



IBM System z Technical Conference Dresden – Germany – May 5-9



z/VSE Enterprise Modernization

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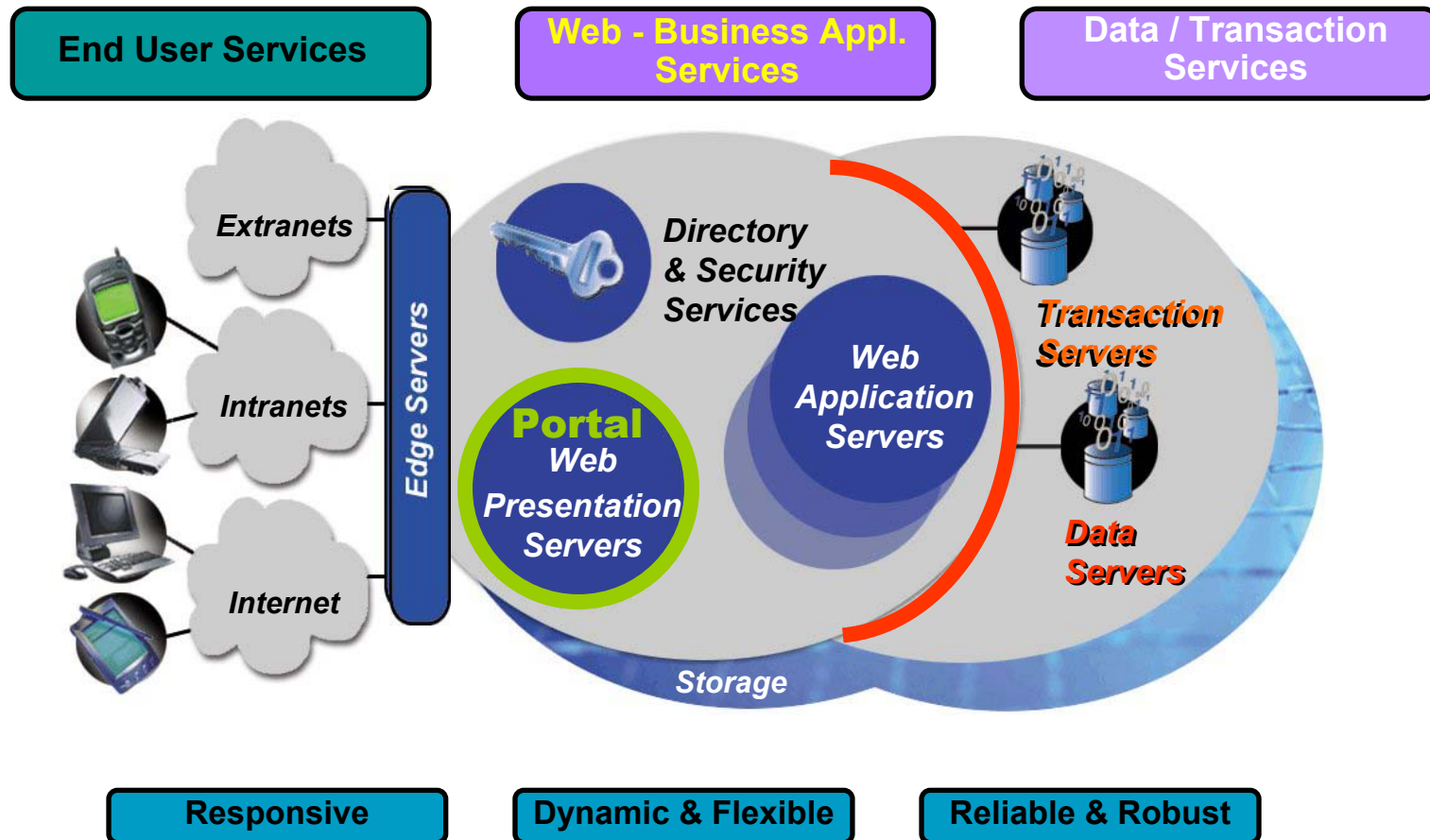
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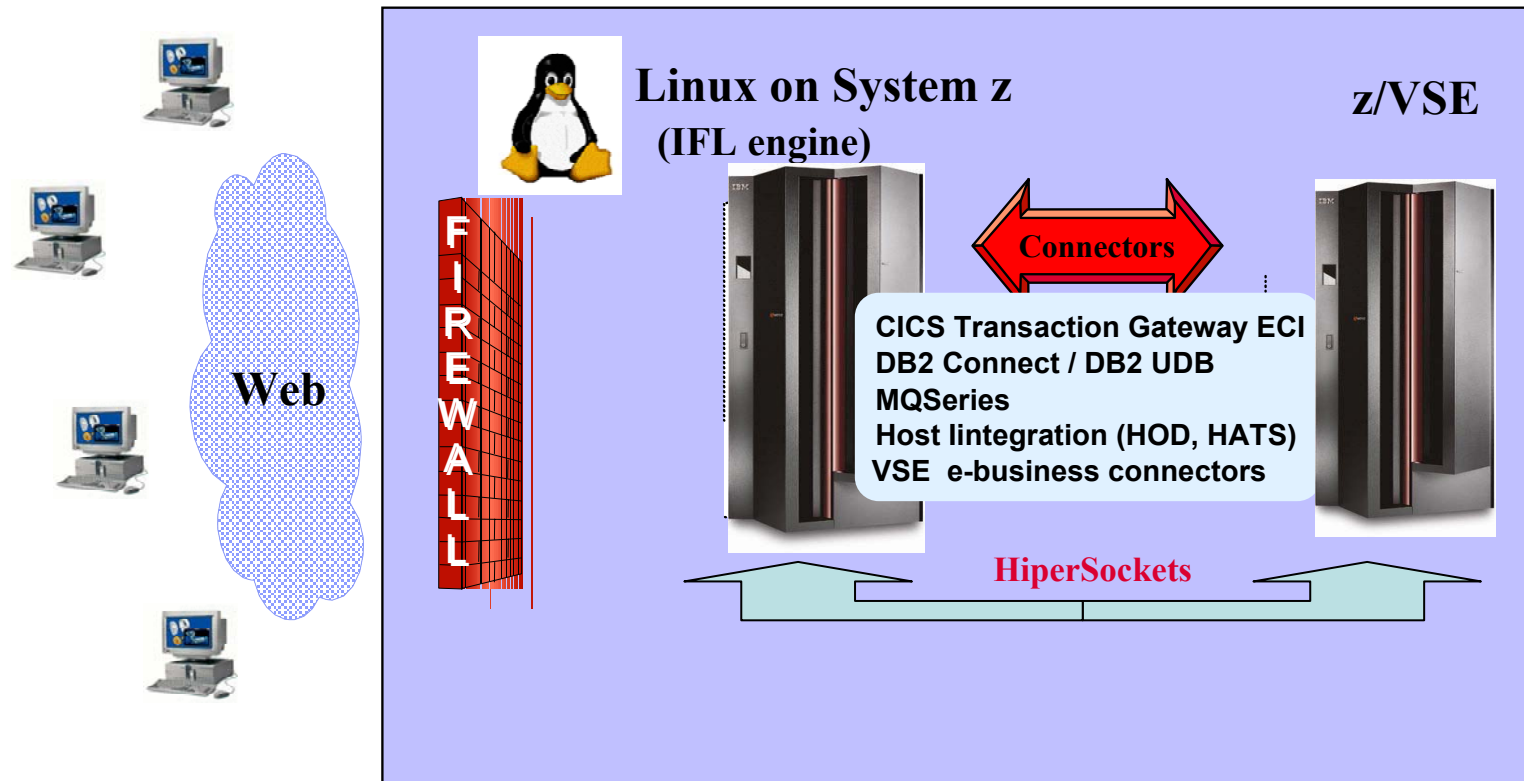
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Infrastructure



