Atomikos Webservers

TransactionsJTA:

Portals to Backend Systems

Distribution is a Fact...

Sales Dept.

Production Dept.

HR Dept.

R&D Dept.
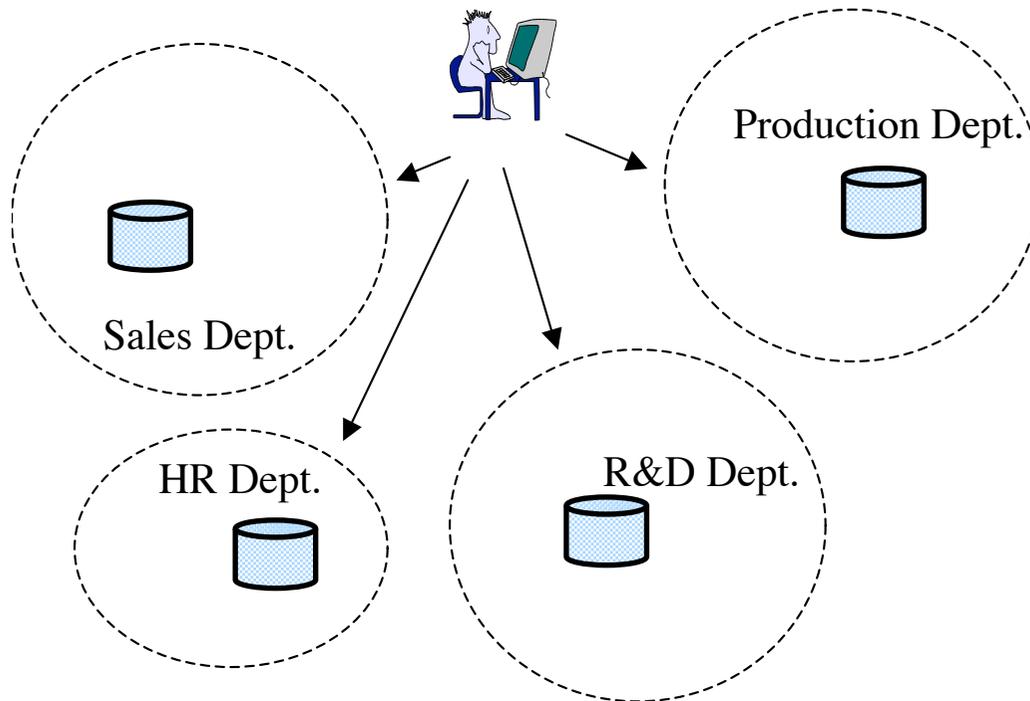
- **Different systems usually exist:**
  - **different departmental policies**
  - **mergers of different companies**

- **Cost-saving dictates integration:**
  - **maximize ROI**
  - **leverage previous investments in hardware, licenses and data**

Integration: The Naive Way

html VT100 Java   Win Linux Mac

…

Sybase   SQL Server

Oracle   DB2   SAP
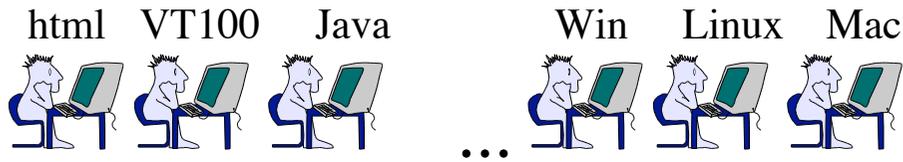
- **Example: 6 different client platforms for 5 server platforms**
- **Connecting each client to each server requires 6x5=30 software modules**
- **This is hard to get, manage and maintain**

Solution: Middleware

html   VT100   Java   Win   Linux   Mac

...

