



Modern Customer solutions with z/VSE 3.1

Wilhelm Mild
Senior consultant, Solution Architectures in
Distributed Environments with VSE



Trademarks

The following are trademarks of the International Business Machines Corporation in the United States and / or other countries.

CICS*	IBM*	Virtual Image Facility
DB2*	IBM logo*	VM/ESA*
DB2 Connect	IMS	VSE/ESA
DB2 Universal Database	Intelligent Miner	VisualAge*
e-business logo*	Multiprise*	VTAM*
Enterprise Storage Server	MQSeries*	WebSphere*
HiperSockets	OS/390*	xSeries
	S/390*	z/Architecture
	SNAP/SHOT*	z/VM
		z/VSE
		zSeries

* Registered trademarks of IBM Corporation

The following are trademarks or registered trademarks of other companies.

LINUX is a registered trademark of Linus Torvalds

Tivoli is a trademark of Tivoli Systems Inc.

Java and all Java-related trademarks and logos are trademarks of Sun Microsystems, Inc., in the United States and other countries

UNIX is a registered trademark of The Open Group in the United States and other countries.

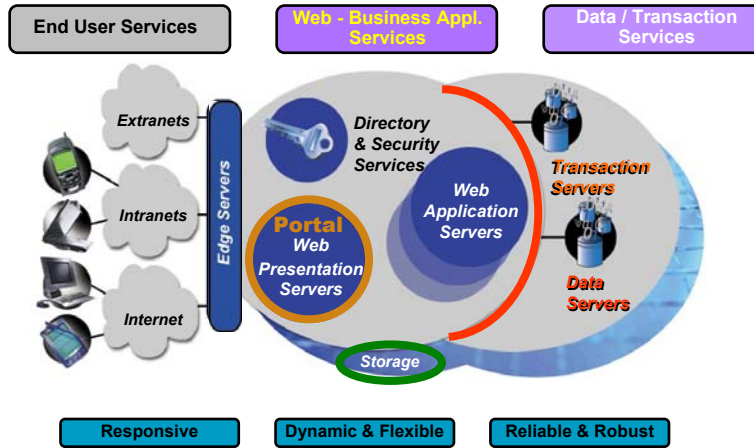
Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation.

SET and Secure Electronic Transaction are trademarks owned by SET Secure Electronic Transaction LLC.

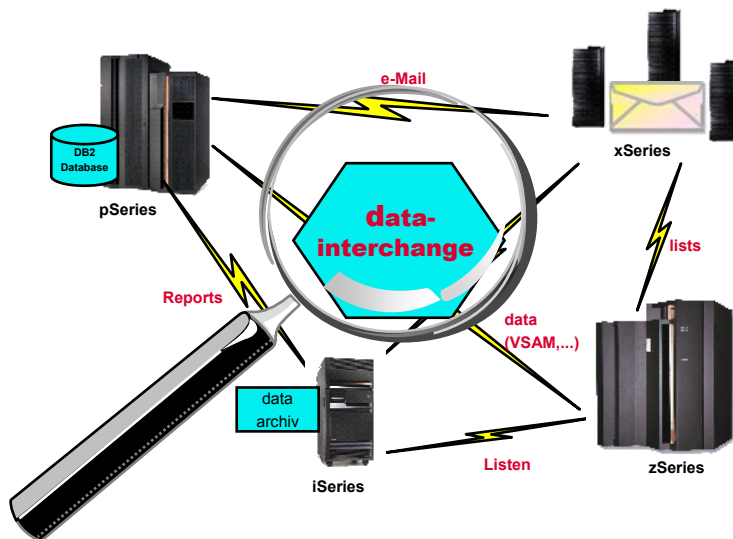
Intel is a registered trademark of Intel Corporation.



