

The Friendly Foods Case Study

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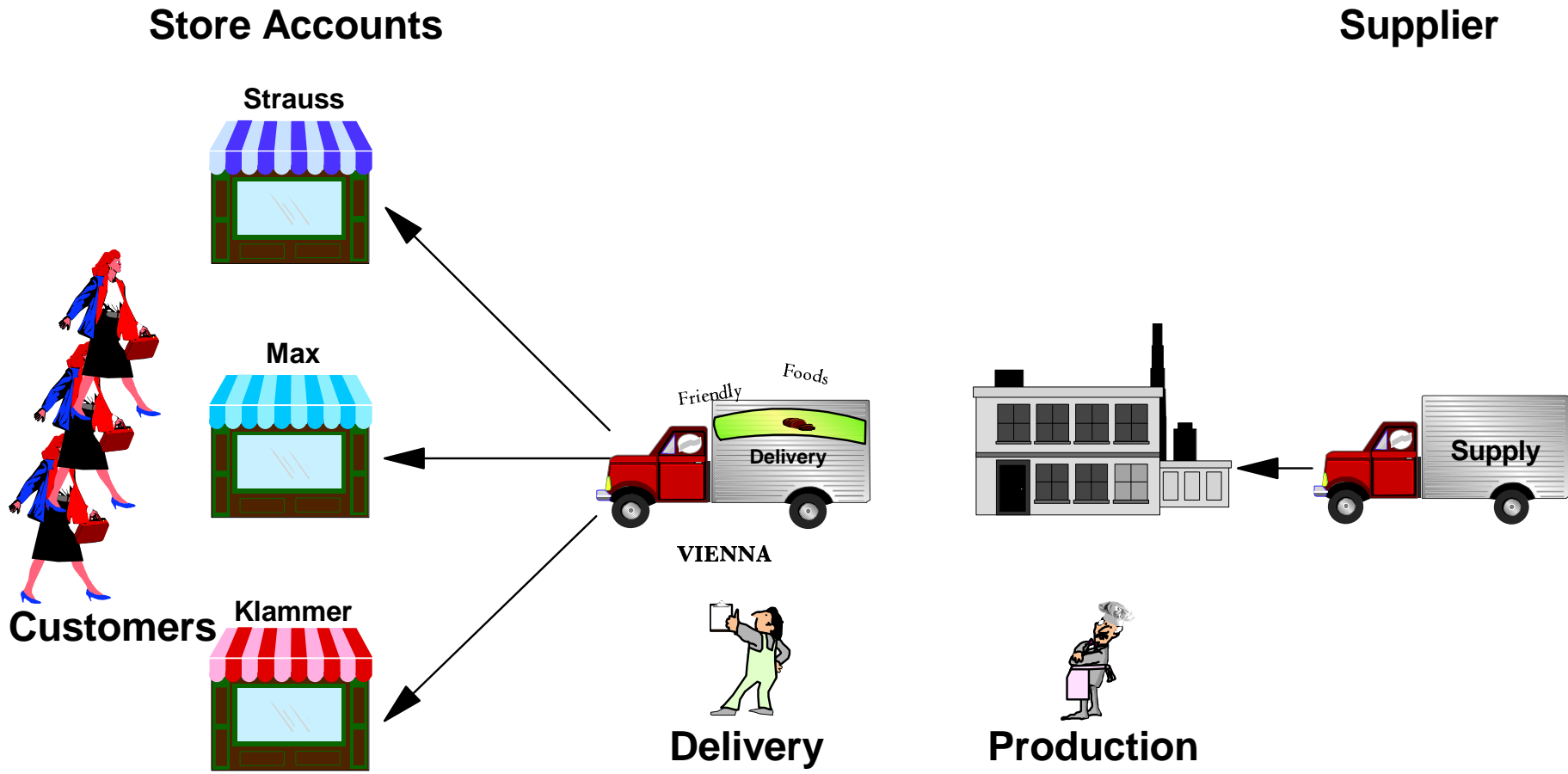
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Topics Covered

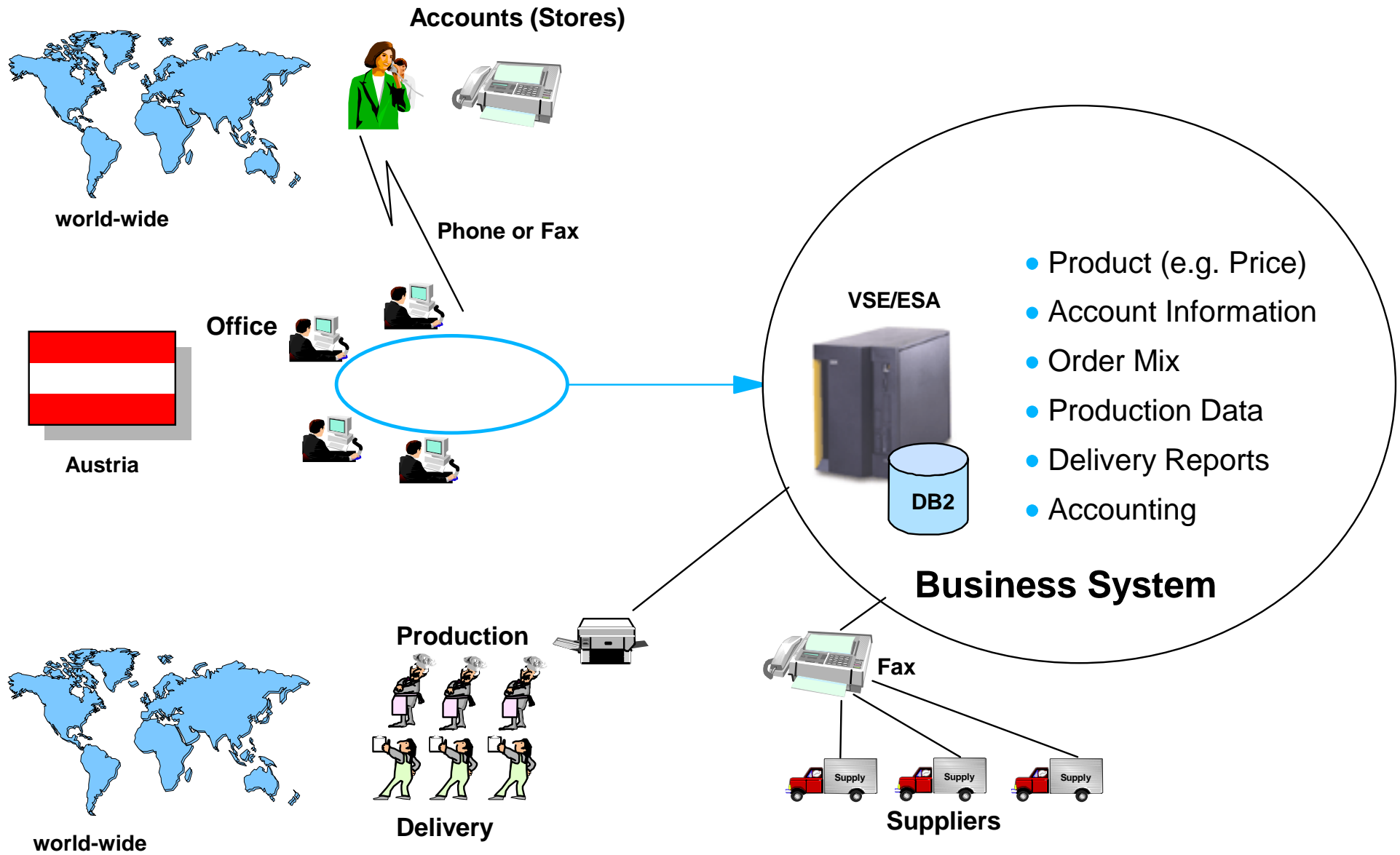
- **Introduction to Friendly Foods**
- **Friendly Foods e-business implementation**
 - Consumer Marketing
 - Account self-service and account tracking
 - Integration with Service Providers
 - Integration with Suppliers
 - New Interface for the existing Supply Chain Management Application (SCM)
- **Implementation Alternatives**
- **Summary and Outlook**
- **More Information**

Friendly Foods Manufacturing Business



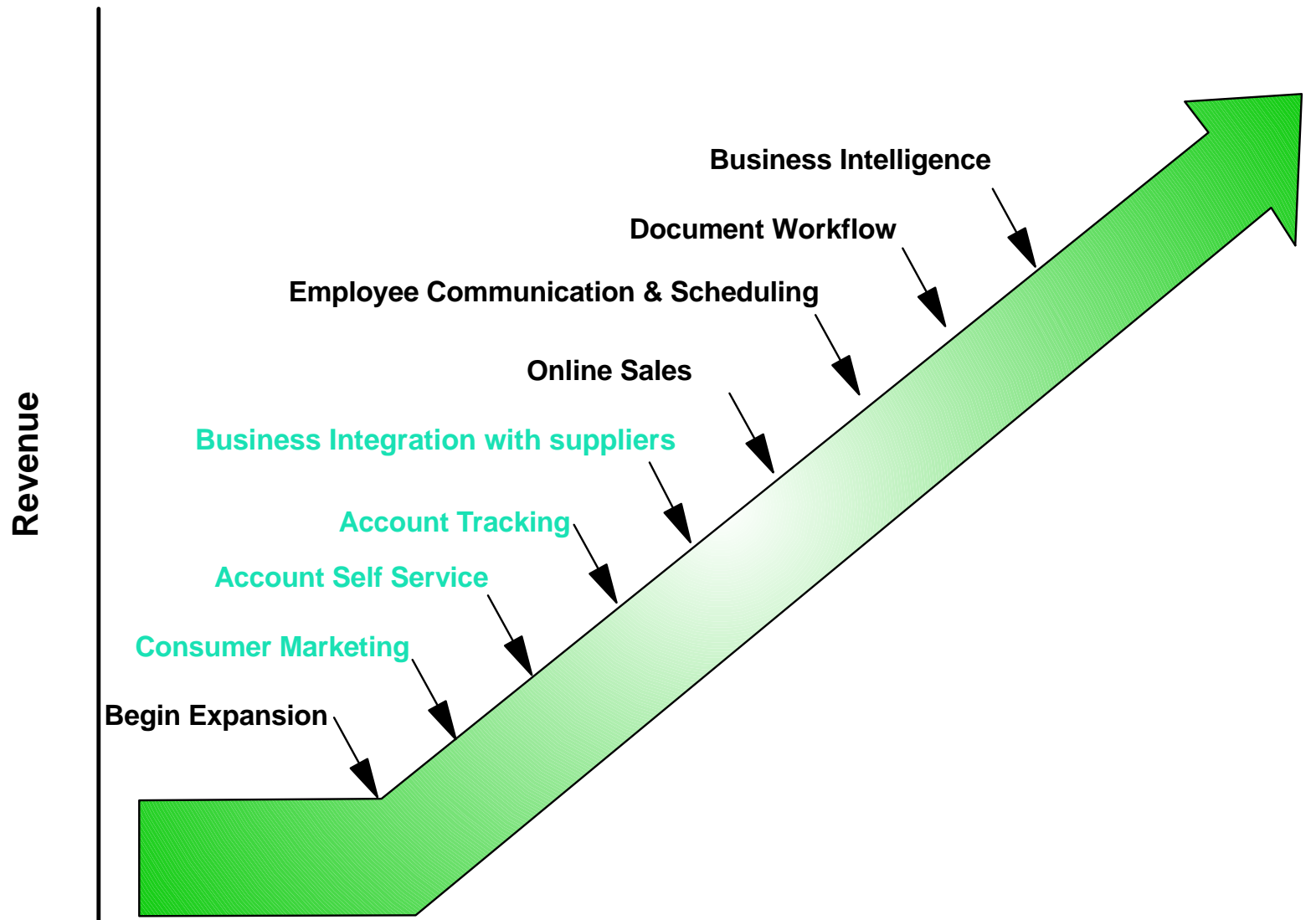
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Friendly Foods ... Before



