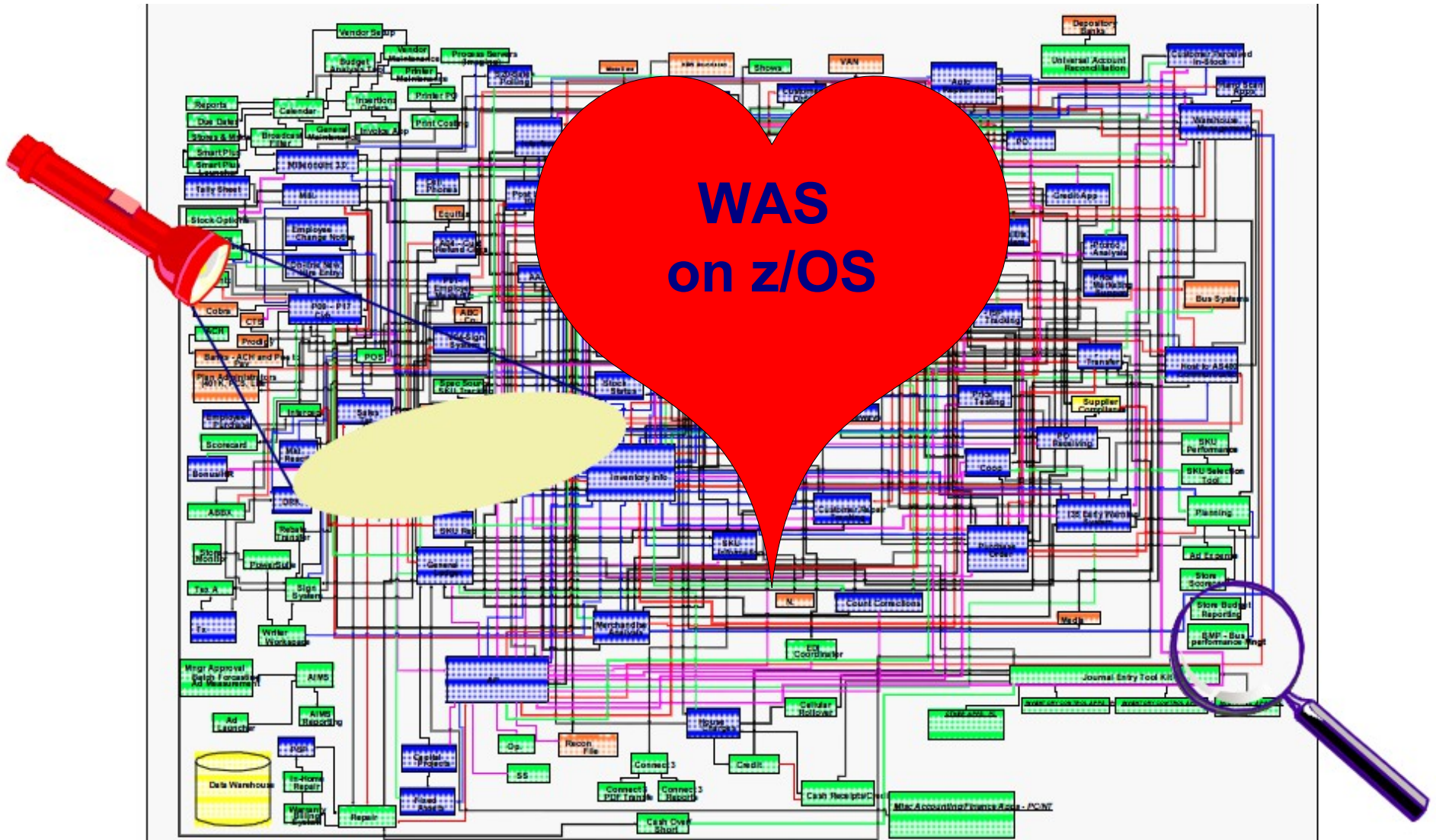


# WSC Guidelines for a Healthy WebSphere Application Server on z/OS



**John Hutchinson, hutchjm@us.ibm.com IBM Americas Advanced Technical Skills  
Techdoc TD104172, December 2012**

# ***Catalog of Information for WAS on z/OS...***

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High-level guide to documents will help you Configure & Manage WAS on z/OS, based on Washington Systems Center (WSC) experiences.

Click on **Hyperlinks** to access documents on the web at the following sites:

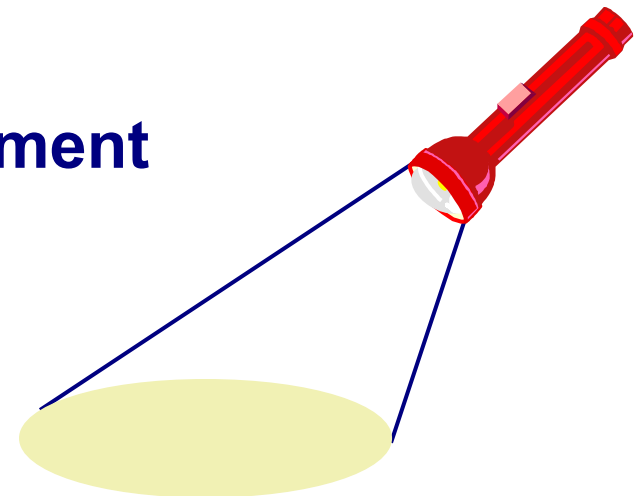
- **Techdocs** at <http://www.ibm.com/support/techdocs>
  - **WPxxxxxx** (White Papers)
  - **TDxxxxxxx** (Hints, Tips, and Technotes)
  - **PRSxxxx** (Presentations and Downloads)
- **Redbooks (SG24-xxxx)** at <http://www.redbooks.ibm.com/>
- **DeveloperWorks** at <http://www.ibm.com/developerworks/websphere/>
- **alphaWorks** at <http://www.alphaworks.ibm.com/>
- WAS z/OS **Guide to Documentation & Presentations** WP102205 
- Primary information source for WAS: the **Information Center:**  
<http://www.ibm.com/software/webservers/appserv/was/library>

