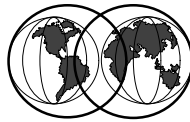


ERP Solutions on OS/390

Workshop - August 5, 1999

Kathryn Arrell



ERP Workshop 1999



- ERP Market Place
- ERP Architecture for S/390
- Sizing ERP Applications for OS/390
- Specific Implementations for S/390
 - SAP R/3 Implementation
 - PeopleSoft Implementation
 - Oracle Applications Implementation
 - Baan Implementation
- Printing and Tuning Considerations
- S/390 and DB2 Strengths for ERP Solutions
- IBM Contacts and Material for S/390 ERP Solutions

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S/390 Multiprise 2000	MVS/ESA	RAMAC
S/390*	AIX*	IBM S/390 Parallel Enterprise
ESCON*	Server Generation 3	

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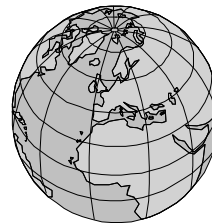
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ERP Market Place



• Customer Incentives

- Globalization
 - World wide intensified competition
 - Faster production cycles
 - Shorter development cycles
 - Manage growth and control costs
- Year 2000 and Euro Currency



• Beyond ERP

- Enable e-business
- Improved Customer Service (CRM)
- Supply Chain

• S/390 Incentives

- Customers are choosing packaged applications to run their business
- The ERP Database platform will drive future hardware decisions
- Customers are interested in moving to S/390 as ERP usage grows

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ERP Market Leaders



- Total Projected Revenue 1998
 - SAP AG 4.7 billion
 - Oracle Financials 1.9 billion
 - PeopleSoft 1.4 billion
 - Baan 992 million
 - J.D.Edwards 990 million
- Other Facts
 - 70% of Fortune 1000 companies have or plan to start implementing ERP systems
 - 15% to 20% implementing for year 2000 problem

(Computerworld 09/98)

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New Applications for S/390



- Four ERPs in production on S/390
 - SAP, Baan, Oracle Applications, PeopleSoft
- Other considering for next year ?
- More ERP Vendors
 - Lawson Software
 - JDE
- Supply Chain
 - Siebel
- CRM
 - IMI

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ERP History



- Packaged Solutions or Roll-your-own applications
 - Roll your own code costly to maintain and upgrade
- Manufacturing Packages
 - MRP was the forerunner of ERP
 - Developed initially on AS/400 and UNIX systems
 - Grew to cover all business aspects
- Year 2000 accelerated the change
- ERPs become Mission-Critical Applications
- Databases can be very large
- S/390 Strengths are important

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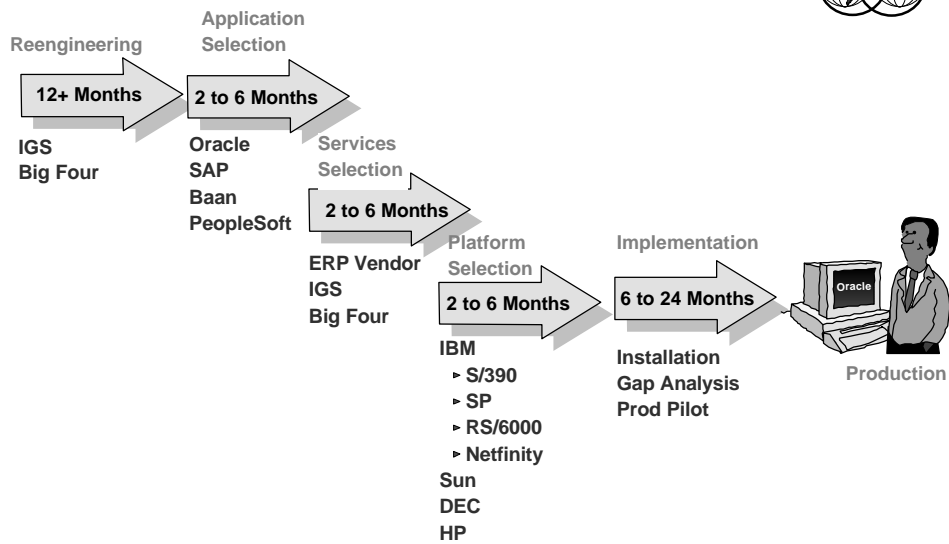
ERP Sales Cycle



- Customer chooses the ERP package
 - Based on functionality of applications
 - Degree of business reengineering
- Customer chooses the Consultant
 - Functional consulting
- Customer chooses the platform to run ERP
 - Consultant opinion and experience can affect decision
 - Start with pilot and initial production phase
- Customer grows the usage
 - More modules, more users
 - Extends the reach to CRM and SC

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ERP Deployment Cycle

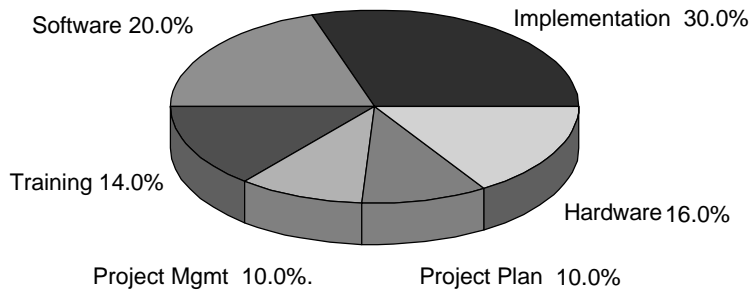


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ERP Complex Project: Opportunity Breakdown



Rule of Thumb: 1: 3: 1
SW: Services: HW



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ERP Int'l Competency Center Status



ERP Partner

International CC



Waldorf, Germany

S/390 Support: Mike Sheets, Derek Noble,
Tanja Lustig
Manager: Rainer Hofmann

Oracle

Redwood Shores, CA

S/390 Support: Moshe Reder, Tom Powell
Manager: Janet Vehar



Pleasanton, CA

S/390 Support: Ralph Deadwyler, Mike Curtis
Manager: Susan Durrett



Barneveld, Holland

S/390 Support: Eric de Jeu
Manager: Philip Van Loon

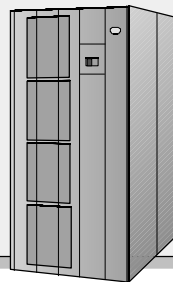
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Value of S/390 for Mission Critical Applications



- Why use S/390 for new ERP Applications?
- Why move currently implemented ERP Applications to S/390?

- ✗ Choice of leading applications
- ✗ Performance and scalability
- ✗ Simplicity
- ✗ Low total cost of computing
- ✗ Backup/Recovery
- ✗ Availability



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- Sizing ERP Applications for OS/390
- Specific Implementations for S/390
 - SAP R/3 Implementation
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 - Oracle Applications Implementation
 - Baan Implementation
- Tuning, and Migration Considerations
- S/390 and DB2 Strengths for ERP Solutions
- IBM Contacts and Material for S/390 ERP Solutions

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ERP Architecture Terminology



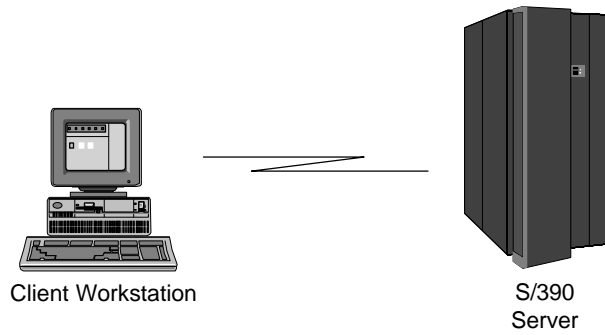
- Physical or logical tiers
 - Two-tier approach
 - Three-tier approach
- Logical Functions
 - Presentation Server or Layer
 - Interface to the user (client)
 - Character-based, GUI, Web,
 - Fat , thin
 - Application Server or Layer
 - Executes program logic (business functions) or connectivity
 - Database Server
 - File Server, Print Servers etc.
- Client Server versus Transaction - based

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Two-Tier Approach



- Typical two-tier physical architecture

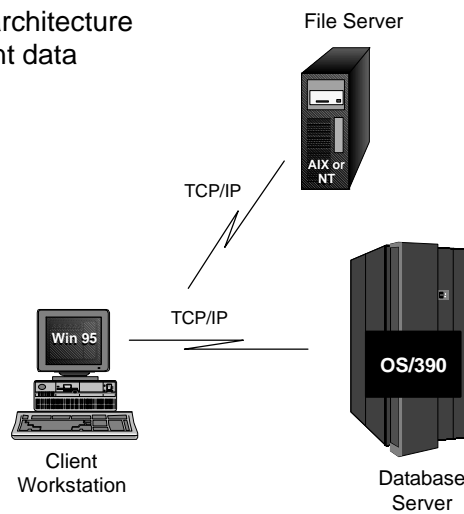


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File Server Approach



- File server architecture to store client data

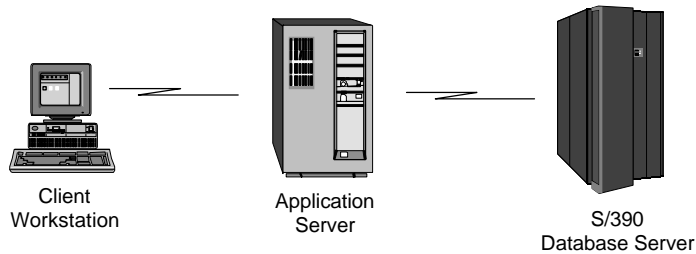


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Three-Tier Approach



- Three-tier physical architecture



Three-Tier Architecture

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Functions of Middle Tier



- Varies by ERP Solution
- Pure Application Server
 - Executes the application code
- Web Server
 - Serves the html code
- Presentation Server
 - Stores the user interface code
- Communication Server
 - Facilitates connectivity to DB
- Many meanings to the term Application Server

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Network Communications



- Workstation to Application Server
 - "Web-Enabled" to Web Server
 - TCP/IP Communications
- Middle Tier to Database Server
 - Should be same location
 - Should be high-speed
- Workstation to File Server
 - High-Speed Communication Necessary
 - Installations May Replicate File Servers

ERP Workshop

Installation Process



- **Usually Reflects History**
- **Multi-Platform Environment**
 - Generally Controlled from Application Server
 - Often Delivered on CD-ROM
- **User-Specific Options**
 - Communications Network
 - Applications Used
 - Question and Answer script
- **Database Initialization & Load**
 - Biggest Part of Installation Machine Load
- **May Require Specialists from Varied Areas**
- **May REQUIRE ERP-Certified Specialists and Environment**

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People Communications



- Successful ERP Implementation Involves a Variety of Skills and Disciplines
 - May not use the same Terms
 - UNIX versus Mainframe versus Workstation
 - Hardware/Software Combinations may be New
 - Especially True for High-Speed Links
- Need 'Glue' for Cooperation
 - Within the Organization
 - With the Various Suppliers

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Sizing ERP Applications



- What is sizing
- Why do you size
- How is the methodology developed
- How do you invoke a sizing
- How do you minimize the number of iterations
- Sizing for SAP, Baan, PeopleSoft, Oracle
- Enterprise Assurance Plan (EAP)

Sizing ERP Applications



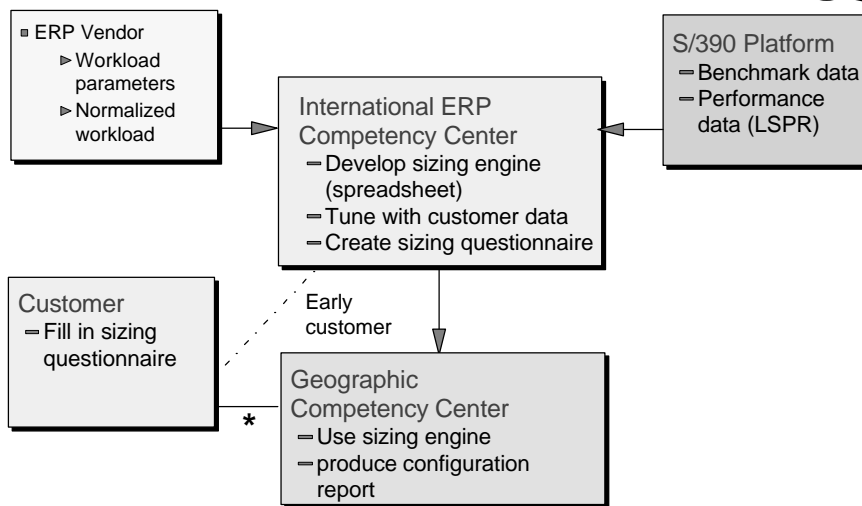
- What is sizing
 - New Application for Customer
 - No historical data with usually less than exact requirements
 - Hardware vendor provides detailed questionnaire
 - Configuration output becomes early predictor for hardware requirements
- Why do you size
 - Initial estimate of hardware needs
 - Less exact than capacity planning
 - Pricing for RFP based on initial sizing

Sizing ERP Applications



- How is Methodology developed
 - ERP Vendor performs internal benchmarks to determine parameters for sizing
 - Develops master questionnaire
 - Out put from questionnaire becomes input to sizing engine
 - Sizing engine is usually a spreadsheet
 - Results are a normalized view of the workload
 - Given to Hardware vendor to match to hardware
 - Vendor benchmarks and platform performance data used to create sizing worksheet
 - Worksheet produces configuration report

Development of Sizing Process



Sizing ERP Applications



- How do you invoke a sizing
 - ERP Geographical Competency Center responsibility
 - Get the questionnaire from <http://w3.ibmfx.ibm.com>
 - Fill in the customer data
 - Submit to the Competency center sizing team
 - Data becomes input to sizing worksheet
 - Sizing report is the deliverable to the customer

- How do you minimize the number of iterations
 - Typically can be 6 iterations
 - Understand the questions
 - Work with the customer to get accurate data
 - Work with the sizing team for reasonableness checks

Sizing ERP Applications



- Content of WEB site
 - Click on IBMFAX, then SEARCH, then search on sizing
 - Found 6 hit(s) where Title and Description contains "sizing"
 - Please select the documents you would like to have added to your fax request. You may then either press Fax to fax your request or Continue to build your request. Click on the Doc # to get more detailed information about the document. Now you can also view a document by clicking . If you want to download a copy of the document in Adobe PDF format, click on the icon. PDF files can be viewed and/or printed with the Adobe Acrobat reader, which you can download from the Adobe web site. If this is your first time using PDF or if you are having a problem, take a look at our list of frequently asked questions.

-	DESCRIPTION	DOC #	PAGES	DATE
-	IBM/BaaN IVc Sizing and Planning Questionnaire -	8650	9	02/18/99
-	IBM/J. D. Edwards Sizing and Planning	8651	5	05/20/98
-	IBM/Peoplesoft Sizing and Planning Questionnaire	9113	22	01/25/99
-	IBM/SAP R/3 Disk Sizing Questionnaire - IBM/ERP	8635	7	04/21/98
-	IBM/SAP R/3 Sizing and Planning Questionnaire -	8636	15	02/24/99
-	Oracle Applications for IBM Sizing Questionnaire	9459	15	02/24/99

Sizing ERP Applications



- Information needed to size
 - Number of users - named, logged on, concurrent, expert or heavy
 - Four types of workload - online, batch, reporting, customized
 - Which ERP application functions will be used (modules)
 - Amount of batch in prime shift
 - Peak workloads
 - Data storage requirements
- Initial Sizing versus Capacity Planning
 - Initial sizing is based on benchmarks and other customer experiences
 - Ongoing Capacity Planning process is necessary
 - Based on customer data. gather data over time
 - OS/390 - CPU, I/O, memory, overhead
 - Network traffic
 - AIX or NT Servers

Enterprise Assurance Program



What is it?

