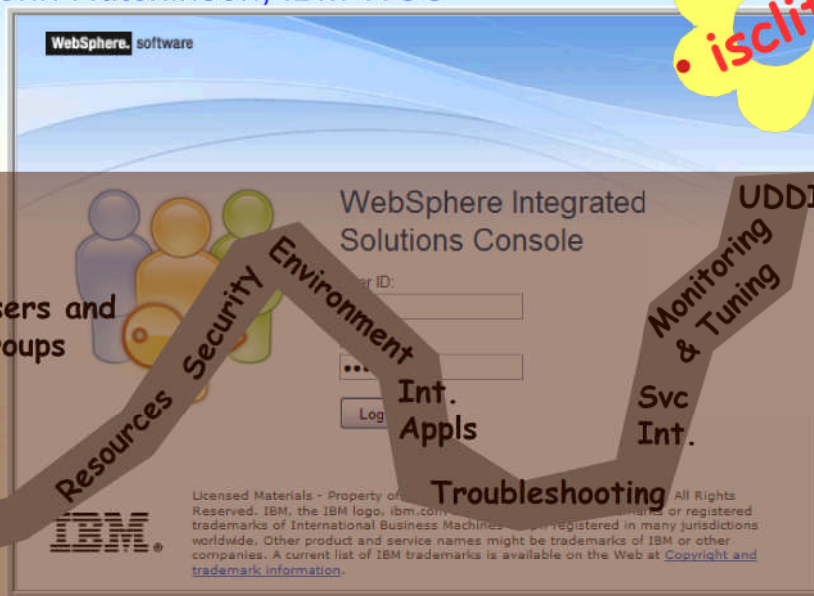




Welcome

Guided Activities



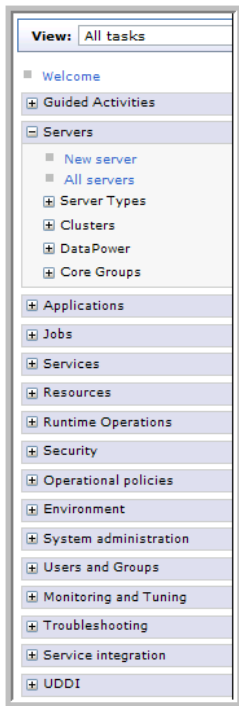
WebSphere Application Server on z/OS



Session	Day	Time	Room	Title	Speaker
11377	Monday	11:00	Grand Ballroom Salon B	What Can I Do With the SMF 120s?	David Follis
11371	Monday	3:00	Orange County Salon 2/3	Administrator Hands On Lab	David Follis / Michael Stephen / Ken Irwin
11378	Tuesday	12:15	Grand Ballroom Salon B	Spelunking the Admin Console	John Hutchinson
11375	Tuesday	4:30	Grand Ballroom Salon B	Being the Back-Up Administrator	Mike Loos
11374	Wednesday	11:00	Grand Ballroom Salon B	Liberty Profile – Rumors Dispelled	David Follis
11373	Thursday	4:30	Grand Ballroom Salon B	What's New?	David Follis / John Hutchinson / Michael Stephen
11370	Thursday	6:00	Grand Ballroom - Salon B	Potpourri	Anybody
11376	Friday	8:00	Platinum Ballrom Salon 10	zWAS – In Real Life	David Follis / Rod Feak

“Cruise” thru the ISC

Integrated Solutions Console (aka “Admin. Console”)



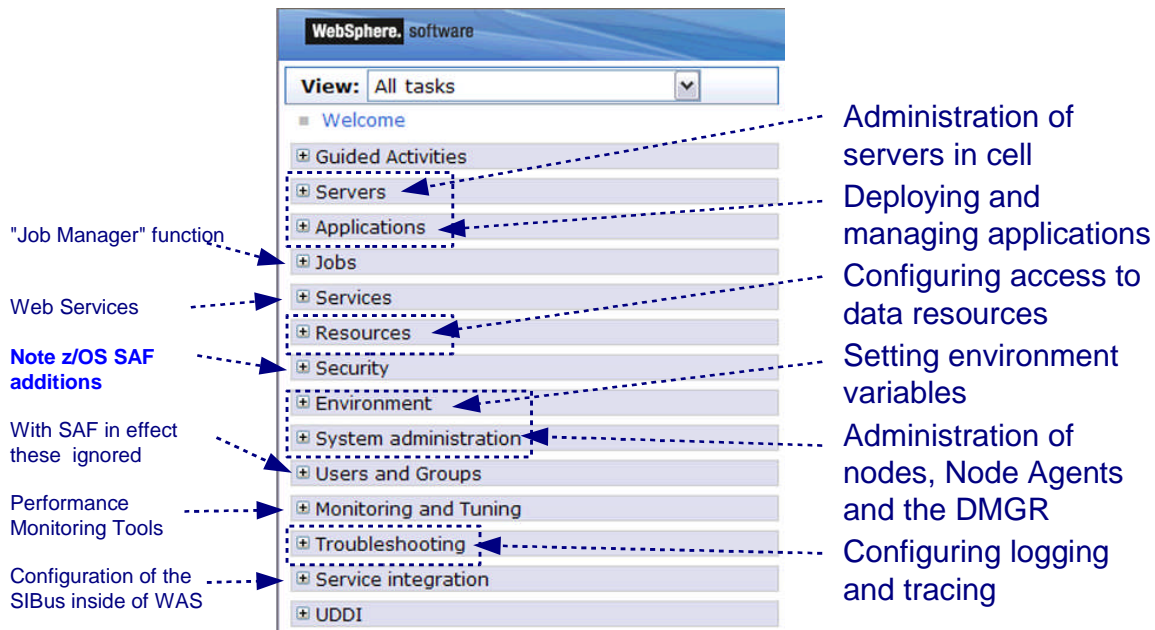
- <http://<host>:<port>/ibm/console>
- Use the ISC to perform tasks such as:
 - Add, Delete, Start, Stop **Application Servers**
 - Deploy, Start, Stop & Modify **Applications**
 - Add, Delete & Modify J2EE **Resource** Providers
 - Configure **Security**, & access to admin. console
 - Manage **Variables**, Shared **Libraries**,...
 - Collect data for **Performance & Troubleshooting**
 - Find product **version info**.

3

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Left-Side Navigator Bar

At a high level, the Admin Console is common across all platforms, but contain many many detailed areas to explore.



WebSphere. software

View: All tasks

- Welcome
- ⊕ Guided Activities
- ⊕ Servers ← Administration of servers in cell
- ⊕ Applications ← Deploying and managing applications
- ⊕ Jobs
- ⊕ Services ← Configuring access to data resources
- ⊕ Resources ← Setting environment variables
- ⊕ Security
- ⊕ Environment ← Administration of nodes, Node Agents and the DMGR
- ⊕ System administration ← "Job Manager" function
- ⊕ Users and Groups
- ⊕ Monitoring and Tuning ← Performance Monitoring Tools
- ⊕ Troubleshooting ← Configuring logging and tracing
- ⊕ Service integration ← Configuration of the SIBus inside of WAS
- ⊕ UDDI

Note z/OS SAF additions

With SAF in effect these ignored

Web Services

4

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Examples of Platform Specifics Surfacing

Sampling of some z/OS platform specifics surface in the Admin. Console:

Under a given application server:

Under Global Security:

The Admin Console has a great deal of commonality, but you can find differences the closer to the platform you get...

Under the integrated Java Batch configuration:

6

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Customizing the Navigation Bar

1. Click on View (drop-down)
2. Select 'My tasks'
3. [Edit 'My tasks'](#)
4. Expand selections
5. Check your tasks
 - ✓ JDBC providers
 - ✓ Data sources
 - ✓ ...
6. Click on "Apply"

7

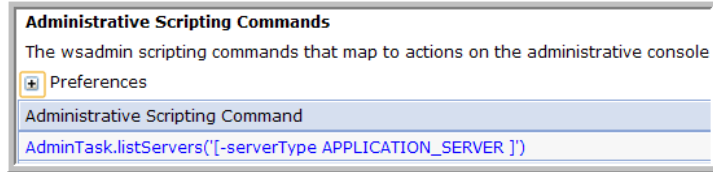
Complete your sessions evaluation online at SHARE.org/AnaheimEval

Customizing Console Preferences



Systems Administration > Console Preferences

- ✓Auto-refresh
- ✓Show help portlet
- ✓Synch changes with nodes
- ✓Command Assistance

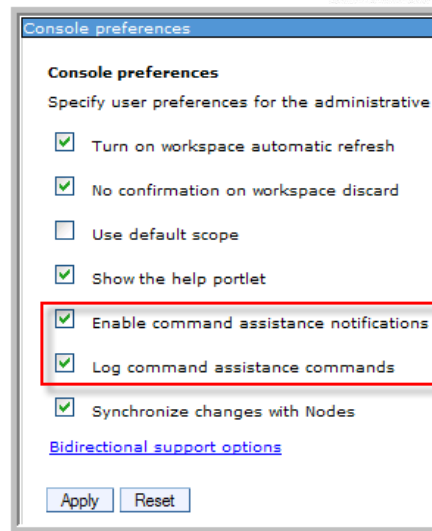


Administrative Scripting Commands
The wsadmin scripting commands that map to actions on the administrative console

