

2013

2013 ACUTA/NACUBO State of Resent Report

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2013

ACUTA / NACUBO

STATE OF RESNET REPORT

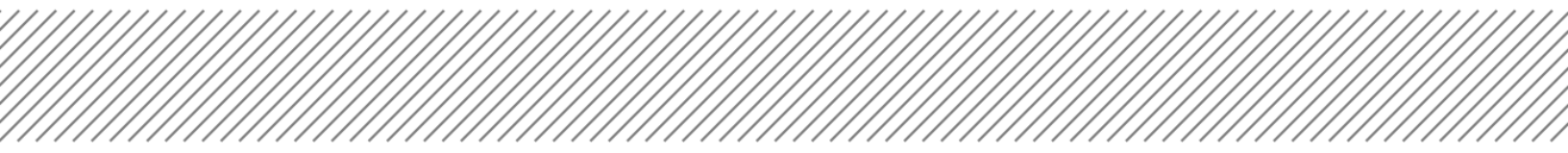
ResNet Trends & Practices
Across Higher Education

acuta

The Association of Information
Communications Technology
Professionals in Higher Education



The National Association of
College and University
Business Officers



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INTRODUCTION

The ACUTA/NACUBO Study paints a vivid picture of the intensifying tug-of-war between rising ResNet costs and tightening budgets at many of our nation's universities and colleges. It is our hope that the study will provide a comprehensive and coherent inventory of practices, perceptions and priorities to help administrators rise to the challenges of the coming years.

- Dee Childs
ACUTA Environmental Scanning Committee Chair, Associate Provost and CIO, The University of Alabama in Huntsville

In today's higher education environment, collaboration between technology leaders and business officers has never been more important.

Strategic investments in technology can yield significant competitive advantages, strengthening the ability of the institution to attract new students, capitalize on new revenue models and prepare students for the next generation of careers.

With new innovation comes new challenges, however, and planning for the coming tide of bandwidth consumption has become one of the defining challenges for today's residential network.

As we navigate this sea change, colleges and universities are grappling with dueling priorities - supporting connectivity demands and maintaining high standards of quality, stability and security - all while optimizing capital expenditure and staffing needs. Charged with delivering more services in more ways, officials in both IT and Business find themselves challenged to reconcile budget constraints with institutional advancement.

The Association for Information Communications Technology Professionals in Higher Education (ACUTA) and The National Association of College and University Business Officers (NACUBO) are pleased to present research findings from the 2013 ACUTA/NACUBO State of ResNet study.

This is the second installment of a comprehensive five-year tracking study to measure the broad variation in ResNet practices and policies in higher education in order to develop a long-term body of knowledge around an area where very little aggregate data currently exists. It is also the first time that our two institutions have partnered to study ResNet issues, and the first time that respondents extend beyond information technology to include CFOs and business officers.

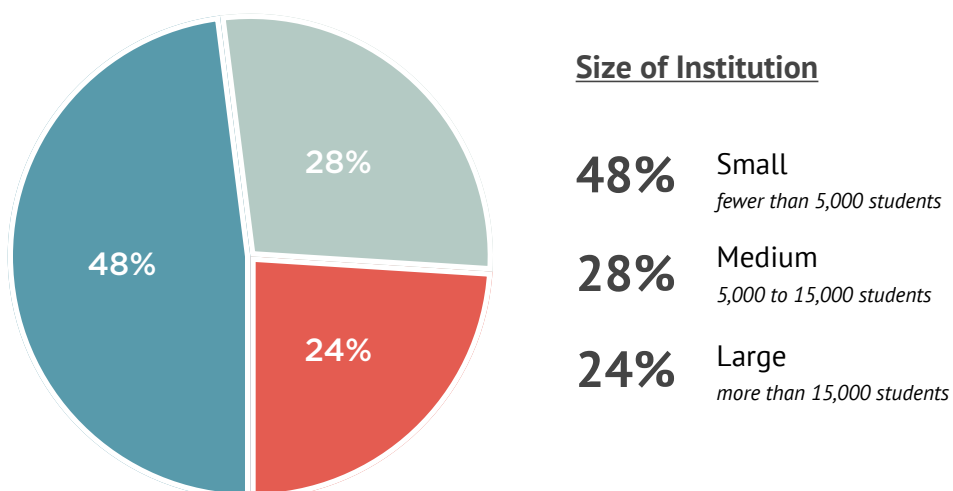
With this research, we hope to help administrators and business officers deepen their understanding of key ResNet trends and issues, gain insights to help position their departments to champion change, foster greater collaboration and create new efficiencies in the years ahead.

