### **IBM System z Technology Summit**



Why WebSphere Application Server on System z?





#### z doctor is in!

Visit the z Solution Suite for 1-1 consultations; see the zEnterprise in action

# Save the Date

Impact2011
Changing the Way Business and

**Optimize for Growth. Deliver Results.** 

**April 10–15**Las Vegas, NV

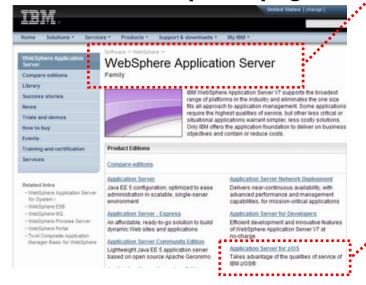
IT Leaders Work

ibm.com/impact



#### Two Questions We'll Answer Today ...

ibm.com WebSphere page.



WebSphere Application Server

Family

WebSphere. software

How does WebSphere **Application Server address** your business imperatives?

#### Application Server for z/OS

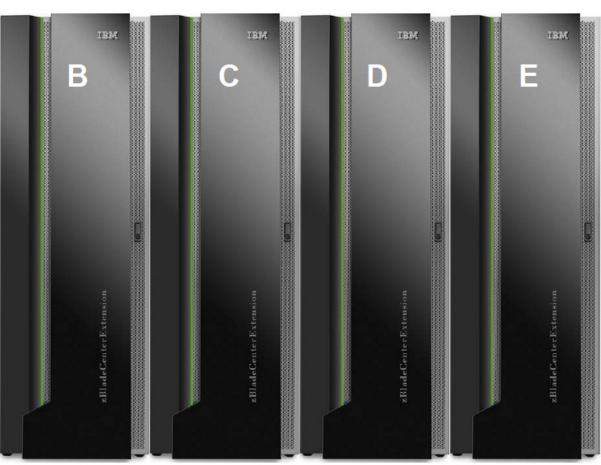
Takes advantage of the qualities of service of IBM z/OS®

What is meant by "Takes advantage of the qualities of service of IBM z/OS?"



#### IBM zEnterprise System





IBM zEnterprise 196 (z196)

IBM zEnterprise BladeCenter Extension (zBX)

IBM zEnterprise Unified Resource Manager (zManager)





#### z196 – Under the covers (Model M66 or M80)

Internal Batteries (optional)

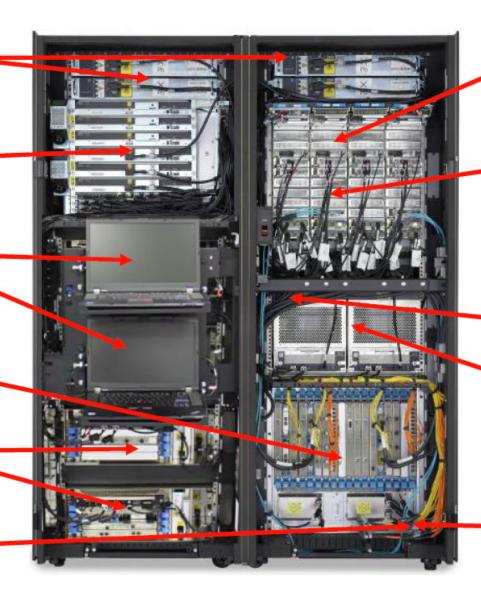
Power Supplies

2 x Support Elements

I/O cage

I/O drawers

Fiber Quick Connect (FQC) Feature (optional)



Processor Books, Memory, MBA and HCA cards

Ethernet cables for internal System LAN connecting Flexible Service Processor (FSP) cage controller cards

InfiniBand I/O Interconnects

2 x Cooling Units





## z196 Water cooled - Under the covers (Model M66 or M80) front

view

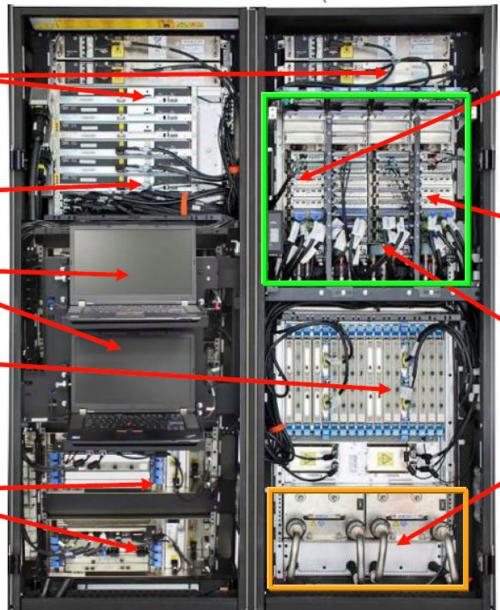
Internal Batteries (optional)

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Ethernet cables for internal System LAN connecting Flexible Service Processor (FSP) cage controller cards

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> InfiniBand I/O Interconnects

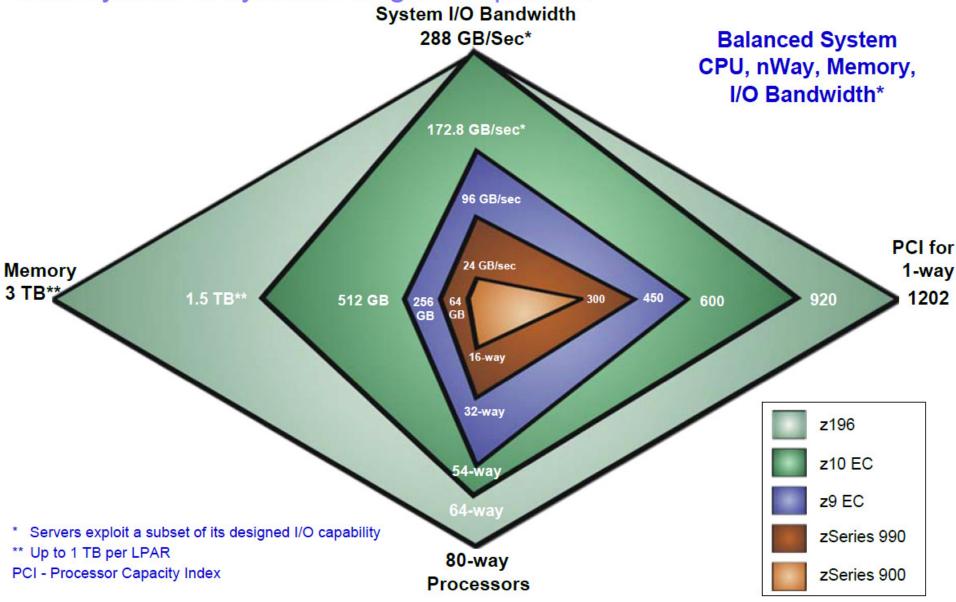
> > 2 x Water Cooling Units



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### IBM System z: System Design Comparison



