



z/VSE Version 3 Release 1



# WAVV 2006

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VSE Trends and Directions

G. M. (Jerry) Johnston  
Senior Advisor  
Boeblingen Lab  
p798000@us.ibm.com





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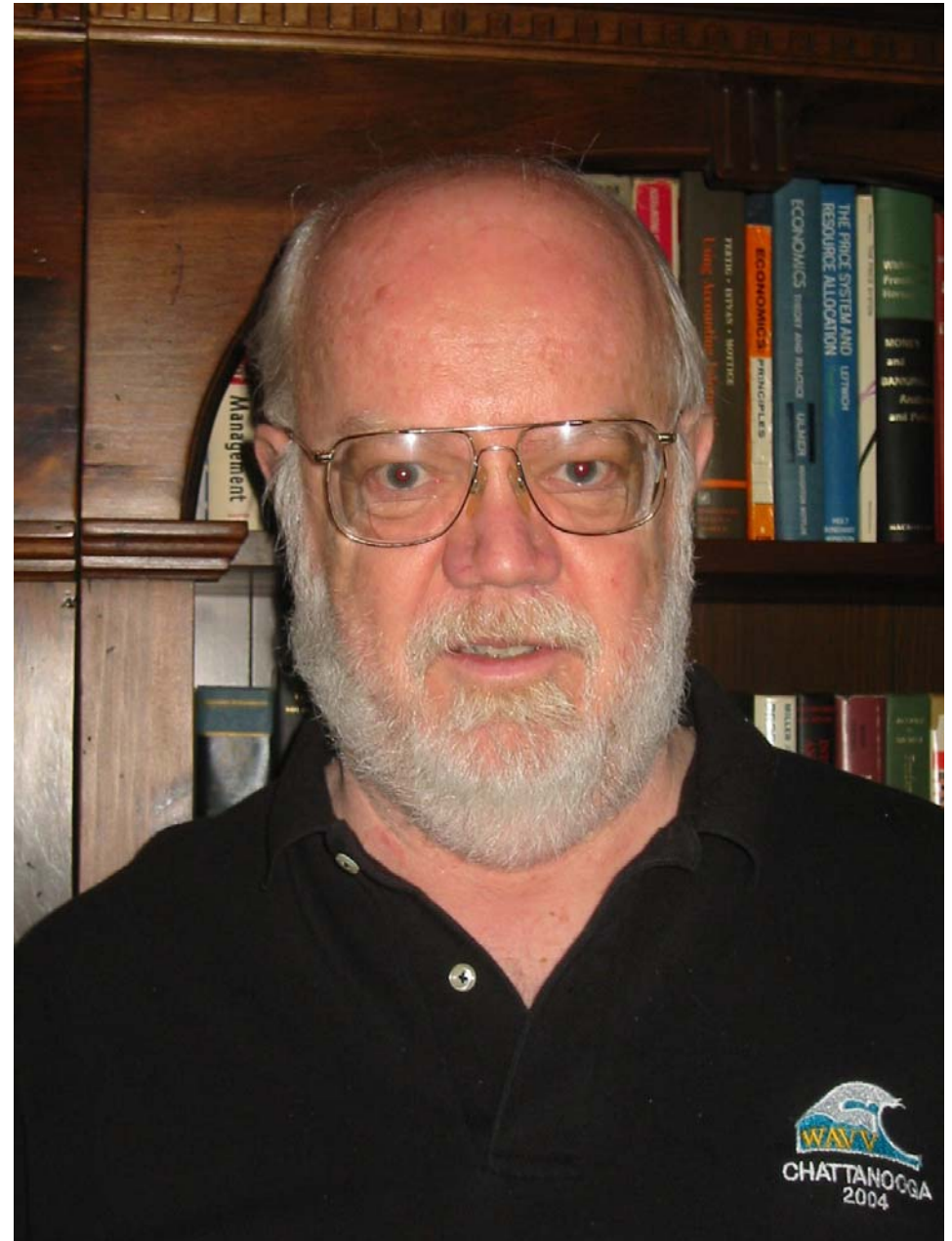
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## Abstract:

Today's session includes a brief review of recent VSE and VSE-related landmarks, plus the status of z/VSE V3.1. It will review IBM's strategy as well as possible directions for z/VSE.





## Review and Status



# IBM Mainframe & VSE Evolution

## zSeries 890

- ▶ 366 MIPS (1-way)
- ▶ 8 – 32 GB

## z/VSE V3.1

- ▶ Batch and OLTP
- ▶ On-demand
  - Web
  - Linux
- ▶ still lovable

▪ S/370->4300->9370->ES9000->S/390

## S/360-30

- ▶ 30 KIPS (.03 MIPS)
- ▶ 16 – 64 KB

▪ DOS/VS->DOS/VSE->(SSX)->VSE/SP  
VSE/ESA V1->VSE/ESA V2

## DOS/360

- ▶ 1 batch partition
- ▶ basic, but lovable



1960s



1970s



1980s



1990s



2000s



## Changes since WAVV 2005



- 06/11/2005 - VisualAge Generator EGL Plug in
- 06/21/2005 - WebSphere MQ client for VSE (no charge)
- 07/27/2005 - announce IBM System z9 109 (including z/VSE SOD)
- 08/02/2005 - announce EoS for **VSE/ESA V2.7 (effective 2/28/2007)**
- 10/06/2005 - CICS2WS tool (n/c – supports VSE web services)
- 11/01/2005 - FCP-SCSI qualification for DS6000 and DS8000
- 11/25/2005 - z/VSE V3.1.1 (hardware, BSM, VSE/POWER, etc.) available



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- **01/01/2006 - withdrawal of ESL charge option**
- **01/15/2006 - S/390 SUF discontinued (replaced by ShopzSeries)**
- **02/07/2006 - announce EoS for HLASM V1.4 (effective 4/7/2007)**
- **02/13/2006 - 31-bit I/O buffers for z/VSE V3 available**
- **03/31/2006 - EoS for VSE/ESA V2.6 effective**



## VSE Server Support

IBM System z & S/390 Servers	z/VSE V3.1	VSE/ESA V2.7	Hdwr Support
IBM System z9 109 (31-bit mode only)	Yes	Yes	Yes
zSeries 990, 890 (31-bit mode <u>only</u> )	Yes	Yes	Yes
zSeries 900, 800 (31-bit mode <u>only</u> )	Yes	Yes	Yes
S/390 Parallel Enterprise Server™ G5/G6	Yes	Yes	Yes
S/390® Multiprise® 3000	Yes	Yes	Yes
S/390 Parallel Enterprise Server™ G3/G4	No	No	Yes (1)
S/390® Multiprise® 2000	No	No	Yes
S/390 Integrated Server	No	No	Yes
P/390 and R/390	No	No	No
S/390 Parallel Enterprise Server™ G1/G2	No	No	No
ES/9000® – 9221, 9121, 9021	No	No	No

**Note 1: S/390 G3 hardware support will end 12/31/2006**





## z/VSE V3.1 System z Exploitation

System z Functions	z/VSE V3.1 (1)	VSE/ESA V2.7
Fibre Channel Protocol (CHPID = FCP) for SCSI Disks	Yes	No
CP Assist for Cryptographic Function (CPACF)	Yes	No
Crypto Express2 ('PCICA' SSL encryption assist)	Yes	Yes
HiperSockets™ (including spanned HiperSockets)	Yes	Yes
FICON Express2™	Yes	Yes
OSA Express2 (incl 10Gb and Gb ethernet)	Yes	Yes
OSA Integrated Console Controller (OSA-ICC)	Yes	Yes
Up to 60 LPARs	Yes	Yes
Up to 4 LCSSs	Yes	Yes

**Note 1:** z/VSE V3 can operate in 31-bit mode only. It does not implement z/Architecture and specifically does not implement 64-bit mode capabilities. z/VSE V3 is designed to support selected features of IBM System z hardware.



