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# Managing Messaging Systems – Class Overview

Introductions, Review, Class Structure, Class Activities

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# Part 1: Introductions

1 Class Information

2 About Me

3 About You

# Class Information

- Class Portal: <http://mohsen.banan.1.byname.net/teaching/bc-isit442>
- We May Also Use Canvas Occasionally
- For now mohsen.banan@bellevuecollege.edu is the best way to reach me

# About Me

An Engineer, Not A Teacher  
Occasionally I Teach  
Google “Mohsen Banan”

# About You

It is a small class.  
To teach you well, I need to get to know you.

## 4 Relevant Concepts Review

# Relevant Concepts Review

- Unix/Linux Command Line
- Virtualization
- OSI
- Messaging
- Wireshark

## Part III

# Class Structure And Class Overview



# Part 3: Class Structure And Class Overview

- 5 Class Structure
  - Theory: Model, Terminology, Protocols
  - Practice: Hands-On
  
- 6 Class Overview
  - Basic Model for email (Inter-personal Message Handling System (MHS))
  - Some Basic MHS (email) Terminology Review
  - MTA Comparisons – qmail is our choice of ultimate MTA
  - The ByStar Mail Server Configuration – Hosted And In-House
  - The Right qmail Autonomous Client Configuration

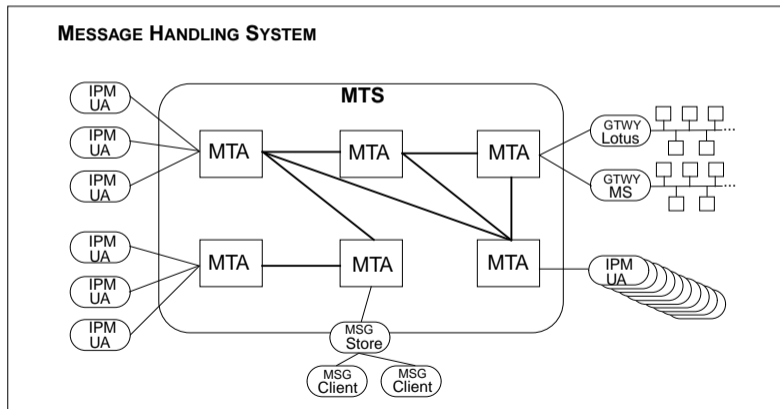
# Theory – Model, Terminology, Protocols

About half

# Practice: Hands-On

About half

# Messaging Model and Terminology



# Some Basic MHS (email) Terminology Review

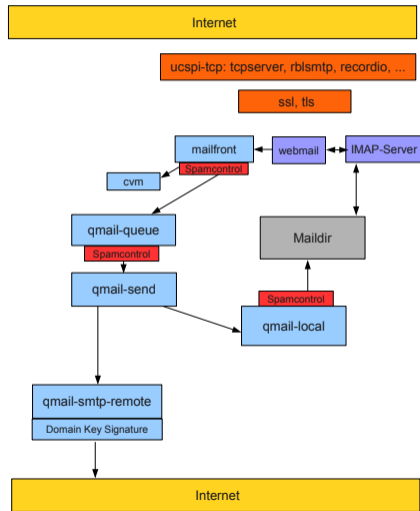
Since we are going to use email as the example through out, let's quickly review some basic terms.

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

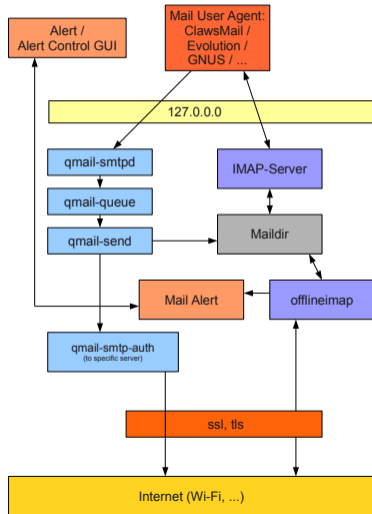
# MTA Comparisons – qmail is our choice of ultimate MTA.

- qmail vs Sendmail vs Exchange vs Postfix vs Exim  
[http://shearer.org/MTA\\_Comparison](http://shearer.org/MTA_Comparison)
- Linux Modules and Protocol Layers
- qmail – <http://cr.yp.to/qmail.html>

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



# The Right qmail Autonomous Client Configuration





# Part 4: Assignments And Grading

- 7 Assignment
  - Main Quarter Assignments
  - This Week's Assignment
  
- 8 Grading

# Main Quarter Assignments

- 1 Build A Secure And Flexible Mail Responder
- 2 MTA Logs Analysis
- 3 Mail Heartbeat – Failure Alert

## This Week's Assignment:

- 1 Personal Statement (Due Thursday 1/5/2017)
- 2 Completion Of Emacs Tutorial (Due Tuesday 1/10/2017)

# Grading Is Based On:

- 1 Main Quarter Assignments
- 2 Weekly Assignments
- 3 Occasional Quizzes

# Part 5: Class Activities

- 9 Virtualization
- 10 Obtaining Your VM Player and Your VM Images
  - About Virtual Machines Players And Virtual Machines Images
  - Virtualization Technology Choices
  - Obtaining Your VM Player/s
  - Obtaining Your VM Image
- 11 Starting Your VM – Configurations and Logging In
  - Preparing Your VM
  - Configuring Your VM
- 12 Emacs
  - What Is Emacs?
  - What Is Blee?
  - Obtaining And Installing Emacs?

- 1 Virtualization Host Machine
- 2 VM Players
- 3 VM Images
- 4 Virtualization Guest Machines

- VMware – Proprietary – Hypervisor Types: 1 and 2
- KVM – Libre-Halaal – Hypervisor Types: 1
- VirtualBox – Libre-Halaal – Hypervisor Types: 2
- Microsoft Stuff – Proprietary – Hypervisor Types: 2

Corporate America's Choice: VMware

- VMware WorkStation 11 (Licensed Software, order it through your manager)
- VMware Player (free of charge download for non-commercial use)

Order and Instalation Instructions at:

<http://by-star.net/obtainingTmcpVMs>



# Obtaining Your VM Image

Development VM Images Are Kept In ByStar Intranet  
Download Instructions Are At:

<http://by-star.net/obtainingTmcpVMs>

# Preparing Your VM

The VM Image That You Downloaded Is In OVF Format.  
OVF Is Well Suited For Transfer Of VM Images – But Not For Running.  
You First Need To Convert It To vmx format:

- In Your VM Player Software
- “Open A Virtual Machine” which specifies the OVF Image

Before Running Your VM, It Is Good Idea To Verify That You Have Good (Optimum) Configurations For Your VM:

- Select Your VM Image
- Edit Virtual Machine Settings
- Memory (4 GB) – if you can afford it
- Processors (More Than 1 less than 4) – if you can afford it
- Network Adapter (NAT) – Always At ByStar

# What Is Emacs?

- Emacs is far more than just an editor. Viewing Emacs as an Editor Centered User Environment is only the beginning of recognizing its power.
- Emacs Competes With Best Of Breed IDEs.
- Emacs Competes With Outlook
- A Full Lisp Engine Plus Tons Of Apps
- Emacs Is About Full Integration

# What Is Blee?

- Blee (ByStar Libre Emacs Environment) Is A Layer Over Emacs That Integrates It With Autonomous ByStar Services.

# Obtaining And Installing Emacs?