## Information Management Lotus Rational Tivoli WebSphere

Information Management	Letus	Partional	Twok	WebSgittere	Information Wanagement	Letus	Rational	Tivali	WebSgittere	Information Management	Lette	Particeal	Tivali	WebSgittere
Data Governance General	Advanced Messaging	Software Delivery Platform	Asset Hanagement Enterprise Asset	Application Infrastructure	Discovery IBM InfoSphere	Application Connectivity	RealTime Functional Testing	Network Multi- Function Security	IBM WebSphere Transformation	-		IBM Rational Software Architect Extension for Deployment Planning	Provisioning Manager Family IBM Tivoli Release Process Manager	Charts IBM ILOG Views Data Access
IBM InfoSphere Guardium Family	IBM Lotus Domino Enterprise Client	General/Jazz Foundation	IBM Maximo Asset	Application Foundation	IBM InfoSphere Global Name Recognition Family	Alloy by IBM and SAP	1BM Rational Functional Tester	IBM Security Network Intrusion	Extender Family IBM WebSphere				Process Manager IBM Tivoli Remote	IBM ILOG Views
Data Management	Access License IBM Lotus Domino	IBM Rational Insight	Management	IBM CICS Connectors Family	IBM InfoSphere Information Server	IBM Lotus Connector for SAP Solutions	Functional Tester	Prevention System IBM Security Server	Transformation Extender Options			IBM Rational Software Architect Extension for	Control	IBM ILOG Views Graph Layout
Database Servers - Distributed	Express Family	IBM Rational Lifecycle Package	IBM Maximo Asset Management Essentials	IBM CICS Deployment Assistant for z/OS	Family	IBM Lotus Enterprise	IBM Rational Functional Tester Extension for Oracle	Protection	Family			Integrated Architecture	1BM Tivoli Service Automation Manager	IBM ILOG Views
IBM DB2 Advanced Enterprise Server	IBM Lotus Domino Family	IBM Rational Publishing Engine	Essentials IBM Maximo Asset	Assistant for z/OS IBM CICS Tools	IBM InfoSphere QualityStage Family	Integrator for Domino	Applications	1BM Security SiteProtector System	Business Process Management and			Frameworks IBM Rational	Event Management Automation	Maps IBM WebSohere
Enterprise Server Edition for Linux	IBM Lotus Domino Messaging Client	IBM Rational SoDA	Management Scheduler	Family	IBM InfoSphere QualityStage Module	Design & Construction	IBM Rational Functional Tester	IBM Security Virtual Server Protection for	Industry Solutions			Software Architect Extension for SQA and WebSphere	IBM Operations	IBM WebSphere ILOG Decision Validation Services
Edition for Linux, UNIX, and Windows	Access License	IBM Rational Team Webtoo	IBM Maximo Change and Corrective Action	IBM CICS Transaction Gateway Deaktop Edition	for DPID	IBM Lotus Domino Designer	Plus IBM Rational Robot	VMware	Business Process Management			1934 Patronal	Manager for z/VM	IBM WebSphere ILOG Decision
IBM DB2 Data Server Family	IBM Lotus (Notes IBM Lotus Notes	Process and Best	and Corrective Action Manager	Desktop Edition IBM CICS	Master Data	IBM Lotus Expeditor	IBM Rational Service	IBM Security zSecure suite	IBM Blueworks Uve			Software Architect	AF/OPERATOR on z/OS	Validation Services for Linux on System
IBM DB2 Everyplace Family	IBM Lotus Notes	Practices	Enterprise Asset	IBM CICS Transaction Server for Windows	Management IBM InfoSphere Master Content for	IBM Lotus Workflow IBM WebSphere Dashboard	Tester for SOA Quality	IBM Tivoli Data and Application Security	IBM WebSphere Business Compass			IBM Rational Software Architect for WebSphere	IBM Tivoli Natroni/OMNIbus	Z IRM WebSohere
Family 18M DB2 Express-C	Traveler  1BM Lotus Protector for Mail Encryption	IBM Rational Method Composer	Management Industry Solutions	TRM CTCC	Master Content for InfoSohere Master	Dashboard Framework	Performance Testing	IBM Tivoli Identity	IBM WebSphere Business Compass Advanced Edition			for WebSphere	IBM Tivoli Netcool/OMNIbus Gateways	ILOG Decision Validation Services for z/OS
IBM DB2 Express-C Fixed Term Ucense		IBM Rational Portfolio Manager	IBM Maximo Asset	Transaction Server for z/OS	InfoSphere Master Data Management Server	IBM WebSphere Portlet Factory	IBM Rational Performance Tester	and Access Assurance	Advanced Edition			Software IBM Rational	Gateways	for z/OS IBM WebSohere
18M Express Runtime	General IBM Lotus EasySync	IBM Rational Suite	Management Industry Solutions	IBM Express Runtime IBM Hourglass	IBM InfoSphere	Portiet Factory	Performance Tester Extension for Oracle Applications	IBM Tivoli Key Lifecycle Manager	IBM WebSphere Business Modeler			Software Architect Simulation Toolkit	IBM Tivoli OMNIbus and Network	ILOG IRules
IBM Informix Choice Edition	PTD	Software Delivery	Parrity	IBM Open Source Consolidation	Master Information Hub		IBM Rational	IBM Tivoli Key Lifecycle Manager for z/OS				IBM Rational Statemate	Manager Job Scheduling	IBM WebSphere ILOG JRules for Linux
18M Informix Family	Organizational Productivity, Portals	Automation IBM Rational	Enterprise Asset Management Options	Package	IBM InfoSphere Streams		Performance Tester Family	z/05	IBM WebSphere Business Monitor			IBM Rational Suite	IBM Tivoli Workload	on System z
IBM Informix Growth Edition	and Collaboration	Automation Framework for	IBM Maximo Enterprise Asset	IBM Retail Store Server Advanced	IBM InfoSphere Traceability Server		Security	IBM Tivoli Security Compliance Manager	IBM WebSphere Business Services Fabric Family			for Technical Developers IBM Rational Tau	Scheduler Family Network Management	IBM WebSphere ILOG JRules for z/OS IBM WebSphere
IBM Informix Innovator-C Edition	Portals IBM Customer	WebSphere	Management Options	Server Advanced Edition with Informix Database	18M Initiate Master		IBM Rational AppScan Family	IBM Tivoli Security	Fabric Family IBM WebSobere			Systems Testing	& Performance	ILOG Rule Solutions for Office
IBM Informix Ultimate Edition	Experience Suite	IBM Rational Build Forge Family	IBM Maximo Spatial	IBM TXSeries for	Data Service IBM Multiform Master		1BM Rational Policy	Information and Event Manager	IBM WebSphere Dynamic Process Edition			IBM Rational Systems Tester	IBM Tivoli NetView for z/OS	IBM WebSphere ILOG Rule Team
18M Red Brick	IBM Lotus ActiveInsight	IBM Rational Software Analyzer	Asset Management	Multiplatforms IBM WebSohere	Data Management		Tester Family Test and Change	IBM Tivoli Security Management for	IBM WebSphere			IBM Rational TTCN	IBM Tivoli Network Manager IP Edition	
Warehouse Family IBM solidDB	IBM Lotus Active/Insight for z/OS	Family	IT Asset Management	Application Server	Warehousing		Management	z/06	Integration Developer			Suite	IBM Tivoli OMNIbus	IBM WebSphere ILOG Rule Team