**Middleware**

Oracle   Sybase   DB2   SQL Server   SAP
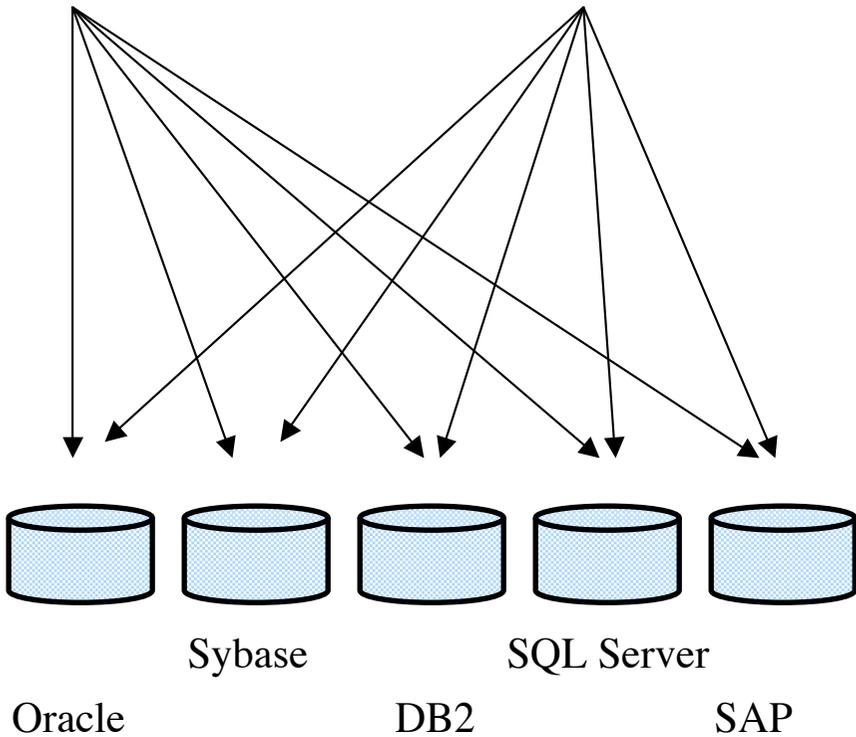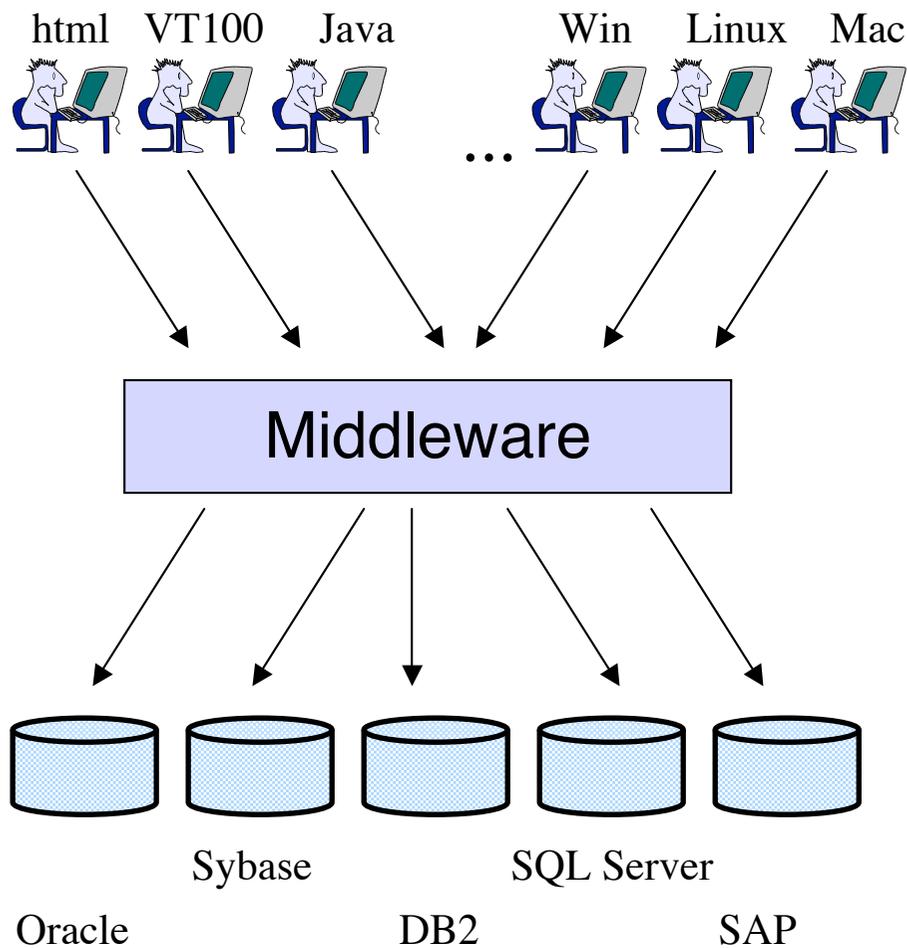
- **Put a system in the middle**
- **6 Clients for 1 Middle Layer**
- **5 servers for 1 Middle Layer**
- **Only 1 interconnection module is needed per client**
- **Only 1 interconnection module is needed per server**
- **The complexity is now only 6+5=11**

