

EMAIL-SIG

Service Update

August 10, 2011

AGENDA

SMTP-Relay

PennNet Mailing Lists

Forward-Only

Exchange

Mobile Devices

Zimbra

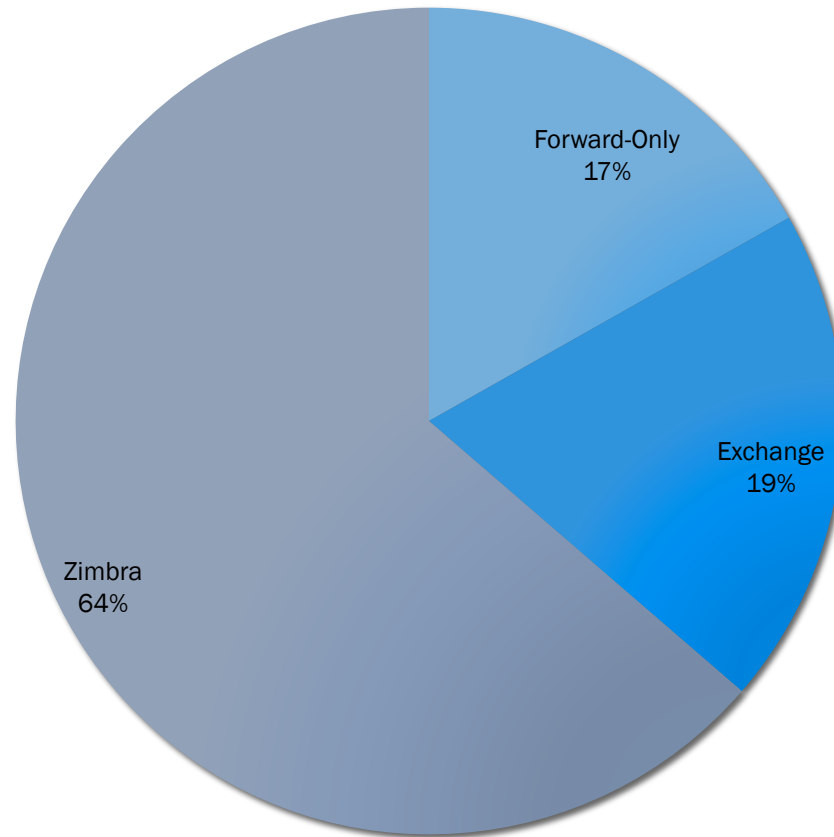
SMTP-Relay

- 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 53 hosts (up 10% in FY11)
- \$10/IP address/month; No charge for mail within ISC service

PennNet Mailing Lists

- March 10: Upgrade to LISTSERV from 15.5 to 16; small changes to displays, newsletter templates, report formats
- May 10: Added option to secure lists with Confirm option
- Goal to explore feasibility of integrating with Grouper in FY12
- Rate structure remains \$0.50/list/month in FY12

Email Services – 20,000 Accounts



Forward-Only

- Leverages existing infrastructure for mail routing and MessageLabs AV/AS
- Almost 3,500 accounts (up 170% in FY11)
- Infrastructure due for a refresh
- Rates remain \$0.75/month in FY12