Preferences

Administrative Scripting Command

```
AdminTask.listServers(['-serverType APPLICATION_SERVER '])
```



Console preferences

Specify user preferences for the administrative console

- Turn on workspace automatic refresh
- No confirmation on workspace discard
- Use default scope
- Show the help portlet
- Enable command assistance notifications
- Log command assistance commands
- Synchronize changes with Nodes

[Bidirectional support options](#)

Apply Reset

✓Logging Command Assistance:

```
/wasv85config/cbcell/cbdmnode/DeploymentManager/  
profiles/default/logs/dmgr/  
commandAssistanceJythonCommands_hutch.log  
# [5/8/12 12:08:13:266 EDT] JDBCProvider  
AdminConfig.list('JDBCProvider', AdminConfig.getid( '/Cell:cbcell/'))
```

8

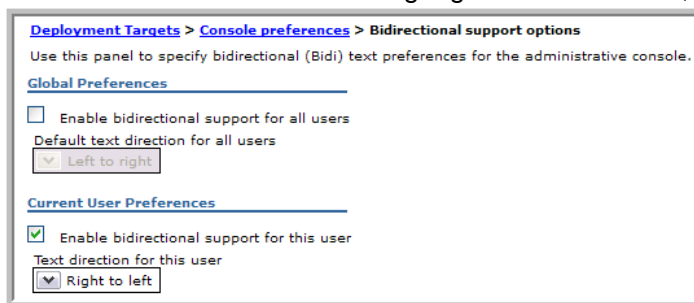
Complete your sessions evaluation online at SHARE.org/AnaheimEval



More Console preferences: *Bidirectional support options*



- Default is “Left to right”.
- If you click Right to left:
(Natural base text direction for languages such as Arabic, Hebrew, Urdu and Farsi.)



Deployment Targets > Console preferences > Bidirectional support options

Use this panel to specify bidirectional (Bidi) text preferences for the administrative console.

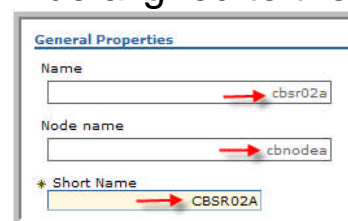
Global Preferences

- Enable bidirectional support for all users
- Default text direction for all users

Current User Preferences

- Enable bidirectional support for this user
- Text direction for this user

- All the text boxes will be aligned to the right:



General Properties

Name

Node name

* Short Name

9

Complete your sessions evaluation online at SHARE.org/AnaheimEval



Customize your Console's Identity:

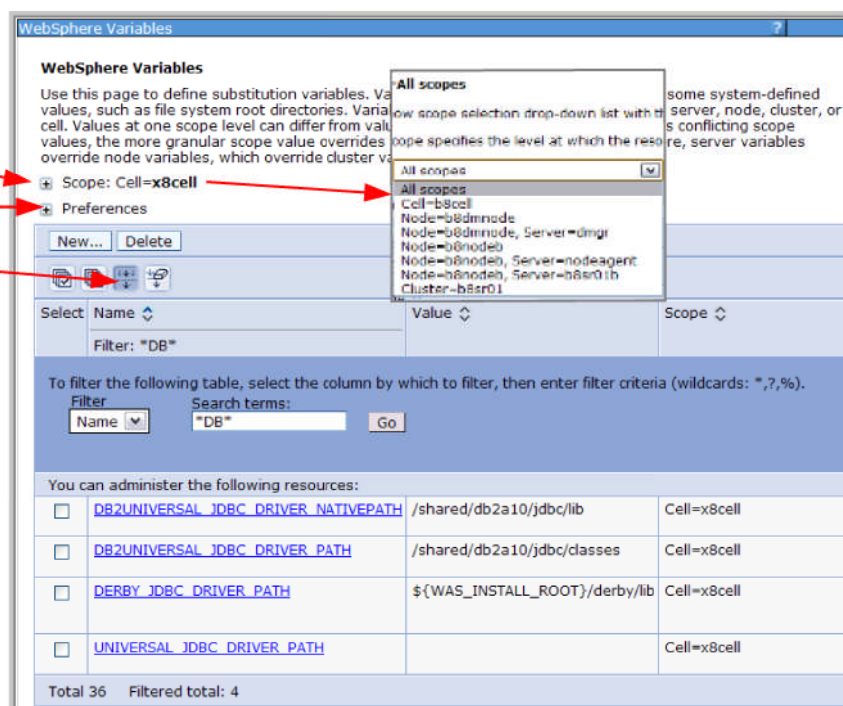
- (Avoid mistaking a Production console for a Test console...)

Admin. Console: Help's

- ISC has its own set of "Help" panels:
 - Field help (*hover*)
 - Page help
 - Keyword Search
 - Command Assistance

Use Scope, Preferences, and Filters to limit the displays

- Scope: All or ...
- Preferences: 20
- Click on "Show filter function"



WebSphere Variables

Use this page to define substitution variables. Variable values, such as file system root directories. Variable values at one scope level can differ from values at another. The more granular scope value overrides the less granular scope value. Some system-defined variables, such as server, node, cluster, or cell, are conflicting scope values. Some system-defined variables, such as server, node, cluster, or cell, are conflicting scope values.

Scope: Cell=x8cell

Preferences

New... Delete

Select	Name	Value	Scope
	Filter: "DB"		
To filter the following table, select the column by which to filter, then enter filter criteria (wildcards: *,?,%).			
Filter	Search terms:	Go	
Name	"DB"		
You can administer the following resources:			
<input type="checkbox"/>	DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH	/shared/db2a10/jdbc/lib	Cell=x8cell
<input type="checkbox"/>	DB2UNIVERSAL_JDBC_DRIVER_PATH	/shared/db2a10/jdbc/classes	Cell=x8cell
<input type="checkbox"/>	DERBY_JDBC_DRIVER_PATH	\${WAS_INSTALL_ROOT}/derby/lib	Cell=x8cell
<input type="checkbox"/>	UNIVERSAL_JDBC_DRIVER_PATH		Cell=x8cell

Total 36 Filtered total: 4

12

Complete your sessions evaluation online at SHARE.org/AnaheimEval

What's new in the V8.5?

- Cross Component Trace (XCT)
- Select SDK level (Java 6 or 7) by Node, Server
- Submit Jobs to manage Liberty profile installations
- IBM Support Assistant (ISA) Data Collector
- Extended Repository Service (Checkpoint changes)
- Virtual Enterprise (WVE) extensions
 - *Intelligent Routing*
 - *Health Monitoring*
 - *Dynamic Clusters*
 - *Application Edition Management*

See session 11373 "WebSphere Application server on z/OS - What's New?"

13

Complete your sessions evaluation online at SHARE.org/AnaheimEval

ISC Guided Activities (“Wizards”)

Guided Activities (WAS V8):

- Connect to a database
- Route requests through a Web server to an application server
- Configure a cluster and making applications highly available

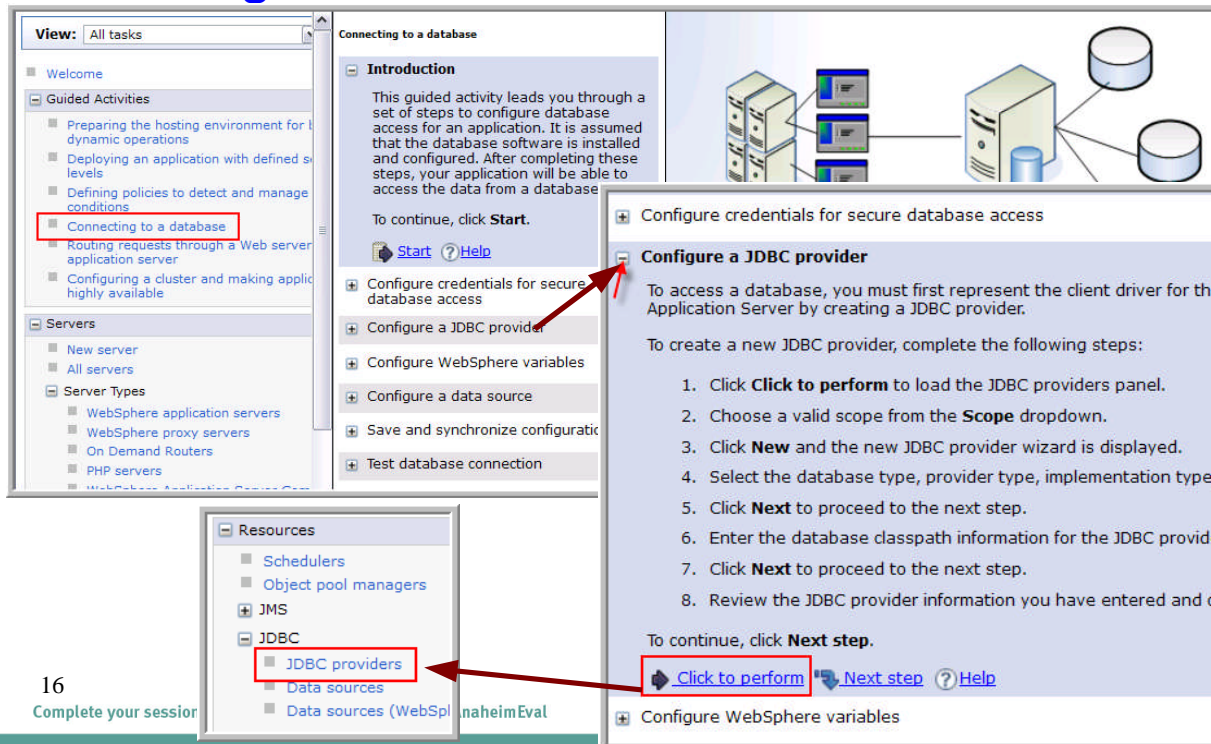
New Guided Activities with WAS 8.5 (VE Stuff *):