METHODOLOGY

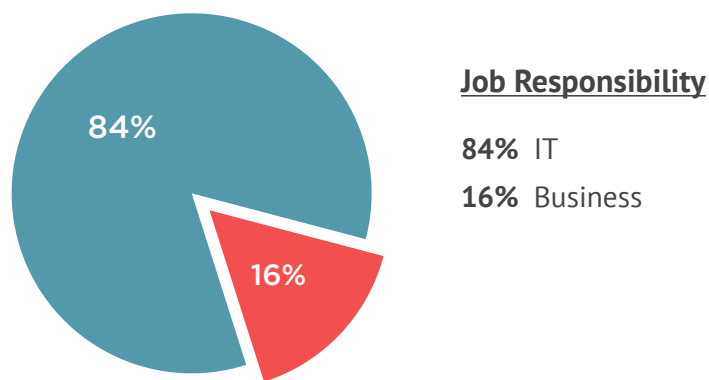
For the second year, market research firm Forward Analytics was contracted to perform ResNet industry research and to report quantitative market intelligence designed to benefit higher education IT departments and enhance residential computer networking available to college and university students. Forward Analytics worked closely with ACUTA and NACUBO representatives to design the 2013 survey and conducting polling in November/December 2012. While similar to last year's questionnaire, the second annual survey garnered more in-depth data to issues that were presented in the earlier study.

A total of 280 surveys were completed, representing 251 universities or colleges (28 institutions had multiple respondents). With a sample population of 1,700 U.S. higher education institutions, the response rate represents a statistical significance of +/-5.7% at the 95% confidence interval. With 251 unique institutional respondents, it can be said that if the survey were repeated 100 times, 95 in 100 times the research findings would vary at most +/- 5.7%. This level of sampling is deemed significant for supporting business decisions and strategic planning.

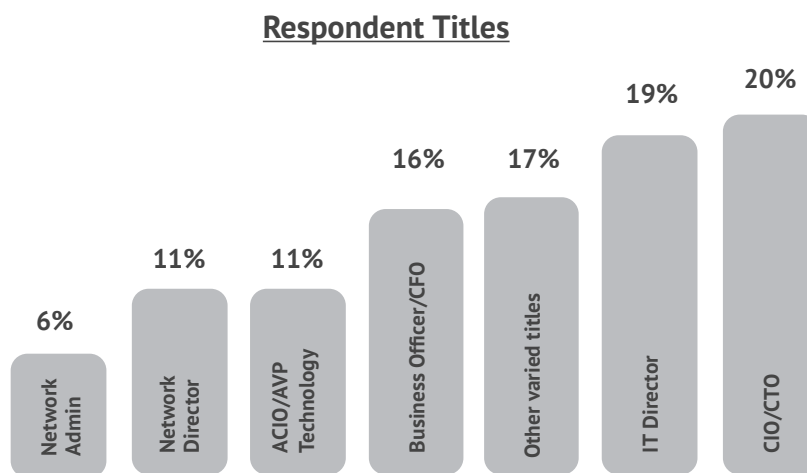
The survey sample has the following characteristics:



Of the 280 total responses, 44 respondents indicated that their primary job responsibility was related to business, while 215 respondents primarily handled IT.



The number of business responses relative to the overall survey population indicates that findings in the 2013 study may not represent the views of the entire business community in higher education. Beginning with these initial figures, we aim to continue expanding this research to provide a more complete picture of business officer perspectives in years to come.



EXECUTIVE SUMMARY

The 2013 ACUTA/NACUBO State of ResNet Report shows that while many campuses are rapidly adapting to meet ResNet challenges, there is still significant concern over the future of the residential network. In this second year of this study, we see the emergence of trends that may tell us a great deal about the trajectory of ResNet policies and perspectives nationwide.

ResNet costs are outpacing budgets on most campuses.