## z/VSE Interoperability

zSeries Functions	z/VSE V3.1 (1)	VSE/ESA V2.7
<b>VSE Connectors (no additional charge)</b>		
Web Services, i.e. SOAP and XML	Yes	Yes
VSEScript and DL/1	Yes	Yes
VSAM Redirector	Yes	Yes
VSAM, POWER, Librarian, ICCF lib, console	Yes	Yes
DB2 Stored Procedures for VSAM and DL/1	Yes	Yes
<b>IBM Middleware (priced)</b>		
CICS Transaction Gateway	Yes	Yes
Host on Demand / Host Application Transformation	Yes	Yes
DB2 Connect/DB2 UDB (DB2 Server for VSE PRPQ)	Yes	Yes
WebSphere MQ (VSE Client no charge)	Yes	Yes

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# IBM System z Storage Options



IBM TotalStorage	DS6000	ESS 750, 800, 800Turbo	DS8000
ESCON	Not Avail	Yes	Yes
FICON	Yes	Yes	Yes
<b>FCP/SCSI</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>



## VSE Release Status

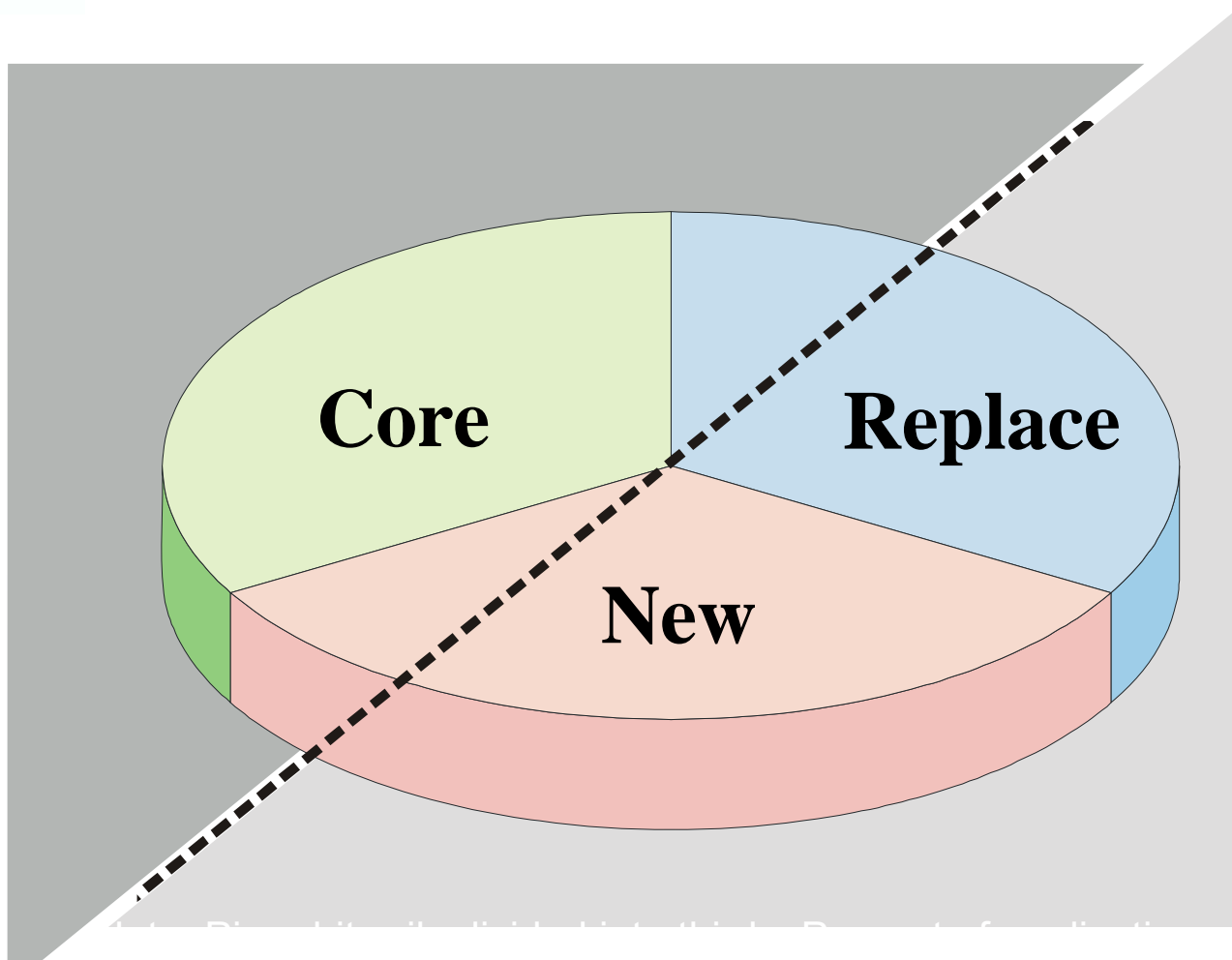
VSE Version and Release	Marketed	Supported	End of Support
<b>z/VSE V3.1</b>	<b>Yes</b>	<b>Yes</b>	<b>tbd</b>
VSE/ESA V2.7	No	Yes	02/2007
<b>VSE/ESA V2.6</b>	<b>No</b>	<b>No</b>	<b>03/2006</b>



# z/VSE Strategy



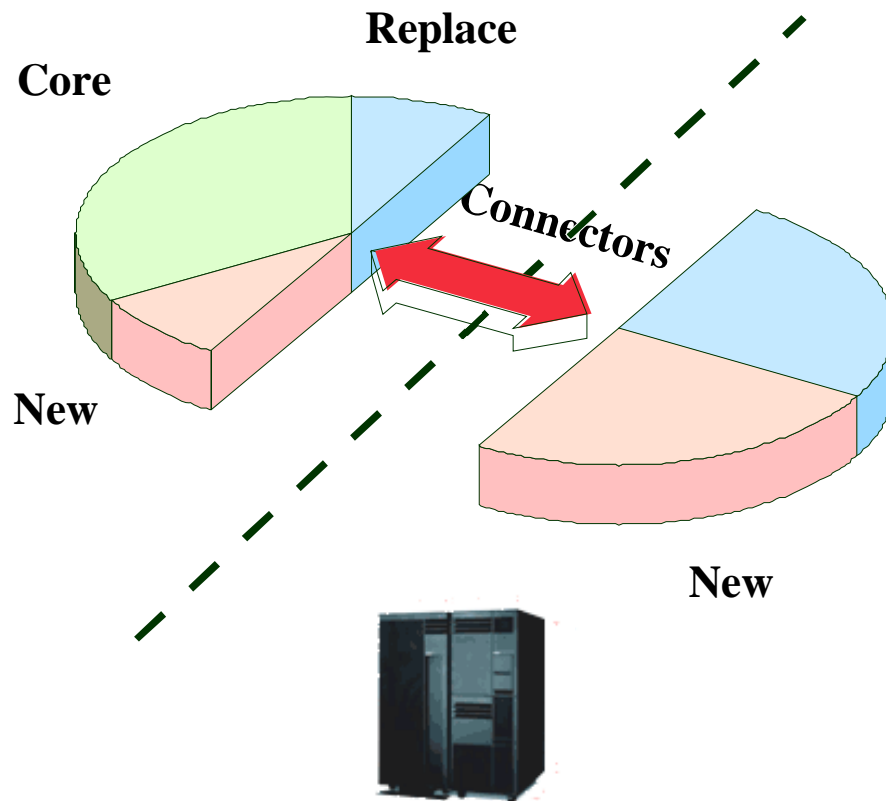
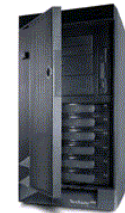
# Customer Application Portfolio:



Pie arbitrarily divided into 1/3 segments



# Integrating Hybrid Environments





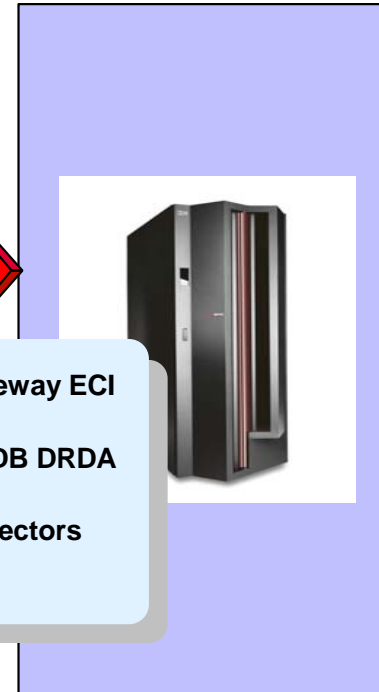
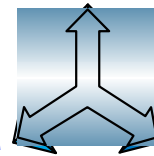
# Hybrid model

IBM TotalStorage



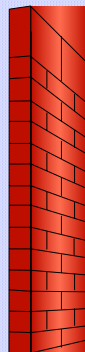
IBM System z  
Enterprise Server

IBM System z  
IBM System p5  
@server xSeries  
IBM BladeCenter  
IBM System i5  
OpenPower



- CICS Transaction Gateway ECI
- HOD/HATS
- DB2 Connect / DB2 UDB DRDA
- WebSphere MQ
- VSE e-business connectors
- VSE Web services

