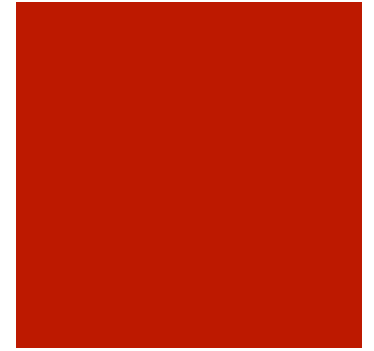




Email-SIG

Service Update
December 5, 2011

Email-SIG

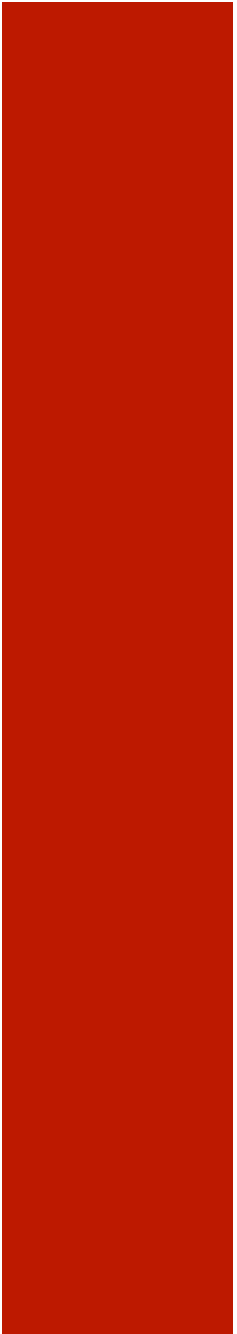


Please:

- Sign the sign-in sheet
- Ask questions or offer comments at any time
- Let me know if you can't hear me
- Send feedback afterward to preset@isc.upenn.edu

Agenda

SMTP-Relay
PennNet Mailing Lists
Forward-Only
Exchange
Mobile Devices
Zimbra



SMTP-Relay



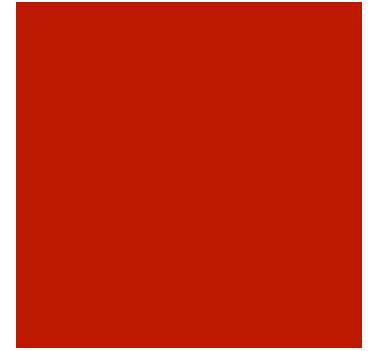
- Use cases: printers, faxes, control systems that need to send email w/o user auth, or to external addresses
- Separate service to avoid dependencies on Exchange and Zimbra
- Currently used by 58 hosts (up 14% from a year ago)
- \$10/IP address/month; rate stable for FY13; no charge for mail within ISC service

PennNet Mailing Lists



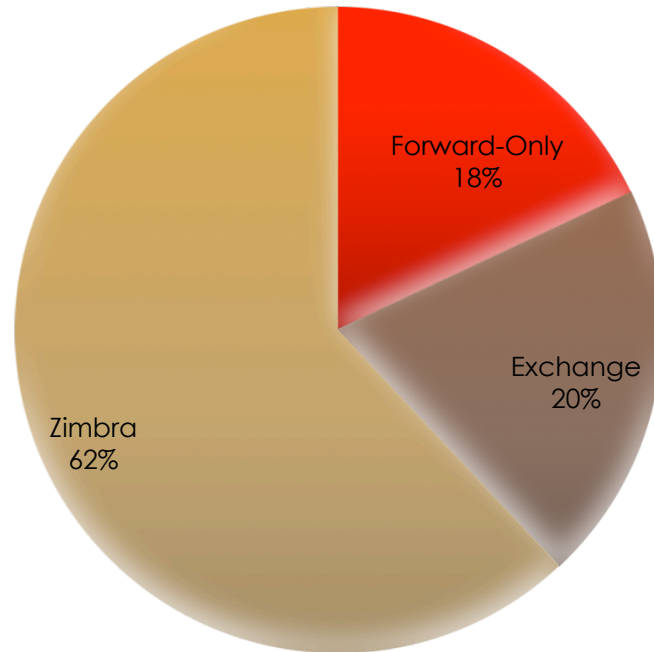
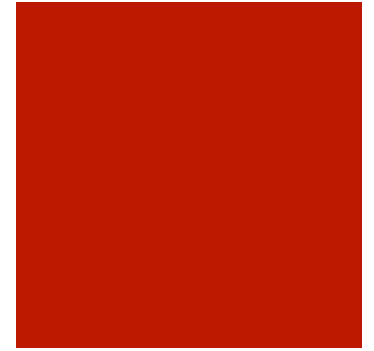
- ISC goal to explore feasibility of integrating LSOFT Listserv with PennGroups in FY12. Results:
 - List owners would not see membership of lists
 - Silent failures if the LDAP interface to PennGroups is unavailable
 - Continuing minimal experimentation
- Rate structure remains \$0.50/list/month in FY13
- **UPDATE: May increase to \$0.55 to continue to fund Grouper work**