- An Assurance that:
 - IBM will work to establish the correct sizing for your SAP project when using S/390 as the Database Server and an RS/6000 as the Application Server
 - IBM will propose the correct production configuration
 - IBM will conduct a "Capacity Baseline" prior to customer production to verify assumptions and establish new sizing if required
 - IBM will stand by its configurations

EAP



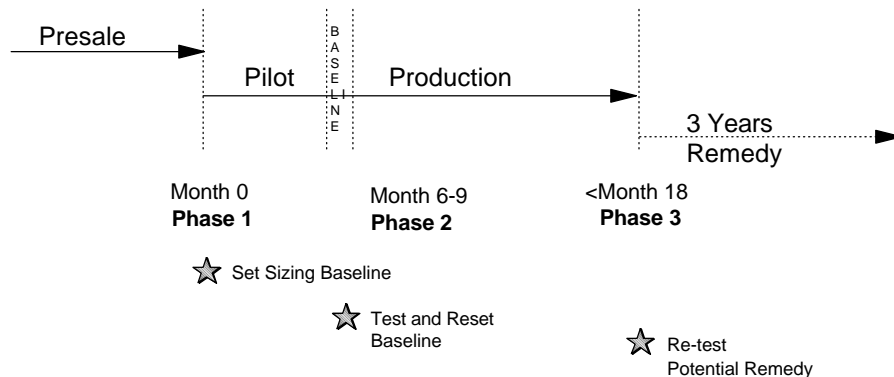
How Does It Work?

- Pre- Sales
 - Configure solution Business as Usual
 - Initial system performance assumptions documented
- Early Production (25% of full production capacity)
 - Verify original assumptions still valid
 - Capacity Baseline Measurement
 - Measurement of system for capacity planning
 - Establish 15% +/- bandwidth for guarantee
- Full Production
 - Verify system within 15% +/- bandwidth
 - Customer may call for Baseline again if outside bandwidth
 - IBM has right to tune system to improve performance if outside bandwidth

EAP



Timeline



EAP



What Does It Cover?

- The Assurance covers:
 - The S/390 Database Servers (G4 and G5 only)
 - The RS/6000 Application Servers
 - The IBM software and maintenance (for up to 3 years)
 - The running of Capacity Baseline Services
 - The support required to make the system perform

SAP R/3 on OS/390

Using DB2 for OS/390



SAP



- **History**
 - Began in 1972
 - SAP R/2 was 2-Tier Product (CICS-Based)
 - Strong in Financial Applications and Manufacturing
 - Very Strong in Europe and US
- **HQ in Walldorf Germany**
- **Present Status**
 - Larger Base than Other ERPs
 - Expanding in:
 - Platforms Supported
 - Applications Available
 - Generally Regarded as Ultimate Competitor for both:
 - Existing ERPs
 - Startups

SAP R/3 Architecture



Generic SAP R/3 Architecture

- 2-Tier or 3-Tier Approach
 - 3-Tier Most Common
- Multiple Application Servers
- Uses Popular DBMS Products
 - Oracle
 - DB2 for OS/390
 - DB2 for AIX
 - Informix, etc.
- Range of Applications Available
 - Popular Financial Applications
 - Manufacturing Applications

SAP R/3 Architecture for S/390



Architecture

- 3-Tier Approach
- Multiple Application Servers
- Uses Only DB2.
- Special Communication between S/390 and Applications Servers

SAP R/3 on DB2 for OS/390



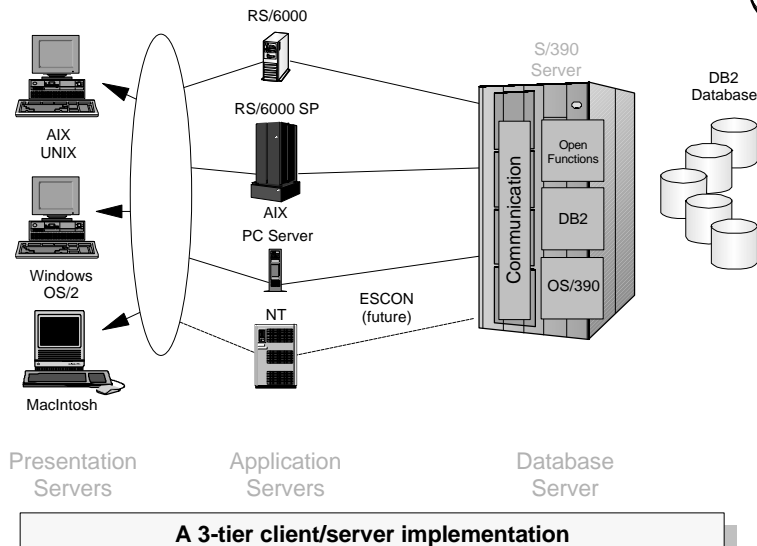
- SAP R/3 System
 - Strategic Enterprise Management
 - Logistics
 - Supply Chain
 - Application Engineering
 - System Management
 - Financials
 - Human Resources
 - Internet/Intranet
 - Business Process Technology

SAP R/3 on DB2 for OS/390

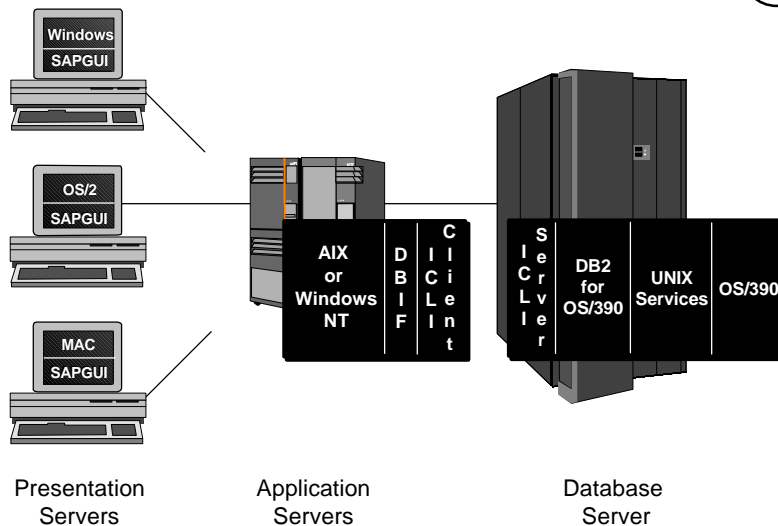


- SAP Industry Solutions
 - SAP Aerospace & Defense
 - SAP Automotive
 - SAP Banking
 - SAP Chemicals
 - SAP Consumer Products
 - SAP Engineering & Construction
 - SAP Healthcare
 - SAP High Tech Electronics
 - SAP Insurance
 - SAP Media
 - SAP Oil Gas
 - SAP Pharmaceuticals
 - SAP Public Sector
 - SAP Retail
 - Service Provider
 - SAP Telecommunications
 - Transportation
 - Higher Education and Research
- Plus Complementary Software

SAP R/3 Architecture



SAP R/3 Communications



SAP R/3 Central Instance



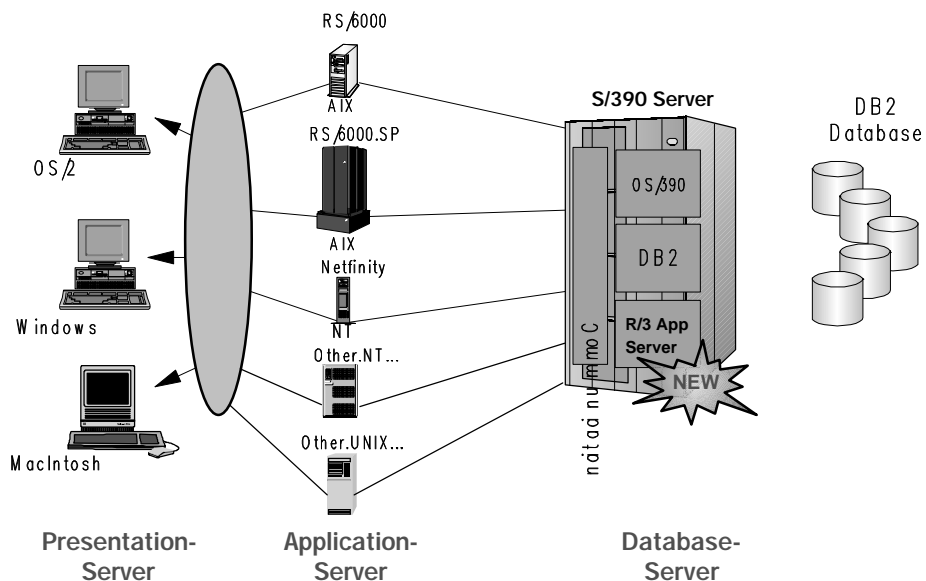
- "Special" Application Server
- Provides SAP R/3 Administrative Services
 - Message Server
 - Enqueue Server
- Provides DB Integrity
 - EVEN IF DBMS DOES NOT
 - Uses a DB Table called VBLOG
 - Or a combination of tables
 - Important for Tuning Purpose
- Installation Begins with the CI
 - DB Load from the CI (Mass Inserts)

S/390 Database Server



- All Application Data
- SAP R/3 Administrative Data
 - Authorized Users
 - Configuration Information
 - VBLOG or VBHDR, VBMOD, VBDATA
- Application Code
 - Application Language (ABAP)
- Code for Presentation Servers
 - SAPGUI
- DB2 Subsystem is DEDICATED to SAP R/3

SAP R/3 on DB2 for OS/390



Communications to Database Server



- IBM Provides ICLI Server
 - Communication Handler
 - Release dependant - see OSS notes
- Communicates with ICLI Client
 - ICLI Client executes on Application Server
 - Usually CI
 - Sometimes Additional Gateways
- SAP Provides DBIF
 - General Function
 - Transmits SQL to ICLI Client
- High-Speed Access is Essential

Communications to Database Server - Protocols



- High-Speed UDP
 - UDP-Based
 - Especially for High-Speed LAN or Channel Connections
- Enhanced ESCON
 - Channel Connections ONLY
 - Specialized Protocol
 - SHOULD NOT BE CONSIDERED IN NEW INSTALLATIONS
- High-Speed Web Access
 - TCP-Based
 - Standard Configuration
 - Standard Reliability

Communication Protocol Roadmap



R/3 kernel	OS/390 1.3, 2.4	OS/390 2.5	OS/390 2.6	OS/390 2.7	OS/390 2.8
3.11	Enh.ESCON HPDT UDP	Enh.ESCON HPDT UDP Std.TCP/IP (1)	Enh.ESCON HPDT UDP Std.TCP/IP (2)	Enh.ESCON HPDT UDP Std.TCP/IP	Enh.ESCON HPDT UDP Std.TCP/IP
4.0B	-	Enh.ESCON HPDT UDP Std.TCP/IP (1)	Enh.ESCON HPDT UDP Std.TCP/IP (2)	Enh.ESCON HPDT UDP Std.TCP/IP	Enh.ESCON HPDT UDP Std.TCP/IP
4.5A	-	Enh.ESCON HPDT UDP Std.TCP/IP (1)	Enh.ESCON HPDT UDP Std.TCP/IP (2)	Enh.ESCON HPDT UDP Std.TCP/IP	Enh.ESCON HPDT UDP Std.TCP/IP
4.5B	-	Enh.ESCON HPDT UDP Std.TCP/IP (1)	Enh.ESCON HPDT UDP Std.TCP/IP (2)	Enh.ESCON HPDT UDP Std.TCP/IP	Enh.ESCON HPDT UDP Std.TCP/IP
4.6A	-	-	Std.TCP/IP	Std.TCP/IP	Std.TCP/IP
4.6B	-	-	Std.TCP/IP	Std.TCP/IP	Std.TCP/IP

Black text: Supported at this time, Blue text: Planned to be supported

Notes: This is the current planning which may change at any time without further notice !

(1) Performance of TCP/IP on OS/390 2.5 supports test environments only.

(2) When using TCP/IP on OS/390 2.6, we recommend to have your competence center verify the performance requirements of your particular workload.

Installing SAP R/3 on DB2 for OS/390



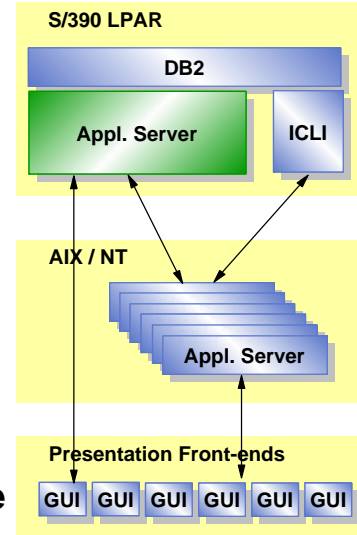
- Files from CD-ROM Available on Central Instance
- Script Provides Customizing Data
 - ▶ User has Completed Parameter List
 - From "Planning and Preparation Guide for SAP R/3 OS/390 Implementation"
 - Available from IBM/SAP Competency Center
- SAP R/3 Kernel is Created on Central Instance
- FTP Connection Made to Database Server (S/390)
 - ▶ This may use same Connection as ICLI or a different one.
- OS/390 Jobs are Sent to S/390 to Customize ICLI and Prepare Database
- Database is Loaded Using the ICLI Connection
- APPLICATION Database Load is a User Task

System Structure

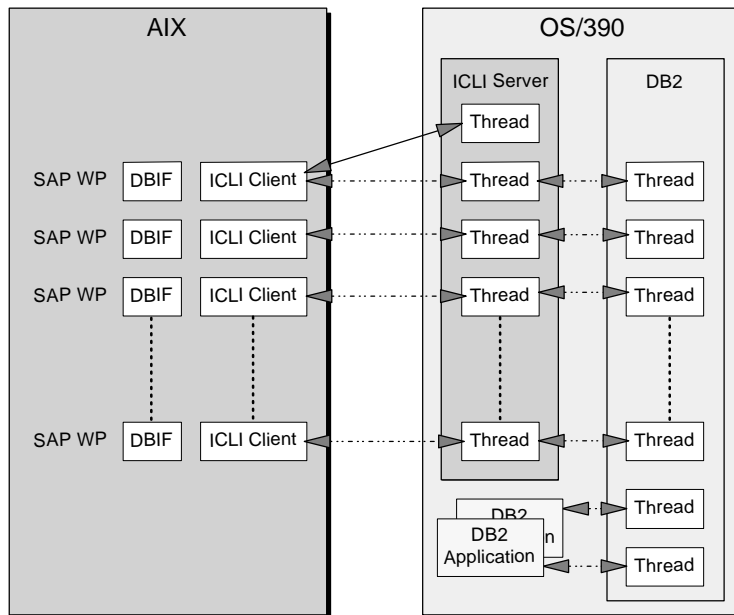


Single System Environment

- OS/390 R/3 application server runs in same LPAR as database server
- One LPAR can run one or more
 - Application server instances
 - SAP R/3 systems
- Direct connection / calls to local DB2
 - Increased performance
 - Better resource utilization
- ICLI is used by NT and UNIX application servers to access the DB server



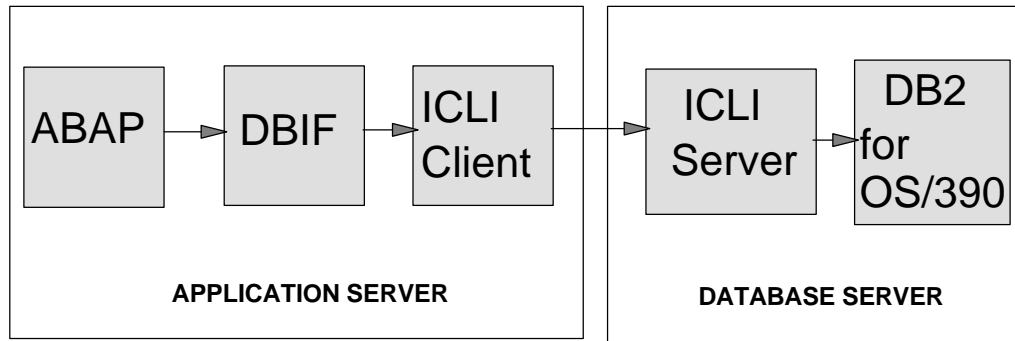
SAP R/3 on DB2 for OS/390



Communications to Database Server



■ DBIF and ICLI Functions

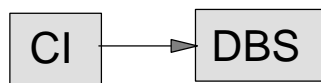


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Example Configurations

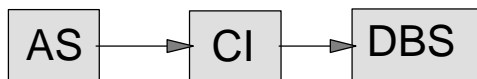


■ Simple



- ESCON
- FDDI

■ Gateway (1)