Integration of z/VSE with Linux on zSeries



Agenda: Connector Update

(1) Data integration

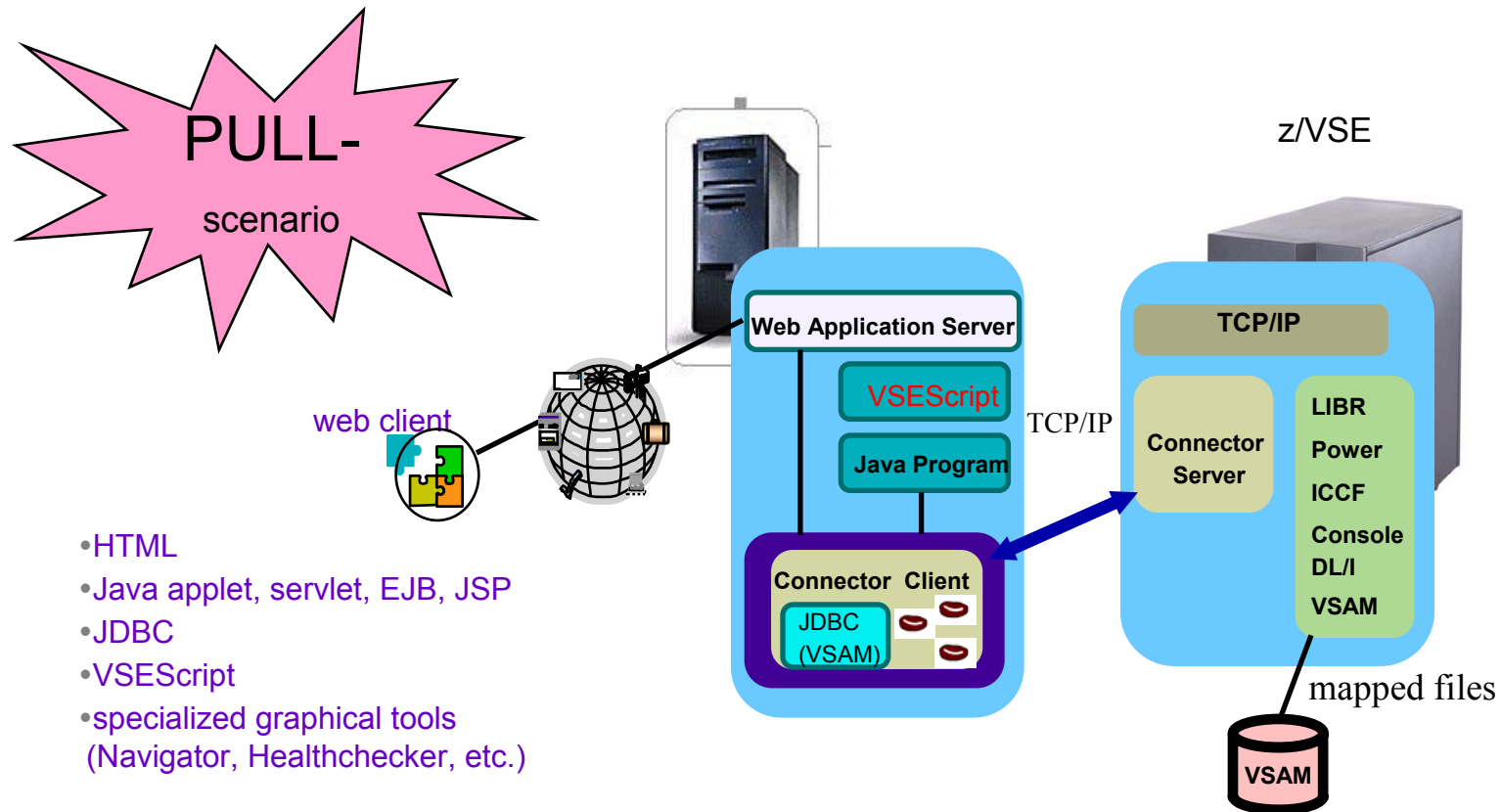
(2) Application integration

1. Connector Update – Data integration

A. PULL scenario - VSE Connector
- access VSE resources from remote

B. PUSH scenario – VSE VSAM Redirector
- VSE applications to access remote data

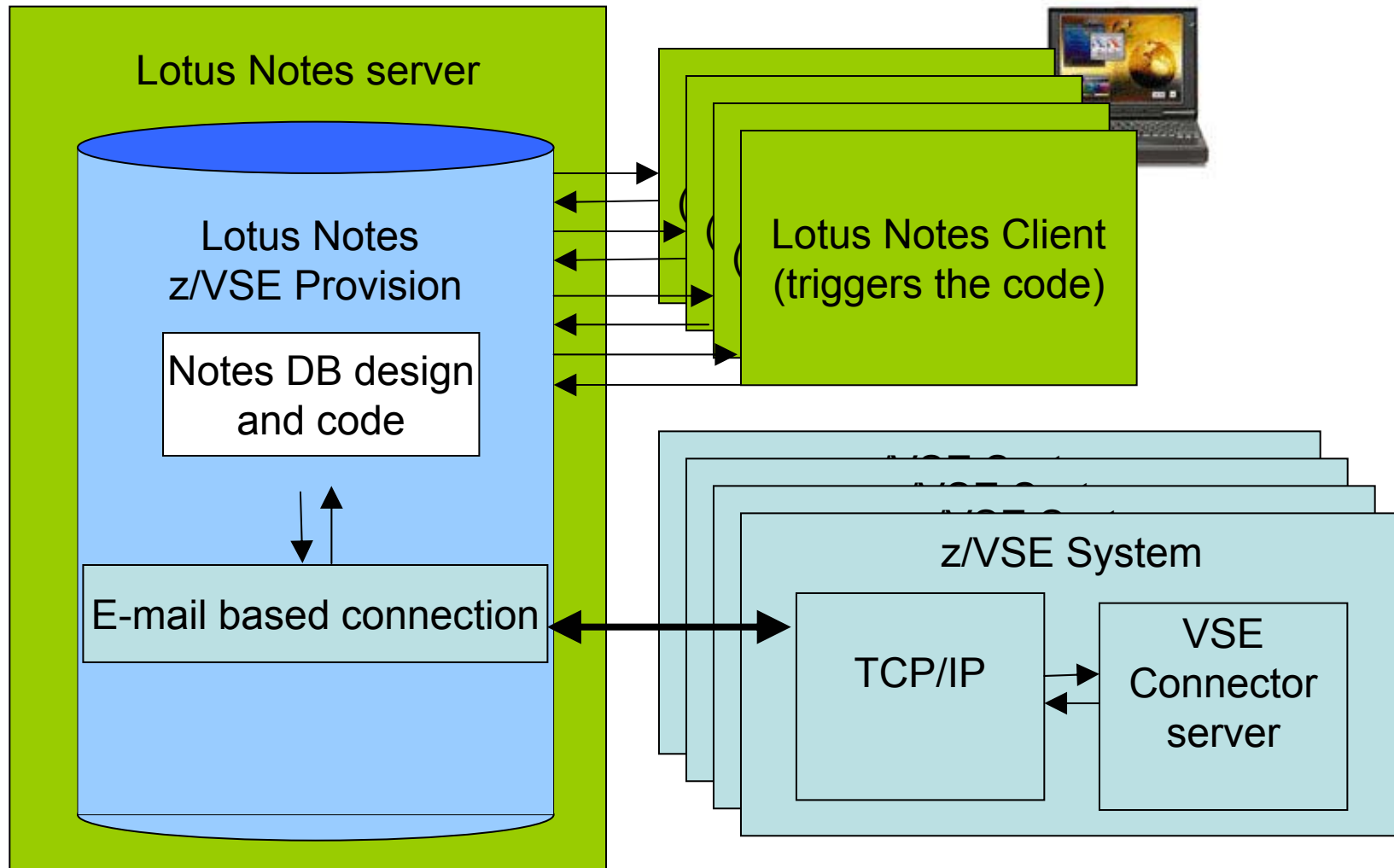
(A) PULL scenario: Real time access to z/VSE Resources with the Java-Based Connector



- HTML
- Java applet, servlet, EJB, JSP
- JDBC
- VSEScript
- specialized graphical tools (Navigator, Healthchecker, etc.)

- ▶ real time access to VSE resources from remote systems ,
 - ▶ real time access to VSAM data, Librarian
 - ▶ monitoring and analyzing possibilities using console or statistic values

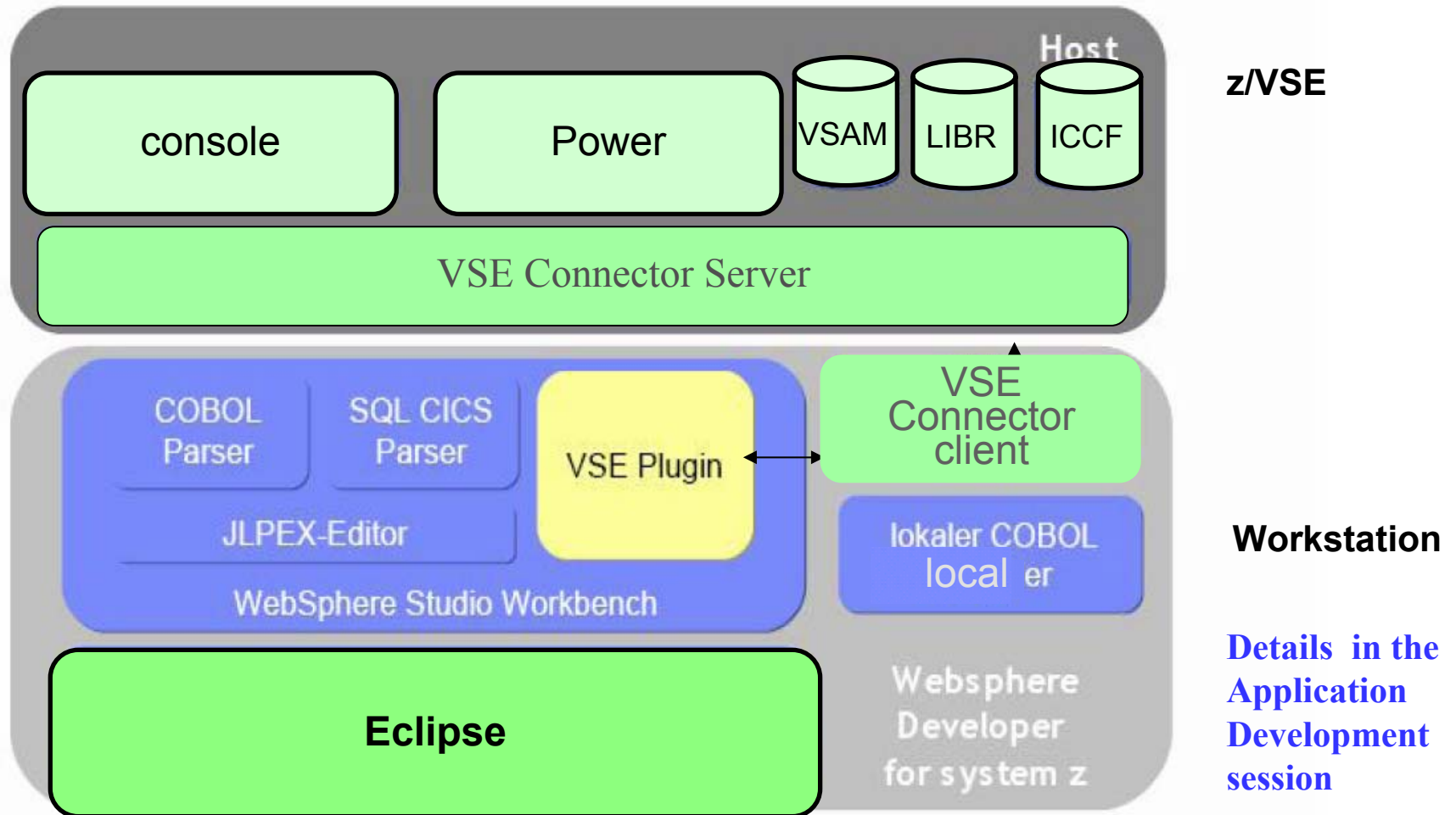
Lotus Notes and z/VSE interaction



The IBM Development environment for the enterprise

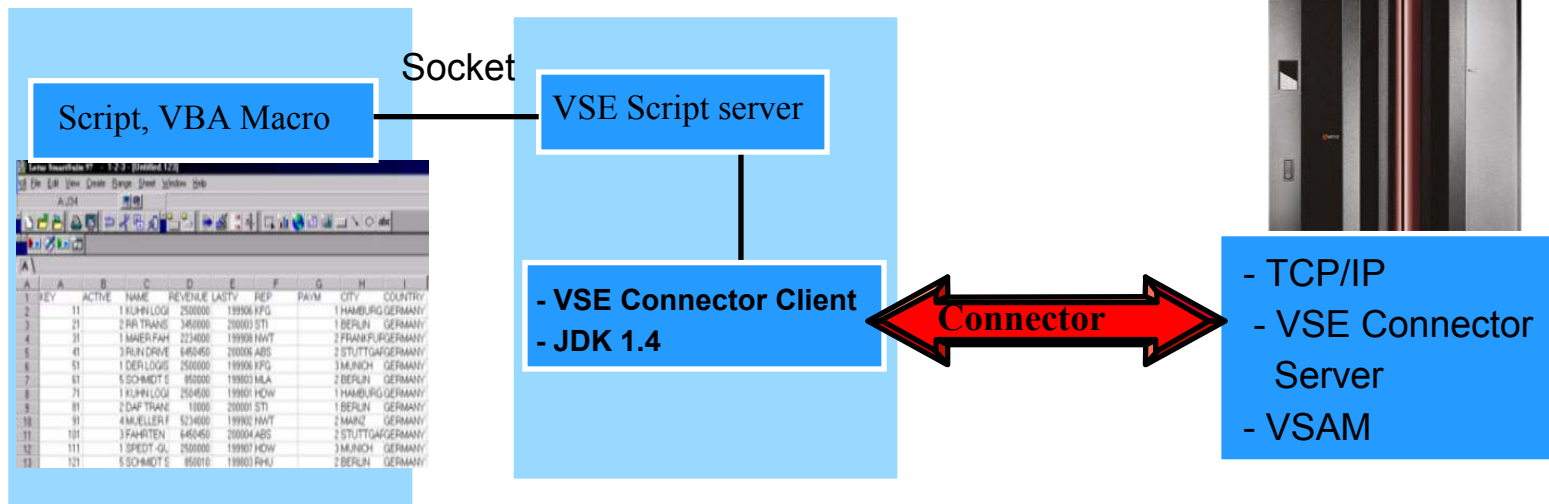
Rational Developer for System z (RDZ)

with z/VSE Development Plug-in



Script access to VSAM data from remote systems using non-Java methods

Enduser view

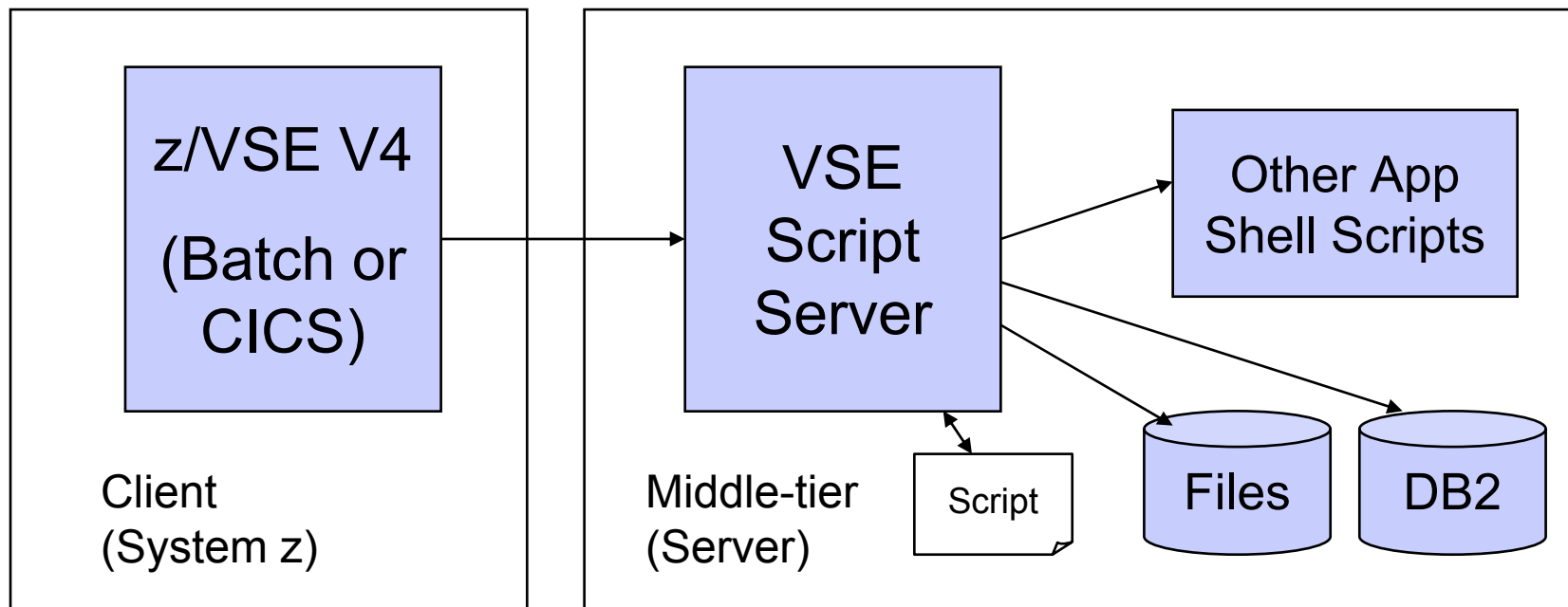


Advantages:

- ▶ Individual requests (Statistics)
 - ▶ Security: Userid/Password for VSE
- ▶ Centralization, using macros from server
- ▶ Automation (automatically create Office files/reports)

New with z/VSE V4 – remote script invocation from VSE

- With z/VSE V4 we provide a Script client that runs on VSE
 - Allows to start scripts on remote systems



Solutions with PULL scenario

- Access VSAM data from Linux/UNIX/Windows with Web applications
- Access DL/I data from Java applications or Web applications
- Access the data from Office applications via SCRIPTS
- Access Librarian for Editing members with modern Editors
- Access POWER queues and look at the members and Reports
- Generate dynamic JOBS from a Java environment and get back
- drive remote applications/processes from VSE with VSE Script

