

# Internet Based Email

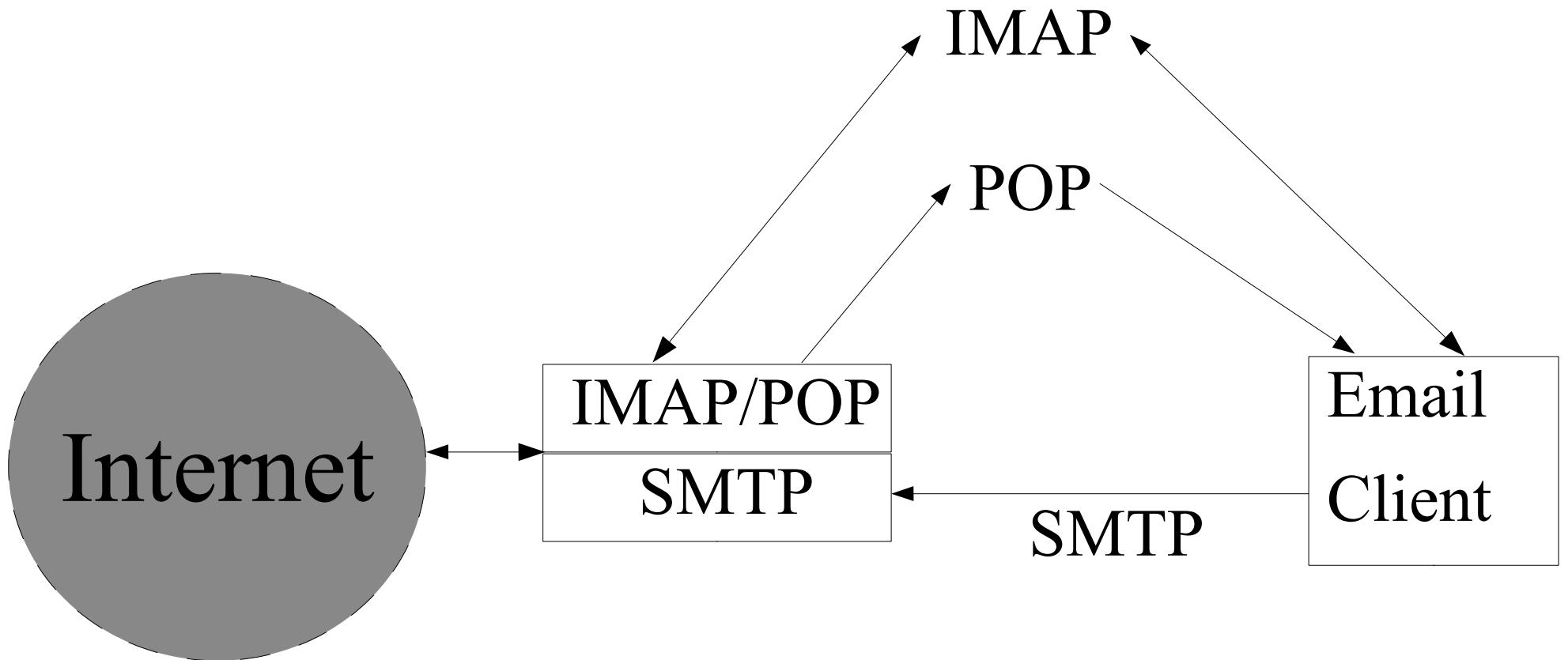
## IMP

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# Overview

- Email 101
- Internet Based Email Options
- IMP
- IMP - Extended to the Internet
- IMP - Pros/Cons
- IMP - Future developments
- IMP - Install notes
- IMP – Demo
- References

# Email 101



# Email 101

- SMTP
  - Simple Mail Transfer Protocol
- POP
  - Post Office Protocol
- IMAP
  - Internet Message Access Protocol

# Email 101

- SMTP
  - Transfers email between mail servers
  - Receives and forwards email from client software
  - sendmail
  - Exchange??