- SP
Switch
- FDDI

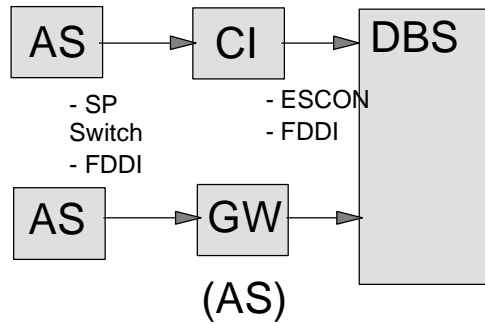
- ESCON
- FDDI

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Example Configurations - 2



■ Gateway (2)

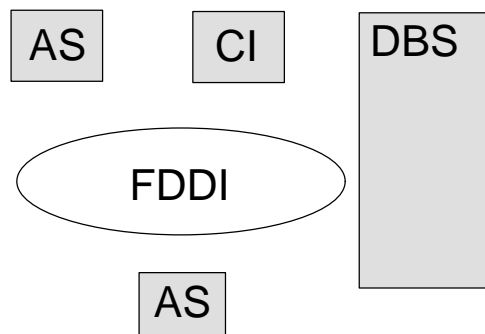


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Example Configurations - 3



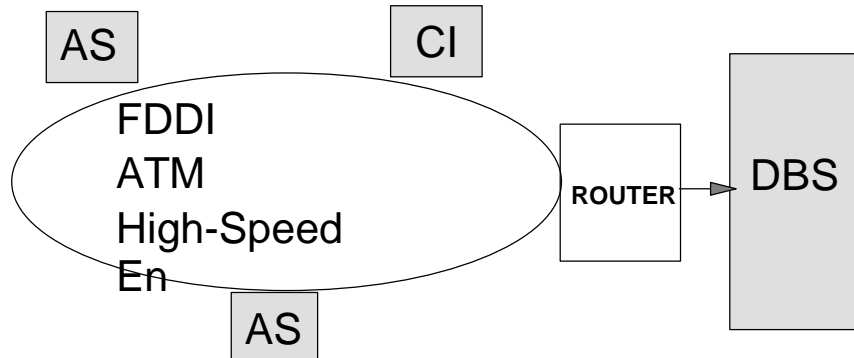
■ LAN



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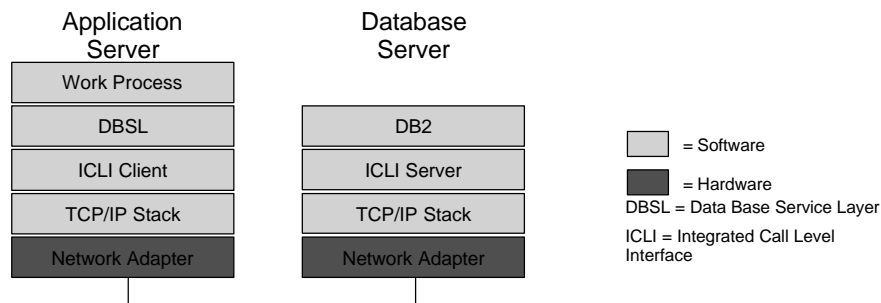
Example Configurations - 4

■ LAN with Router



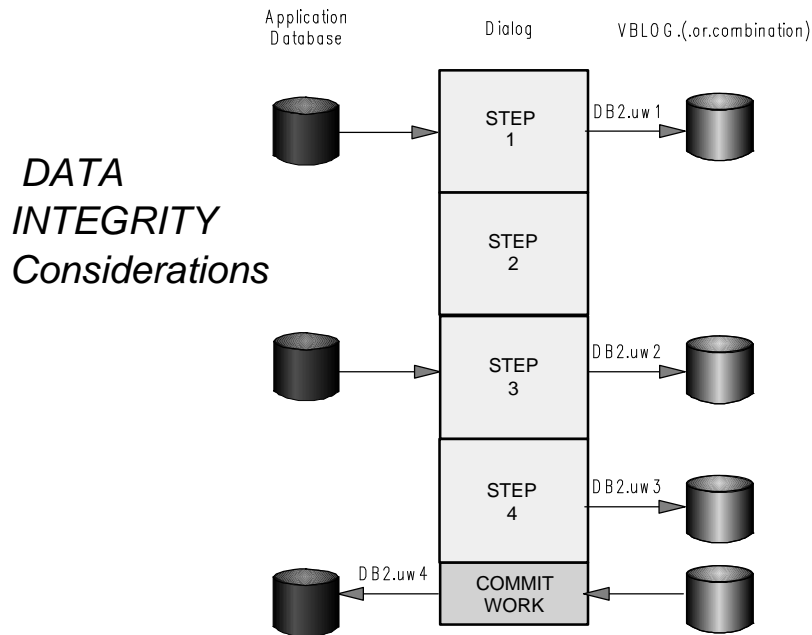
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Connection App Server <-> DB Server



- Supported connection hardware:
 - ESCON
 - FDDI LAN, Fast E/N + future OSA-2 supported hardware
- For ESCON, three communications protocols supported:
 - HPDT UDP (new name with OS/390 2.5: High Speed UDP)
 - Enhanced ESCON
 - TCP/IP (check connectivity matrix)--> strategic solution
- For FDDI, Fast E/N(and OSA-2), HPDT UDP, TCP/IP are supported
 - TCP/IP strategic solution (check connectivity matrix)

SAP R/3 on DB2 for OS/390



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SAP R/3 on OS/390



■ Successful Customers

- Schott Spezialglas GmbH (Zeiss Lenses)
- IBM Corporation
- Nabisco
- Motorola
- Royal Canadian Mounted Police
- Deere and Company

Over 240 customers implementing

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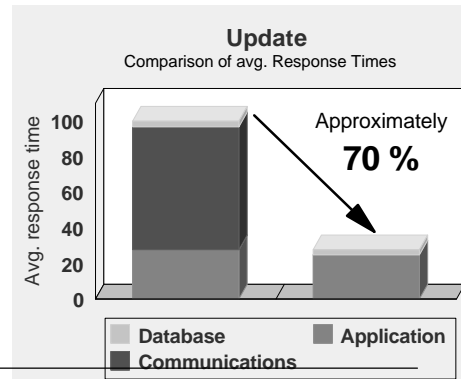
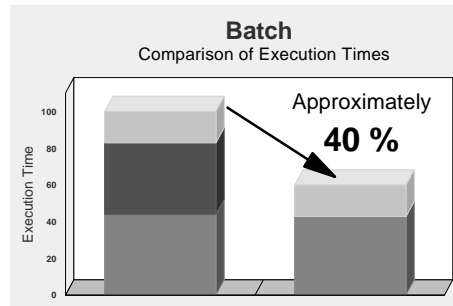
SAP R/3 on DB2 for OS/390



Higher Throughput

Optimized communication

Higher Batch and Update throughput based on improved communication of App. & DB server located on same system.



Release Support Matrix



R/3 database	R/3 kernel	DB2	OS/390	AIX	NT
3.0F, 3.1H, 3.1I	3.1I	V5, V6, ...	1.3, ...	4.1.4, ...	4.0, ...
4.0A, 4.0B	4.0B	V5, V6, ...	2.5, ...	4.2.1, ...	4.0, ...
4.5A	4.5A	V5, V6, ...	2.5, ..., 2.7	4.2.1, ...	4.0, ...
4.5A, 4.5B	4.5B	V5, V6, ...	2.5, ...	4.2.1, ...	4.0, ...
4.6A	4.6A	V6, ...	2.6, ...	4.3.2, ...	4.0, ...
4.6A, 4.6B	4.6B	V6, ...	2.6, ...	4.3.2, ...	4.0, ...
...

Black text: Supported at this time

Blue text (appears grey in handouts): Planned to be supported

Note: This is the current planning which may change at any time without further notice!

This information is also available in the information APAR II11352.

SAP R/3 on OS/390 - WHY?



- **Easier Management**
- **Lower Costs**
- **Improved Security**
- **Higher Availability**
- **Easier Disaster Recovery**
- **Increased Performance**
- **Simpler Storage Strategies**

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PeopleSoft

Using DB2 for OS/390



PeopleSoft for OS/390



■ History

- Began in 1987
- Human Resources Application Package
- Now have 50% of HR market
- Client Server Technology
- Concentrated on Customer Service

■ HQ in Pleasanton California

■ Present Status

- Expanded to financials, manufacturing, distribution
- International presence
- Revenue doubling every year

ERP Workshop

PeopleSoft for OS/390



People Tools for End Users
 InVision QueryLink Tree Manager Process Scheduler

<u>Industry Verticals</u>	<u>HRMS</u>	<u>Financials</u>	<u>Distribution</u>	<u>Manufacturing</u>
<ul style="list-style-type: none"> - Public Sector - Healthcare - Financial Services - Higher Ed - Federal Government 	<ul style="list-style-type: none"> - PeopleSoft Human Resources <ul style="list-style-type: none"> - Personnel and base benefits processing - PeopleSoft Benefits Administration - PeopleSoft Flexible Spending Account Administration - Payroll - PeopleSoft Payroll Interface - PeopleSoft Time and Labor - PeopleSoft Pension Administration 	<ul style="list-style-type: none"> - General Ledger - Receivables - Payables - Asset Management - Project Costing - Budgets - Billing 	<ul style="list-style-type: none"> - PeopleSoft Purchasing - PeopleSoft Inventory - PeopleSoft Order Mgmt - PeopleSoft DRP <ul style="list-style-type: none"> - Realtime aggregate planning and scheduling, product availability, analysis, etc. 	<ul style="list-style-type: none"> - PeopleSoft Bills and Routing - PeopleSoft Enterprise Planning - PeopleSoft Production Management - PeopleSoft Product Costing

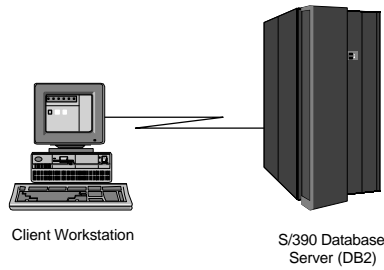
People Tools for Business Analysts and I/S Professionals
 Rapid Application Development Environment

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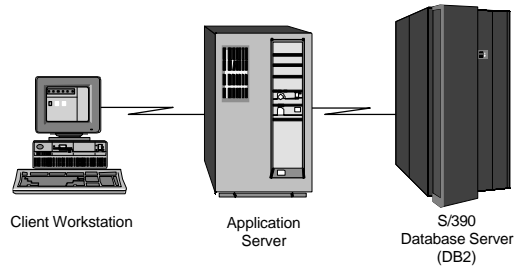
PeopleSoft for OS/390



Two-Tier Architecture



Three-Tier Architecture

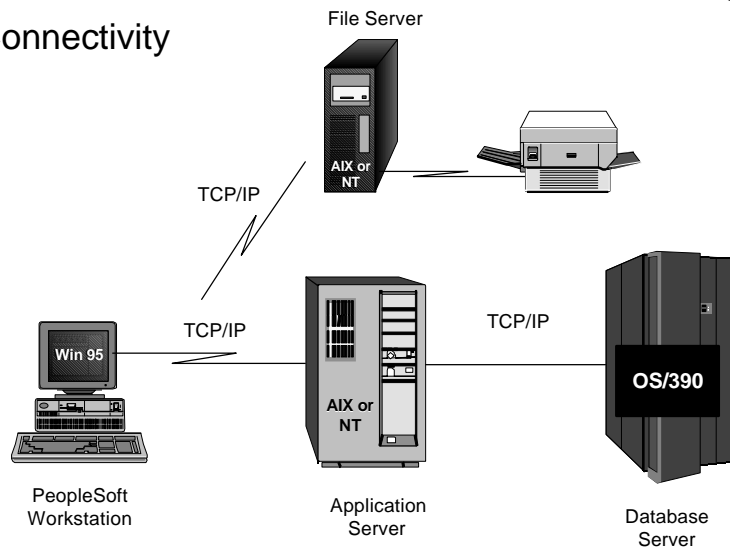


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PeopleSoft for OS/390



Connectivity



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PeopleSoft for OS/390



■ Installation Process

- Set up client connectivity to database
- Files from a CDROM loaded via a Client Workstation to File Server
- Data mover scripts move data to the DB2 Database
- File Transfer scripts move data to the Application Server dor Application Server
- Set up Process Manager for batch

■ Connectivity

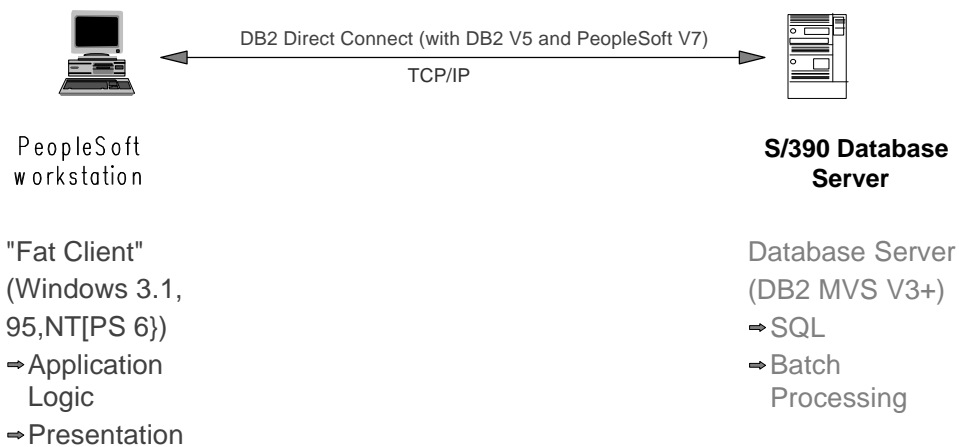
- DB2 Connect from DB server to Application Server
- Tuxedo to thin client
 - OR
- Tuxedo to Jolt to Web Server to Client with browser

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PeopleSoft for OS/390



PeopleSoft 2-Tier Architecture



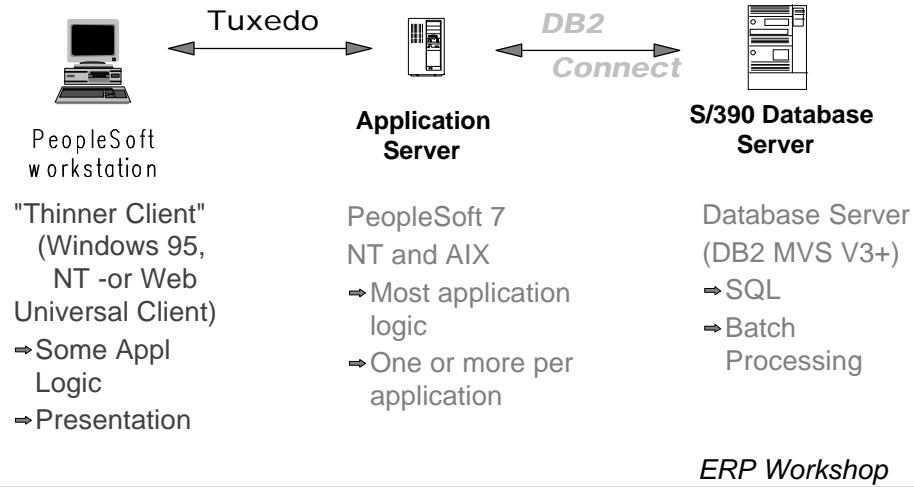
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PeopleSoft for OS/390

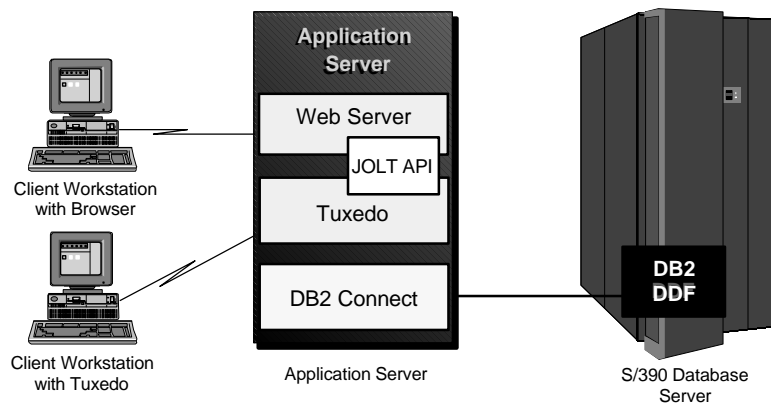


PeopleSoft 3-Tier Architecture for S/390

- PeopleSoft 7 and later
- No OS/390 Application Server in PeopleSoft 7.0 only NT and AIX