- 61% of respondents expect the cost of providing ResNet to increase over the next two years. Half of those respondents expect an increase of 5% or more.
- Despite rising costs, 44% of schools reported no change in the portion of their operating budget devoted to ResNet over the last two years.
- 10% reported a decrease in ResNet funding over the same period, while 31% reported an increase.
- The top three factors attributed to increased spending are the cost of increasing bandwidth (72%), the cost of network hardware/software (63%) and the costs of providing new services to residents (50%).

Concerns about funding and demand on network support are rising sharply.

- Funding for network support was a primary concern for 37% of respondents, rising from 23% in 2012.
- Increasing demand on network support was a primary concern for 23% of respondents, rising from 16% in 2012.

Call center support is widely available, but 24/7 support is rare.

- Most schools provide some form of network phone support (89%), but limit the hours that support is available.
- Only 12% of campuses currently provide 24/7 network support.

Schools are leveraging economies-of-scale to lower costs.

- Campus-wide purchasing (51%), consortium purchasing (47%) and system-wide purchasing (26%) are the primary practices schools are using to reduce the cost of bandwidth.
- 40% of campuses pay for ResNet bandwidth without recovering the cost, down from 48% last year.

More campuses are accommodating demand for unlimited mobility and bandwidth.

- Unlimited mobile devices are allowed to connect to the network at 80% of campuses, rising from 68% last year.
- Significantly more students have the option to pay for additional bandwidth, as the number of campuses providing bandwidth upgrades has nearly tripled since last year - rising from six to 16%.

While most schools are concerned about long-term viability, few have a plan for coming years.

- 61% of those surveyed say they are either concerned or very concerned about the ability of their campus to support future ResNet demands.
- 44% of campuses say they do not have a plan for ResNet growth in the years ahead, while 14% of all respondents are unsure.
- Roughly one in three business officers say they are unsure whether their campus has a plan for coming years.

FINDINGS

COVERAGE & BANDWIDTH DEMANDS

Bandwidth and coverage continue to be top issues for the residential network. Every year, students report to campus with an increasing array of mobile and Internet-connected devices. As these devices incrementally raise bandwidth consumption, colleges and universities are challenged to keep up.

Individual Bandwidth Access

Despite considerable demand, most schools enforce minimal restrictions on bandwidth access in student residence halls.

- 68% of schools do not cap individual bandwidth usage for student residents.
- Of the institutions that cap usage, 16% provide students with the option to pay for additional bandwidth.

Bandwidth Management Practices

A majority of colleges and universities manage bandwidth usage through various means, most commonly through shaping and limiting bandwidth by protocol.

Bandwidth management practices	
Shaping and limiting bandwidth by protocol	72%
Capping network-wide throughput available to streaming video	23%
Implementation of cache servers	23%
Providing minimum guaranteed service levels by user	13%

Figure 1

Future Bandwidth Consumers

Last year's Trends & Practices Survey asked, "Which categories of network-enabled devices do you view as the largest bandwidth consumers in the coming years?" Respondents were asked to check up to three responses.

In 2012, 90% of responding colleges said they expect tablets to consume the most bandwidth in the years to come. Other top consumers included smartphones (85.6%), iPod/iPod Touches (76.4%), and game boxes (75.5%).

In the 2013 study, the question was altered to ask respondents, "How do you expect the following network-enabled devices to affect bandwidth consumption in the coming years?" Responses were listed on a scale of one to 10, with one being the lowest impact (consuming the least bandwidth) and 10 being the highest (consuming the most).

The chart below illustrates the percentage of respondents who assigned each device a rating of six or higher.

Which devices will most impact bandwidth consumption in the coming years?	
Tablets (iPad, Android)	84%
Desktop and laptop computers	75%
Video systems (DVD/Blu-Ray Players, Apple TV, Roku, Slingbox)	64%
Smartphones (iPhone, Blackberry, Android)	63%
Game boxes (PS3, Wii, XBOX, XBOX 360, etc.)	61%
Smart TVs	52%
iPod/iPod Touches	34%
e-Book Readers (Kindle, Nook)	28%
Handheld Game Consoles (3DS, etc.)	27%
Wireless Printers	14%

Figure 2

Bandwidth Dedicated to ResNet

Since this question was asked in last year's study, the amount of Internet bandwidth available to ResNet has seen an overall increase.