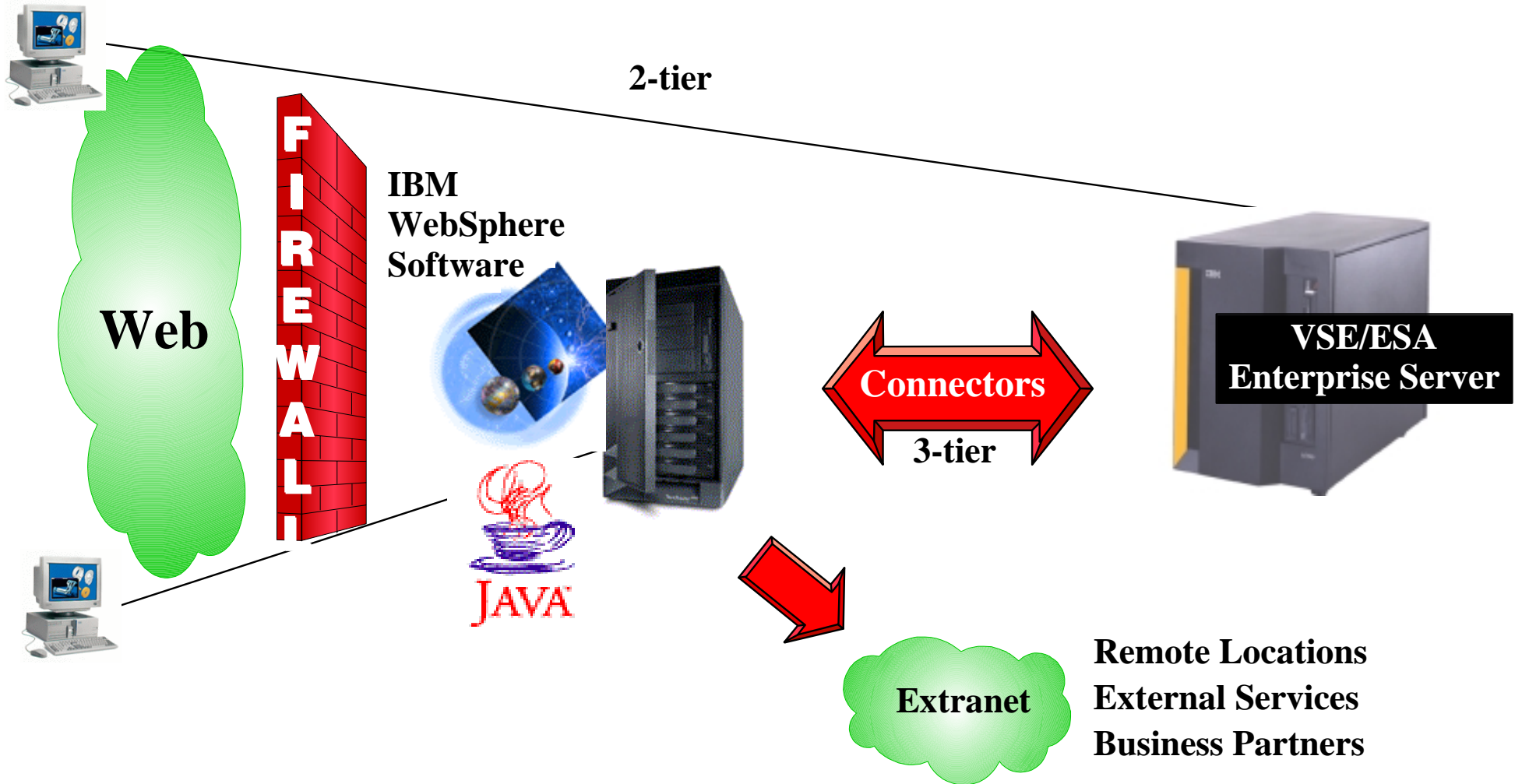
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The Friendly Foods e-business plan



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e-business Implementation - Options



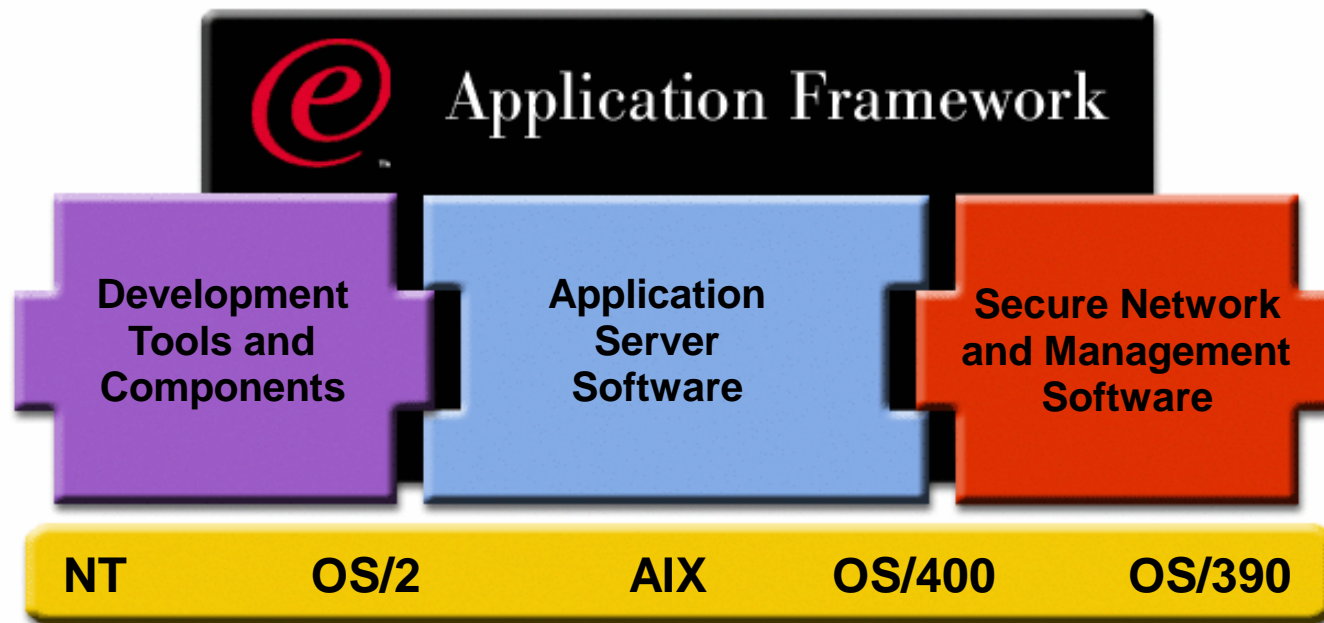
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FF e-business Implementation - Requirements

- Implement latest Internet Technologies and Standards
 - Java (Java applets, Java servlets, Java Beans etc.)
- Protect investment in VSE assets
- Positioned to adopt future technologies
- Portability
- Productive Implementation with modern tools

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The IBM Application Framework for e-business



A framework for building e-business applications:

- Simplifies through the use of Java
- Fully supported by IBM products
- Leverage existing applications into the world of e-business
- Flexibility of multi-platform standards (Java, Internet, OMG)

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The IBM Application Framework for e-business



Development
Tools and
Components



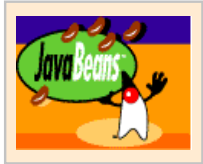
Application Server
Software



Secure Network
and Management
Software

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ebAF Programming Model



- **Java Beans**
 - small reusable Java objects
 - component model for Java



- **Java Servlets**
 - server side logic
 - "applets for the server"
- **Java Server Pages**
 - combination of Java and HTML in a single page
 - separation of business and presentation logic



- **Enterprise Java Beans**
 - extends the JavaBean model to the enterprise
 - adds transactional qualities

Web
Browser



Web
Standards



Web
Application
Server

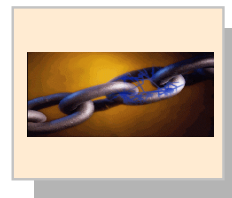
Connectors



Existing
Applications
and Data

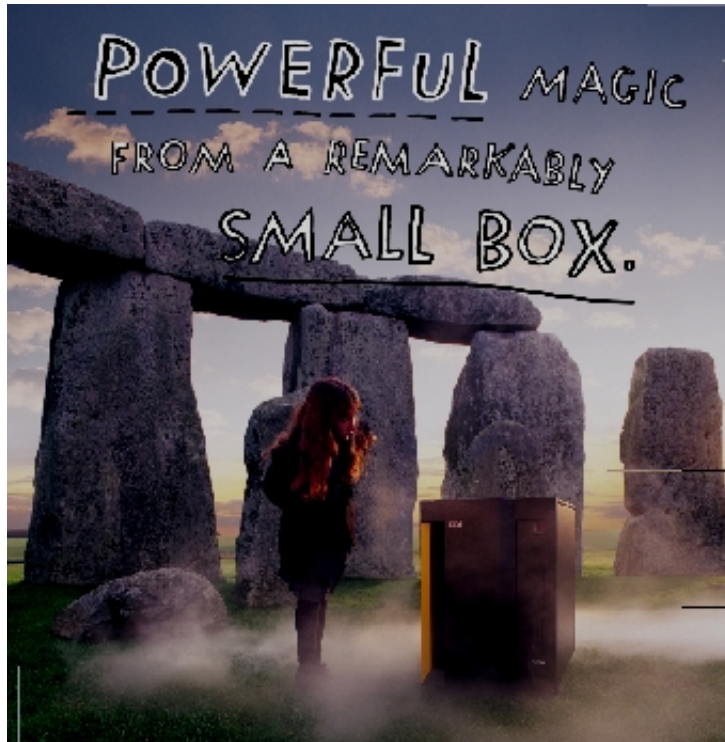


- **Java Applets**
 - small java routine that executes on the browser
 - runs in controlled browser "sandbox"



- **Java Connectors**
 - web-enabled existing applications and data
 - JDBC, JSQL, CICS Transaction Gateway...