1. Connector Update – Data integration

A. PULL scenario - VSE Connector

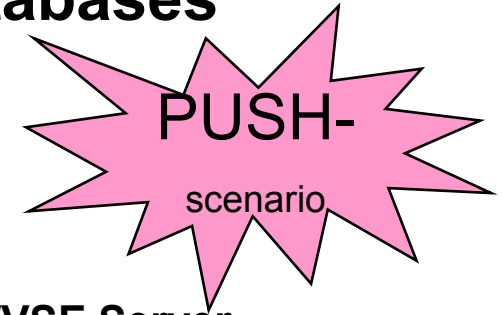
A. - access VSE resources from remote

B. PUSH scenario – VSE VSAM Redirector

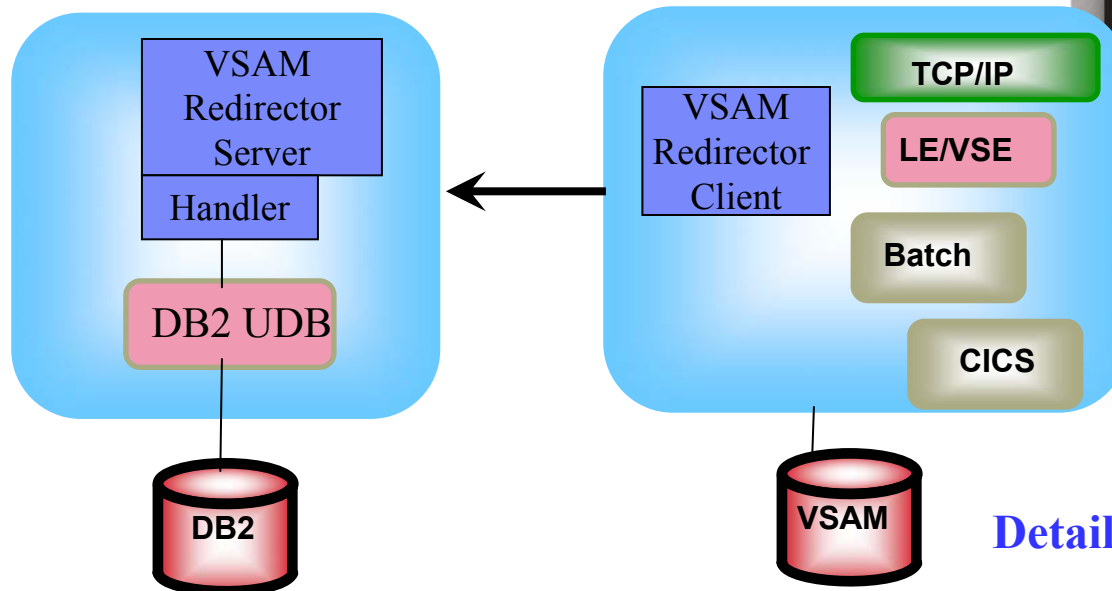
A. - VSE applications to access remote data

(B)PUSH scenario: VSE/VSAM applications, access remote relational databases

- (1) Real time access VSAM to relational databases
 - a) synchronization (two phase commit of VSAM and DB2)
 - b) Real time access to DB2 (no VSAM access anymore)
- (2) VSE local data collection for VSAM
 - a) Capture Exit and Incremental FTP, processing
 - b) MQ Exit and MQ Series solutions



z/VSE Server

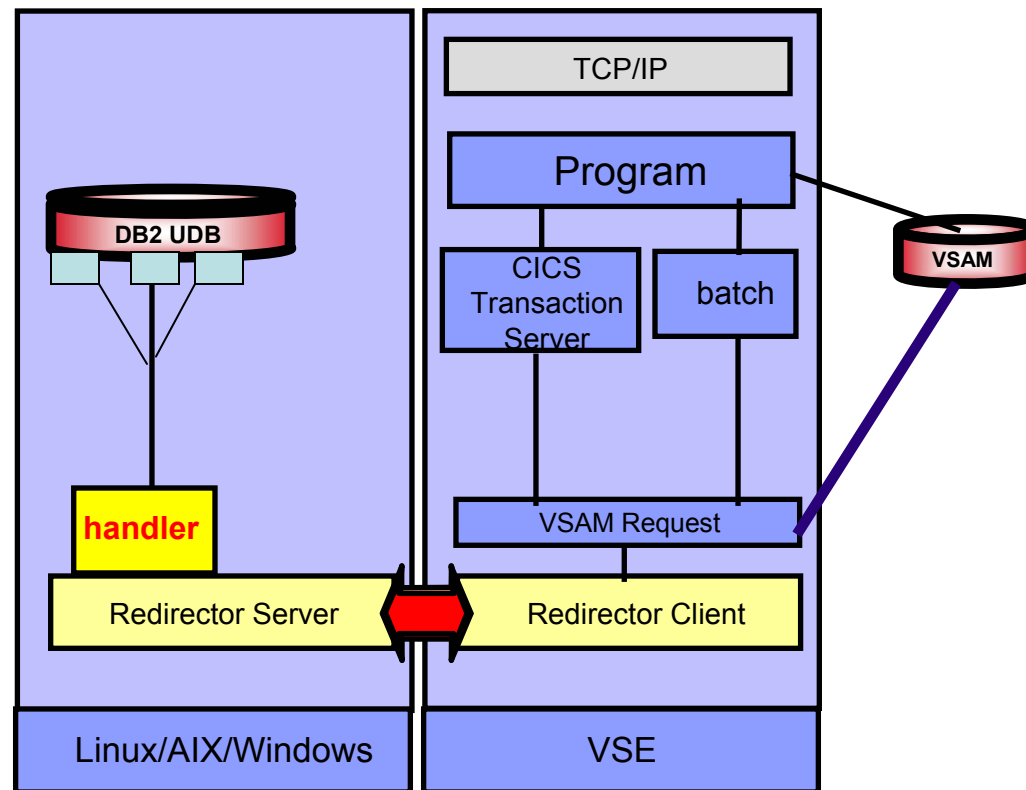


Details in Redirector session

Data synchronization – Normalization

VSE/VSAM Redirector can store VSAM data normalized

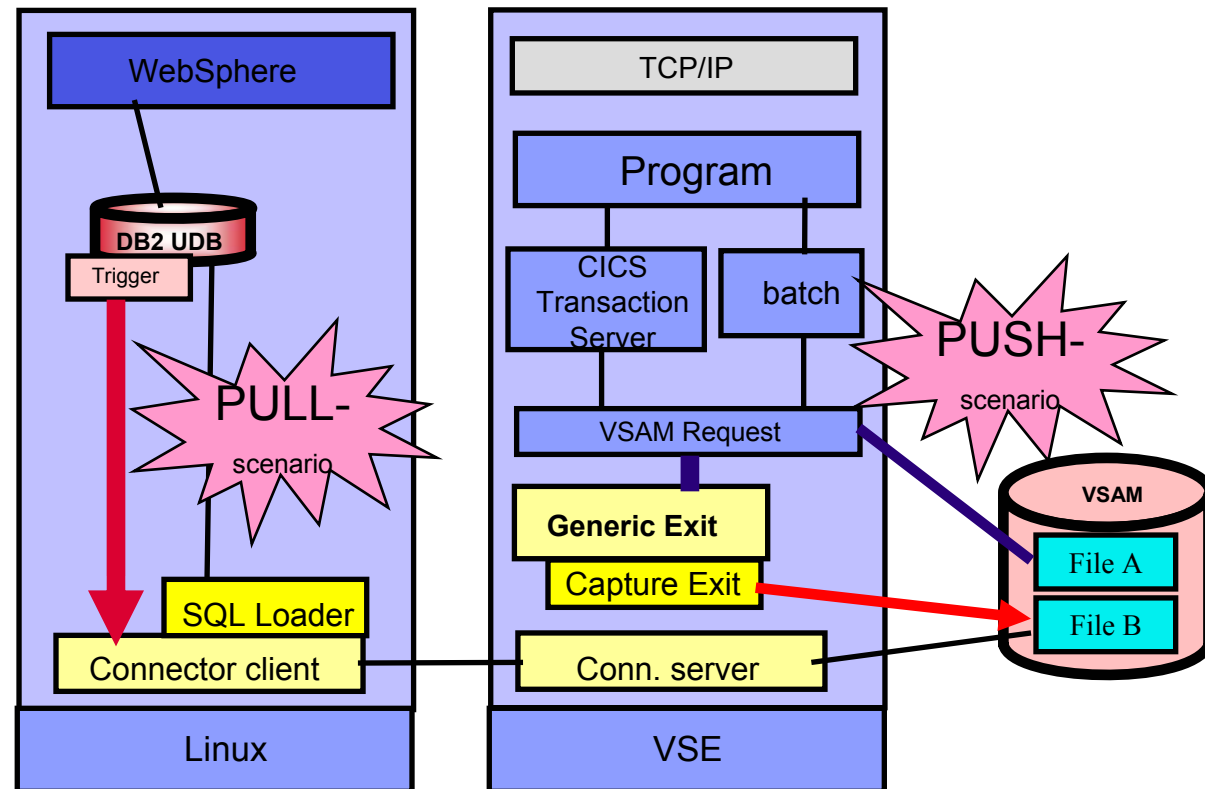
- ▶ No changes to the existing VSE applications
- ▶ **The new Redirector Handler in z/VSE 4.1 can store 'VSAM' data in multiple DB Tables .**



- ▶ Applications on VSE should be able to access DB2 data on Linux
- ▶ Population of DB2 UDB on Linux with VSAM using VSAM Redirector. (VSAM Redirector is part of VSE)

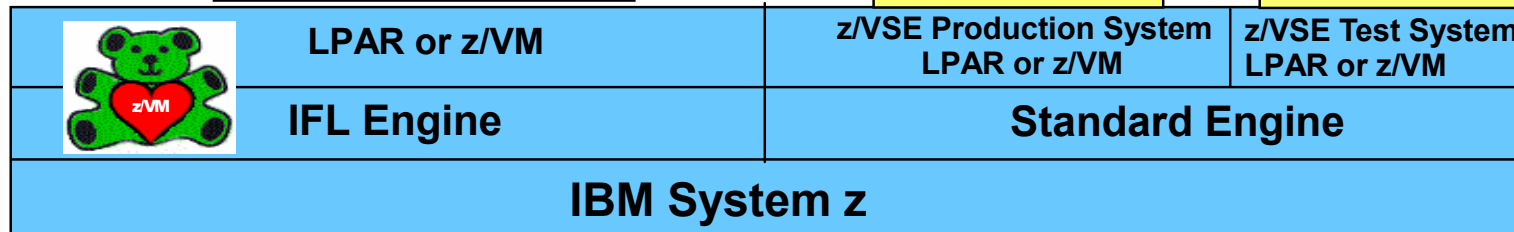
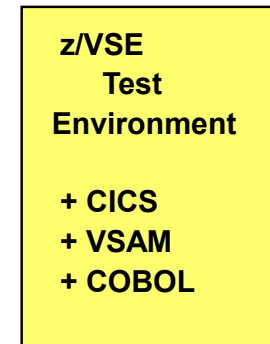
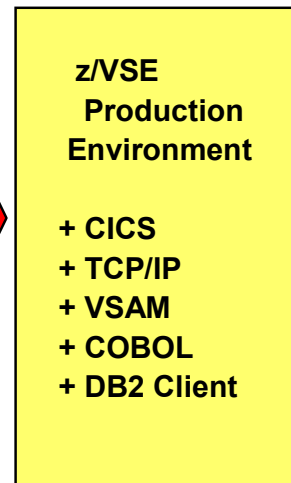
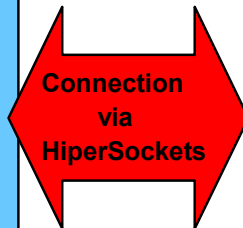
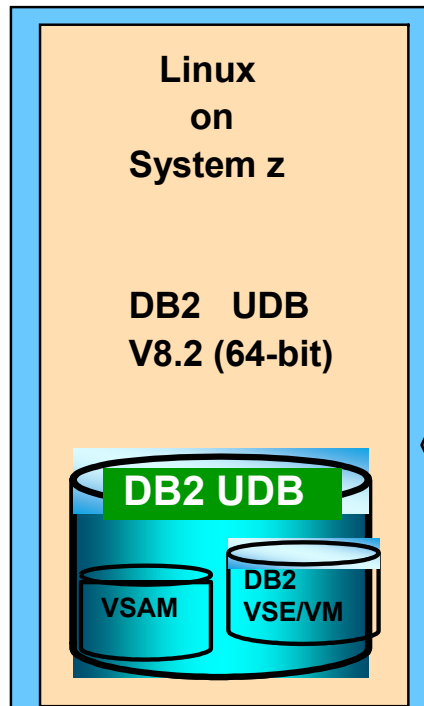
Solution for FTP Replacement: Bidirectional updates with VSE connectors

- ▶ With VSAM Capture – the performance of the VSE production system protected
- ▶ The changes are processed asynchronously and not influencing the production system