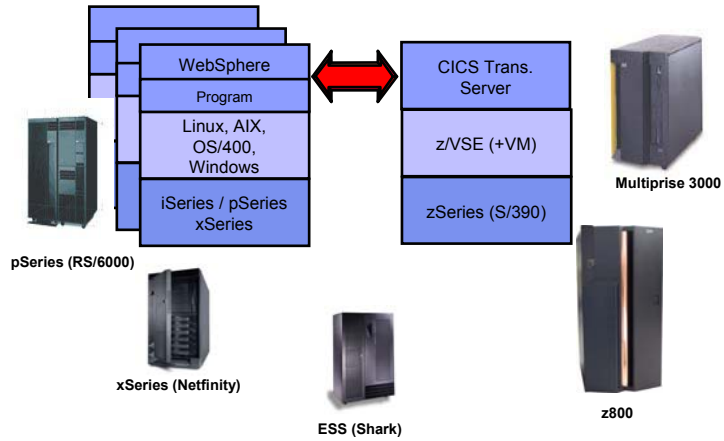
Infrastructure



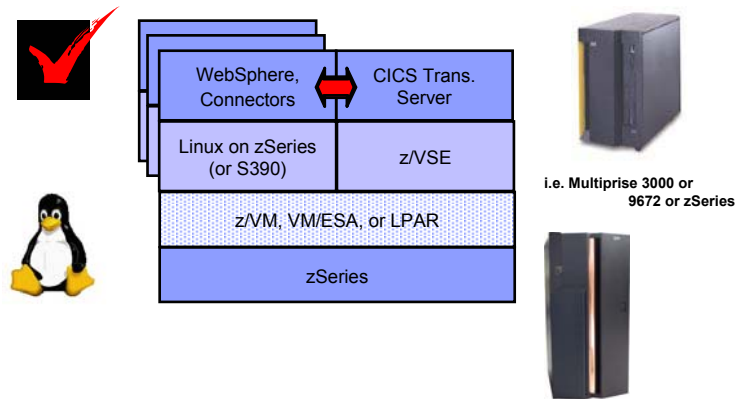
Data interchange – actual need



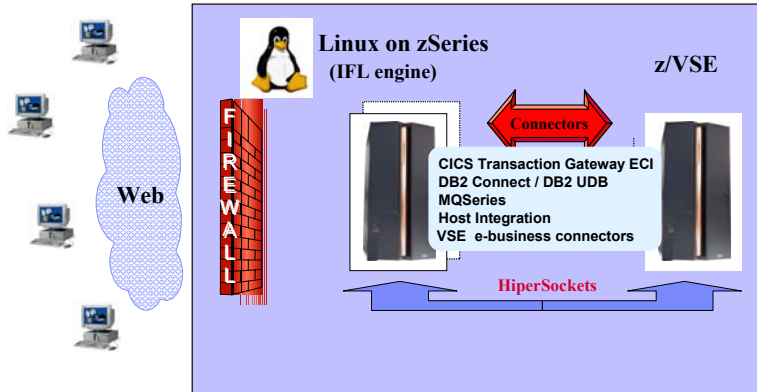
VSE/ESA Flexibility – in a heterogeneous environment



Linux for zSeries 3-tier logical / 2-tier physical

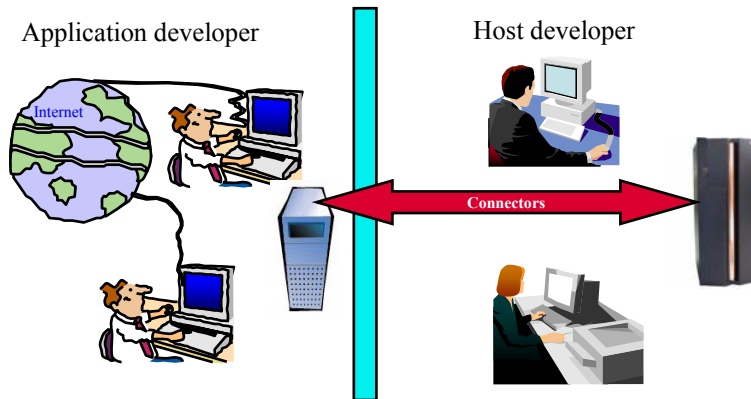


Integration of VSE/ESA with Linux for zSeries



Challenges in today's IT

► Two Architectures, one solution

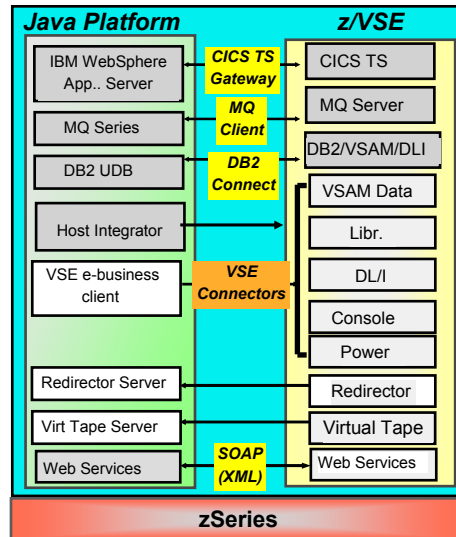


Middleware relations to z/VSE

• Modern applications with Linux for zSeries

• Most modern technologies interact with VSE services

• Modernisation using real time access to data

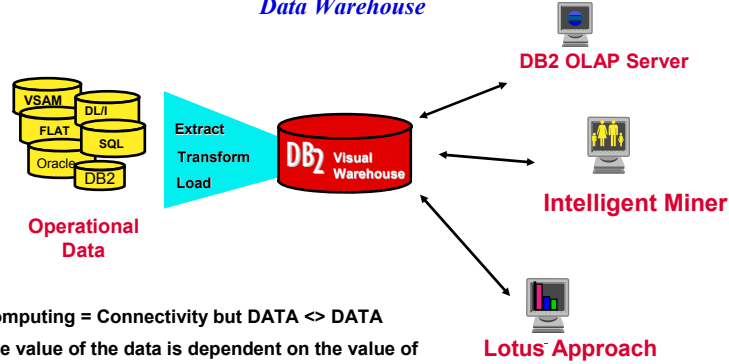


Agenda: Optimization of operations

- (1) Business intelligence with VSE data
(common data store in a distributed environment)
- (2) Web transaction processing
- (3) Application integration
- (4) Dynamic On demand business

(1) Connectors enable Business Intelligence solutions with z/VSE data, the way for better and faster decisions