# Email 101 - POP

- Designed to support "offline" mail processing
- Computer user periodically invokes a mail "client" program that connects to the server and downloads all of the pending mail to the user's local inbox
- After transfer, all mail processing is local to the client machine
- Intended to move mail (on demand) from the mail server (drop point) to a single destination machine

# Email 101 - IMAP

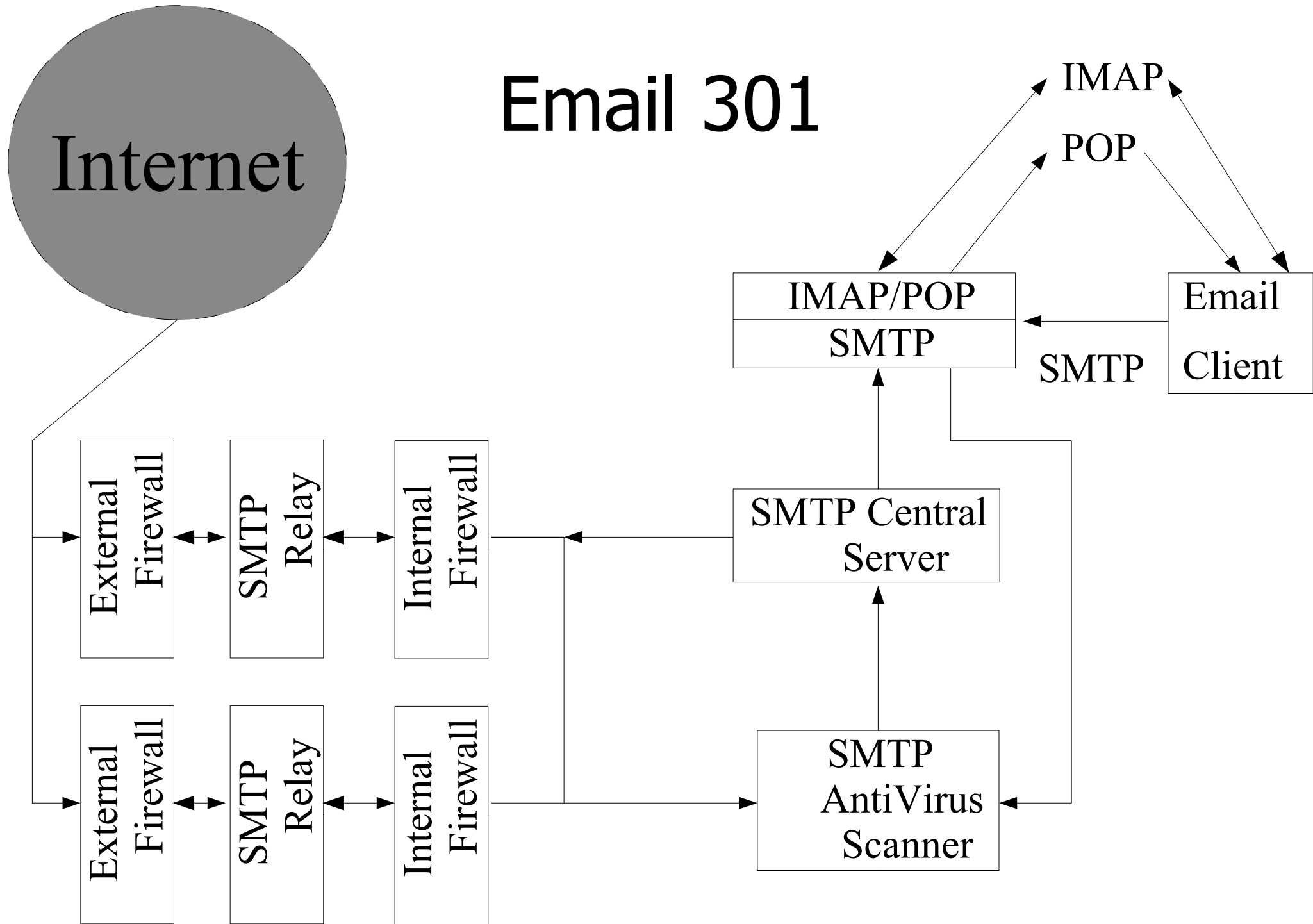
- A method of accessing electronic mail messages that are kept on a (possibly shared) mail server
- It permits a "client" email program to access remote message stores as if they were local
- The protocol includes operations for:
  - Creating, deleting, renaming mailboxes
  - Checking for new messages
  - Permanently removing messages
  - Setting and clearing flags
  - Searching, and selective fetching of message attributes, texts, and portions thereof for efficiency