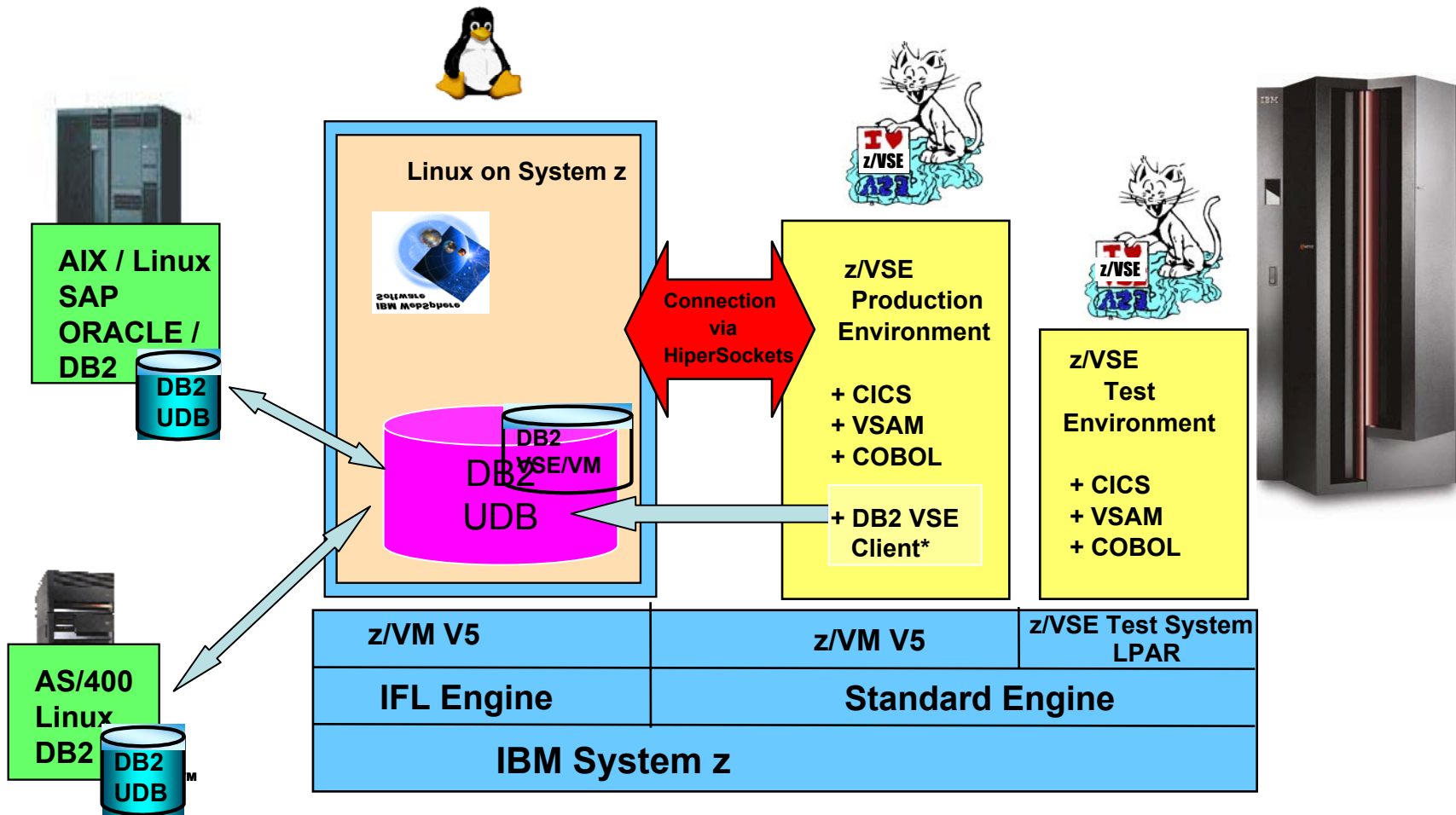


- ▶ Collect the changed records in a separate VSAM file
 - ▶ Possibility of cleansing
- ▶ Process them – with the VSE Connectors

Solution: Common Data Store with DB2 UDB on Linux on System z



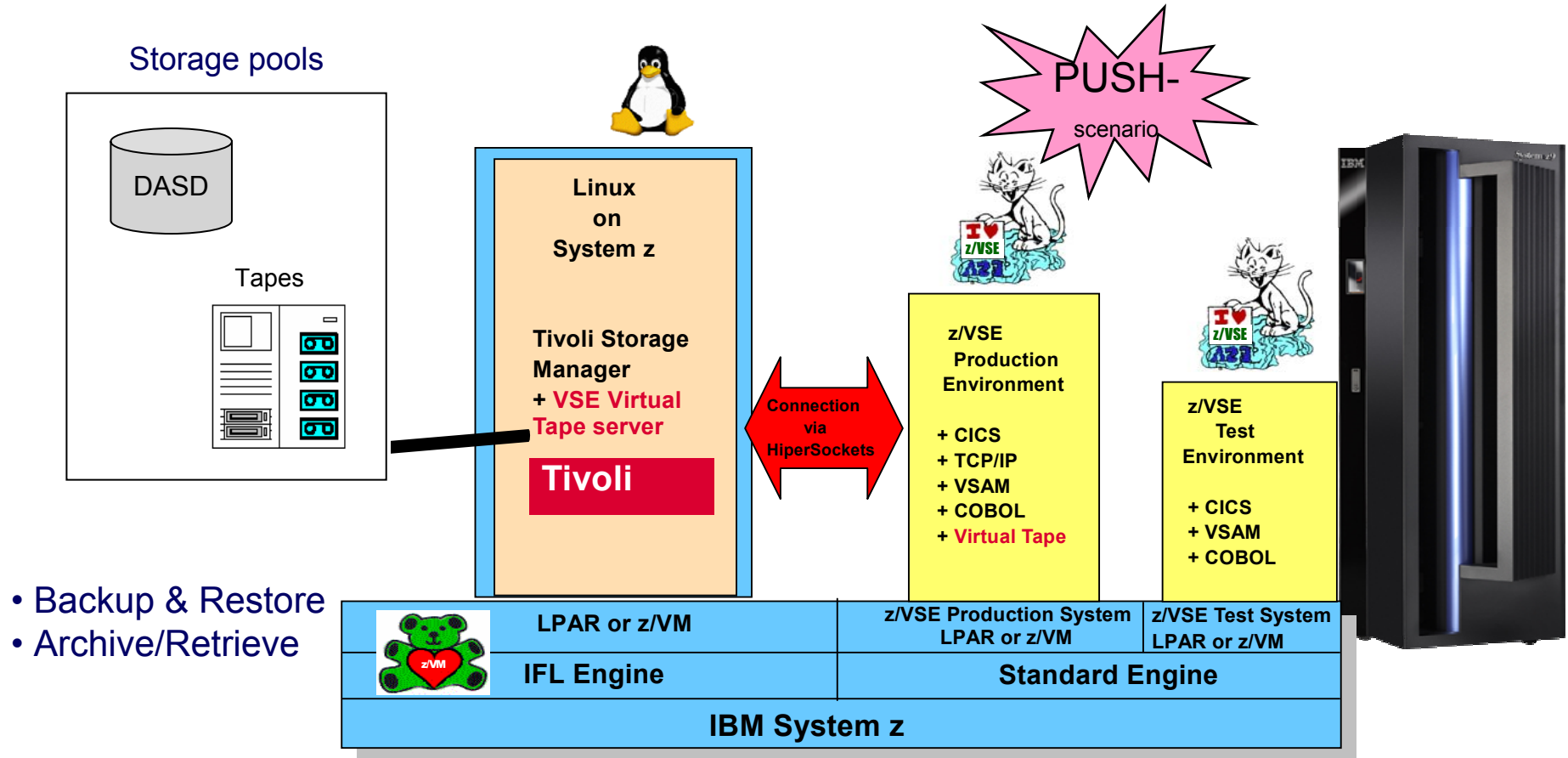
DB2 Scenarios – with DB2 UDB on Linux



(*) DB2 VSE Client – the client functionality only, can be obtained with [PRPQ P10154](#) or **DB2 7.5 Client Edition**

z/VSE 4.1 – Backup integration

Integration of z/VSE with Tivoli Storage Manager (TSM)



- Backup & Restore
- Archive/Retrieve

More Details in the z/VSE Resiliency session and VTAPE update.

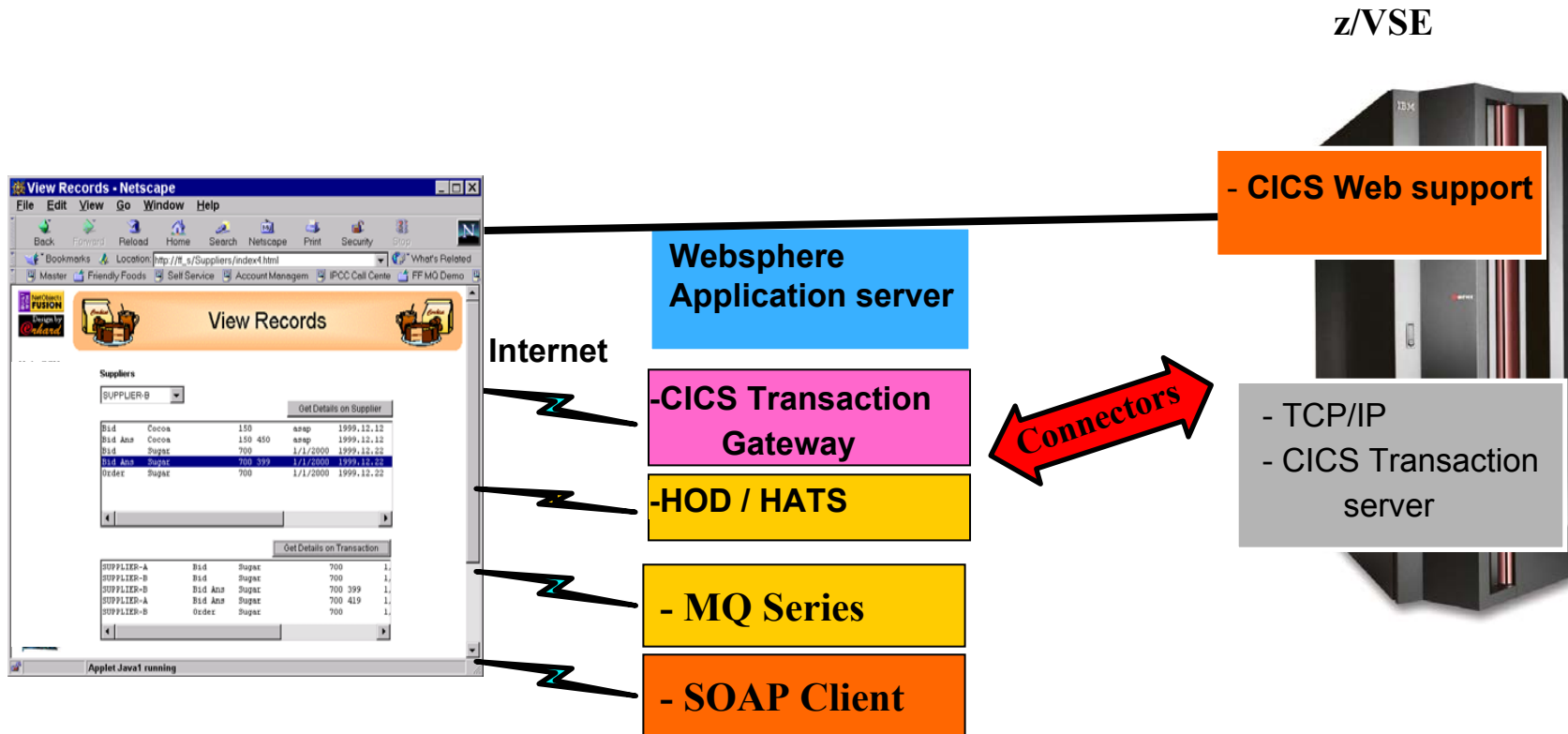
Agenda: Connector Update

(1) Data integration

(2) Application integration

- ▶ **Modernize application interface**
- ▶ **Access applications**
- ▶ **Integrate applications**

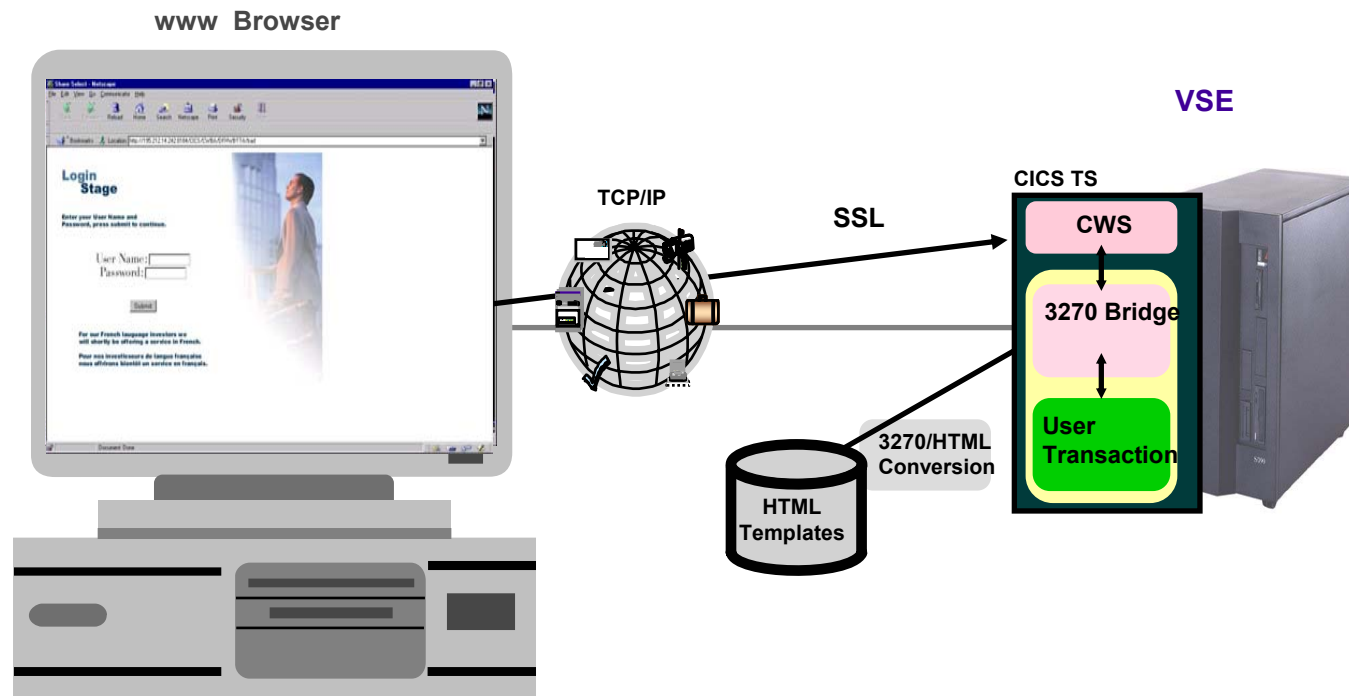
z/VSE application integration with the Web