- At the higher end of the bandwidth spectrum, there was an eight point increase in the number of schools that provide 1 Gb or more - nearly doubling from 18% to 33% in the past year.
- At the lower end, the number of schools offering the lowest connection speeds (500 Mbps or less) dropped to 55% (from 60% in 2012).

How much Internet bandwidth is available to the residential network?

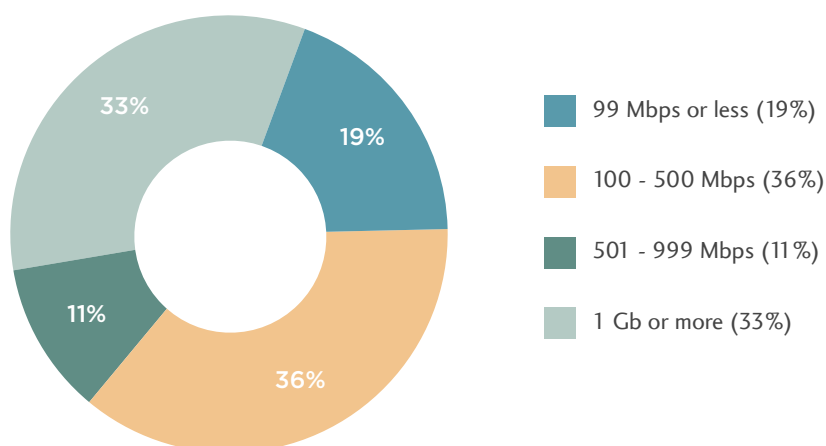


Figure 3

Snapshot of Current Wireless Coverage

Nearly all campuses provide wireless access in their residential halls, including student rooms and suites (91%), common areas and community space (96%), academic spaces (93%), administrative areas (94%) and dining facilities (90%). Slightly fewer institutions provide wireless access in the residential computer labs (81%), while 66% provide wireless access in the outside areas adjacent to the residential space (courtyards, breezeways, parks).

Residents also anticipate seamless mobility throughout campus. While moving across campus, students expect to maintain connectivity between their mobile devices and the Internet. In 2013, less than half (45%) of institutions report reaching more than 80% of the campus with strong wireless coverage.

What percentage of your campus can currently access a strong wireless network connection?

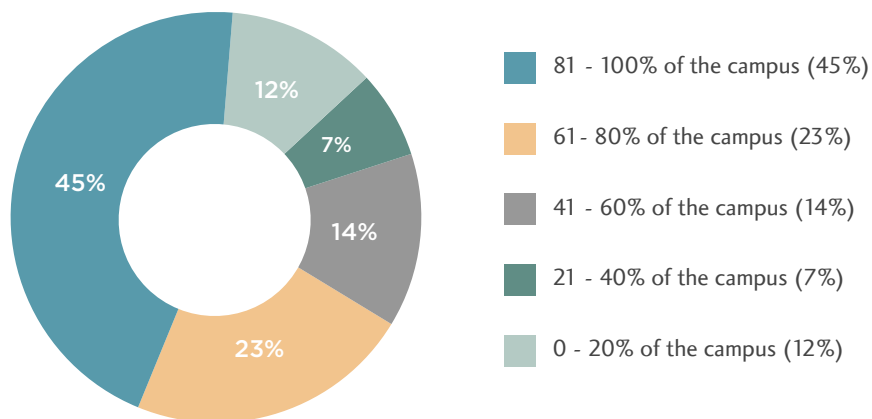


Figure 4

Wired Ethernet Ports

Despite the prevalence of wireless access, only 15% of universities plan to remove wired Ethernet ports in residential buildings. Another 17% of respondents are unsure if they will be removed.

This is a year-over-year rise, as fewer institutions (5%) had plans to remove wired Ethernet access ports in 2012. Furthermore, the majority of institutions include wired Ethernet access ports in new residential construction by offering one port per student (77%), one port per resident (14%) and/or providing ports upon request (4%). Despite this finding, 11% of institutions did not include Ethernet ports in residential construction completed over the past three years.

Improving Cellular Coverage

The challenge facing schools is to eliminate any gaps in cellular coverage that might result in dropped calls or choppy cellular Internet connections, and to provide enough coverage in high-traffic areas without causing signal interference.