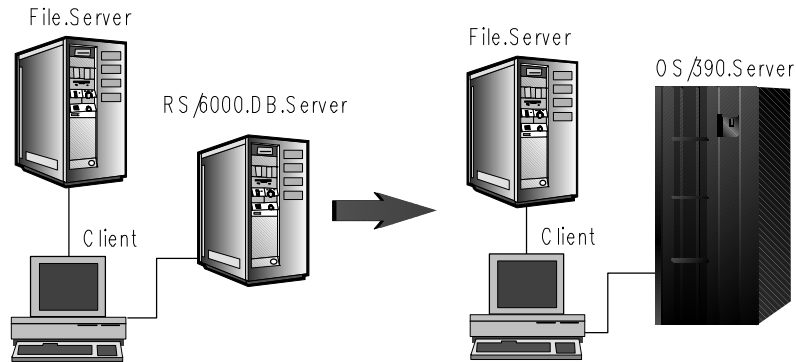
PeopleSoft for OS/390



Three-Tier Architecture with Web Browser

ERP Workshop

PeopleSoft for OS/390



Rehosting PeopleSoft Applications for OS/390

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PeopleSoft for OS/390



- **Coastal Corporation, a major competitor in the petroleum industry, moves PeopleSoft from HP/Oracle to S/390 and DB2**
 - Running all PeopleSoft Financial Modules for seven Coastal companies
 - Reversed the move to UNIX
 - Approximately a three month implementation cycle
 - Datamove - Oracle to DB2
 - DB2 planning and skills transfer

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PeopleSoft for OS/390



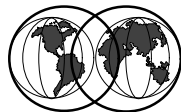
Scaling to Meet Large Customer Needs

- Duke Power
 - Large customer base, dynamic industry, anticipating growth in users and applications (HR and Financials)
 - Needed available and very scaleable solution
 - In production with *PeopleSoft on DB2 in a parallel sysplex*
 - PeopleSoft applications can integrate with other applications well

-

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Oracle Applications for OS/390



Oracle Applications for OS/390



- History

- Began in 1977
- Database Product Initially
- Financials package in late 1980s
- Client Server Technology
- Tightly integrated with Oracle Database

- HQ in Redwood Shores California

- Present Status

- Expanded to 45+ modules
- International presence (40% USA, 90+ countries)
- Oracle Applications revenue doubling every year
- 34,000 employees

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Oracle Applications for OS/390



Comprehensive, Integrated.

Functionality

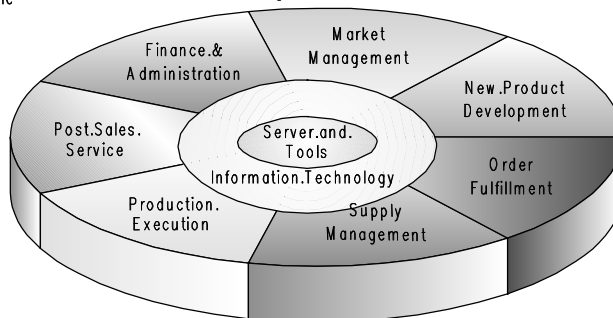
Finance
 General.Ledger
 Accounts.Payable
 Accounts.Receivable
 Fixed.Assets
 Project.Billing
 Project.Costing
 Financial.Analyzer

Post-Sales
 Service
 Service
 Inventory
 Work.in.Process

Production.Execution
 Bill.of.Material
 Work.in.Process
 Cost.Management
 Quality

Human.Resources

Human.Resources
 Payroll
 Training.Administration



Information.Technology
 Business.Agents.(Alert)
 Workflow
 Application.Data.Warehouse
 EDI.Gateway
 Internet.Commerce

Market.Management
 Sales.&Marketing
 Sales.Compensation

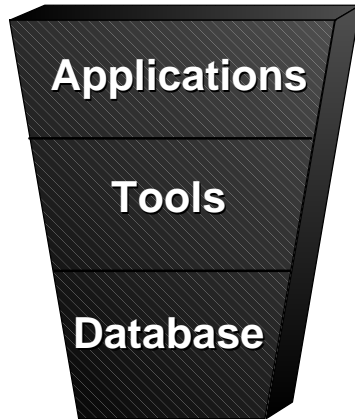
Product.Development
 Engineering
 Cost.Management

Order.Fulfillment
 Order.Entry
 Inventory
 Shipping
 Distribution.
 Planning

Supply.Management
 Master.Scheduling
 MRP
 Capacity
 Purchasing
 Receiving
 Inventory
 Payables

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Oracle Applications for OS/390



Oracle Builds
a Full Stack of
Integrated Technology

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Oracle Applications for OS/390



Release 10.7 Smart Client
Release 10.7 NCA
Release 11 NCA
Release 11i **

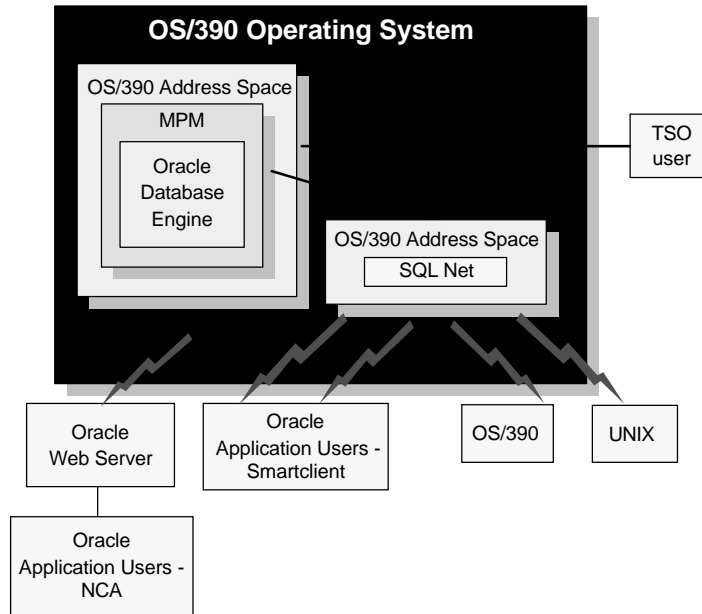
Oracle Application Server (Web)
Oracle Developer Server (Forms)

Oracle7, Oracle8
Oracle8i **

** Future

ERP Workshop

Oracle Applications for OS/390



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Oracle Applications for OS/390

• OS/390 Environment

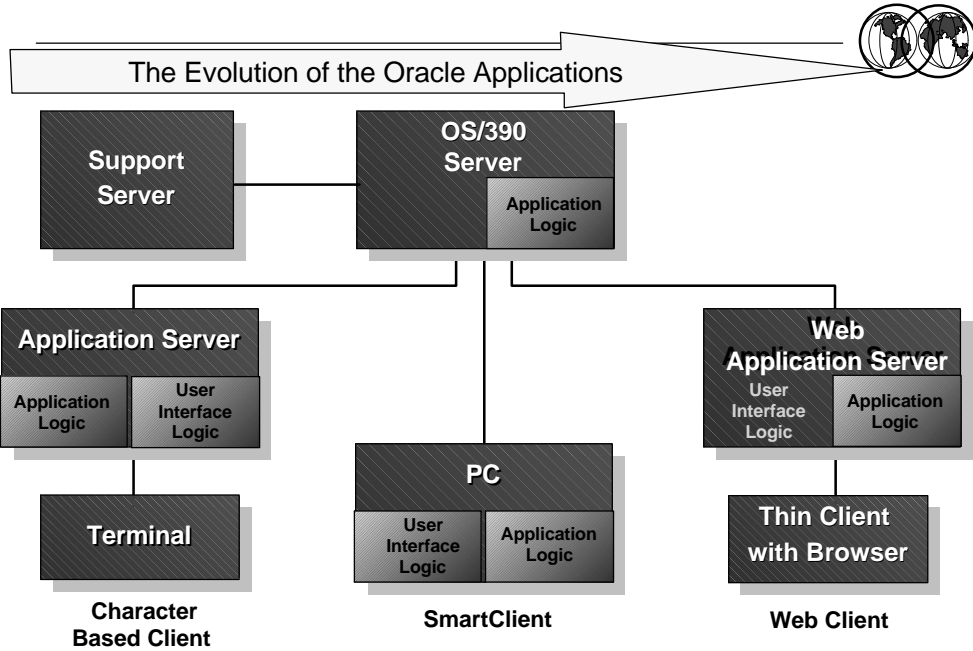
- ▶ Oracle database (MPM) runs in its own address space
- ▶ TNS (the communications part) runs in its own address space
- ▶ Application logic is stored procedures in the database

• Level of Software

- OS/390 Levels
 - Can run on MVS or OS/390
 - OS/390 Rel 1.2 needed for Year 2000
 - Recommend OS/390 2.6 and Latest TCP/IP has better performance
- Oracle Levels
 - Oracle Server 7.3.3.5 going to Oracle 8
 - Oracle Applications 10.7 going to 11

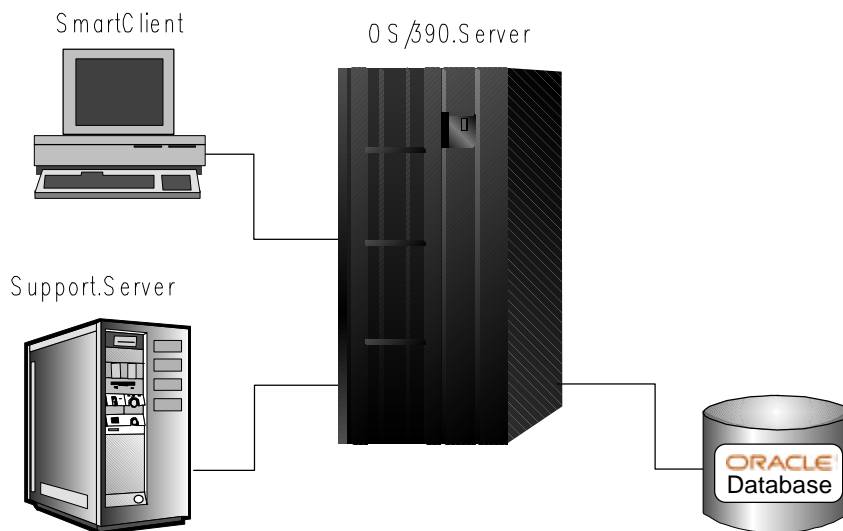
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Oracle Applications for OS/390



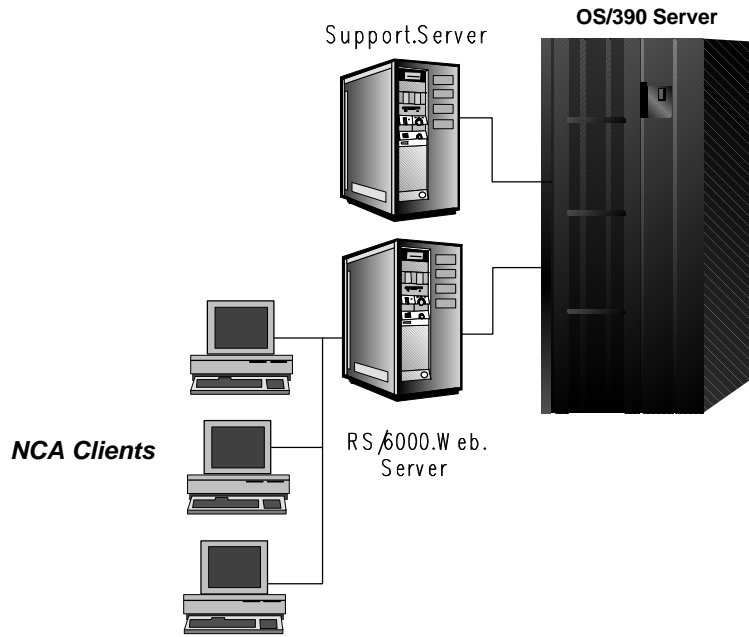
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Oracle Applications for OS/390



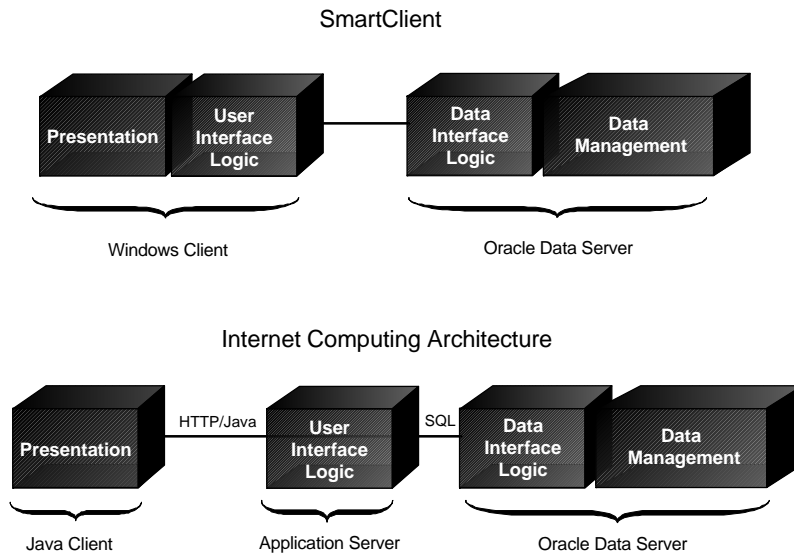
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Oracle Applications for OS/390



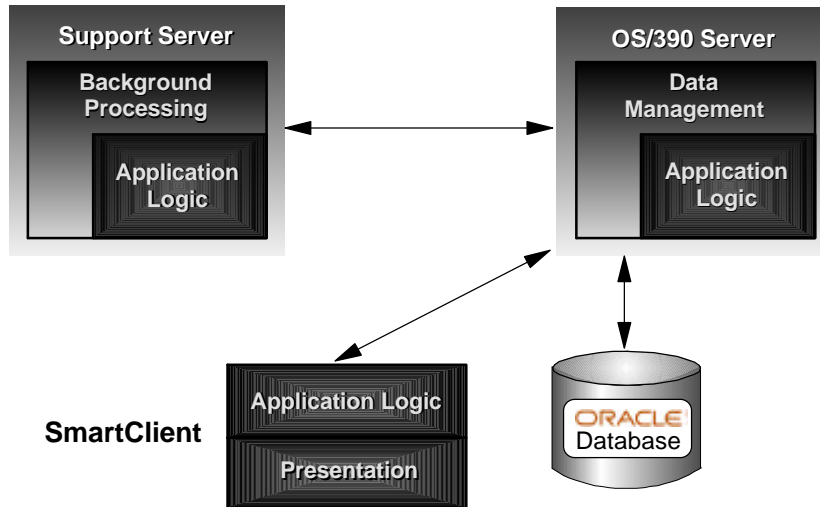
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Oracle Applications for OS/390



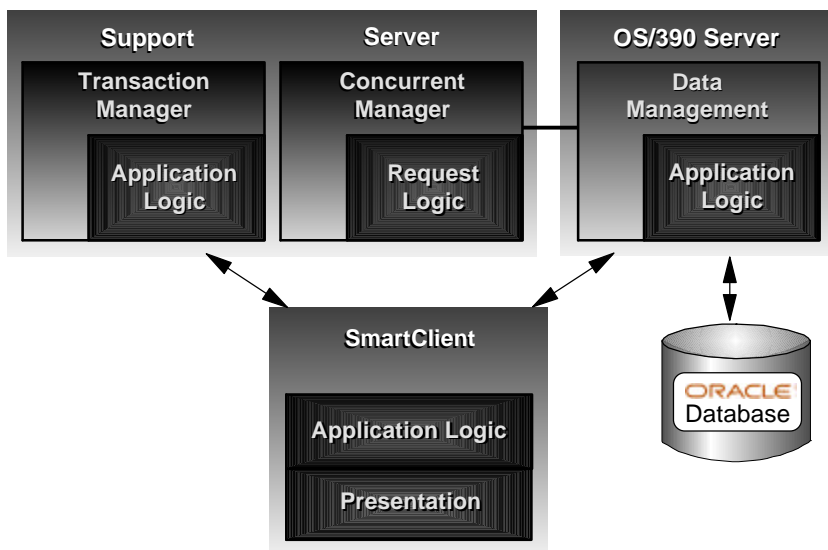
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Oracle Applications for OS/390