- Prepare the hosting environment for basic dynamic operations
- Deploy an application with defined service levels
- Define policies to detect and manage health conditions
- **BPM** Guided Activity**
 - Deployment Environments
 - * From WVE, aka Operations Optimizer
 - ** Business Process Management, aka Process Server

15

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Guided Activity Example: Connecting to a Database



Connecting to a database

Introduction

This guided activity leads you through a set of steps to configure database access for an application. It is assumed that the database software is installed and configured. After completing these steps, your application will be able to access the data from a database.

To continue, click **Start**.

[Start](#) [? Help](#)

- Configure credentials for secure database access
- Configure a JDBC provider**
- Configure WebSphere variables
- Configure a data source
- Save and synchronize configuration
- Test database connection

Configure a JDBC provider

To access a database, you must first represent the client driver for the Application Server by creating a JDBC provider.

To create a new JDBC provider, complete the following steps:

1. Click **Click to perform** to load the JDBC providers panel.
2. Choose a valid scope from the **Scope** dropdown.
3. Click **New** and the new JDBC provider wizard is displayed.
4. Select the database type, provider type, implementation type.
5. Click **Next** to proceed to the next step.
6. Enter the database classpath information for the JDBC provider.
7. Click **Next** to proceed to the next step.
8. Review the JDBC provider information you have entered and click **Next step**.

To continue, click **Next step**.

[Click to perform](#) [Next step](#) [? Help](#)

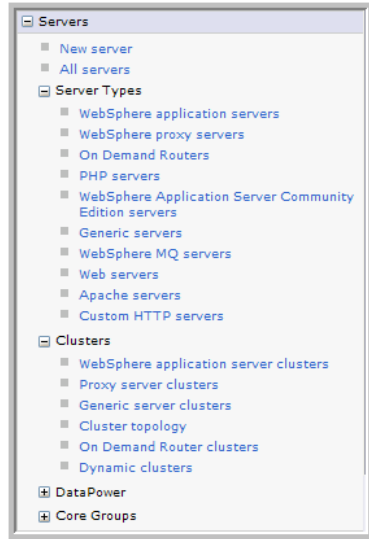
Resources

- Schedulers
- Object pool managers
- JMS
- JDBC**
 - JDBC providers**
 - Data sources
 - Data sources (WebSphere)

16

Complete your session evaluation online at SHARE.org/AnaheimEval

Server & Cluster “Types”



- **Servers (WAS 8.5 - WVE Stuff hi-lighted):**
 - WebSphere application servers
 - WebSphere proxy servers
 - **On Demand Routers**
 - **PHP servers**
 - **WebSphere Application Server Community Edition servers**
 - Generic servers
 - Version 5 JMS servers
 - WebSphere MQ servers
 - Web servers
 - **Apache servers**
 - **Custom HTTP servers**
- **New Clusters with WAS 8.5 (WVE):**
 - **On Demand Router Clusters**
 - **Dynamic Clusters**

17

Complete your sessions evaluation online at SHARE.org/AnaheimEval

WebSphere Application Servers

- many “settings”:

General Properties

Container Settings

- Session management
- SIP Container Settings
- Web Container Settings
- Portlet Container Settings
- EJB Container Settings
- Container Services
- Business Process Services

Applications

- Installed applications

Server messaging

- Messaging engines
- Messaging engine inbound transports
- WebSphere MQ link inbound transports
- SIB service

Server Infrastructure

- Java and Process Management
- Administration Administration

18

Java SDKs

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Communications

- Ports
- Messaging
- Communications Enabled Applications

Performance

- Performance Monitoring Infrastructure (PMI)
- Performance & Diagnostic Advisor Config.

Security

- Security domain
- Default policy set bindings
- JAX-WS and JAX-RPC security runtime

Troubleshooting

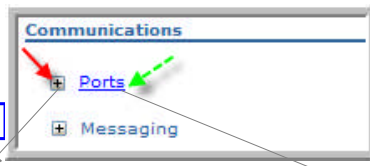
- NCSA access, HTTP error & FRCA logging
- Logging and tracing
- Change log detail levels

Additional Properties

- Class loader viewer service
- Core group service
- Endpoint listeners
- Debugging service
- Reliable messaging state
- Web server plug-in properties
- Thread pools

Several ways to view and set properties:

- e.g., Server Ports:
- Browse mode [+]



Edit mode:

Communications

- Ports

Port Name	Port
BOOTSTRAP_ADDRESS	23083
SOAP_CONNECTOR_ADDRESS	23082
ORB_LISTENER_ADDRESS	23083
WC_adminhost	23085
WC_defaulthost	23087
DCS_UNICAST_ADDRESS	23090
ORB_SSL_LISTENER_ADDRESS	23084
WC_adminhost_secure	23086
WC_defaulthost_secure	23088
SIP_DEFAULTHOST	23095
SIP_DEFAULTHOST_SECURE	23096
OVERLAY_UDP_LISTENER_ADDRESS	23098
OVERLAY_TCP_LISTENER_ADDRESS	23099
IPC_CONNECTOR_ADDRESS	23089
SIB_ENDPOINT_ADDRESS	23091
SIB_ENDPOINT_SECURE_ADDRESS	23092
SIB_MQ_ENDPOINT_ADDRESS	23093
SIB_MQ_ENDPOINT_SECURE_ADDRESS	23094

Application servers > cbsr02a > Ports

Specifies the TCP/IP ports this server uses for connections.

Preferences

New... Delete

Select

Port Name	Host	Port
<input type="checkbox"/> BOOTSTRAP_ADDRESS	*	23083
<input type="checkbox"/> DCS_UNICAST_ADDRESS	*	23090
<input type="checkbox"/> IPC_CONNECTOR_ADDRESS	localhost	23089
<input type="checkbox"/> ORB_LISTENER_ADDRESS	*	23083
<input type="checkbox"/> ORB_SSL_LISTENER_ADDRESS	*	23084
<input type="checkbox"/> OVERLAY_TCP_LISTENER_ADDRESS	*	23099

20

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Applications

Applications

- All applications
- New Application
- Install New Middleware Application
- Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
- Edition Control Center
- Global deployment settings

- New with WAS V8
 - Global deployment settings
 - Monitored Directory
- New with WAS 8.5 (VE):
 - Edition Control Center
 - Middleware Applications
- BPM Applications
 - SCA modules
 - (BPE, HTM)

Global deployment settings

Use this page to manage settings that apply to all applications. NOTE: some settings may o

Configuration

General Properties

Monitored Directory Deployment

Monitor directory to automatically deploy applications

Monitored directory: USER_INSTALL_ROOT}/monitoredDeployableApps}\$

Polling interval: 5 seconds

Edition Control Center

The edition control center enables management and operational control over application editions, including interruption free application upgrade. An application edition is a version of an application comprised of distinct versions of modules and/or bindings. This page provides a summary view of enterprise application, its editions, and their current state. Click on an enterprise application name manage the individual editions of the selected application.

Preferences

Applications	Type	Editions	Active	Vali
SimpleClear	Java 2 Platform, Enterprise Edition	1	1	
SuperSnoop	Java 2 Platform, Enterprise Edition	1	1	
IvtApp	Java 2 Platform, Enterprise Edition	1	1	

21

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Job Manager for Administrative Functions



- These are administrative jobs; not Batch (Compute Grid) jobs

WebSphere, software Welcome hutch - <*** PRODUCTION ***> Help

Cell=b8cell, Profile=default

View: All tasks

Jobs

Submit

Status

Targets

Target resources

Target groups

Installation Manager Installation kits

Services

Resources

Security

Environment

Integration Applications

System administration

Job status

This panel shows the status of submitted jobs with a status summary. It provides links to view status of the target and explore the job history. Set the find parameters to limit the search results for submitted jobs. The results of job search are displayed in the following collection.

Status summary key: Succeeded Partially succeeded Failed Incomplete

Find

State: Active, Suspended, Pending, Expired

Description: =

Activation Time: >=

Expiration Time: >=

Target name: =

Submit a job to the job manager

Choose the type of job that you want to perform. Optionally provide a description.

