Lift and Shift: Moving from an onsite mail server to a hosted solution
Hosted Vs In-House Mail – Merits and Transition Process Considerations

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1 About This Document (Presentation/Podcast)

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2 Merits Of Hosted Vs In-House Mail Systems

2.1 Basic Model for email (Inter-personal Message Handeling System (MHS)

Figure 1 is taken from X.400 reference model.

The basic model for email (Inter-personal Message Handeling System (MHS)) mimics the postal service.

2.2 Some Basic MHS (email) Terminology Review

Some Basic MHS (email) Terminology Review

Since we are going to use email as the example through out, let's quickly review some basic terms.

- Message Handling System (MHS) – interpersonal, non-intrusive, either deliver of bounce

- Message Transfer Agent (MTA), Message Transfer System (MTS) – Examples: Sendmail, qmail, exim, MS-Exchange, …

- Mail User Agent (MUA) – Examples: MS-Outlook, pine, Gnome's Evolution, Emacs' Gnus, …

- WebMail – A Web Based MUA

- Message Delivery – email is put in your mailbox or pushed to MUA

- Message Submission – Sending email
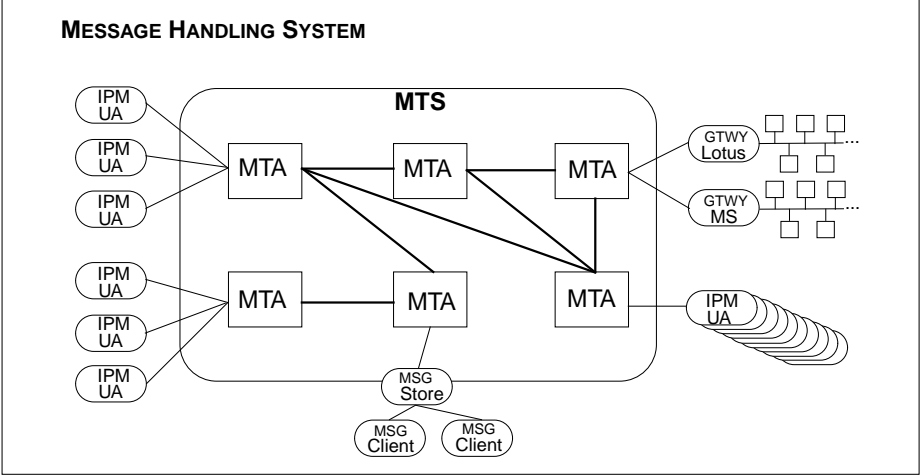
- Message Retrieval – Example: imap

Figure 1: mhsModel

2.3 Costs And Benefits Of In-House Vs Hosted Mail System

- When Your MTA and Mbox is physically at your premise, it is called "In-House".

- When Your MTA and Mbox is not physically at your premise, it is called "Hosted".

- A Hosted Mail Service may be easier to manage and maintain.

- If you have the know-how, an In-House Mail Service can provide you full control. Consider the "delete test".

- A Hosted Mail Service approach compromises your autonomy and privacy.

2.4 Conviviality, Autonomy and Privacy Ramifications Of In-House Vs Hosted

Conviviality, Autonomy and Privacy Ramifications Of In-House Vs Hosted

- Hosted Mail Services are more likely to become "Industrial Tools".

- In-House Mail Services are more likely to become "Convivial Tools".

- Unless A Hosted Mail Services is a "Libre Service", you should avoid it if autonomy and privacy are of value.

- We shall consider transitioning from an In-House to Hosted, only if it is a Libre Service. All widely available Mail Services are not Libre Services.

- Those with money and power (say Hillary Clinton) prefer to have their own In-House Private and Autonomous Mail Server.

- Who is the Hosted solution for?

- Email Is Too Important Of A Tool To Be Left To Simple Economic Considerations.

2.5 Illich's Concept of Convivial Tools

Illich's Concept of Convivial Tools

Tools are intrinsic to social relationships. An individual relates himself in action to his society through the use of tools that he actively masters, or by which he is passively acted upon.

