

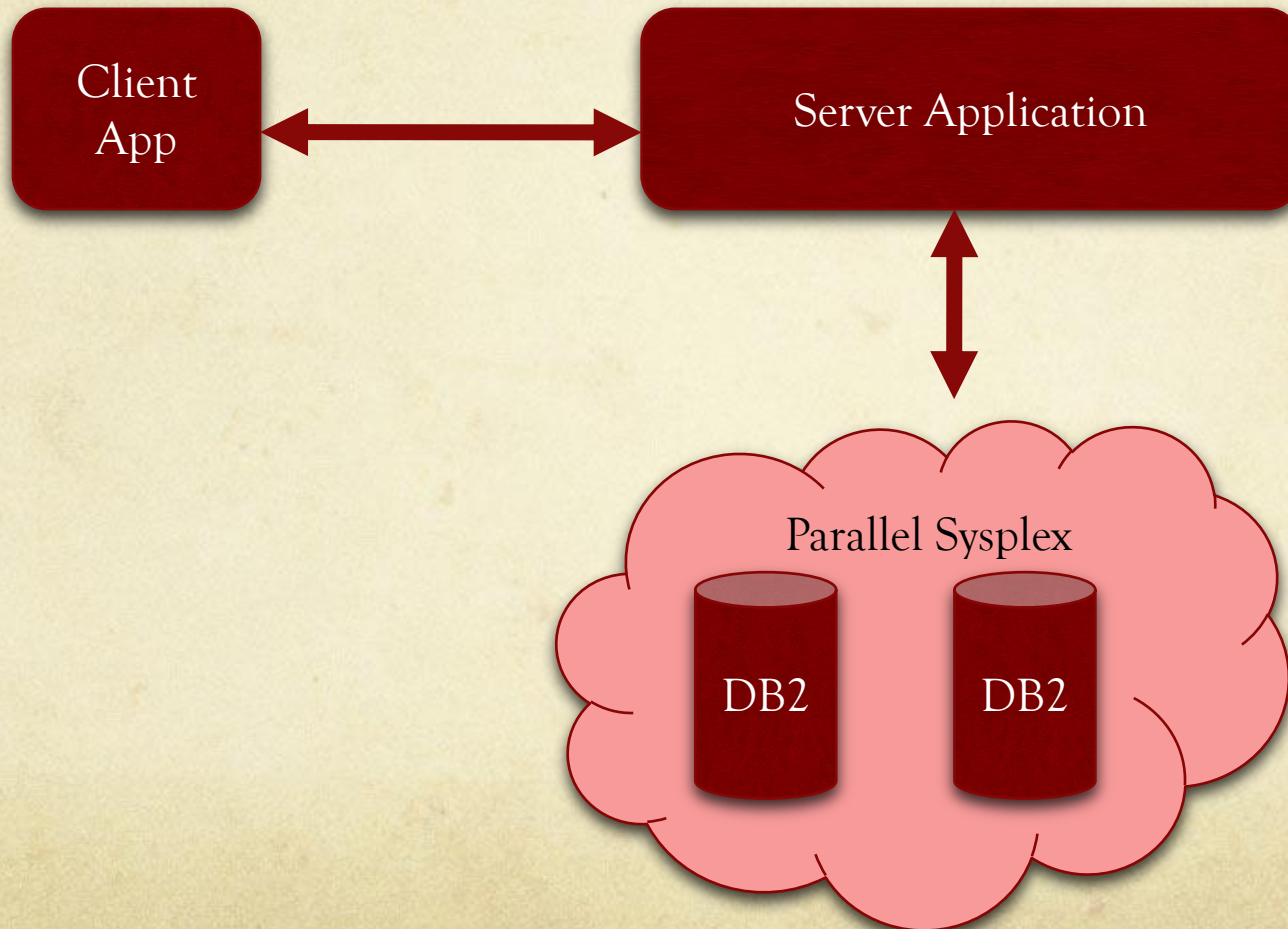
Exploring zOS: A look into  
zOS, it's coupling facility,  
DB2 data sharing and  
WebSphere Application  
Server

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# Overview

- Project was an independent study conducted at Marist College
- Three participants
  - Sean Goldsmith (Marist College graduate student)
  - Doug Trimboli (IBMer from Poughkeepsie lab)
  - Angelo Corridori (Professor at Marist College)
- Goals
  - Assess the capability and performance of parallel sysplex as a clustering technology
  - Assess a zOS environment which provided new functionality not currently found in the knowledge center or test drive images

# Project Diagram



# Project Stack Diagram



# zPDT Overview

- IBM's System z Personal Development Toolkit
- Primarily used by ISVs for application development on System z
- Supports z/OS 1.11 and z/OS 1.12 (including middleware DB2, IMS, CICS, WAS), z/VM 6.1 and VSE
- Emulator itself runs on TOP Linux (Redhat or Suse) on an Intel x86 platform

# Project Overview

- The project was divided into five phases
  1. Install and manage a zPDT instance
    - Define IODF used by zPDT emulator
  2. Configure zVM, zOS and parallel sysplex
    - Configure zOS members (e.g. IEASYSxx, IEASYMxx, LOADxx)
  3. Install DB2 in zOS
    - Add new DASD to zOS instances
    - Create DB2 ISPF Panels
    - Create and run DB2 JCL jobs
    - Update zOS members (e.g. COMMNDxx, IEFSSNxx)
  4. Configure DB2 to share data between two zOS instances using the coupling facility
    - Define CFRM policy to create LIST, LOCK, SCA and cache structures.
    - Rebuild the CF policy
    - Authorize DB2 to access these structures
    - Configure zOS members (e.g. COUPLExx)
    - Activate the CF Policy
  5. Install WebSphere Application Server
    - Use WCT (WebSphere Customization Tools) to generate the necessary JCL
    - Configure zOS members for WAS install (e.g. TCPPARMS)

# Project Road Bumps

- Ranged from simple to very complex
- Examples include
  - Basic activities, such as logging into TSO
    - Error caused by TSO subsystem starting before the VTAM subsystem had finished loading
  - Cryptic error messages while trying to enable DB2 in data sharing mode
    - DSNJ707E -DBP2 DSNJS01A LOCATION NAME LOCDB9G IN BSDS DOES NOT MATCH THE LOCATION NAME DBP1LOC ASSOCIATED WITH THE DATA SHARING GROUP

# Reflections and Lessons Learned

- Project was very ambitious in terms of its technical goals
- While we were unable to accomplish all of the technical goals, the project had many successful outcomes
  - zPDT proved to be an extremely useful tool for this type of research
  - DB2 was installed and configured in data sharing mode
  - A parallel sysplex was configured and used by the DB2 subsystem
  - Hands on learning experience using zOS in real world applications



DEMO