Web



Clients

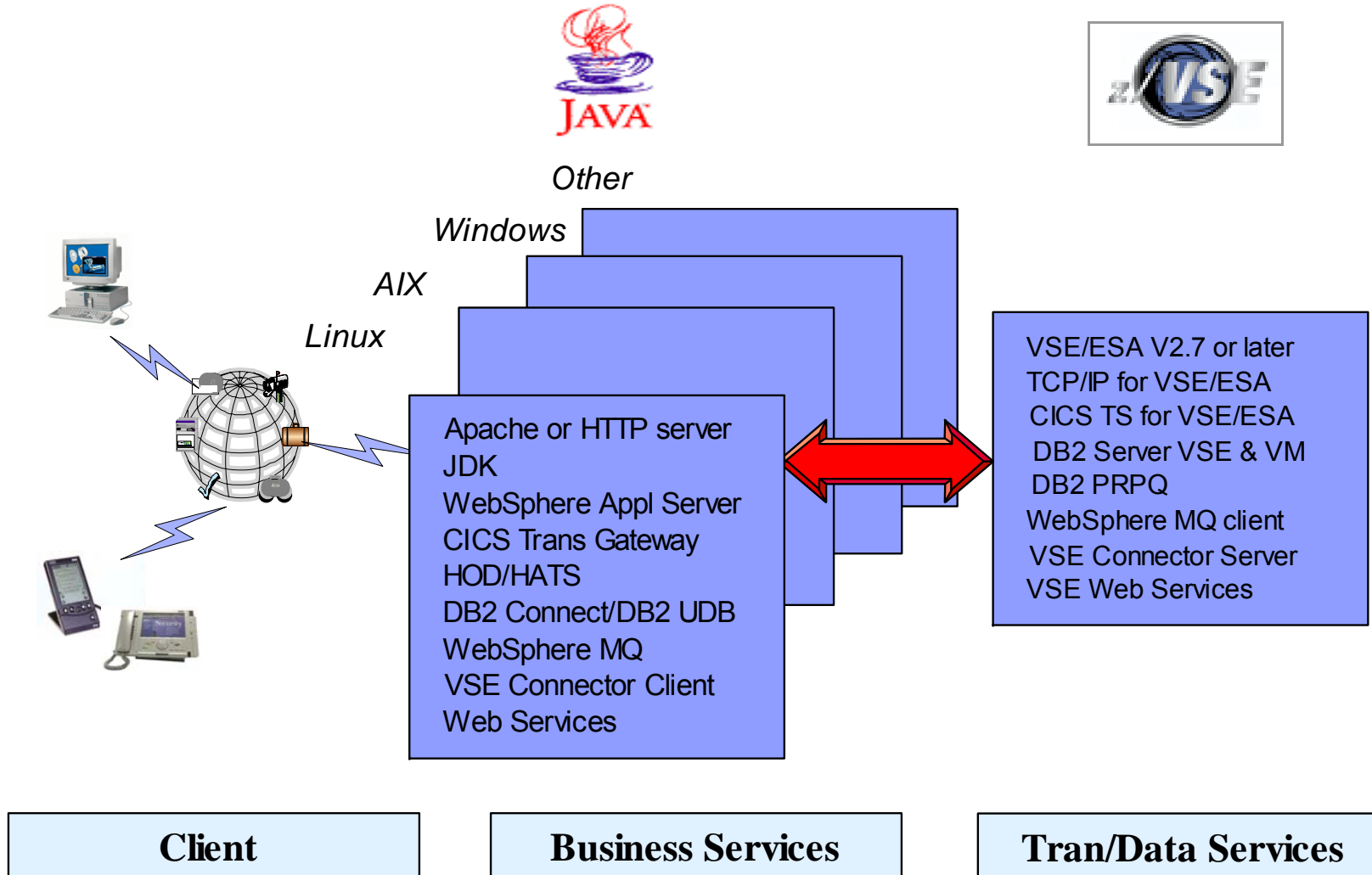
Business Services

Tran/Data Services





# Middleware for a Hybrid model

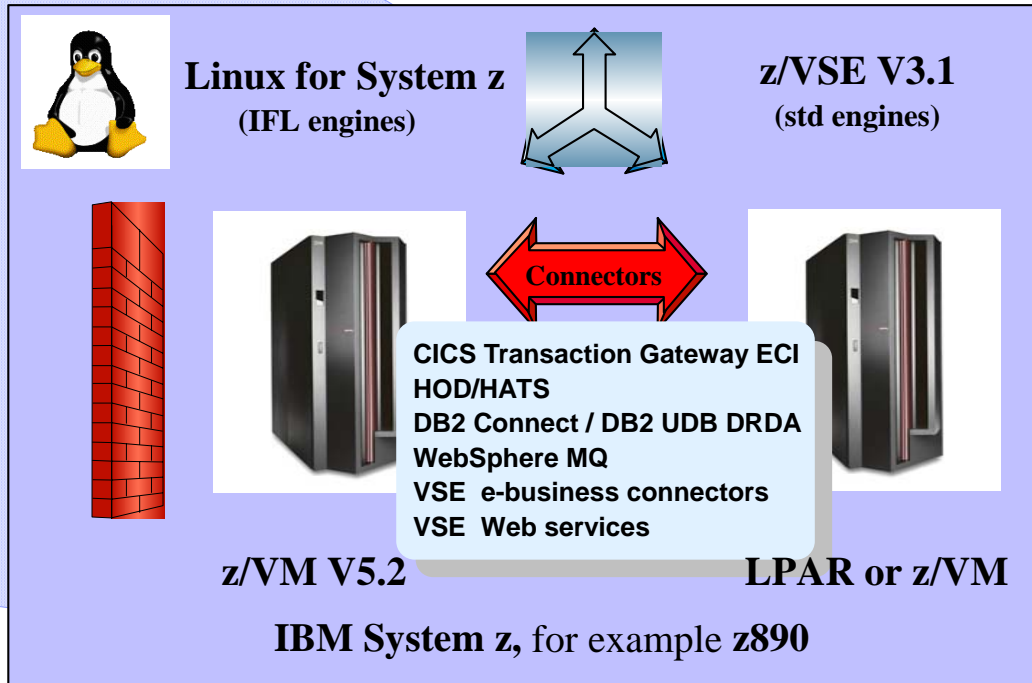




# Think *inside* the box



Web



Clients

Business Services

Tran/Data Services

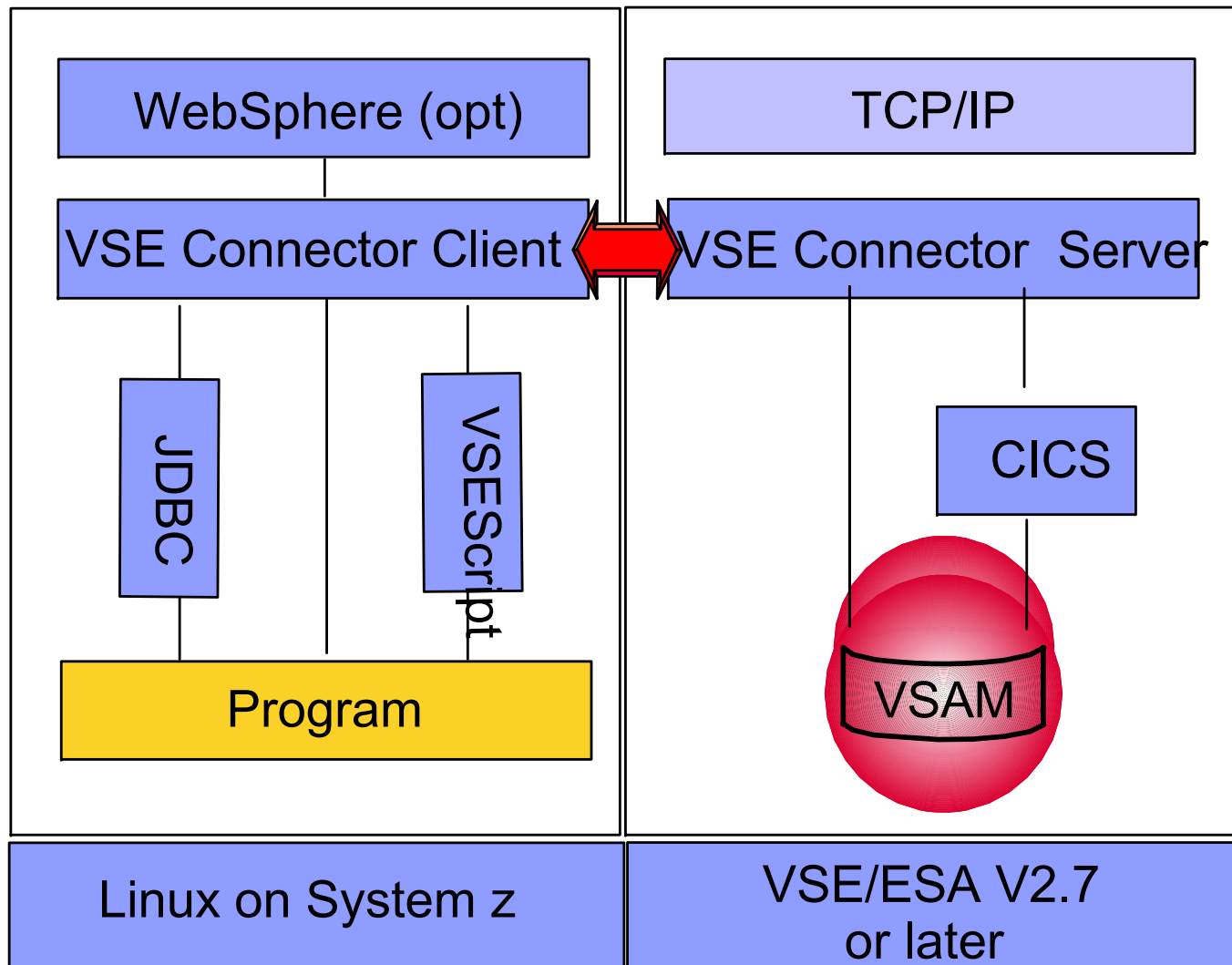