# Email 101 - IMAP

- Key goals for IMAP include:
  - Be fully compatible with Internet messaging standards
  - Allow message access and management from more than one computer
  - Allow access without reliance on less efficient file access protocols
  - Provide support for "online", "offline", and "disconnected" access modes
  - Support for concurrent access to shared mailboxes
  - Client software needs no knowledge about the server's file store format



# Email 301



# Web based Email Clients

- MailMan - CGI script
- AcmeMail - Perl based
- IMP - PHP, MySQL
- Commercial products available
  - Sendmail - Mailspinner
  - Mail Studio - complete environment

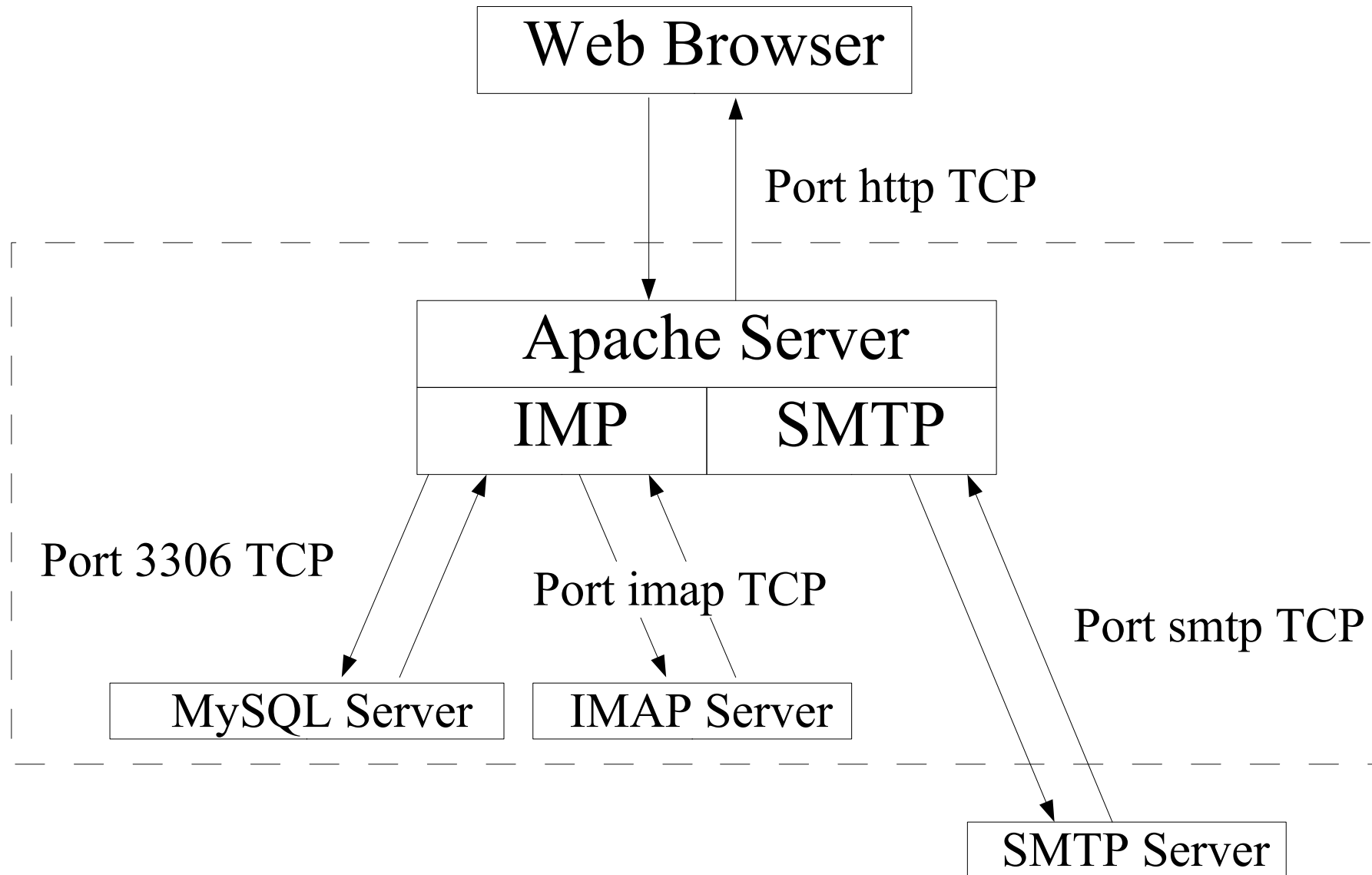
# IMP - General

- Internet Messaging Program
- Component of the Horde project IMP is the most widely-deployed component of Horde
- Features:
  - Web based
  - Attachments, Spell-check
  - Address book
