

# 网络设计与应用管理实践

Network Design and Application Management Practice  
Part I

[liuyu@mail.cnu.edu.cn](mailto:liuyu@mail.cnu.edu.cn)

Network Analysis and Administer Lab  
2013.2

# Network Design & Management Practice

2013

Yn Lin



# Overview

- Curriculum information
- Teacher information
- Curriculum content
- Assessment
- Reference

# Curriculum information

- Number: 3103161
- Curriculum name:
  - Network Design and Application Management Practice
- Period:
  - class teaching: 36+
  - practice: 36+
- Credit hour: 4 credit



# Teacher Contact

- Liu Yu
- Mail:
  - [liuyu@mail.cnu.edu.cn](mailto:liuyu@mail.cnu.edu.cn)
- Resource:
  - <http://liuyu.ie.cnu.edu.cn/2013/netman>
  - <http://nikinanalieu.github.com/ndmp/>
- Office
  - Network Analysis Lab (326)

# Course Content

- Elementary knowledge
- Application Management
- Network Device Management
- Network Design



# Moodle

- <http://moodle.ie.cnu.edu.cn>
- password: netlab

# Environment

- Ubuntu 11.04/12.04 LTS Server
- VMWare Player
- Windows Server 2003 R2



# Elementary knowledge

- Network Basic
- Application Server Basic
- UNIX Basic

# Application Management

- UNIX/Linux Basic
- AMP system
- Network Services



# Network Design

- Network Device
- Switch Basic
- Multilayer Switched Networks
- Basic Routing
- Network Address Translate
- Dynamic Routing

# Network Design

- Campus Network Design
- Advanced Network Device Management



# Assessment

- Regular Grade: 10%
- Practice Report: 60%
- Network Design Report: 15%
- Mid-term Inspection: 5%
- Final (include answer to complaint) : 5%
- Comprehensive Assessment: 5%

# Reference

- 计算机网络
- 网络工程师教程
- 思科网络技术学院教程
- BCMSN、BCRAN、BSCI
- <http://help.ubuntu.com>



# Q & A

- Q&A

- break

# Application Server Basic

- An application server is a software framework dedicated to the efficient execution of procedures (scripts, routines, programs, etc.) for supporting the construction of applications.



# Application Server

- The term was created in the context of web applications but evolved into much more comprehensive **service layer**. An application server acts as a set of components accessible to the software developer through an API defined by the platform itself.

# Application Server

- For web applications, these components are usually performed in the same machine where the web server is running, and their main job is to support the construction of dynamic pages.



# Application Server

- Present-day application servers target much more than just web pages generation, they implement services like **clustering**, **fail-over** and **load-balancing** so developers can be focused just on implementing **the business logic**.

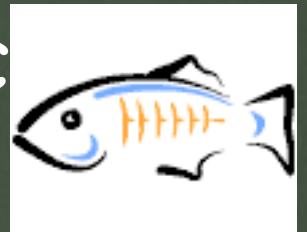
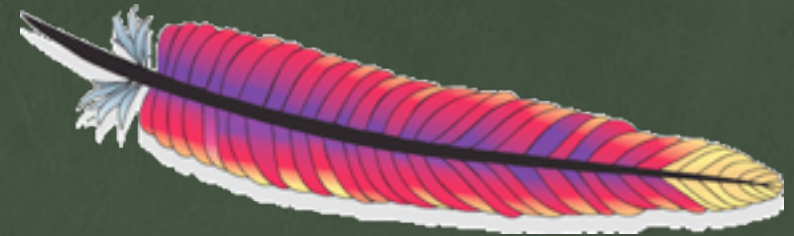
# Application Servers

- Apache-based application server
  - Perl, Python, **PHP**, **Ruby**, Tcl
- C++ Language
  - Barracuda Web Server, Tuxedo, G-WAN, tntnet, cppserv, **Wt**, Wexus



# Java EE Servers

- Apache Geronimo (ASF)
- Apache Tomcat (ASF)
- Glassfish Application Server (open source)
- WebSphere Application Server and  
WebSphere Application Server Community Edition (IBM)



WebSphere. software

# Application Servers

- JBoss (Red Hat)



- JRun (Adobe Systems)



- Oracle OC4J (Oracle)

- WebLogic Server (Oracle)

- GlassFish Enterprise Server (Oracle)

- WebObjects (Apple Inc.)



# .NET Servers

- Internet Information Services
- .NET Framework
- Distributed Transactions/COM+
- Third-part
  - Mono (Novell,GPL), Base4 Application Server (Open Source), Apache Application Server (ASF)



# p~ Servers

- Python

  - Zope



- Perl

  - HTML::Mason (Amazon.com)

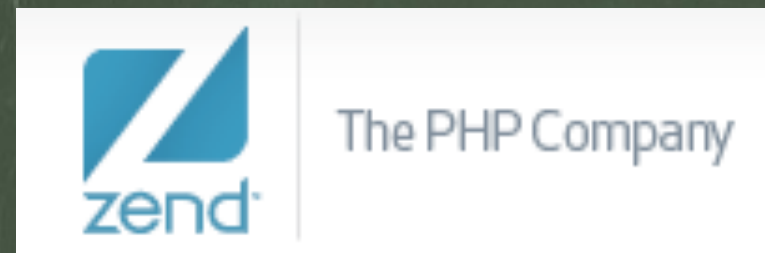




  - Catalyst

- PHP

  - Zend Server





# Other Servers

- Ruby

- Cerise



- Smalltalk

- Seaside Software

- Tcl

- AOLServer

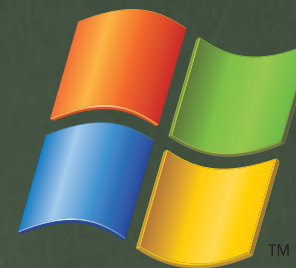


# Application Platforms

- Zend
- Appaserver
- Base4
- Zope
- Spring Framework (Rod Johnson)



# Server Operating



# UNIX and Linux

- UNIX History
- <http://zh.wikipedia.org/wiki/UNIX>



# Q&A

- Q&A

- break