Open Source Distributed Email Services

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29 December 2000
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Section I

Introduction
Email

★ Electronic Mail

★ has become a utility such as phones, water and electricity

★ popular means of communications

★ an acceptable means of doing business

★ some people can’t live without it?
Current Email Setups

★ single machine that provides both SMTP and POP
★ equip that machine with expensive hardware
★ not scalable
★ single point of failure
★ unable to model current organizational setups
★ limited number of users
Section II

Email System
Components

★ MTA
★ Mailbox System
★ User Authentication
MTA

- Mail Transport Agent
- used to send and receive email from different mail servers
- forwards the mail to its appropriate mailbox

- Sendmail
- Qmail
- Postfix
Mailbox System

★ stores users email
★ is accessed by the user to retrieve email
★ various protocols include POP3 and IMAP

★ /var/spool/mail
★ mbox
★ maildir
User Authentication

★ means in which user information is stored
★ ensures that mail is delivered to the proper user
★ authenticate mailbox access

★ /etc/passwd
★ NIS
★ LDAP
Section III

Ateneo Distributed Email System
Benefits

★ distributes load based on organizational structure
★ no single point of failure
★ single mail domain for entire organization
Choice of Components

- Postfix
- Cyrus IMAPD
- LDAP
Postfix

★ Mail Transport Agent similar to sendmail
★ implemented using various daemons and helper applications
★ supports LDAP authentication
Cyrus IMAPD

⋆ daemon that is accessed to provide email to the user via POP or IMAP
⋆ stores user mailboxes is a separate system
⋆ supports LDAP authentication
LDAP

★ Lightweight Directory Access Protocol
★ stores user and mailbox information
★ data is stored in a hierarchical structure
★ provides a means for replication
Section IV

Design
Prototype Design

Distributed Email System
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