Communications & Collaboration Team

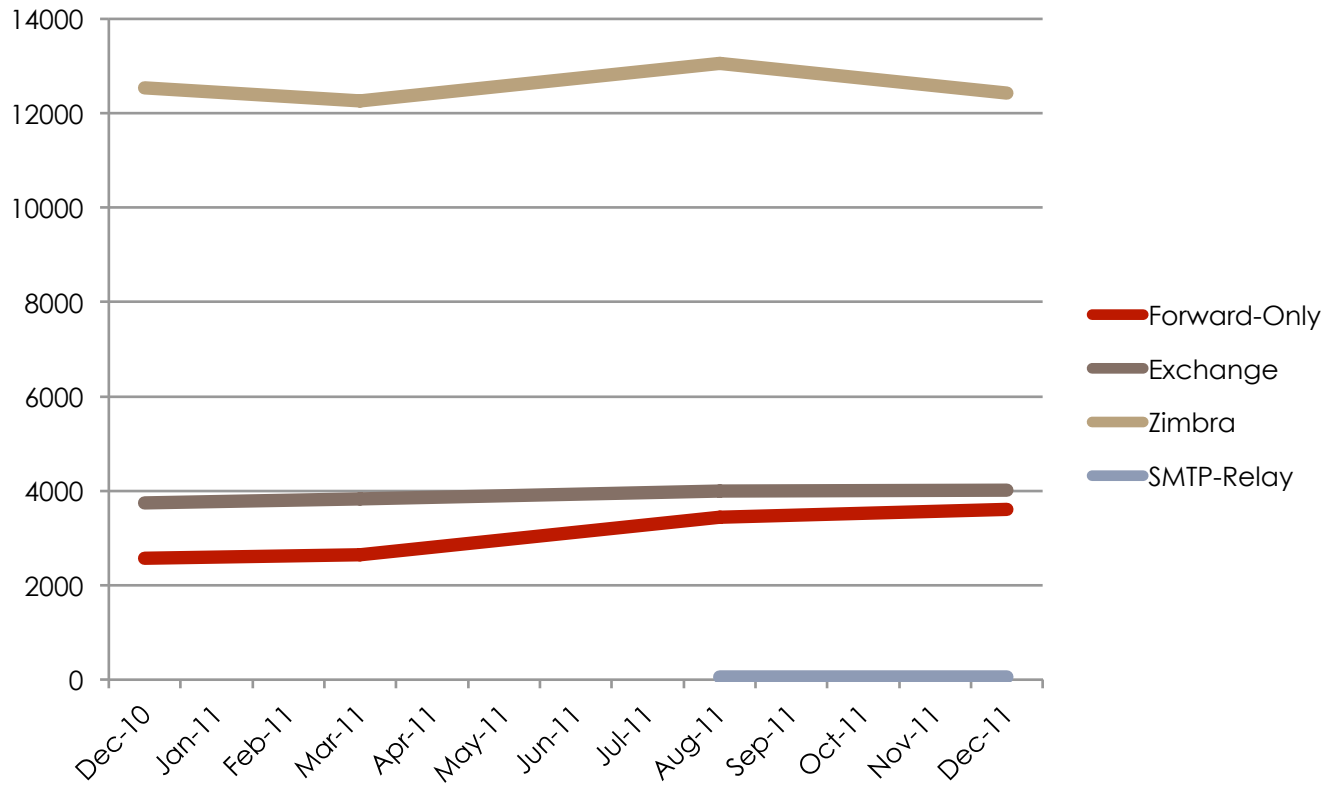


- Michael Conway
- David Dimm
- Peggy Duffy
- Diane Galeone
- Matt Miller
- John Monko
- Eric Snyder
- John Speno
- Peggy Yetter

Email Services – 20,000 Accounts

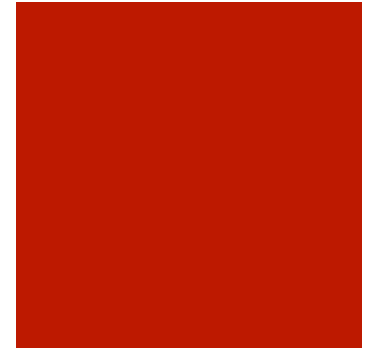


Growth Trends



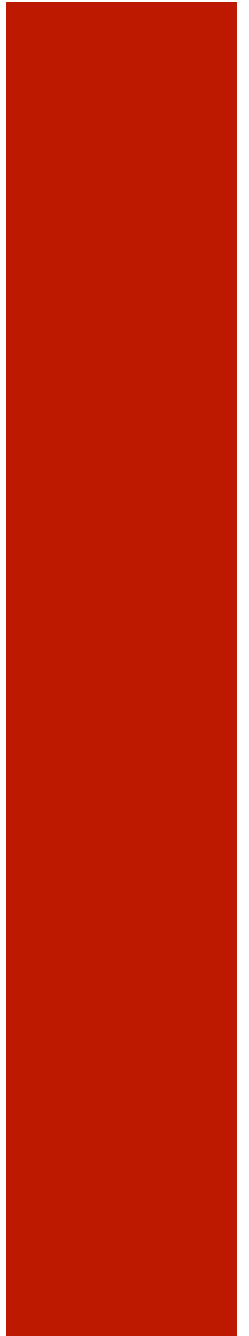
Forward-Only

- Leverages existing infrastructure for mail routing and Symantec.cloud AV/AS
- Almost 3,600 accounts (up 40% from a year ago)
- Infrastructure due for a refresh
- Rate increase: from \$0.75 to \$0.80/month in FY13



Exchange 2010

Service Overview
Architecture Review
Known Issues
Roadmap
Q&A



Service Overview

- Production since June 2011
- Over 4,000 accounts (level in FY12)
- Over 900 ActiveSync devices (up 70% from a year ago)
- About 315 BlackBerry handhelds (down 19% from a year ago)

- Target Uptime: 99.9% (<9 hours)
- Actual: 99.999% YTD
- Averaged across multiple servers/services

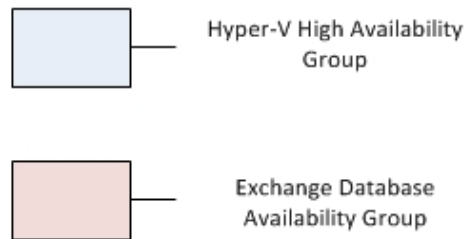
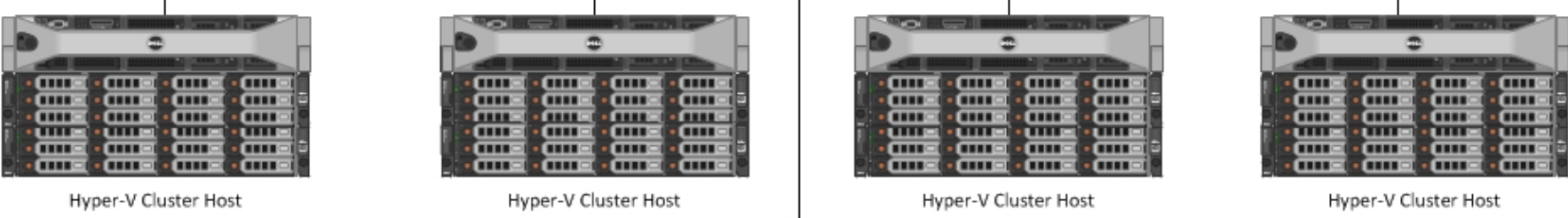
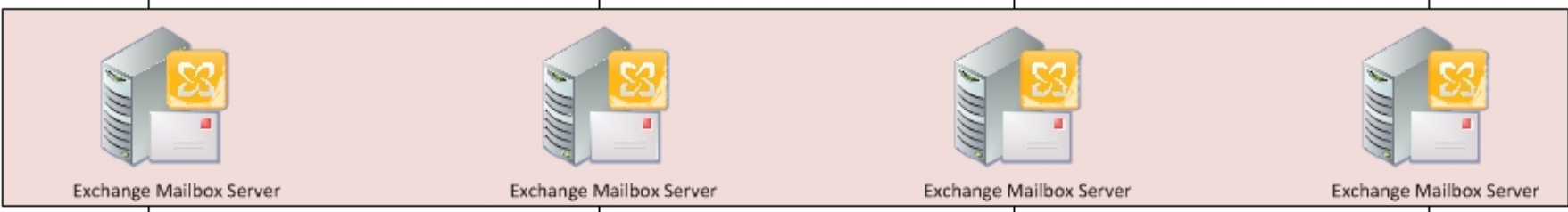
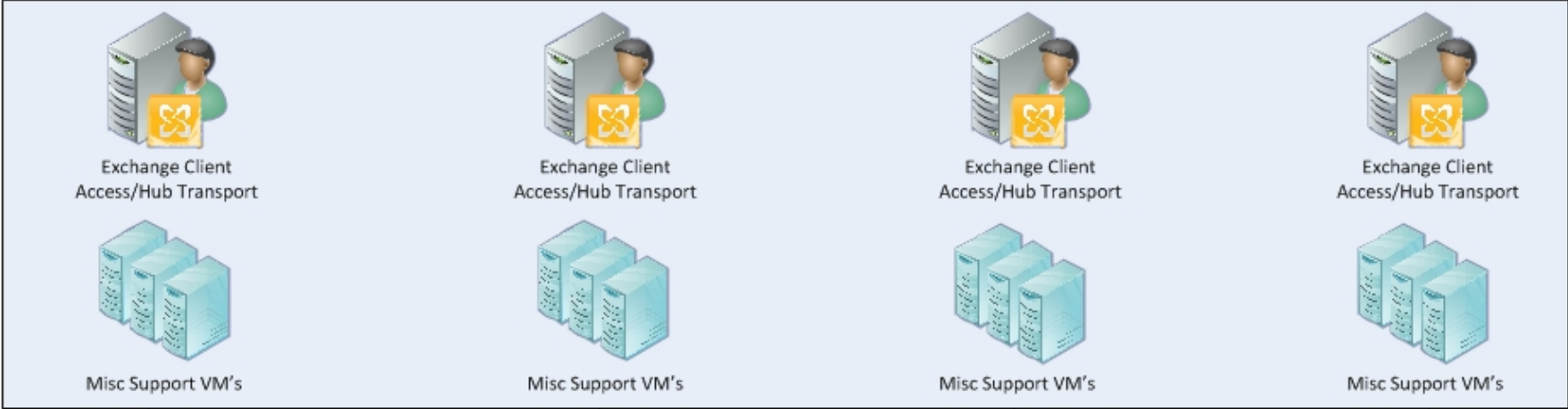


Architecture / Features

- 100% virtualized, 16 VMs (4 physical hosts)
- Geographically distributed across 4 data centers
- Scaled to accommodate multi-gigabyte mailboxes for all
- 3 copies of every mailbox (1 active, 2 passive)

- Mailbox resiliency
- Online mailbox moves
- Client throttling
- Outlook Web App (support for Firefox, Safari, etc.)



