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rich clients using J2EE Application Server or SASH stack

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agenda

- abstract
- evaluation of J2EE and SASH Stack
- operational view
 - configuration
 - monitoring
- conclusion



Abstract

- comparison between J2EE Client-Server Application and Client-Server Application using SASH Stack and providing hints when to use which alternative



evaluation of J2EE and the SASH Stack

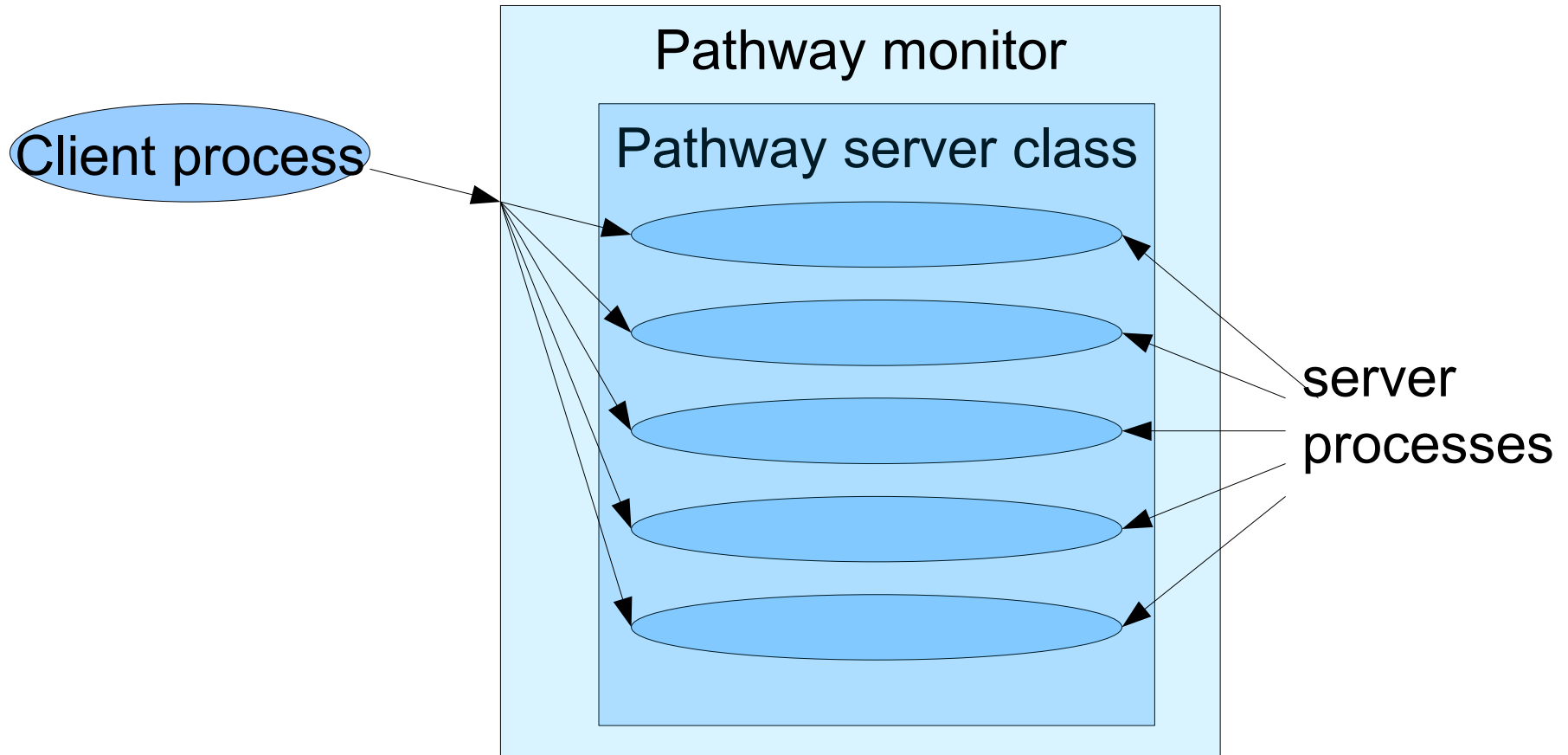


firm goals for Client-Server applications

- scalability
- availability

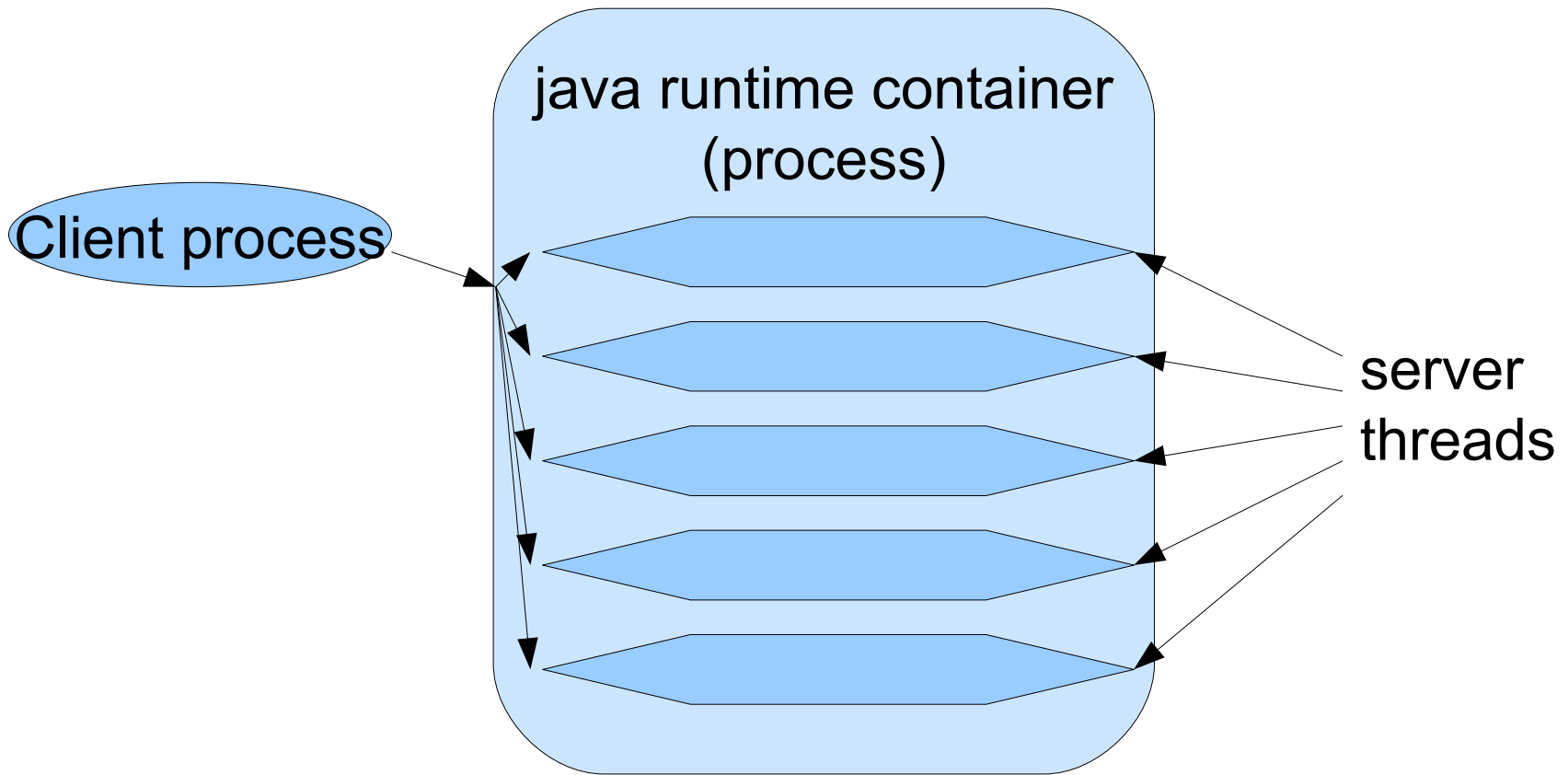


