DATA SOURCE AND RESOURCE REFERENCE SETTINGS

FOR MICROSOFT SQL SERVER 2008

IN WEBSPHERE 6.0 USING Java 1.4

By Wick Gankanda | Updated: March 21, 2013

DATA SOURCE AND RESOURCE REFERENCE SETTINGS

Using IBM WebSphere embedded ConnectJDBC driver for MS SQL Server

WebSphere embedded ConnectJDBC driver for MS SQL Server is a Type 4 JDBC driver that provides JDBC access to the MS SQL Server 2000 database. This JDBC driver ships with WebSphere Application Server. Only use this provider with the Connect JDBC driver embedded in WebSphere; it cannot be used with a Connect JDBC driver purchased separately from DataDirect Technologies.

This JDBC provider supports this data source: com.microsoft.jdbcx.sqlserver.SQLServerDataSource

Requires JDBC driver files that are shipped with WebSphere Application Server and located in the WAS_HOME/lib/ directory: sqlserver.jar, base.jar and util.jar

This error is displayed if JARs are missing or pointing to wrong folder:

Binding DataDirect ConnectJDBC for SQL Server DataSource as jdbc/DataDirect ConnectJDBC for SQL Server DataSource Failed to connect to the DataSource. Encountered "": java.lang.ClassNotFoundException: DSRA8000E: No jar or zip files found in /sqlserver.jar;/base.jar;/util.jar

WebSphere Variables

Set the WebSphere variable MSSQLSERVER_JDBC_DRIVER_PATH by going to Environment > WebSphere Variables

			000000001
[MSSQLSERVER_JDBC_DRIVER_PATH	\${WAS_INSTALL_ROOT}/lib	cells:WGankand- D630Node01Cell:nodes:WGankand- D630Node01

Resource Configuration

Goto Resources > JDBC Providers. Node level scope is automatically selected.

Click on New button to configure a new JDBC provider

Welcome	JDBC providers
Guided Activities	JDBC providers ?
Servers	Messages
Applications	U Your workspace has been auto-refreshed from the master configuration. You can
Resources	disable auto-refresh in your user preferences.
T JMS Providers	
JDBC Providers	JDBC providers
Resource Adapters	JDBC providers are used by the installed applications to access data from databases.
 Schedulers 	
	Cell : WGankand-D630Node01Cell Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it
 Object pool managers 	works, see the scope settings help
Mail Providers URL Providers	
Resource Environment Providers	Server : server1
E Security	Apply
System administration	⑦ Preferences
Monitoring and Tuning	New Delete
	Select Name 🗘 Description 🗘
	None
JDBC providers <u>JDBC providers</u> > New Choose a type of IDBC provider to	create.
	create.
Configuration	
General Properties	
Step 1: Select the database SQL Server v Step 2: Select the provider t WebSphere embedded Con Step 3: Select the implemen Connection pool data source	type unectJDBC driver for MS SQL Server ♥ utation type re ♥
Next Cancel	

After selecting the proper settings, click Next >

Replace "CONNECTJDBC_JDBC_DRIVER_PATH" with "MSSQLSERVER_JDBC_DRIVER_PATH" to get the below.

Class path: \${WAS_LIBS_DIR}/sqlserver.jar \${WAS_LIBS_DIR}/base.jar \${WAS_LIBS_DIR}/util.jar \${WAS_LIBS_DIR}/spy.jar Name: WebSphere embedded ConnectJDBC driver for MS SQL Server PREV: DataDirect ConnectJDBC type 4 driver for MS SQL Server

Implementation class name:

com.ibm.websphere.jdbcx.sqlserver.SQLServerDataSource

Messages	
Modifying the implementation class name will eliminate sources and data sources version 4 from templates.	the ability to create data
	ver
DBC providers are used by the installed applications to access data from dat.	abases.
Configuration	
General Properties	
* 5	Additional Properties
<pre>cells:WGankand-D630Node01Cell:nodes:WGankand-D630Node01</pre>	 Data sources
* N	 Data sources (Version 4)
* Name WebSphere embedded ConnectIDBC driver for MS SOL	
Description	
WebSphere embedded ConnectIDBC driver for MS SOL	
Server.	
Class path	
\${WAS_LIBS_DIR}/sqlserver.jar	
\${WAS_LIBS_DIR}/base.jar \$/WAS_LIBS_DIR\/util_jar	
\${WAS_LIBS_DIR}/spy.jar	
Native library path	
* Implementation class name	
com.ibm.websphere.jdbcx.sqlserver.SQLServerDataSour	

Click on Apply > Save.