Java Website: Zero Installation Middleware

html

Middleware=Java website

Sybase   SQL Server

Oracle   DB2   SAP
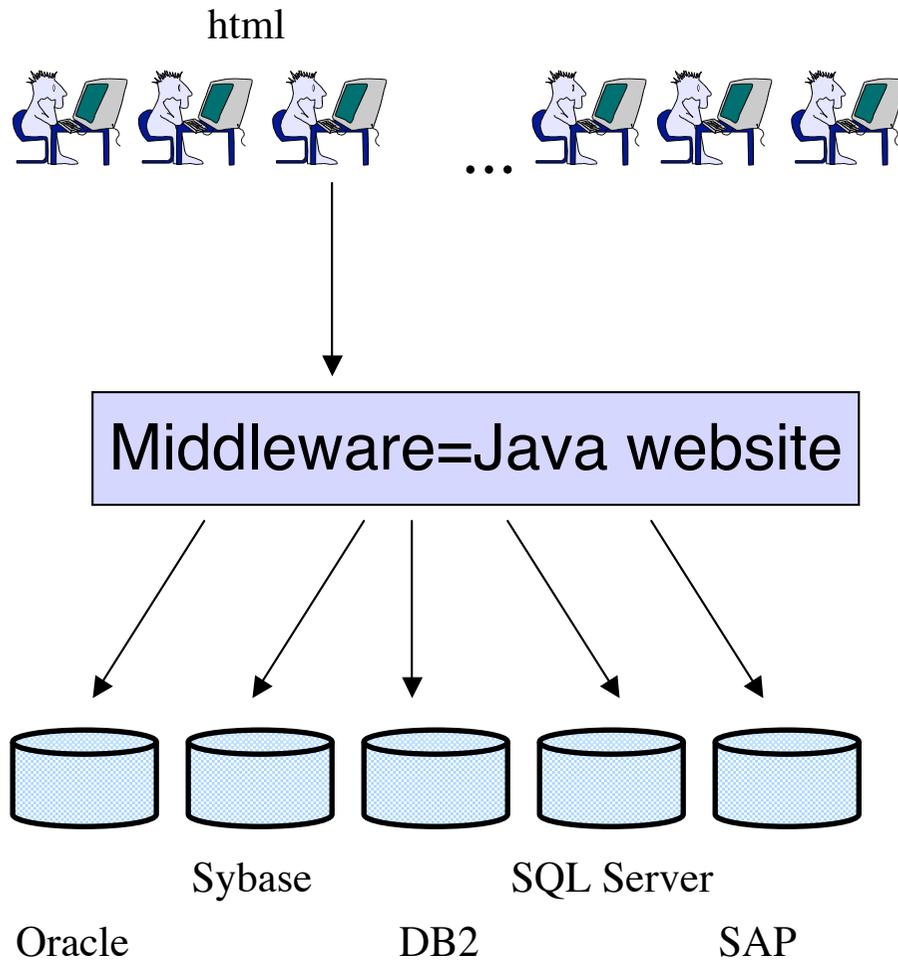
- **The middle layer can be a Java (J2EE) webserver**
  - **Programmed with Java plug-ins and web pages**
- **Web access: clients need no new software!**
  - **Browsers are everywhere already**
  - **No special browser needed, despite the Java webserver!!!**
- **This again reduces installation and maintenance costs**
  - **Only 5 modules are needed**
  - **No custom installation needed for the clients**
  - **Maintenance is limited to the server**

Java Website: Integration Portal

ΑΤΟΜΙΚΟΣ

html

Tomcat+
TransactionsJTA

combine
orders, invoices

get invoices
update invoice

get orders
update order

Oracle
(Invoice DB)