Database Extensions		Compilers and Modernization	IBM License Metric Tool	IBM WebSphere Remote Server	IBM InfoSobere		IBM Rational Quality Manager Family	Identity Management IBM Security zSecure	IBM WebSphere Lombardi Edition			Requirements Definition and	and Network Manager	ILOG Rule Team Server for Linux on System z
IBM DB2 pureScale Feature	IBM Lotus Workforce Management	Compilers	IBM Maximo Asset Management for Energy Optimization	Remote Server Family	Warehouse Family IBM InfoSohere		IBM Rational Test	SUITE	IBM WebSphere Process Server			Management IBM Rational DOORS	IBM Tivoli Performance Modeler for z/OS	IBM WebSphere ILOG Rule Team
IBM Homogeneous	IBM Mashup Center	IBM COBOL for AIX	Energy Optimization IBM Thyoli Asset	IBM WebSphere	IBM InfoSphere Warehouse Pack for Customer Insight		Lab Hanager Architecture, Design	IBM Tivoli Directory Integrator	Family			IBM Rational Lifecycle Package	for z/OS Systems, Application,	Server for z/OS
IBM Homogeneous Replication Feature for DB2 Enterprise	IBM WebSphere Dashboard Framework	IBM Enterprise COBOL for z/OS	Discovery for Distributed	Extreme Transaction	IBM InfoSphere		and Construction	IBM Twoli Directory	IBM WebSphere Sensor Events			IBM Rational Requirements	and Transaction	IBM WebSphere ILOG Rule Team Server for JNET
	18M WalrSchare	IBM Enterprise PL/I for z/OS	IBM Tivoli Asset Discovery for z/OS	Processing	IBM InfoSphere Warehouse Pack for Market and		Enterprise Architecture IBM Rational Asset	IBM Tivoli Federated	Business Event			Composer	Performance and Availability	IBM WebSphere
IBM Informix DataBlade Modules Family	Dashboard Framework for Linux	IBM PL/I for AIX		IBM WebSphere Extended	Campaign Insight		Manager	Identity Manager IBM Tivoli Federated	Processing IBM WebSohere			IBM Rational Requisite/Pro	IBM Twoli Composite Application Manager Family	ILOG Rules for COBOL
Database Tools -		IBM Rational Ada Developer	Management for IT	Extended Deployment IBM WebSphere	IBM InfoSphere Warehouse Pack for Supply Chain Insight		IBM Rational System Architect	IBM Tivoli Federated Identity Manager Family	Business Events			Project and Portfolio	Family	IBM WebSphere ILOG Rules for .NET
Distributed	IBM WebSphere Portal Accelerator Family	IBM Rational	IT Asset Management Options	Extended Deployment	IBM InfoSphere Warehouse Packs		Application	IBM Tivoli Federated Identity Manager for	IBM WebSphere . Business Events			Management General	IBM Tivoli Composite Application Manager for Application	Commerce, Mobile, Portal and Speech
IBM Informix Tools Family	IBM WebSphere	Development Studio for IBM i	IBM Maximo Asset	Compute Grid	Family		Construction	z/06	Business Events eXtreme Scale			IBM Rational Focal	Diagnostics	Commerce
IBM Mashup Center	Portal Family IRM WebSchere	IBM XL C and C++ Compiler Family	Management for IT Options Family	IBM WebSphere Extended	10.00		IBM Rational Application	IBM Tivoli Identity and Access	Industry Solutions			IBM Rational Method	IBM Tivoli Monitoring and Provisioning for	IBM WebSphere Commerce Family
Database Tools - Other	Portlet Factory	IBM XL Fortran Compiler Family	IT Financial	Deployment for z/OS IBM WebSphere			Developer for WebSphere Software	Assurance IBM Tivoli Identity	IBM Chemical and Petroleum Integrated			IBM Rational Project	IBM Retail Store Server	Portal
1BM DB2 Tools for z/OS Family	Forms Management	Enterprise	Management IBM Tivoli Decision	eXtreme Scale			IBM Rational Application	Manager	Information Framework			Conductor	IBM Tivoli OMEGAMON XE	IBM Mobile Portal Accelerator
IBM IMS Tools Family	IBM Forms	Modernization Tools	Support for z/O5	IBM WebSphere Real Time			Developer Standard	Threat Mitigation	IBM Retail Store Server Advanced			Change and Configuration Management	Family IBM Twoli System	Speech
Anationtions	Deaktop Productivity IBM Lotus Symphony	IBM Host Access Client Package	IBM Tivoli Usage and Accounting Manager	Intelligent			IBM Rational Software Architect	IBM Proventia Network Multi- Function Security	Server Advanced Edition with Informix Database			Management Change Management	Automation Integrated Operations Manager	IBM Embedded ViaVoice Family
IBM DB2 Connect Family	Social Software	Family IBM Personal	Network and Service	Management			Authornation Contact	Function Security IBM Security	IBM WebSohere			IBM Rational Change		IBM WebSphere
	IBM Customer	Communications	Assurance Communications	IBM Application Time Facility for z/OS IBM ISPF			Pack for RAFW and WAS	1BM Security Network Intrusion Prevention System	Banking Content Pack			IBM Rational ClearQuest Family	Systems Performance IBM Tivoli Business	Translation Server for Multiplatforms
Integrated Data Management	Experience Suite IBM Lotus Connections	IBM Rational Asset Analyzer	Service Provider	Productivity Tool			IBM Rational Software Architect	IBM Security Server	IBM WebSphere Front Office for			IBM Rational Lifecycle Package	Service Manager for z/OS	IBM WebSphere Unified Messaging for WebSphere Voice
IBM Data Studio	Connections	IBM Rational Business Developer	Solutions IBM Twoli Netcool	1BM Migration Utility for z/OS			Extension for	Protection IBM Security	Front Office for Financial Markets IBM WebSohere			Collaborative	1BM Tivoli Business Systems Manager for 2/05	Response
IBM InfoSphere Data Architect	Learning Software	IBM Rational Developer for Power	Configuration				Automation Planning	IBM Security SiteProtector System	Healthcare Content			Application Lifecycle Management	z/OS	IBM WebSphere Voice Response for AIX
IBM InfoSphere	Management System	Systems Software	Network Performance	IBM Problem Determination Tools Family			Model-driven Development	IBM Security Virtual Server Protection for	TRM WebSohere			IBM Rational Team Concert Family	IBM Tivoli Decision Support for z/OS	
Optim Query Tuner for DB2 for Linux, UNIX and Windows	IBM Workplace Collaborative	IBM Rational Developer for System z Family	Management	IBM WebSphere CloudBurst Appliance			IBM Rational Data	VMware Service Management	Industry Content Pack Family			Configuration	IBM Tivoli OMEGAMON XE	Miscellaneous Networking
IBM InfoSphere	Learning Mobile and Enterorise	z Family IRM Rational	1BM Tivoli Netcool Performance Manager	IBM WebSphere Virtual Enterprise			and Application Modeling Bundle	Application	IBM WebSphere			Management	Family	IBM Communication Controller for Linux on System z
Optim Query Tuner for DB2 for z/OS	Access	IBM Rational Developer for System z with EGL	IBM Tivoli Netcool Performance Manager	Application Integration			IBM Rational Professional Bundle	Performance & Availability	Pack IBM WebSohere			IBM Breeze for SCLM for z/OS	IBM Tivoli Output Manager for z/OS IBM Tivoli	on System z