Step 1: Choose a job type

Step 2: Choose job targets

Step 3: Specify job parameters

Step 4: Schedule the job

Step 5: Review the summary and submit the job

Choose a job type

Job type: Run wsadmin script

Collect file

Configure properties

Create application server

Create cluster

Create cluster member

Create proxy server

Delete application server

Delete cluster

Delete cluster member

Delete proxy server

Distribute file

Install application

Inventory

Remove file

Run wsadmin script

Start application

Start cluster

Start server

Status

Stop application

Stop cluster

Stop server

Uninstall application

Update application

Next Cancel

22

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Job Manager Console (NOT the JMC in XD)



Categories in Job Manager Console

View: All tasks

Welcome

Jobs

Resources

Security

Environment

System administration

Users and Groups

Troubleshooting

- Job Management Tasks:
 - Submit
 - Status (monitor)
 - Target Groups & Resources
 - Schedule

Administering nodes remotely using the job manager

- Job manager
- Job manager security
- Job manager targets

Job manager resources

- Liberty profile resources

Setting up a job manager environment

- Starting and stopping the job manager
- Configuring job managers
- Viewing target information using the job manager
- Viewing target resource information using the job manager

Submitting jobs

- Checking job status
- Administering groups of nodes for the job manager
- Tuning the job polling interval

- See the WAS InfoCenter, and
- Techdoc WP101341
“Introducing The WebSphere V7 Job Manager for z/OS”

23

Complete your sessions evaluation online at SHARE.org/AnaheimEval



WAS v8.5 - Preparing Hosting Environment for Dynamic Operations (WVE)



- Create an On Demand Router or Dynamic Cluster
- Enable e-mail notification for runtime tasks
- Save and synchronize configuration
- Task completion and next steps

Dynamic Clusters

A dynamic cluster is a server cluster that uses weights to balance the workloads of its cluster members dynamically, based on performance information that is collected from the cluster members. If a cluster member fails, requests are routed to other members of the cluster. The dynamic cluster can start or stop instances depending on the workload in the environment.

Preferences: New... Delete Manual Set Mode

Select	Name	Type	Operational mode
<input type="checkbox"/>	cbDynCluster2	WebSphere application server	Supervised
Total 1			

2012

Services



- (These are usually defined and configured by configuration scripts or “wizards.”)

REST services

Configure Representational State Transfer (REST) services in your environment. Enable or disable each REST service and modify the configuration.

General Properties

Scope selection: all

Enabled	Type	Scope	Provider Application	Description
<input checked="" type="checkbox"/>	SCA Services(6.2.0.0)	Node=b8dmnode,Server=dmgr	REST Services Gateway Dmgr	SCA Services
<input checked="" type="checkbox"/>	Health Monitor(6.2.0.0)	Node=b8dmnode,Server=dmgr	REST Services Gateway Dmgr	The Health Monitor REST is a
<input checked="" type="checkbox"/>	SCM Connectivity Server(7.0.0.0)	Node=b8dmnode,Server=dmgr	REST Services Gateway Dmgr	Service Connectivity Manage
<input checked="" type="checkbox"/>	Process services(8.0.0.0)	Cluster=b8sr01	IBM_BPM_Teamworks_b8sr01	REST services for processes
<input checked="" type="checkbox"/>	Task services(8.0.0.0)	Cluster=b8sr01	IBM_BPM_Teamworks_b8sr01	REST services for tasks (Bus
<input checked="" type="checkbox"/>	Process services(8.0.0.0)	Cluster=b8sr01	BPEContainer_b8sr01	Business Process Choreogra
<input checked="" type="checkbox"/>	Task services(8.0.0.0)	Cluster=b8sr01	TaskContainer_b8sr01	Business Process Choreogra

Complete your sessions evaluation online at SHARE.org/AnaheimEval

in Anaheim
2012

Resources

- **Resources Defined at many scopes:**
- Cell, Node, Cluster, Server, ...

All scopes
 Show scope selection drop-down list with the all scopes option.
 Scope specifies the level at which the resource definition is visible.

All scopes
 All scopes
 Cell-b8scel
 Node=b8dmnode
 Node=b8dmnode, Server=dmgr
 Node=b8nodeb
 Node=b8nodeb, Server=nodeagent
 Node=b8nodeh, Server=b8sr01b
 Cluster-b8sr01

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity step and more general information about the topic.

Scope: =All scopes

Show scope selection drop-down list with the all scopes option

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

All scopes

Preferences

New... Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description
<input type="checkbox"/>	Business Process Choreographer ME data source	jdbc/com.ibm.ws.sib/b8sr01-BPC.b8cell.Bus	Cluster=b8sr01	DB2 Universal JDBC Driver Provider	Business Process Choreographer Message Engine data source
<input type="checkbox"/>	Business Process Choreographer data source	jdbc/BPEDB	Cluster=b8sr01	DB2 Universal JDBC Driver Provider	Business Process Choreographer data source
<input type="checkbox"/>	Business Space data source	jdbc/mashupDS	Cluster=b8sr01	DB2 Universal JDBC Driver Provider	Business Space data source

Security

- **Global Security – The big “Switch”**
- (The others are used for more complex settings.)

Cell=b8cell, Profile=default

Global security

Global security

Use this panel to configure administration and the default application security policy for all administrative functions and is used as a default security policy to override and customize the security policies for user applications.

Security Configuration Wizard Security Configuration Report

Administrative security

Enable administrative security

- [Administrative user roles](#)
- [Administrative group roles](#)
- [Administrative authentication](#)

Application security

Enable application security

Java 2 security

Use Java 2 security to restrict application access to local resources

- Warn if applications are granted custom permissions
- Restrict access to resource authentication data

Configuring WebSphere for LDAP



Security > Global Security > Standalone LDAP Registry > Configure

Federated repositories
Local operating system
Standalone LDAP registry
Standalone custom registry

Click Configure

Complete your sessions evaluation online at SHARE.org/AnaheimEval



Users and Groups

Only for non-SAF (Federated) Security

- Administrative user roles
- Administrative group roles
- Manage Users
- Manage Groups

6 users matched the search criteria.

Select	User ID	First name	Last name	E-mail
<input type="checkbox"/>	tw_admin	tw_admin	tw_admin	ui...
<input type="checkbox"/>	tw_author	tw_author	tw_author	ui...
<input type="checkbox"/>	tw_portal_admin	tw_portal_admin	tw_portal_admin	ui...
<input type="checkbox"/>	tw_runtime_server	tw_runtime_server	tw_runtime_server	ui...
<input type="checkbox"/>	tw_user	tw_user	tw_user	ui...
<input type="checkbox"/>	tw_webservice	tw_webservice	tw_webservice	ui...

Page 1 of 1

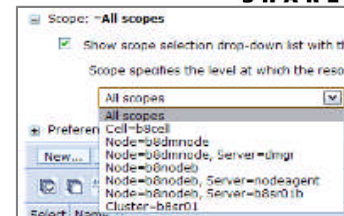
1 groups matched the search criteria.

Select	Group name	Description	Unique Name
<input type="checkbox"/>	TWSecurityProviderUsers		cn=TWSecurityProviderUsers,o=defaultWIMFileBasedRealm



Environment

- **Variables Defined at many scopes:**
- Cell, Node, Cluster, Server, ...
- Here are some Cell-level suggestions for z/OS:



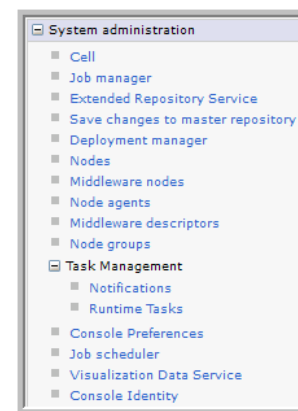
Variable Name	Value	Scope
TZ	ESTSEDT	Cell=b8cell
UNIVERSAL_JDBC_DRIVER_PATH	\${WAS_INSTALL_ROOT}/jdbcdrivers/DB2	Cell=b8cell
WAS_CELL	b8cell	Cell=b8cell
WAS_CELL_NAME	b8cell	Cell=b8cell
WAS_DAEMON_ONLY_ICU_DATA	/wasv8config/b8cell/b8dmnode/wassmpe/bin/	Cell=b8cell
WAS_DAEMON_read_license_agreement	true	Cell=b8cell
WAS_SERVER_ONLY_cell_short_name	B8CELL	Cell=b8cell
protocol_http_defaultIdentity	B8GUEST	Cell=b8cell
protocol_https_default_identity	B8GUEST	Cell=b8cell
ras_default_msg_dd	DEFALTDD	Cell=b8cell
ras_hardcopy_msg_dd	HRDCPYDD	Cell=b8cell
ras_time_local	1	Cell=b8cell

Complete your sessions evaluation online at SHARE.org/AnaheimEval



System Administration

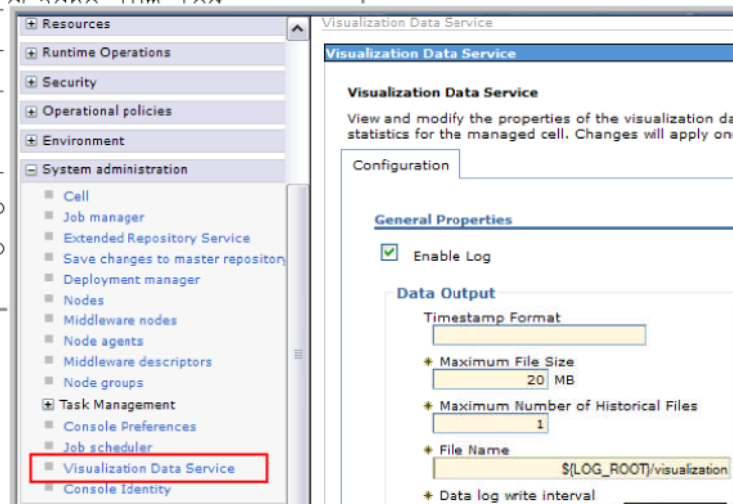
- Cell
- Job manager
- Extended Repository Service
- Save changes to master repository
- Deployment manager
- Nodes
- Middleware nodes
- Node agents
- Middleware descriptors
- Node groups
- Task Management (Notifications & Runtime Tasks)
- Console Preferences
- Job scheduler
- *Visualization Data Service*
- Console Identity



Visualization Data Service

(Added with WVE & 8.5) Log historical data in ...