Click on Data sources under Additional Properties > New

Scope: cells:xx-O980Node01Cell:nodes:xx-O980Node01 Name: WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB JNDI name: jdbc/suppweb Check Use this Data Source in container managed persistence (CMP) Description: JDBC DataSource 4 SupplierDB

Data store helper class name: check Select a data store helper class For Data store helper classes provided by WebSphere Application Server , should see 'WebSphere Branded ConnectJDBC data store helper'

Component-managed authentication alias: none

Container-managed authentication: Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) > since none is setup at this stage, select (none).

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) is set to (none).

Additional Properties

- Data sources
- Data sources (Version 4)

Fill Connect JDBC data source properties: Database name: SUPPWEB Server name: 129.129.160.3 Port number: 1433

Screen-shot:

JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources > New

A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.

eneral Properties	The additional
Scope	available until the
cells:WG-O980Node01Cell:nodes:WG-O980Node01	general properties for
Name	Additional Propertie
WebSphere embedded ConnectJDBC 4 SQLServer DataS	
JNDI name	Connection pool
jdbc/suppweb	properties
$\overline{\mathbb{V}}$ Use this Data Source in container managed persistence (CMP)	 WebSphere Application Server data
Description	source
JDBC DataSource 4 SupplierDB	Custom properties
Category	Related Items
	J2EE
Data store helper class name	Connector
Select a data store helper class	(J2C)
Data store helper classes provided by WebSphere Application Server	authentication
Websebare Breeded Concerting Codets store belook	data entres
websphere branded Connect/DBC data store helper	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper)	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper)	
 (com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name 	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name	
 (com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias 	
WebSphere Branded ConnectDBC data store helper (com.ibm.websphere.rsadapter.WSConnectDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias Component-managed authentication alias (none)	
Websphere Branded Connect/DBC data store helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Image: Specify a user-defined data store helper Enter a package-qualified data store helper class name Image: Component-managed authentication alias Component-managed authentication alias (none) Image: Container-managed authentication	
Websphere Branded Connect/DBC Data Store Helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias (none) Container-managed authentication alias (none) Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead)	
Websphere Branded Connect/DBC Data Store Helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper)	
Wrebsphere Branded ConnectDBcC data store helper (com.ibm.websphere.rsadapter.WSConnectDBCDataStoreHelper)	
Wrebsphere Branded Connect/DBC Data Store Helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper)	
Websphere Branded Connect/DBC Data Store Helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias (none) Container-managed authentication alias (none) Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) (none)	
Wrebsphere Branded connect/DBC data store helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper)	
Wrebsphere Branded connect/DBC data store helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias (none) ▼ Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) ▼ Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) (none) ▼ Connect JDBC data source properties Database name	
Wrebsphere Branded connect/DBC data store helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias Component-managed authentication alias (none) Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) (none) Connect JDBC data source properties Database name SUPPWEB	
Wrebsphere Branded Connect/DBC Data Store Helper (com.ibm.websphere.rsadapter.WSConnect/DBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias (none) Container-managed authentication alias (none) Container-managed authentication alias (none) Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) (none) Connect JDBC data source properties Database name SuppWEB * Server name	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) © Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias Component-managed authentication alias (none) • Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) • Connect JDBC data source properties Database name SuppwEB * Server name 129.129.160.3	
(com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper) Specify a user-defined data store helper Enter a package-qualified data store helper class name Component-managed authentication alias Component-managed authentication alias (none) • Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) (none) • Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) (none) • Connect JDBC data source properties Database name SUPPWEB * Server name [129.129.160.3 Port number	

Click on Apply > Save.

Result in the JDBC providers:

JDBC p Data s	nectJDBC driver for M	5 SQL Server >						
A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.								
🕀 Pref	erences							
New	Delete Test	connection	Manage state					
Select	Name 🛟	JNDI name 🗘	Description 🗘	Category 🗘				
	WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB	jdbc/suppweb	JDBC DataSource 4 SupplierDB					

Click on 'WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB'

Click on Related Items: J2EE Connector Architecture (J2C) authentication data entries

This specifies a list of user IDs and passwords for Java 2 connector security to use.

Click on New:

1DBC provi

Alias (name of the authentication data entry): alias_jdbc1/suppl_web_services User ID: Password:

Description: J2C for JDBC suppl_web_services

 JDBC providers

 JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources > WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB > J2EE Connector Architecture (J2C) authentication data entries > New

 Specifies a list of user IDs and passwords for Java 2 connector security to use.