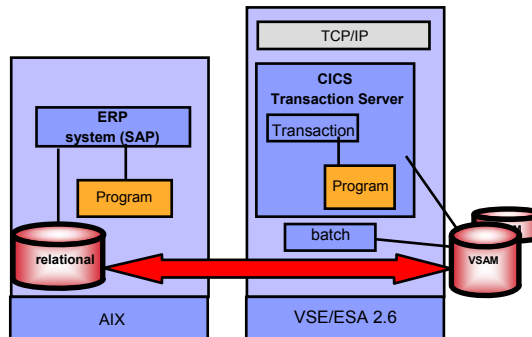
Integration of different data to a intelligent Data Warehouse



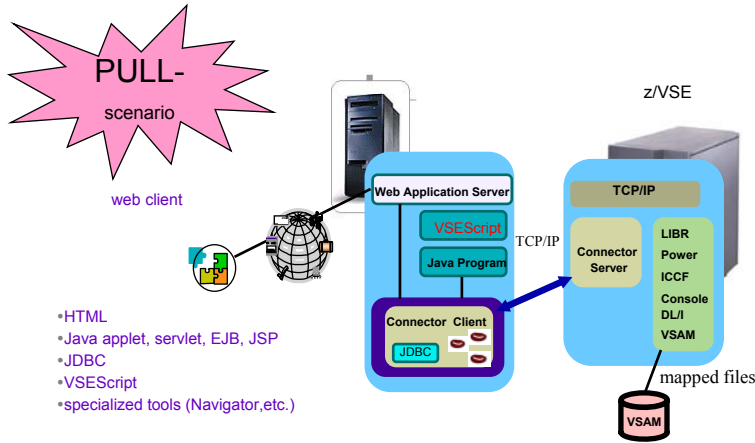
- ▶ Computing = Connectivity but DATA <-> DATA
- ▶ The value of the data is dependent on the value of information you can get from it.

Common data store in distributed environments (synchronous data propagation)

- ▶ customer data are redundant in both systems in different organisations (VSAM in VSE and relational in AIX)
- ▶ real time data synchronization is needed
- ▶ no change to VSE programs required



Real time access to z/VSE – Java –Based Connector

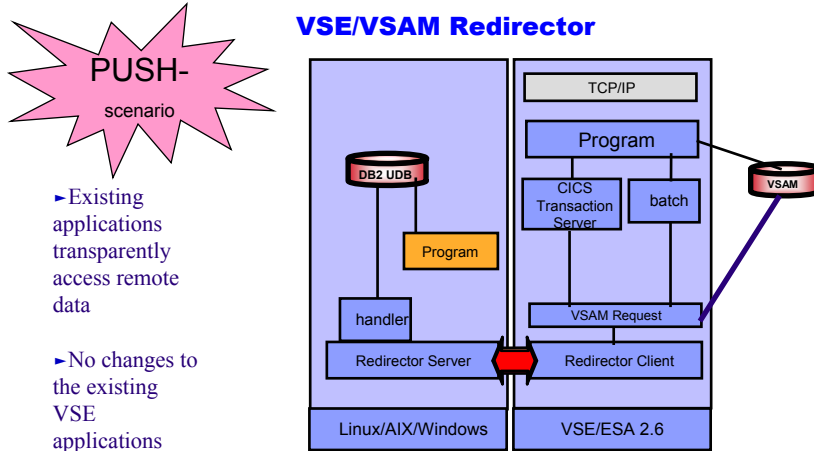


- HTML
- Java applet, servlet, EJB, JSP
- JDBC
- VSEScript
- specialized tools (Navigator, etc.)

- ▶ real time access to VSE resources from remote systems
- ▶ new possibilities for leveraging z/VSE investment

Data propagation / synchronization from VSE

VSE/VSAM Redirector

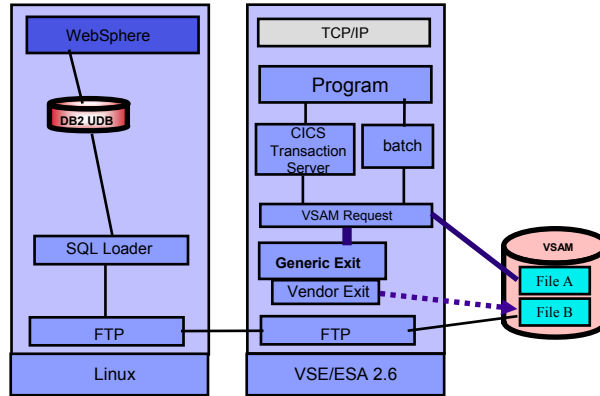


- ▶ Existing applications transparently access remote data
- ▶ No changes to the existing VSE applications

- ▶ Applications on VSE should be able to access DB2 data on Linux
- ▶ Synchronization of DB2 UDB on Linux with VSAM using VSAM Redirector. (VSAM Redirector is part of VSE/ESA 2.6/2.7)