# Healthy Topics

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*This is organized in the following subject areas:*

- A. Introduction & Education**
- B. Installation Setup & Configuration**
- C. Administration & Operations**
- D. Availability & Recovery**
- E. Security**
- F. Application Deployment & Management**
- G. Performance**
- H. Problem Determination**



# A. Introduction

## Before you start...

### ✓ Hardware Requirements:

- ✓ “Basic Sizing Guidelines for WAS on z/OS ” – [WP101620](#)
  - Minimum of 2.2 Gb Real, 2+ DASD volumes (9000 Cyl.)

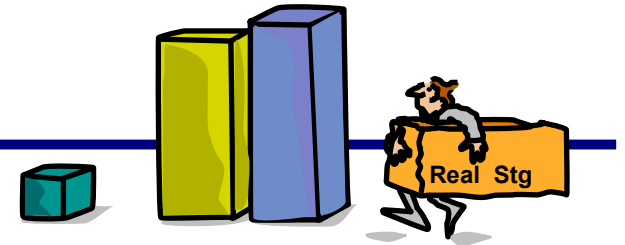
### ✓ Software Requirements:

- ✓ “[Program Directory](#)” or “[Target System Requirements](#)” in the InfoCenter.
- ✓ Use the latest version ([7.0.0.23](#), [8.0.0.5](#), or [8.5.0.01](#)) when setting up a new server.

### ✓ Configuration options: Understand the functions & options available.

- ✓ “Why WAS on z/OS” - [WP101532](#)
- ✓ Use a Network Deployment (ND) configuration for production.
- ✓ 1st time: Start with a standalone server to master the fundamentals.

### ✓ Saving time with WebSphere documentation – [PRS3546](#)



# Education Resources

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The best way to learn about WebSphere is a workshop with hands-on lab exercises, such as these:

- **Wildfire Classes** – PRS1778
  - *WebSphere for z/OS Version 8.5 for z/OS (WBSR85)* PRS4848
  - *Security Workshop: WAS V8 (WSW08)*
  - *Business Process Manager V8 (ZBPM8)* - PRS5030
  - *Java Exploiters Wildfire Workshop (ZJAV1)* - PRS3583

Enroll via your IBM Rep. who can contact Judy Vadnais-Keute via email: Judith Vadnais/Poughkeepsie/IBM or ([judyv@us.ibm.com](mailto:judyv@us.ibm.com))



- **Previous Wildfire Classes (Materials only)**
  - *WebSphere for z/OS Version 7 for z/OS (Materials only)* PRS3422
  - *Security Workshop: WAS V7 (Materials only)* - PRS3961
- **IBM Education Assistant** (educational modules designed to help you gain a better understanding of WebSphere products)
  - <http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp>

# B. WAS Installation

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- Product code loaded and applied using **SMP/E**.
  - See the “**Program Directory**” available in the InfoCenter.
- See Preventive Service Planning (**PSP**) site for Service Recommendations and Cross Product Dependencies:  
<http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp>
  - WAS V7.0: upgrade ‘WASAS700’ and subset ‘H28W700’
  - WAS V8.0: upgrade ‘WASAS800’ and subset ‘HBBO800’
  - WAS V8.5: upgrade ‘WASAS850’ and subset ‘HBBO850’
- The latest **PTFs** can also be found at  
[http://www.ibm.com/software/webservers/appserv/zos\\_os390/support/](http://www.ibm.com/software/webservers/appserv/zos_os390/support/)
  - click on ‘**Fixes by version**’ under the ‘**Download**’ section.
- **Basic Sizing** for WAS on z/OS – **WP101620**
- Set up z/OS Components for WAS
  - Components must be configured plus the necessary skills to use them: (UNIX, TCP/IP, RRS, RACF, TSO, RMF, SDSF, DB2, etc.)
  - See “Preparing the base operating system” in the InfoCenter

# Workstation Tools

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- **Telnet client** ( [PuTTY](#), [TeraTerm](#) )
- **FTP clients** ([WS\\_FTP LE](#))
- **Web browser** ([Internet Explorer](#), [Firefox](#))
- **PDF Reader** ([Adobe](#))
- **Text File Editor** ([PFE](#) , [Notepad](#), or [SlickEdit](#))
- **WCT** (WebSphere Customization Toolbox) & **zPMT** (z/OS Profile Management Tool) – See [Installation Manager](#)
- **RAD** ([Rational Application Developer](#)) or **WID**



**Each of the hot links above take to you the tool's download site or home page.**

# Installation Manager

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- "A Cookbook for the use of Installation Manager on z/OS with WebSphere on z/OS" - WP102014
  - Starting with WAS z/OS Version 8, the method of installation and maintenance of the product changed to using IBM Installation Manager (IM).
  - This document provides a step-by-step understanding of how to use IM to install and maintain WAS z/OS.