EXCHANGE

Overview of Service

Migration Review

Roadmap

Q&A

Exchange 2007

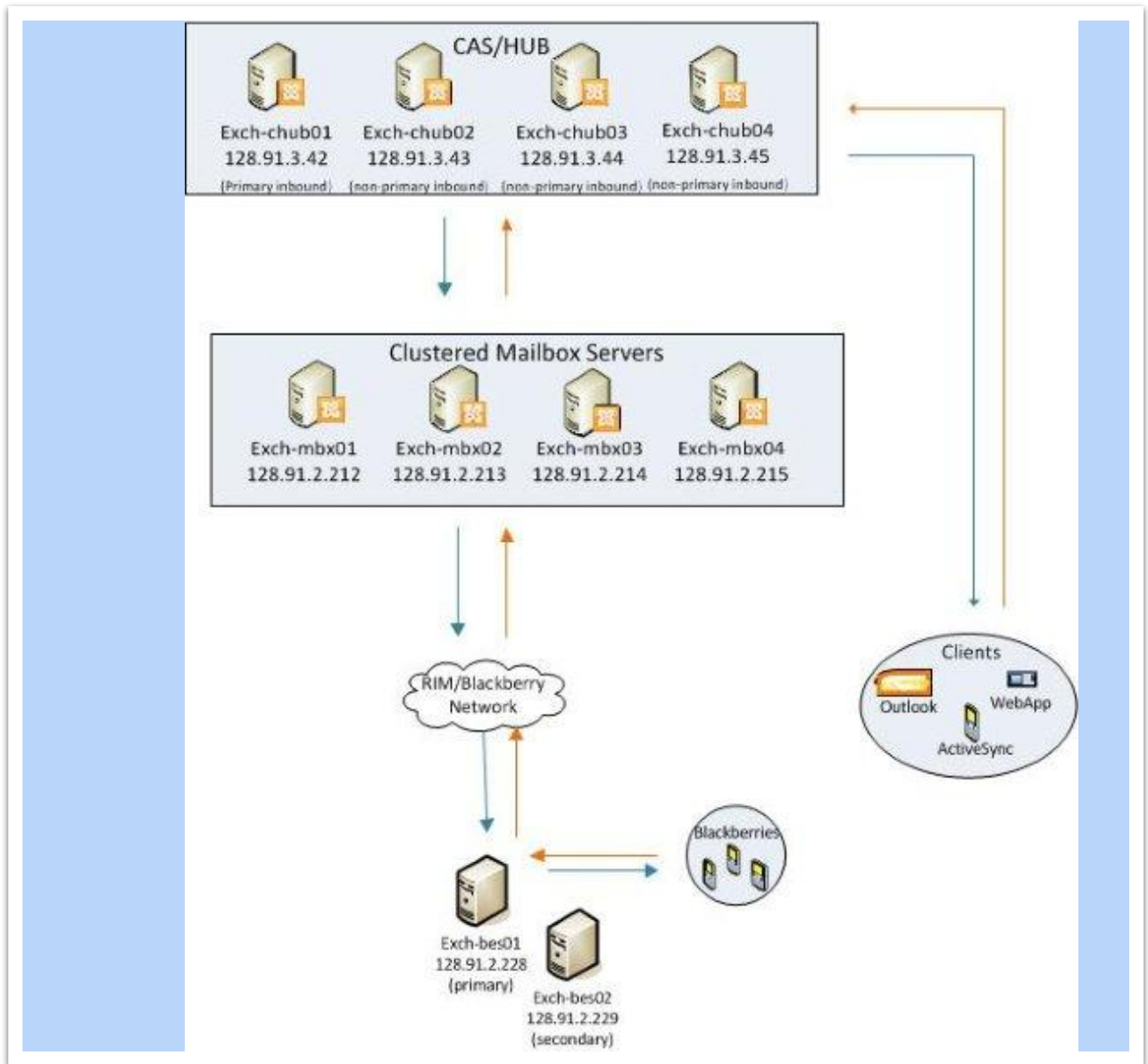
- Service Lifecycle: 7/2007-8/2011
- August 2010: Quota increase from 250 MB to 500 MB
- 99.95% uptime in FY11
- Some components still in use
- Retiring legacy infrastructure soon

Exchange 2010

- 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.)

Exchange 2010 Architecture



Service Snapshot

- Over 4,000 accounts (up 13% in FY11)
- About 850 ActiveSync devices (up 40% in FY11)
- About 330 BlackBerry handhelds (down 11% in FY11)

EXCHANGE MIGRATION

Review

Thanks to the Team

- David Dimm
- Diane Galeone
- Criss Keating
- Matt Miller
- Amy Phillips
- Eric Snyder
- Peggy Yetter

- ... and all our pilot users, ISC colleagues, and ... you!