(1) Incremental FTP

Reduce network traffic, save time

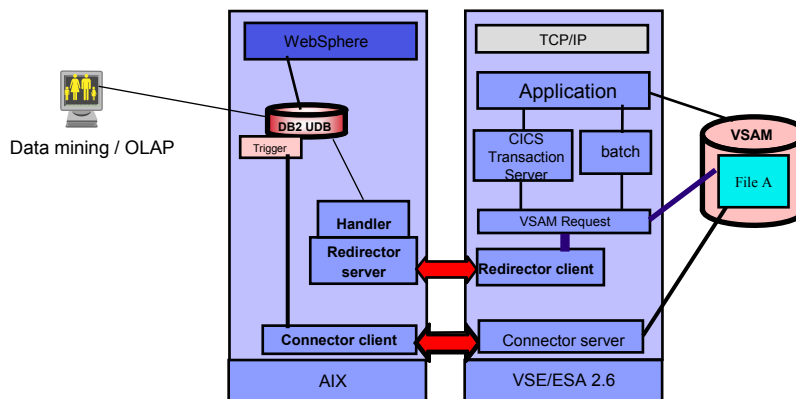


- ▶ Collect the changed records in a separate VSAM file
 - ▶ Possibility of cleansing
- ▶ FTP – as before, with a much smaller file
 - ▶ (The VSAM Redirector is part of VSE/ESA 2.6)

Final solution

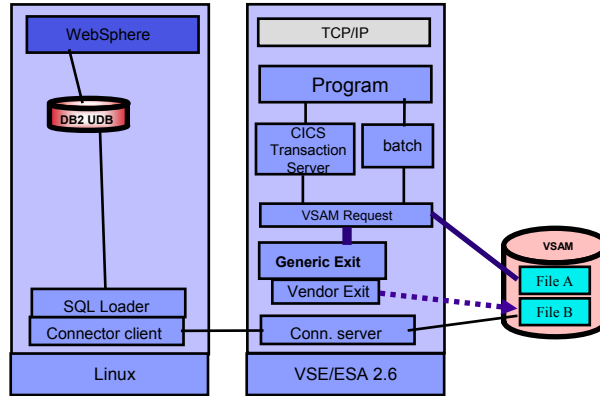
common data store – Business intelligence

- ❑ Car manufacturer, paper manufacturer – Germany, insurance – US



Final solution Incremental, Linux driven updates

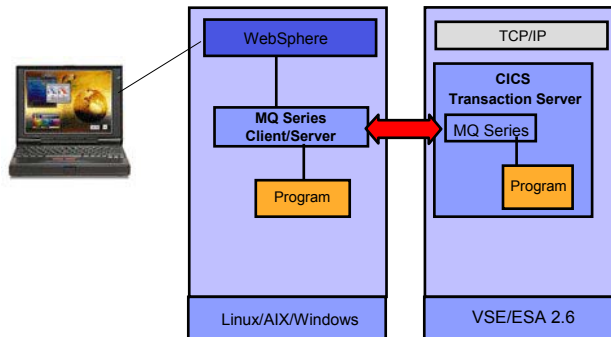
❑ Energy supplier – Germany



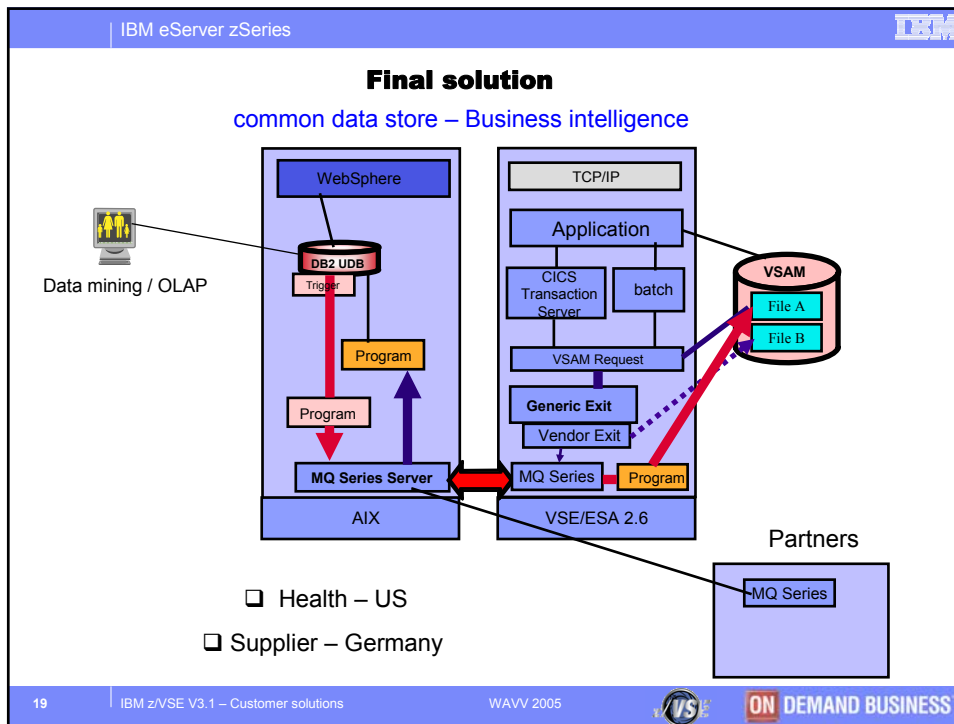
- ▶ Collect the changed records in a separate VSAM file
 - ▶ Possibility of cleansing
- ▶ Process them – with the VSE Connectors