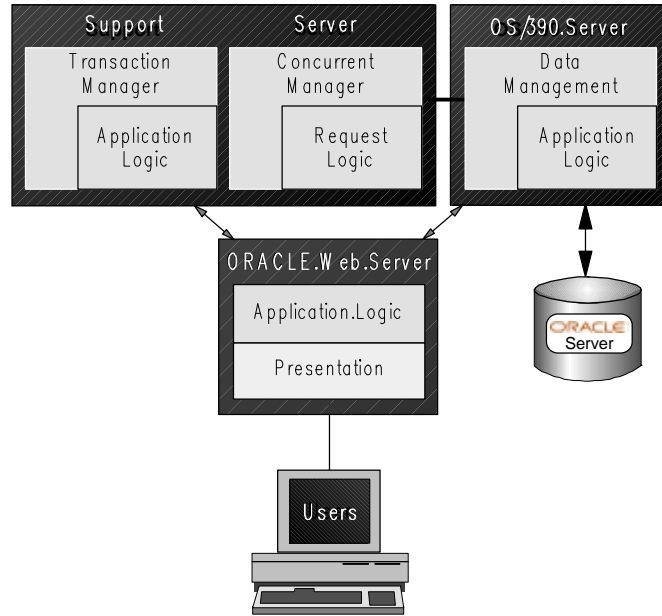
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Oracle Applications for OS/390



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Oracle Applications for OS/390



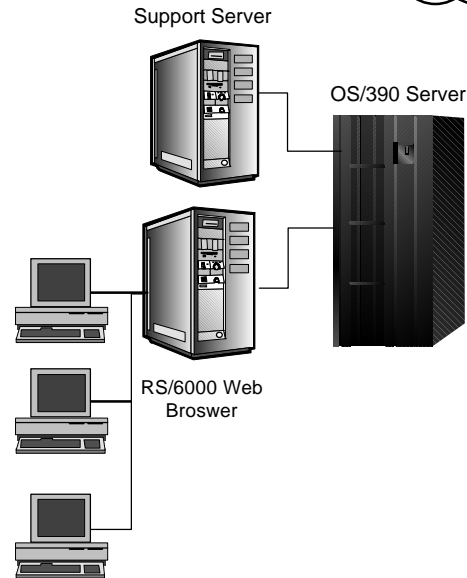
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Oracle Applications for OS/390



The NCA Approach

- Lower.Labor.Costs
- Lower.Network.Costs
- Increase.Service.Levels
- Shared.Code.on.Servers
- Applications.Code.Same.as.Smart.Client...

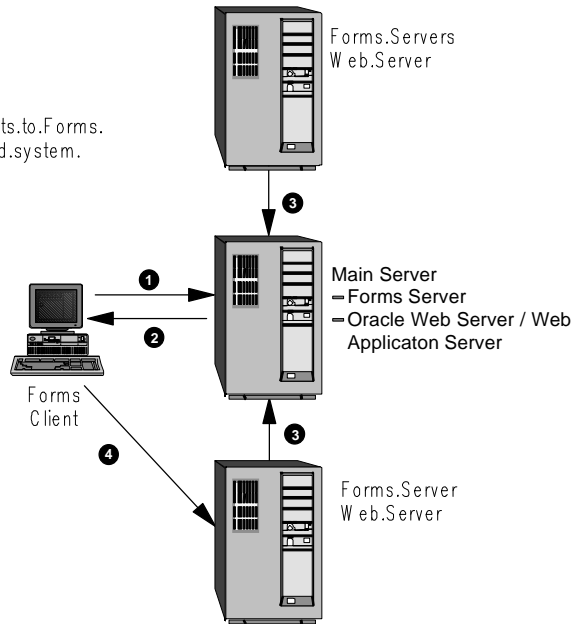


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Oracle Applications for OS/390



- 1 Connection request
- 2 HTML returned
- 3 Read HTML, a connects to Forms Server on least-loaded system.
- 4 Load information



Load Balancing of Forms Servers

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Oracle Applications for OS/390



- Customer Installed
 - TUI - Germany
 - Tesco - UK
 - Jacobs Engineering - USA
 - Club Med - France
 - Sainsbury - UK

 - Tulane University - USA

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Oracle Applications for OS/390



■ Skills Needed for Customer Installation

- OS/390 Installer
 - ◆ ISPF and TSO
 - ◆ Oracle patches
- AIX or NT
 - ◆ Web Server, Forms Server, Loading Applications
- Oracle Application
 - ◆ Administration - userids, passwords
 - ◆ Functional
 - ◆ Gap Analysis
- Oracle DBA
 - Tuning/administration
 - TSO/ISPF

- Oracle is Oracle is Oracle
 - Functions are the same on each platform

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Oracle Applications for OS/390



■ Migrating and Upgrading Recommendations

- Database Version Change (Oracle7 to Oracle8)
 - ◆ Migration Utility for same platform
 - ◆ Export Import for platform change
- Oracle Applications Upgrade (Oracle Apps 10.7 to Oracle Apps 11)

- Oracle Client Upgrade (Character to SmartClient to NCA)

- UNIX to OS/390
 - ◆ Keep Same level of Database and Applications

- Make changes in small steps

- Customer Written Applications - Oracle Database Server only
 - ◆ Understand things to review - reserved words,

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Sizing Oracle Apps for OS/390

- Oracle Applications is customer unique
 - Initial sizing is based on customer input
 - Which modules will be used
 - ◆ Number of concurrent users
 - ◆ Number of environments
 - ◆ Amount of batch
 - ◆ Amount of user written code
 - Complex and customer-unique
- IBM data for Oracle Applications
 - GL Benchmarks were done in 09/96, 04/97, and 01/99
 - Middle Tier benchmarked in Montpellier in 1999
 - Memory is the constrained element on Database and Mid Tier platforms

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Sizing Mid-Tier Platform

- Mid tier can be UNIX or NT
- Each logged on user takes 10 to 12 Mb
- Mid Tier function
 - Web Server
 - Forms Server
 - Support Server
 - Concurrent.Manager.(Reports,Printing,Batch.)
 - Transaction.Manager.(Order.Entry,Inventory,WIP)
- Size CPU, memory and Disk

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Sizing S/390 Platform



- Memory available to one address space is the constraint
- Each logged on user takes 2 Mb. Maximum available on S/390 is 2GB
- Options
 - Separate Oracle Databases for unique functions (for example, HR and FI - use Web Server
 - Self Service Apps do not stay connected
 - Set time out parameter for inactivity
- Futures
 - Oracle to span address spaces
 - S/390 to support 64 bit
 - More self service type of applications

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Oracle Applications for OS/390



- Frequently Asked Questions about Oracle Applications and S/390
 - Can Oracle Applications use Oracle Parallel Server and the Sysplex
 - Do Oracle Applications work with DB2
 - Does the Support Server run on OS/390
 - Does the Web Server run on OS/390 with Oracle Applications
 - Are Oracle Apps 10.7 supported with Oracle 8 Server on S/390?
 - Do Oracle NCA Apps run with IBM WebSphere?

ANSWER is NO to all these questions

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Installing Oracle Applications



- Installing Oracle 8 and Apps 11
 - Install Oracle 8 and Net8 on OS/390
 - Connect to Net8 listener
 - Install patches 8.0.4.3.1 and 8.0.4.3.2 on OS/390
 - Install jre/JDBC and patches from Interoperability CD
 - Size and prepare database for Apps 11
 - Install Oracle8 on AIX
 - Install Application Server on AIX (Web Server)
 - Install Developer Server on AIX (Forms)
 - Load Apps 11 to S/390 from AIX
 - Install 11.0.2 patches (11.0.1 not needed)
 - Setup Listeners (Web, Forms, UDB, Net8)
 - Setup NCA Client
 - Set up Concurrent Manager
 - Set up Printing

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Installing Oracle Applications



- Networking.
 - TCP/IP with TNS from DB server to Application Server
 - TNS to client
 - OR
 - TNS to Web Server to Client with browser

- AIX
 - Files from a CDROM loaded to Support Server
You actually order Oracle Applications for AIX
 - Script moves data to the Oracle Database
 - Client and connectivity set up
 - Batch set up

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Installing Oracle Applications



- Networking - TCP/IP with OS/390 Rel 2.5

```
//TNS  PROC INDEX=MPM2,  
//     LIBV=ORACLE,  
//     P='CCHAR=@ SSN=TNS NOLOGMSG HPNS TCPSTK=TCPIPOE',  
//     R=0M  
  
//IEFPROC EXEC PGM=TNSMAIN,REGION=&R,TIME=1440,  
// PARM='&P'  
-----  
//SYSIN  DD DUMMY  
//*CPHOSTS DD DSN=TCPIPOE.SC04.HOSTS.SITEINFO,DISP=SHR  
//*OSTNAME DD DSN=MPM2.ORACLE.PARMLIB(HOST),DISP=SHR
```

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Oracle Applications for OS/390 Change Management



- Oracle Maintenance Philosophy
 - Releases delivered on tape or CD
 - Patches delivered in either ZAP or module replacement format--available by download, or by e-mail, or on tape
 - Patch set releases “roll-up” maintenance (see readme files for details of included Zaps/bug)

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Oracle Applications for OS/390 Change Management



- Importance of Tracking
 - SMPE not frequently used
 - Module replacements may overwrite applied ZAPs

- Maintenance Application
 - Remember to keep copies of old libraries
 - ZAPs applied with SuperZap utility
 - Module replacements in new libraries concatenated above old libraries
 - Remember SET APF

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Tuning Oracle Applications



- Network
- CPU
- Storage
- I/O Subsystem
- Oracle
- Applications
- SQL
- Batch

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Tools for Tuning Oracle Applications



- OS/390 Tools
 - Types of dumps
 - IPCS
 - GTF
 - SLIP command
 - CHNGDUMP command
 - Dump Analysis and Elimination (DAE)
 - Logs and Messages
 - LOGREC
 - SMF and RMF
 - SDSF

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Third Party Tools for Oracle



- Omegamon
- Strobe
- Platinum
- Treehouse
- Savant Q
- Delphi Command Center
- BMC Patrol
- IOF

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Tuning Oracle Applications



- Oracle Tools
 - MPM Trace
 - SQL Trace
 - System State Dump
 - V\$ Dynamic Tables
 - Scripts

- Performance Pack (Part of Enterprise Manager)
 - Oracle Trace

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Tuning Oracle Applications



- Approach
 - Quantify User Complaints
 - Understand the problem
 - Determine an approach for analysis

- SQL Tuning
 - Explain plan
 - SQL Trace
 - TKPROF

- Don't run batch in prime shift

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Tuning Oracle Applications



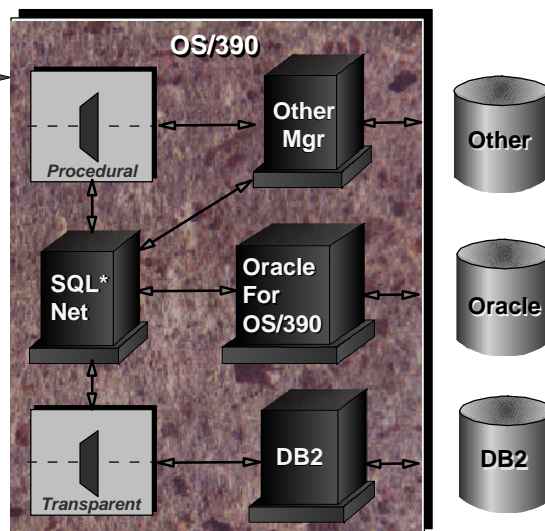
- BSTAT/ESTAT
 - run at regular intervals
 - check for hit ratios
 - library cache
 - buffer cache
 - Oracle Initialisation Parameters
 - DB_BLOCK_BUFFERS
 - SGA
 - Shared Pool Size

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Oracle Gateways for OS/390



Supports direct connection from any Oracle client



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Oracle Applications for OS/390

Futures

Oracle 8i and Apps 11i

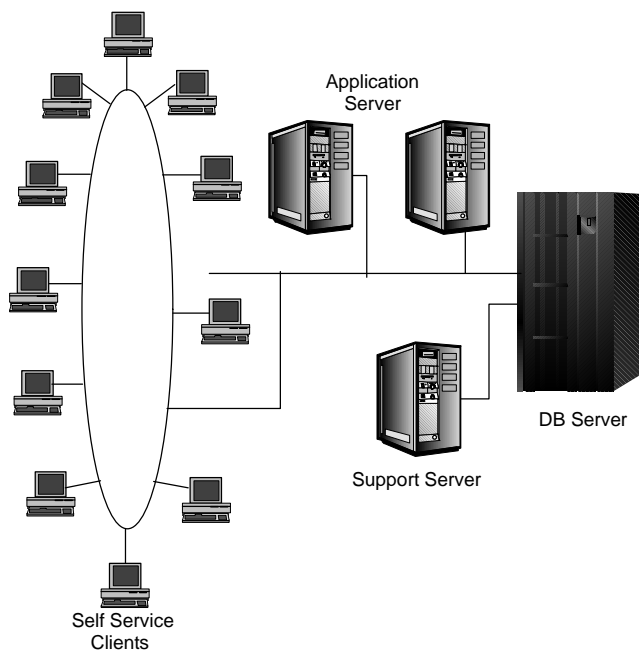
Oracle Web Server on S/390 for Oracle Apps

More Scalability

Faster Export / Import

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Web Self-Service Clients



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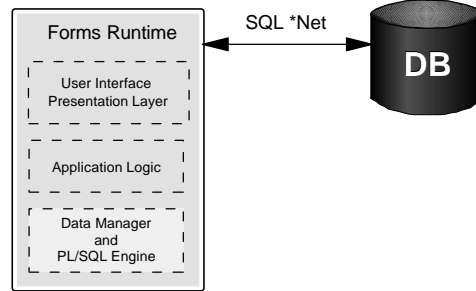
Client-Server



Desktop Machine



Database Server



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Internet Client Architecture



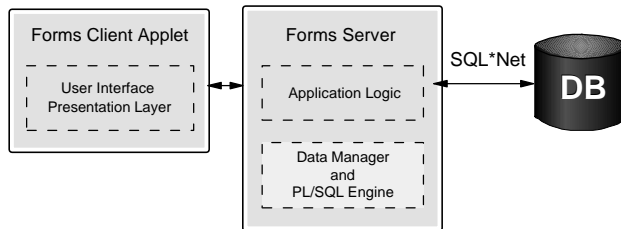
Desktop Machine
(Web Browser)



Application Server



Database Server



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Developer Server and Application Server



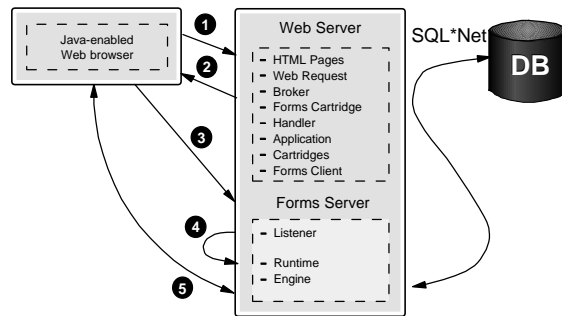
Desktop Machine



Application Server



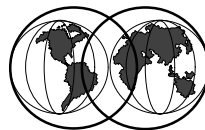
Database Server



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BAAN IV on OS/390

Using DB2 for OS/390



Baan Applications for OS/390



- History
 - Founded in 1978
 - Product formerly called Triton
 - Manufacturing based Application
- Location Barneveld, Netherlands
 - dual HQ in Virginia
- Present Status.
 - 62 offices worldwide
 - Over 5000 customers worldwide
 - Over 5000 employees worldwide
 - S/390 Version was first available in 09/98

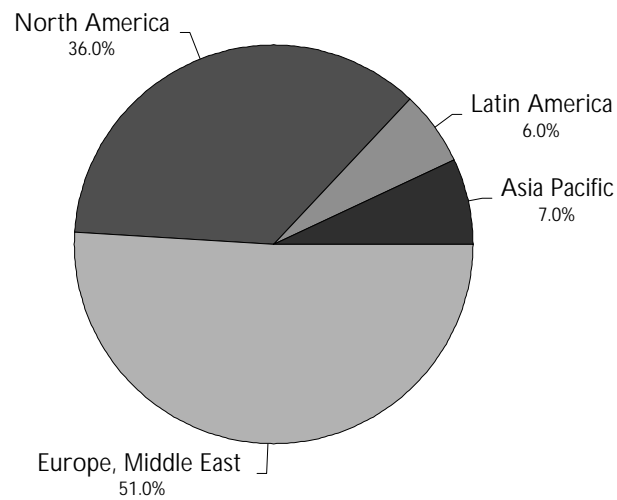
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Baan Applications for OS/390



Baan Overview Revenue Sources By Geography



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Baan Applications for OS/390



- Applications

- Manufacturing
- Project
- Finance
- Service
- Process
- Distribution and Transportation

- Tools

- Orgware (DEM)
- Baan Tools

Baan

- Industries

- Automotive
- Electronics
- Process
- Hybrid Manufacturing
- Aerospace and Defense
- Project based markets

- Platforms

- UNIX, NT
- plans for AS/400 and OS/390

- Database Support

- DB2, Oracle, Informix, Sybase, SQLServer on NT
- BaanBase

Dynamic Enterprise Modeling



- ▶ Set of Tools (Orgware) to quickly create Models

- Business Functions
- Processes
- Organizations

- ▶ Integrated to provide Automatic Configuration

- Parameters
- Security Profiles
- User Desktops

- ▶ Time Phased Implementation

- ▶ Ongoing Changes in System Deployment

- ▶ Introduced in 1996..