  - Multiple folder support
  - Multiple-language support

# IMP - General

- Requires
  - Horde
  - PHP, PHPLib
  - Apache server with PHP support
  - MySQL database for contact, preferences, session info
  - SMTP server
  - IMAP server (although IMP supports POP)
  - Perl - to use config scripts
- Optional
  - other databases, LDAP, SSL Web Server

# IMP - Architecture



# IMP - Secure

- Requirements
  - Secure access from anywhere (not only company equipment)
  - Encrypted data
  - Two levels of authentication
  - Restrict access to internal systems from Internet

# IMP - Secure

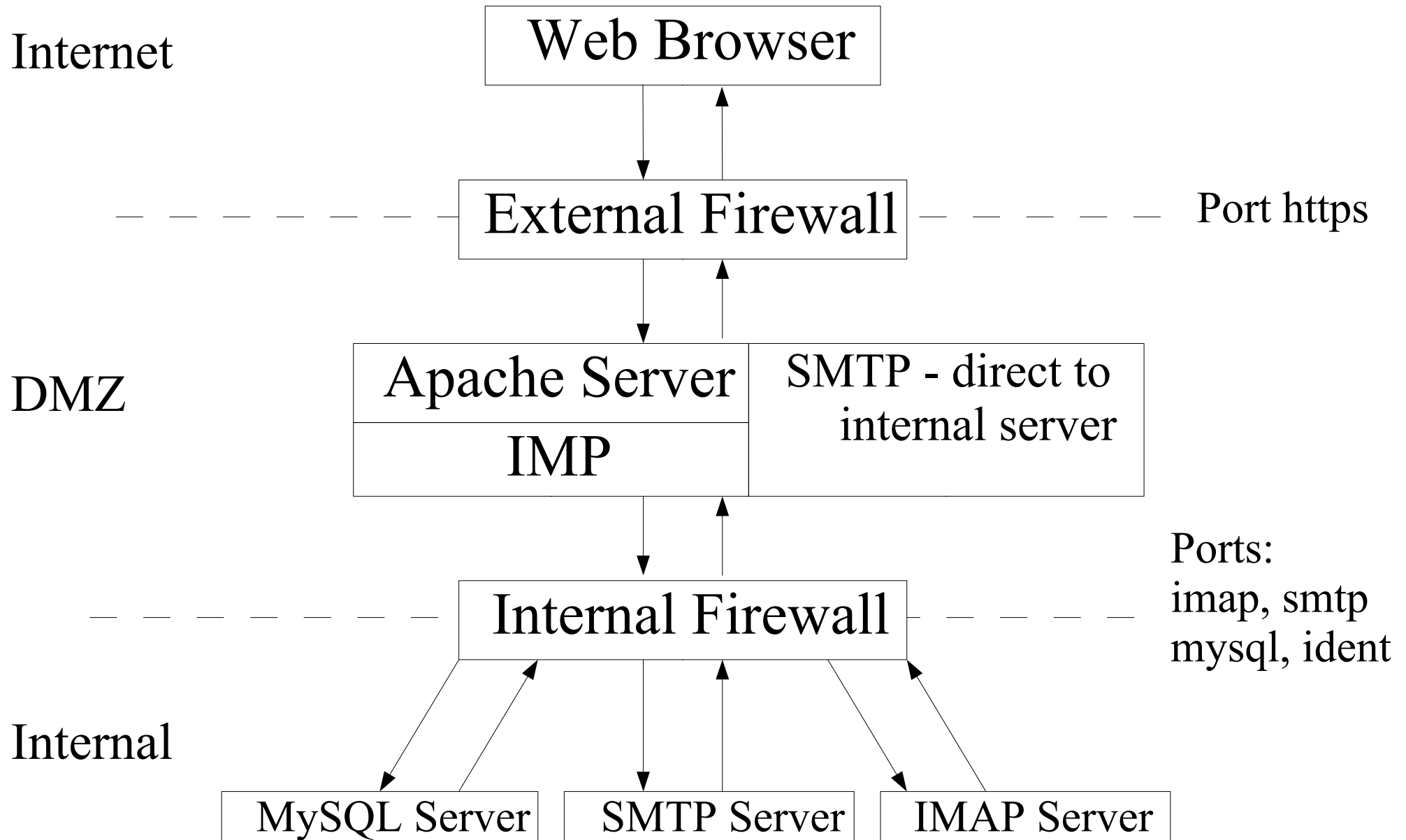
- Secure access from anywhere
  - Push SSL certificates to clients
  - Can use commercial or self signed certificates
- Encrypted data
  - Encrypt traffic using https and ssl certificates
  - Clients encrypt using IMP's public key
  - IMP decrypts using private key