Pathway – the approach of Dynamic Scaling



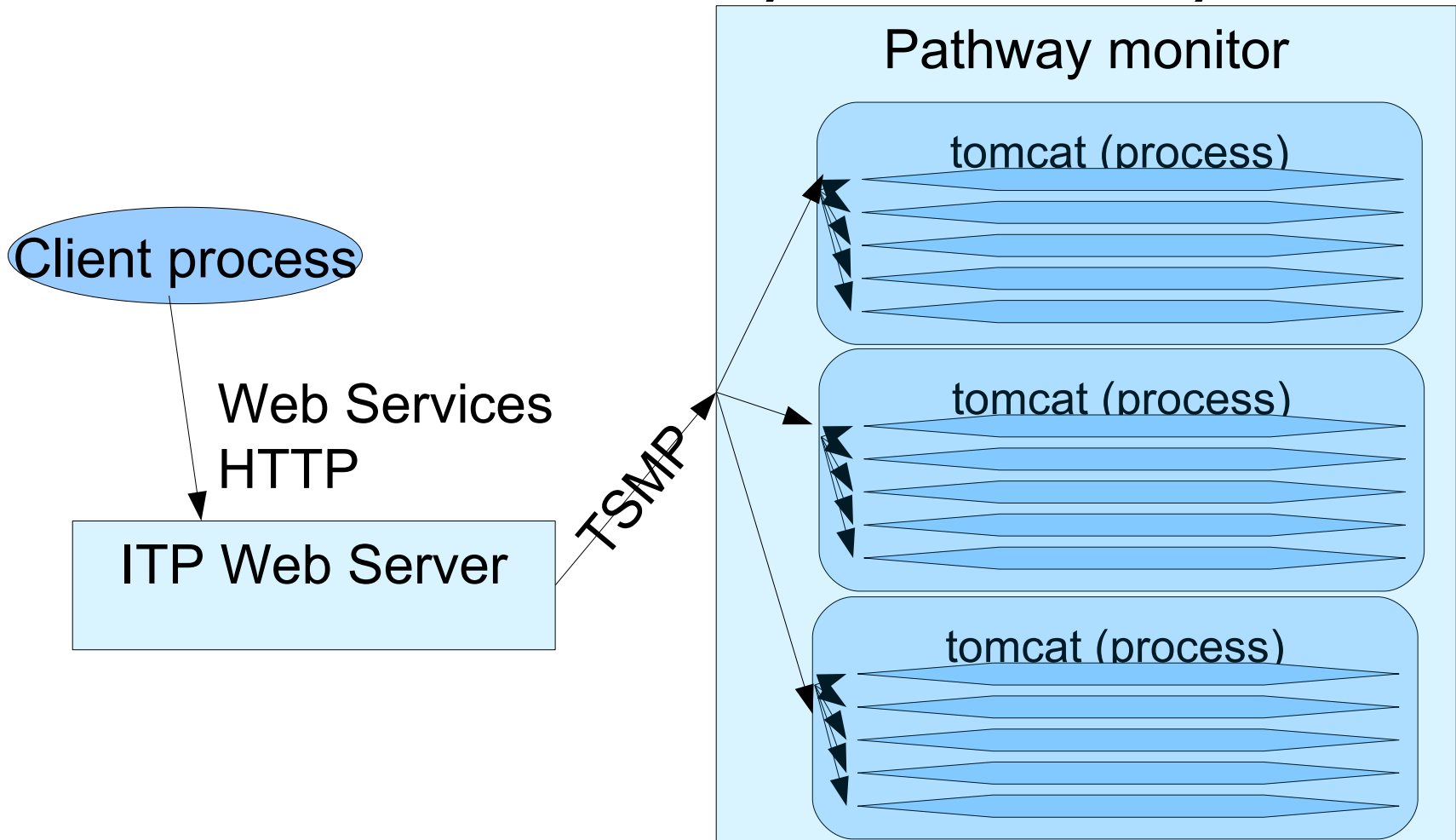


Java – the approach of Dynamic Scaling



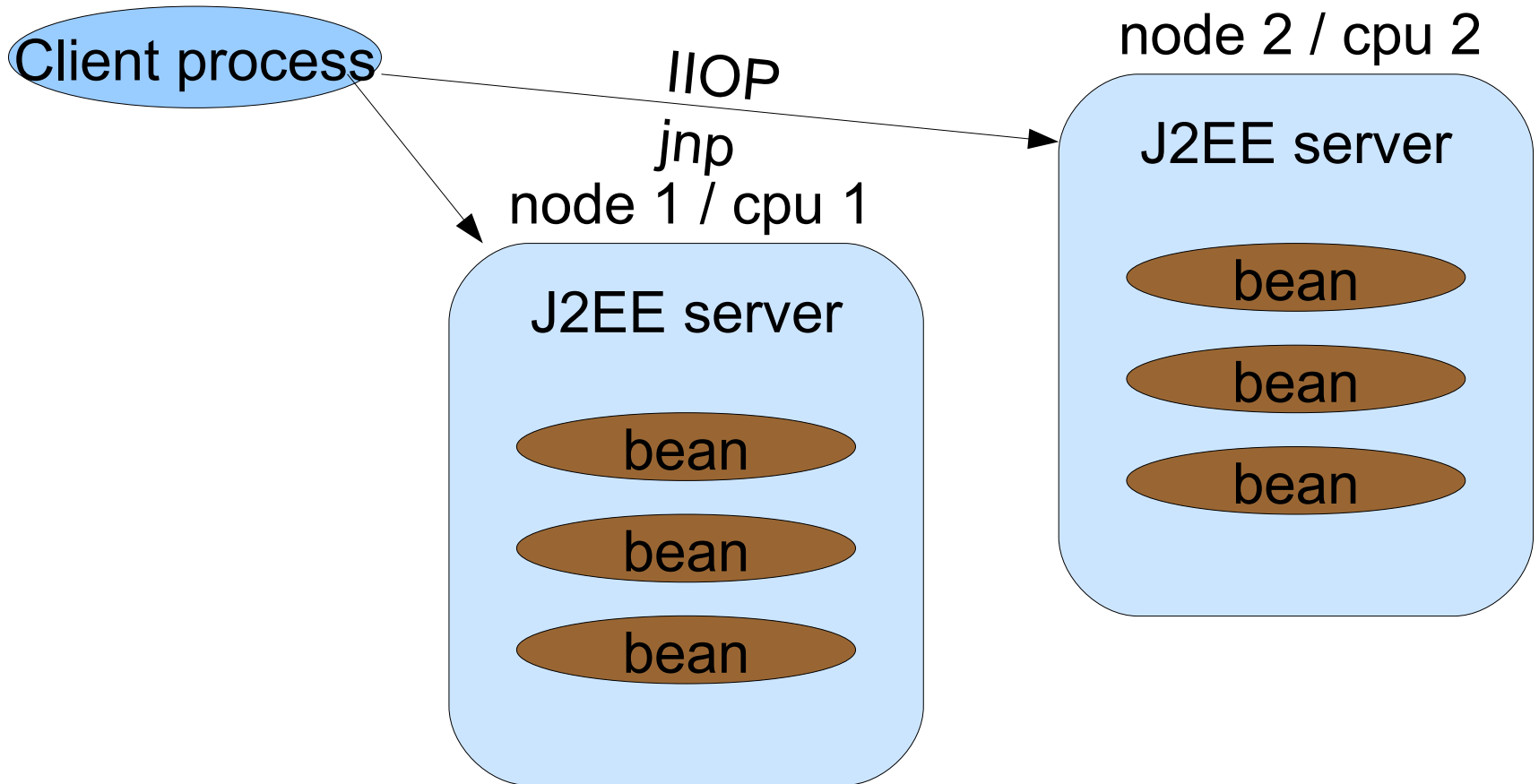


SASH stack – scalability & availability





J2EE – scalability & availability





Services of J2EE

- runtime container for beans
- persistence layer
- runtime container for Java Server Pages
- runtime container for web services
- Java Messaging System (JMS)



services of J2EE

- supplying resources like
 - database connections
 - transaction monitor
 - connections to external systems



J2EE on HP NonStop Server

- Oracle/BEA's WLS
 - Version 9.2 (J2EE 1.4)
- JBoss
 - Version 4.2.x (Java EE 5)