- ▶ Enable the access to core applications with web technologies
- ▶ No change to the core applications
- ▶ Consistent development interfaces (Java based)

Direct access to VSE transactions via browser

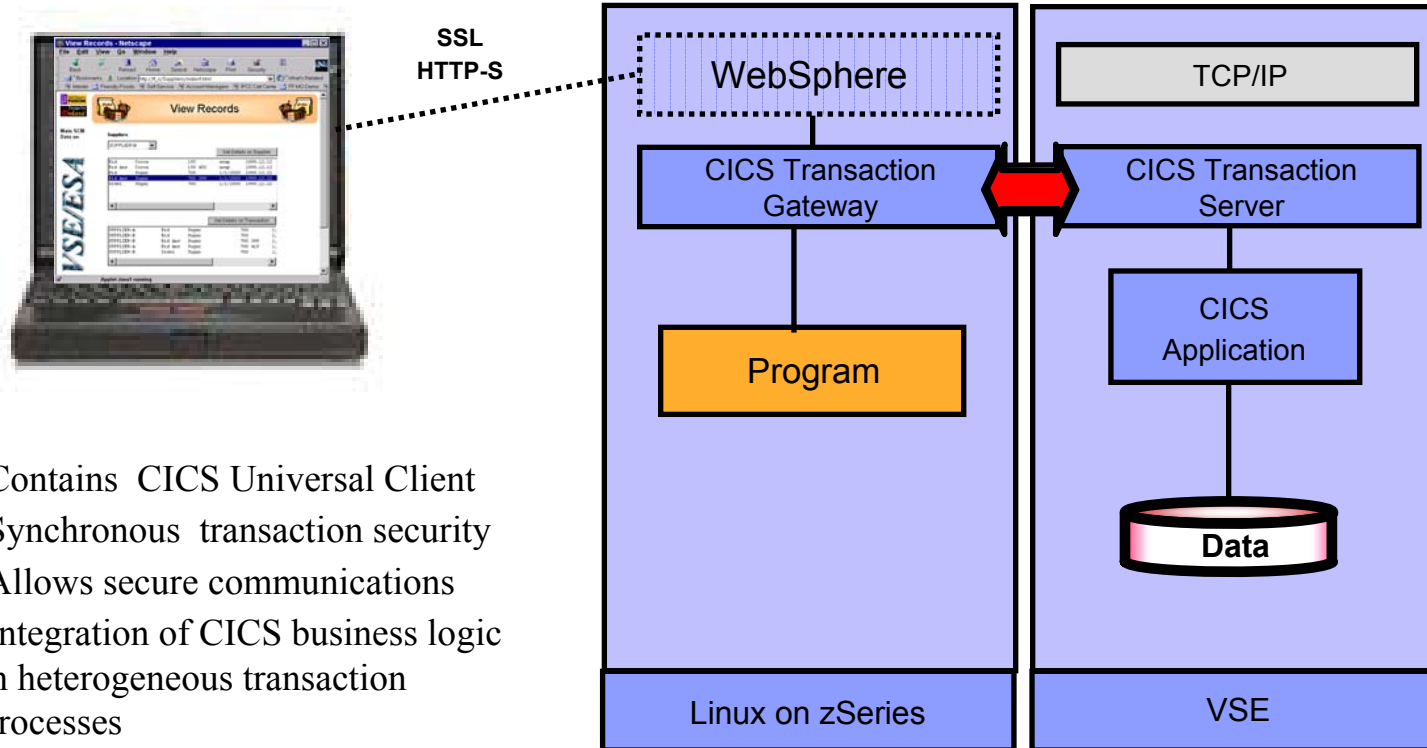
IBM CICS Web Support - Components



- ▶ direct access to VSE transactions via web Browser
- ▶ Without the need of a web server on VSE

Integration of VSE transaction processes

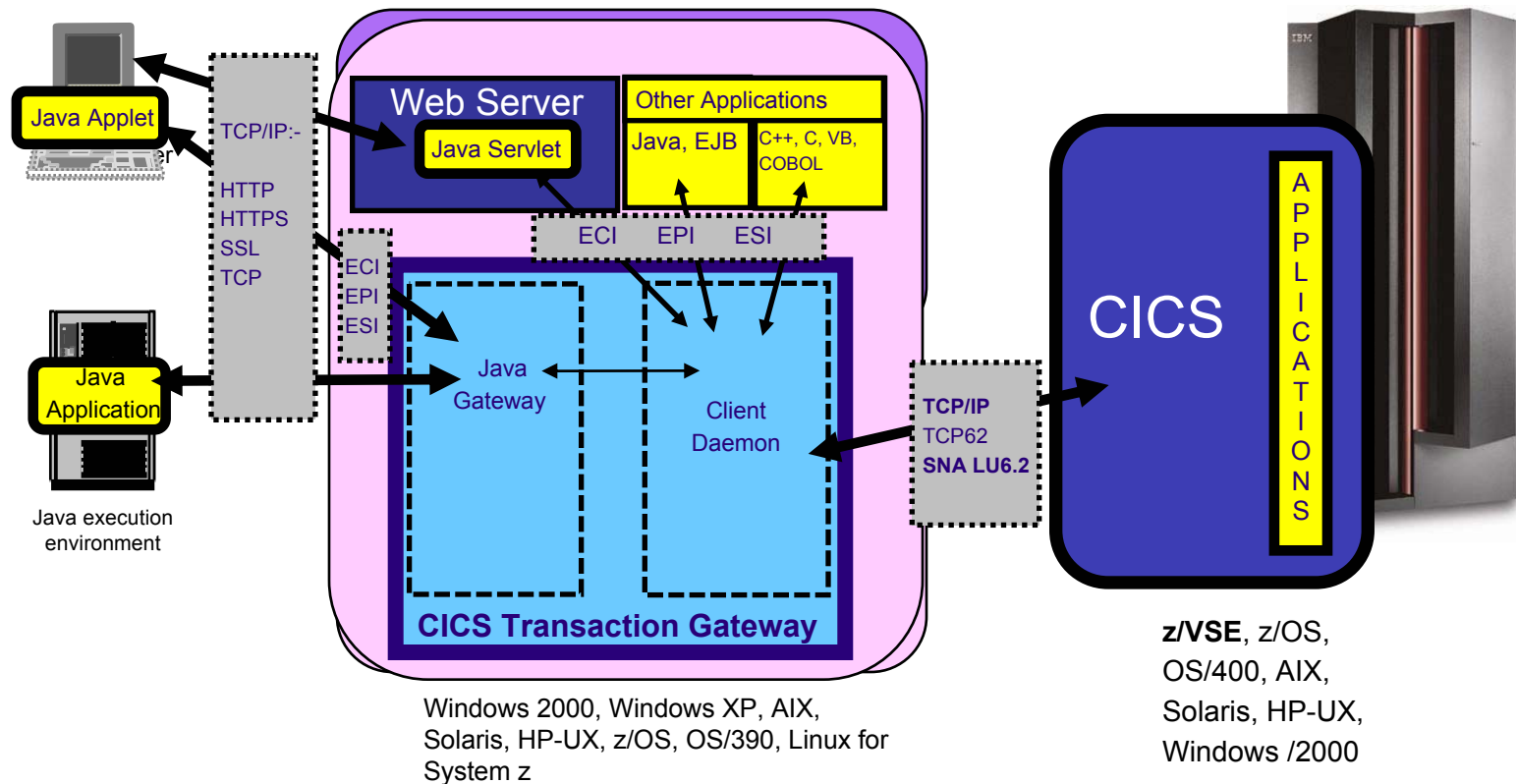
IBM CICS Transaction Gateway



- ▶ Contains CICS Universal Client
- ▶ Synchronous transaction security
- ▶ Allows secure communications
- ▶ Integration of CICS business logic in heterogeneous transaction processes

Integration of VSE transactions in distributed processes

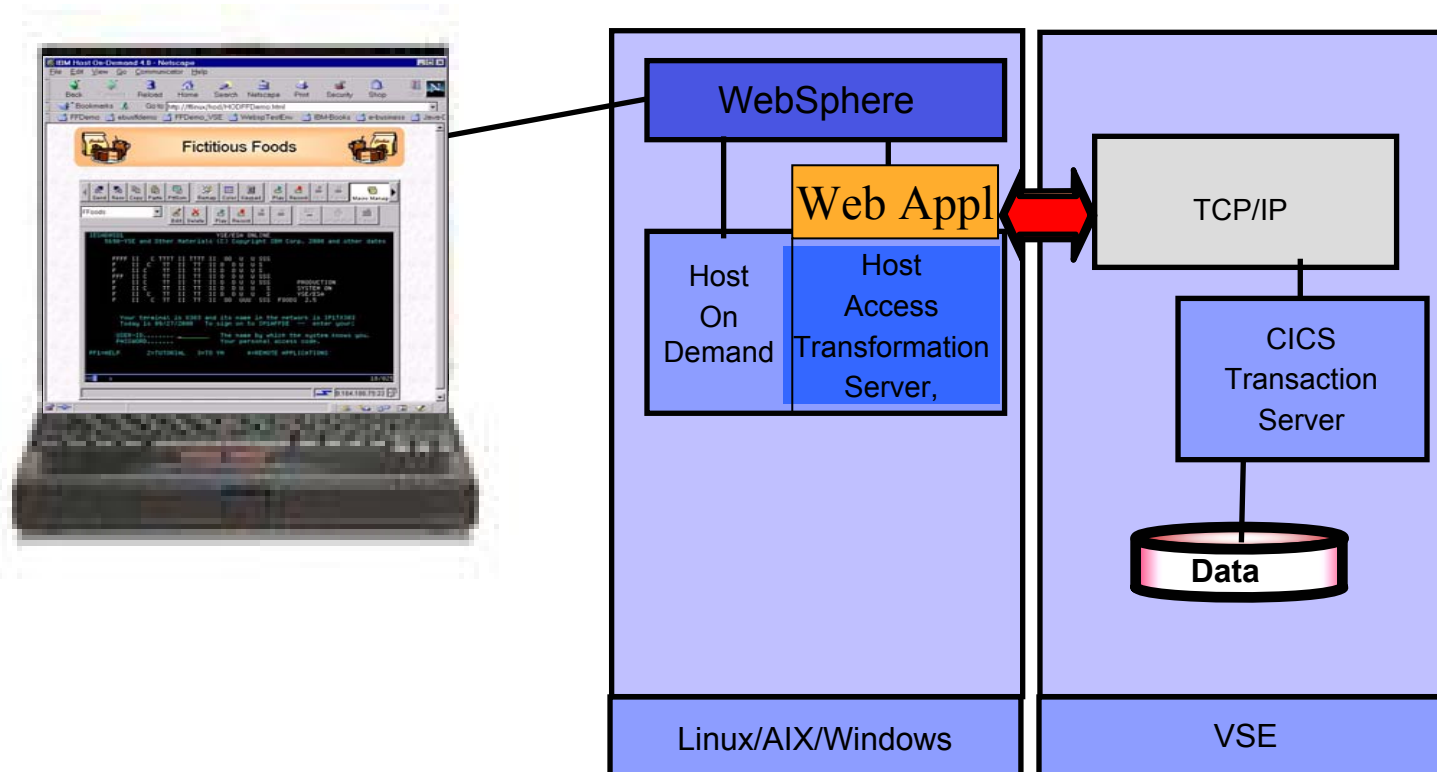
CICS Transaction Gateway (CTG) - Components



- ▶ **Synchronous transaction security**
- ▶ **Allows secure communications**
- ▶ **Integration of CICS business logic in heterogeneous transaction processes**
- ▶ **Workload Manager integrated in CTG**

General access to VSE via browser

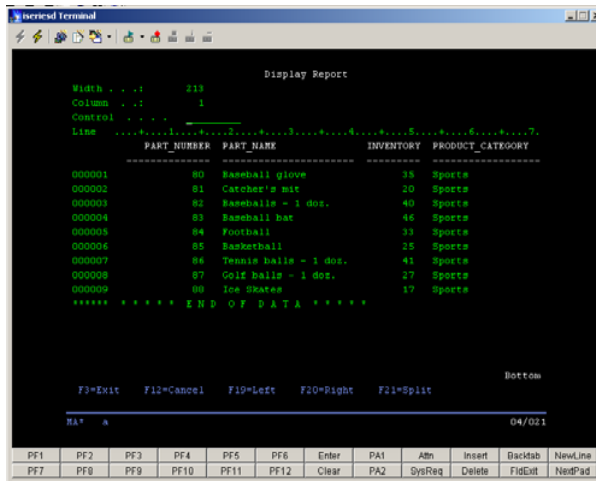
WebSphere host Integrator - Implementation