Asynchronous data propagation

MQ Series - Implementation



- ▶ asynchronous data exchange using message queuing
- ▶ guaranteed and 'only once' delivery
- ▶ integration into Web Application servers (WebSphere)
- ▶ bidirectional data interchange – same interface on many platforms

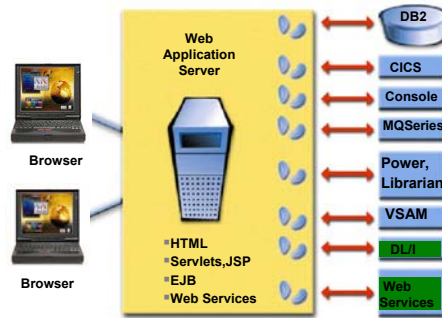


- IBM eServer zSeries IBM
- ### Agenda: Optimization of operations
- (1) Business intelligence with VSE data
 - (2) Web transaction processing
 - (3) Application integration
 - (4) Dynamic On demand business
- 20 | IBM z/VSE V3.1 – Customer solutions | WAVV 2005 | ON DEMAND BUSINESS

(2) Web Transaction processing

(using the Websphere Software Platform and Connectors for z/VSE)

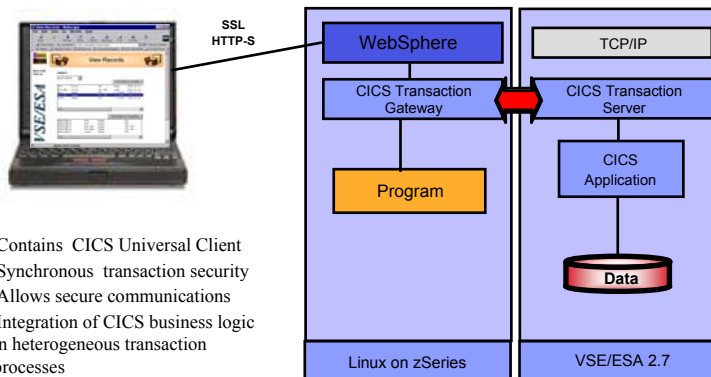
❑ Bank- Switzerland, Heating services - Germany



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

Integration of VSE/ESA transaction processes

IBM CICS Transaction Gateway

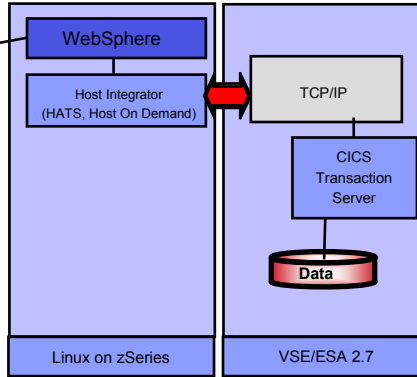


- ▶ Contains CICS Universal Client
- ▶ Synchronous transaction security
- ▶ Allows secure communications
- ▶ Integration of CICS business logic in heterogeneous transaction processes
- ▶ 1.5 mill trans per day

General access to VSE/ESA via browser

Host Access transformation Server (HATS)
and Host on Demand

- ❑ Distributor – Finland – modernisation for z/VSE and z/OS



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

NEW!: Available for Linux for zSeries

Interaction with VSE/ESA via browser using (HATS)

Description	Inventory Graph	Part Number
Baseball glove	[Bar chart]	10
Catcher's mit	[Bar chart]	20
Baseball - 1 doz	[Bar chart]	10
Baseball bat	[Bar chart]	10
Football	[Bar chart]	10
Basketball	[Bar chart]	10
Tennis ball - 1 doz	[Bar chart]	10
Softball - 1 doz	[Bar chart]	10
Ice Skates	[Bar chart]	10

Aug	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3				
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

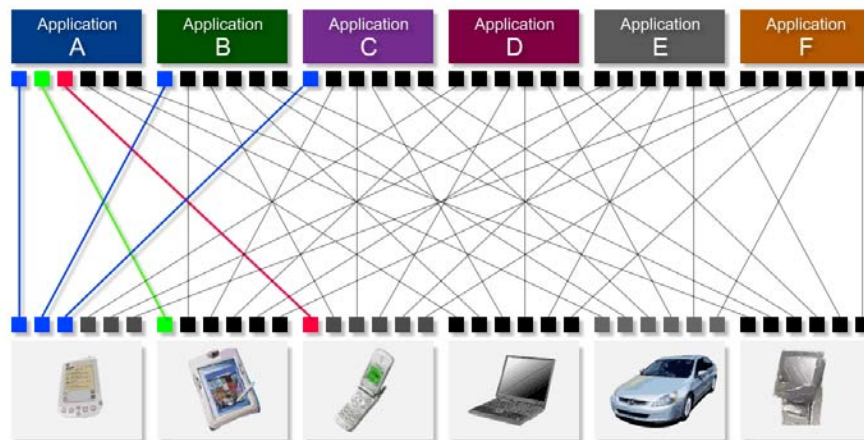
Quantity	Image
10	
20	
10	
10	

Agenda: Optimization of operations

- (1) Business intelligence with VSE data
- (2) Web transaction processing
- (3) Application integration
- (4) Dynamic On demand business