Timeline

- January - March: Development builds, internal testing, documentation
- April: Production builds
- April 26: First major change, 2010 CAS integrated
- May: Pilots; web application development begins
- June: Early adopter migrations
- July: Production migrations begin
- July 6: Base quota increase from 500 MB to 1 GB
- August: Clean up, turn down legacy service

Migration Issues

- Timing
- Quota notices
- Simultaneous use of both environments adds complexity (but is more flexible and less disruptive)
- Rewrite of significant portions of Exchange Account Management / Account Services

Client Migrations

- Mac client (Apple Mail, Entourage 2008) handling of new CAS
- Android devices and profile rebuilds
- BlackBerry handhelds and transition to BES 5.0
 - Connection thresholds
 - Activations not completing
 - Calendar duplicates
 - Rewrite of BlackBerry Account Management

Recent Known Issues

- BlackBerry Account Management multiple-match errors (FIXED)
- Resend service books (FIXED)
- Internal reporting on account reconciliation

Incidents

- July 21, 2:16-2:33: Unrelated system swamps NOC1 network, disrupts connections
- August 7: One CAS stops responding, is quickly pulled from cluster

Short-term Priorities

- Shut down old infrastructure
- Handle known issues
- Enhance monitoring with SCOM
- Metrics

Medium-term Priorities

- E-discovery
- Watching our vendors

Long-term Priorities

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

As agreed, unadvertised, disruptive maintenance of up to 15 minutes may be performed:

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

Rates

- Exchange @ \$9.00/month (from \$7.75)
- BlackBerry @ \$15/month (from \$14.00)
- Additional storage: \$0.50/250MB/month (from \$1.25)
- Default quota: 1 GB; Auto-quota up to 2GB; Max quota up to 4 GB

ISC's Questions

- How to address storage needs: higher ceiling? bigger increments? unlimited and metered?
- Have you and/or your Mac users been using Lion? With what results?
- Are you successfully guiding your users toward particular mobile devices?

Your Questions

- Mobile Device Reports on ActiveSync users, Blackberry users, last connected mobile device, etc.
- Brick-level backups

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

Currently Supported Platforms

	Android	BlackBerry	iOS	webOS	Windows Phone 7
					
Newest/oldest supported version	Unsupported	6.0/4.2	4.3.5/3.2.3	3.0/1.2	1.2/1.0
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

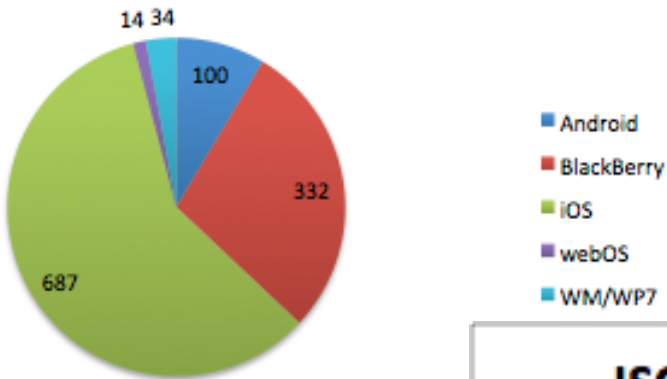
² Voicemail attachments are played via the system speaker instead of the earpiece