To the degree that he masters his tools, he can invest the world with his meaning; to the degree that he is mastered by his tools, the shape of the tool determines his own self-image. Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision. Industrial tools deny this possibility to those who use them and they allow their designers to determine the meaning and expectations of others. Most tools today cannot be used in a convivial fashion.

2.6 The Autonomous Libre Services Argument

- Definition: An Internet Service is the capability of running Internet connected software

- Definition: Internet Service is Autonomous, when it is completely at your behest

    - To be Autonomous, it must be a LIBRE SERVICE (requirements of transparency at source code level + reproducibility results in copyleft)

- To be Autonomous, service context needs to be PORTABLE. (e.g., take your entire Facebook context and move it to a different provider.)
- To be Autonomous, the service provider must comply with NON-RETENTION of data and service termination at your behest

- Autonomous Services interact with other Autonomous Services directly. (End-to-End).

- Federated Services, operate on public information and on deligated Autonomous Service information segments.

2.7   Choosing A Hosted Mail Service

- The likes of Google Mail, Outlook, etc. are all Non-Libre Services.

- In-practice if you value your Autonomy and Privacy you have very few Hosted Mail Service choices.

- http://www.by-star.net is an example of a Libre-Service.

3   Transition From In-House To Hosted Mail System)

- Preparations For The Move

- During The Transition

- After The Transition

3.1   Preparations For The Move

- Make sure that all relevant MUAs do work with the Hosted Mail Service.

- Maintain Control Of Your DNS Service. Do not deligate your full domain to the hosted service.

- Backup user mboxes.

- Backup user address books and other info.

- Let users know when and how they need to re-configure their MUA and submit-servers.

3.2   During The Move

- Keep the In-House MTAs alive for about two weeks – Because of DNS cache.

- Have mail forwarders in the In-House MTA sending to Hosted Mail Service.

- Point your DNS MX records (and other DNS Mail records) to the Hosted Service.

- Disable In-House IMAP and POP servers.

- Have users point to the Hosted Mail Retreival Service and the Hosted Mail Submission Service.

- Continue to keep control over mail related DNS records of your mail service. Have users configure with imap.example.com, pop.example.com, etc.

- Add the Hosted service's admin to the abuse alias (alias@example.com)

3.3   After The Move

- Decommission your In-House MTAs.

- Decommission your In-House Mail Retrieval And Mail Submission servers.

- Setup a nagios style mail ping against the Hosted service.

- Monitor the logs regularly – not just when problems arise.

4   The Correct Ultimate Mail System – Hosted And In-House

4.1   MTA Comparisons – qmail is our choice of ultimate MTA

- qmail vs Sendmail vs Exchange vs Postfix vs Exim http://shearer.org/MTA_Comparison

- Linux Modules and Protocol Layers

- qmail – http://cr.yp.to/qmail.html

4.2   The ByStar Mail Server Configuration – Hosted And In-House

Figure ?? shows ...

4.3   The Right qmail Autonomous Client Configuration

Figure ?? shows ...

5   Questions/Comments/Discussion

5.1   Colophon

- Totally Libre and Copyleft

- No proprietary software used in preparation, presentation and communication of this information