Baan Applications for OS/390



- Baan Business Innovation
- BDM International, Inc.
- Cap Gemini
- Compuware Corp.
- Coopers & Lybrand
- Deloitte & Touche Consulting Group
- Ernst & Young
- IBM Global Services
- KPMG
- Origin
- PA Consulting
- Price Waterhouse
- SE Technologies, Inc

Support Partners

Baan Applications for OS/390



- Aurum
- Coda
- Meta4
- Supply Chain (BaanSync)
- Hyperion
- Safari
- Antalys
- Prolog
- PDM
- TopTier
- Manugistics...

Close Family & Friends

Baan Applications for OS/390



- Most Recent ERP Port to S/390
 - Application Server Ported as well as Database Server
 - First ERP solution to have Application Server on UNIX Services
 - Benchmarks being done in POK and Montpellier
- New OS/390 Features
 - Available with OS/390 V2 R6
 - Connection Manger
 - Process Manager
- Installation Process
 - DB2 installed and customized
 - CM and PM customized
 - Files from a CDROM loaded to UNIX Services
 - Script moves data to the DB2 Database
 - Client and connectivity set up

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Baan Applications Packages



Constraint
Planning (**cp**)

Process (**ps**)

Common (**tc**)

Manufacturing (**ti**)

Orgware (**tg**)

Finance (**tf**)

Services (**ts**)

Utilities (**tu**)

Project (**tp**)

Distribution (**td**)

Transportation (**tr**)

Baan Tools (**tt**)

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Aerostructures Chose Baan on S/390



Business Drivers

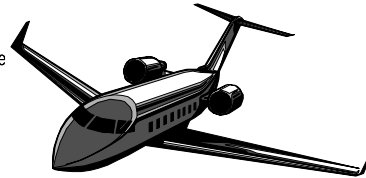
- Manufacturer of complex assemblies for commercial and military aviation
- Year 2000 Requirements
- Strong manufacturing functionality
 - Fully integrated capacity planning, product data management with financial applications
- Improved integration and functions of ERP solution

Major Decision Points

- Lowest Total Cost of Computing
- Baan's Dynamic Enterprise Modeler ensured a quick, efficient transition in June, 1998
- IBM and Baan commitment to S/390 solution
- Inherent capability to work across multiple sites for manufacturing planning
- Short time to implementation
- Simplified interfaces to legacy systems.
- Runs largely "out of the box"

Why IBM?

- Leverage existing infrastructure and resources
- Very concerned about scalability and performance
- Minimize project costs
- Reliability
- Availability
- Serviceability



Lawson Products Chose Baan on S/390



Business Drivers

- Distributor of Manufacturing Products
- Year 2000 Requirements
- Reverting to strong Centralized Mainframe
- Handles Baan ERP and Lotus Notes Groupware
- Baan Functionality

Major Decision Points

- Lowest Total Cost of Computing
- Estimated 24-30 Unix servers equivalent
- IBM Global Services.
- Simplified interfaces to legacy systems.

Why IBM?

- Leverage existing infrastructure and resources
- IBM commitment to success of project
- Lowest Total Cost of Computing
- Minimize project costs
- Reliability
- Availability
- Serviceability



CAE Chose Baan on S/390



Business Drivers

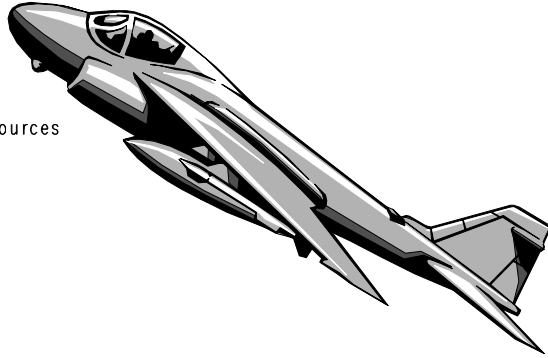
- Manufacturer of Flight Simulators
- Year 2000 Requirements
- Strong S/390 and UNIX Skills
- One for One comparison of UNIX and S/390
- Baan Functionality for Aerospace

Major Decision Points

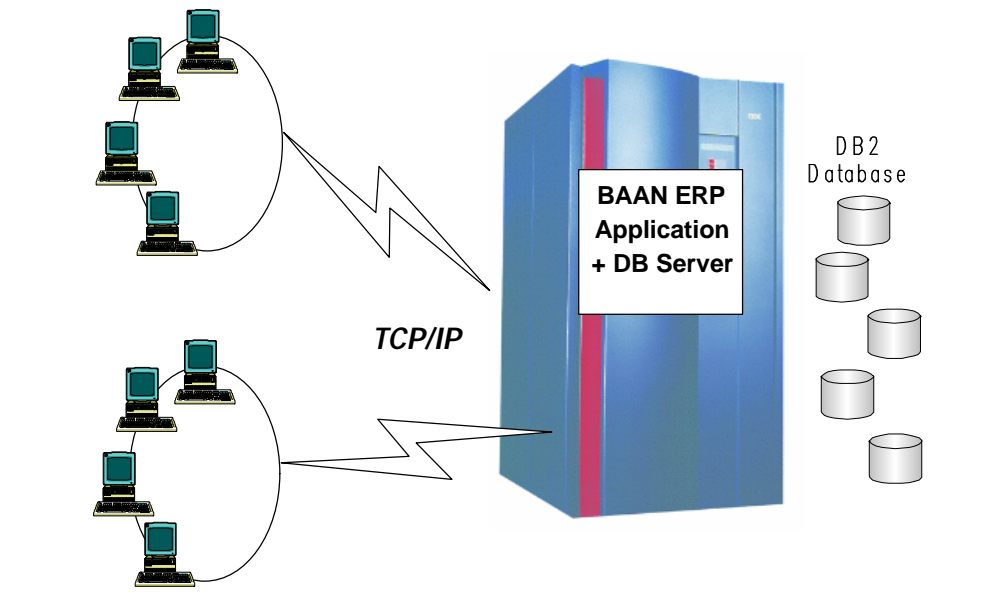
- Lowest Total Cost of Computing
- Batch Requirements
- IBM plus Baan Consulting Services
- Simplified interfaces to legacy systems

Why IBM?

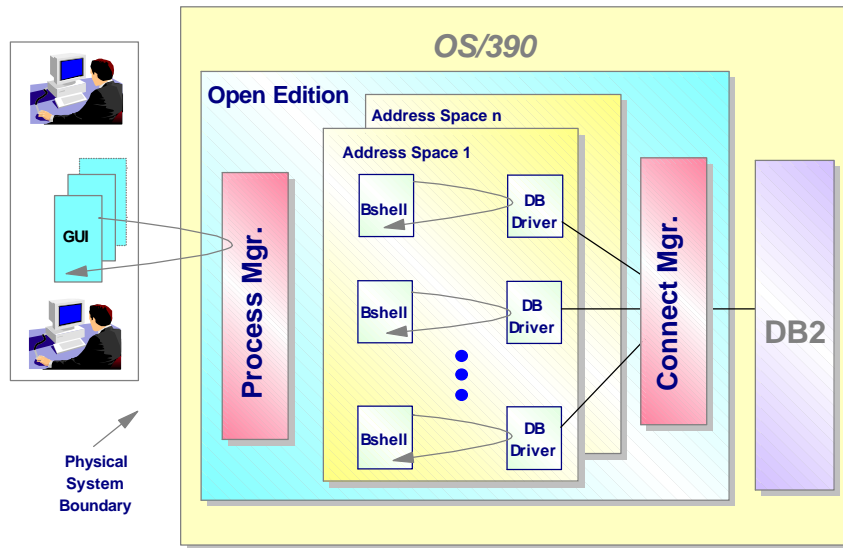
- Leverage existing infrastructure and resources
- IBM commitment to success of project
- Lowest Total Cost of Computing
- Minimize project costs
- Reliability
- Availability
- Serviceability



Baan Applications for OS/390



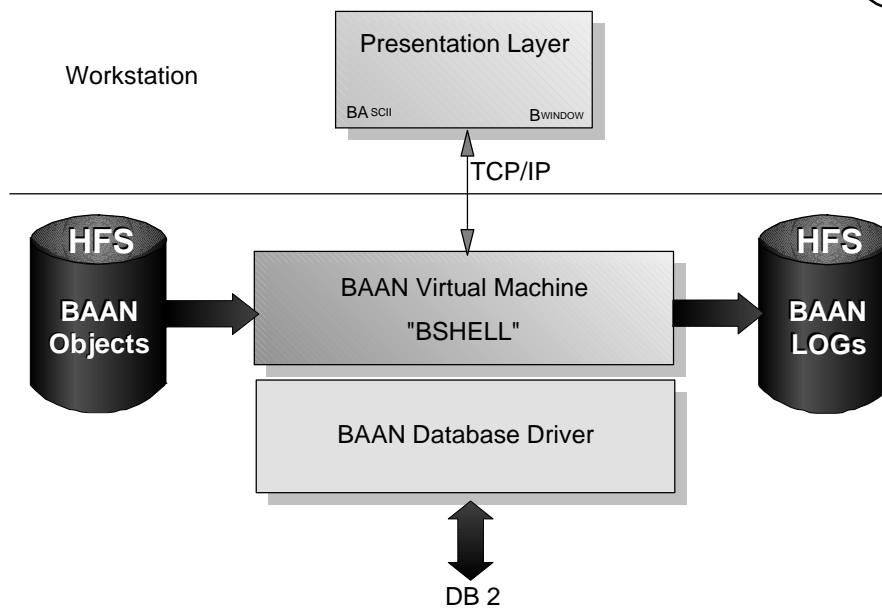
Baan Applications for OS/390



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Baan Applications for OS/390



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DB2 Setup



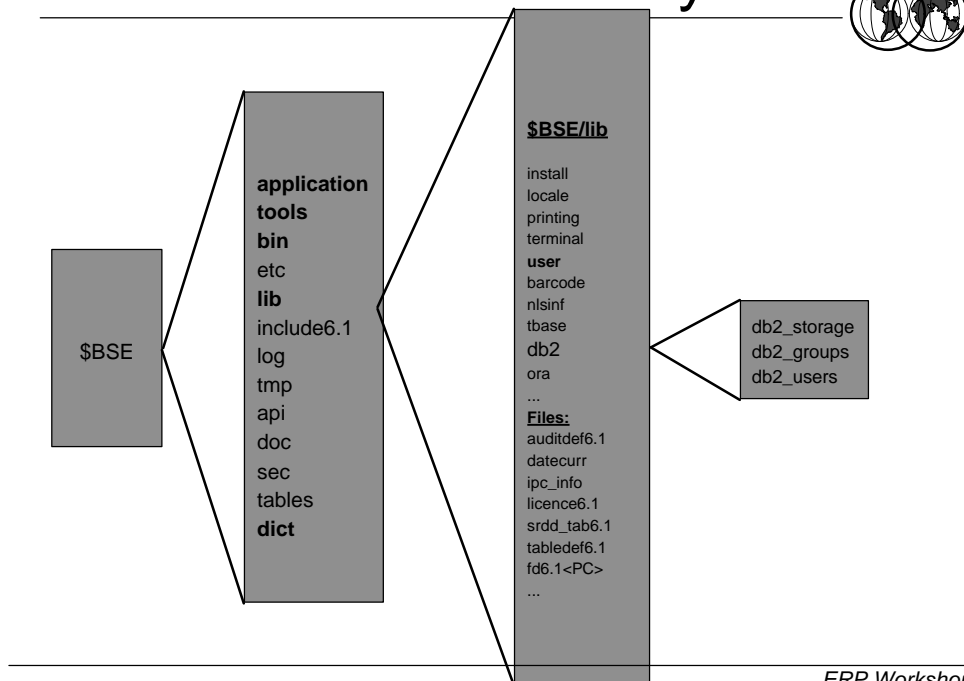
- ▶ DB2.Setup.and.Customization
 - Using.JCL

OR

- ▶ db2install6.1..script.for.Baan.installation
 - db2_users
 - db2_groups
 - db2_storage
- ▶ db2install6.1.script.for.DB2.Setup
 - Create.Stogroups
 - Create.databases
 - Create.tablespace
 - Grant.privileges.to.userids
- ▶ Level.1.and.Level.2.DB2.Driver..

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Baan Hierarchical File System

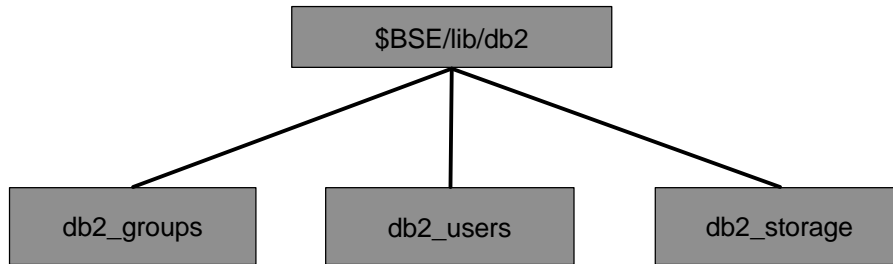


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Baan Applications for OS/390



DB2 Baan Files



baan
(UNIX Id owner
of the DB2 database)

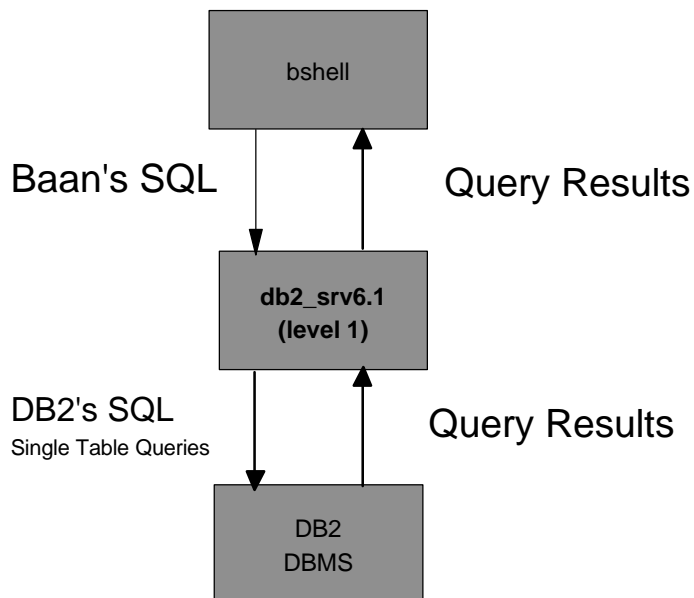
Users with access
to BaaN and DB2. Users must
belong to groups in
db2_groups

Data/Index
allocation by
tablespace,
index optimization

\$BSE/bin/db2_admin6.1

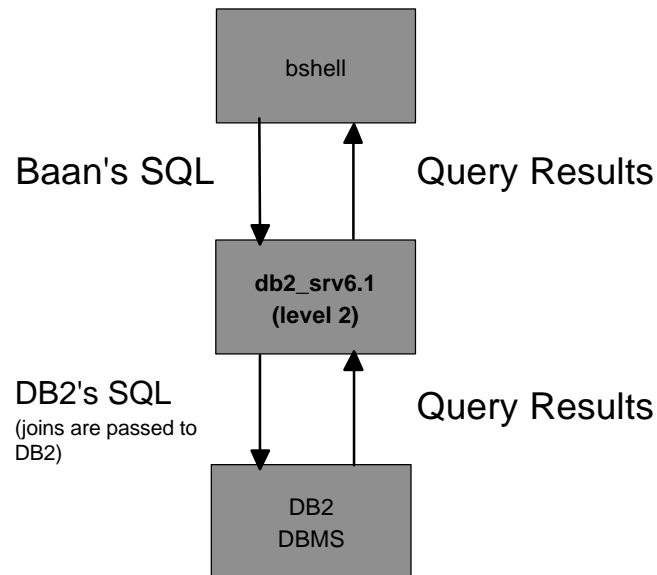
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Baan Database Driver Level 1



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Baan Database Driver Level 2



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Baan Companies



- ▶ Baan uses Companies to group DB2 tables to users
- ▶ Company.000
 - Base company
 - Used by all other companies
 - data definitions etc
- ▶ Demo Company.550,750.....
 - Demo companies supplied by Baan
- ▶ Other Companies
 - Set up as you need
 - For example
 - company.400 for Manufacturing Production
 - company.410 for Manufacturing Test..