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

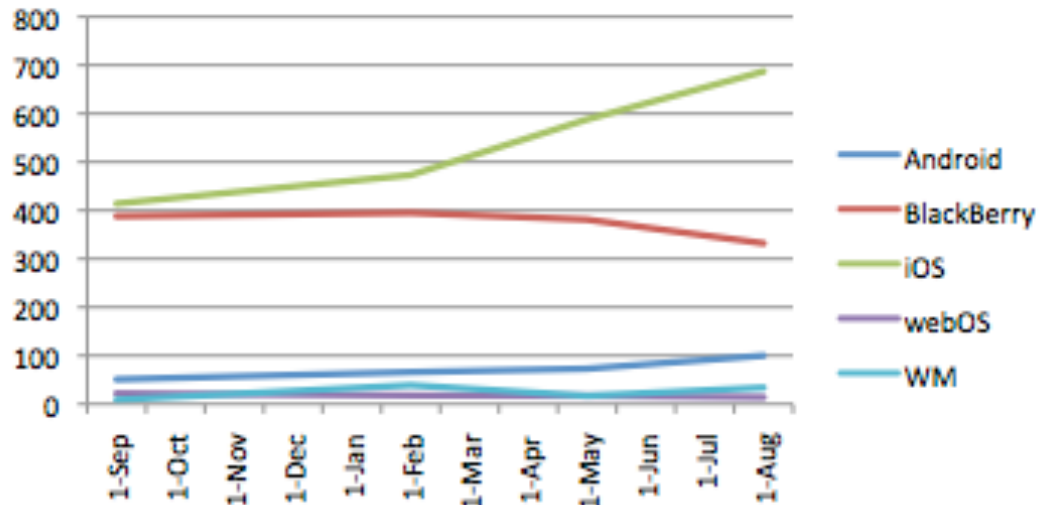


Platform Marketshare

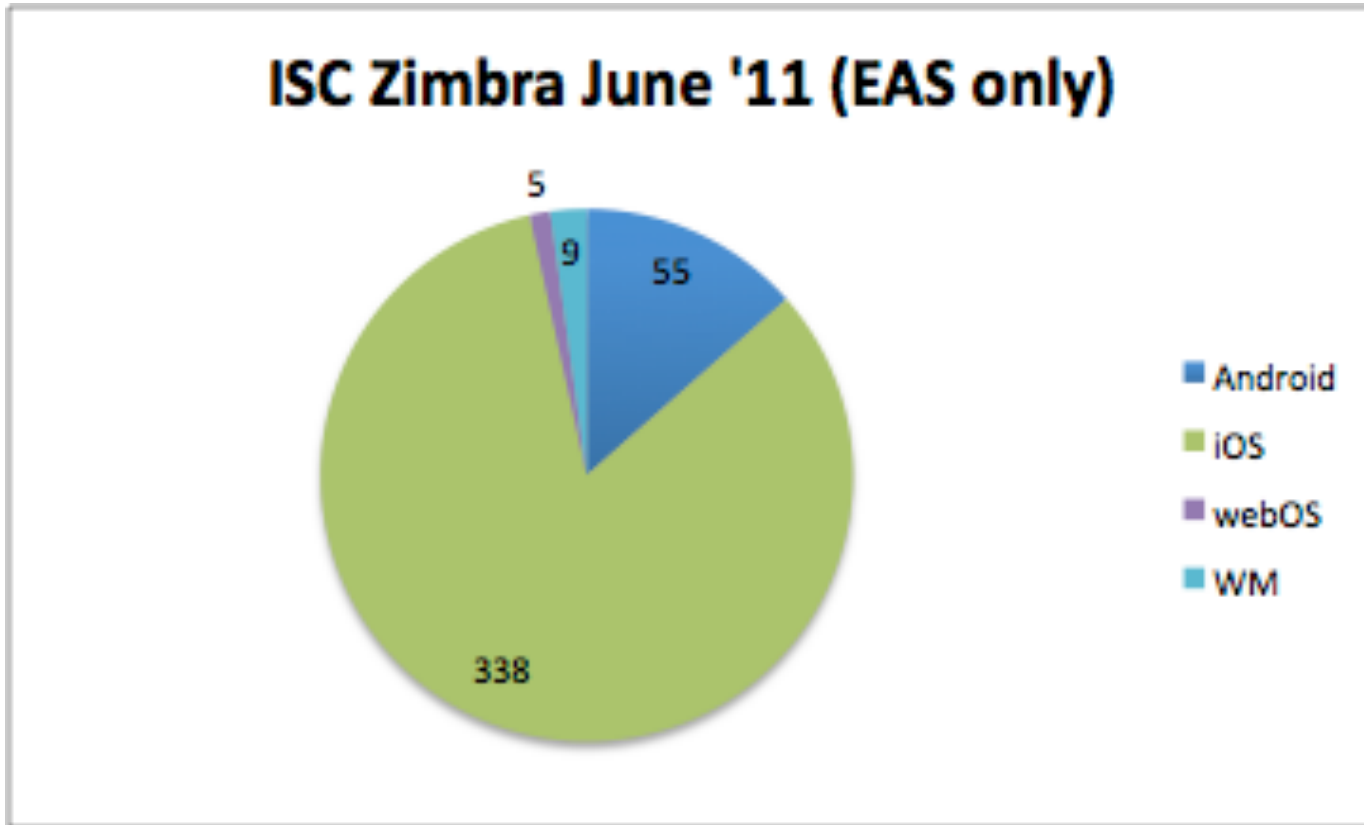
ISC Exchange, August 2011



ISC Exchange, Sep. 2010 - Aug. 2011



Platform Marketshare



Ongoing Android Issues

- 10809: Password is stored on disk in plain text
- Fragmentation
- Update inconsistencies



What's new?

- TouchPad



What's coming?

- iOS 5
- Ice Cream Sandwich
- Mango
- Bushel of BlackBerrys

iOS 5



Things to watch out for

- Death of unlimited data
- (Potential) AT&T/T-Mobile merger
- Global thermonuclear patent warfare



Questions, comments, & consultations

- mcclead@isc.upenn.edu



ZIMBRA

Availability for FY11

Incidents

Maintenance

Rates

Zimbra

- Production on July 26, 2008
- 10 Linux servers in 2 campus data centers
- 2.5 TB of mailbox storage
- Data replicated in Levy and MODV campus data centers
- About 13,000 accounts (up about 3% in FY11)
- About 670 with Mobile Sync enabled (up 70% in FY11)

Availability

- Target: 99.9% (<9 hours)
- Zimbra: 99.64% (52 hours, 40 minutes)
- Averaged across multiple servers/services

Incidents/Maintenance

- March 12: Upgrade to 6.0.10
- April 13: ZAM/ZAS 1.4 (acceptance policies for resource accounts, bug fixes, 8-character password compliance)
- April: BlackBerry service discontinued
- June 7, 8 a.m. - June 9, 2 a.m.: System unusable; eventual resolution: hardware