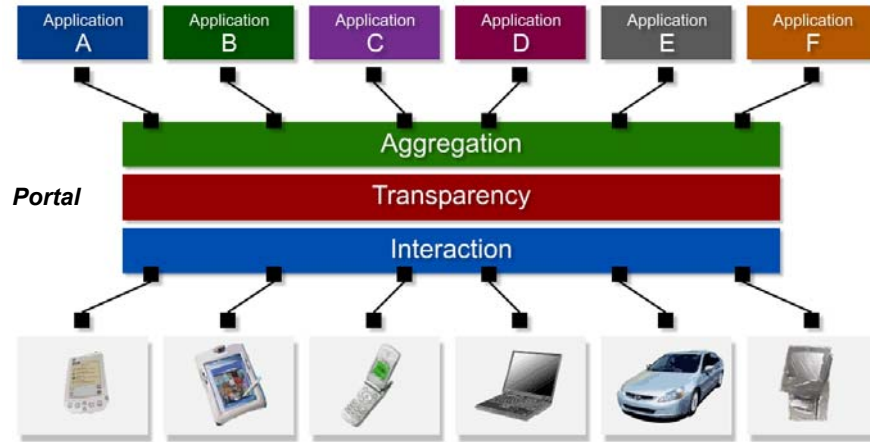
(3) Application integration and Enterprise Modernization

M applications...



N devices *How do you solve an expanding "M x N" matrix?*

A Mobile Application Platform Defined



What is a Portal?

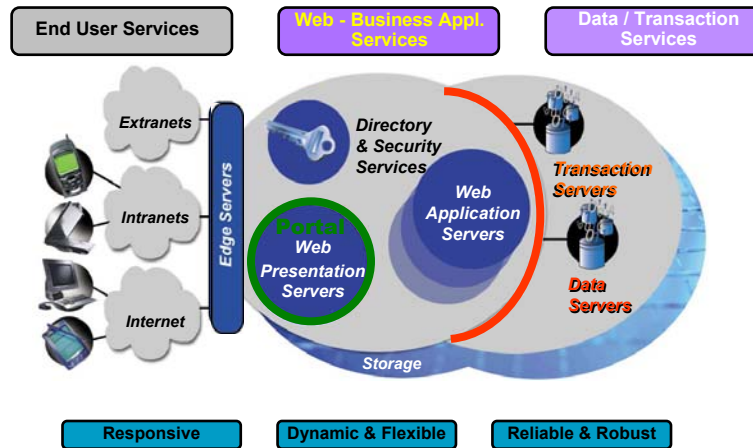
- Enterprise Applications
- Messaging
- Search
- Collaboration
- E-meetings
- Web Content
- People Finder
- Knowledge Management
- Business Intelligence
- Document management
- Host systems

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



Infrastructure

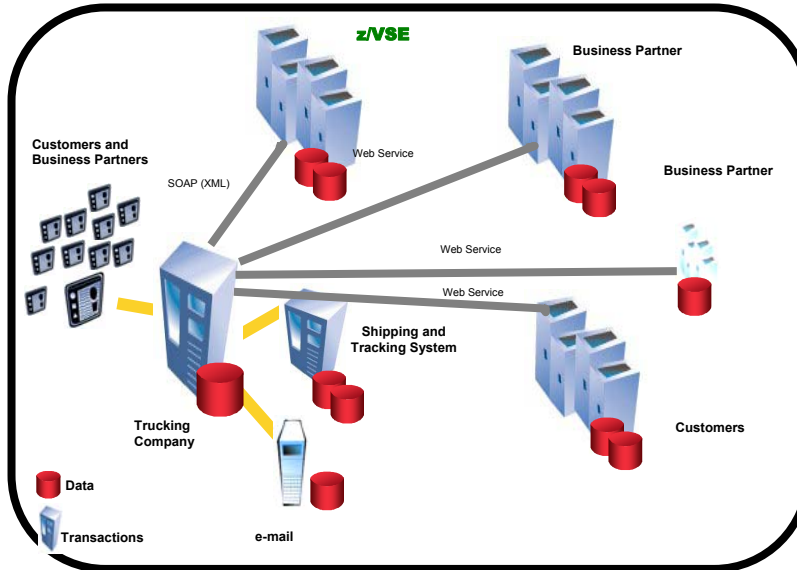
- Banks, internet distributor– Germany, Switzerland



Agenda: Optimization of operations

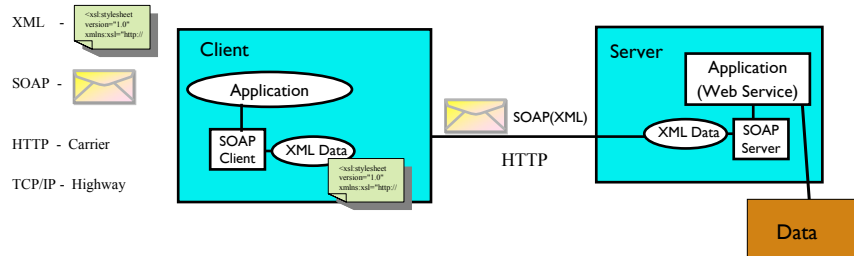
- (1) Business intelligence with VSE data
- (2) Web transaction processing
- (3) Application integration
- (4) Service Oriented Architecture (SOA)