18M InfoSphere Optim Query	IBM Lotus EasySync	IBM Rational	for Wireless	and Connectivity			IBM Rational	IBM Tivoli Composite Application Manager Family	Presence Server			IBM Enhanced Access Control for	Performance Modeler for z/OS	IBM Communications Server Family
Optim Query Workload Tuner for DB2 for z/OS	IBM Lotus Expeditor	IBM Rational Developer for System z with Java	IBM Tivoli Network Performance Flow	Enterprise Service Bus IBM WebSphere			Rhapsody Architect for Software		IBM WebSphere Product Ufecycle Management Content			Access Control for SCLM for z/OS	IBM Tivoli System	IBM X.25 Over TCP/IP for
IBM Optim Data Growth Solution	IBM Lotus Mobile Connect	IBM Rational	Analyzer	Enterprise Service			IBM Rational Rhapsody Architect for Systems	IBM Tivoli Composite Application Manager	Management Content Pack			IBM Merge Tool for z/OS and OS/390	Multiplatforms	Communication Controller for Linux
Family	IBM Mobile Portal	Developer for zEnterprise	Service Quality Management	IBM WebSphere			for Systems Engineers	for Application Diagnostics	IBM WebSphere			IBM Rational GearCase Family	IBM Tivoli System Automation for z/OS	
IBM Optim Data Privacy Solution Family	Accelerator Web Content	IBM Rational Host Access Transformation	Management IBM Tivoli Netcool	Bus for z/OS			IBM Rational	IBM Tivoli IntelliWatch Pinnacle	Remote Server Family			IBM Rational Synergy IBM SCLM	IBM Tivoli Web Access for	
Family IBM Optim Data	Management	Transformation Service for 5250 Applications	Service Quality Management Center	IBM WebSphere Message Broker Family			Rhapsody Automatic Test Generation Add	for Distributed	IBM WebSphere Telecom Content			Administrator Toolkit IBM SCLM Advanced Edition for 2/OS	Access for Information Management	
Reduction	IBM Customer Experience Suite	TRM Dational Host	Security Management				On IBM Rational	Business Service	Pack IBM WebSphere			Edition for z/OS IBM SQLM Developer	Transaction	
IBM Optim Database Relationship Analyzer	IBM Lotus Web	Access Transformation	Access Hanagement IBM Tivoli Access	Messaging-Oriented Middleware			Rhapsody Designer for Systems	Management	Telecom Web Services Server				Management IBM Tivoli	
IBM Optim Test Data	Content Management IBM Lotus Web		Management Family	IBM WebSphere MQ			Engineers IBM Rational	IBM Tivoli Business Service Manager	IBM WebSphere XML			Accelerators Information	IBM Tivoli OMEGAMON DE on z/OS	
Management Solution Family	Content Management, Standard Edition	IBM Rational Host Integration Solution Family	IBM Tivoli Data and Application Security	Everyplace Family IBM WebSohere MO			Rhapsody Developer	IBM Tivoli Business Systems Manager	Document Management Server			Technology	Other Service Management	
Warehousing		Family IBM Rational	IBM Tivoli Federated Identity Manager Business Gateway	IBM WebSphere MQ Family			IBM Rational Rhapsody Developer Rules Composer and	Systems Manager IBM Tivoli Netcool/Impact	ILOG Products			IBM Deployment Planning and Automation	Management	
IBM Smart Analytics Optimizer	Team Collaboration IBM Lotus	Migration Extension	Business Gateway IBM Twoli Federated	Partner Gateway			Rules Composer and Rules Player Add On		IBM ILOG DB Link			Automation Accelerator	1BM Tivoli Advanced Allocation Management for	
IBM Smart Analytics System 9600	Foundations Start	IBM Rational Programming Patferns for System z		IBM WebSphere Partner Gateway			IBM Rational	Change & Configuration	IBM ILOG Diagram for .NET			Systems		
InfoSphere	IBM Lotus Quickr IBM Lotus Quickr	Patterns for System z IBM Rational Suite DevelopmentStudio	Identity Manager Business Gateway Single Business	Family			Rhapsody DoDAF, MODAF and URDH	18M CloudBurst	IBM ILOG Elixir IBM ILOG Elixir			IBM Rational Accelerator for	1BM Tivoli Automated Tape Allocation Manager for z/OS	
Industry Models and Accelerators	Content Integrator	DevelopmentStudio for UNIX	Partner IBM Tivoli Federated	Governance IBM WebSphere			IBM Rational	IBM Deployment Planning and				Accelerator for Systems and Software Engineering	Manager for z/OS Service Request	
IBM Industry Models	Software as a Service Cloud Computing	IBM SCLM Administrator Toolkit	Identity Manager Family	Service Registry and Repository			Rhapsody Family IBM Rational	Planning and Automation Accelerator	IBM ILOG Gantt for .NET			Enterprise	Management	
Family	IBM LotusLive Family	Administrator Toolkit IBM SCLM Advanced Edition for z/OS	IBM Tivoli Identity and Access	Adapters			Rhapsody Test Conductor Add On	IBM Service Delivery Manager	IBM ILOG JViews			Modernization IBM Enterprise	Service Deak IBM Tivoli Service	
	Unified	Edition for z/OS IBM WebSobers Host	Assurance	IBM WebSphere Adapter Family			IBM Rational Rhapsody Tools and	IBM Tivoli Application	IBM ILOG JViews			Modernization Accelerator for	Request Manager	
	Communications and Collaboration	IBM WebSphere Host On-Demand	IBM Tivoli Key Lifecycle Manager	Adapter Family  DataPower Appliances			Rhapsody Tools and Utilities Add On	Dependency Discovery Manager	Diagrammer IBM ILOG JViews			Developers	Service Request Management Options	
Warehouse Packs Family	Instant Messaging and	Quality and Security Management	IBM Tivoli Key Lifecycle Manager for z/OS	IBM WebSphere DataPower SQA			IBM Rational Rose Data Modeler	IBM Tivoli Change and Configuration Management					18M Maximo Sendre	
Information	eMeetings IBM Lotus Sametime	Developer Testing	z/05	DataPower SQA Appliances Family			IBM Rational Rose	Management	IBM ILOG JViews Family				Request Management Options Family	
Integration	Family	IBM Rational Purify Family	IBM Tivoli Security Policy Manager	Data Transformation			Modeler IBM Rational Rose	Database IBM Tivoli	IBM ILOG JViews Gantt				Storage Management Data Protection	
IBM InfoSphere Business Glossary	Telephony	IBM Rational	IBM Tivoli Unified Single Sign-On	IBM WebSphere Data Interchange for MultiPlatforms			Technical Developer IBM Rational SDL	Configuration Manager for	IBM ILOG JVIews Graph Layout for				IBM Archive Manager	
Family	IBM Lotus Sametime Unified Telephony	PurifyPlus Family IBM Rational	Compliance				Suite	Automatic Teller Machines	Eclipse				for z/VM IBM Backup and Restore Manager for	
IBM InfoSphere DataStage Family	Software Development	PurifyPlus for AIX	Management	IBM WebSphere Data Interchange for z/OS			IBM Rational Software Architect	IBM Tivoli	IBM ILOG JVIews Maps				Restore Manager for	
IBM InfoSphere	& Business Integration	IBM Rational Test	IBM Proventia				IBM Rational Software Architect	Information Management for	IBM ILOG JViews Maps for Defense					