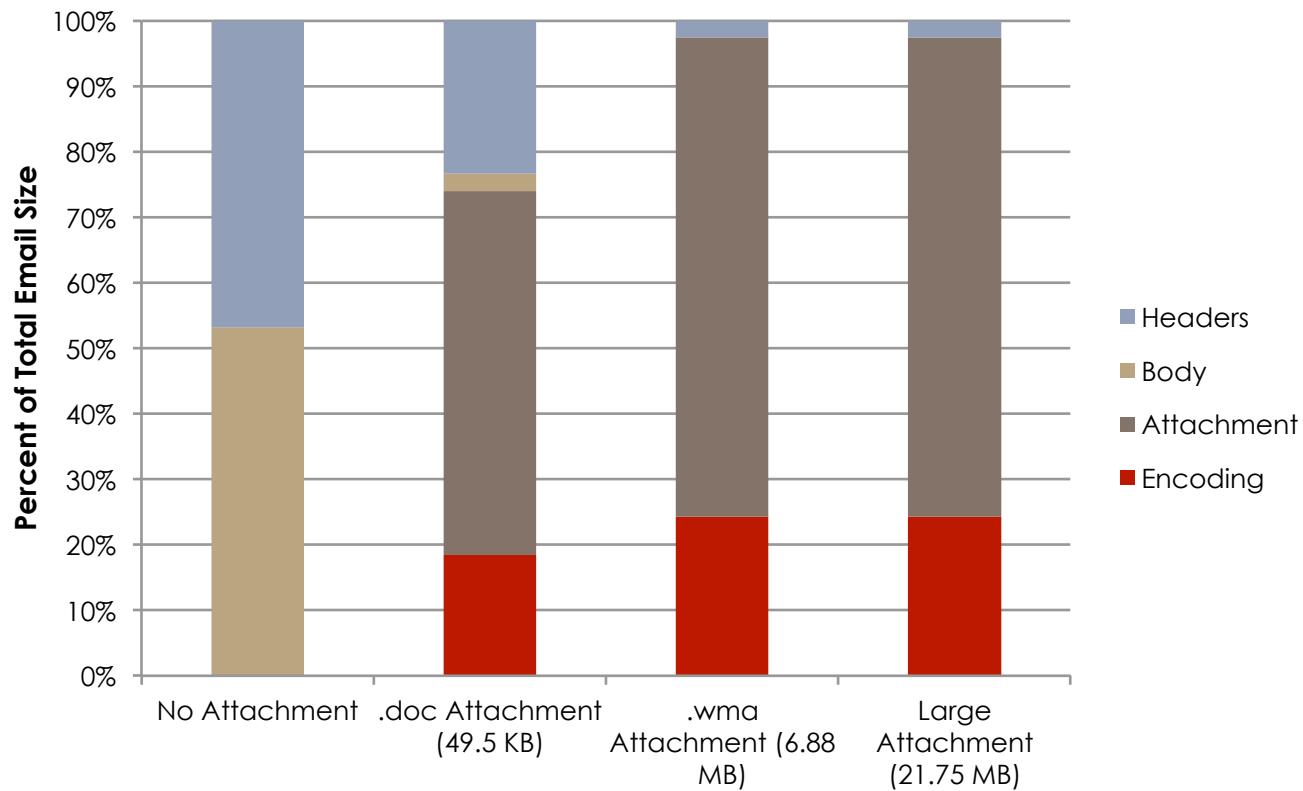


Changes

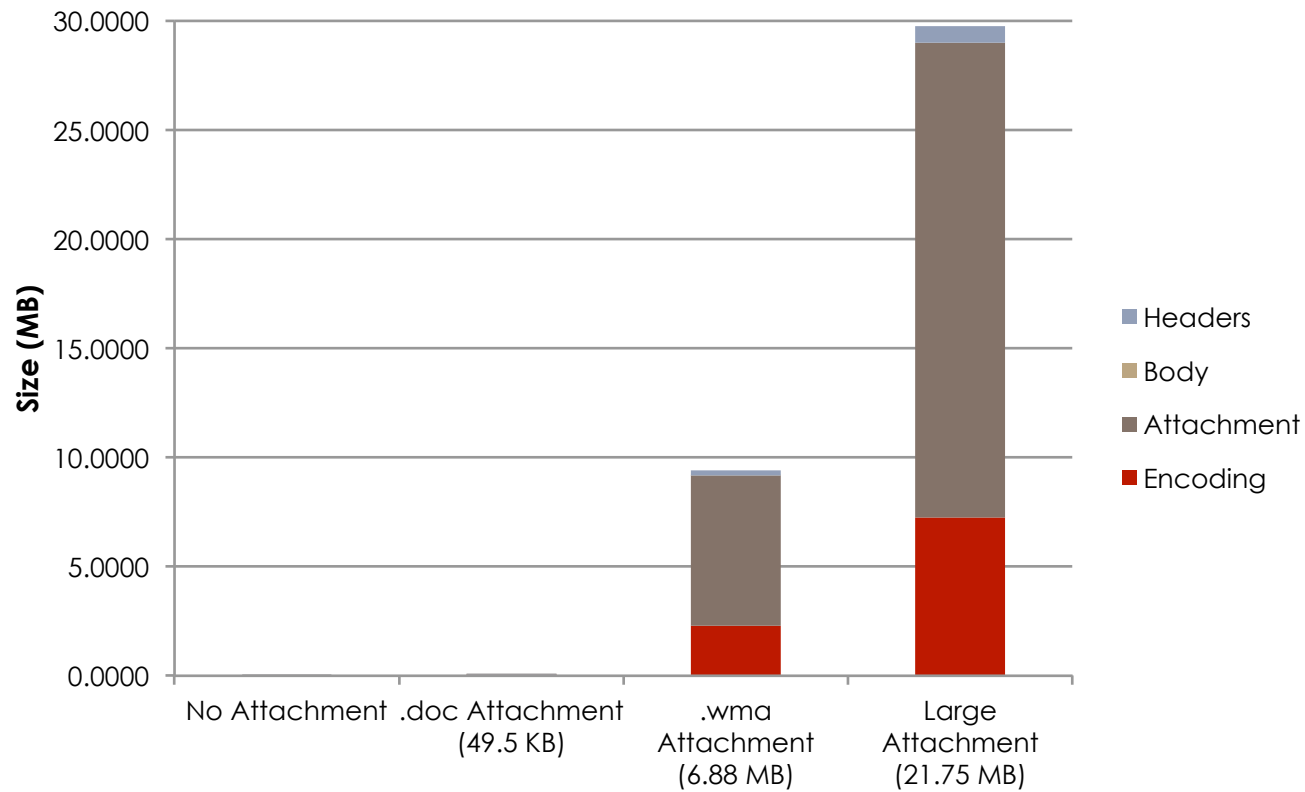
- November 4: Production fix for Exchange account deletion (disabling, billing)
- November 14: Switch client SMTP from 2007 to 2010
- November 17: Production fix for autoquota
- November 18: 30 MB max message size
- November 22: Production fix for 500 MB default quota bug



