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

- Zimbra 62%
- Exchange 20%
- Forward-Only 18%
Growth Trends

[Graph showing growth trends for different categories: Forward-Only, Exchange, Zimbra, and SMTP-Relay over the months from Dec-10 to Dec-11. The y-axis represents the growth in terms of a scale ranging from 0 to 14000, and the x-axis represents the months from Dec-10 to Dec-11.]
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
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

![Graph showing the percent of total email size for different types of attachments.](image-url)
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

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

- 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

- $0.52
- $0.55
- $1.24
- $1.12
- $5.77

Legend:
- Hardware
- Software
- Support
- Infra
- Staff
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/)
- [http://www.upenn.edu/computing/email/exchange/sig-meetings/](http://www.upenn.edu/computing/email/exchange/sig-meetings/)
- [https://zimbra.upenn.edu/home/nt-dtime/Calendar?fmt=html](https://zimbra.upenn.edu/home/nt-dtime/Calendar?fmt=html)
5 Minute Mobile Update

Jordan McClead
Lead for Mobile Technology
ISC-TSS
Carrier Data Retention

**VERIZON**
- **TEXT MESSAGE DETAIL**
  - 1 yr rolling
  - 2 yrs pre-paid
  - 5 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

**T-MOBILE**
- **IP DESTINATION INFORMATION**
  - 90 days
  - 0 days
  - 3 days
  - 60 days

**AT&T**
- **CALL DETAIL RECORDS**
  - 1 yr rolling
  - 2 yrs pre-paid
  - 5 yrs post-paid
  - 1.5-2 yrs

**SPRINT**
- **BILL COPIES (POST-PAID ONLY)**
  - 3-5 yrs
  - 0 yrs
  - 5-7 yrs
  - 7 yrs

Source:
Detecting & ditching

Automatically Send
Don’t Send

Help Apple improve its products and services by automatically sending daily diagnostic and usage data. Diagnostic data may include location information.

Diagnostic & Usage Data

Diagnostic & usage data will not be sent to Apple.

Voodoo Simple CarrierIQ Detector

Simple CarrierIQ detector
Detection score: (not reliable yet)
590

ROM binaries and daemons
confidence level: 70
/system/bin/iqmsd
/system/xbin/iqbridged
/system/lib/libiq_service.so
/system/lib/libiq_client.so

ROM configs
confidence level: 0
Nothing found

System services
confidence level: 70
6_com.carrieriq.iqagent.service.IQService: [com.carrieriq.iqagent.interfaces.IService]

Running processes
confidence level: 200
/system 103 1 3148 448 fffffffff00000000

## Currently Supported Platforms

<table>
<thead>
<tr>
<th>Feature</th>
<th>Android</th>
<th>BlackBerry</th>
<th>iOS</th>
<th>webOS</th>
<th>Windows Phone 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newest/oldest supported version</td>
<td>Unsupported</td>
<td>7.0/4.3</td>
<td>5.0.1/4.3.5</td>
<td>3.0.4/1.2</td>
<td>1.5/1.2</td>
</tr>
<tr>
<td>AirPennNet-Help</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Exchange</td>
<td>Unsupported</td>
<td>Uses BES(^1)</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Zimbra</td>
<td>Unsupported</td>
<td>Unsupported</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>PennNet Phone voicemail attachment playback</td>
<td>Unsupported</td>
<td>Y(^2)</td>
<td>Y(^2)</td>
<td>Y</td>
<td>Y(^2)</td>
</tr>
<tr>
<td>Security</td>
<td>Poor</td>
<td>Excellent</td>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
</tr>
</tbody>
</table>

\(^1\) 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/](http://www.upenn.edu/computing/provider/handheld/)
Platform Marketshare

ISC Zimbra November '11 (EAS only)

- Android: 39
- iOS: 750
- webOS: 16
- WM: 185
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
- Screenshots
- App-level data control
- EAS v14
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
Maintenance

- As agreed, unadvertised, disruptive maintenance of up to 15 minutes may be performed:
  - Mon-Fri: 1am-3am
  - Sat-Sun: 6am-7am
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

- Hardware: $1.49
- Software: $0.98
- Support: $0.46
- Infra: $0.69
- Staff: $0.14
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
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