An industry-leading open standard application server platform, with powerful business functionality

#### **Manage Cost**

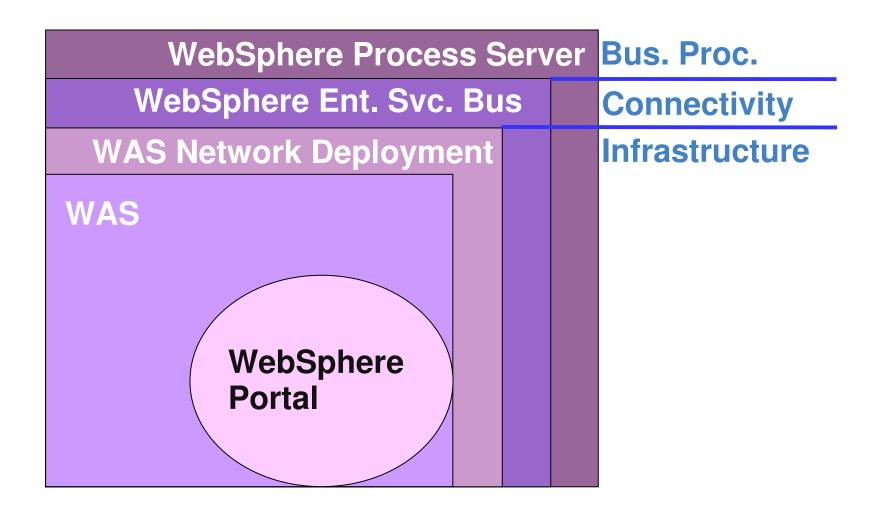
- Common standards across all platforms
- Common tooling across all platforms
- Many of the same skills across all platforms