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Baan Companies



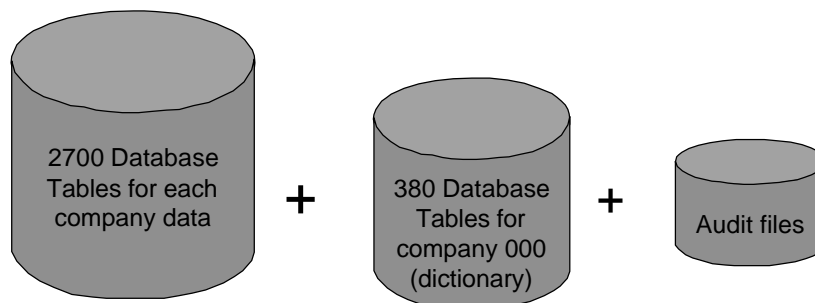
- ▶ Baan..Companies.have.vrc.levels.(version,.
release,.customer)
- ▶ Company.200.vrc0
 - Base.company.data
- ▶ Company.200.vrc.1.....
 - Localization.data
- ▶ Company.200.vrc.2
 - Patches.for.applications.xxxx
- ▶ Company.200.vrc.3
 - Test.patches

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Baan Database Tables

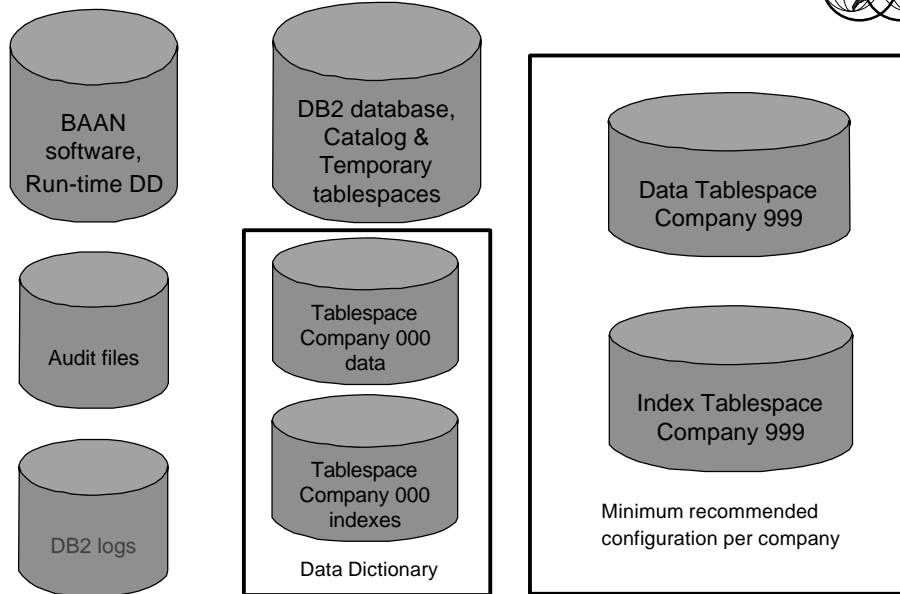


- . A set of database tables for each package.
- . Table definitions are copied during installation.
- . VRCs(version, release, customer extension) of a package may have different definition of a table and/or new table definitions



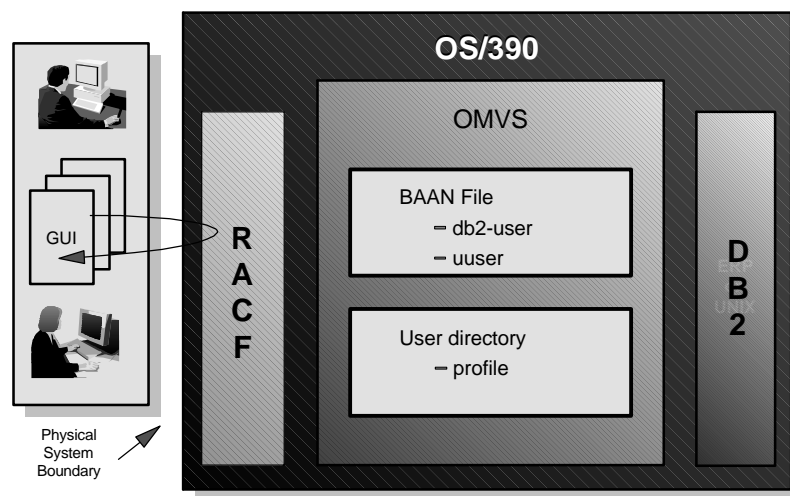
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Baan Database for OS/390



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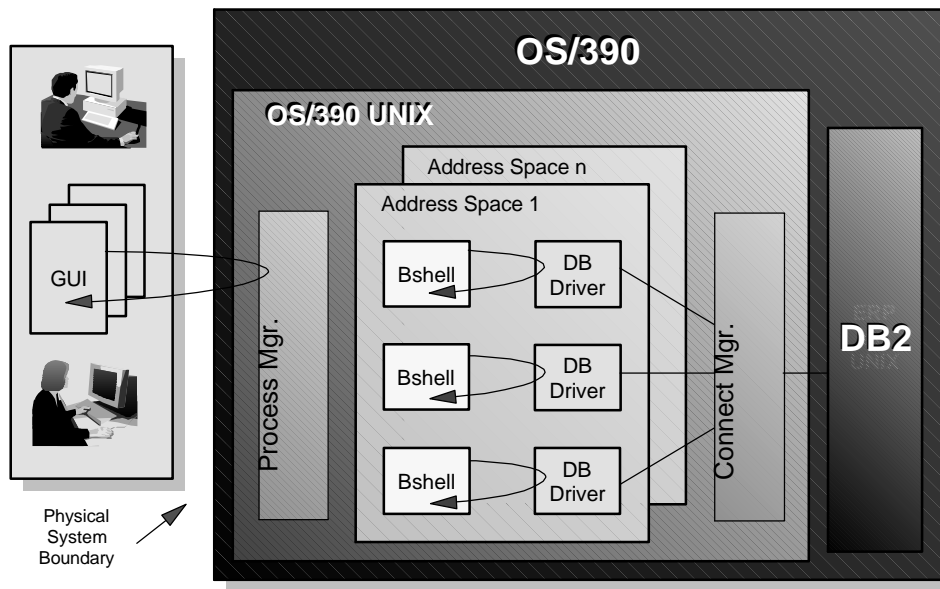
Baan Applications Security for OS/390



ITSOERP 1999

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Connection Manager & Process Manager



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Why Connection Manager



DB2 - 2000 ACTIVE CONNECTION LIMIT

1 BAAN user ==> n sessions ==> n DB2 Connections

m BAAN users ==> m*n sessions ==> m*n DB2 Connections

Solution

Take advantage of
Uncommitted (dirty) read and
Share DB2 connections among
sessions and users

DB2 on OS/390 Connection Scaling

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Connection Manager Setup



Copy Configuration file to /etc.conf
cp /usr/lpp/cmx/samples/cmx.conf /etc/cmx/cmx.conf

Update entries which must match the entries in DNSZPARM and
DNSDECHP
// Connection Manager Resources

```
[NAMES]
DB2SubSystem=DB2D
DB2PlanName=CMXPLN
DB2Attach=CAF
[CCSID]
DB2ccsid=819
[TRACE]
Trace=0
TraceWrap=0
TraceUser=ALL
[ERROR]
DB2ErrorLog=1
```

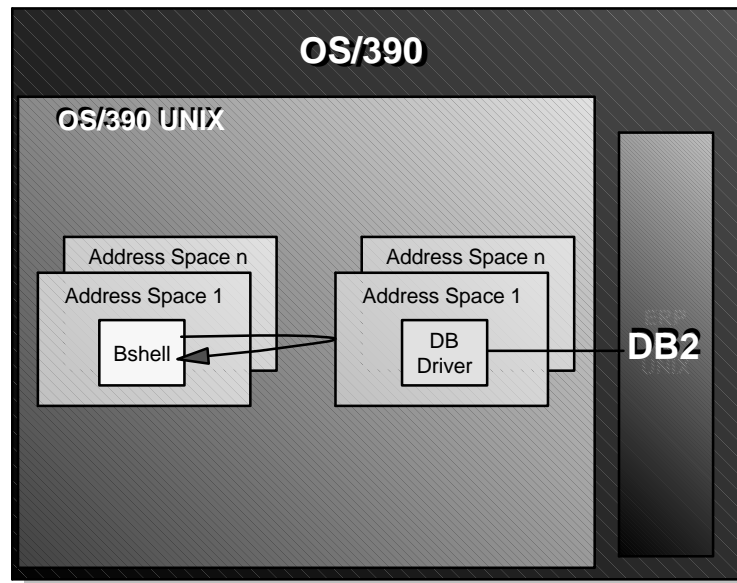
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Why Process Manager



Each User can
have many
processes

Having only one
process in an
address space
uses a lot of
resources



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Baan Applications for OS/390



■ Installation Process

- DB2 installed and customized
- Connection Manager and Process Manager customized
 - OS/390 V2R6 or higher
- Application installation process (running scripts)
 - Files are loaded from a CDROM
- Creates Baan Software Environment (BSE)
 - Baan Applications
- Scripts move data to the Database
- Client and connectivity set up

Baan Applications for OS/390



■ Baan IV

- First set of Baan Application Ported to S/390
- All early customers are using this level

■ BaanERP

- Available with OS/390 V2 R6 in March 1999 (formerly Baan V)
- Not all applications are available
- Uses more on the Baan Window client for installation

■ Baan Series

- Denotes all the available Baan products
- BaanERP is a subset of Baan Series

Migrating Baan to S/390



■ **Baan Utilities to Move Data**

- Dump from UNIX Platform
- FTP to S/390
- Split into Separate Companies
- Maintain vrc levels and patch levels
- Multiple Load jobs

■ **Tuning**

- Standard S/390 Monitoring
- Increase buffer pools, dynamic cache allocations
- Parallelize jobs (Multiple bshells)
- Work with Baan Support for Application issues

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Baan Lessons Learned



■ **Lessons Learned from Early Customers**

■ **Skills**

- Baan Tools training, DB2 expertise, Baan Consultants
- Simple training is not enough

■ **Install Process**

- DB2 Setup on S/390
- Baan Install is a UNIX process, ASCII and EBCDIC

■ **Moving Data**

- Handling large files, need to parallelize

■ **Managing the Database**

- Is it a new DB2 account, many tables and indexes, Backup and Recovery

■ **Lpar environment**

- licenses and file structures, profiles, licenses. shared memory

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Baan and IBM



- **Baan Recovering from 1998**
 - New Management
- **IBM/Baan Relationship Stronger**
 - Baan Factory in Atlanta
 - Baan Executives Ties are closer
 - IBM Baan Competency Center in Barneveld
- **Futures**
 - Three Tier Option
 - Level 2 DB2 Driver
 - Baan 6.0.x. level of applications

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- ERP Market Place
- ERP Architecture for S/390
- Sizing ERP Applications for OS/390
- Specific Implementations for S/390
 - SAP R/3 Implementation
 - PeopleSoft Implementation
 - Oracle Applications Implementation
 - Baan Implementation
- Printing and Tuning Considerations (and HA)
- S/390 and DB2 Strengths for ERP Solutions
- IBM Contacts and Material for S/390 ERP Solutions

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Printing with ERPs for OS/390



■ LAN Printers or Mainframe Printers

- These were UNIX based applications with LAN printers
- Usually start with LAN printers
- As print volumes grow they want to use the mainframe printers

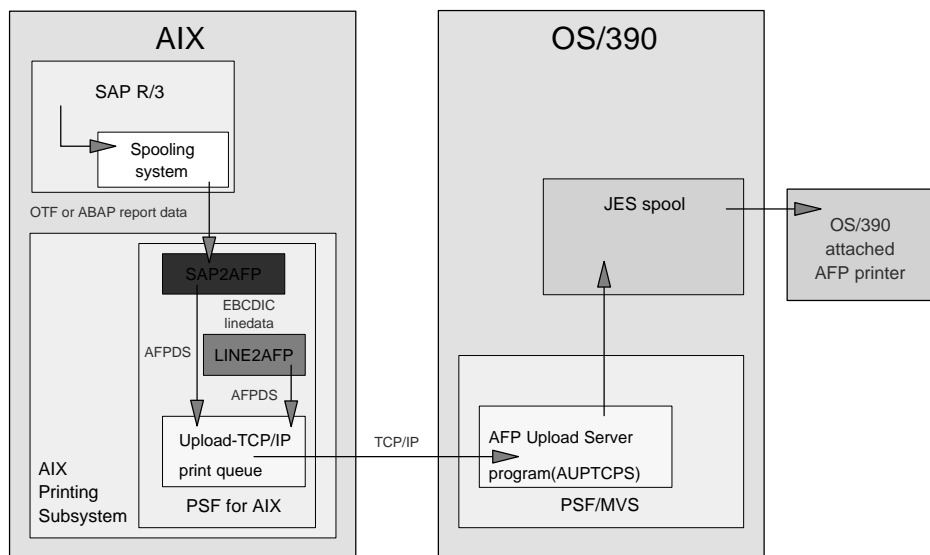
■ Areas to Consider

- How is printing invoked
- Does it need ASCII to EBCDIC conversion
- Do the control characters need to be converted
- Do separator or header pages need to be created
- Is there a mainframe printing infrastructure in place
 - IBM or non-IBM printers
- Code pages for other languages
- Special Fonts

Printing with ERPs for OS/390

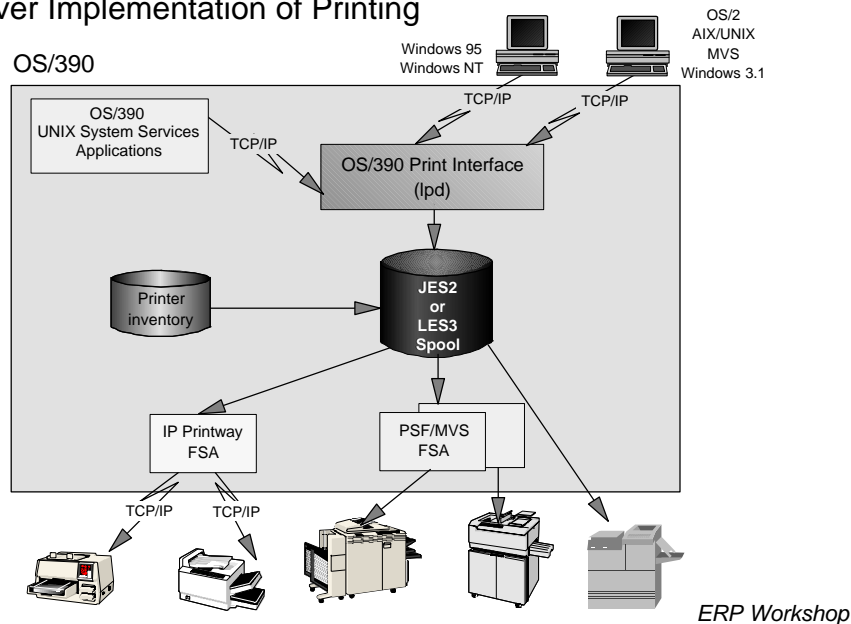


■ SAP Implementation of Printing



Printing with ERPs for OS/390

■ Print Server Implementation of Printing



High Availability for ERPs

■ Degree of High Availability

- Is the need for Continuous Availability - no interruption
- Is the need for High Availability - planned downtime
- Can downtime be tolerated