 Configuration

 General Properties

 * Alias

 lias_jdbc1/suppl_web_services

 * User ID

* Password ••••••• Description J2C for JDBC suppl_web_servio

Click on Apply > Save. Should see the new entry:

DBC prov	viders		2					
JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources > WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB > J2EE Connector Architecture (J2C) authentication data entries								
Specifies a list of user IDs and passwords for Java 2 connector security to use.								
	erences							
New								
	6 👯 🖤							
Select	Alias 💠	User ID 💲	Description 🗘					
	WG- O980Node01/alias_jdbc1/suppl_web_services	supplierws	J2C for JDBC suppl_web_services					
Total	1							

Related Items

J2EE
 Connector
 Architecture
 (J2C)
 authentication
 data entries

Go back and follow paths: Resources > JDBC providers > entry 'WebSphere embedded ConnectJDBC driver for MS SQL Server' > Data sources > WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB

Under Container-managed authentication: Container-managed authentication alias, select the previous Alias 'xxx/alias_jdbc1/suppl_web_services'

Click on Apply > Save.

Return to this:

JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources

A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.

Preferences New Delete Test connection Manage state... Description 🗘 Select Name 🛟 JNDI name 🗘 Category 🗘 WebSphere embedded jdbc/suppweb ConnectJDBC 4 JDBC DataSource 4 SupplierDB SQLServer DataSource 4 SupplierDB Total 1 Test connection Check entry in the Select box

Should get this console output upon successful connection to the database:

Messages				
Test connection for data sour SQLServer DataSource 4 Supplie O980Node01 was successful.	ce WebSphere embedded Connec rDB on server server1 at node WG	tJDBC 4 3-		
[7/22/10 18:37:48:418 GMT]	00000020 ResourceMgrIm	I WS	VR0049I:	Binding WebSphere embedded ConnectJDBC 4
SQLServer DataSource 4 Supp	plierDB_CF as eis/jdbc/s	suppweb	_CMP	
[7/22/10 18:37:48:431 GMT]	00000020 ResourceMgrIm	I WS	VR0049I:	Binding WebSphere embedded ConnectJDBC 4
SQLServer DataSource 4 Supp	plierDB as jdbc/suppweb			
[7/22/10 18:37:48:606 GMT]	00000020 DSConfigurati	I DS	RA8203I:	Database product name : Microsoft SQL Server
[7/22/10 18:37:48:615 GMT]	00000020 DSConfigurati	I DS	RA8204I:	Database product version : Microsoft SQL Server
2008 - 10.0.2531				
[7/22/10 18:37:48:620 GMT]	00000020 DSConfigurati	I DS	RA8205I:	JDBC driver name : SQLServer
[7/22/10 18:37:48:629 GMT]	00000020 DSConfigurati	I DS	RA8206I:	JDBC driver version : 3.40.87
(012757.007232.008739)	-			
[7/22/10 18:37:48:635 GMT]	00000020 DSConfigurati	I DS	RA8025I:	Successfully connected to DataSource.

Set Thread Pools for WebContainer for the Web Application server

Go to Application servers > select server > Thread Pools > WebContainer

Settings: Minimum Size: 10 threads Maximum Size: 1001 threads (2 x Connection-pools + 1) Thread inactivity timeout: 300 milliseconds (number of milliseconds of inactivity that should elapse before a thread is reclaimed) Uncheck: Allow thread allocation beyond maximum thread size

Resource Reference Defined



WebSphere Bindings JNDI name: jdbc/suppweb

References

References			
This web application references the following resources:	Name: jdbc/Sup	pplierDBReference	_
	Description: JDBC Re	esource Reference for DB for Supplier Web se	Vio
I kesodiceket jand odhbijetnokej sterice			-
and the second sec	Type: javax.so	ql.DataSource	2
	Authentication; Contain	er	1
	Sharing scope: Shareab	ble	J.
	WebSphere Bin	dinas	
	The following are bindin Server,	ig properties for the WebSphere Application	-
	JNDI name: jdbc/supp	web	
	JAAS login configuratio	n:	
Add Remove	None		

Save and close.