(4) service oriented architecture with z/VSE using Web Services



Web Services

XML Document + SOAP Protocol = Web Services

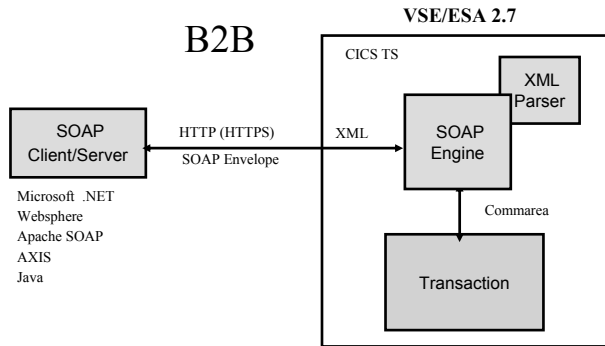


A web service

- ☞ implements a business, application or system functionality
- ☞ is intended for application communication
- ☞ is useable in internet, intranet, extranet
- ☞ is useable for browser-based solutions up to the B2B integration between companies
- ☞ uses only standard internet technologies

Web Services with VSE/ESA 2.7

XML data interchange with CICS transactions



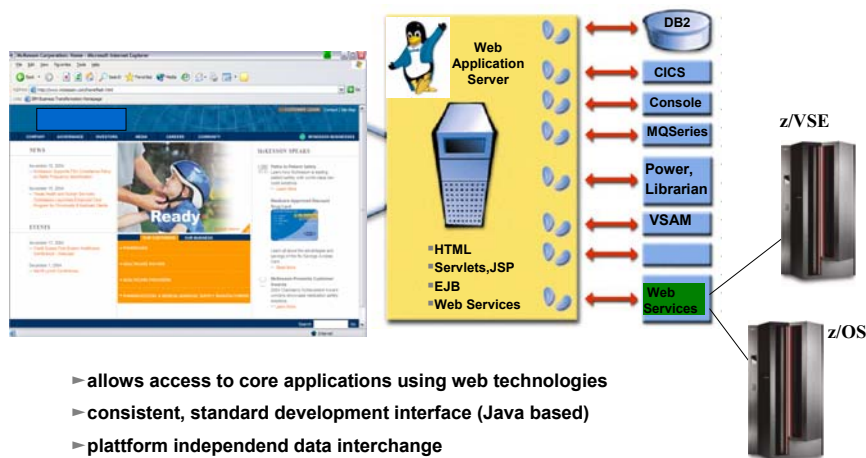
★ VSE/ESA Transactions as Web Service

▶ NEW: Also with VSE/ESA 2.6 + UQ81044

Web Transactions with z/VSE using Web Services

(with the Websphere Software Plattform and VSE Connectors)

□ VSE and XML, SOAP Web Services – France, Germany, US



- ▶ allows access to core applications using web technologies
- ▶ consistent, standard development interface (Java based)
- ▶ platform independent data interchange

IBM eServer zSeries

zSeries Expo 2004

Environment

Alcad

Production environment

IBM eServer zSeries software

WebSphere software

impol

VSE/ESA V2.6
SuSE SLES V8

Souround products

DB2 Information Management Software

modern application development for VSE – ALCAD, Slovenia

35 IBM z/VSE V3.1 – Customer solutions WAVV 2005 ON DEMAND BUSINESS

IBM eServer zSeries

Integration of DB2 UDB with DB2 VSE

WebSphere

DB2 Connect

DB2 UDB

Program (JDBC, ODBC, CLI)

Linux/AIX/Windows/Solaris

TCP/IP

DB2 VSE

DB2 Stored Procedure

CICS Transaction Server

batch

DB2 VSE

VSE/ESA 2.6

DLI

VSAM

- Remote access of DB2 VSE via DB2 Connect
- Integration of non relational VSE data with DB2 logic via Stored Procedures
- Remote access of DB2 UDB from DB2 VSE via DB2 VSE Client functionality on VSE.

PRPQ P10154 - allows customers to pay for the DB2 Server for VSE&VM client connectivity capability only- by storing the data on DB2 'UDB on Linux for zSeries.

