pivotal	6	17%	83%
IBM Softlayer	7	14%	86%
HP	7	0%	100%

Source: Piper Jaffray 2015 CIO Survey.

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