#### **Enhance Agility**

- Rapid development and deployment model
- Many dynamic runtime elements

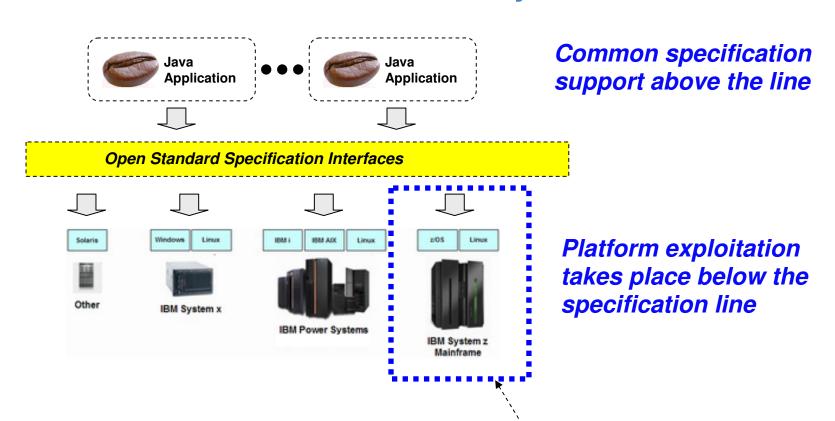
## Common business applications runtime across the enterprise ... development, test, production

#### The WebSphere Application Server 'Stack'



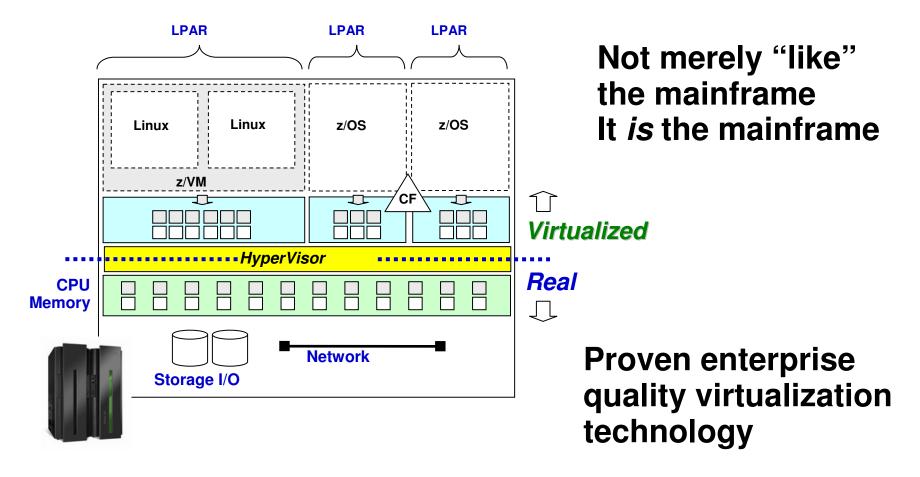


#### **Common Standards Across Family of Platforms**



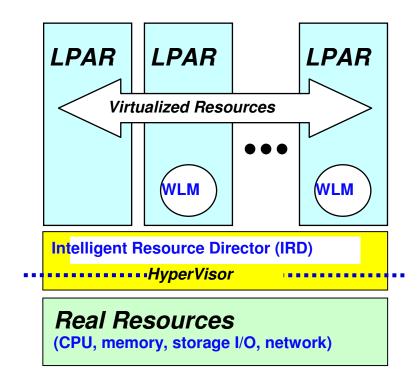
It's all about the System z and z/OS platform and the way WAS z/OS exploits the platform

#### **Industry-Leading Virtualization Technology**



Not all virtualization technologies are the same

#### **Dynamic Resource Re-Allocation Between LPARs**



Add CPU non-disruptively

Re-allocate CPU non-disruptively

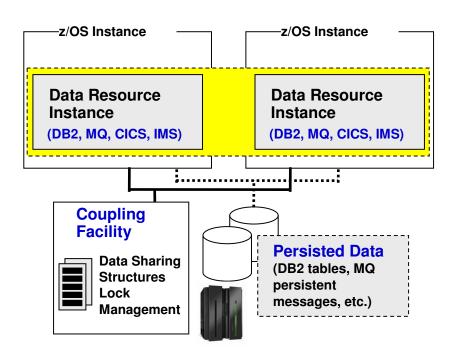
IRD intelligently balances

Vary I/O capacity dynamically

WLM advise IRD

Virtualization technology that evolved in the enterprise *Solid, stable and proven* 

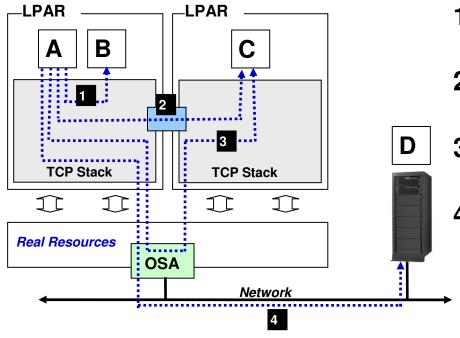
#### **True Data Sharing From Multiple Resource Instances**



- Parallel Sysplex provides clustered z/OS instances
- Shared data, lock management, coordinated time management, high-speed data transfer
- Mature, stable, reliable
- Unbeatable availability

## Provides scalability and availability ... to levels used throughout the world for critical activity

#### Intelligent TCP/IP



1. Same LPAR

No network ... cross memory ... ultra fast

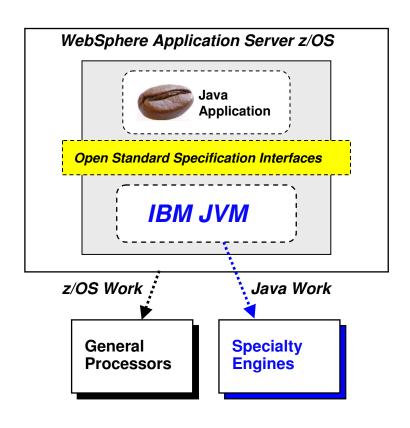
- 2. Different LPAR, HiperSockets
  No network ... cross memory ... very fast
- 3. Different LPAR, *not* HiperSockets No wire ... just adapter card ... fast
- 4. Off System z