30 MB Message Size



30 MB Message Size



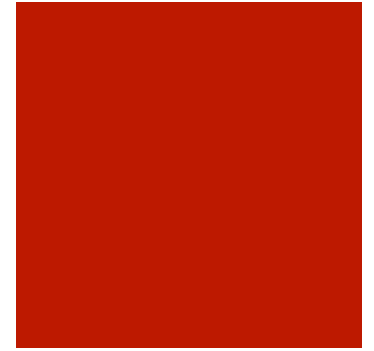
Incidents

- October 12 and 13: RIM outage
- October 25: Database reseeding
- November 1 and onward: OWA search indexes
- November 7: RIM outage



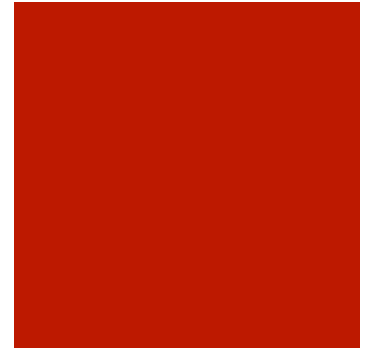
Recent Known Issues

- Hidden Sync Issues and quota
- EAM needs a fix to allow standard quota bump immediately to 4 GB
- EAM needs a fix for group account view, password change, quotas, etc.
- Autoquota users (4 GB max) cannot be set back to standard quota (4 GB max)
- EAM needs better error handling for nonexistent org and budget codes



Short-term Priorities

- Free / busy sharing with Zimbra
- Shut down old infrastructure
- Handle known issues
- Enhance monitoring with SCOM



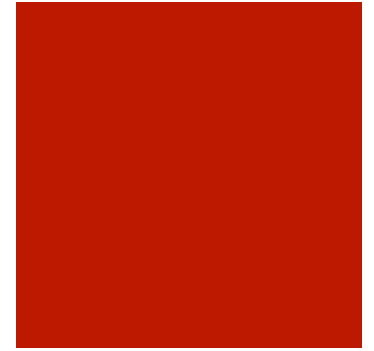
Medium-term Priorities

- E-discovery
- Patch BES for a real GAL / hidden user fix
- Watching our vendors



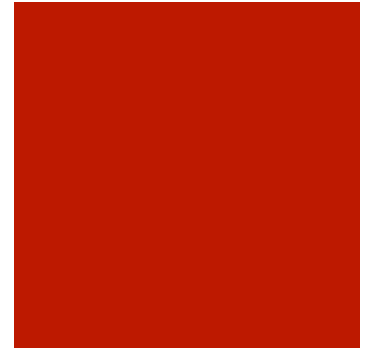
Long-term Priorities

- Addressing capacity and quota needs
- Evaluate backup strategies
- Benchmark against our peers
- Manage costs
- Look for consolidation opportunities
- Look for integration opportunities



Monitoring

- Nagios polls services, reports availability
- Spectrum pings, sends alarms
- Oncall service 24x7x365



Maintenance

- Monthly rolling Windows Server OS patches
- Over quota notices now sent in the morning
- May still have periodic targeted user moves between DAGs

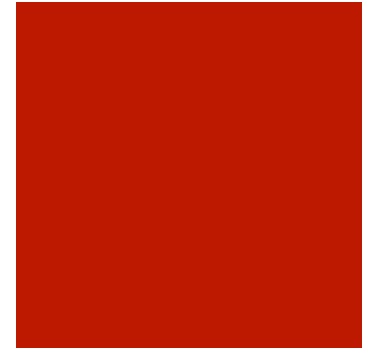
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- Mon-Fri: 1am-3am
- Sat-Sun: 6am-7am

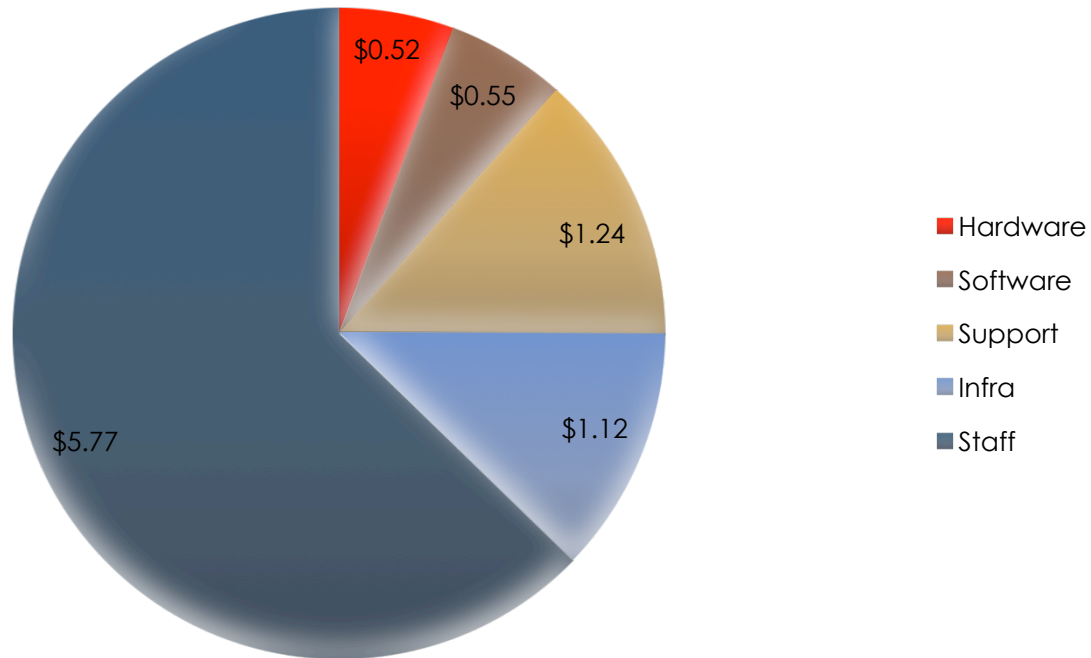
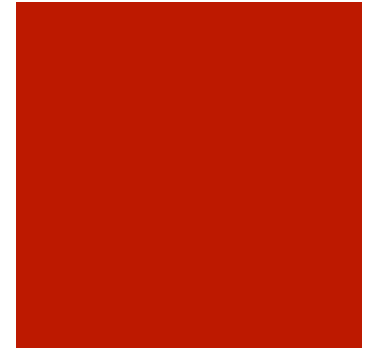


Rates for FY13

- Exchange @ \$9.20/month (from \$9.00)
- BlackBerry @ \$15/month
- Additional storage: \$0.50/250MB/month
- Default quota: 1 GB; Auto-quota up to 4GB; Max quota up to 4 GB

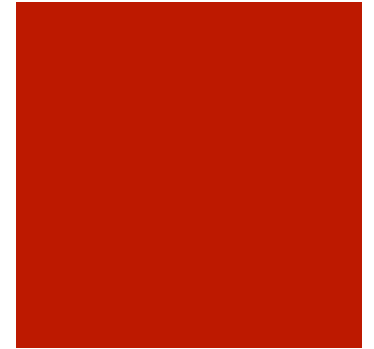


What You Buy



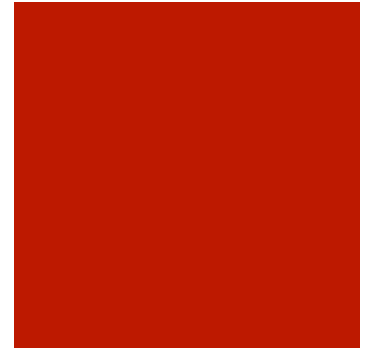
ISC's Questions

- What trends are you seeing with your users
 - Around OS?
 - Email clients?
 - Mobile devices?
 - Tablets?