To support coverage demands, more than three-fourths of campuses expect to augment *residential* cellular reception within the next three to five years. Thirty-nine percent of institutions plan to deploy in-building distributed antennae systems (DAS), 22% plan to deploy outdoor DAS, and 26% plan to deploy outdoor cellular sites.

Presently, only three of the surveyed institutions already deploy DAS and eight institutions have a cell tower on or near campus, while 38% of institutions have no plans for cellular augmentation. Most campuses who do not plan to augment reception say that cellular coverage is satisfactory, while some institutions indicate that cellular augmentation is too expensive.

- Nearly 80% of institutions allow students to connect an unlimited number of devices (aside from desktop or laptop computer) to the residential computer network - an 11 point increase from 2012.
- Only 14% of schools cap the number of devices a student can connect to the network at five devices or fewer, representing a 50% drop from 2012.
- 42% of campuses permit residents to extend the network with switches (27%), hubs (26%), servers (17%), routers (13%) or wireless routers (16%).

RESNET MANAGEMENT & SUPPORT

Along with broad connectivity, network support for mobile devices is an increasingly common expectation held by incoming students. Despite these expectations, institutions face steep challenges in order to properly implement and support this function on a large scale. ResNet responsibilities may span multiple organizations with many different people playing a role in support, from the operation of the network, to planning, recruitment, support and problem solving.

The 2013 ResNet study reveals that IT (Central IT Networking, Security, etc.) is primarily responsible for maintaining the physical infrastructure and providing end-user support of the residential computer network for on-campus housing facilities at most colleges and universities. When Student Affairs (Housing, Residence Life, etc.) plays a role in physical infrastructure and end-user support for the ResNet, their role is typically still in conjunction with the IT department. In this area, the 2013 study presents data comparable to findings in 2012.

The 2012 ResNet Trends & Practices survey asked if connectivity assistance is provided for various network-enabled devices (in addition to computers and laptops). Several institutions indicated that connectivity assistance is available for mobile devices, while other types of network support are not. This year's study explores the type of support provided by the institution for each of these devices and quantifies the number of institutions that do not currently provide support for network-enabled devices. Phone support is the most common type of assistance provided by schools, except in the case of tablets (iPad, Android), where in-person support is more frequently provided. The best way to compare 2012 and 2013 data is to explore the percentage of higher-education institutions that do not provide connectivity or assistance for the network-supported devices. The 2013 data prove that schools are clearly increasing support for a larger number of mobile devices.

- Most colleges and universities provide residents with a variety of options for network support including on-site/walk-ins (93%), email (92%), call center (90%), live chat (23%) and/or text message (17%).
- While 60% of institutions provide 40+ hours of support to residents each week, but only 12% offer 24/7 access to support.
- 6% of schools provide less than 30 hours of support through their ResNet help desk. In-room network assistance is provided to residents by 89% of survey institutions.
- 47% of schools dispatch technicians immediately upon request to handle hands-on network support needs, while 68% provide technicians on an appointment-only basis.

RESNET COSTS & FUNDING

Higher-education institutions face the challenges of rising information technology costs while providing a reliable infrastructure.

- 61% of surveyed colleges and universities expect the cost of providing ResNet to increase over the next two years.
- 34% of institutions expect it to remain the same.

Only 39% of institutions saw an increase in the operating budget devoted to the ResNet over the past two years. Nearly ten percent of institutions experienced a decrease in the operating budget devoted to ResNet.

The survey also shows that the major factors instigating change in ResNet budgets are:

- Increasing bandwidth (64%)
- Cost of network hardware or software (60%)
- Providing new services to students (45%)

Hiring and/or training and new or additional staff account for budget changes for 16% of higher-education institutions.

Bandwidth Cost Recovery

Survey data reveal that 48% of IT departments pay for bandwidth but recover some or all of their costs through fees to residents or interdepartmental charges to Housing. Further, six percent of institutions rely on an outside vendor to supply the bandwidth where the vendor recovers some or all of their cost through a charge to the university.

At four percent of schools, the Housing department pays a non-university ISP and is left to recover some or all of the cost. 40% of IT departments pay for bandwidth supplied to residential networks but do not recover the cost, a decrease from 48% in 2012.

Bandwidth Cost Reduction

The majority of respondents say that some form of institutional purchasing (campus, consortium or system wide) is their preferred way to control/reduce bandwidth related costs. Colleges and universities currently have varied funding models for campus telecommunications and network services. The following are the five primary funding modalities listed by respondents:

Do you use any of the following practices to reduce Internet bandwidth costs?