# IMP - Secure

- Two levels of authentication
  - .htaccess from Apache
    - controls access into directories
  - IMP's IMAP login
    - internal to the system (not exposed to the internet)
- Restrict Access
  - Place services behind layers of firewalls
  - Expose as little internal information as possible
  - Do not allow unencrypted access



# IMP Secure - Architecture



# IMP - Pros/Cons

- Pros
  - Concurrent access from anywhere
  - Server based storage of IMAP
  - O/S independent
  - Lightweight - low bandwidth requirements
- Cons
  - Weak address book
  - Security - controlling access to data
  - No offline access

# IMP - Future

- Certificates
  - Use certificate authority
- OTP - One Time Passwords
  - Investigating use of OTP cards for first level passwords
- Increased functionality
  - Better address book
  - Integrate with LDAP server
- New Versions
  - Imp 3.0, Horde 2.0

# IMP – Installation Highlights

- Install RH7.2 with apache, imap, mysql, php stuff
- Get i386 and noarch rh7 packages from [ftp.horde.org](http://ftp.horde.org)
- Install
  - horde-1.2.7
  - horde-mysql-1.2.7
  - imp-2.2.7
- Start services
  - http, imap, sendmail, mysql
- Test
  - <http://localhost/horde/test.php3>

# IMP – Installation Highlights

- Mysql setup
  - `mysqladmin -u root password 'new password'`
  - `mysql -p`  
`</var/www/html/horde/scripts/database/mysql_create.sql`
  - `mysqladmin -p reload`
  - `mysqladmin -u hordemgr hordemgr 'new password'`
- Setup IMP
  - `cd /var/www/html/horde`
  - `sh install.sh`
  - Connect to `http://localhost/horde/setup.php3`

# References

- IMP: [www.horde.org](http://www.horde.org)
- Mail studio: [www.mailstudio.com/](http://www.mailstudio.com/)
- MailMan: [www.endymion.com](http://www.endymion.com)
- Acmemail: [www.astray.com/acmemail/](http://www.astray.com/acmemail/)
- Mail Spinner: [www.mailspinner.com](http://www.mailspinner.com)
- IMAP: [www.imap.org](http://www.imap.org)