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Implementation at Friendly Foods

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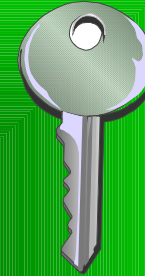
e-business Enablement



Base Pak

Program Interfaces

- X/Open compliant C Interface integrated in the Language Environment
- Language Translator (S/390 Assembler, COBOL, PL/I and C)
- Assembler Macro Interface
- BSD Socket Interface



Network Connectivity

- Integrated Communications Adapter (ICA) of ES/9000 9221 processors for Ethernet, Token-Ring
- IBM 3172 Interconnect Controller for Ethernet, Token-Ring and FDDI
- S/390 Open Systems Adapter 2 (OSA-2) for Ethernet, Fast Ethernet, Token-Ring, FDDI and ATM (LAN Emulation mode only)
- CLAW Connection to RS/6000
- Channel to Channel Adapters (includes virtual CTCA provided by the VM/ESA operating system).
- IBM 2216 Nways Multiaccess Connector

Environments

- VSE/ESA V2.3/ VSE/ESA 2.4

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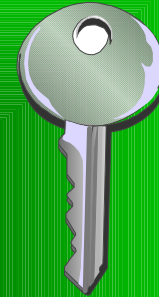
e-business Enablement



Application Pak = Base Pak Plus

File Transfer

- FTP Client and Server offers access to
 - VSAM ESDS and KSDS datasets
 - Sequential Data sets
 - VSE/POWER spool files
 - VSE library and sublibrary files
 - ICCF Libraries (read only)



Terminal Emulation

- Telnet Client and Server
 - Full Screen 3270
 - Access to other Telnet servers via CICS

Web Server

- Store HTML documents on VSE
- Store JAVA and other objects on VSE
- Common Gateway Interface (CGI)
- Server Side Includes (SSI)

Remote Printing

- Line Printer Daemon (LPD Server)
- Line Printer Requester (LPR Client)
- Line Printer Queue (LPQ)

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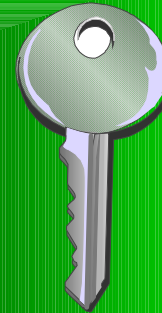
e-business Enablement



Network File System

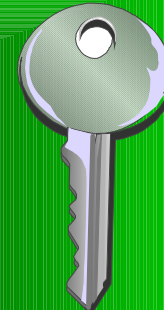
NFS Server

- NFS V2 protocol
- Access to:
 - VSE/VSAM ESDS files
 - VSE/ESA Library files
 - VSE/POWER spool files



General Print Server Prereq: Application Pak

- Provides 328x printing capability in a TN3270 environment without application change
- Maps VTAM-based printing to LPR/LPD-based network printers
- Allows GPS daemons appear to VSE/ESA as locally-attached VTAM printer



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TCP/IP Exploitation



- **MQSeries for VSE/ESA V2.1**
 - <http://www.software.ibm.com/ts/mqseries/platforms/vseesa/v2r1/index.html>
- **CICS Web Support / 3270 Bridge**
 - <http://www.software.ibm.com/ts/cics/library/whitepapers/cicsweb/cwi.html>
- **PSF/VSE - Support for TCP/IP attached devices**
 - APAR - DY45247
 - PTF - UD51162
- **DB2 Server for VSE and VM - DRDA TCP/IP Support**
 - Currently in beta test
 - <http://www.software.ibm.com/data/db2/vse-vm/feedback/beta62form.html>
- **VisualAge Generator - transfer generated code to VSE**
 - APAR - PQ26899 & PQ26900
 - PTF - UQ36588

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First Step - Consumer Marketing



Stores - Netscape

File Edit View Go Window Help

Master Friendly Foods Self Service Account Managem IPCC Call Centre FF MQ Demo Websphere Admin Supplier B SelfS

Friendly Foods

Friendly Catalog Service Recipes Stores

To get a list store names and locations that carry Friendly Foods products in your neighborhood, select your country an optional a ZIP range and press the GET STORE Button. [Click here](#) for a list of all stores

Country: Australia [v] [Get Store]

ZIP Range: 1 [] 9 []

Storename	Locstreet	Loccity	Loczip	Loccountry

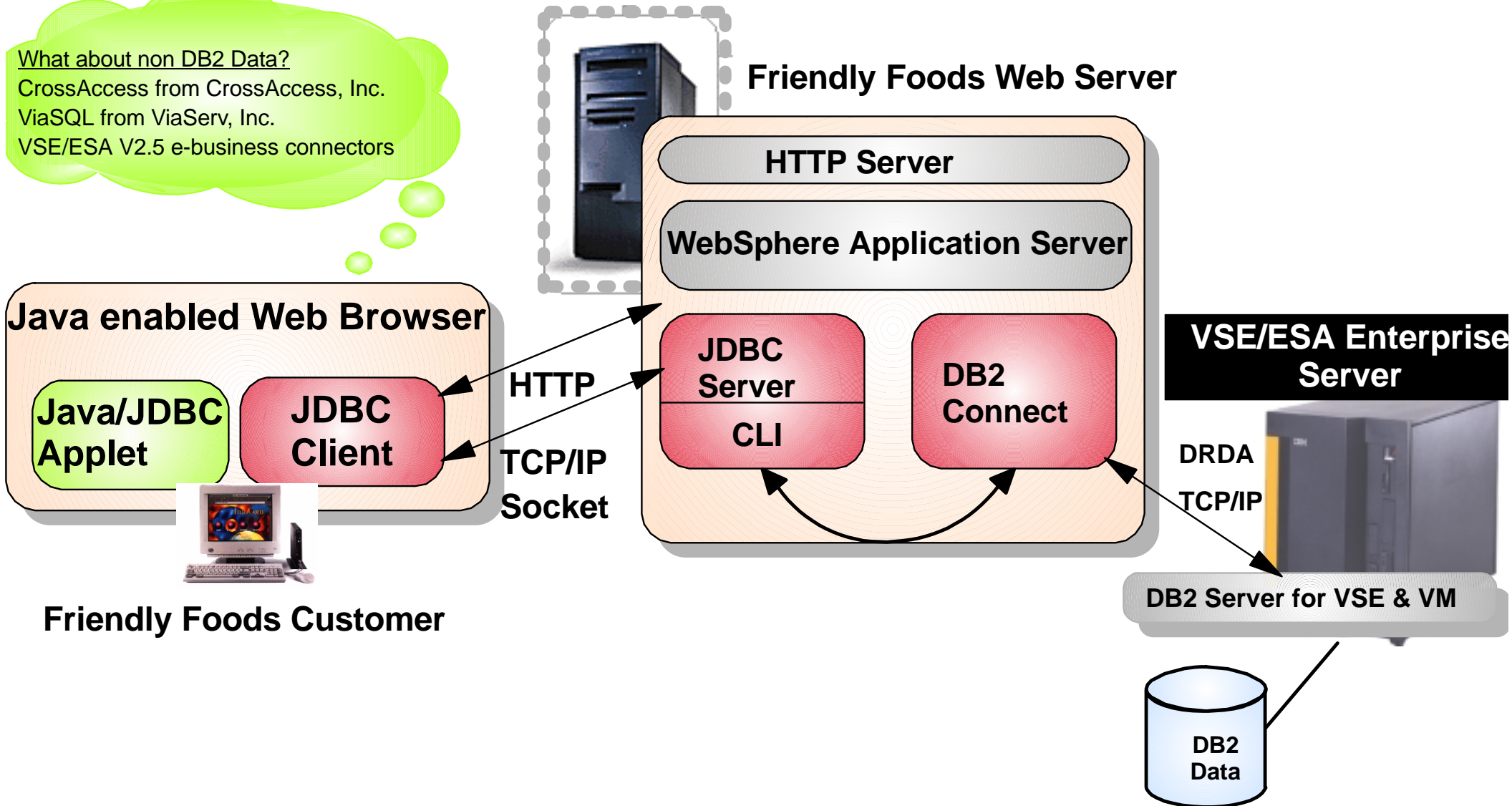
Applet JavaBean4 running

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First Step - DB2 Connect (Java Applet)



What about non DB2 Data?
CrossAccess from CrossAccess, Inc.
ViaSQL from ViaServ, Inc.
VSE/ESA V2.5 e-business connectors



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Second Step - Account Self Service



AccSSLogResults - Netscape

File Edit View Go Window Help

Back Forward Reload Home Search Netscape Print Security Stop

Location: http://ff_servlet/AccountSelfService/AccountSelfServiceLog

Master Friendly Foods Self Service Account Management IPCC Call Centre FF MQ Demo Webs