- <profile_root>/logs/visualization/
- DeploymentTargetStatsHistoricCache.log
- DeploymentTargetStatsHistoricCache_10m.log
- DeploymentTargetStatsHistoricCache_1d.log
- DeploymentTargetStatsHistoricCache_1h.log
- NodeStatsHistoricCache.log
- NodeStatsHistoricCache_10m.log
- NodeStatsHistoricCache_1d.log
- NodeStatsHistoricCache_1h.log
- . . .



32

Complete your sessions evaluation online at SHARE.org/AnaheimEval

ISC Extensions with BPM

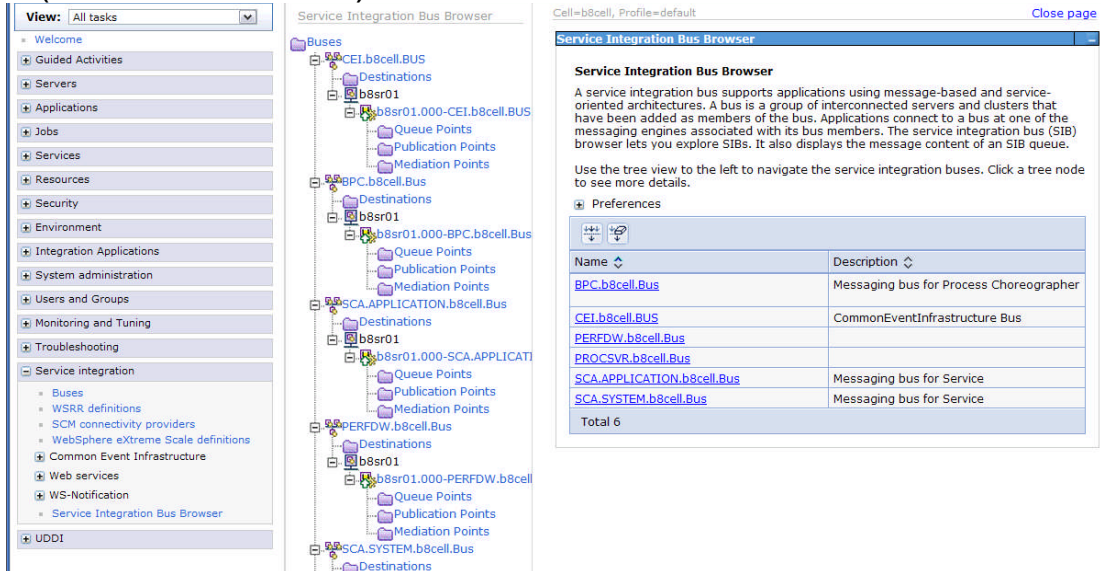
- **Servers:** Deployment Environments (“Wizard”)
 - Create new Servers, Clusters based on a “.deploy” document.
- **Applications:** SCA Modules
- **Security:** Business Integration Security, Admin. Auth. Groups
- **Service Integration:** Bus Browser

33

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Service Integration: Bus Browser

- (Added with BPM)



The screenshot shows the Service Integration Bus Browser interface. On the left is a navigation tree with categories like Servers, Applications, Services, etc., and a sub-tree for Service integration. The main area displays a tree view of buses, including CEI.b8cell.BUS, BPC.b8cell.BUS, and SCA.APPLICATION.b8cell.BUS. On the right, a detailed view for 'Service Integration Bus Browser' is shown, containing a description and a table of buses.

Service Integration Bus Browser

A service integration bus supports applications using message-based and service-oriented architectures. A bus is a group of interconnected servers and clusters that have been added as members of the bus. Applications connect to a bus at one of the messaging engines associated with its bus members. The service integration bus (SIB) browser lets you explore SIBs. It also displays the message content of an SIB queue.

Use the tree view to the left to navigate the service integration buses. Click a tree node to see more details.

Preferences

Name	Description
BPC.b8cell.Bus	Messaging bus for Process Choreographer
CEI.b8cell.BUS	CommonEventInfrastructure Bus
PERFDW.b8cell.Bus	
PROCSVR.b8cell.Bus	
SCA.APPLICATION.b8cell.Bus	Messaging bus for Service
SCA.SYSTEM.b8cell.Bus	Messaging bus for Service
Total 6	

34

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Monitoring and Tuning

Monitoring and Tuning

- Performance Monitoring Infrastructure (PMI)
- Request metrics
- Performance Viewer
 - Current activity
 - View logs

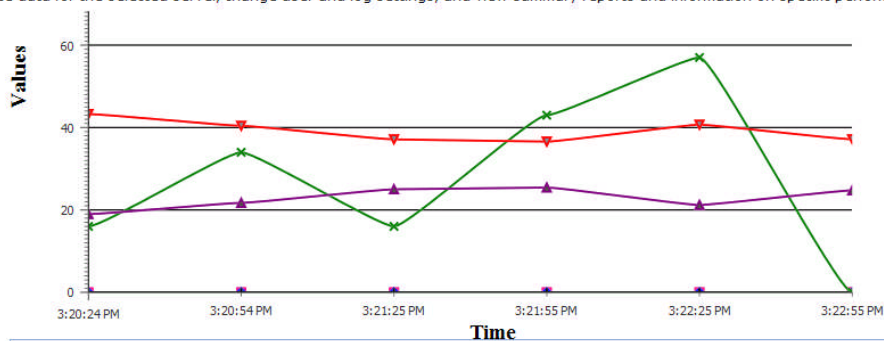
Tivoli Performance Viewer > cbsr02a

Use this page to view and refresh performance data for the selected server, change user and log settings, and view summary reports and information on specific perform

Refresh View Module(s)

- cbsr02a
 - Advisor
 - Settings
 - Summary Reports
 - Performance Modules

Deselect All

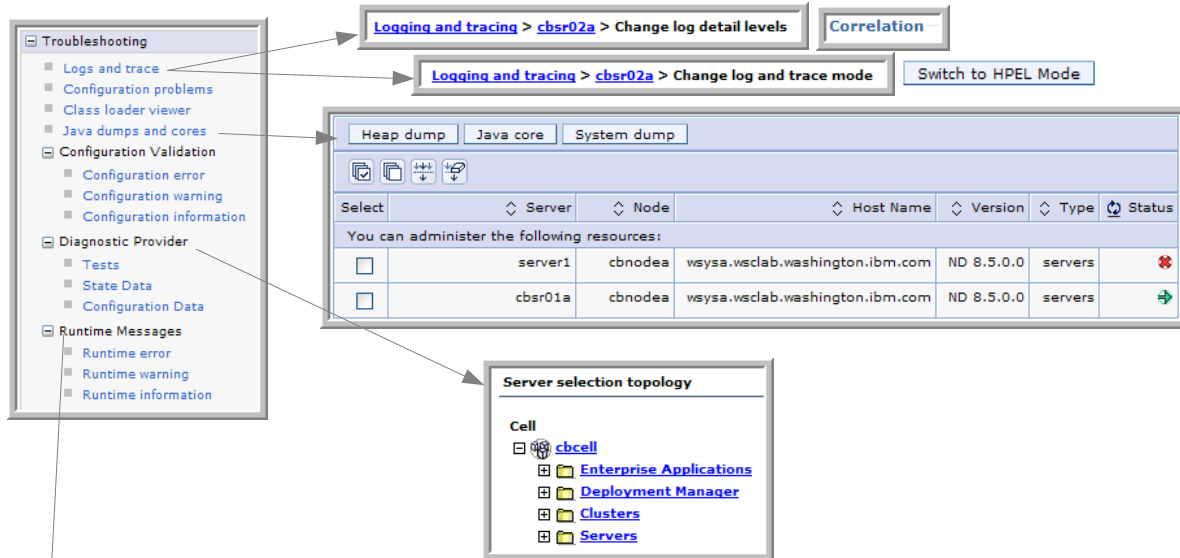


Reset To Zero Clear Buffer View Table Show Legend

Select	Marker	Name	Value	Scale	Update	Scaled Value
JVM Runtime						
<input type="checkbox"/>		HeapSize (?)	619008.0	1.0E-4		61.9008
<input checked="" type="checkbox"/>	▼	FreeMemory (?)	371581.0	1.0E-4		37.1581
<input checked="" type="checkbox"/>	▲	UsedMemory (?)	247425.0	1.0E-4		24.7425
<input type="checkbox"/>		UpTime (?)	1664.0	0.01		16.64
<input checked="" type="checkbox"/>	×	ProcessCpuUsage (?)	0.0	1.0		0.0