**Traditional networking here** 

When throughput and scalability is important, network delays can add up

TCP/IP on z/OS is very aware and optimizes its path to reduce overhead and benefit your business

#### **Specialty Engine Exploitation**

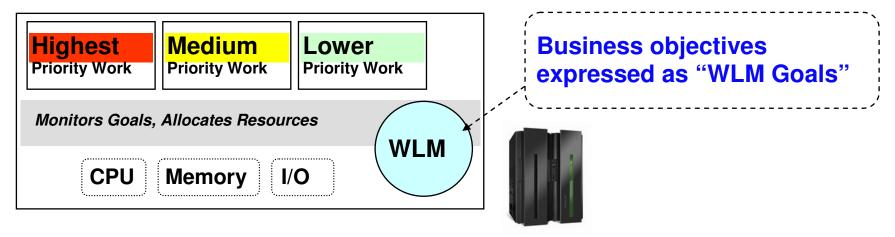


- Offload Java work to financially attractive specialty engines
- Completely transparent process to applications
- Greater general processor capacity for non-Java work
- Lower software licensing costs, and/or the avoidance of additional costs

Works for Java offload, Linux on System z offload and certain DB2 processing offload

A feature enthusiastically embraced by many System z and z/OS customers!



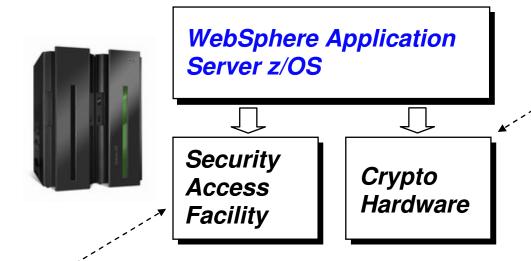


#### **Benefits to you and your business:**

- Intelligent control of resources towards meeting your goals
- Very efficient resource sharing can be accomplished
- Critical work gets the resources, less critical held off temporarily
- Intelligent routing of work based on WLM monitoring of system

Manage costs -- very efficient utilization of asset investment Provide agility -- intelligent and dynamic allocation to meet goals



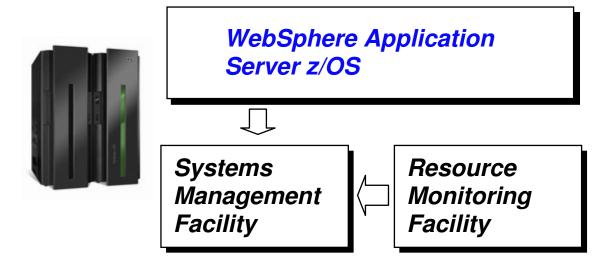


- Highest level of security for storage of private keys
- Very fast encryption and decryption
- Enhances security

- System interface for security products (IBM = RACF)
- Single, integrated security facility for tighter process control
- Define many classes of security profiles, including digital certificates

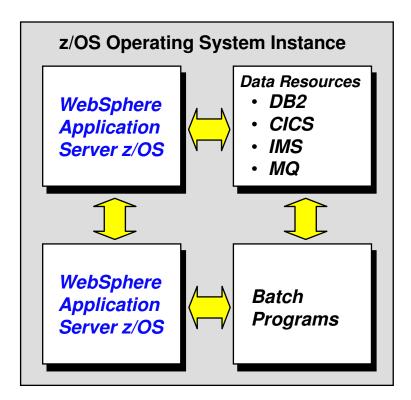
Security breaches are very disruptive and very expensive Protecting secure data is a business imperative SAF has proven itself to be secure and trusted





- Achieve very accurate and customized reporting of system activity
- Perform very precise capacity measurement and planning
- Capture who is using what resources and when
- Allows finer-grained accounting and chargeback
- Many tools on the shelf to do analysis and reporting
   Have a clear view of your resource investment and utilize is
   as fully as you can with the information you can gather

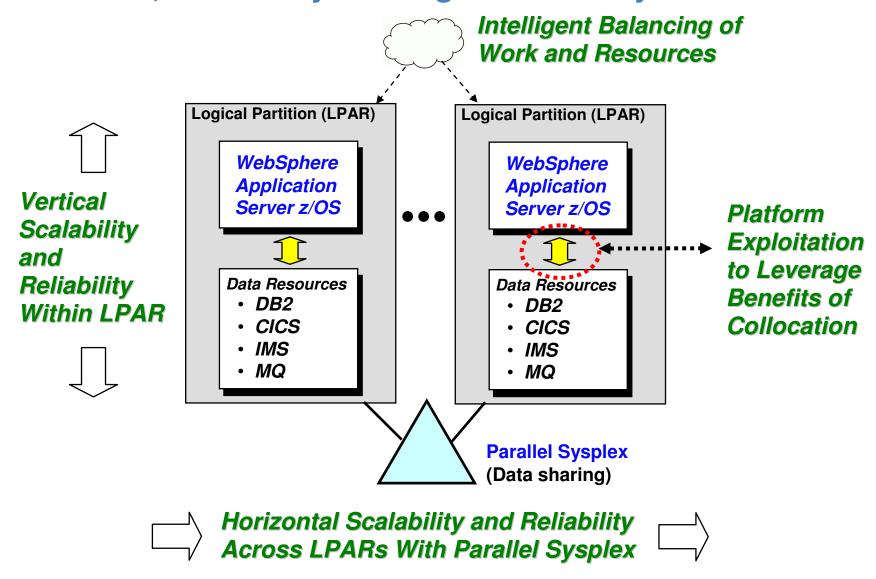
#### **Collocation Benefits**



- Extremely fast data transfer
- Tightly controlled by z/OS authorization processes
- Eliminate need to serialize and deserialize data and objects
- Eliminate need for encryption overhead
- Propagate several forms of user identity