Your Questions

- Add mobile device reports in Exchange Account Management?
- Autoquota feature status since Exchange 2010?



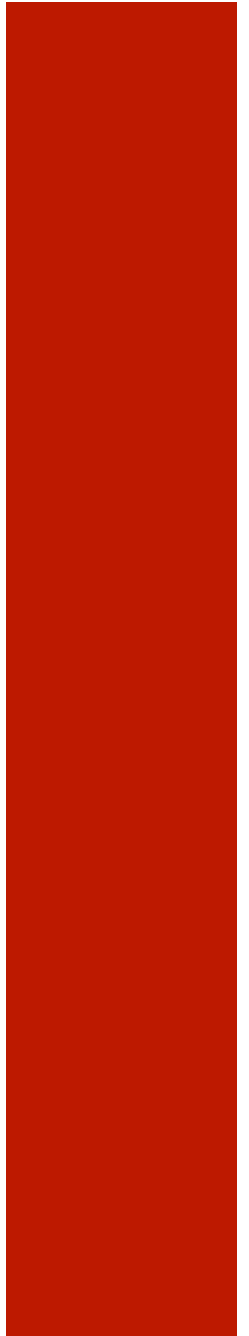
References

- <http://www.upenn.edu/computing/email/>
- <http://www.upenn.edu/computing/email/exchange/sig-meetings/>
- <https://zimbra.upenn.edu/home/nt-dtime/Calendar?fmt=html>



5 Minute Mobile Update

Jordan McClead
Lead for Mobile Technology
ISC-TSS



CARRIER



Using Carrier IQ



at&t

Sprint 

T-Mobile



htc
quietly brilliant

Limited use of
Carrier IQ



Not using
Carrier IQ



Google



Carrier Data Retention

- VERIZON
- T-MOBILE
- AT&T
- SPRINT



1 Year



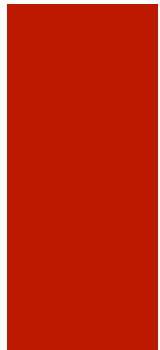
4-6 Months



3+ Years



18-24 months



TEXT MESSAGE DETAIL



1 yr rolling



2 yrs pre-paid
5 yrs post-paid



5-7 yrs post-paid



1.5-2 yrs

TEXT MESSAGE CONTENT



3-5 days



0 days



0 days



0 days

IP SESSION INFORMATION



1 yr rolling



0 days



0 days public IP
3 days private IP



60 days

IP DESTINATION INFORMATION



90 days



0 days



3 days



60 days

CALL DETAIL RECORDS



1 yr rolling



2 yrs pre-paid
5 yrs post-paid



5-7 yrs post-paid



1.5-2 yrs

BILL COPIES (POST-PAID ONLY)



3-5 yrs



0 yrs



5-7 yrs

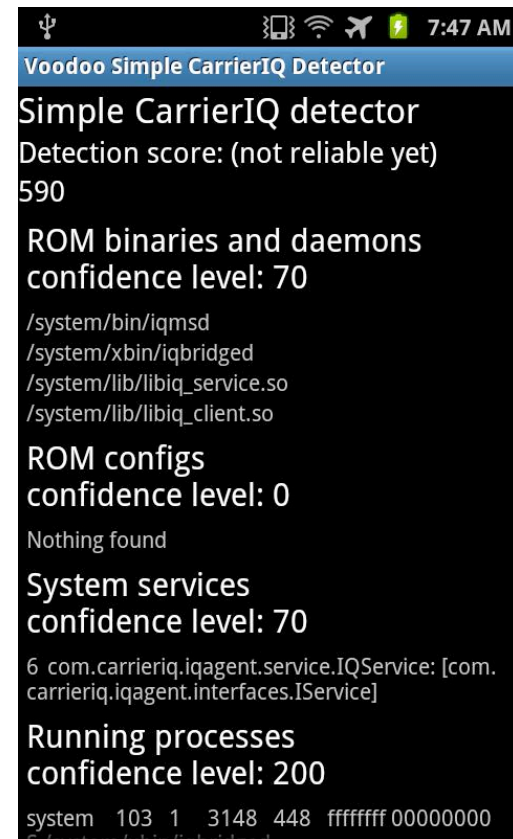
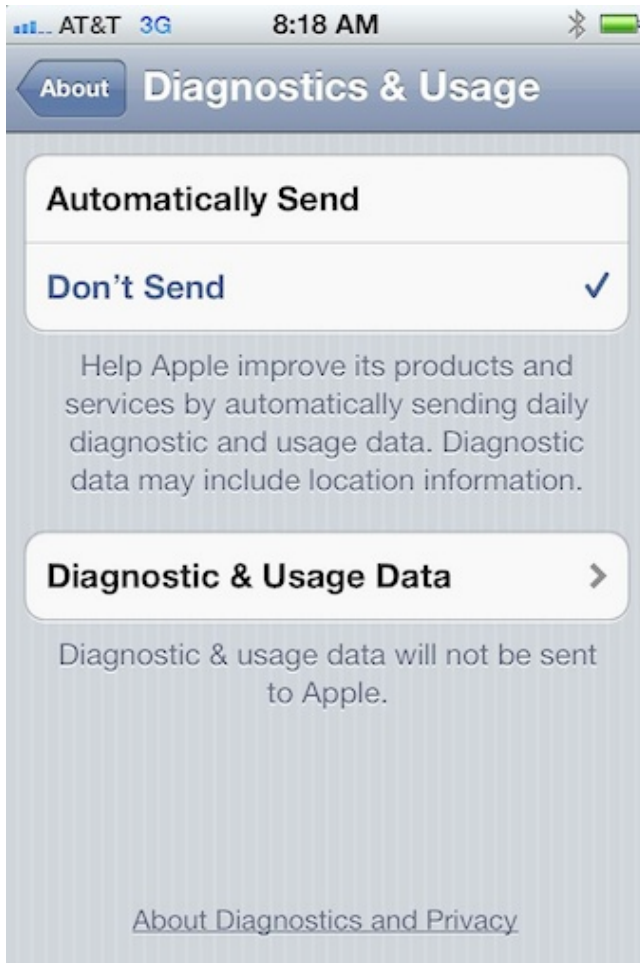


7 yrs

Source:



Detecting & ditching





htc
quietly brilliant






wesley@wesley-desktop:/media/cone

File Edit View Terminal Help

```
-r-xr-xr-x 1 wesley wesley 14607 Jan 13 21:40 ldlinux.sys
drwx----- 2 wesley wesley 4096 Jan 13 21:40 live
-rwxr-xr-x 1 wesley wesley 1546 Jan 5 07:02 md5sum.txt
-rwxr-xr-x 1 wesley wesley 544482 Jan 13 22:07 Screenshot.png
drwx----- 4 wesley wesley 4096 Jan 13 22:08 Severed Fith
-rwxr-xr-x 1 wesley wesley 634 Jan 13 21:40 syslinux.cfg
-rwxr-xr-x 1 wesley wesley 566 Jan 13 21:40 ubnfilel.txt
-rwxr-xr-x 1 wesley wesley 14031212 Jan 5 07:02 ubninit
-rwxr-xr-x 1 wesley wesley 2297504 Jan 5 07:02 ubnkern
-rwxr-xr-x 1 wesley wesley 20 Jan 13 21:39 ubnpathl.txt
-rwxr-xr-x 1 wesley wesley 144392 Jan 13 21:40 vesamenu.c32
[wesley@wesley-desktop cone]$ ls -al Severed\Fith/
total 77416
drwx----- 4 wesley wesley 4096 Jan 13 22:08 .
drwx----- 6 wesley wesley 4096 Jan 13 22:08 ..
-rwxr-xr-x 1 wesley wesley 2122 Oct 20 2008 about.txt
drwx----- 2 wesley wesley 4096 Jan 13 22:08 .mediaartlocal
-rwxr-xr-x 1 wesley wesley 923297 Oct 20 2008 severedfifth-deniedbyreign-backcover.jpg
-rwxr-xr-x 1 wesley wesley 12115064 Oct 20 2008 severedfifth-deniedbyreign-beatingheart.mp3
-rwxr-xr-x 1 wesley wesley 7656164 Oct 20 2008 severedfifth-deniedbyreign-dollarplague.mp3
-rwxr-xr-x 1 wesley wesley 11962259 Oct 20 2008 severedfifth-deniedbyreign-edgeofdesign.mp3
-rwxr-xr-x 1 wesley wesley 10217944 Oct 20 2008 severedfifth-deniedbyreign-enslavedbypain.mp3
-rwxr-xr-x 1 wesley wesley 1270320 Oct 20 2008 severedfifth-deniedbyreign-frontcover.jpg
-rwxr-xr-x 1 wesley wesley 7892469 Oct 20 2008 severedfifth-deniedbyreign-kickback.mp3
-rwxr-xr-x 1 wesley wesley 5789104 Oct 20 2008 severedfifth-deniedbyreign-takethetest.mp3
-rwxr-xr-x 1 wesley wesley 8570489 Oct 20 2008 severedfifth-deniedbyreign-thelake.mp3
-rwxr-xr-x 1 wesley wesley 12833999 Oct 20 2008 severedfifth-deniedbyreign-war.mp3
drwx----- 2 wesley wesley 4096 Oct 26 23:19 severedfifth-nightmaresbydesign-2010-ogg
[wesley@wesley-desktop cone]$
```

Currently Supported Platforms



	Android	BlackBerry	iOS	webOS	Windows Phone 7
					
Newest/oldest supported version	Unsupported	7.0/4.3	5.0.1/4.3.5	3.0.4/1.2	1.5/1.2
AirPennNet-Help	Y	N	Y	N	N
Exchange	Unsupported	Uses BES ¹	Y	Y	Y
Zimbra	Unsupported	Unsupported	Y	Y	Y
PennNet Phone voicemail attachment playback	Unsupported	Y	Y ²	Y	Y ²
Security	Poor	Excellent	Fair	Poor	Poor

¹ BES usage incurs extra charges per month

² Voicemail attachments are played via the system speaker instead of the earpiece

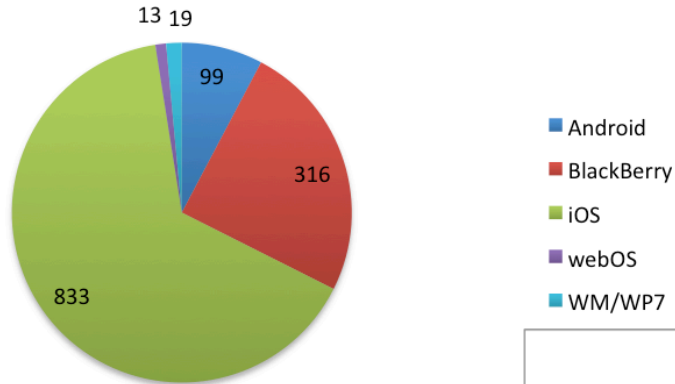
<http://www.upenn.edu/computing/provider/handheld/>