BUILT WITH NetObjects FUSION


Production data on


Main Menu

Basic Store Information

WSP/BSA

Store Name	Strauss
Address	Spiegelgasse 9
	Vienna , 10000
	Austria

 Account

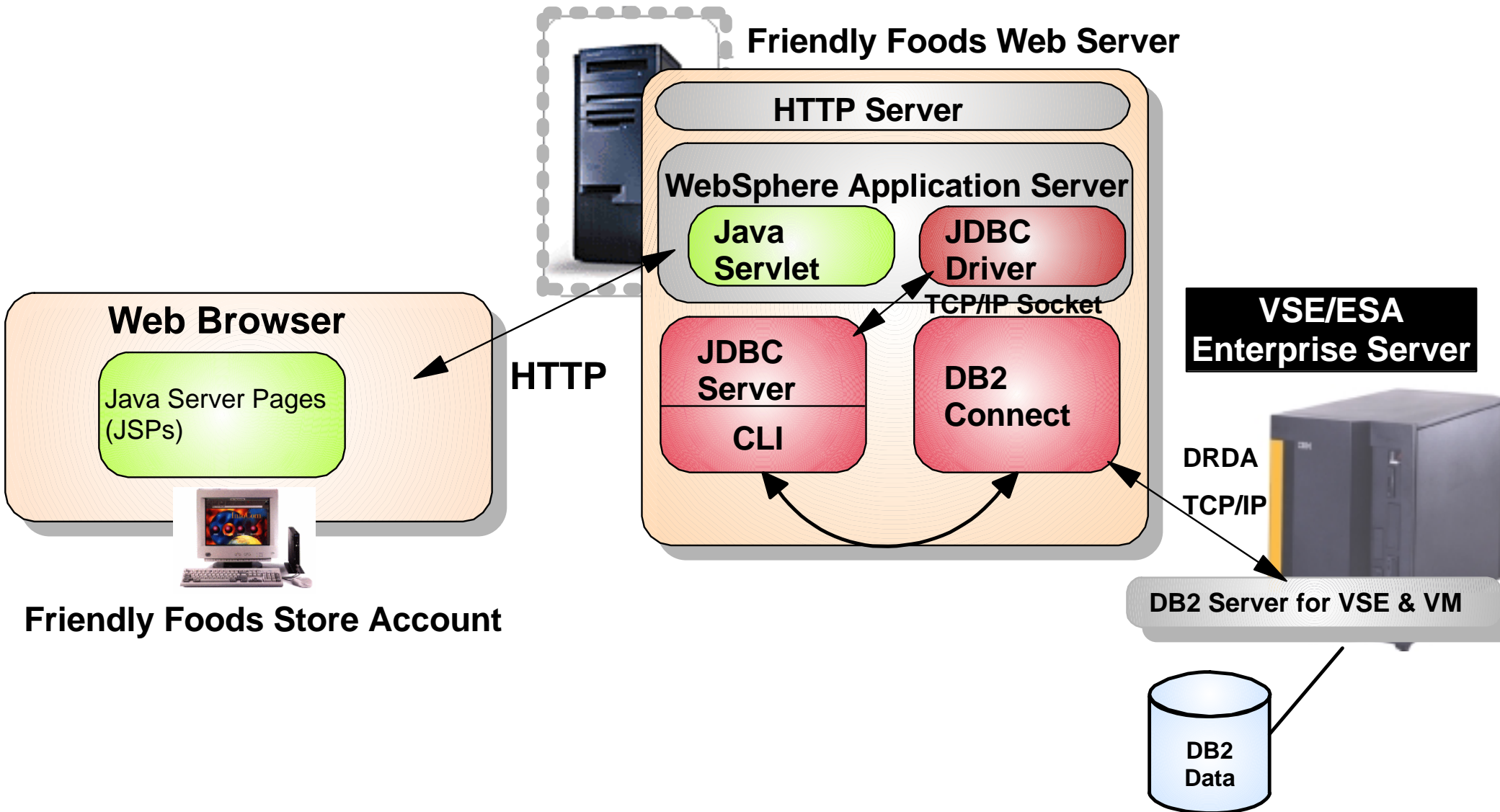
 Order Mix

Document: Done

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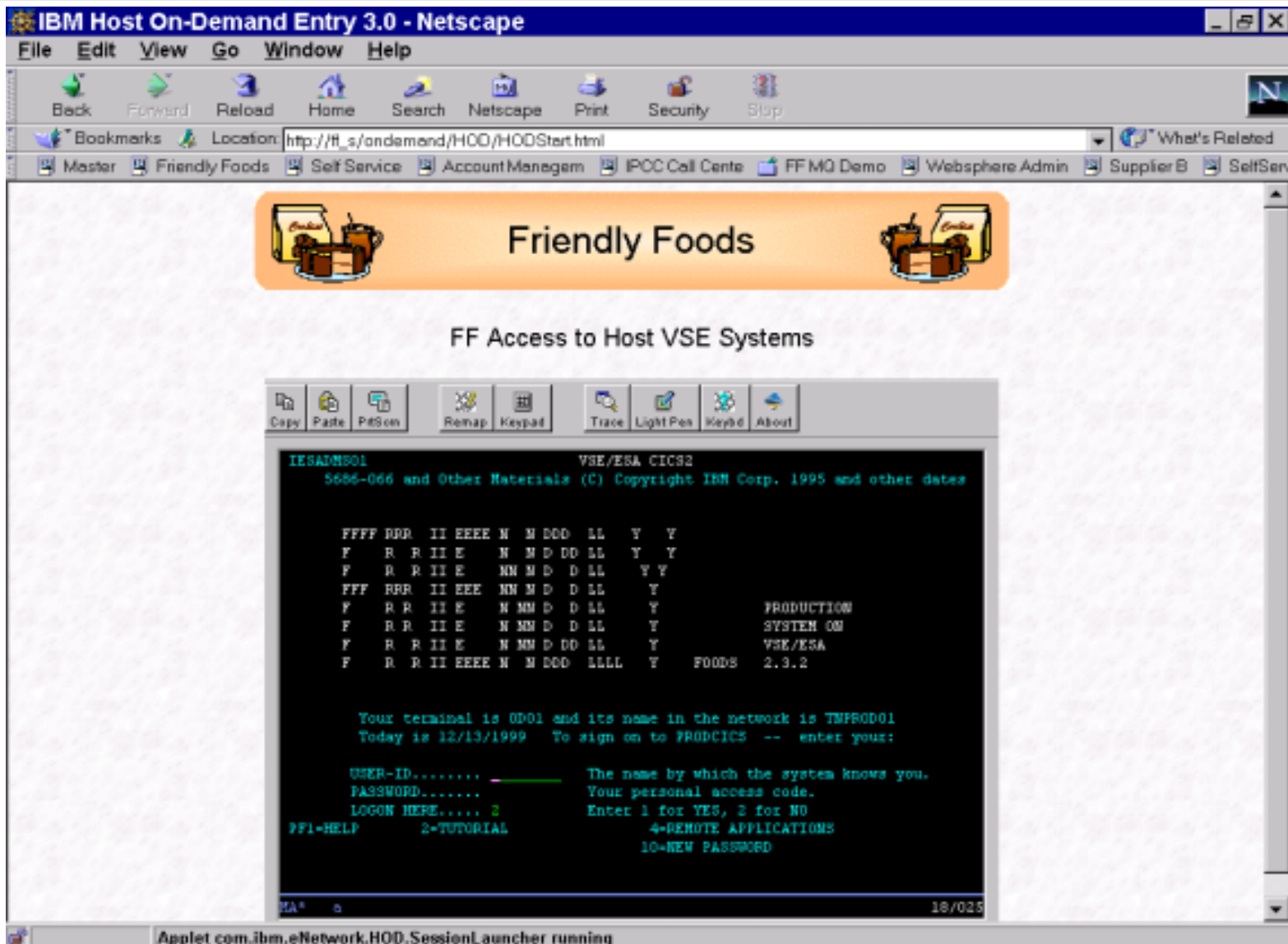


Second Step - DB2 Connect (Java Servlet)



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Third Step - Integration of Service Providers



The screenshot shows a Netscape browser window titled "IBM Host On-Demand Entry 3.0 - Netscape". The address bar contains the URL "http://ft_s/ondemand/HOD/HODStart.html". The browser's menu bar includes "File", "Edit", "View", "Go", "Window", and "Help". The toolbar contains icons for "Back", "Forward", "Reload", "Home", "Search", "Netscape", "Print", "Security", and "Stop". The bookmarks bar shows "Master", "Friendly Foods", "Self Service", "Account Managem", "IPOCC Call Cente", "FF MQ Demo", "Websphere Admin", "Supplier B", and "SelfServ".

The main content area features a banner for "Friendly Foods" with images of coffee and a bag of coffee. Below the banner is the text "FF Access to Host VSE Systems". A toolbar with icons for "Copy", "Paste", "Print", "Remap", "Keypad", "Trace", "Light Pen", "Keypad", and "About" is positioned above a terminal window.

The terminal window displays the following text:

```
IESADMS01          VSE/ESA CICS2
5686-066 and Other Materials (C) Copyright IBM Corp. 1995 and other dates

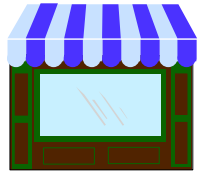
FFFF RRR II EEEE N M DDD LL Y Y
F  R  R  II E  N  M D DD LL Y Y
F  R  R  II E  MN M D D LL Y Y
FFF  RRR  II EEE  MN M D D LL Y
F  R  R  II E  N  MM D D LL Y          PRODUCTION
F  R  R  II E  N  MM D D LL Y          SYSTEM ON
F  R  R  II E  N  MM D DD LL Y          VSE/ESA
F  R  R  II EEEE N M DDD LLLL Y  FOODS  2.3.2

Your terminal is 0D01 and its name in the network is TBFPROD1
Today is 12/13/1999 To sign on to PRODCICS -- enter your:

USER-ID.....          The name by which the system knows you.
PASSWORD.....         Your personal access code.
LOGON HERE..... 2      Enter 1 for YES, 3 for NO
?F1-HELP          2-TUTORIAL          4-REMOTE APPLICATIONS
                                10-NEW PASSWORD

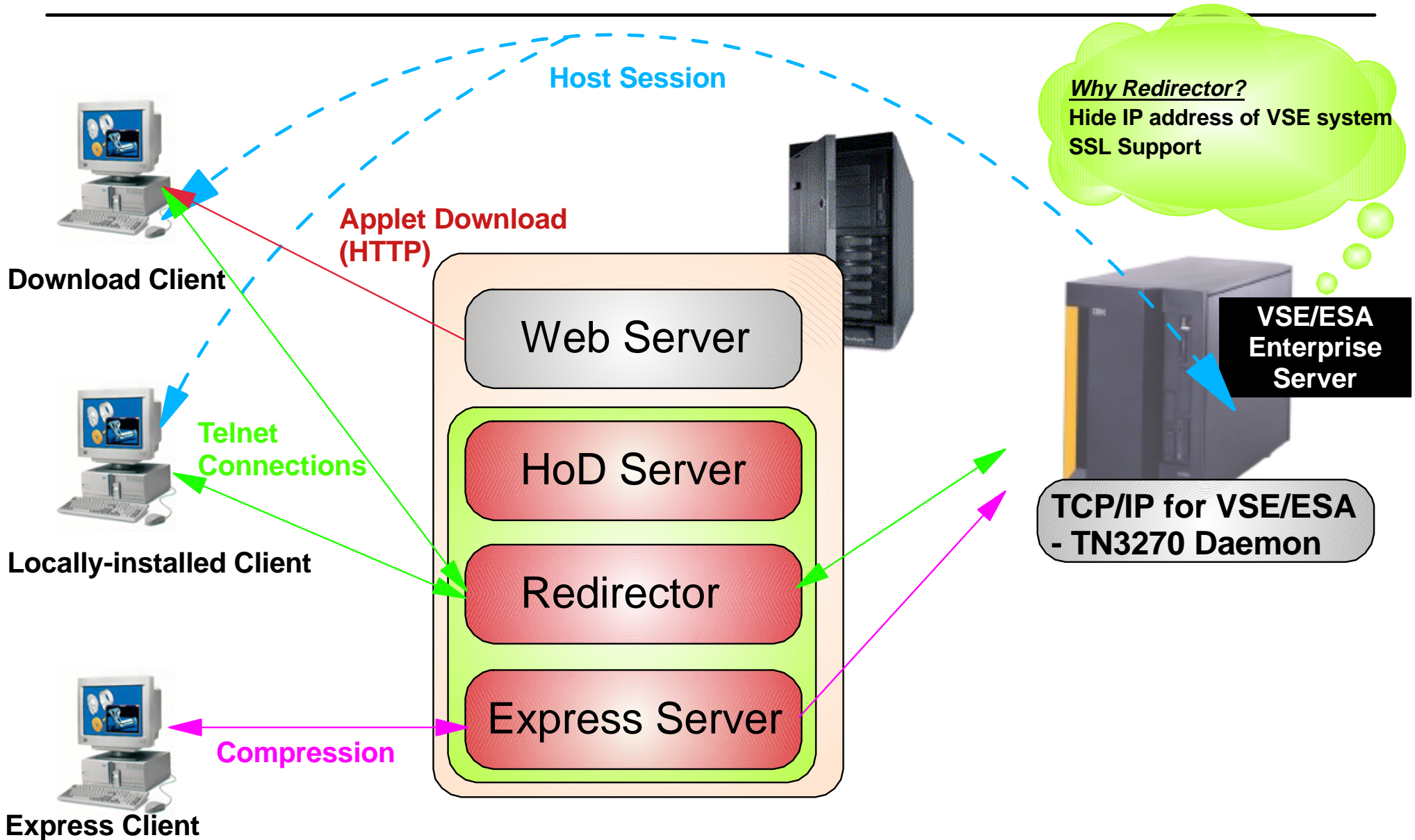
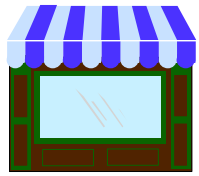
PA*  a                                     18/025
```

The status bar at the bottom of the browser window reads "Applet com.ibm.eNetwork.HOD.SessionLauncher running".