# Configuring WAS – 1st Steps

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- For your first configuration, consider building a Standalone Server
- Use these [WebSphere for z/OS Configuration Planning Spreadsheets](#):
  - Version 7 - [PRS3341](#)
  - Version 8 - [PRS4686](#)
  - Version 8.5 - [PRS4944](#)
- Next build an ND (Network Deployment) cell, which is covered in *'Top Down' Configuration Approach to WAS on z/OS* - [WP101030](#)
  - Based on more comprehensive white paper:  
*WAS z/OS V6 - WSC Sample ND Configuration* - [WP100653](#)
- **More Techdocs and a RedBook:**
  - ➔ [Creating a New Server in WebSphere V7 for z/OS](#) - [TD105447](#)
  - ➔ [WAS on z/OS like Thunder 'n Lightning; Ain't so Frightening](#) [PRS3657](#)
  - ➔ [“WAS V7: Concepts, Planning and Design” Redbook](#) [SG24-7708](#)

# Configuration Papers

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## Planning & General Guidance:

- *Planning Test, Production and Maintenance* - WP100396
- *Problem Avoidance for WAS for z/OS (Ch. 1)* - REDP6003

## zPMT (z/OS Profile Management Tool):

- *zPMT Introduction* - WP100871
- *Using zPMT & Spreadsheet to Build Quick Standalone* WP100999
- *Intro. WebSphere Configuration Tool (WCT) for z/OS-* PRS3357

## 31-bit considerations:

- *SHRLIBRGNSIZE & Effect on 31-Bit JVM Storage Needs* – WP101320

## 64-bit considerations:

- *64-bit Addressing Support in WAS for z/OS V6.1* - WP100920
- *C/C++ Considerations with 64-bit WAS for z/OS* - WP101095
- *64-bit Effect: 5 different ways to look at Applications-* WP101121

# **Hidden Gems:**

## **#1 Little Known Features of WAS on z/OS - WP101138**

*(includes a script to clean up common variables- message routing)*

- Sticking w/ the script – cleaning up common variable settings
- To GMT or not to GMT - using `ras_time_local`
- Keeping track when your applications don't
- Putting trace output in its place
- Managing your message output
- What's going on? The MVS DISPLAY command
- Spreading the work around - stateful session placement
- Please stand by - pause/resume listeners
- Are your enclaves propagating? Should you care?
- Handling large IOP messages in 64-bit mode
- Servant survivor - staying up during a timeout flurry
- Throttle up - scaling up to a lot of connected clients

## **#2: More Great, but Little Known Features... - WP101464**

- Making controller ASIDs reusable
- Allowing servants to connect to WLM early
- SMF record changes for IBM Getting Started Sub-Capacity Pricing (GSSP)
- Starting multiple servants in parallel (& minimum and maximum numbers)
- Controlling the number of dispatch threads in a servant
- Improved tools and diagnostics for troubleshooting.
- Ability to dynamically update the dispatch timeout delay
- Spinning server output by volume instead of by time
- Improved WLM classification wildcarding

## **#3: WAS V8 Hidden Gems – WP101992**



# Other Configuration Options

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**Sysplex Distributor** to increase availability & workload balancing [WP100312](#)

**HTTP Server** for session affinity and routing.

- *Understanding the HTTP Web Server Plugin* - [PRS1467](#)
- *IBM HTTP Server for z/OS Powered by Apache* – [WP101170](#)
- *Extending IHS powered by Apache with Custom Modules* – [WP101225](#)
- *Introducing WebSphere V7 Secure Proxy Server* – [WP101423](#)

**Job Manager** *Introducing The WebSphere V7 Job Manager for z/OS*

- [WP101341](#)

**Heterogeneous Cells** spanning different operating system platforms

- [WP100644](#)

**Cloudscape** *Configuring the Cloudscape Network Server for WAS for z/OS* - [TD102368](#) - Shows how to set up Cloudscape in a generic WebSphere Server.

# Runtime Migration

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Migrate your Version 7 with the automation scripts detailed in these papers:

## **To V. 7**

- *Migrating to WAS V.7 on z/OS - [WP101329](#)*
- *Migration to WAS V.7 Performance Study - [WP101589](#)*

## **To V. 8**

- *[WP101936 Migrating to WebSphere Extended Deployment Compute Grid v8.0.0.0 on z/OS](#)* 
- *<http://www.ibm.com/support/docview.wss?rs=180&uid=swg27008724>* 

# Configuring WAS Resource Managers

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Techdocs to help set up connections to resource managers:

## CICS

- *Connecting CICS Transaction Server from WAS for z/OS V 6* [WP100607](#)
- *Using JMS & WAS to Interact with CICS - MQ/CICS Bridge* [WP100682](#)

## IMS

- *IMS Connectivity in an On Demand Environment* - [SG24-6794](#)
- *IMS Java Guide & Reference* - [SC18-7821](#)

## MQ

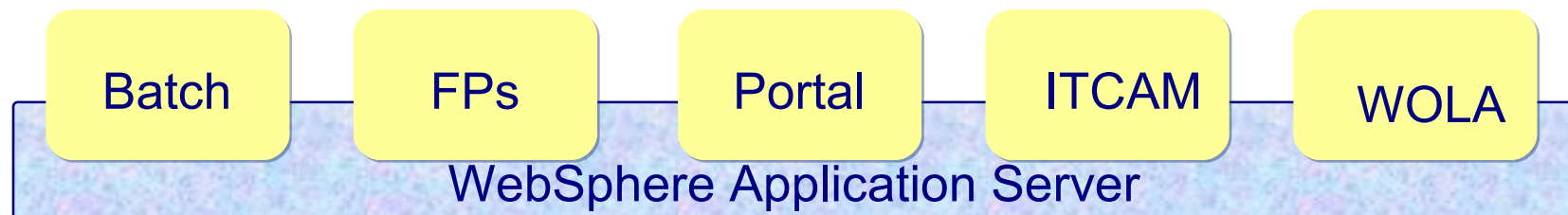
- *WebSphere for z/OS JMS and MDB IVP* - [WP100424](#)
- *Message Driven Bean Implementation with Activation Spec* - [WP101792](#)