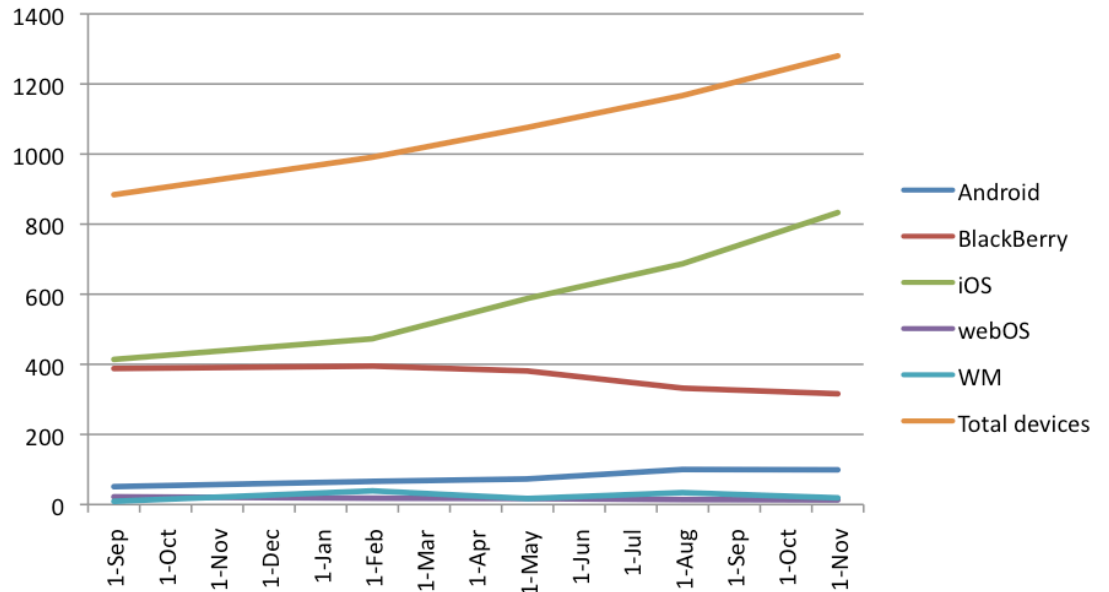
Platform Marketshare



ISC Exchange, November 2011



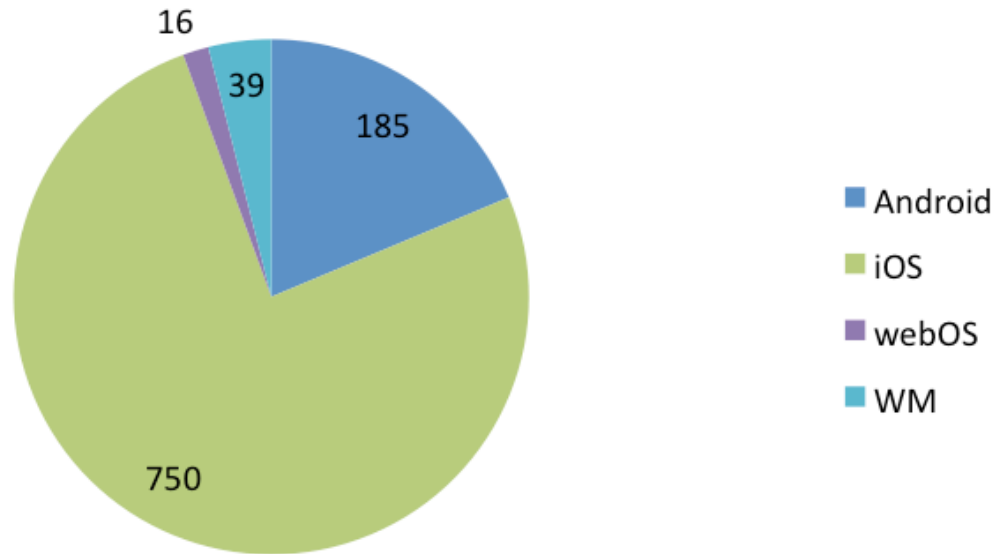
ISC Exchange, Sep. 2010 - Nov. 2011



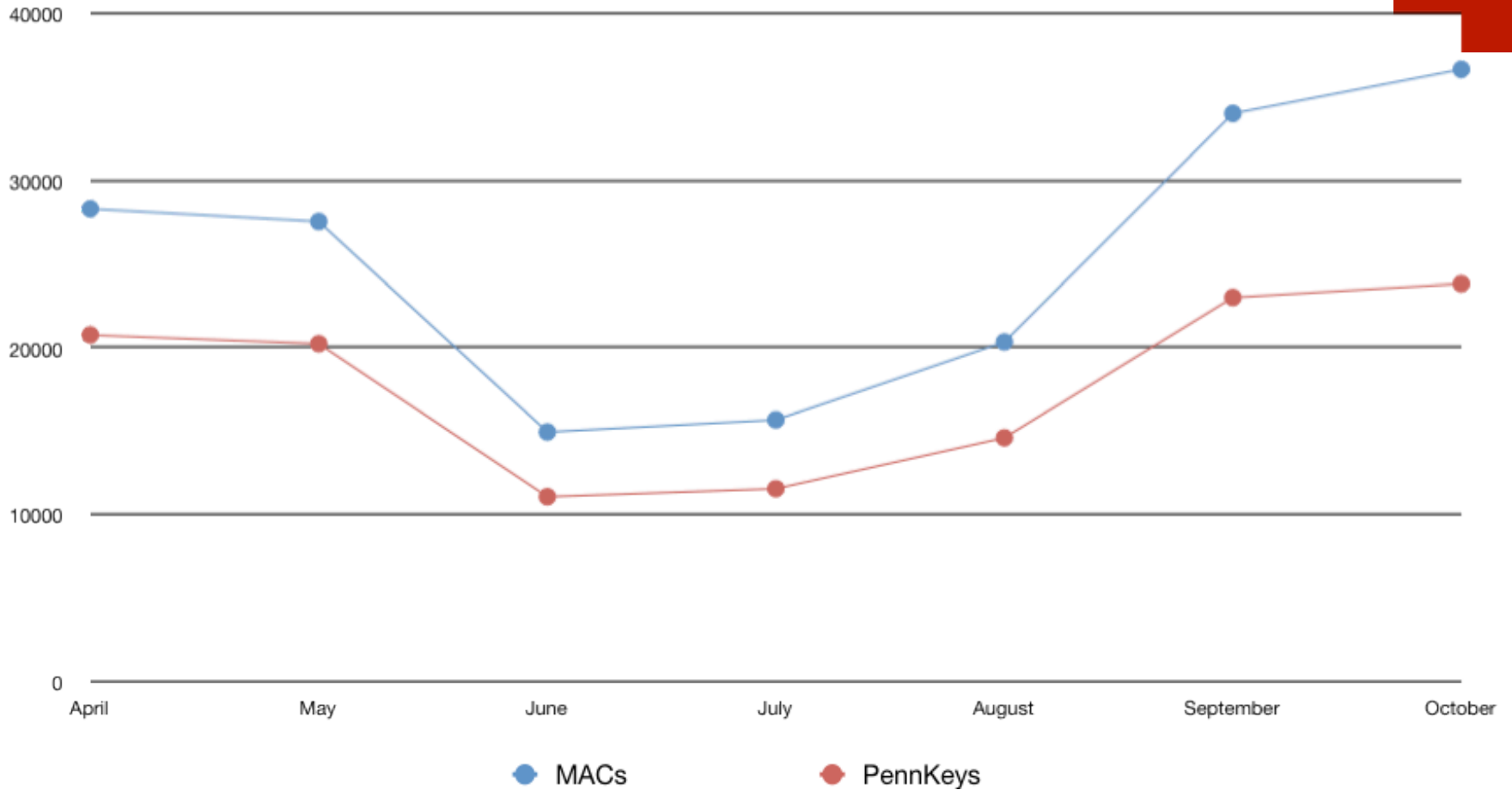
Platform Marketshare



ISC Zimbra November '11 (EAS only)



MACs vs. PennKeys



October '11:
36,692 MACs vs. 23,871 PennKeys
1.54 to 1



What's new?





What's coming?



iOS 5.1



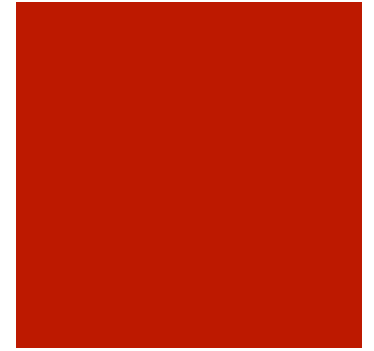
- Forces iCloud, adds APIs
- Minor security fixes
- Battery life improvements

Android 4.0.1



- Improved, unified UI
- Notification enhancements
- EAS v14
- Screenshots
- App-level data control

Questions, comments, & consultations



- mcclead@isc.upenn.edu



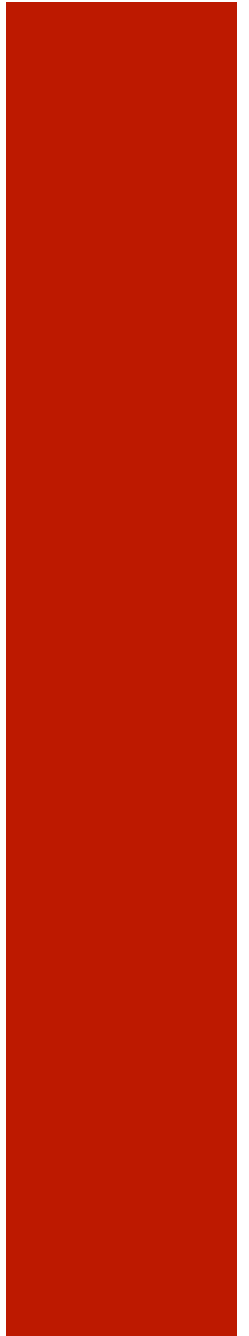
Zimbra

Service Overview

Known Issues

Roadmap

Q&A



Service Overview

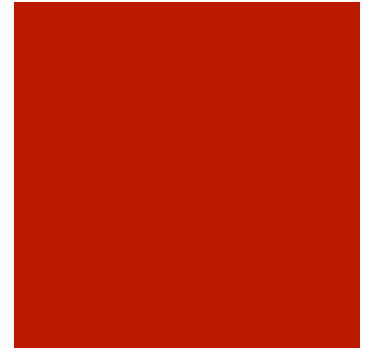
- Production on July 26, 2008
- 12,420 accounts (down 1% from one year ago)
- About 990 with Mobile Sync enabled (up 300% from one year ago)