# Interoperability

## Access VSE Resources from External (i.e. Linux)

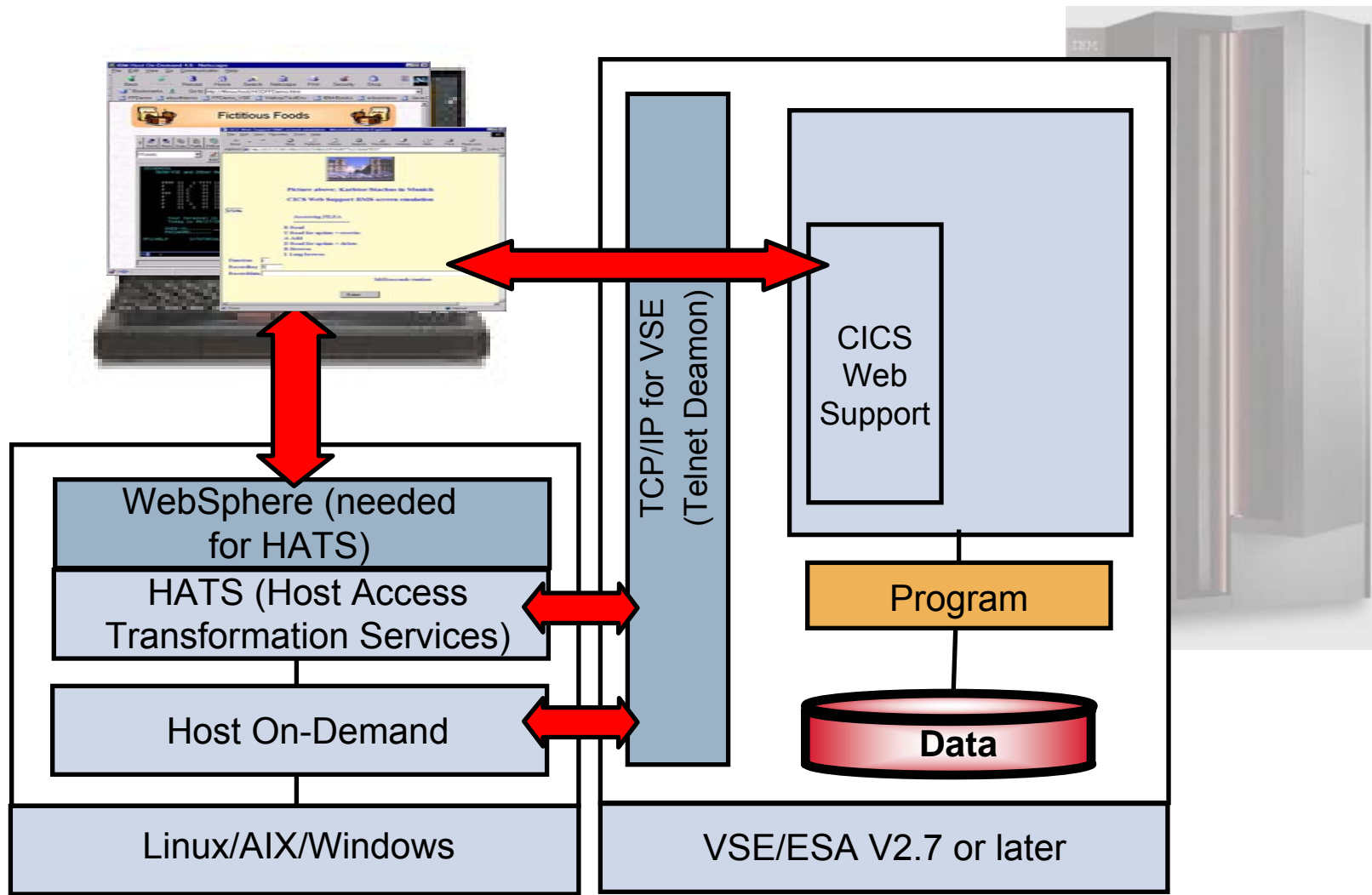


# VSAM Connector



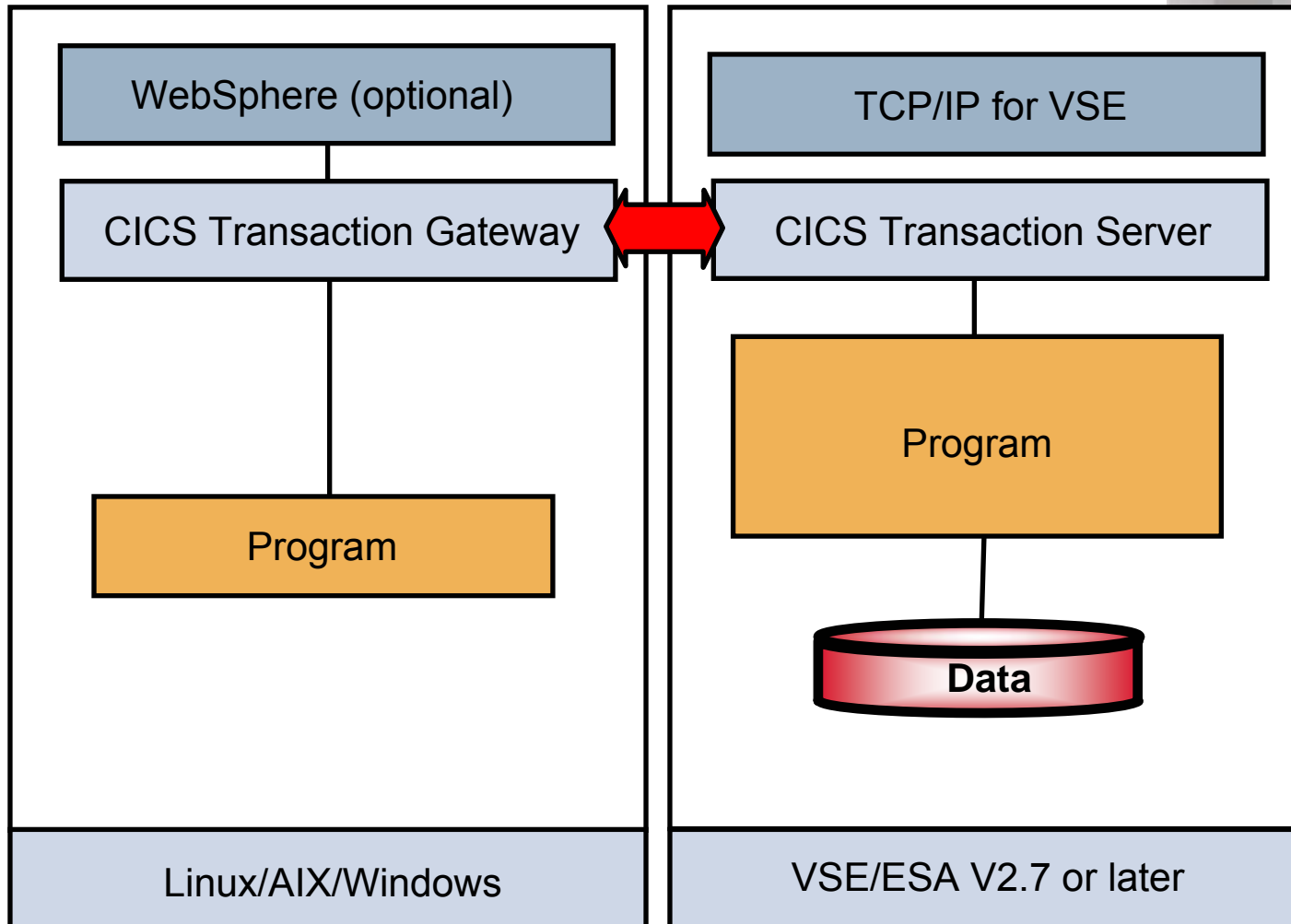


# CICS Access using CWS and HATS



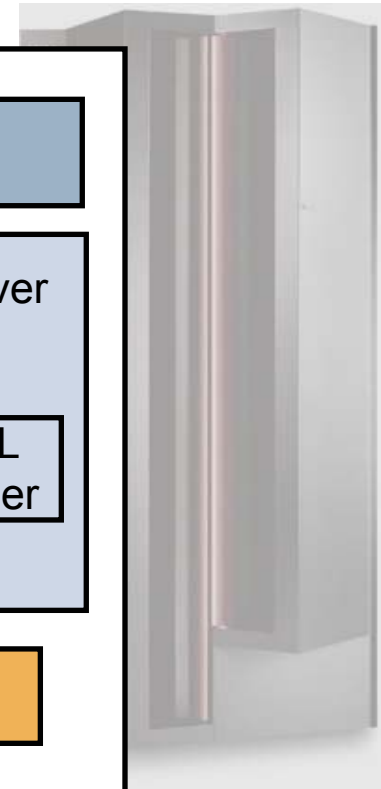
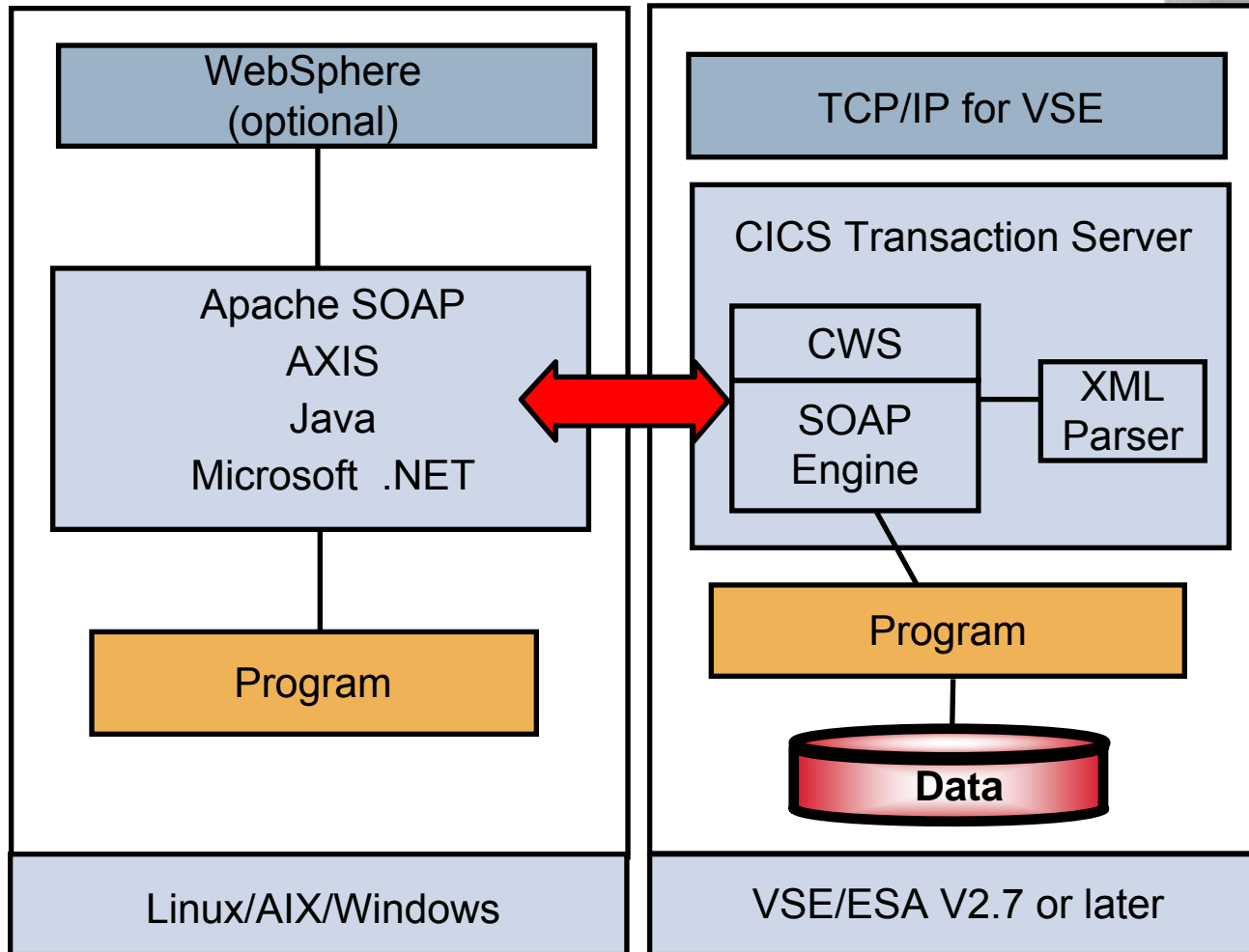