# Extensions to WAS

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Products configured on top of WAS:

- **Modern Batch and Compute Grid** - WP101783 
  - **Feature Pack for Web Services** - WP101084
  - **Feature Pack for EJB3** - WP101142
  - **WAS V7 Feature Pack for SCA** - WP101394
  - **WebSphere Portal Server** - WP101249
  - **ITCAM V6.1** on WebSphere for z/OS - WP101206, SG24-7151
  - **WOLA** (Optimized Local Adapters) - WP101490 
- + "Re-engineering applications using optimized local adapters on V"



# WebSphere Modern Batch

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## Feature Pack and Compute Grid - WP101783

### Specific Feature Brochures

- Skip-Record Retry-Step
- Batch Listeners
- COBOL Container
- Parallel Job Manager

### Presentation with discussions of the following topics:

- Business Pressures on Traditional Batch
- IBM WebSphere Java Batch Overview
- IBM WebSphere Java Batch Feature Focus
- IBM WebSphere Java Batch for z/OS Focus
- IBM WebSphere Java Batch Deployment Scenarios

### White Paper with more detailed coverage of the following topics:

- Introduction to Java batch processing
- WebSphere Application Server Version 8.5 (which includes WebSphere Java Batch function)
- Compute Grid V8 (which is identical to the WebSphere Java Batch function in WAS V8.5)
- COBOL Container, Skip-Record, Retry-Step, Job Listeners, and the Parallel Job Manager

### Videos

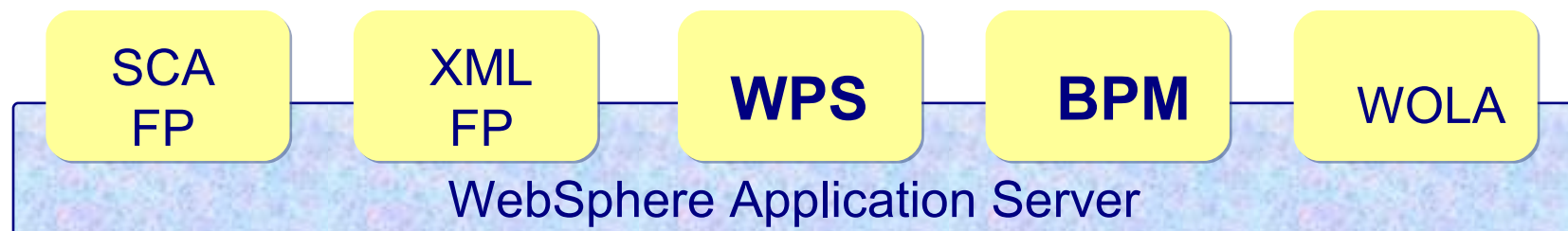
- 1.Business Pressures on Traditional Batch <http://youtu.be/fczMsZBIJko>
- 2.Overview of WebSphere Java Batch <http://youtu.be/cFQvVgb6qEY>
- 3.Focus on New Features in CG V8 and WAS V8.5 <http://youtu.be/LM5NEuO9Ucw>
4. WebSphere Java Batch and z/OS [http://youtu.be/tvCulpu3\\_Ts](http://youtu.be/tvCulpu3_Ts)

# More product extensions to WAS

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## IBM Business Process Management – Flagship of SOA...

- **BPM** (Business Process Management) Version 8 on z/OS
  - BMP on z/OS Configuration Guide - [WP102075](#)
  - Introducing WPS for z/OS V 7 Configuration Tips [PRS5030](#)
- **z/OS: WebSphere Business Process Management**
  - V7 Production Topologies” [RedBook](#) [SG24-7831](#)



# ***C. Operations & System Administration***

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Day-to-day operation of WebSphere can be administered through various **Operator Interfaces**:

- WebSphere administrative console (using a web browser)
- wsadmin scripts or command-line tools in a USS environment,
- MVS Console (usually under TSO and SDSF),
- Ant tools, or JMX programs.
- See InfoCenter article  
Where to perform WebSphere Operations