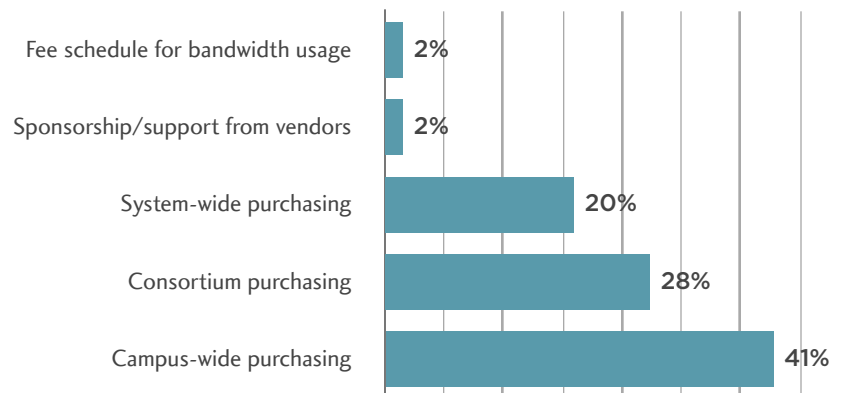


Figure 5

- 36% partially fund the residential network with student fees and partially through central university funds.
- 31% completely fund the residential network as a core university service from central university funds.
- 15% jointly fund the residential network through central university, student fees and departments.
- 13% partially fund the residential network through departmental assistance (colleges and schools) and partially through central university funds.

ALTERNATIVE MODELS

The study reports that 49% of colleges and universities currently outsource cable television in their residential halls (similar to the 2012 study) though 5% of institutions do not offer cable to its residents. The majority of campuses (52%) provide broadband-based bulk service with custom channel lineup to on-campus residents, while 24% pulled satellite-based bulk service.

Almost 16% of campuses outsource phone service for residents. Currently, 38% of college campuses offer their residents HD channels with cable television and 27% offer expanded cable packages. More than half of responding institutions (53%) have hallway or common-area phones in on-campus residents and 49% have in-room landline phone ports. Almost 15% of institutions do not offer any landline or VoIP options to on-campus residents.

Has your campus considered outsourcing any portion of the residential network?

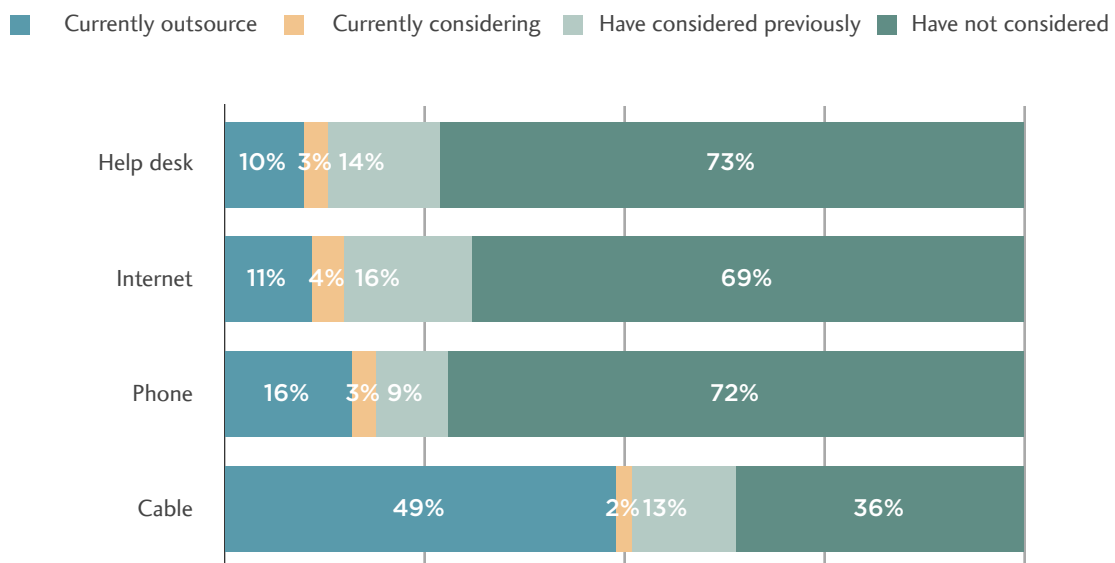


Figure 6

Recent IT Outsourcing

The survey also asked colleges and universities to identify IT functions that have been outsourced *in the past three years*. Despite possible protection rights and security risks, the majority of institutions outsourced email (56%). Fewer institutions outsourced other IT functions such as data storage (15%), help desk (10%), data center (9%), network security (6%) and ERP (5%).