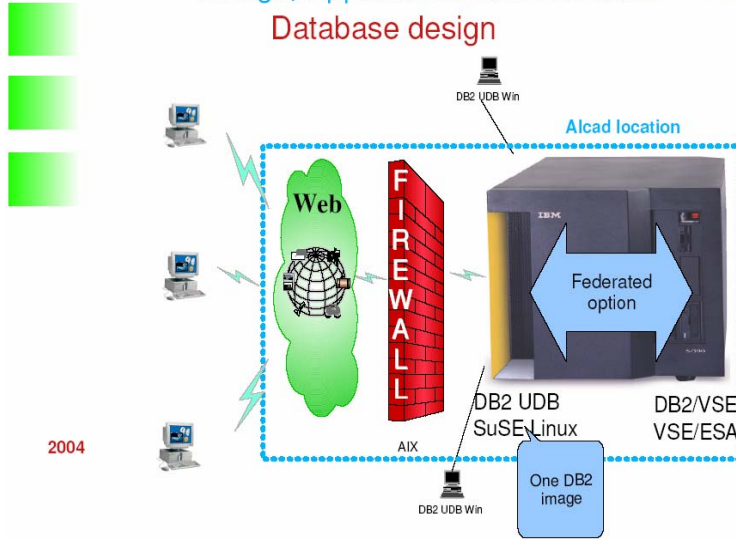
36 IBM z/VSE V3.1 – Customer solutions WAVV 2005 ON DEMAND BUSINESS

zSeries Expo 2004

Design, Applications and Solutions



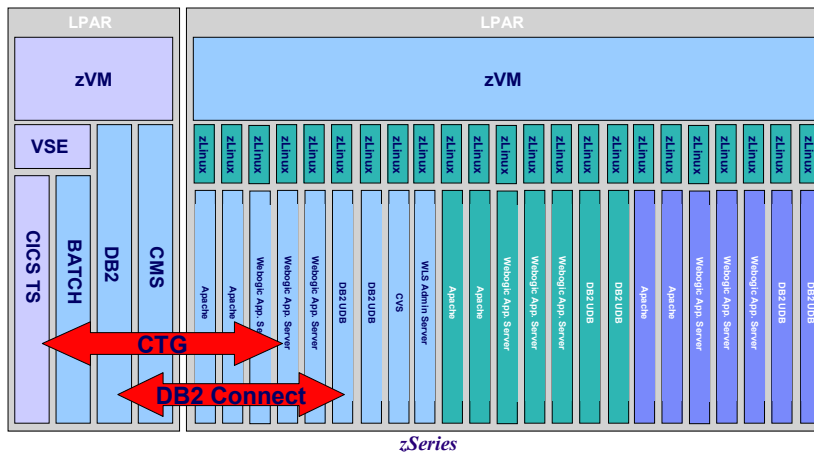
Database design



2004



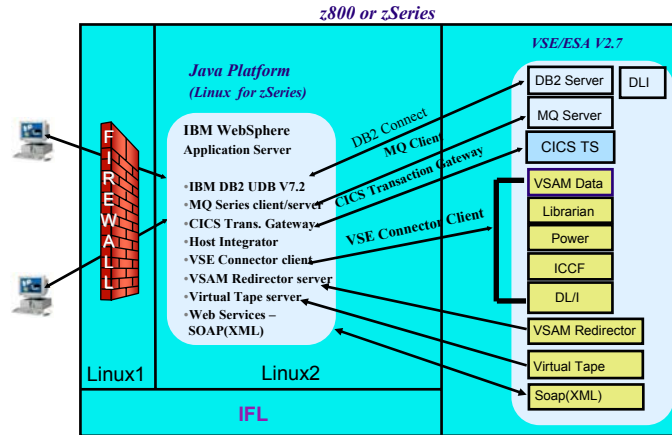
Consolidation – Insurance in Germany



zSeries



VSE/ESA Connections



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

- ✓ **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**
 - ✓ CICS Transaction Gateway, Web Services
- ✓ **access remote applications from VSE**
 - ✓ Web Services via SOAP(XML)

VSE + Linux, a happy pair with the stability of a dinosaur and support from a bear .



Linux for zSeries



z/VSE

z/VM – a platform, were pinguins can multiply like rabbits.



IBM eServer zSeries

z/VSE, the new web presence

The screenshot shows the IBM z/VSE website interface. At the top, there is a navigation bar with links for Home, Products, Services & solutions, Support & downloads, and My account. A search bar is located on the right. The main content area features a 'z/VSE' header, a 'Learn more' section with links to 'About z/VSE', 'News', and 'History of z/VSE', and a 'Redesigned z/VSE homepage' announcement. A sidebar on the left contains a 'Solutions' link circled in red, along with other navigation options like 'About VSE', 'How to buy', 'News', 'Products & components', 'Documentation', 'Service & support', 'Downloads', 'Education', 'Partners', 'FAQ', and 'Contact VSE'. The bottom of the page includes a 'Related links' section and a 'z/VSE Version 3 Release 1' section detailing supported hardware and software.

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

Additional Information

- z/VSE/ESA Home Page
<http://www.ibm.com/servers/eserver/zseries/zvse/>
- z/VSE solutions
<http://www-1.ibm.com/servers/eserver/zseries/zvse/solutions>
- e-business Connectors User's Guide SC33-6719
<http://www-1.ibm.com/servers/eserver/zseries/zvse/documentation/#conn>



- e-business Solutions for VSE/ESA SG24-5662
- e-business Connectivity for VSE/ESA SG24-5950
- CICS Transaction Server for VSE/ESA
CICS Web Support SG24-5997-00
- WebSphere V5 for Linux on zSeries Connectivity Handbook SG24-7042



We appreciate your comments at : zvse@de.ibm.com