# Operations: MVS (TSO / SDSF) Consoles

- *Managing Operator Message Routing* - [TD103695](#)
- *SDSF system displays and MVS commands* - [TD100589](#).
- *Managing LE Options in WebSphere Servers* - [TD103863](#)
- *Creating Dynamic 3270 Screen Size in PCOM* - [TD102151](#) to increase the number of rows & columns on your 3270 displays:

```
WSC1.WS
Display Filter View Print Options Help
-----
SDSF DA SYSA (ALL) PAG 0 CPU/L 3/ 3 LINE 25-31 (44)
COMMAND INPUT ==> SCROLL ==> CSR
NP  JOBNAME  JobID  SysN  CPU%  Real  Paging  SIO  CPU-Ti  ASIDX  SrvClass  ECPU%  EXCP-Cnt  ProcStep  StepName  RptClass  Owner  S
FZAGNTC  STC32442 SYSC  0.00  51T  0.00  0.00  227.88  0061  OPS_DEF  0.29  1299678  BB0CTL  FZAGNTC  FZACRU
FZDEMNC  STC32439 SYSC  0.00  6754 0.00  0.00  0.42  004C  SYSSTC  0.00  9921  BB0DAEMN FZDEMNC  FZACRU
FZDMGR   STC32434 SYSC  0.00  75T  0.00  0.00  203.68 005B  OPS_DEF  0.00  1123834 BB0CTL  FZDMGR   FZACRU
FZDMGRS  STC32441 SYSC  0.00  97T  0.00  0.00  134.25 0060  OPS_DEF  0.00  1117670 BB0SR   FZDMGRS  FZASRU
FZSR01C  STC32444 SYSC  0.29  75T  0.00  0.00  169.39 0062  OPS_DEF  0.00  888063  BB0CTL  FZSR01C  FZACRU
FZSR01CS STC32445 SYSC  0.00  98T  0.00  0.00  127.88 0063  OPS_DEF  0.00  663414  BB0SR   FZSR01CS FZASRU

Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY B7SR01DS STC27993 DSID 105 LINE 3,945 COLUMNS 02- 133
COMMAND INPUT ==> SCROLL ==> CSR
WSWS3576I: Info: Changed java name com.ibm.www.GetStoredQueryResponse to javax.xml.soap.SOAPElement for xml construct {http://www.ibm.com/xmlns/prod/websphere/human-task/services/6.0}>getStoredQueryResponse due to mapping file reference.
WSWS3576I: Info: Changed java name com.ibm.www.CustomPropertyType to javax.xml.soap.SOAPElement for xml construct {http://www.ibm.com/xmlns/prod/websphere/bpc-common/types/6.0}CustomProperty due to mapping file reference.
WSWS3576I: Info: Changed java name com.ibm.www.CustomPropertyType to javax.xml.soap.SOAPElement for xml construct {http://www.ibm.com/xmlns/prod/websphere/bpc-common/types/6.0}CustomPropertyType due to mapping file reference.
WSWS3576I: Info: Changed java name com.ibm.www.CustomPropertyType[] to javax.xml.soap.SOAPElement[] for xml construct {http://www.ibm.com/xmlns/prod/websphere/bpc-common/types/6.0}CustomProperty[,unbounded] due to mapping file reference.
WSWS3576I: Info: Changed java name com.ibm.www.TerminateResponse to javax.xml.soap.SOAPElement for xml construct {http://www.ibm.com/xmlns/prod/websphere/human-task/services/6.0}>terminateResponse due to mapping file reference.
WSWS3576I: Info: Changed java name com.ibm.www.TerminateResponse to javax.xml.soap.SOAPElement for xml construct {http://www.ibm.com/xmlns/prod/websphere/human-task/services/6.0}terminateResponse due to mapping file reference.
```

# Administration

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## Use the wsadmin tool to automate Configuration Tasks:

- *WSADMIN Primer (with Jython)* - WP101014
  - Includes several sample hands-on exercises.
- *Using Jython Scripting Language with WSADMIN* - WP100963
  - Includes several sample scripts to do common administrative tasks.
- *Creating new Application Servers in WAS V6* - TD104066
  - Includes sample jython script to automatically correct the port assignments to the WSC standard numbering scheme.
- Plus many InfoCenter articles...

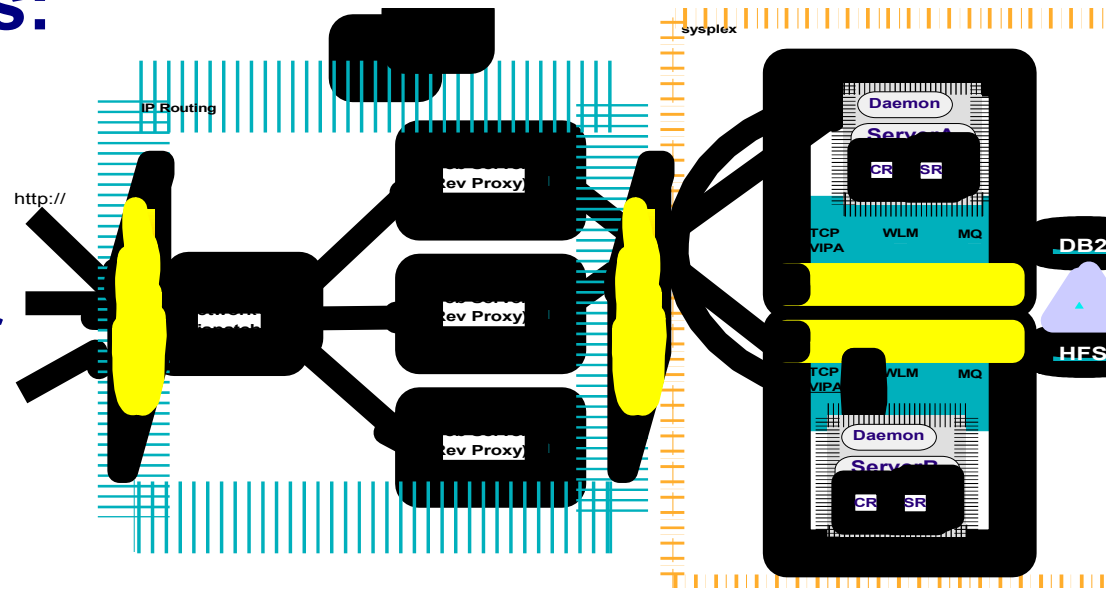
# D. Availability

- **High Availability requires:**

- Planning
- Robust Parallel Sysplex
- Reliable parts
- Fully tested in a QA server
- Redundant components
  - Network Deployment (ND)
  - Clusters on Multiple LPARs
  - 2 of everything (3 are better)
- Frequent back-ups (& reliable restore procedures)

- **Techdocs:**

- *Architecting High Availability Using WAS on z/OS* - [SG24-6850](#)
- *Handling Application Dispatch Timeouts* - [WP101233](#)
- *WAS V7 - Dispatch Timeout Improvements* - [WP101374](#)



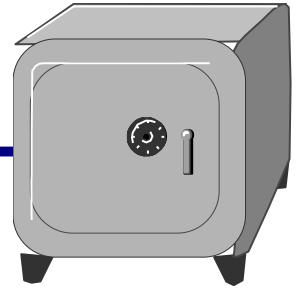
# & Recovery . . .