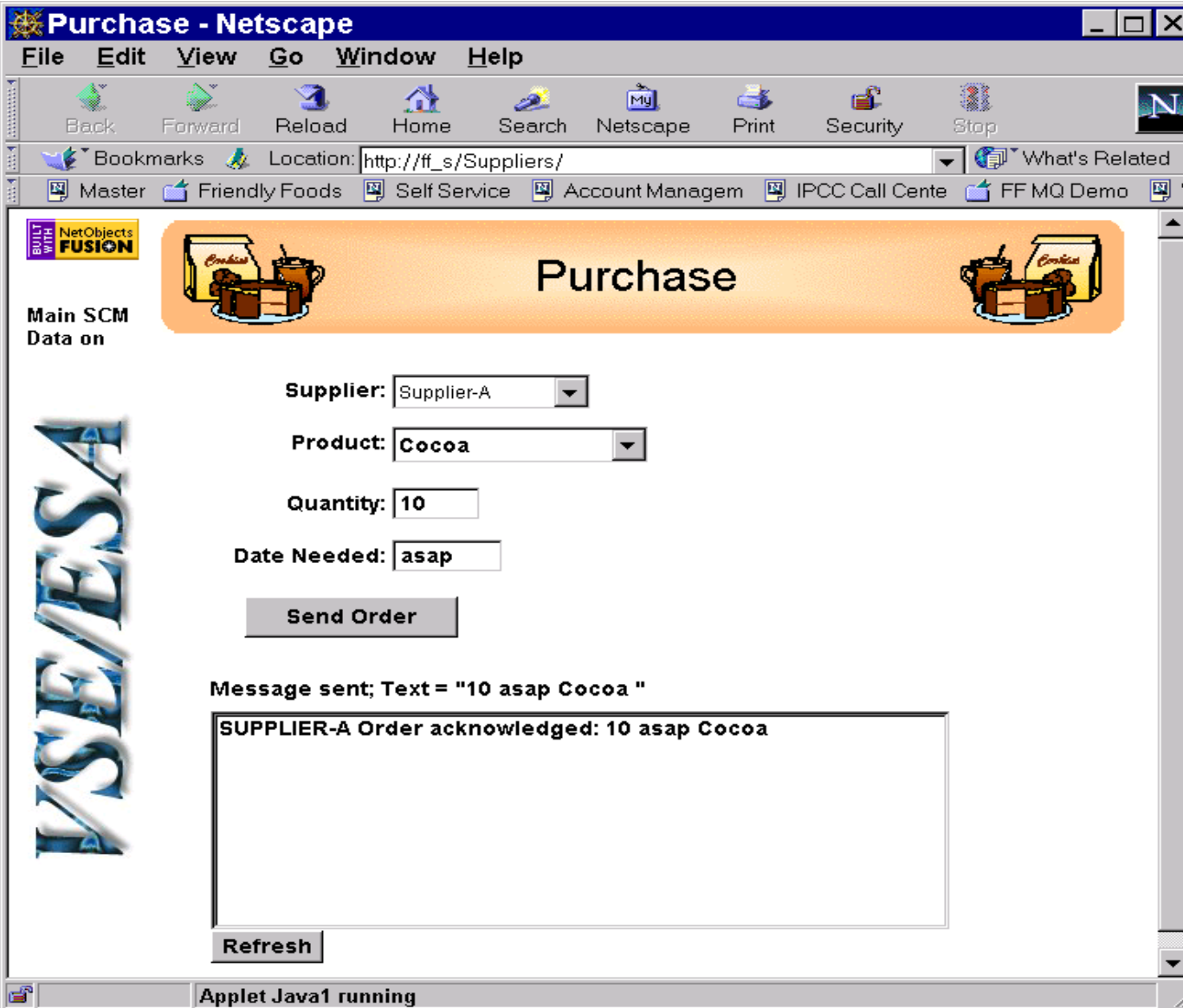
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Third Step - SecureWay Host on-Demand



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Fourth Step - Business Integration with Suppliers



The screenshot shows a Netscape browser window titled "Purchase - Netscape". The address bar displays "http://ff_s/Suppliers/". The browser's menu bar includes File, Edit, View, Go, Window, and Help. The toolbar contains icons for Back, Forward, Reload, Home, Search, Netscape, Print, Security, and Stop. The bookmarks bar lists "Master", "Friendly Foods", "Self Service", "Account Management", "IPCC Call Centre", and "FF MQ Demo".

The main content area features a "Purchase" form with the following fields:

- Supplier: Supplier-A (dropdown menu)
- Product: Cocoa (dropdown menu)
- Quantity: 10 (text input)
- Date Needed: asap (text input)

A "Send Order" button is located below the form. Below the button, a message box displays: "Message sent; Text = '10 asap Cocoa '" and "SUPPLIER-A Order acknowledged: 10 asap Cocoa". A "Refresh" button is positioned at the bottom of the message box.

On the left side of the browser window, there is a vertical banner for "AS/ESA" and a "Main SCM Data on" section. The status bar at the bottom indicates "Applet Java1 running".

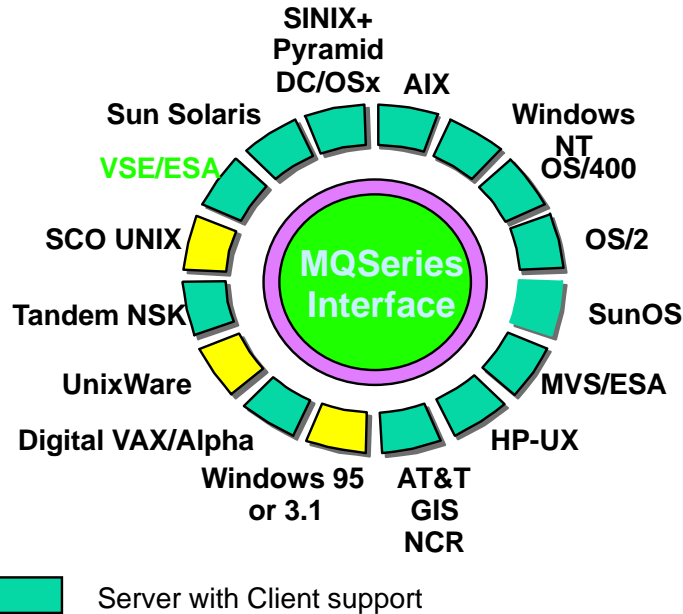


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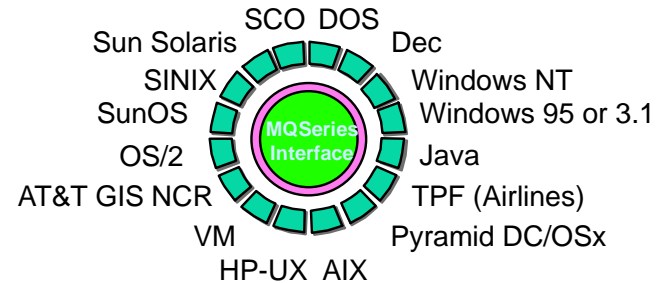
Fourth Step - Why MQSeries?



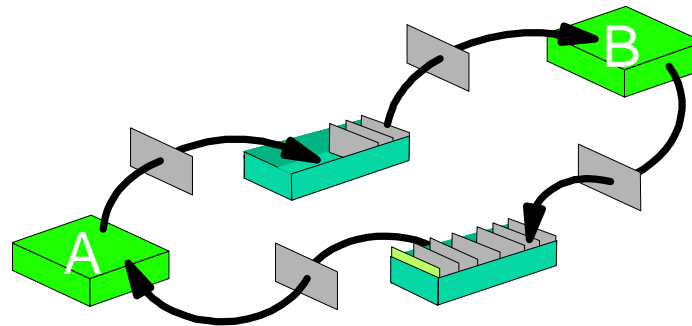
Servers



Clients



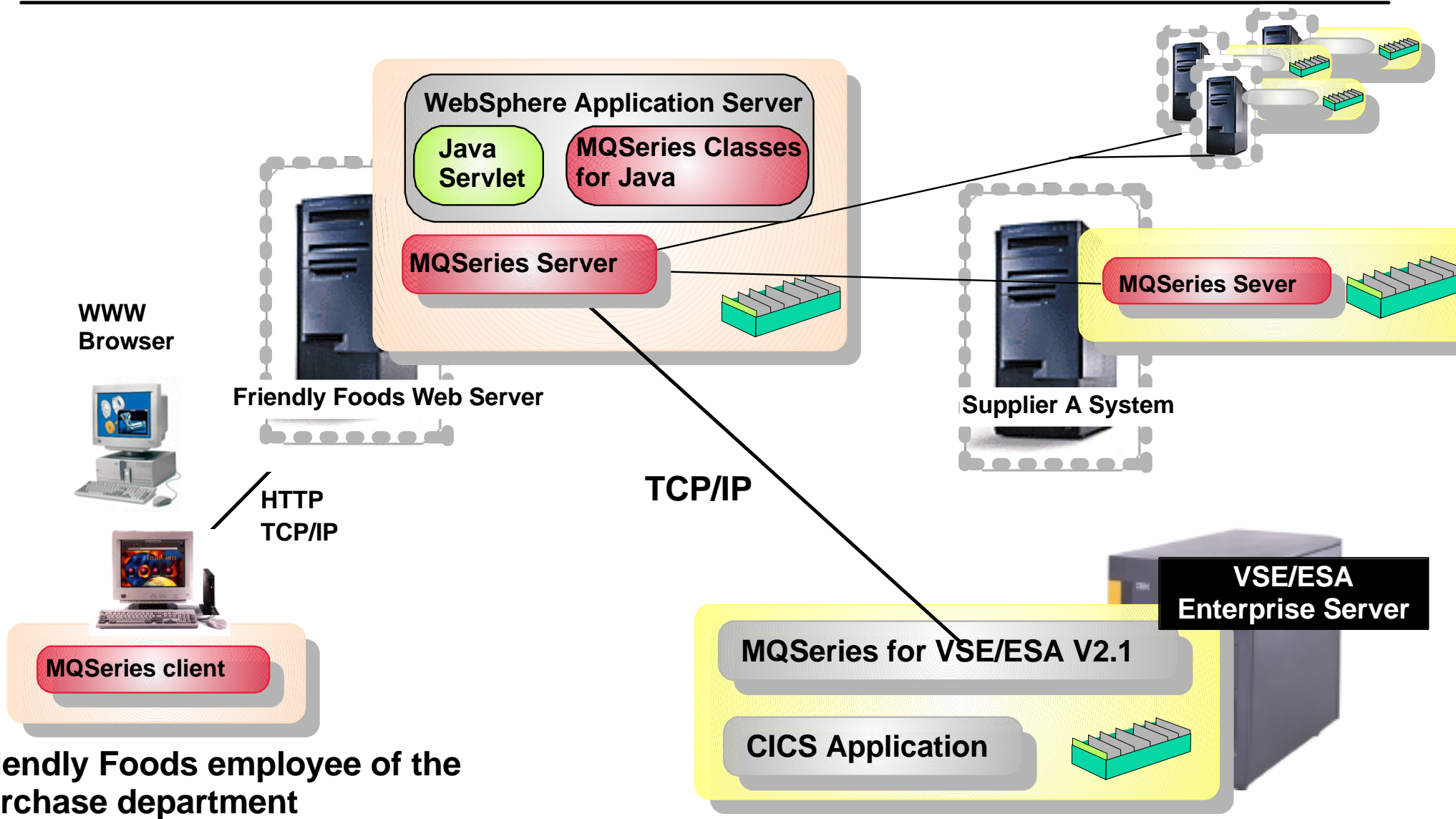
MQI Channel



- **Assured Delivery**
- **Compatibility**
- **Fast, continuous delivery**

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Fourth Step - MQSeries



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Fifth Step - New User Interface for SCM