- Slides prepared with beamer-latex

- Presented using Ubuntu-Debian-GNU-Linux and Maemo on PDA

- Served as an Autonomous Libre Service using Debian, Apache, Plone, ...
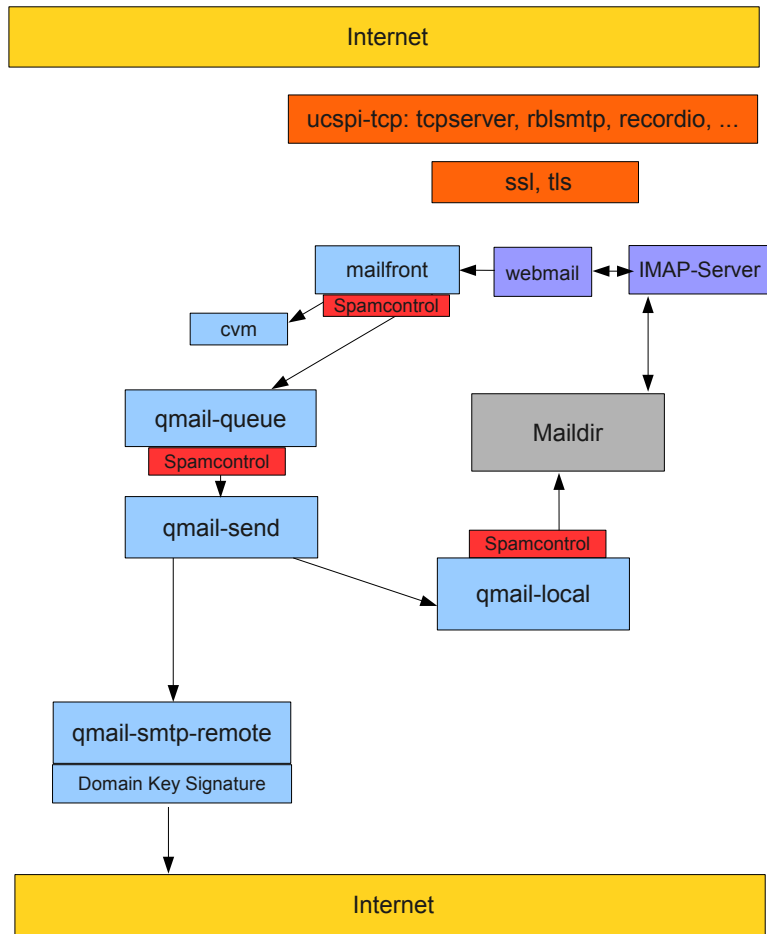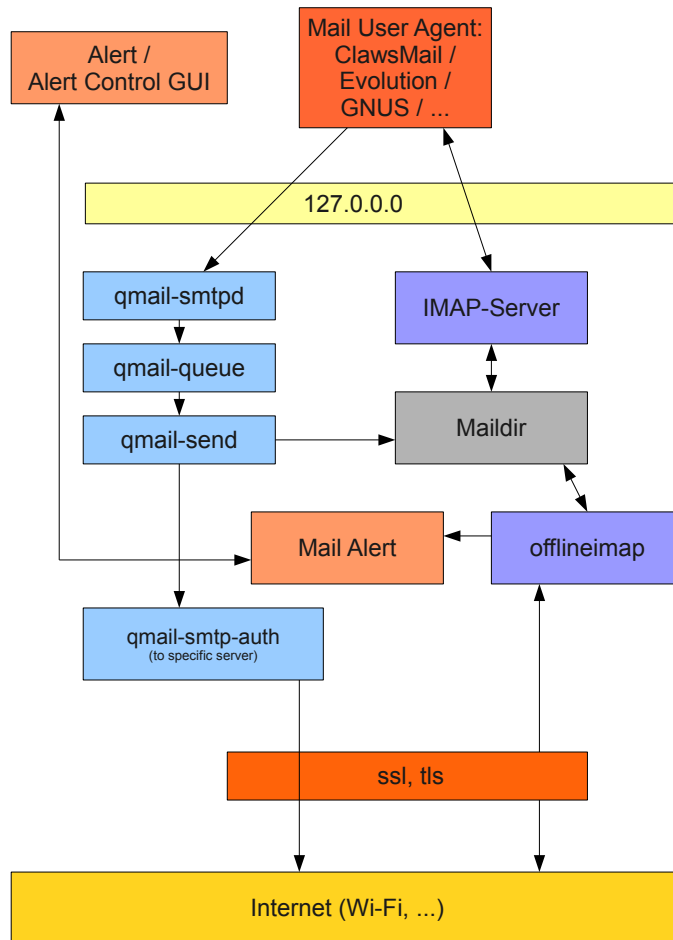
5.2   Questions/Comments/Discussion

References

Figure 2: qmail-bystar-wellknown-sa

Figure 3: qmail-bystar-wellknown-ua