■ Hardware and Software

- Plan for no single point of failure
- Parallel Sysplex
- RVA for DASD with SnapShot
- HACMP for AIX servers

■ Database

- DB2 Data Sharing for SAP, PeopleSoft or Baan
- Oracle Parallel Server for Oracle Applications
 - High availability only as Applications are not parallel aware
 - For Applications failover only

High Availability for ERPs



■ Oracle Applications and High Availability

- OPS and Parallel Sysplex
 - Applications are not parallel aware
- Users can still access the database if the Support Server is down

■ Baan Applications and High Availability

- DB2 and Parallel Sysplex
- UNIX Services and HFS in 1999

■ PeopleSoft and High Availability

- DB2 and Parallel Sysplex
- File Server needed for two-tier
- Application Server needed for three-tier

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High Availability for ERPs

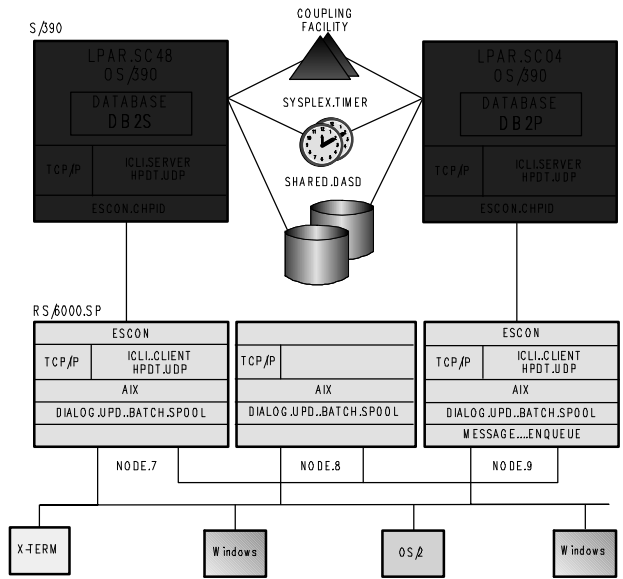


■ SAP and High Availability

- Database
 - DB2 and Parallel Sysplex
- Central Instance
 - HACMP for central instance
- Connectivity
 - ICL
 - ESCON or FDDI connections

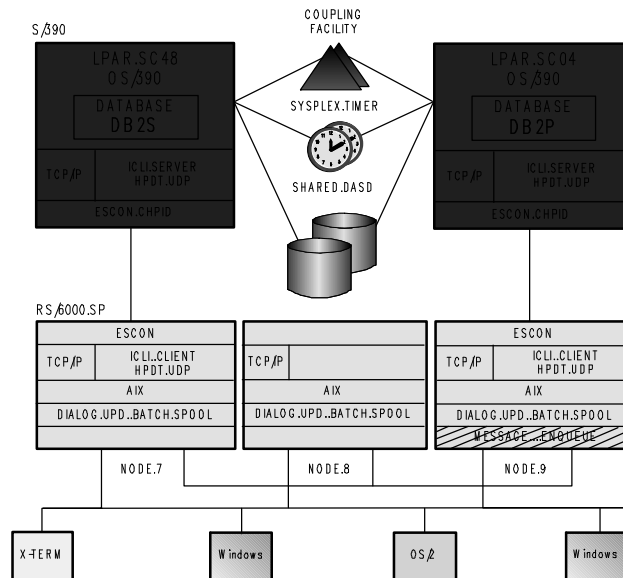
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Test Configuration



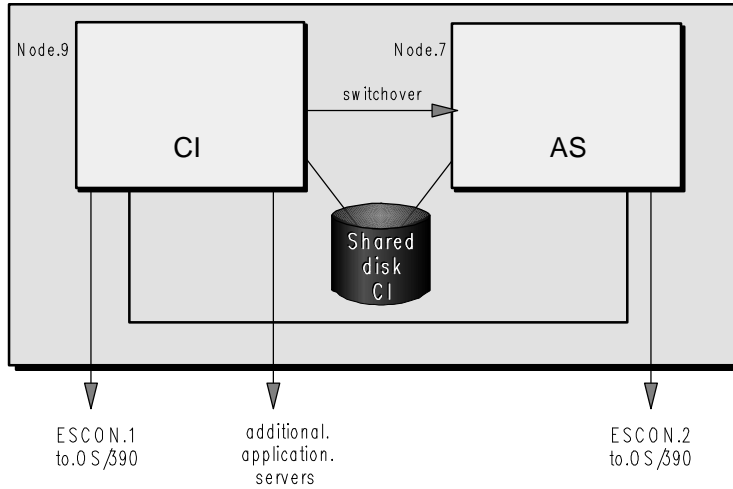
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Test Configuration



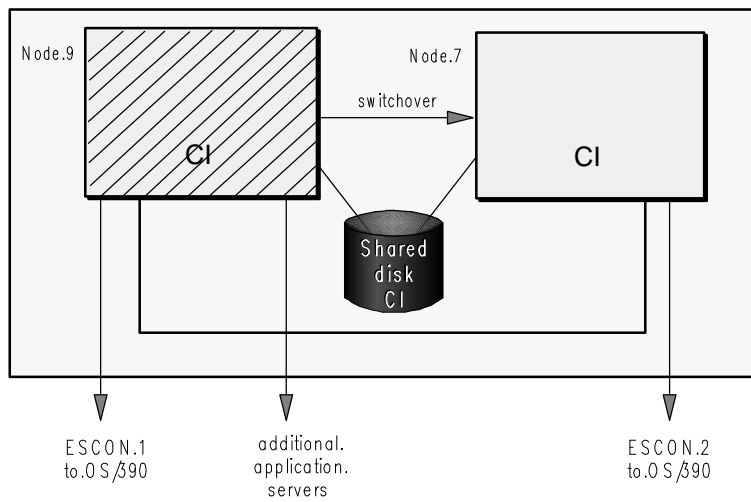
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SAP HACMP CLUSTER (BEFORE FAILOVER)



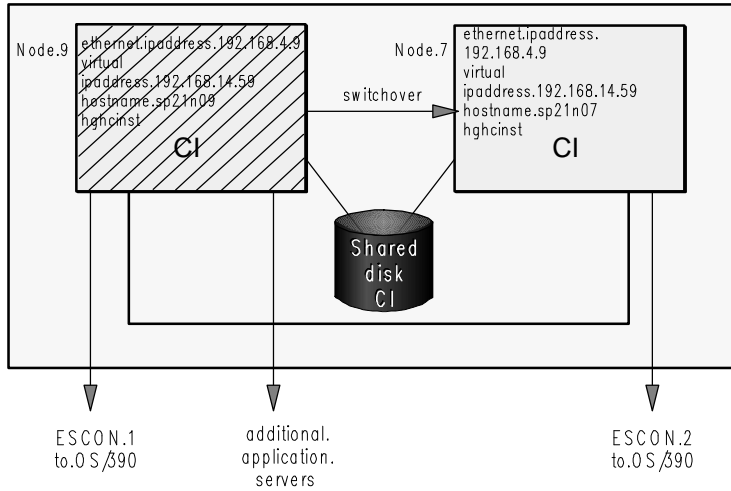
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HACMP CLUSTER (DURING FAILOVER)



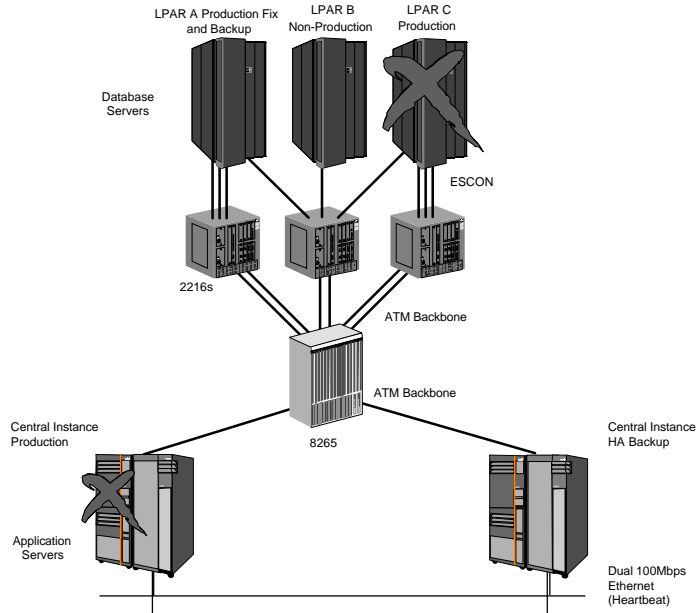
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HACMP CLUSTER (AFTER FAILOVER)



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High Availability for SAP R/3



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Administrating DB2 for Baan on OS/390



- **DB2 Considerations**

- Thousands of indexes
- Many databases and tablespaces
- Need large VTOC
- Need large SYS1.CATALOG
- Need Point in time backups
- Need Image copy backups
- Monitor Data Layout and Bufferpool usage
- Online Utilities considerations
 - Reorg, Runstats, Backups, Concurrent Copy
- DB2 Data Sharing

Performance & Tuning



- ERP Solutions are not tuned! (for S/390 especially)
- User written code usually the cause of problems
- Methodical approach needed
- Tools available to determine problem areas
 - rewrite user written queries (Oracle)
- Report poorly performing vendor written code
 - improve with indexes - not rewriting the vendor code
- Have a good database administrator

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- ERP Market Place
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S/390 for ERP



- S/390 Benefit Areas:
 - Availability
 - Scalability
 - Performance
 - Interface to Legacy Applications
 - Usage of S/390 Skill Base
 - Usage of Systems Management Infrastructure
 - Backup and Recovery
 - Workload Manager
 - Security
 - Low Cost - Cost of Ownership

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DB2 for OS/390



- DB2 for OS/390 Delivers
 - ASCII Tables
 - Dynamic Statement Cache
 - Indexing Options
 - Partitioning
 - Buffering
 - Data Layout
 - Data Compression
 - Online Utilities
 - ▶ Reorg, Runstats, Backups, Concurrent Copy
 - DB2 Data Sharing
 - Connectivity Options
 - ▶ TCP/IP with DDF

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Why Have Customers Say They Bought ERPs on S/390



- One Database Server versus Cluster of UNIX servers
- Hardware and Software Reliability
- Skills in House
- Systems Management Processes in Place
- Security
- Known and Trusted Environment

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Convincing a Customer that they should buy ERPs on S/390



- There are many strengths that may be applicable and that will cause a customer to choose S/390 over other platforms - how can you determine what these are for your customers?
- One approach - open ended questions to stimulate discussion on S/390 strengths and to lead the customer to his own conclusions, such as:
 - ▶ What is your growth plan for your usage of this ERP?
 - ▶ Will you be adding other applications or be extending it to other departments or divisions of your company?
 - ▶ Will you need to interchange data with legacy applications?
 - ▶ What existing skills (where skills can be DB2 DBA, Oracle DBA, S/390, UNIX Services on OS/390, UNIX, or NT) or combination of these skills do you have?

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S/390 Classic Strengths



Proven Experience

- A rich set of management tools
- A huge range of growth
- The tightest security
- Protection from data loss
- Continuously available

Scaleable environment for ERP Applications

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-
- ERP Market Place
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S/390 Division Contacts



-
- ERP Segment Contacts Poughkeepsie
 - S/390 Jump Starts
 - ▶ Bob Carstensen - all ERPs
 - ▶ Jeff Wiese -Baan
 - ▶ Dennis Dutcavich -Oracle
 - ▶ Mei Lin -PeopleSoft
 - S/390 Alliance Manager
 - ▶ Peggy McKeon - SAP
 - ▶ Joe Kovacs - Oracle
 - ▶ John Dolen - Baan
 - ▶ Jeff Noel - PeopleSoft
 - Marketing
 - ▶ Jackie DiGiandomenico -Baan
 - ▶ Nigel Woodland - Oracle and PeopleSoft

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North America S/390 Contacts



- Marketing
 - Doris Benson -all ERPs
 - Rory Canellis - Oracle
 - Gaylan Braselton - Baan
 - Gordon Wright - PeopleSoft
 - Chris Whipple - SAP

- ERP Competency Center (North America)
 - Scott Bell - Manager S/390 ERP
 - Lou Doran - Oracle and Baan
 - Don Geissler - SAP
 - Hoson Rim - PeopleSoft

 - Debbie Badger - Manager Sizing

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ERP Int'l Competency Center Status 24



ERP Partner



Oracle



International CC

Walldorf, Germany

S/390 Support:

Mike Sheets, Derek Noble, Tanja Lustig

Manager: Rainer Hofmann

Redwood Shores, CA

S/390 Support: Moshe Reder, Tom Powell

Manager: Janet Vehar

Pleasanton, CA

S/390 Support: Ralph Deadwyler, Mike Curtis

Manager: Susan Durrett

Barneveld, Holland

S/390 Support: Eric de Jeu

Manager: Philip Van Loon

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ERP Redbooks for OS/390



- SAP Redbooks
 - SG24-4945 Implementing SAP with DB2 on OS/3908
 - SG24-2078 DB2 Experiences with SAP on OS/390718
 - SG24-2003 - High Availability with SAP and DB2 for OS/390
- PeopleSoft Rebook
 - SG24-5156 Installing PeopleSoft on OS/390
- Baan Redbook
 - SG24-5334 Installing BaanIV on OS/390
 - SG24-5440 Installing BaanERP on OS/390
 - SG24-5452 Baan Applications on OS/390 Implementation Experiences
- Oracle Redbooks
 - SG24-2084 Oracle Applications for OS/390 Presentation Guide
 - SG24-4980 Installing Oracle Applications for OS/390
 - ZZ81-0412 Oracle Applications Implementation Experiences

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What is after ERP



- Increased Usage of ERP Applications
 - Use new applications
 - Give access to more users
- Supply Chain Management
- Customer Relationship Management
- ERP Extensions
- Business Integration
- e-Business
- Realize the Return on Investment

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IBM WEB Pages for ERP on OS/390



- IBM S/390 <http://www.s390.ibm.com/applications>
- IBM ERP <http://www.ibm.com/erp>
- Red Books <http://www.redbooks.ibm.com/redbooks>
- Residencies <http://w3.itso.ibm.com>
- IBM/SAP CC <http://w3.isicc.de.ibm.com>

ERP Workshop

Hints and Tips to get started



- Get involved as soon as you hear your customer talking about ERP packages
- Involve your local DB2 Specialist, you will need their DB2 specific skills and it is probably a competitive database situation
- Find out who the ERP rep is and introduce yourself. Try and work with them jointly to promote a IBM based solution
- Find out which Consultant has been chosen as an implementation partner, they will most likely be making the platform decision or recommendation
- Try to work on a joint ERP IBM briefing, stress the partnership between IBM and ERP Vendor.
- Leverage the long time IBM relationship with I/T and Executive management. Educate them on the strengths of S/390 so they can do internal selling
- ERP packages are "bet your business" applications, they are replacing 20 year old "bet your business" applications that have most likely been running on S/390, the requirements for scalability, reliability, etc. should be the same for the new ERP applications. You want them to run on S/390 for the next 20 years
- Have the customer fill out the IBM/ERP sizing questionnaire so the competency center can give sizing estimates for S/390 Mips, Application Server (NT or RS/6000), and DASD

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