- July 1, 10 p.m. - July 2, 1 a.m.: Failover to rebuilt primary
- July 20, 10:15-11:20: New primary fails; again hardware, but possible SYN flood nuance
- August 19: Likely 2-hour maintenance for cutover to a more robust primary

Monitoring

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

Maintenance

- As agreed, unadvertised, disruptive maintenance of up to 15 minutes may be performed:
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FY12 Rates

- One price for Enhanced or Basic accounts
- \$3.50/month (from Enhanced @ \$3.10 and Basic @ \$3.60)
- Driven by client access reality: mobile devices, calendaring
- Enhanced still recommended for security, supportability, convenience
- Additional storage: \$0.50/250MB/month (down from \$1.25)
- Quota: 1GB; Auto-quota up to 4GB; Max quota up to 10GB

Short-term Priorities

- Scaling for Fall 2011

Medium-term Priorities

Tracking issues of interest

- Releases (6.0.13, 7.x, 8.x)
- Handling of IM
- Requested an enhancement to allow restores during backups
- Client space

Long-term

- Evaluate backup strategies
- Evaluate next generation options
- Benchmarking with our peers
- Managing costs

ISC Questions

- What's on your wish list for a next-generation collaboration solution for your users?
- Time permitting, would you like to see some roadmap info on Zimbra 7 and 8?

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