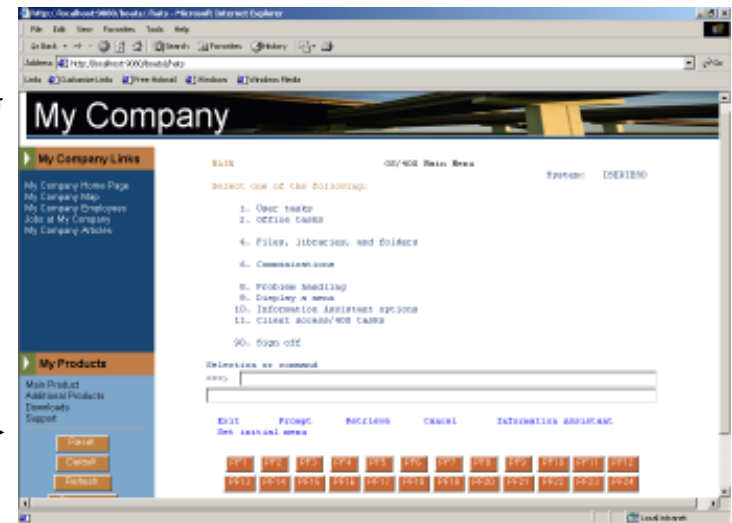
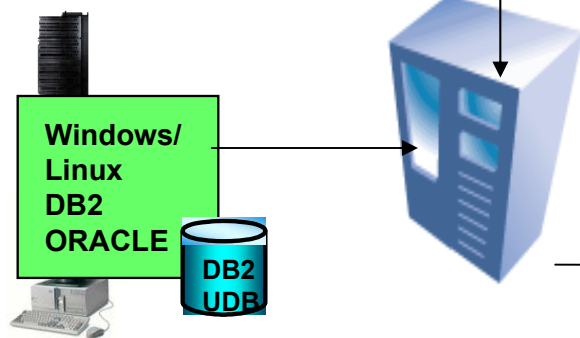
- ▶ Access to VSE using a browser
- ▶ NO 3270 Software needed for client
- ▶ No changes in VSE required

Application Integration with Host Access Transformation Services (HATS)

- No software download to the client
- Web Services on the fly
- Integration with distributed applications
- **Web Service on the fly**



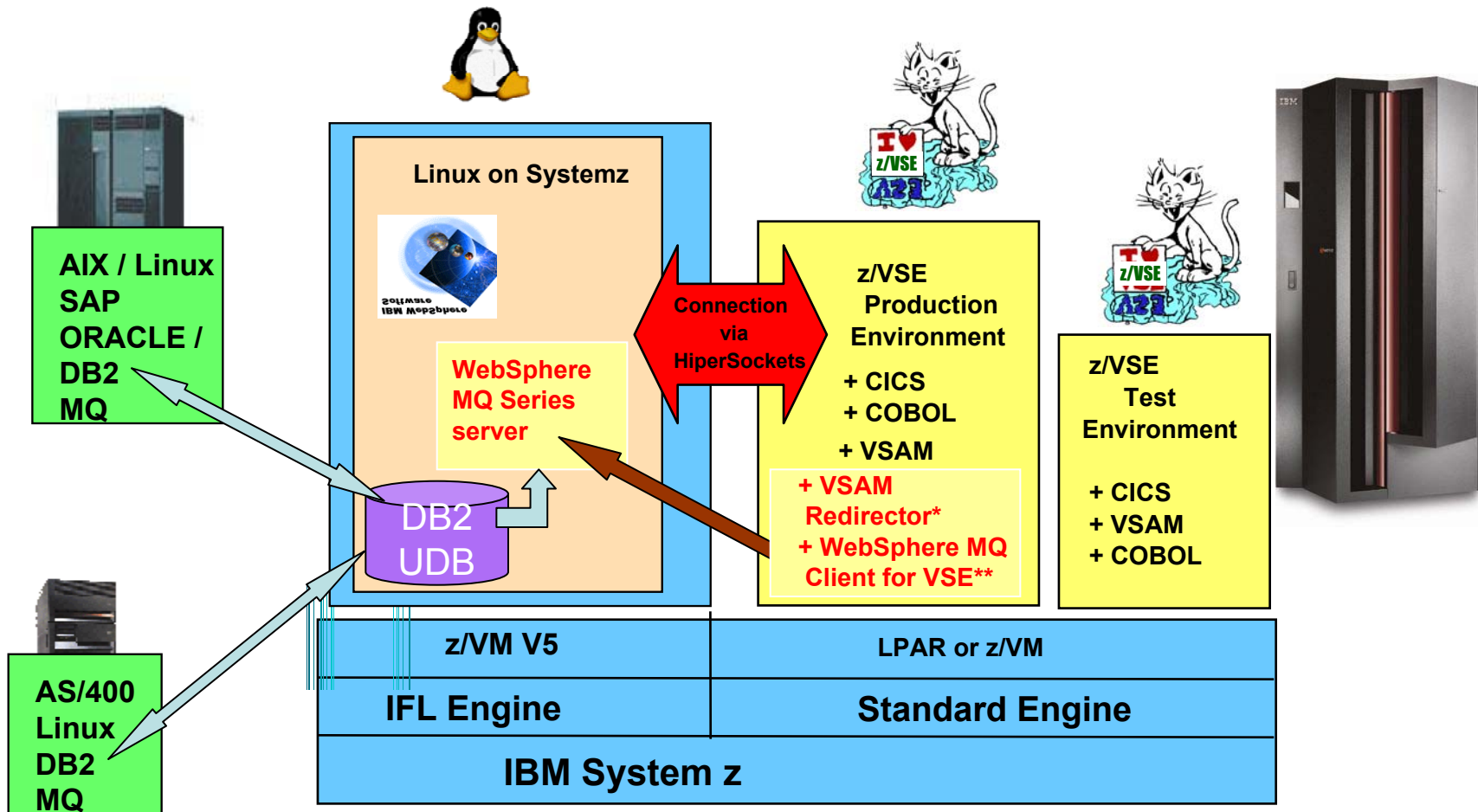
3270 or 5250 data stream



Screen transformation rules running on WebSphere Application Server

HTML in a Browser

WebSphere MQ Series Solutions with z/VSE

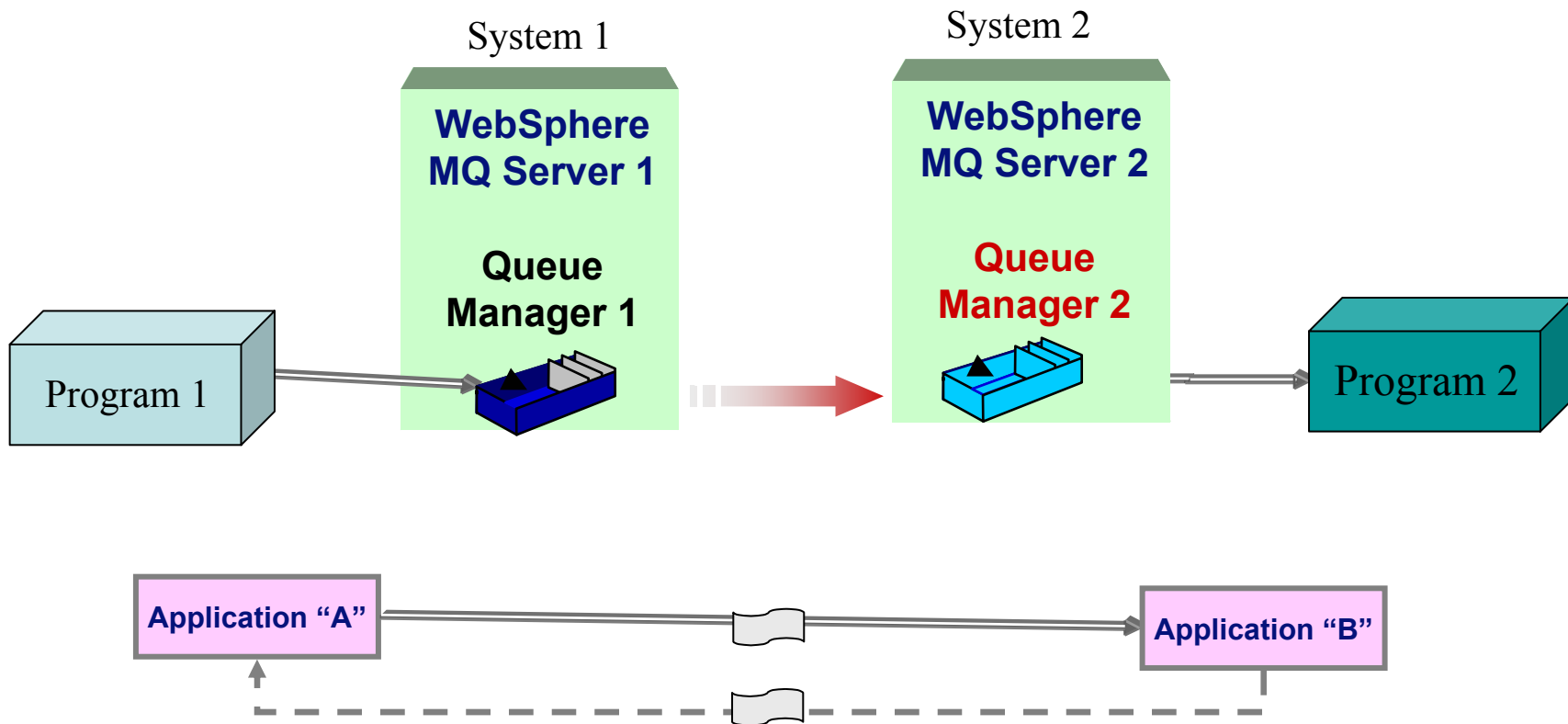


(*) VSAM Redirector + Redirector MQ Exit allows MQ Solutions without changes to VSAM programs
 (**) WebSphere MQ Client for VSE is free of charge