Have you outsourced any of the following IT functions in the past three years?

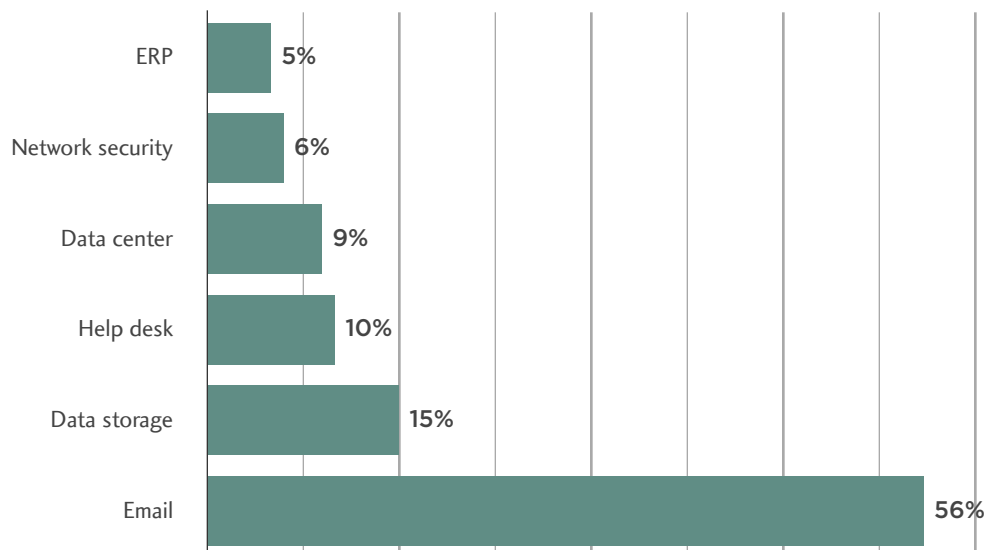
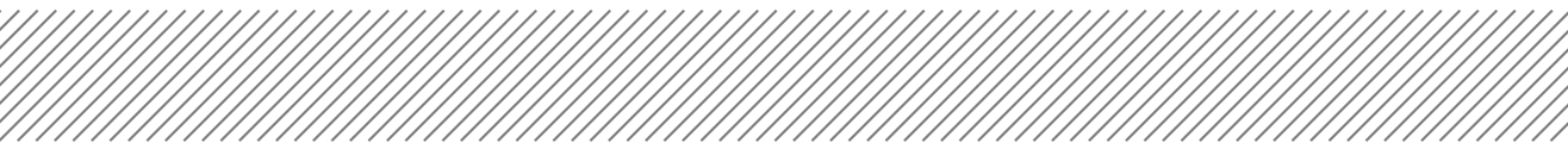


Figure 7



The 2013 State of ResNet Report is brought to you by the Association for Information Communications Technology Professionals in Higher Education (ACUTA) and the National Association of College and University Officers (NACUBO).

About ACUTA

ACUTA, the Association for Information Communications Technology Professionals in Higher Education, is an international nonprofit educational association serving colleges and universities. Its core purpose is to advance the capabilities of higher education communications and collaboration technology leaders. ACUTA represents nearly 2,000 individuals at more than 700 institutions of higher education, with members ranging from small schools and community colleges to the very largest U.S. institutions. ACUTA's corporate affiliate members represent all categories of communications technology vendors serving the college and university market. For more information about ACUTA and its mission, visit www.acuta.org.

About NACUBO

NACUBO, the National Association of College and University Officers, founded in 1962, is a nonprofit professional organization representing chief administrative and financial officers at more than 2,500 colleges and universities across the country. NACUBO's mission is to promote sound management and financial practices at colleges and universities. For more information about NACUBO, visit www.nacubo.org.

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