Copy Paste PrtScrn Remap Keypad Trace Light Pen Keybd Abo

```
FRIENDLY FOODS SUPPLIER RECORD
=====

SUPPLIER:      SUPPLIER-B

TASK          PRODUCT          QTY PRIC  DUE DATE  ORDER DATE  USER
-----
Bid           Cocoa             150      450      asap       1999.12.12
Bid Ans       Cocoa             150      450      asap       1999.12.12
Bid           Sugar             700      399      1/1/2000   1999.12.22
Bid Ans       Sugar             700      399      1/1/2000   1999.12.22
Order         Sugar             700      399      1/1/2000   1999.12.22

PF3=QUIT      PF10=ORDER PF11=ADD REC PF12=BID

MA*      a
```

01/001

Fifth Step - New User Interface for SCM

View Records - Netscape

File Edit View Go Window Help

Back Forward Reload Home Search Netscape Print Security Stop

Location: http://ff_s/Suppliers/index4.html

Master Friendly Foods Self Service Account Managem IPCC Call Cente FF MQ Demo

View Records

Main SCM Data on

ASB/BSA

Suppliers

SUPPLIER-B

Get Details on Supplier

Bid	Cocoa	150	asap	1999.12.12
Bid Ans	Cocoa	150 450	asap	1999.12.12
Bid	Sugar	700	1/1/2000	1999.12.22
Bid Ans	Sugar	700 399	1/1/2000	1999.12.22
Order	Sugar	700	1/1/2000	1999.12.22

Get Details on Transaction

SUPPLIER-A	Bid	Sugar	700	1,
SUPPLIER-B	Bid	Sugar	700	1,
SUPPLIER-B	Bid Ans	Sugar	700 399	1,
SUPPLIER-A	Bid Ans	Sugar	700 419	1,
SUPPLIER-B	Order	Sugar	700	1,

Applet Java1 running



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Fifth Step - CICS Transaction Gateway



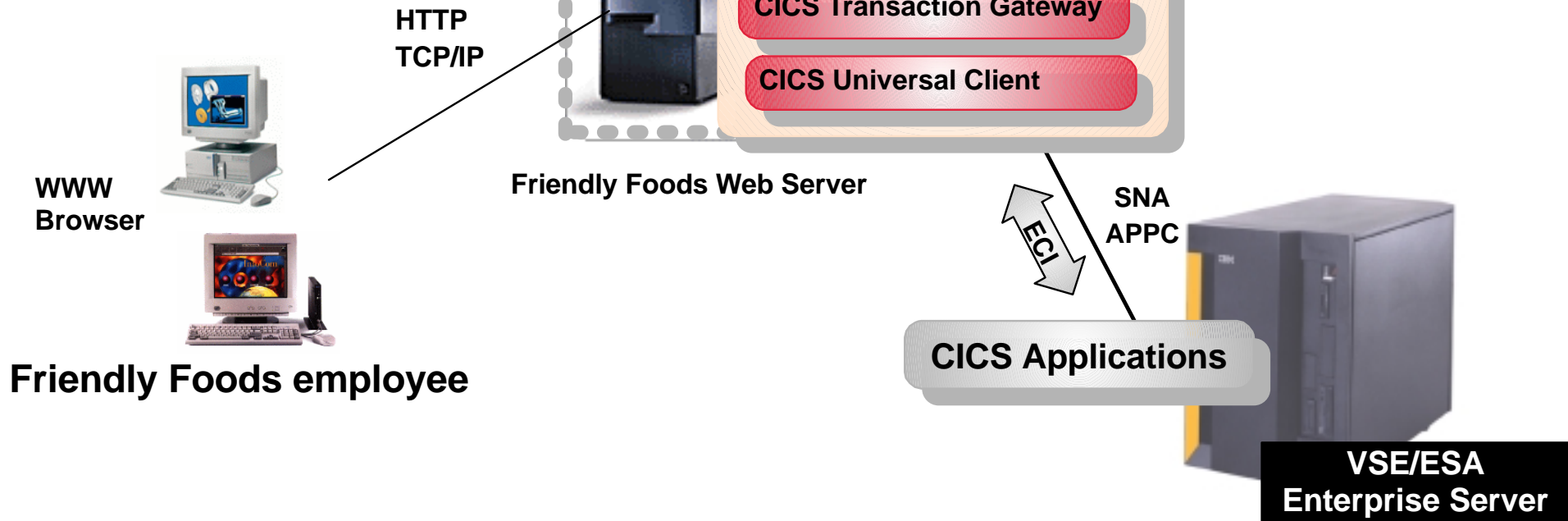
Java ECI Classes

EPI Java Beans

create applets and applications

Terminal Servlet

replaces the CICS Internet Gateway



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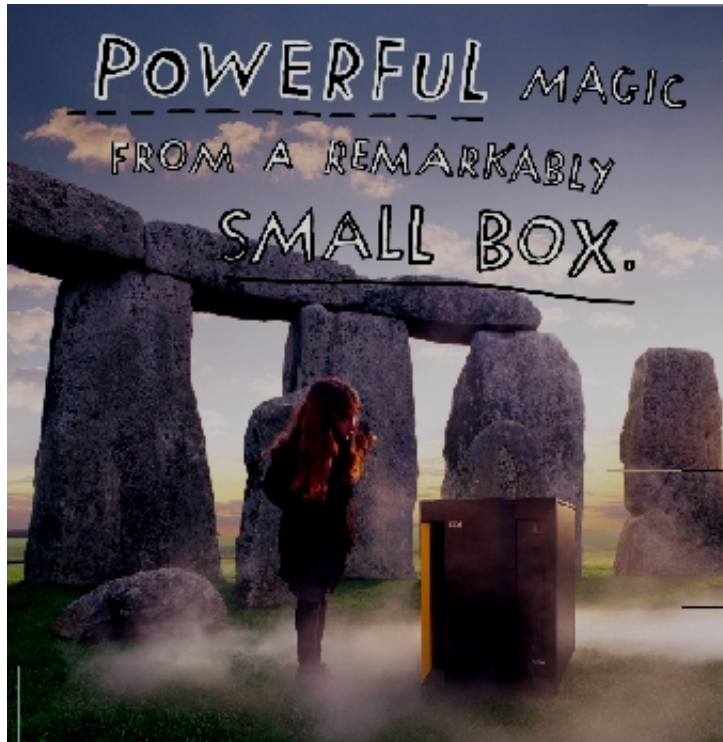
Summary - FF Implementation

Account Self-Service

Account Tracking



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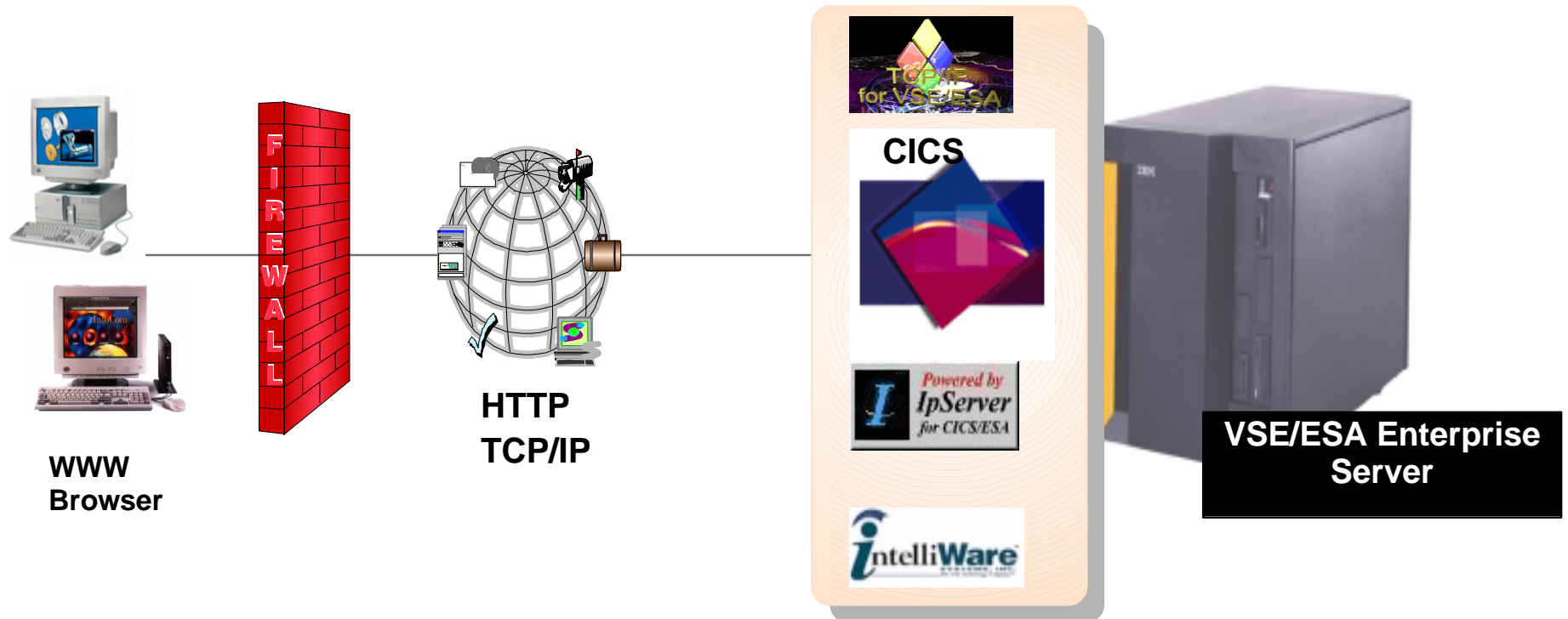