The web.xml file should show:

Using the Data Source in JavaBeans

Java Code:

```
Connection connection = null;
DataSource source = null;
try {
    source = (DataSource) new InitialContext().lookup("java:comp/env/jdbc/SupplierDBReference");
    connection = source.getConnection();
    System.out.println("Connect to " + connection.getCatalog() + " a success!");
}
catch (Exception e) { e.printStackTrace(); }
finally {
    source = null;
    connection = null;
}
```

00

Adding a new database to an existing JDBC provider

Log onto Admin Console > Resources > JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources

Click on New >

Name: WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 CoreDataDB JNDI name: jdbc/coredata Check Use this Data Source in container managed persistence (CMP) Description: JDBC DataSource 4 CoreDataDB

Data store helper class name: check Select a data store helper class For Data store helper classes provided by WebSphere Application Server , should see 'WebSphere Branded ConnectJDBC data store helper'

Component-managed authentication alias: select the previous alias 'xxx/alias_jdbc1/suppl_web_services'

Container-managed authentication: Container-managed authentication alias (deprecated in V6.0, use resource reference authentication settings instead) > since none is setup at this stage, select (none).

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) is set to (none).

Database name: coredata Server name: 129.129.160.3 Port number: 1433

ata source is used by the application to access data from the database. A data so rider, which supplies the specific JDBC driver implementation class.	ource is created unde
General Properties * Scope cells:WG-O980Node01Cell:nodes:WG-O980Node01 * Name	The additional properties will no available until th general propertie this item are sav Additional Prope
ded ConnectJDBC 4 SQLServer DataSource 4 CoreDataDB JNDI name jdbc/coredata	 Connection pool properties
 Use this Data Source in container managed persistence (CMP) Description JDBC DataSource 4 CoreDataDB 	 WebSpher Application Server dat source properties
	 Custom properties
Category	Related Items
Data store helper class name Select a data store helper class Data store helper classes provided by WebSphere Application Server 	 J2EE Connector Architectur (J2C) authentica data entric
WebSphere Branded ConnectJDBC data store helper (com.ibm.websphere.rsadapter.WSConnectJDBCDataStoreHelper)	
Specify a user-defined data store helper	
Enter a package-qualified data store helper class name	

Component-manage	u authentitation anas
Component-man	aged authentication alias
WG-O980Node0	l/alias_jdbc1/suppl_web_services 🔻
Container-managed	authentication
Container-manag	ed authentication alias (deprecated in V6.0, use resour cation settings instead)
(none)	▼
Mapping-configur authentication set (none)	ation alias (deprecated in V6.0, use resource reference ings instead)
Mapping-configur authentication set (none) Connect JDBC data	ation alias (deprecated in V6.0, use resource reference ings instead) source properties
Mapping-configur authentication set (none) Connect JDBC data Database name	ation alias (deprecated in V6.0, use resource reference ings instead) source properties
Mapping-configur authentication set (none) Connect JDBC data Database name coredata	ation alias (deprecated in V6.0, use resource reference ings instead) source properties
Mapping-configur authentication set (none) Connect JDBC data Database name [coredata * Server name	ation alias (deprecated in V6.0, use resource reference ings instead) source properties
Mapping-configur authentication set (none) Connect JDBC data Database name coredata * Server name 129.129.160.3	ation alias (deprecated in V6.0, use resource reference ings instead)
Mapping-configur authentication set (none) Connect JDBC data Database name coredata * Server name 129.129.160.3	ation alias (deprecated in V6.0, use resource reference ings instead)
Mapping-configur authentication set (none) Connect JDBC data Database name coredata * Server name 129.129.160.3 Port number	ation alias (deprecated in V6.0, use resource reference ings instead) source properties

Press Apply > Save > Save changes to master configuration

JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources

A data source is used by the application to access data from the database. A data source is created under a JDBC provider, which supplies the specific JDBC driver implementation class.



Select the newly created Data source and click

Test connection

If successful, see this Message: Test connection for data source WebSphere embedded ConnectJDBC for SQL Server DataSource on server server1 at node ... was successful.



Resource Reference in the Deployment Descriptor

© EJB reference						
Create a	reference to an	enterprise	bean.			
Service re Create a	ference reference to a w	veb service				
Resource Create a	reference reference to an	external re	source.			
Message Create a	destination refe message destin	erence ation refer	ence.			
Resource Creates a	environment reference to ac	eference Iministerec	l objects.			

		_
Name:	jdbc/coredataDBReference	
Description:	JDBC Resource Reference for CoreData DB for Supplier Web services	
		1
		J
Туре:	javax.sql.DataSource	J
Authentication:	Container	J
Sharing scope:	Shareable	J

WebSphere Bindings

The following are binding properties for the WebSphere Application Server.