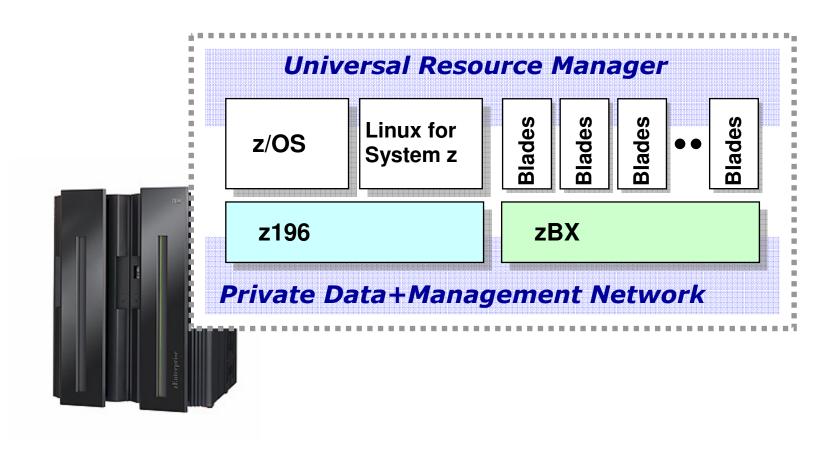
Efficient -- very low overhead so scalability can be addressed Secure -- no network, can't be sniffed or hacked Fast -- for very high volume workloads





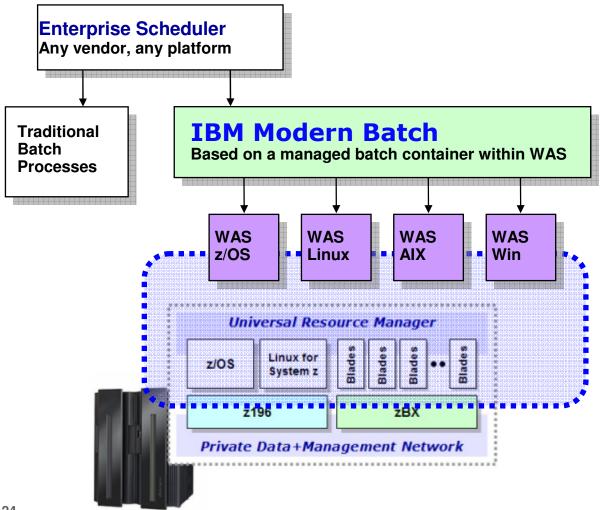


The z/OS benefits we've discussed for work best suited for that, and a coordinated and integrated multi-system machine it all



#### Modern Batch ... Coupled with zEnterprise

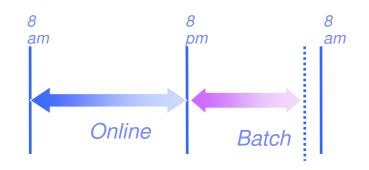
IBM's Modern Batch provides flexible Java batch processing across multiple environments. Put the zEnterprise underneathe and ...



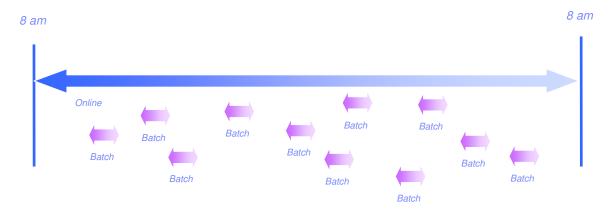
**IBM's Modern Batch** provides the managed container environment for Java batch **WAS** provides the runtime for combined OLTP and **Batch** zEnteprise provides the execution environments that allow the best "fit for purpose" for your needs



#### Defining the Issues of Traditional Batch on a Mainframe

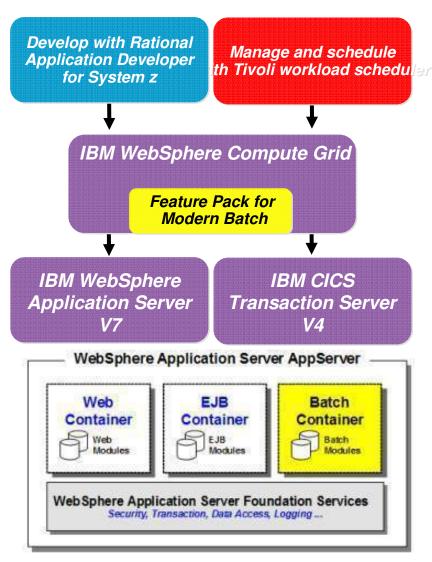


Globalization is putting pressure on traditional "batch windows". There's more data but shrinking batch time.



Is there a way to run batch concurrent with OLTP without affecting SLA for on-line applications?

#### Improved Utilization using Modern Batch on the zEnterprise



#### What it is

-- Architectural framework for meaningful integration between OLTP and batch applications. Reincorporates savings of batch processing into today's OLTP environment

#### What it offers

- -- Continuous interweaving of batch and OLTP processes **aka** 24 x 7 batch and OLTP
- -- Reduced cost through business logic sharing on a **shared** infrastructure
- -- Reduced operational cost from OLTP application and batch job **integration**
- -- High throughput and low resource consumption on z/OS for Java Batch when collocated with data subsystems

#### Already have a z/OS culture

- Already understand it
- Already built processes around it
  - Change management / Problem management
- Already know how to manage, measure, operate with it tooling and experience

#### **Like zSeries Hardware Benefits**

- · Reliability, availability (5 or 6 nines capable), virtualization
- LPARs and internal network speeds zBX

#### Like z/OS Capabilities

- WLM for policy based performance management
- Parallel sysplex for multi-system data sharing
- RACF (resource access control facility) for most robust security system available
- RRS (resource recovery service) for transaction management

#### Want WAS based products close to mainframe apps

- CICS, IMS, DB2; also z/OS optimizations / h/w optimizations
- Network bandwidth adds up

#### **Possible TCO benefits**

· vs. distributed environments

#### Performance Mgmt and Capacity Planning easier

- Tools and discipline exists for many years
- vs. distributed concept of `buy more/bigger h/w` drives up TCO



z doctor is in!

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