# CICS Access thru CTG





# CICS Access using Web Services





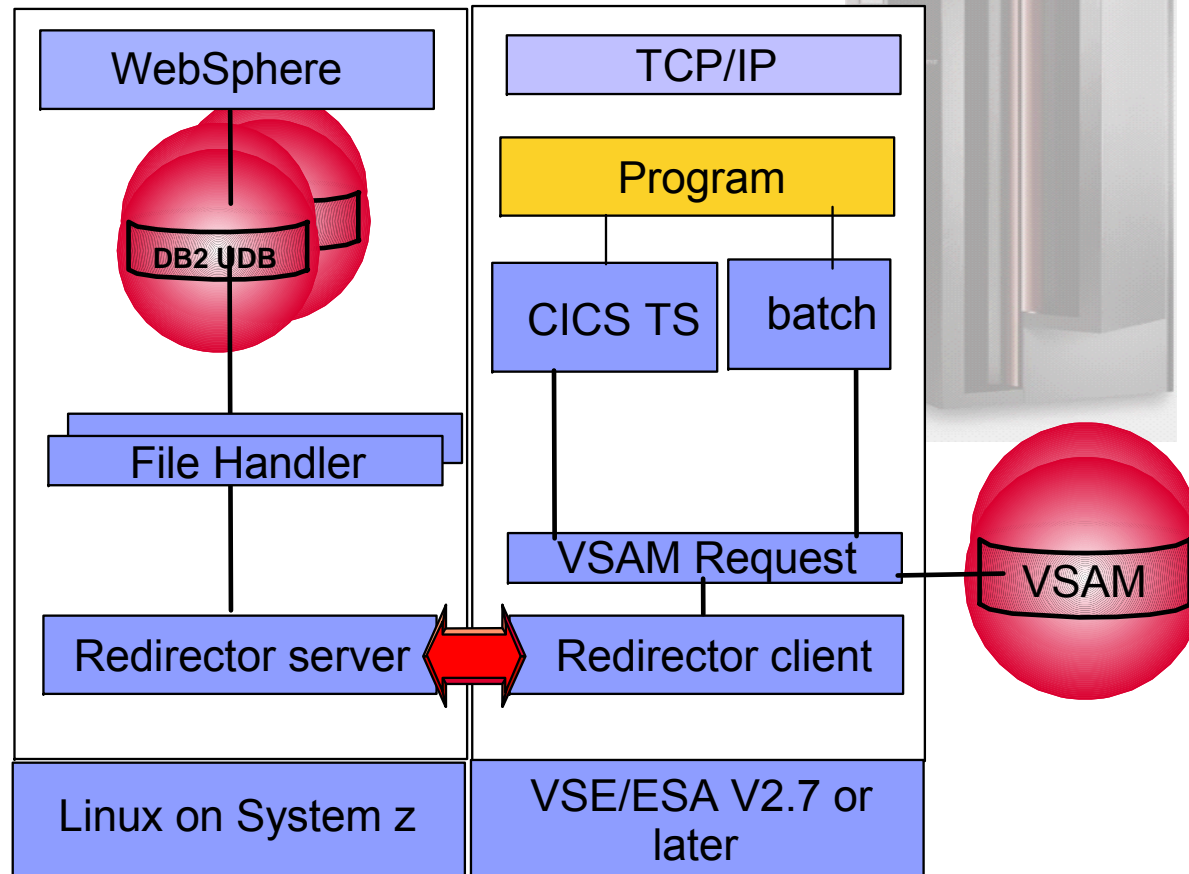
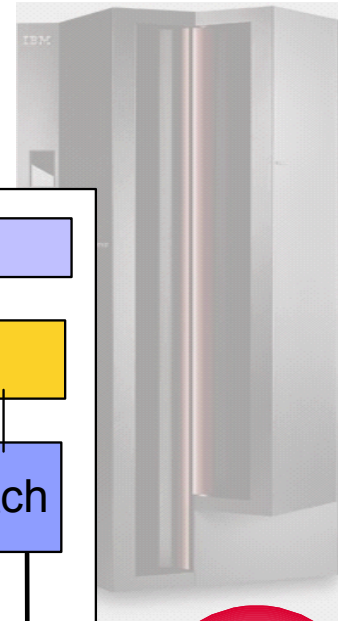
# Interoperability