MQ Series

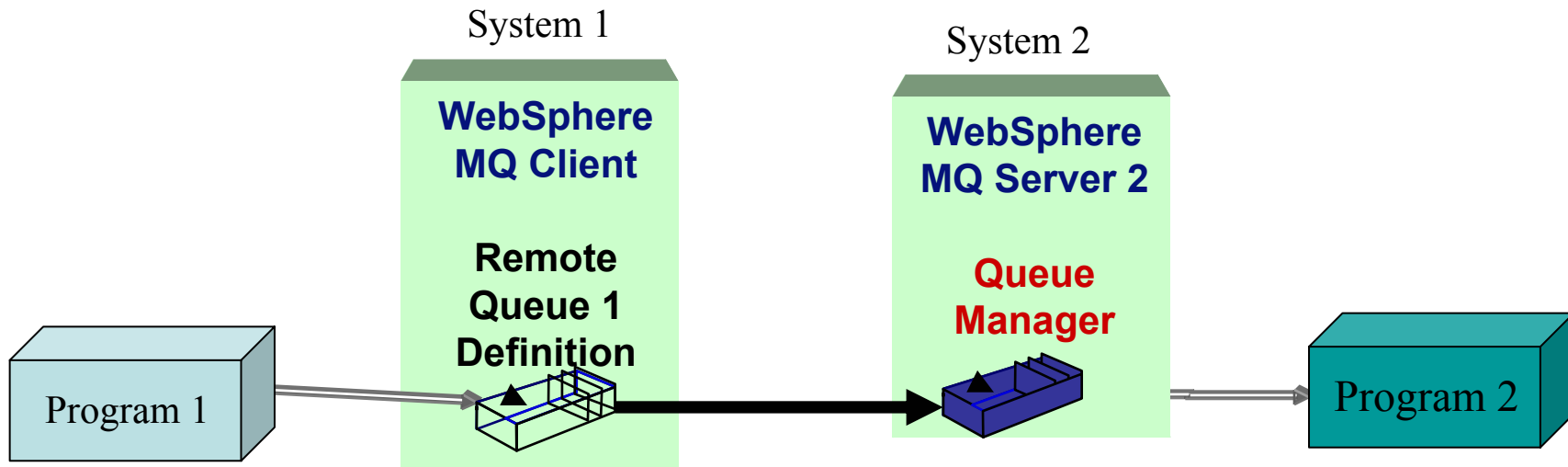
Messaging Overview

MQ Server – Server Scenario

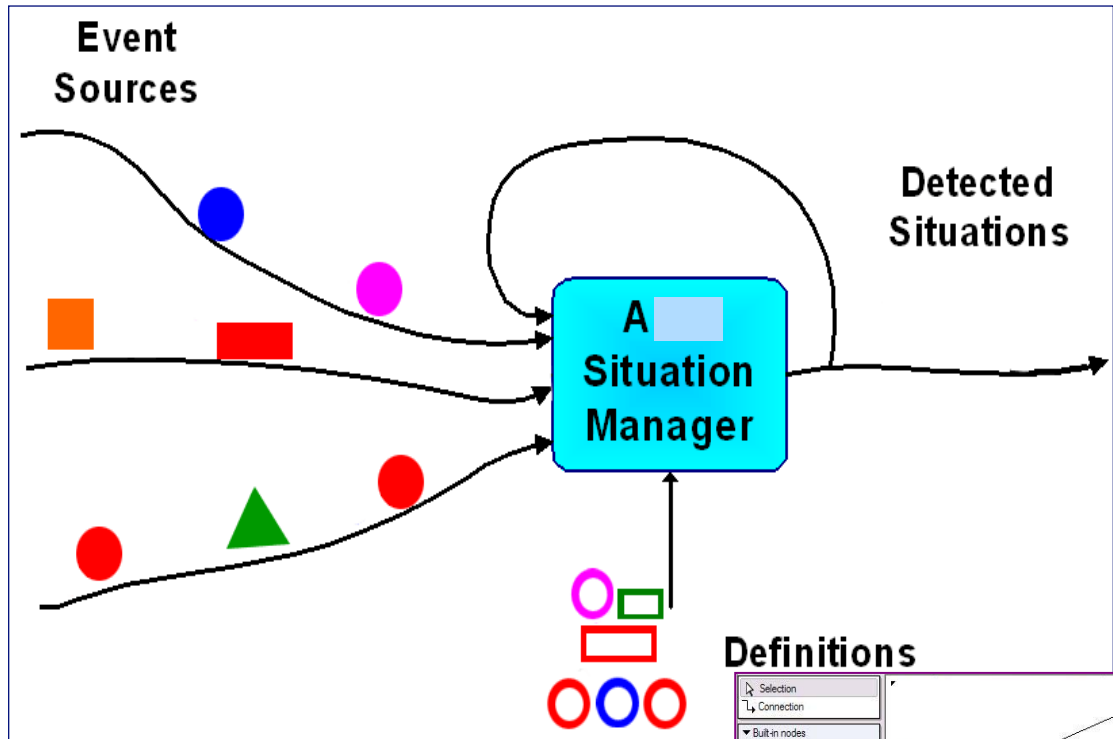


Messaging Overview

MQ Client – Server scenario

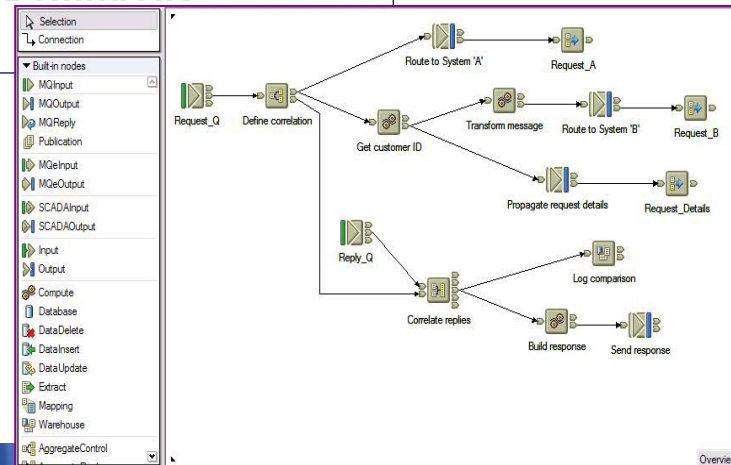


WebSphere Message Broker – intelligent routing



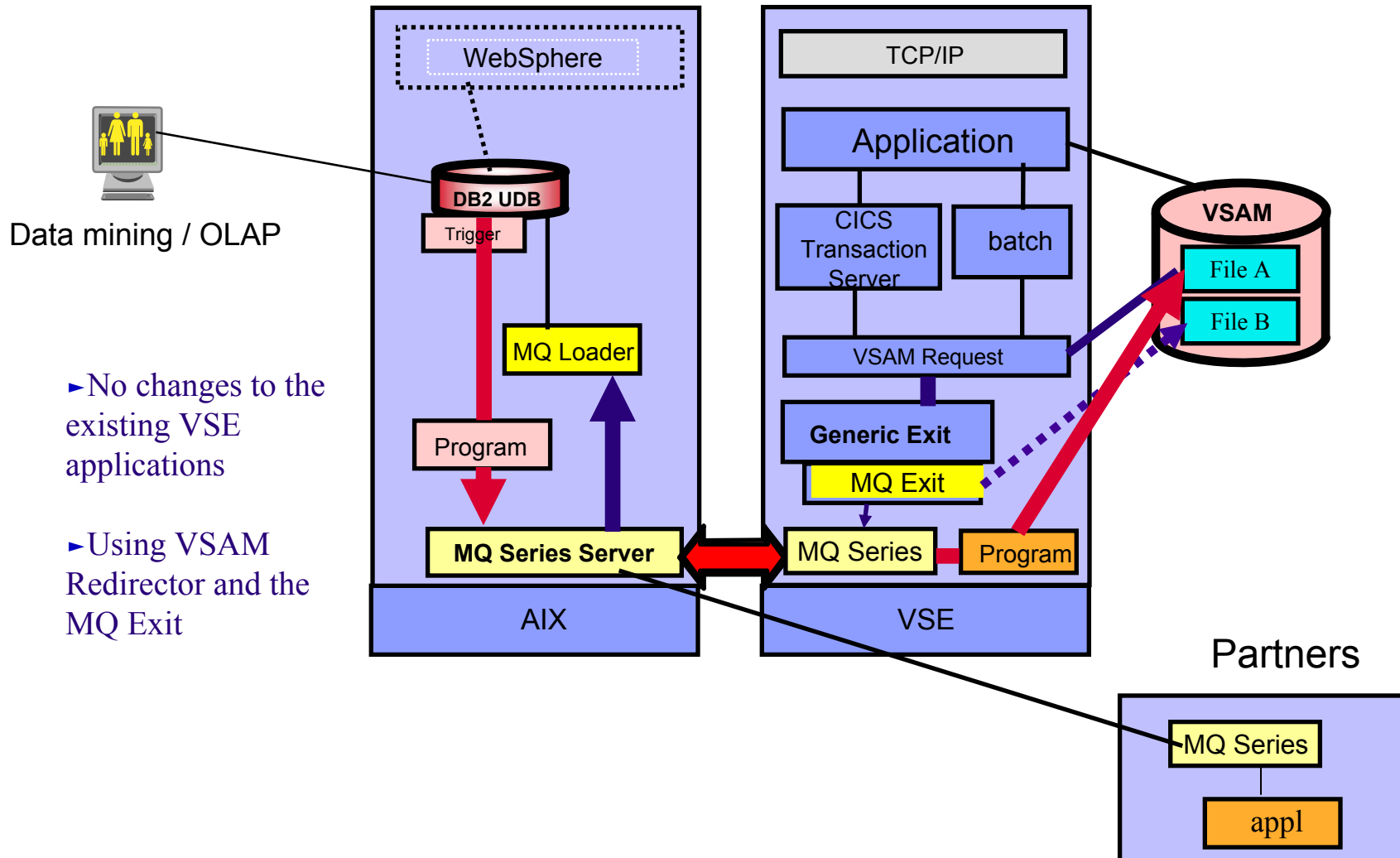
1. A framework for processing MQ messages
2. A robust hosting environment for:
 - ✓ Transforming data
 - ✓ Enriching data
 - ✓ Interacting with databases
 - ✓ Routing messages based on content
 - ✓ Detecting complex combinations of messages
 - ✓ Interacting existing applications with Web Services