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- **Rapid Recovery involves many aspects:**
  - Quick diagnosis (automation alerts)
  - Fix/Restore & Restart damaged parts
  - “Disaster Recovery” sites
  - Fully tested Fail-over scenarios
- *Planning for Disaster Recovery* - PRS1137
- *Making the Deployment Manager Mobile* - WP101140
- *Moving WebSphere Nodes Between MVS images* - PRS1536, and WP100542.
- *Changing the host names and system names* - WP100792
- *System z Mean Time to Recovery Best Practices* - SG24-7816

# E. Security

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- Global Security enabled by default with WebSphere for z/OS V6.1.
  - Recommend you use LocalOS to simplify the security setup.
  - Produces RACF commands to define protection for WebSphere environment.
- *WebSphere for z/OS Security class handouts (WSW07)* PRS3422
- *Configuring Fine-Grained Security* - TD103324
- *Using SERVAUTH to Protect TCP Port Usage* - WP100673
- *J2EE App using Form Based Authentic'n & Style Sheet* - PRS3417
- *Generic RACF Profiles with WebSphere on z/OS V7* – WP101427
- *Impl. Enhanced Form Based Auth. with Servlet Filters* – WP101737

# Security Techdocs, cont'd

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## **SSL, Certificates & Crypto:**

- *SSL Options in WebSphere for z/OS V6.1 – WP101213*
- *Renewing expiring RACF certificates WAS on z/OS – PRS3584*
- *File based KeyStore with WAS on z/OS – WP101579*
- *Renewing expiring RACF certificates for WAS on z/OS PRS3584*
- *Generating PassTicket in Java Appl. on WAS for z/OS - TD105462*

# More Security Documents

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## Security-related RedBooks:

- *WebSphere Application Server V7 Security Guide* - SG24-7660
- *WAS for z/OS and Security Integration* - REDP-4161
- *J2C Security on z/OS* - REDP-4202
- *Java Messaging Service Security on z/OS* - REDP-4203
- *z/OS WebSphere and J2EE Security Handbook* - SG24-6846
- *Java Security and z/OS – The Complete View* – SG24-7610

# F. Application Deployment

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**Sample Applications** - help practice & learn deployment processes

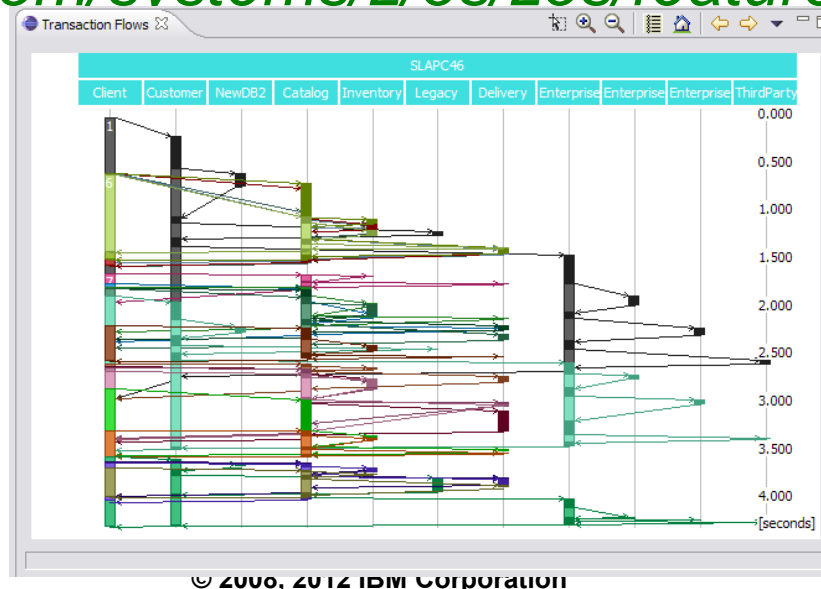
- *SuperSnoop Servlet* - TD101815
- *WebSphere for z/OS JMS and MDB IVP* - WP100424

## **Deployment Tips:**

- *64-bit Addressing Support in WebSphere for z/OS* - WP100920
- *Temp Space Shortage Installing Large Apps* - TD102662
- *Java & System z - DeveloperWorks White Papers* - WP101291
- *Staged Application Deployment in WAS on z/OS* WP101641

# Application Tuning, Management & Debugging

- *Moving Applications to WebSphere on z/OS - WP101093*
- *Enabling the WSAD Distributed Debugger - TD101198*
- *Log4j Enhancements for J2EE Applications - TD102335*
- *SRVE0255E Exception: favicon.ico not def'd - TD105415*
- ***JinsightLive** for IBM System z –  
<http://www.ibm.com/systems/z/os/zos/features/unix/tools/jinsightlive.html>*