## Access External (i.e Linux) Resources from VSE



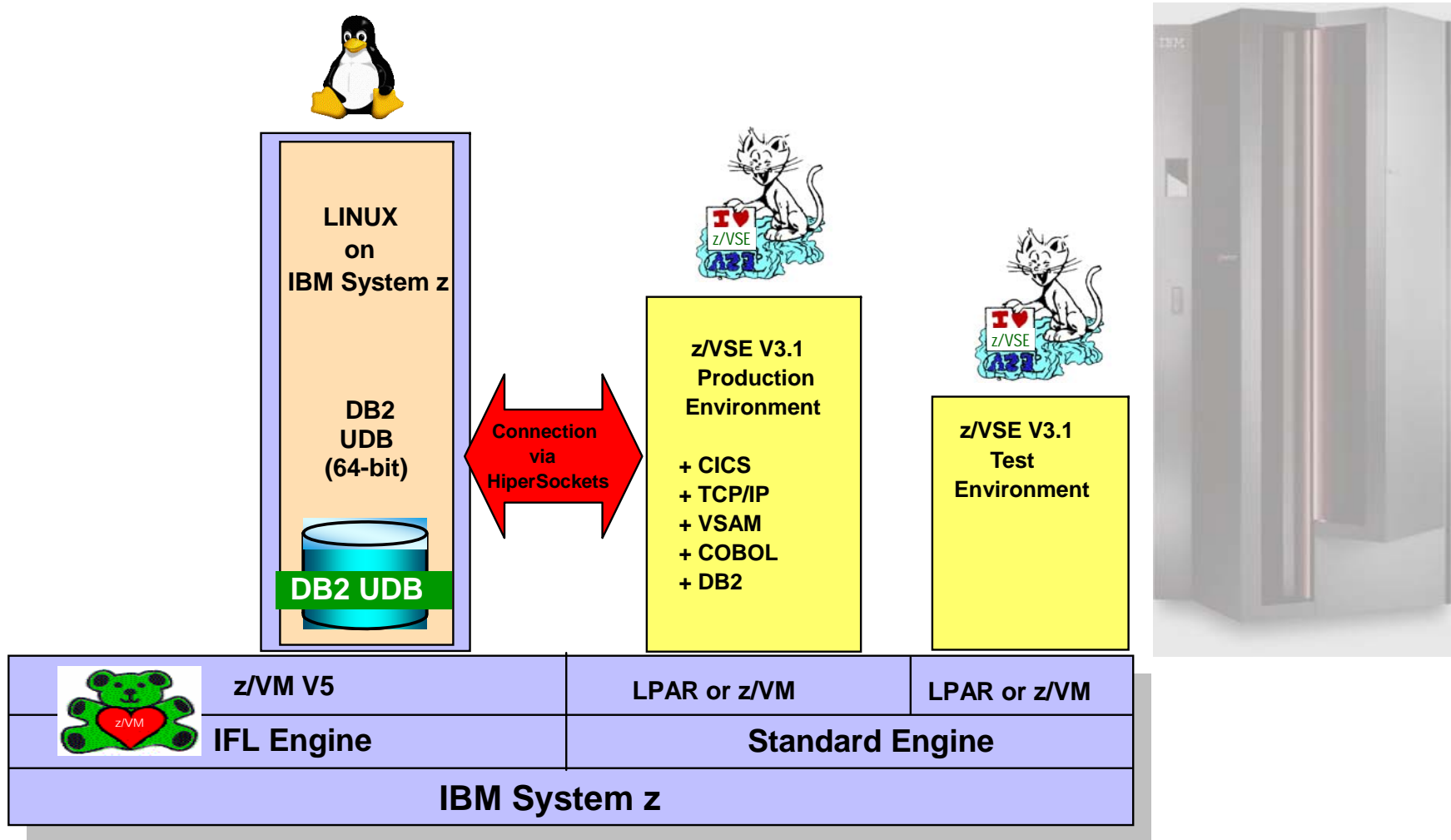


# VSE/VSAM Redirector



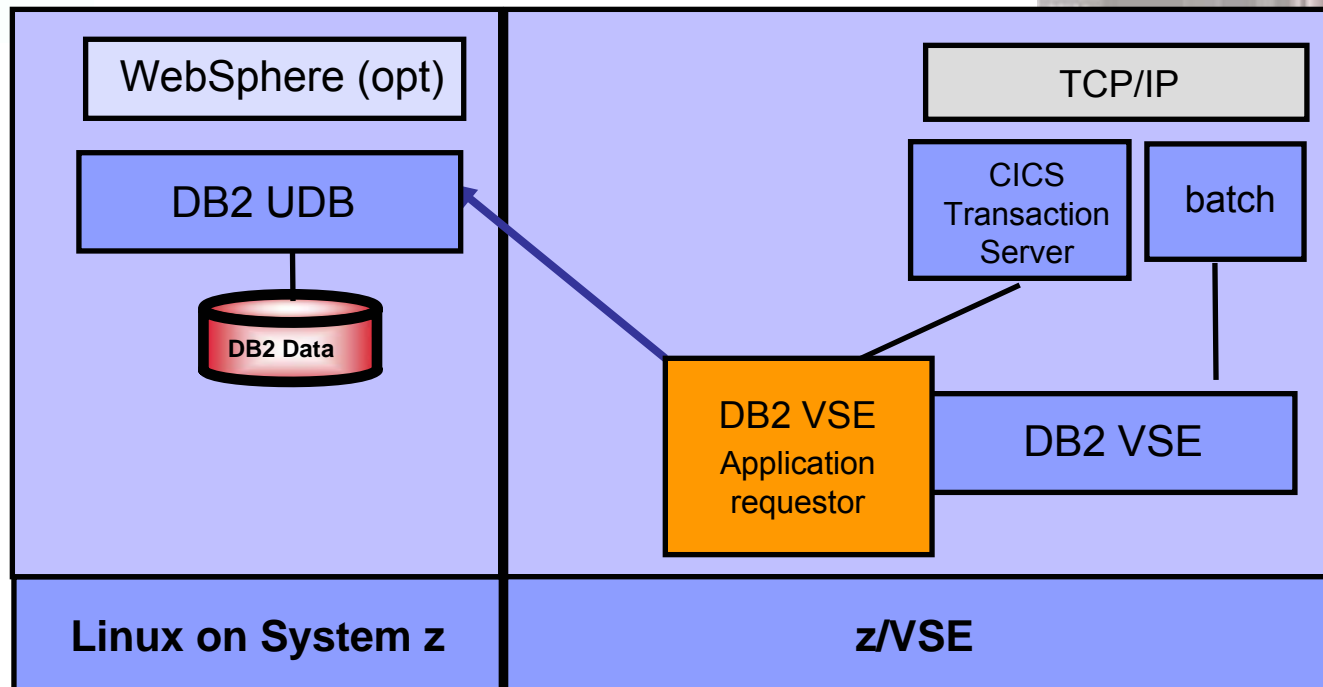


# DB2 UDB (64-bit) for VSE Customers





## DB2 VSE application access to remote DB2 UDB (Linux on IBM System z) Special OFFERING



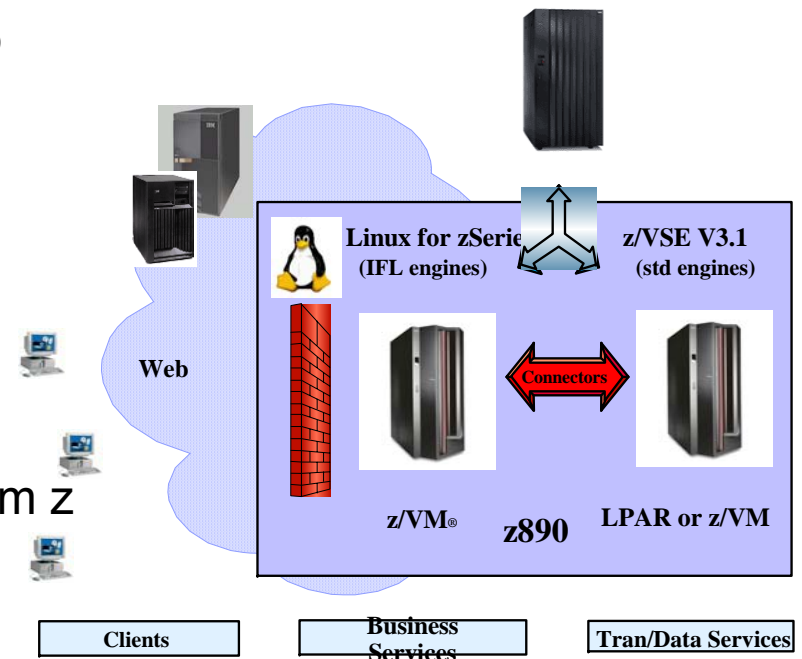
- ▶ *DB2 data on VSE* :
  - ▶ full licenses for DB2 Server for VSE & VM plus DB2 UDB for Linux
- ▶ **no DB2 data on VSE**
  - ▶ PRPQ: P10154 (Ordering Nr: 5799-HAQ )
  - ▶ Reduced License for DB2 VSE Client only - if NO data on VSE
  - ▶ Full Price for DB2 UDB on Linux on zSeries
- ▶ *Note: On VSE the SQL language used is the DB2 VSE SQL Language – because of precompiler*



## z/VSE (1) Strategy

- Help **Protect** your existing investments in core VSE programs, data, equipment, IT skills, *plus* business processes, end user training, etc.
  - ▶ modernize, i.e. extend VSE resources to Web
  - ▶ exploit IBM servers, storage, and software
  - ▶ z/OS affinity
- Help **Integrate** VSE with the rest of your IT based on open and industry standards
  - ▶ IBM middleware
  - ▶ VSE connectors and web services
- Help **Extend** solutions w Linux on IBM System z
  - ▶ infrastructure simplification
  - ▶ line-of-business applications