SASH Stack

- Spring
- Axis2 (web services)
- ServerFaces (extension to java server pages)
- Hibernate (persistence layer)

based on Tomcat (reference implementation of Servlet Container)



Addition to the SASH Stack

- JMS implementation Apache ActiveMQ



development view

- no big difference



functional view 1

- transactions
- timers
- JMS



functional view 2

- transactions
 - BEA WLS XA: one non XA resource allowed in a distributed XA transaction
 - SASH stack: TMF transactions
- timers
 - BEA WLS: J2EE implementation
 - SASH stack: roll your own



Functional View 3

- JMS
 - BEA WLS: integrated
 - SASH stack: use another Open Source implementation



operational view

- administration
- monitoring
- support



administration of the SASH stack

- configuration of resources
 - JDBC Data Sources
possible, but not complete
 - JTA
nt
 - JMS
another add on with its own configuration
- deployment of applications
 - one stage deployment



Data Sources using the SASH stack

NSJSP Server Administration - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

hp NonStop™ Servlets for JavaServer Pages™ Server Administration Commit Changes Log Out

NSJSP Server

- Service (NSJSP-ITPWebServer)
- Resources
 - Data Sources**
 - Mail Sessions
 - Environment Entries
 - User Databases
- User Definition
 - Users
 - Groups
 - Roles

Edit Data Source Data Source Actions

—Available Actions—
—Available Actions—
Create New Data Source
Delete Data Sources

Data Sources

Property	Value
JNDI Name:	jdbc/sqlmxDS
Data Source URL:	<input type="text" value="jdbc:sqlmx:"/>
JDBC Driver Class:	<input type="text" value="com.tandem.sqlmx.SQLMXDriver"/>
User Name:	<input type="text"/>
Password:	<input type="text"/>
Max. Active Connections:	<input type="text" value="4"/>
Max. Idle Connections:	<input type="text" value="2"/>
Max. Wait for Connection:	<input type="text" value="5000"/>
Validation Query:	<input type="text"/>

Save Reset



applications using the SASH stack

manager - Mozilla Firefox

List Applications HTML Manager Help Manager Help Server Status

Applications				
Path	Display Name	Running	Sessions	Commands
/	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/cwcxfdemo	cxf	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 60 minutes
/cwevent	cxf	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 60 minutes
/cwjframe	cxf	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 60 minutes
/docs	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/helloworld	cxf	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 60 minutes
/host-manager	Tomcat Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/kundendemo	cxf	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 60 minutes
/manager	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path (optional):

XML Configuration file URL:

WAR or Directory URL:



administration of BEA's WLS

- web application for administration
 - JDBC data sources
 - transactions
 - JMS
- administration using scripts
- deployment
 - two stage deployment via web application or via script



BEA WLS monitoring, e.g. Data Sources

BEA WebLogic Server Administration Console - Mozilla Firefox

home > Summary of JDBC Data Sources > JDBC Data Source-1 > Summary of JDBC Data Source-1

Messages

Test of JDBC Data Source-1 on server cpu0Server was successful.

Settings for JDBC Data Source-1

Configuration | Targets | Monitoring | Control | Security | Notes

Statistics | **Testing**

Use this page to test database connections in this JDBC data source.



BEA: Monitoring applications

The screenshot shows the BEA WebLogic Server Administration Console in Mozilla Firefox. The main content area is titled "Summary of Deployments" and includes a "Monitoring" tab. Below the tab, there is a descriptive paragraph and a table of installed applications.

Summary of Deployments

This page displays a list of J2EE Applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Deployments

<input type="checkbox"/>	Name ^	State	Type	Deployment Order
<input type="checkbox"/>	CW-EventApp	Active	Enterprise Application	100
<input type="checkbox"/>	CW-JFrameApp	Active	Enterprise Application	100
<input type="checkbox"/>	pv-diagnostics	Active	Enterprise Application	100

Showing 1 - 3 of 3 Previous | Next



BEA – a full fledged bike





SASH Stack as a bike





Conclusion

apples and oranges comparison



Conclusion

- BEA WLS
 - transactions on heterogeneous platforms
 - comfortable administration and monitoring
 - support
- SASH stack
 - only web services and jsp
 - lower cost
 - transaction control limited to HP NonStop Server