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Troubleshooting



Logginq and tracing > cbsr02a > Change log detail levels

Logginq and tracing > cbsr02a > Change log and trace mode

Switch to HPEL Mode

Select	Server	Node	Host Name	Version	Type	Status
<input type="checkbox"/>	server1	cbnodea	wsysa.wsclab.washington.ibm.com	ND 8.5.0.0	servers	✖
<input type="checkbox"/>	cbsr01a	cbnodea	wsysa.wsclab.washington.ibm.com	ND 8.5.0.0	servers	✔

Server selection topology

Cell

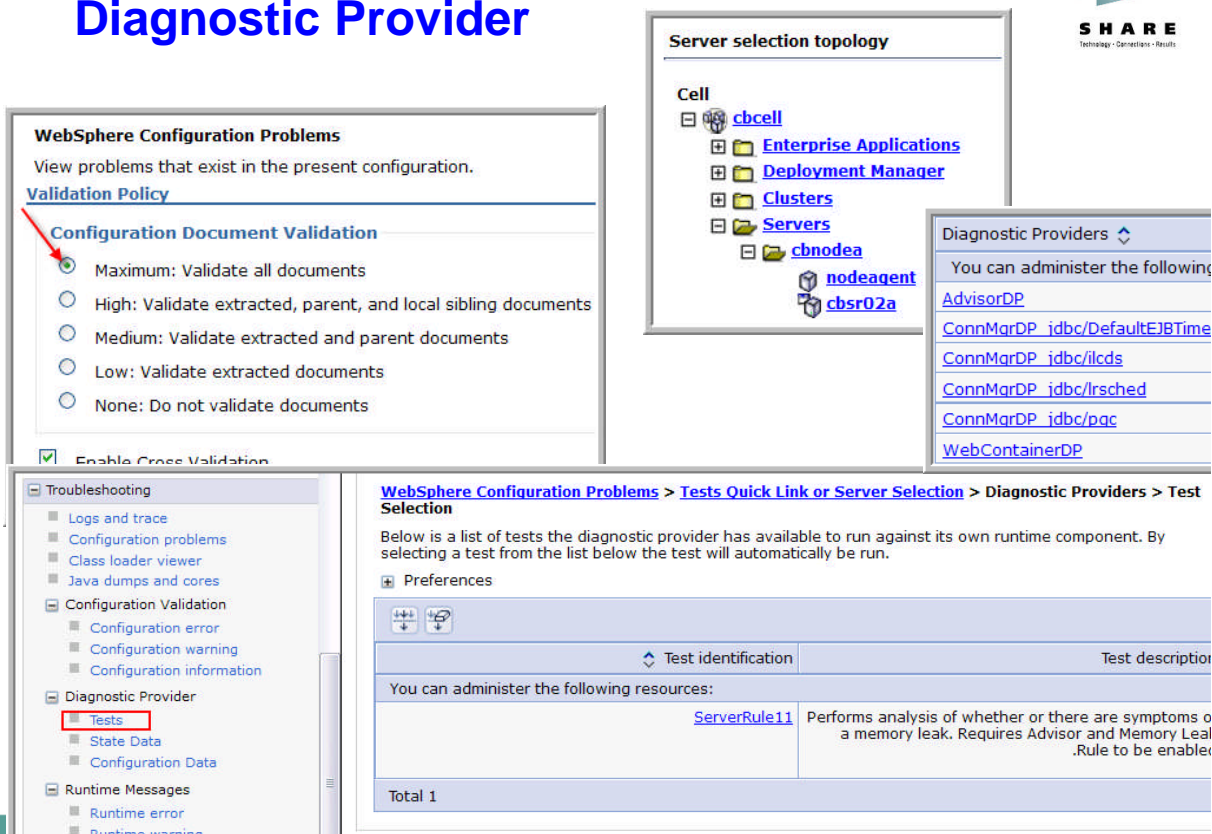
- cbcell
 - Enterprise Applications
 - Deployment Manager
 - Clusters
 - Servers
 - cbnodea
 - nodeagent
 - cbsr02a

- Runtime Messages are easier to gather from the JES Logs using the Modify command (IMO)

36

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Diagnostic Provider



WebSphere Configuration Problems

View problems that exist in the present configuration.

Validation Policy

Configuration Document Validation

- Maximum: Validate all documents
- High: Validate extracted, parent, and local sibling documents
- Medium: Validate extracted and parent documents
- Low: Validate extracted documents
- None: Do not validate documents

Enable Cross Validation

Server selection topology

Cell

- cbcell
 - Enterprise Applications
 - Deployment Manager
 - Clusters
 - Servers
 - cbnodea
 - nodeagent
 - cbsr02a

Diagnostic Providers

You can administer the following

- AdvisorDP
- ConnMqrDP_idbc/DefaultEJBTime
- ConnMqrDP_idbc/ilcds
- ConnMqrDP_idbc/lrsched
- ConnMqrDP_idbc/pqc
- WebContainerDP

WebSphere Configuration Problems > Tests Quick Link or Server Selection > Diagnostic Providers > Test Selection

Below is a list of tests the diagnostic provider has available to run against its own runtime component. By selecting a test from the list below the test will automatically be run.

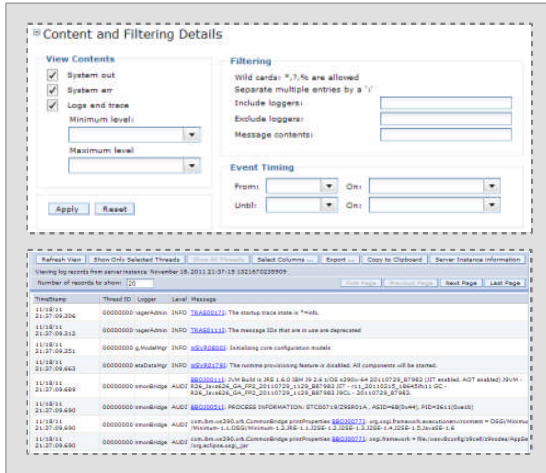
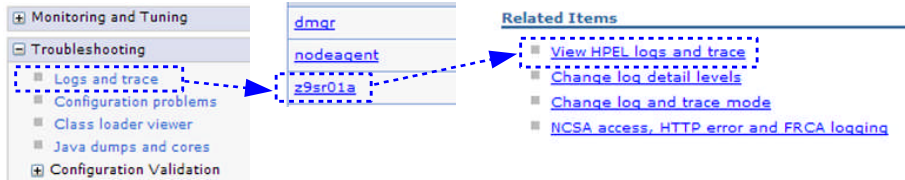
Preferences

Test identification	Test description
ServerRule11	Performs analysis of whether or there are symptoms o a memory leak. Requires Advisor and Memory Leal .Rule to be enable
Total 1	

The Admin Console HPEL Viewer



Graphical log viewer supplied as part of the Admin Console:



Log selection and content filtering section. This influences what appears below ...

... record by record display of HPEL content based on filtering down above.

38

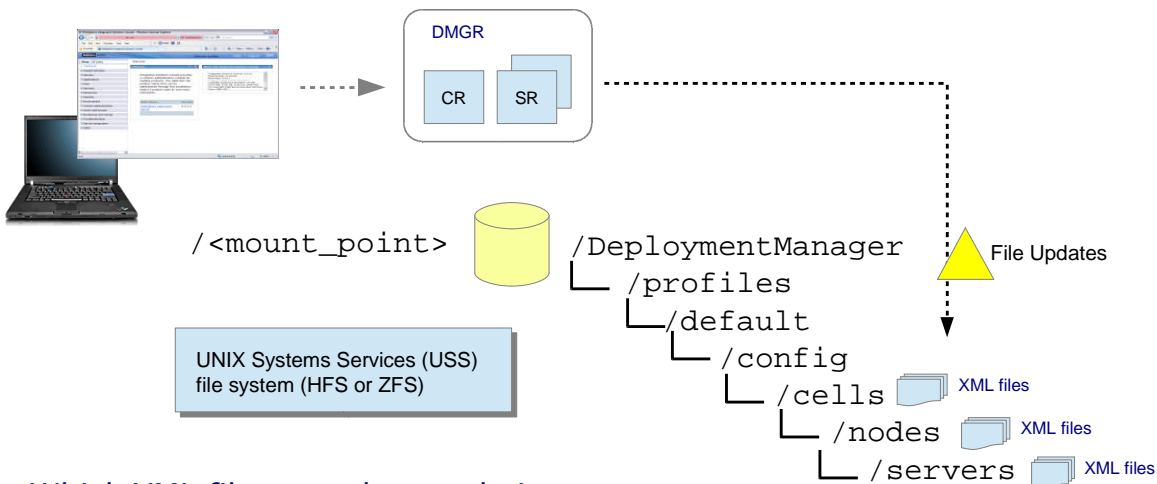
Complete your sessions evaluation online at SHARE.org/AnaheimEval