# ***G. Performance***

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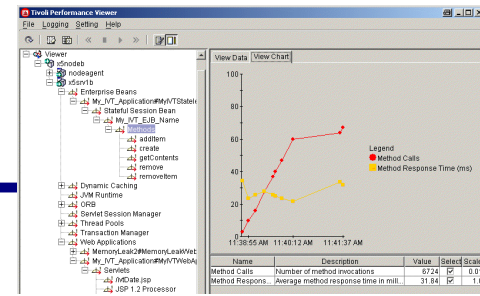
## **Many Configuration options, Topologies, & Tuning Parm's:**

- Hardware resources and configuration.
- Software Levels: z/OS, WAS, & Java (latest releases are best)
- Placement, size, & # of servers, plus threading considerations.
- Environmental properties and WebSphere variables
- Using the IBM HTTP servers
- Workload classification
- Security settings, and SSL options
- SMF, RMF, Performance monitoring & workload simulation
- Java tuning, JVM heap size, and garbage collection.
- Tracing and other performance trouble-shooting tools.
- Application design considerations.
- TCP/IP, DB2, CICS, IMS, MQ subsystems.

See the WAS Information Center for details on each . . .



# Performance Tuning Papers



- *Performance Engineering & Tuning for WAS on z/OS* - PRS2494
- *Optimizing WebSphere for z/OS Performance* - WP100558
- *Diagnosing Performance Problems on WAS for z/OS* - WP100678
- *Large Memory Performance Studies* – WP101157
- *Finding CPU Usage in your applications* - TD102454
- *Threads & CPU Consumption in WAS on z/OS* - WP101474
- *Value of Co-Location with WebSphere for z/OS* - WP101476
- *WebSphere z/OS Optimized Local Adapters* - WP101490
- *Idle System Tuning* – WP101894
- *Z/OS R13 Shared File System Impact Study* - WP102230

# More Performance Tuning Papers

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## **WLM**

- WLM Advanced Topics for WAS on z/OS - [PRS3317](#)
- *Classify WAS Control Region in WLM OMVS rules* - [TD102730](#)
- *WAS and the z/OS Workload Manager* - [WP101740](#)

## **SMF**

- SMF Servlet Filter for WebSphere V6.1 on z/OS - [WP101301](#)
- *Understanding SMF Record Type 120, Subtype 9* - [WP101342](#)
- *Writing Plugins for WAS SMF 120 browser* - [WP101726](#)
- SMF 120 Performance Summary Report Reference - [TD105626](#)



# ***Capacity Planning***

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**Basic Sizing** for WAS on z/OS – WP101620

## **Processor Sizing**

- Contact your IBM Rep to use the zPSG, zSeries processor sizing for new applications.

# H. Problem Determination

## Good “PD” isn’t an exact science;

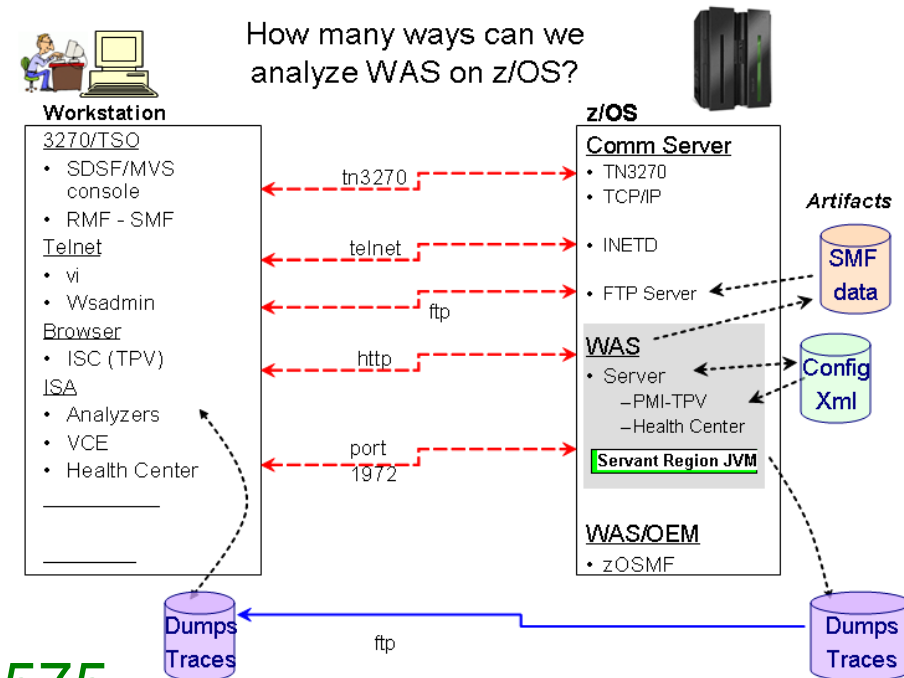
- It’s based on knowledge & experiences (unsuccessful), pattern recognition, contacts & ability to use many tools.
- Best “tools” are your brain, ability to search many sources, and communication with other subject-matter “experts.”