SQL Server
(Orders DB)
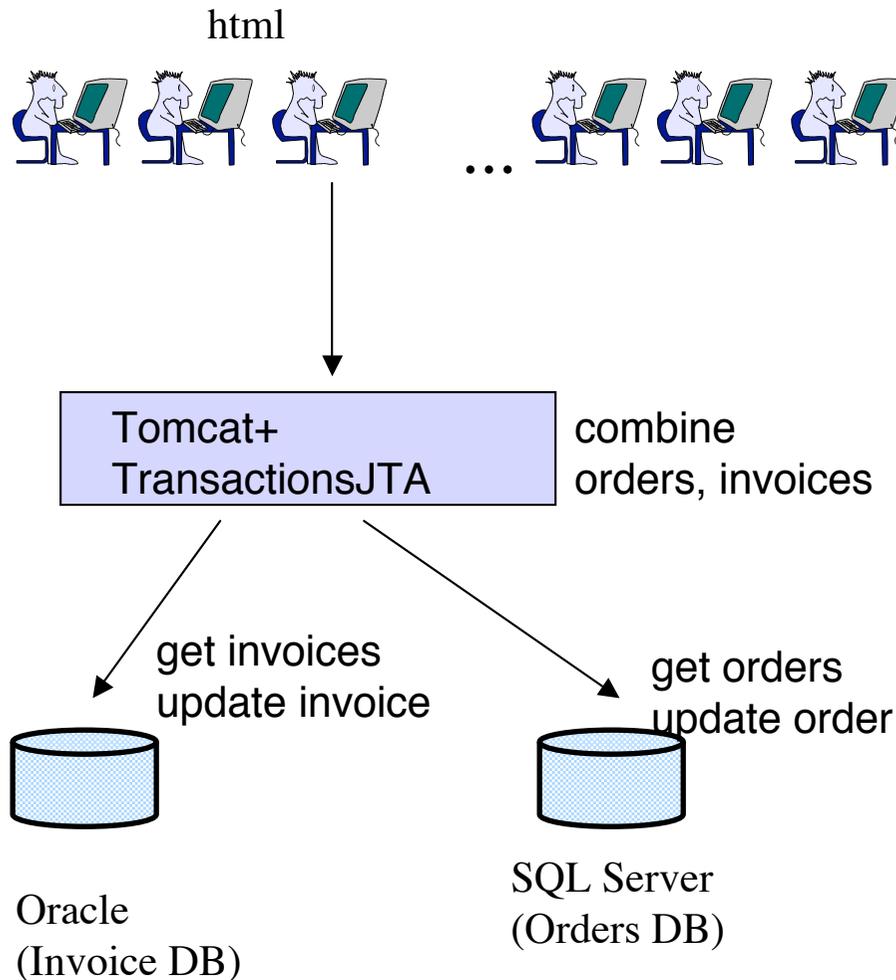
- **The middle layer can combine information from many existing databases**
  - **This is what the java plug-ins do**
  - **Java has a standard programming model for this**
  - **Java has standard connectivity to the backend systems**
  - *Java websites can be installed on any J2EE platform, not just TransactionsJTA!*
- **TransactionsJTA ensures back-end data consistency**
  - **Missing piece in many J2EE servers!**
  - **Not shipped-in with Tomcat, Jetty or JBoss**
  - **Only partially available in much more expensive products**

TransactionsJTA

- **Based on open-source Java webservers**
  - Tomcat
  - Jetty
  - ...
- **TransactionsJTA adds support for multi-access transactions**
  - Needed for J2EE best practice programming schemes
- **TransactionsJTA makes these products robust**
  - Crash recovery
  - Fault-tolerance
- **TransactionsJTA maintains your data consistent!**
  - within each system
  - across different systems
  - across any type of crash
- **TransactionsJTA requires no specific changes in the Java code**
  - We increase your service quality <u>behind the scenes</u>!
- **Patented technology**

Building a Website from Scratch?

- **For new websites, there are no existing back-ends**
  - Why not do all in Oracle or SQLServer?
  - Because these will be the departmental systems of tomorrow!
- **Adopting the J2EE architecture will allow you to include future systems**
  - Separate the integration logic (Java webserver) and the back-end logic (database content)
    - Allows Oracle and SQLServer extensions to be integrated later!
  - Explicitly adopt the integration-capable J2EE architecture
  - Benefit from open-source
  - With reliability and robustness added by Atomikos
  - But fullyJ2EE-standards-compliant