Definitions



Final solution

common data store – Business intelligence

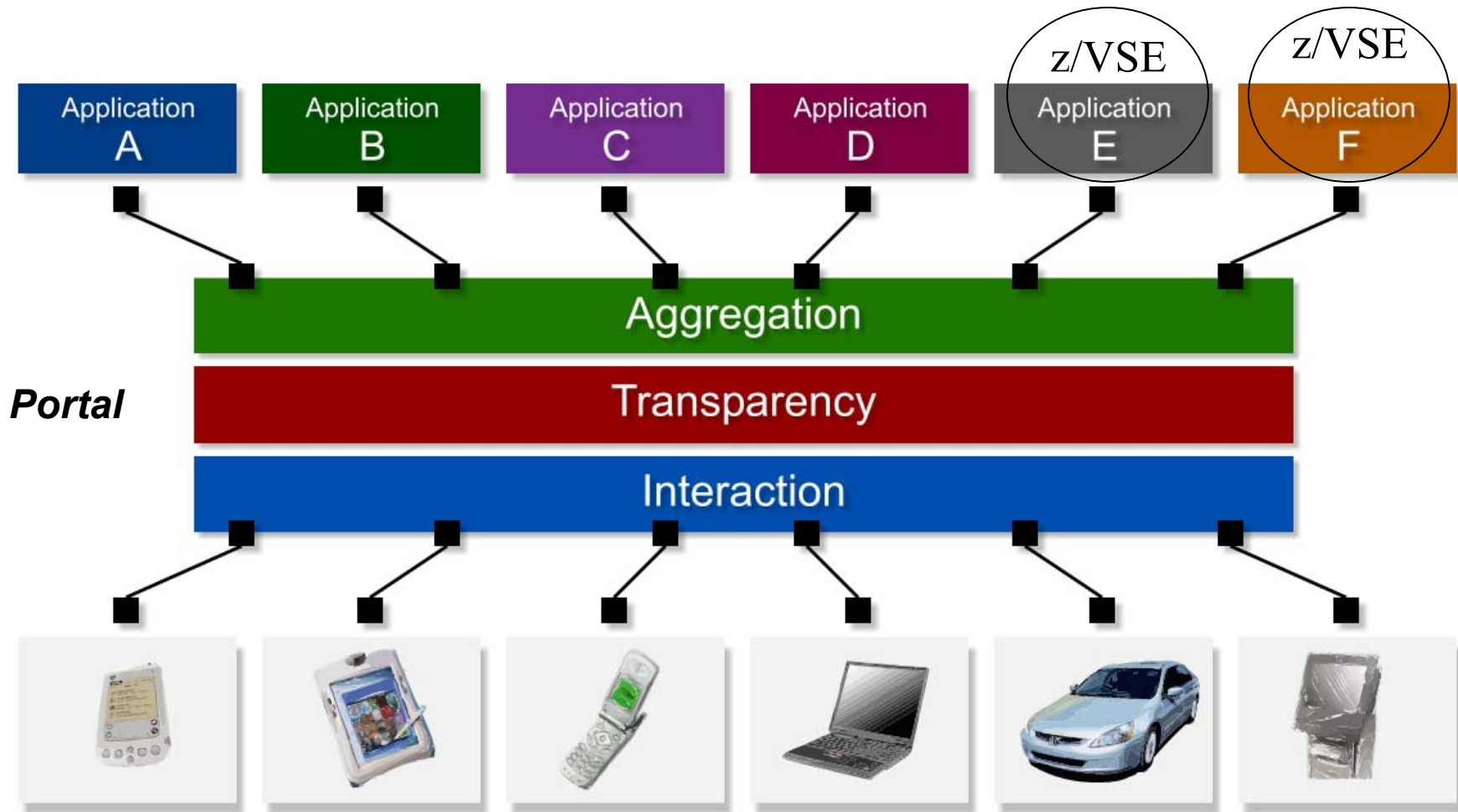


Data mining / OLAP

► No changes to the existing VSE applications

► Using VSAM Redirector and the MQ Exit

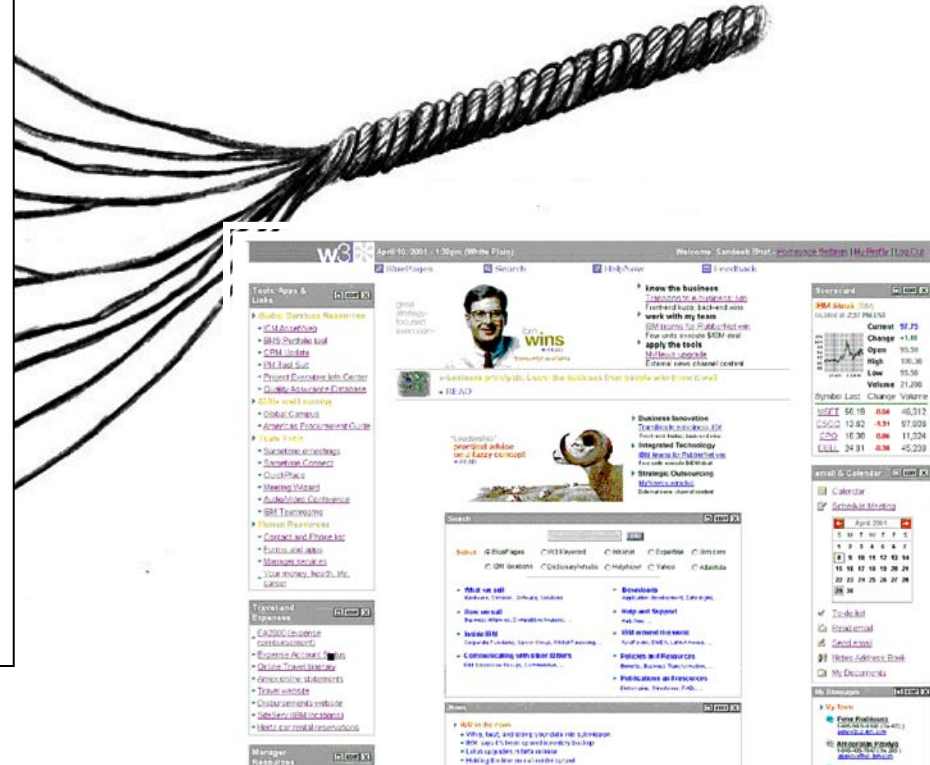
Portal – the integration platform



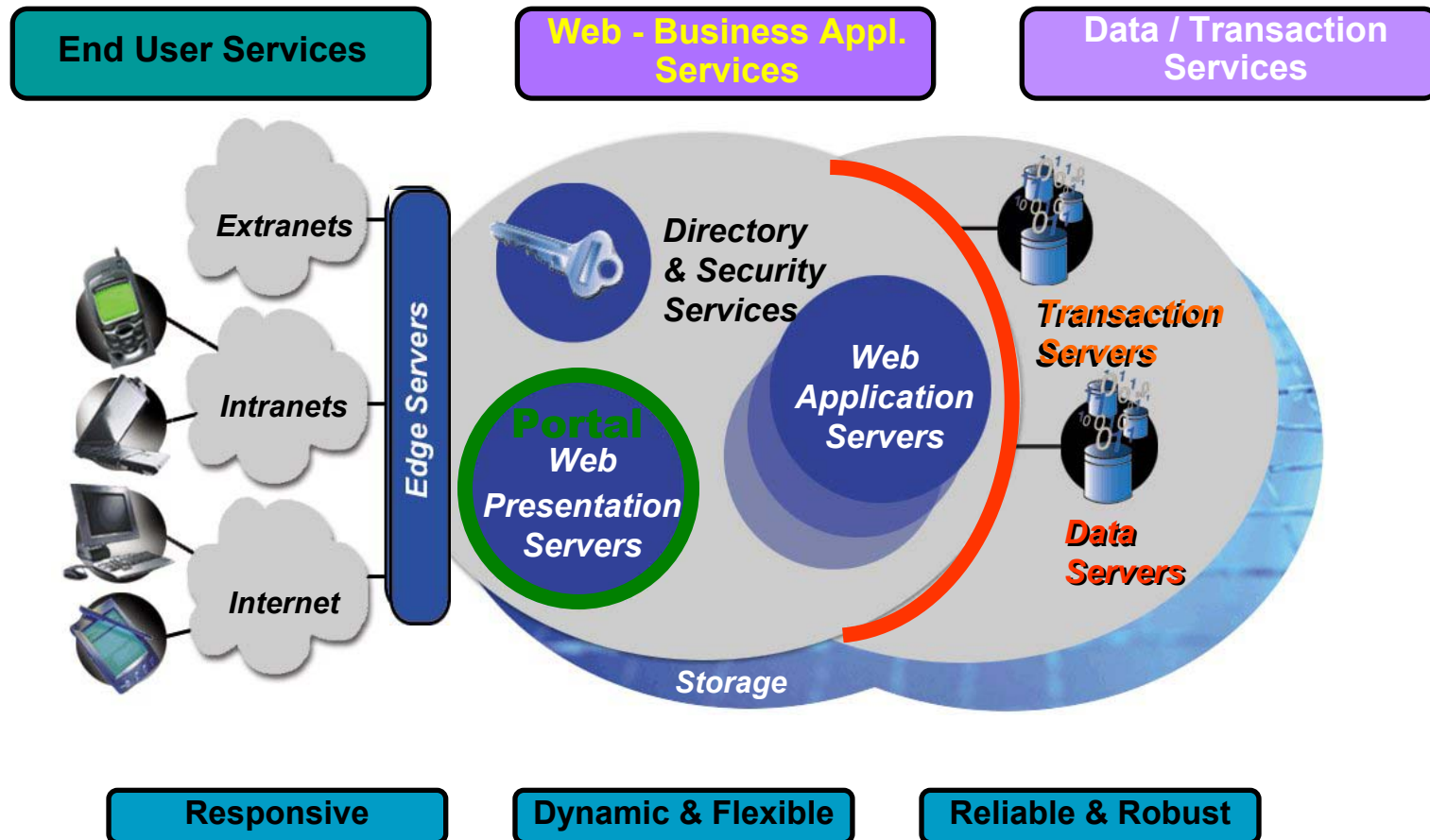
Application integration with Portal

- Enterprise Applications
- Messaging
- Search
- Collaboration
- E-meetings
- Web Content
- People Finder
- Knowledge Management
- Business Intelligence
- Document management
- Host systems

A single point of personalized interaction with applications, content, processes and people



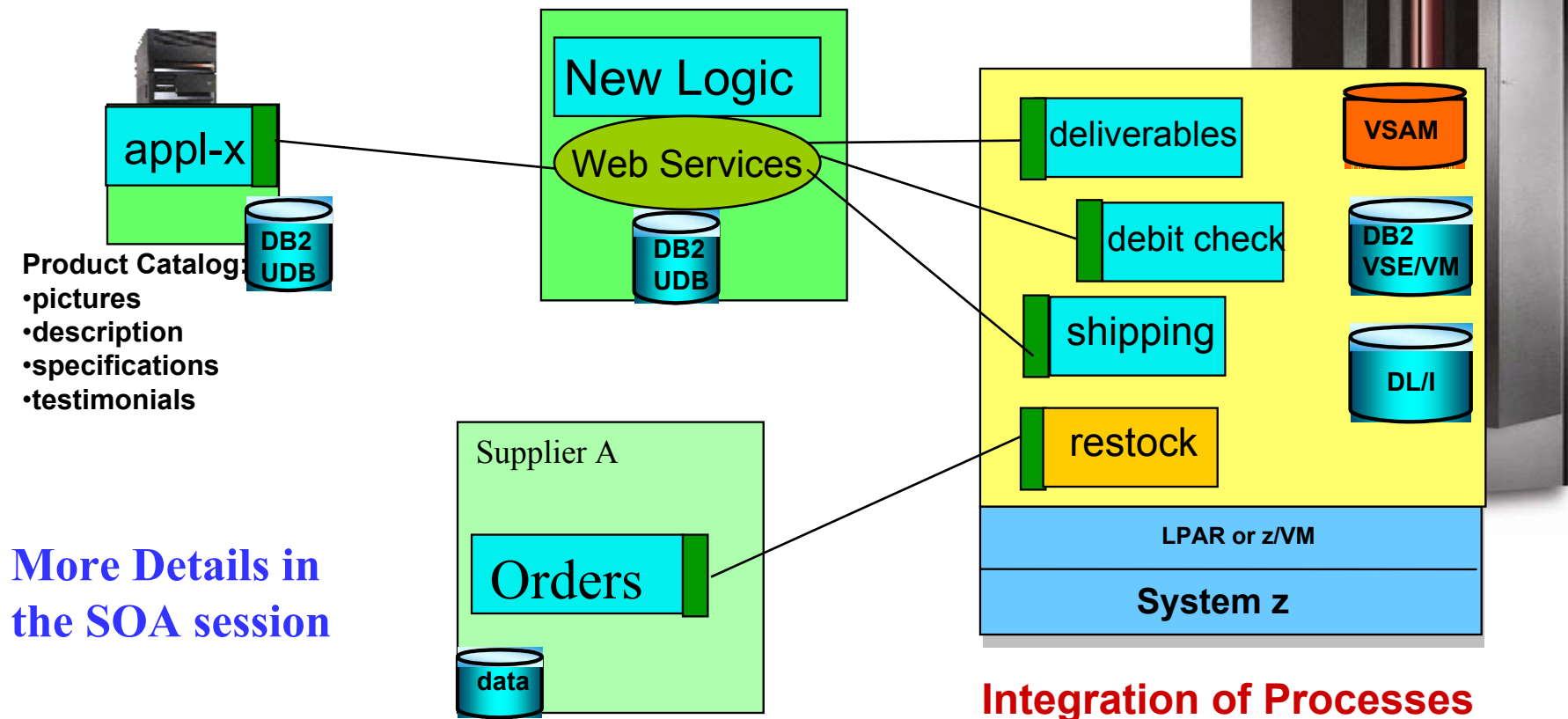
Integration with Portal



SOA – the way to new applications and processes

- Applications look the same for all users
- Core applications can be enhanced with an interface (independent of their language, COBOL, ASM, PL/I)
- New business logic is built

Increased success for the Company

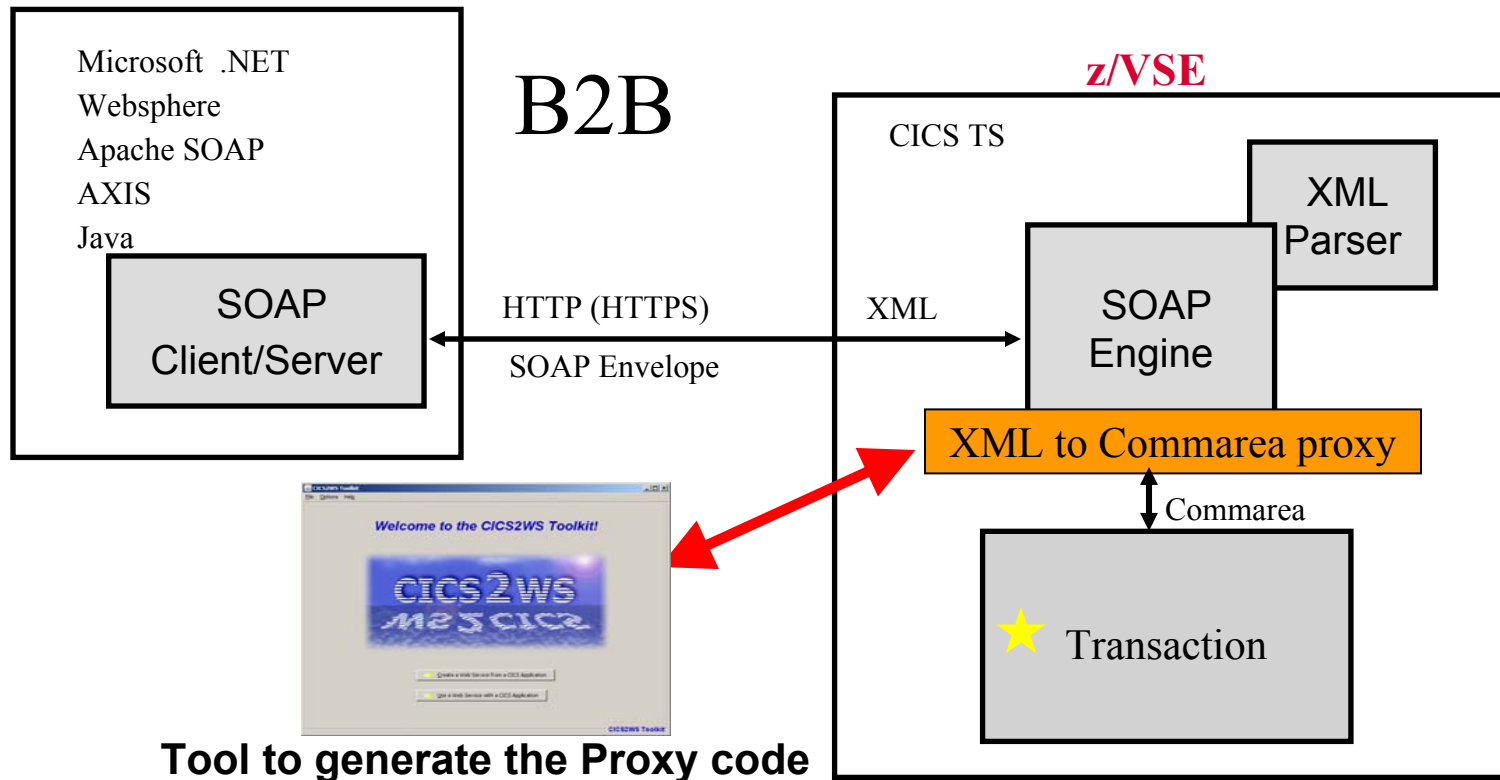


More Details in the SOA session

Integration of Processes

Web Services with z/VSE

SOA and XML data interchange with
CICS transactions in VSE



- ★ Existing VSE Transactions as Web Service
- ★ Existing Transactions can call a remote Web Service

Modernisation possibilities for today's distributed processes with z/VSE

- ✓ data exchange via FTP
 - ✓ VSAM Redirector- modernized FTP (incremental, cleansing)
- ✓ VSE Applications need access to remote data
 - ✓ VSAM Redirector
- ✓ synchronisation of data on different platforms
 - ✓ Incremental FTP, VSAM Redirector
- ✓ Access VSE data and resources from remote platforms
 - ✓ Java-Based Connector, VSE Script
- ✓ access VSE applications from remote platforms
 - ✓ CICSTransaction Gateway, Web Services
- ✓ access remote applications from VSE
 - ✓ SOA: Web Services via SOAP(XML)

Tools available in the VSE download area

<http://www.ibm.com/servers/eserver/zseries/zvse/downloads/>
 More details in the tools session

TCP/IP configuration dialog

Updated: 03/2003

- [Detailed Description](#)
- [Documentation](#)
- [Latest APARs and PTFs](#)
- [Frequently asked questions](#)
- ↓ [Installation](#)

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Keyman/VSE

Updated: 08/2007

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- ↓ [Installation](#)
- ↓ [Terms and conditions](#)

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Note: For use with [TCP/IP 1.5 ServPack E](#) or later.

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VSE System class library

Updated: 02/2007

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VSEPrint utility

Updated: 12/2001

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VSE Health Checker

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CICS2WS Toolkit V2

Updated: 02/2008

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z/VSE, the new web presence

Solutions

Contact,
Requirements

The screenshot shows the IBM z/VSE website interface. At the top, there is a navigation bar with the IBM logo, a search box, and links for 'Country/region [select]' and 'Terms of use'. Below this is a secondary navigation bar with links for 'Home', 'Products', 'Services & solutions', 'Support & downloads', and 'My account'. The main content area features a breadcrumb trail: 'Servers > Mainframe servers > Operating systems > z/VSE'. The 'z/VSE' heading is followed by a descriptive paragraph and a 'Learn more' section with links to 'About VSE', 'News', and 'History of VSE'. A central banner announces 'z/VSE V3.1' with a '40 YEARS' logo. Below this, a section titled 'Redesigned z/VSE homepage' explains the website changes. A 'z/VSE Version3 Release 1' section lists supported hardware and software configurations. The right sidebar contains several widgets: 'We're here to help' with an 'E-mail us' link, 'Mark your calendar' for the 'Guide Share Europe' event, 'Spotlights' for IBM eServer zSeries, and 'Middleware' for WebSphere and information management software. A 'Related links' section is located at the bottom left of the main content area.

<http://www.ibm.com/servers/eserver/zseries/zvse/>