2-tier Alternatives

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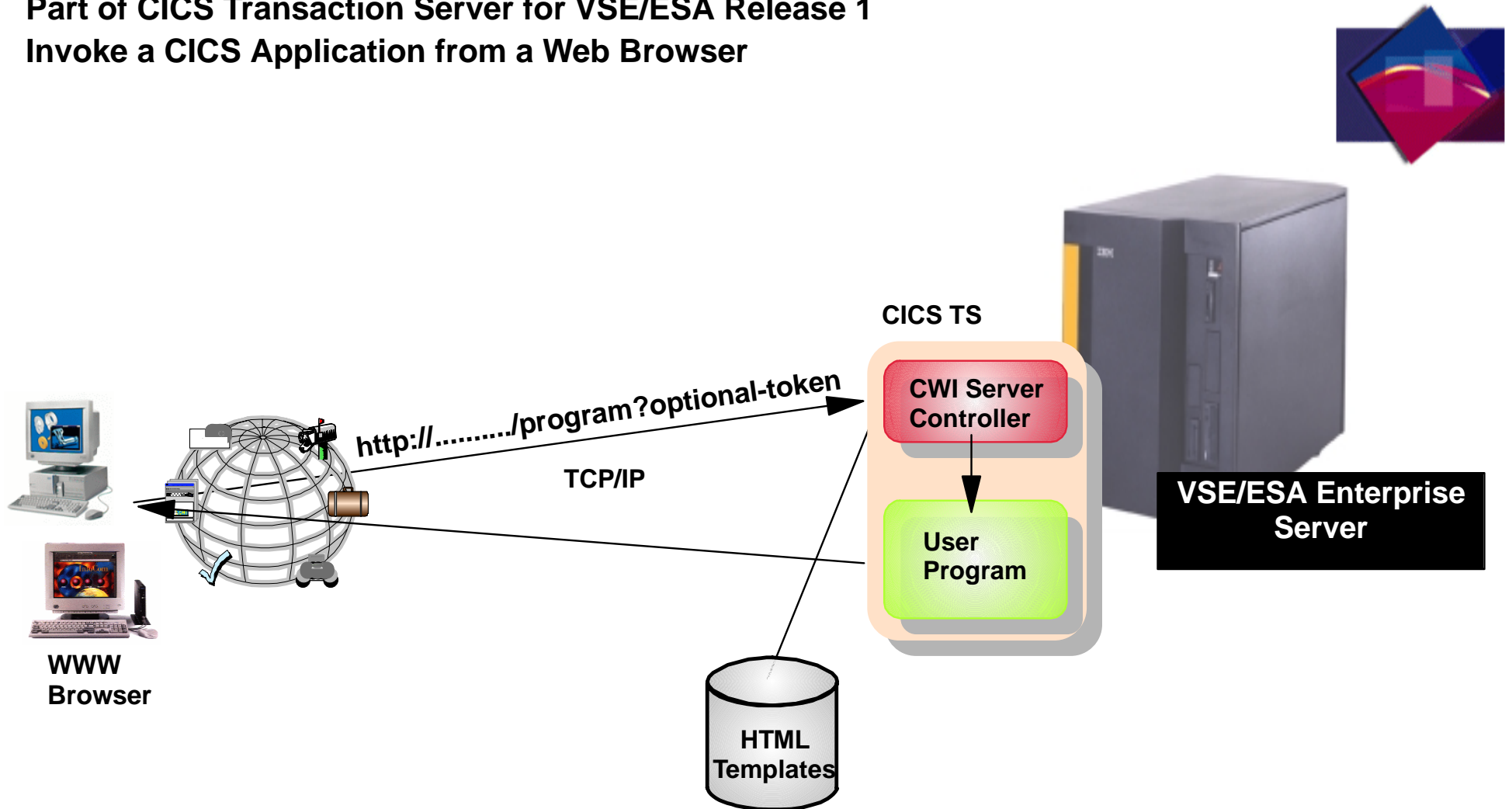
2-tier VSE solutions



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CICS Web Support

Part of CICS Transaction Server for VSE/ESA Release 1
Invoke a CICS Application from a Web Browser

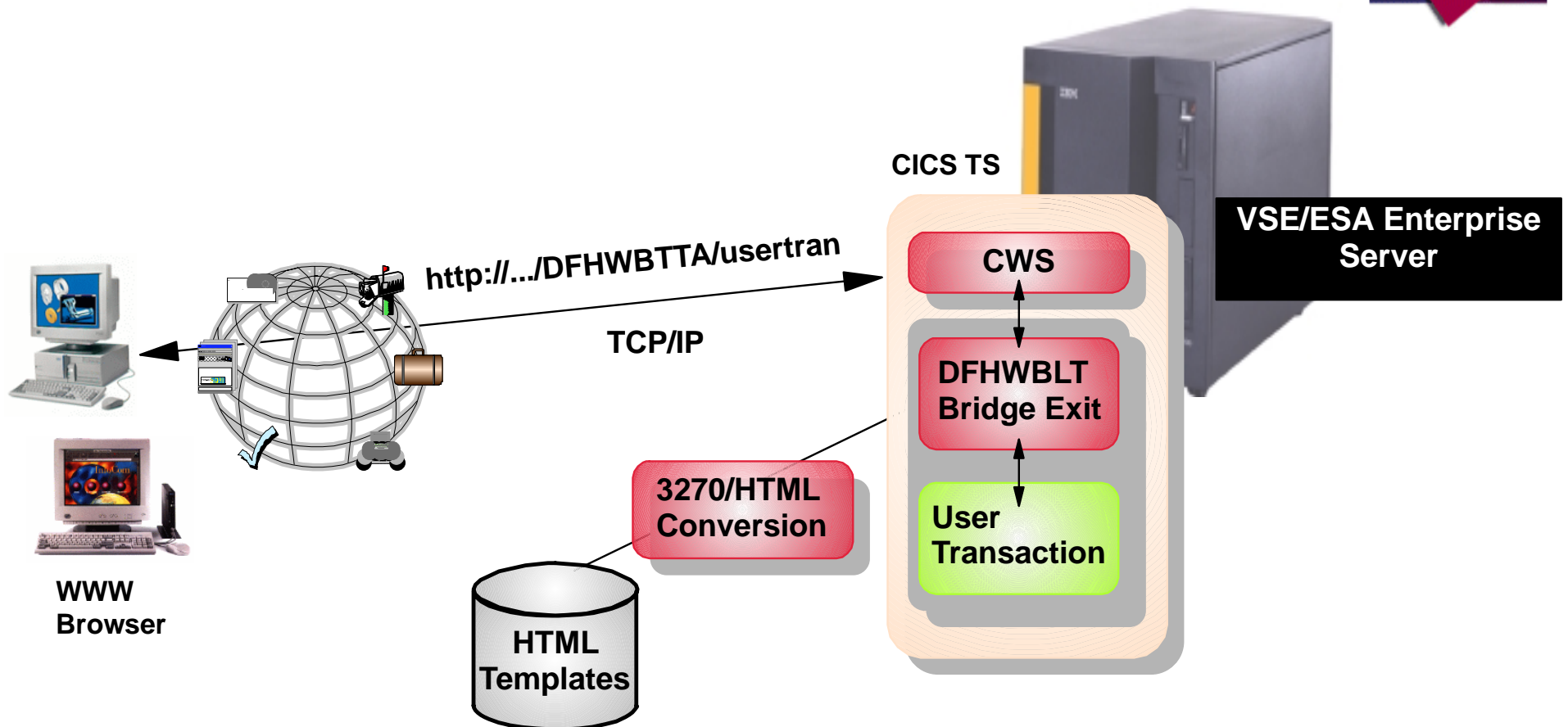


Announced to be available together with VSE/ESA V2.5

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3270 Bridge

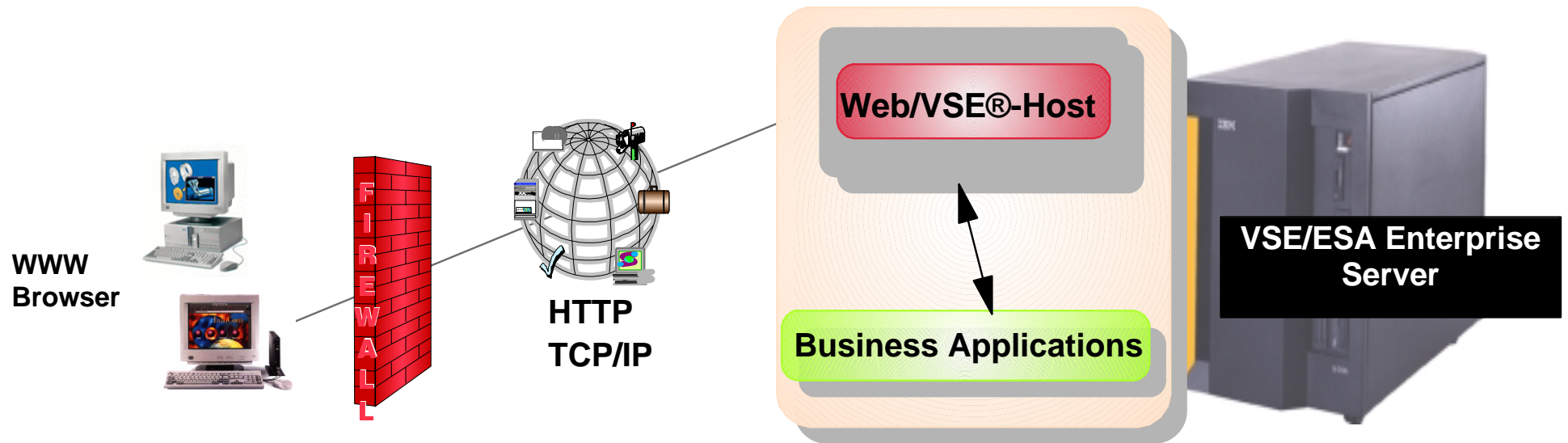
Part of the CICS Transaction Server for VSE/ESA Release 1
Invoke a CICS Transaction from a Web Browser