Administrative Application: Smart XML Updater



A large portion of the Administrative Application's function is to know how to translate mouse clicks into XML updates:



Which XML files not always obvious
Often *more than one* XML file needs updating
You could **try** to do this yourself ...
Better to allow administrative function to do it

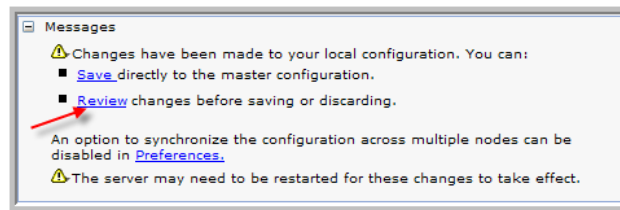
39

Complete your sessions evaluation online at SHARE.org/AnaheimEval

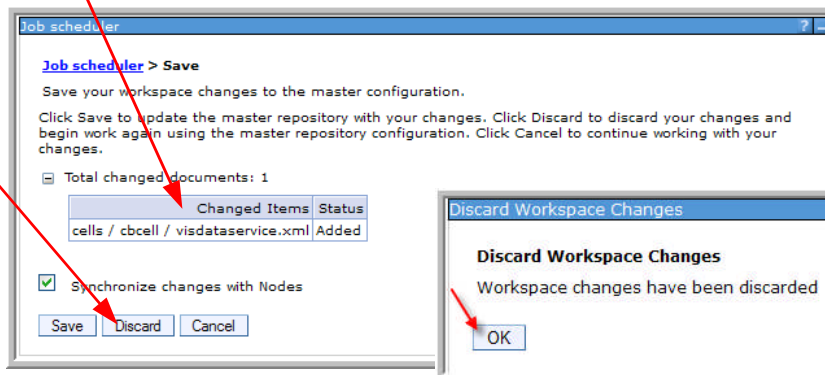


What documents are changed by the ISC?

- Make any Changes
- Click “Review”
- Click “+”
- See what documents will be changed or added



Select “Discard” if you want to see what would be changed without making the actual changes...



40

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Danger! Don't edit .xml files!!

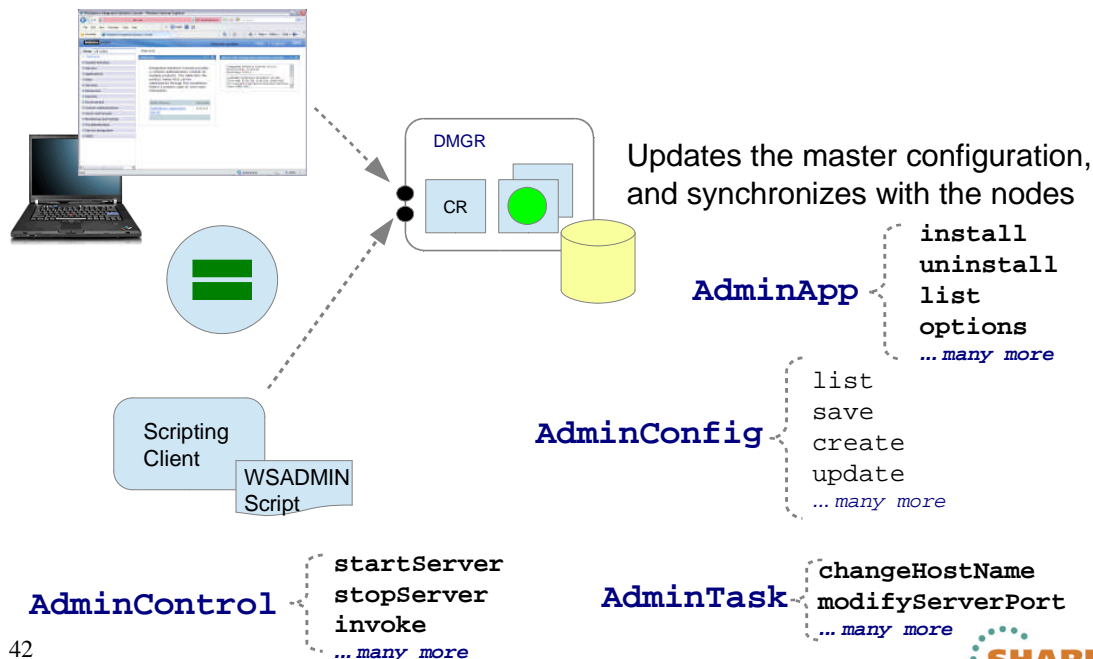
- ✗ They are in ascii
 - ✗ vi (viascii) will truncate lines longer than 1024 (use vim)
 - ✗ xml files are in multiple locations
 - ✗ Multiple xml files are involved with a single change.
 - ✗ If you mess up an xml file, your system may be toast.
- ***A better approach is to use the wsadmin.sh scripting functions!***

41

Complete your sessions evaluation online at SHARE.org/AnaheimEval

WSADMIN scripting facility ...

... a set of interfaces to the administrative function you may use to automate tasks you might otherwise do with the Admin Console:



42

Complete your sessions evaluation online at SHARE.org/AnaheimEval



WSADMIN References

The following resources are available to gaining more experience with WSADMIN:



IBM Techdocs -- ibm.com/support/techdocs

Techdocs Library > White papers >

WebSphere z/OS V6.1 - WSADMIN Primer (with Jython)

WP101014

Techdocs Library > White papers >

Using Jython Scripting Language With WSADMIN

WP100963

Techdocs Library > Hints, tips & Technotes >

Creating a New Server in WebSphere V7 for z/OS

TD105447

Techdocs Library > White papers >

Staged Application Deployment in WebSphere on z/OS V7

WP101641

IBM InfoCenter -- publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp

[Network Deployment \(z/OS\), Version 8.0 > Scripting the application serving environment \(wsadmin\)](#)

Getting started with wsadmin scripting

txml_scrip

Very good reference source for searches on specific WSADMIN commands or methods

WSADMIN client "Help" object and "help" methods

The WSADMIN client has extensive online help in its command syntax. It provides a way to drill down on syntax and usage for specific objects, method and attributes

43

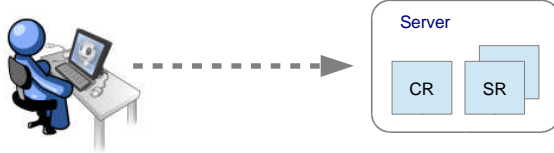
Complete your sessions evaluation online at SHARE.org/AnaheimEval



MODIFY Facility of z/OS Operating System



MODIFY is a means of dynamically displaying information about started task, or dynamically updating the runtime settings for that started task



F <jobname>,keyword,keyword...

```
F Z9SR01A,HELP
F Z9SR01A,HELP
BBOO0178I THE COMMAND MODIFY MAY BE FOLLOW
BBOO0179I CANCEL - CANCEL THIS CONTROL REG
BBOO0179I TRACEALL - SET OVERALL TRACE LEV
:
BBOO0179I DISPLAY - DISPLAY STATUS
:
BBOO0179I WLM_MIN_MAX - RESET WLM MIN/MAX SERVANT SETTINGS
BBOO0179I RECLASSIFY - RE-PROCESS WLM CLASSIFICATION FILE
:
BBOO0179I FAILOVER - FAILS OVER CONNECTIONS FOR RESOURCE IDENTIFIED BY GIVEN JNDINAME
BBOO0179I FAILBACK - FAILS BACK CONNECTIONS TO RESOURCE IDENTIFIED BY GIVEN JNDINAME
```

Example of output generated by simply specifying HELP on the MODIFY
35 MODIFY commands for WAS z/OS
18 DISPLAY options

InfoCenter rxml_mvsmodyfy

Complete your sessions evaluation online at SHARE.org/AnaheimEval



Changing Console Session Expiration



- See “Changing the console session expiration” document in the InfoCenter. (JACL script provided.)

.. or hack this file ..

- <Dmgr_profile_root>/config/cells/cbcell/application s/isclite.ear/deployments/isclite/deployment.xml
 - invalidationTimeout="30"

Danger! Don't edit .xml files!!
(See previous slide.)



Untrusted Certificates

- How to avoid these pesky msgs

Firefox:



This Connection is Untrusted

You have asked Firefox to connect securely to wg31.washington.ibm.com:7506, but we can't confirm that your connection is secure.

Normally, when you try to connect to a website, you are going to the right place.

What Should I Do?

If you usually connect to a website, you may be impersonated. This means that someone else could be using the site, and you could be sending them your information.

[Get me out of here](#)

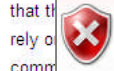
▶ **Technical Details**

▶ **I Understand the Problem**



The site's security certificate is not trusted!

You attempted to reach wg31.washington.ibm.com, but the server presented a certificate issued by an entity that is not trusted by your computer's operating system. This may mean that the information you receive from this website is not trustworthy.



There is a problem with this website's security certificate

The security certificate presented by this website was not issued by a trusted authority.

Security certificate problems may indicate an attempt to fool you or intercept the data you send to the server.