## Tools: IBM Support Assistant

- Browsers, Editors, FTP, telnet
- ISPF, SDSF, Cmds, SPUFI,

## Skills:

- UNIX, vi, jython, jacl, sh scripts
- MVS, TSO, ISPF, SDSF



*“Introducing the ISA on z/OS” – WP101575*

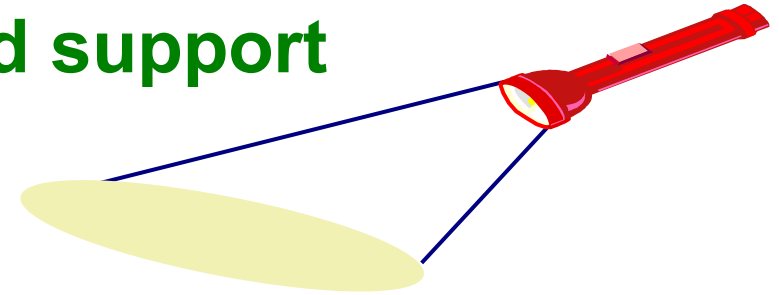
*“Getting started - analysis GC, Heapdumps & Javacores” WP101612*

# PD Documentation

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## InfoCenter: **Troubleshooting and support**

- Overview and new features
- How do I?... Troubleshooting
- Debugging applications
- Adding logging and tracing to your application
- Diagnosing problems (using diagnosis tools)
- Accessing the Support site



## **Redbooks & Redpapers:**

- *Problem Determination for WebSphere for z/OS* **SG24-6880**
- *Problem Determination Methodology for WebSphere* **REDP6001**
- *Problem Symptoms in WebSphere for z/OS* **REDP6002**
- *Problem Avoidance for WebSphere App. Server* **REDP6003**
- *WAS for z/OS Problem Determination Means & Tools* **REDP6880**

# Summary

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- **There is a great deal of information available.**
  - Trick is to find the right document quickly!
- **Become familiar with the information sources.**
  - InfoCenter (WAS V8.5)
  - Techdocs
  - Take the time to READ!
- **Experiment with your own system.**
- **Know whom to call ;-)**

# List of Additions 2011, 2012

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> 2011

WP101827 Hosting IBM Product InfoCenters on z/OS (DB, MC)  
WP101857 ATS zEnterprise Experiences and Usage Document (MG)  
WP101894 WebSphere Application Server - Idle Server Tuning (DB, BH, SK)  
WP101896 WebSphere Application Server z/OS V8 (DB)  
WP101909 IBM WebSphere Compute Grid COBOL Container (DB,DF)  
WP101936 Migrating to WebSphere XD Compute Grid v8.0.0.0 on z/OS (TF, DB)  
WP101953 Business Process Manager Adv. z/OS V7.5 Process Server Configuration (JH)  
WP101992 WebSphere Application Server for z/OS V.8 Hidden Gems (DF)  
WP102014 Cookbook for using Installation Manager on z/OS with WebSphere on z/OS (ML)  
WP102023 WebSphere for z/OS V8 - Granular Control Functions (DF)  
WP102033 WebSphere Application Server z/OS V8 Resource Adapter Failover Lab (DB, JV)  
PRS3961 Security Workshop: WAS z/OS V7 Handouts for WSW07 Wildfire Workshop (MK)  
PRS3422 WebSphere for z/OS - Version 7.0 Handouts for WBSR7 Wildfire Workshop (DB)  
PRS4467 Advanced Technical Skills - YouTube Video Flyer with Hiperlinks (DB)  
PRS4644 WCG01 - WebSphere Compute Grid for z/OS Wildfire class materials (JH)  
PRS4685 ZMAN1 - zEnterprise zManager Workshop (DB)  
PRS4686 WAS z/OS Version 8 Configuration Spreadsheets (JC, DB)  
PRS4848 WAS z/OS V8 Wildfire Workshop Material DB)  
TD105915 Workload Classification in WebSphere XD Compute Grid on z/OS V.8 (JH)  
TD105817 Configure Ext.Scheduler Interface in WAS Compute Grid on z/OS V8 w/MQ (JH)

> 2012:

WP102075 IBM Business Process Manager (BPM) V8 for z/OS Configuration Guide (JH)  
WP102110 WebSphere Application Server z/OS V8.5 (DB)  
WP102188 WAS v6.1 Exit Plan - Inst./Config./Migr. using IM & WCT (DB,ST)  
WP102205 Guide to WAS z/OS Documentation and Presentations (DB, DF, JS)  
WP102230 z/OS R13 Shared File System Impact Study (MC, DB)  
WP102231 WebSphere Compute Grid z/OS Capacity Planning Report (RC, DB)  
PRS4855 Business Process Manager Advanced V7.5 for z/OS Implementation Workshop (JH)  
PRS4944 WAS z/OS Version 8.5 Configuration Spreadsheets (DB)  
PRS5030 Business Process Manager Advanced V8 for z/OS Implementation Workshop - ZBPM8 (JH)  
TD105919 Configure the IBM BPM z/OS V 7.5: Process Server to use LDAP Repository(JH)  
TD105993 EJBDploy - Optional feature in WebSphere Application Server Version 8 (JH)  
TD105994 Sample Applications for WebSphere Application Server Version 8.5 (JH)  
TD106002 WebSphere AppServer V8.5 - SMF Browser for Job Usage data (JH)  
TC000099 WebSphere Application Server for z/OS - Batch Update (JH)  
TC000111 WebSphere Application Server - Getting Started with Version 8, Part Zero(ML)  
TC000112 WebSphere Application Server on zOS Back to Basics (ML)  
TC000115 WebSphere Application Server - What's New? (JH)  
TC000114 WebSphere AppServer V8 on z/OS - Spelunking the Admin Console (JH)

# Questions ?

## Suggestions for future Techdocs?

- Send an e-mail to:

[hutchjm@us.ibm.com](mailto:hutchjm@us.ibm.com) or  
[dbagwell@us.ibm.com](mailto:dbagwell@us.ibm.com)