Announced to be available together with VSE/ESA V2.5

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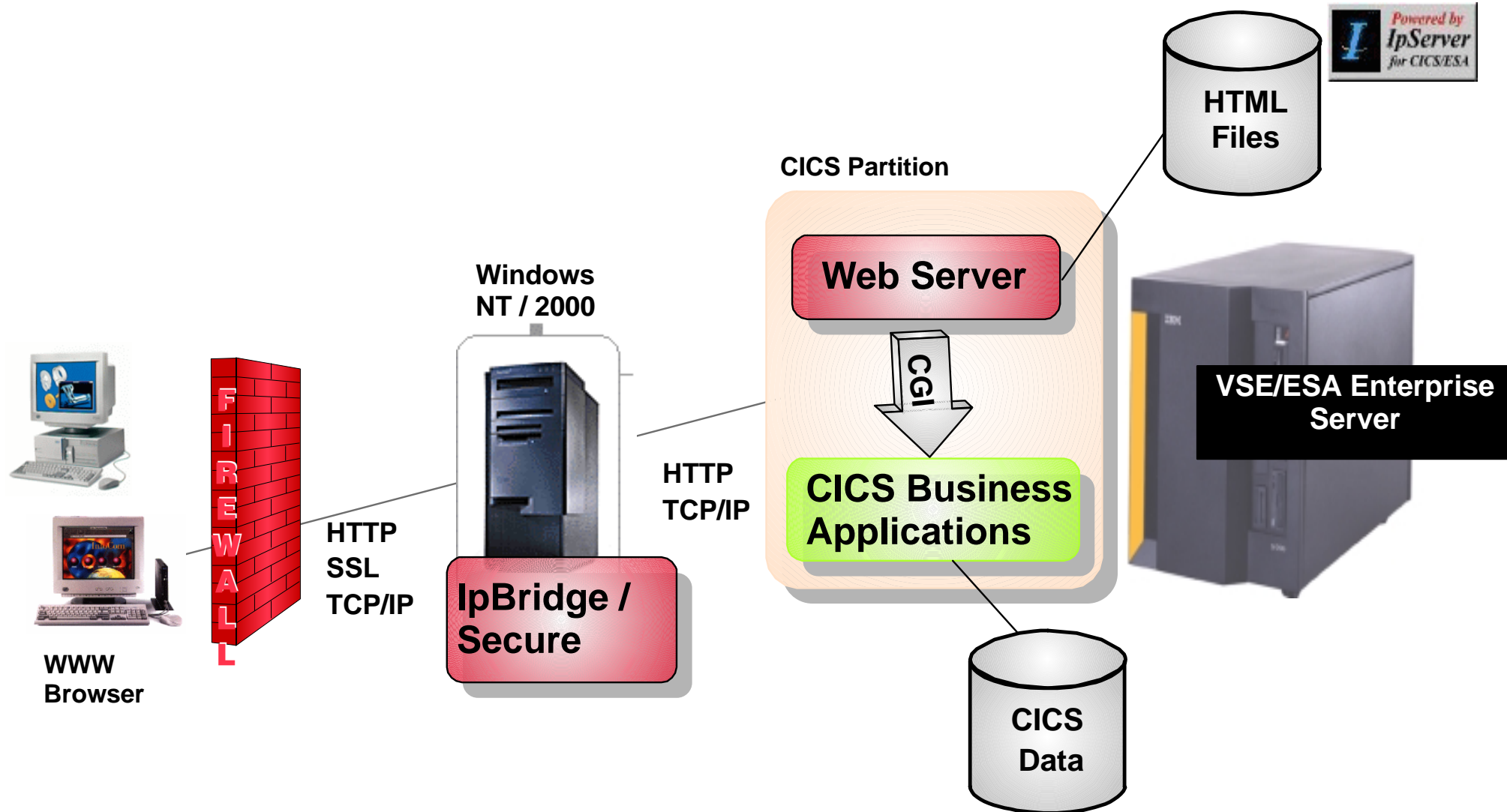
Web/VSE-Host from Intelliware Systems, Inc.



<http://www.vseesa.com>

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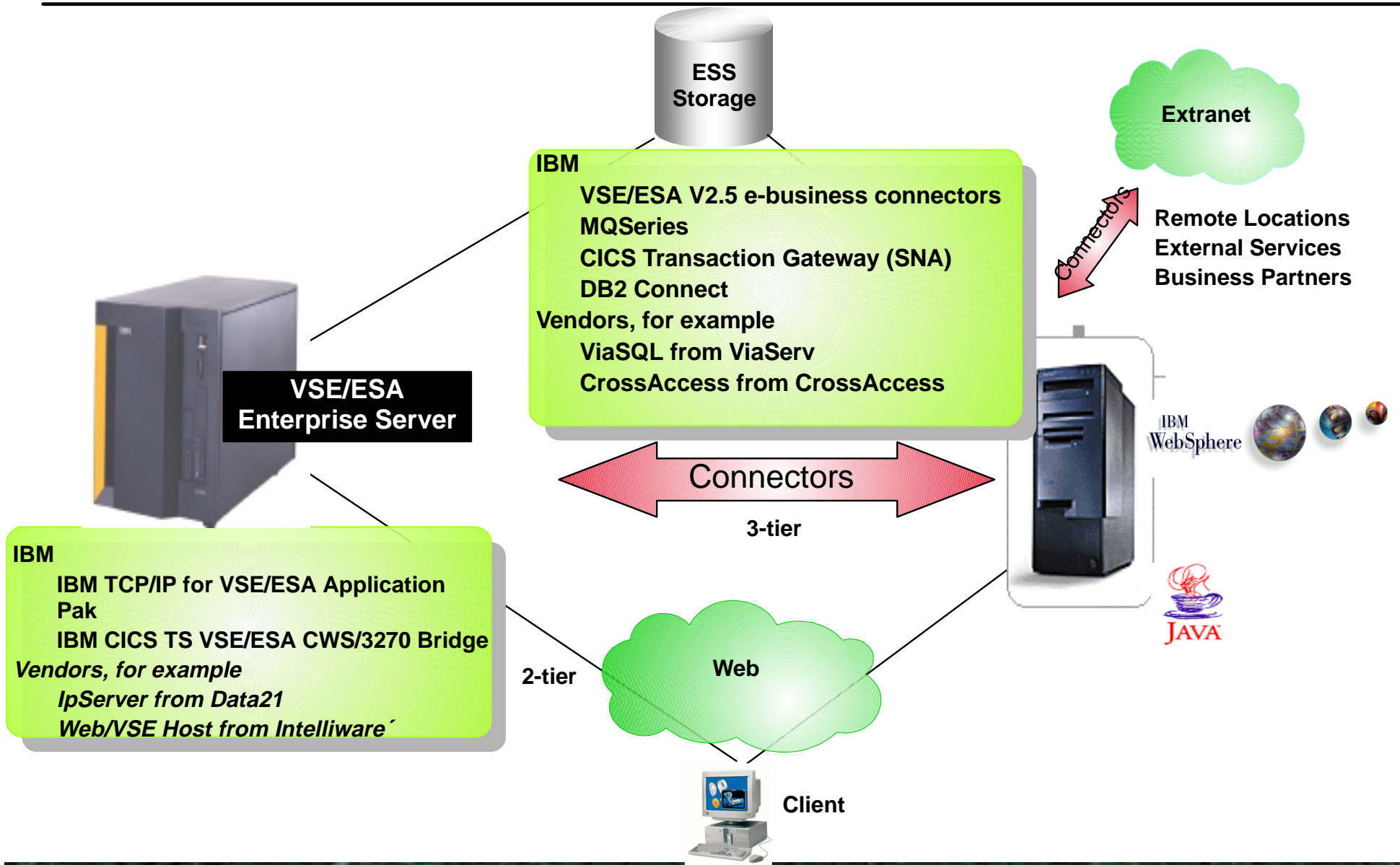
IpServer from Data21, Inc.



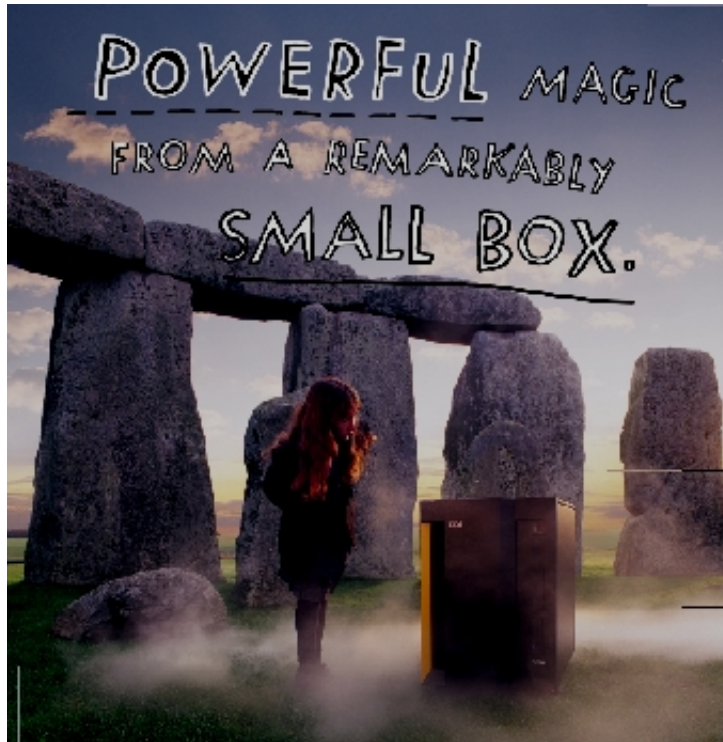
<http://www.data21.com>

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VSE solutions - Summary



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More Information

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More Information on the Web

- **VSE/ESA**

- <http://www.ibm.com/vse>

- **VSE/ESA and e-business**

- <http://www.ibm.com/vse/ebus/home.html>

- **TCP/IP for VSE/ESA**

- <http://www.ibm.com/vse/vsehtmls/tcphome.htm>

- **Application Framework for e-business**

- <http://www.software.ibm.com/ebusiness/>

- **WebSphere Application Server**

- <http://www.software.ibm.com/web servers/appserv/>

- **VisualAge for Java**

- <http://www.ibm.com/software/ad/vajava/>

- **SecureWay Host on-Demand**

- <http://www.ibm.com/software/network/hostondemand/>

- **CICS Transaction Gateway**

- <http://www.software.ibm.com/ts/cics/platforms/internet/tgw30/ctgann30.html>

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More information on the Web

- **MQSeries Family**

- <http://www.software.ibm.com/ts/mqseries/>

- **MQSeries for VSE/ESA**

- <http://www.ibm.com/software/ts/mqseries/platforms/vseesa/>

- **DB2 Family**

- <http://www.software.ibm.com/data/db2/>

- **DB2 Server for VSE & VM**

- <http://www.software.ibm.com/data/db2/vse-vm/>

- **Cross Access, Inc.**

- <http://www.crossaccess.com>

- **Data21, Inc.**

- <http://www.data21.com>

- **Intelliware Systems, Inc.**

- <http://www.vseesa.com>

- **ViaServ, Inc.**

- <http://www.viaserv.com>

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Related Redbooks

- **TCP/IP in General**

- TCP/IP Tutorial and Technical Overview - GG24-3376

- **TCP/IP for VSE/ESA**

- The native TCP/IP Solution for VSE - SG24-2041
- Getting Started with TCP/IP for VSE/ESA - SG24-5626
- VSE as a Webserver - SG24-2040

- **e-business and VSE/ESA**

- e-business solutions for VSE/ESA - SG24-5662

- **WebSphere Application Server**

- Introduction to WebSphere Application Server - SC09-4430
- Developing an e-business Application for the WebSphere Application Server-SG24-5423
- WebSphere Application Servers: Standard and Advanced Editions - SG24-5460



Related Redbooks



● VisualAge for Java

- VisualAge for Java Enterprise Version 2: Data Access Beans - Servlets - CICS Connector - SG24-5265
- Connecting the Enterprise to the Internet with MQSeries and VisualAge for Java - SG24-2144
- IBM WebSphere and VisualAge for Java Database Integration with DB2, Oracle, and SQL Server - SG24571

● CICS related

- Revealed! Architecting Web Access to CICS - SG24-5466
- External Presentation Interface (EPI): New VSE/ESA Support for CICS - SG24-2038
- Revealed! CICS Transaction Gateway with more CICS Clients unmasked - SG24-5277

● Host on-Demand

- IBM SecureWay Host on-Demand Enterprise Communications in the Era of Network Computing - SG24-2149,

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