### Why Not Think Inside the Box?



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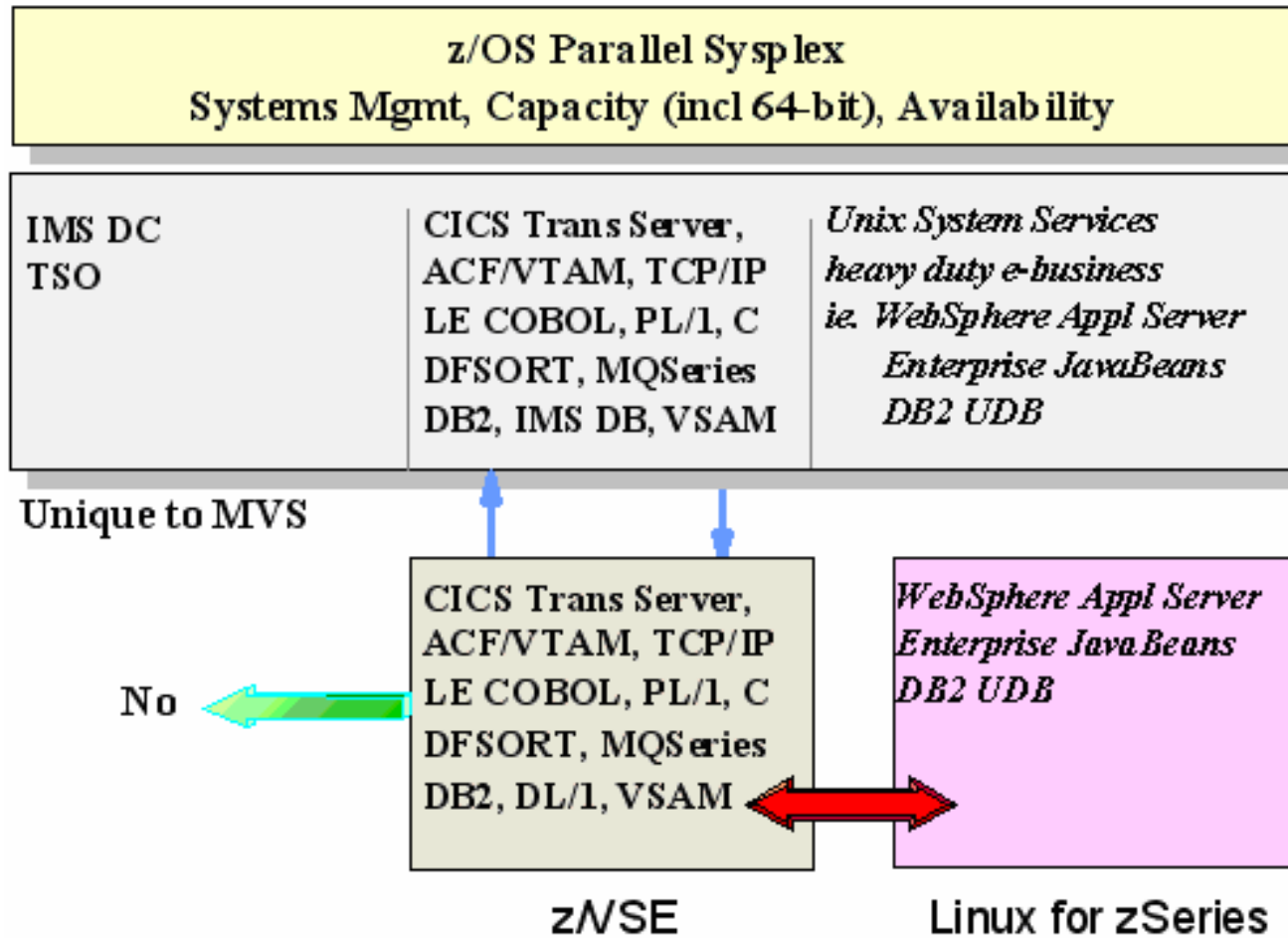


# Directions



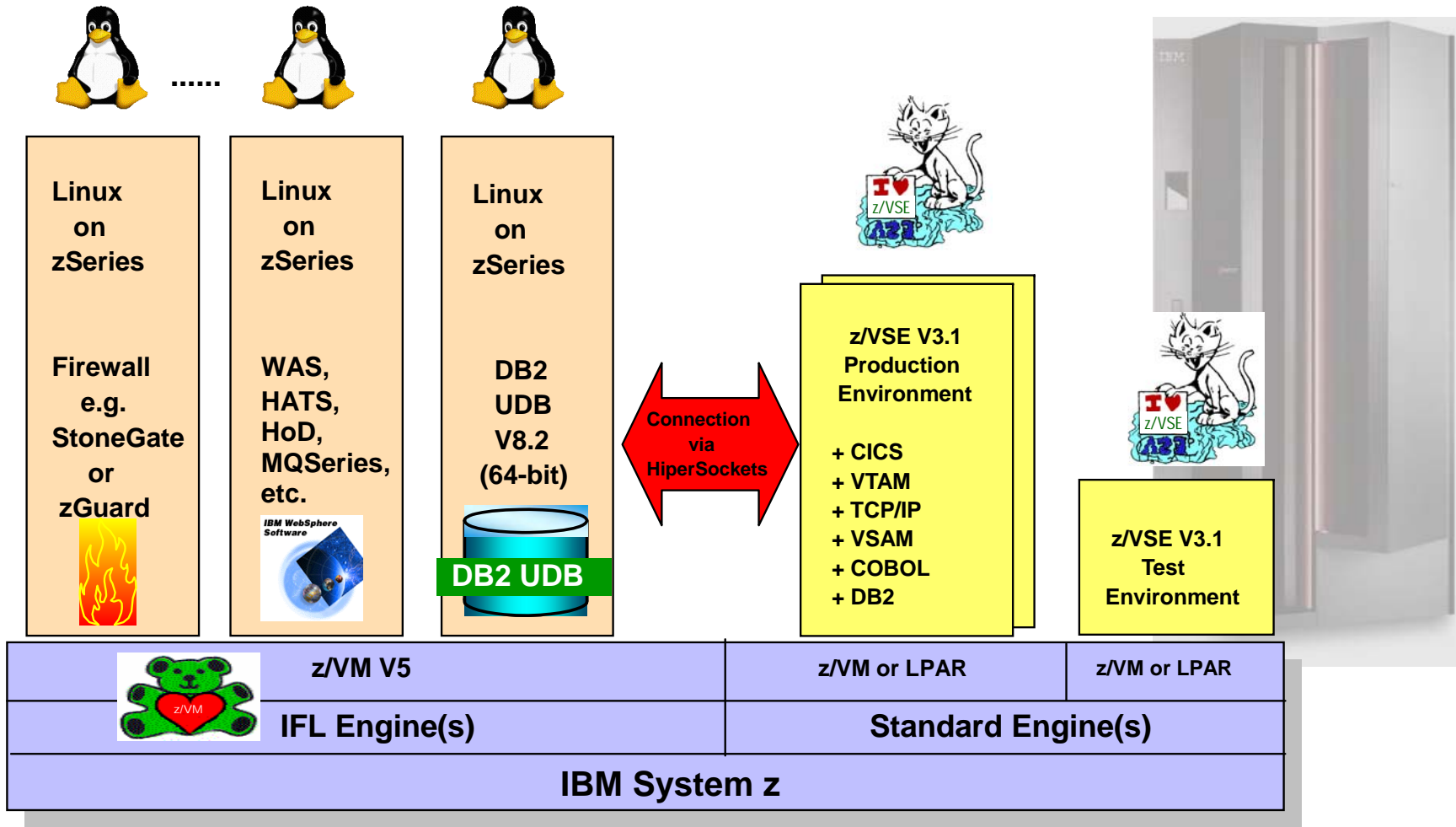
# z/VSE Positioning

z/OS





# z/VSE and Linux on System z





## z/VSE Directions

### ■ **Protect**

- ▶ basic hardware support and selective exploitation
  - IBM System z9
  - IBM TotalStorage
- ▶ value
  - availability/ integrity / reliability / security
  - continuity / stability / z/OS affinity
  - ease-of-use / maintainability / serviceability
  - lower total cost of ownership (TCO) / flexible terms and conditions
  - specific customer requests (WAVV, GSE, individuals, etc. requirements)

### ■ **Integrate**

- ▶ connectivity based on open and industry standards
- ▶ network integration (including IBM Middleware & VSE Connectors)

### ■ **Extend**

- ▶ integrate / exploit capabilities of Linux on System z





After 40 years providing robust, cost-effective solutions, VSE doesn't get older – **it gets better.....**

**P**rotect  
**I**ntegrate  
**E**xtend



*Simple as P i e !*



## Plan Now for VSE-related Events

- **IBM 2006 System z9 and zSeries Expo** – featuring z/OS, z/VM, z/VSE, and Linux on System z
  - ▶ October 9-13, 2006
  - ▶ Orlando, FL
  - ▶ Caribe Royale Resort
  
- **WAVV 2007** – featuring z/VM, z/VSE, and Linux on System z
  - ▶ May 18-22
  - ▶ Green Bay, WI
  - ▶ Regency Suites





z/VSE Version 3 Release 1



Thanks for listening, and  
thanks for your business

Your friends, the VSE development team



40 Years of VSE

5/26/2006

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