- Target: 99.9% (<9 hours)
- Zimbra: 99.966% (2 hours, 55 minutes)
- Averaged across multiple servers/services



Architecture / Features

- 10 Linux servers in 2 campus data centers
- 2.5 TB of mailbox storage
- Data replicated in Levy and MODV campus data centers
- Currently at Zimbra 6.0.10



Incidents/Maintenance

- July 1, 10 p.m. - July 2, 1 a.m.: Failover to rebuilt primary
- July 20, 10:15-11:20: New primary fails; as in June, hardware, but possible SYN flood nuance
- August 20: Unexpected crashing on new primary; backed out
- September 22: Account management disrupted due to maintenance on related server
- October 9: Switch to larger mailbox server
- November 9: PCOM downtime affects ZAM/ZAS
- November 27: Canceled 6.0.14 upgrade



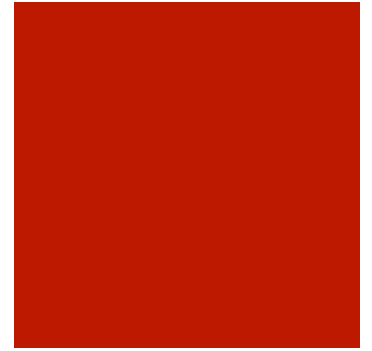
Monitoring

- Nagios polls services, reports availability
- Spectrum pings, sends alarms
- Oncall service 24x7x365



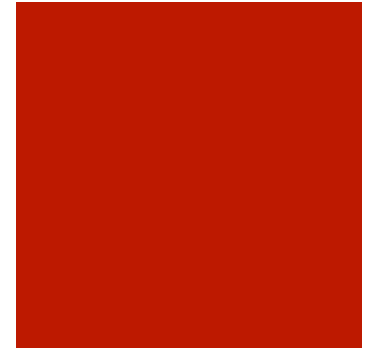
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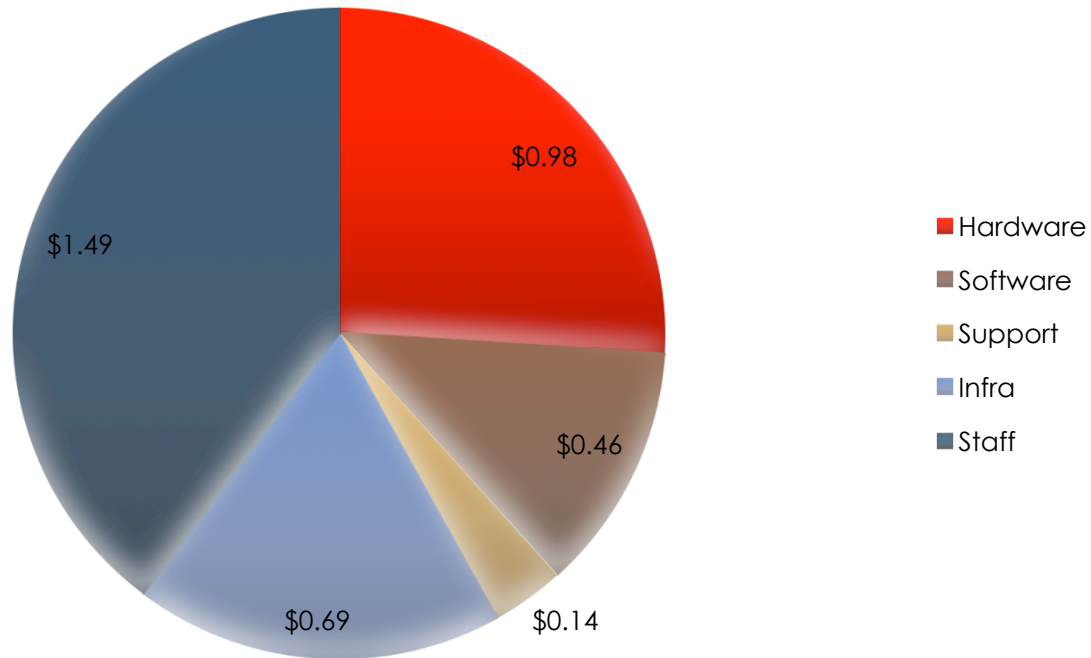
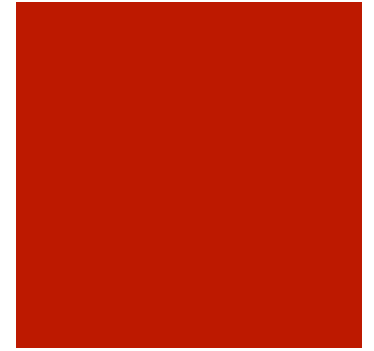


Rates for FY13

- \$3.75/month (from \$3.50 for Basic or Enhanced)
- Additional storage: \$0.50/250MB/month (down from \$1.25)
- Quota: 1GB; Auto-quota up to 4GB; Max quota up to 10GB



What You Buy



Short-term Priorities

- Handling Intermittent mailbox restarts
- 6.0.14 upgrade -- January
- Resolution of Free / Busy sharing with Exchange
- Adding capacity for backups
- Evaluate next generation options



Medium-term Priorities

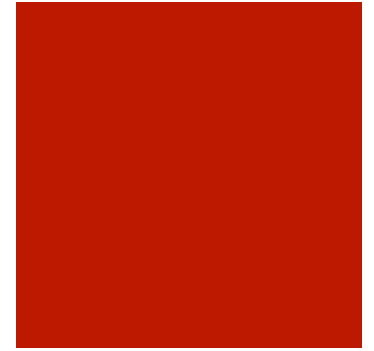


Tracking issues of interest

- Releases (6.0.14 OR 6.0.15, 7.x, 8.x)
- Zimbra Archiving and Discovery for Email Compliance
- Handling of IM
- Requested an enhancement to allow restores during backups
- Service redesign

Long-term

- Evaluate backup strategies
- Evaluate next generation options
- Benchmarking with our peers
- Managing costs
- Watching VMware initiatives
- Look for consolidation opportunities
- Look for integration opportunities



ISC Questions

- How do your users collaborate on documents and projects today? What solutions do you recommend?
- Time permitting, would you like to see some roadmap info on Zimbra 7, 8, and Project Octopus?



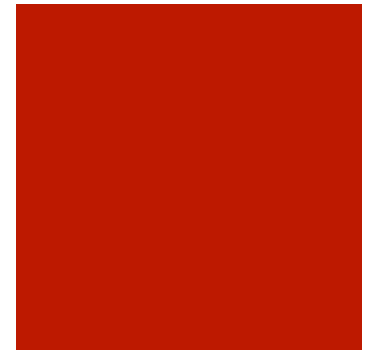
Your Questions



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References

- <http://www.upenn.edu/computing/email/>
- <http://www.upenn.edu/computing/email/zimbra/sig-meetings/>
- <http://www.upenn.edu/computing/security/phish/>
- http://prowiki.isc.upenn.edu/wiki/ISC_Zimbra_documentation
- <https://zimbra.upenn.edu/home/nt-dtime/Calendar?fmt=html>



Thanks