We recommend that you close this webpage and do not continue.

[Click here to close this webpage.](#)

[Continue to this website \(not recommended\).](#)

[More information](#)

Google Chrome:

Internet Explorer:

46

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Follow these steps to Trust CA's

Firefox:

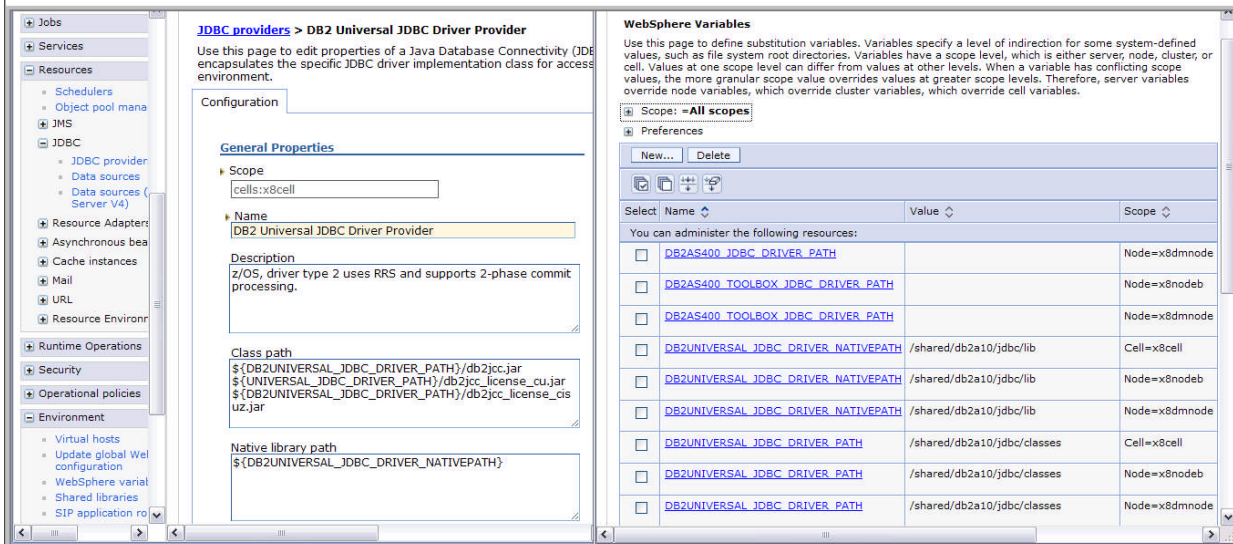
1. Click "Add Exception"
2. In the pop-up window, click View.
3. Click on the Details tab.
- Select WAS CertAuthWAS for Security Domain. Click Export**
4. Choose X.509 Certificate (PEM) as the file type.
- Remember the location to which you have saved your certificate.**
5. Close the certificate viewer
6. In the Firefox menu, click on Tools Options.
7. Click on the Advanced tab. Click on View Certificates.
8. Click on the Authorities tab. Click on Import.
9. Locate the certificate you saved earlier and click on Open.
10. Check the box next to "Trust this CA to identify web sites". Click "OK"
11. Click OK to exit the certificate manager.
12. Click OK to exit Firefox options.

47

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Click on "open link in new window"

This way, you can look at 2 different parts of the ISC side-by-side:



The screenshot shows the IBM WebSphere Administration Console. On the left, a tree view shows the navigation path: **JDBC providers > DB2 Universal JDBC Driver Provider**. The main area is divided into two panes. The left pane, titled "General Properties", shows configuration for the "DB2 Universal JDBC Driver Provider". The "Scope" is set to "cells:x8cell". The "Name" is "DB2 Universal JDBC Driver Provider". The "Description" is "z/OS, driver type 2 uses RRS and supports 2-phase commit processing." The "Class path" is "\${DB2UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc.jar" and the "Native library path" is "\${DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH}". The right pane, titled "WebSphere Variables", shows a table of variables. The scope is set to "All scopes".

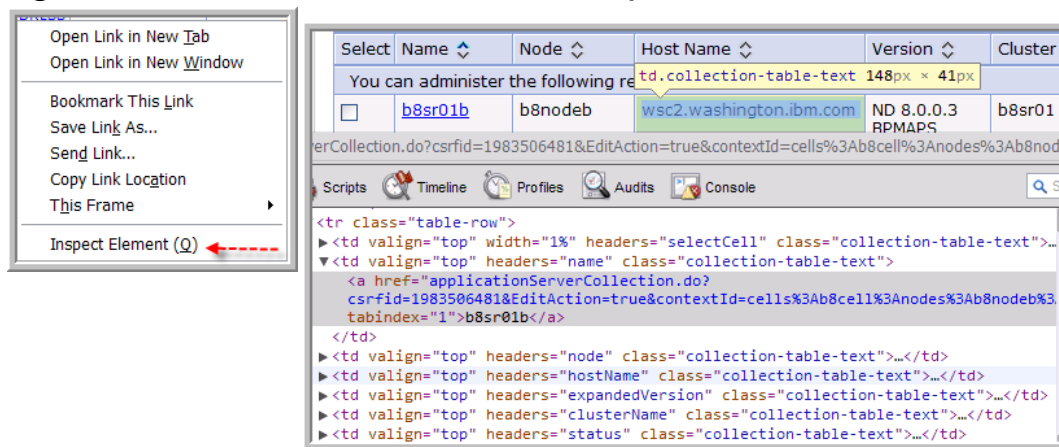
Select	Name	Value	Scope
<input type="checkbox"/>	DB2AS400 JDBC_DRIVER_PATH		Node=x8dmnode
<input type="checkbox"/>	DB2AS400 TOOLBOX JDBC_DRIVER_PATH		Node=x8nodeb
<input type="checkbox"/>	DB2AS400 TOOLBOX JDBC_DRIVER_PATH		Node=x8dmnode
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_NATIVEPATH	/shared/db2a10/jdbc/lib	Cell=x8cell
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_NATIVEPATH	/shared/db2a10/jdbc/lib	Node=x8nodeb
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_NATIVEPATH	/shared/db2a10/jdbc/lib	Node=x8dmnode
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_PATH	/shared/db2a10/jdbc/classes	Cell=x8cell
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_PATH	/shared/db2a10/jdbc/classes	Node=x8nodeb
<input type="checkbox"/>	DB2UNIVERSAL JDBC_DRIVER_PATH	/shared/db2a10/jdbc/classes	Node=x8dmnode

48

Complete your sessions evaluation online at SHARE.org/AnaheimEval

Inspect the ISC html....?

- Right-click on a link and select "Inspect Element":



The screenshot shows a browser's context menu open over a table row. The menu options include "Open Link in New Tab", "Open Link in New Window", "Bookmark This Link", "Save Link As...", "Send Link...", "Copy Link Location", "This Frame", and "Inspect Element (Q)". The "Inspect Element" option is highlighted with a red dashed arrow. Below the menu, the browser's developer tools are open, showing the HTML structure of the selected table row. The HTML code is as follows:

```
<tr class="table-row">
  <td valign="top" width="1%" headers="selectCell" class="collection-table-text">...
  <td valign="top" headers="name" class="collection-table-text">
    <a href="applicationServerCollection.do?csrfid=1983506481&EditAction=true&contextId=cells%3Ab8cell%3Anodes%3Ab8nodeb%3
    tabindex="1">b8sr01b</a>
  </td>
  <td valign="top" headers="node" class="collection-table-text">...</td>
  <td valign="top" headers="hostName" class="collection-table-text">...</td>
  <td valign="top" headers="expandedVersion" class="collection-table-text">...</td>
  <td valign="top" headers="clusterName" class="collection-table-text">...</td>
  <td valign="top" headers="status" class="collection-table-text">...</td>
</tr>
```

50

Complete your sessions evaluation online at SHARE.org/AnaheimEval

I hope you didn't get lost in the ISC cave.
Experiment on your own (in a sandbox system.)

¿Questions?

Please fill out the session evaluation using this Quick Response (QR) Code:



51

Complete your sessions evaluation online at SHARE.org/AnaheimEval

System z Social Media

- **System z official Twitter handle:**
 - [@ibm_system_z](https://twitter.com/ibm_system_z)
- **Top Facebook pages related to System z:**
 - [Systemz Mainframe](#)
 - [IBM System z on Campus](#)
 - [IBM Mainframe Professionals](#)
 - [Millennial Mainframer](#)
- **Top LinkedIn Groups related to System z:**
 - [Mainframe Experts Network](#)
 - [Mainframe](#)
 - [IBM Mainframe](#)
 - [System z Advocates](#)
 - [Cloud Mainframe Computing](#)
- **YouTube**
 - 52 • [IBM System z](#)
- **Leading Blogs related to System z:**
 - [Evangelizing Mainframe \(Destination z blog\)](#)
 - [Mainframe Performance Topics](#)
 - [Common Sense](#)
 - [Enterprise Class Innovation: System z perspectives](#)
 - [Mainframe](#)
 - [MainframeZone](#)
 - [Smarter Computing Blog](#)
 - [Millennial Mainframer](#)



Complete your sessions evaluation online at SHARE.org/AnaheimEval