JNDI name: jdbc/coredata			
JAAS login configuration:			
OUse default method:			
Authentication alias:			
O Use custom login configuration:			
Login configuration name:			
Save and close.			

Should see the new Resource Reference listed.

References

References

This web application references the following resources:



The web.xml file should show:

Using the Data Source in JavaBeans

Java Code:

```
Connection connection = null;
DataSource source = null;
try {
    source = (DataSource) new InitialContext().lookup("java:comp/env/jdbc/coredataDBReference");
    connection = source.getConnection();
    System.out.println("Connect to " + connection.getCatalog() + " a success!");
}
catch (Exception e) { e.printStackTrace(); }
finally {
    source = null;
    connection = null;
}
```

Set the Connection Pool Parameters for Data Sources

Log into WebSphere administrative console. Select Resources > JDBC providers. Select the > JDBC provider

🖯 Resources	Scope:
 JMS Providers JDBC Providers Resource Adapters Asynchronous beans Schedulers Schedulers Cache instances Object pool managers Mail Providers URL Providers Resource Environment Providers 	 Cell : WGankand-D630Node01Cell Scope specifies visible. For deta works, see the s → Node : WGankand-D630Node01 Server : server1 Apply Preferences
Security	New Delete
Environment	
System administration	Sele Name 🗢
Monitoring and Tuning	WebSphere embedded ConnectJDBC driver for MS SQL
Troubleshooting	Server

Select Data sources link > select a data source > follow the arrows on the diagram

JDBC providers > WebSphere embedded ConnectJDBC driver for MS SQL Server > Data sources

A data source is used by the application to access data from the database. A data source is creat which supplies the specific JDBC driver implementation class.

	E 44 40			and the second
1				Additional Properties
Select	Name 🛟	JNDI name 🗘	Description 🗘	Connection pool
	WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 CoreDataDB	jdbc/coredata	CoreDataDB	vebSphere Application Server
	WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 SupplierDB	jdbc/suppweb	JDBC Datasource 4 SupplierDB	data source properties © Custom propertie
DBC	providers > WebSphere emb	edded ConnectJDBC driver fo urce 4 CoreDataDB > Connec	or MS SQL Server > Data yourd tion pools	es > WebSphere embedde
Conne	ction pool properties that car	be modified to change the b	ehavior of the J2C onnection	pool manager. Default
Conne Conne values recom	ction pool properties that car are provided for non-produc mended.	be modified to change the b tion use. Review and possible	pehavior of the J2C connection a modification of these configu	pool manager. Default ration values are

		riddicional ridperties
Scope		 Advanced connection pool properties
Connection timeout		 Connection pool custom properties
180	seconds	
Maximum connections		
10	connections	
Minimum connections		
1	connections	
Reap time		
180	seconds	
Unused timeout		
1800	seconds	
Aged timeout		
0	seconds	
Purge policy		
EntirePool		

Connection timeout = 180 seconds (3 mins)

Maximum connections = 200 connections

Minimum connections = 50 connections

Reap time = 120 seconds (Specifies the interval between runs of the pool maintenance thread.)

Unused timeout = 600 seconds (Specifies the interval in seconds after which an unused or idle connection is discarded)

Aged timeout = 120 seconds (Specifies the interval in seconds before a physical connection is discarded)

Purge policy = EntirePool (Specifies how to purge connections when a stale connection or fatal connection error is detected)

Configuring the WebContainer and database connection pool sizes for a WebSphere server 6.0

Login to administrative console > click Servers > Application Servers > select your server Under "Additional Properties" click Thread Pools:

pplication servers > WAS60Server1	es services required to run enterprise applications.
Runtime Configuration	
Connerl Presention	
General Properties	- Container Settings
WAS60Server1	Web Container Settings
Run in development mode	EJB Container Settings
	E Container Services
Server-specific Application Settings	Business Process Services
Classloader policy Multiple 💌	Server messaging
Class loading mode	Messaging engines
Parent first 🔻	Messaging engine inbound transports
	WebSphere MQ link inbound transports
Apply OK Reset Cancel	 SIB service
	Server Infrastructure
	Java and Process Management
	Administration
	Communications
	E Ports
	• Messaging
	Performance
	 Performance Monitoring Infrastructure (PMI)
	Runtime Performance Advisor Configuration
	Security
	Web services: Default bindings for Web services securi
	Troubleshooting
	HTTP error and NCSA access logging
	 Diagnostic Trace Service
	Logging and Tracing
	Change Log Detail Levels
	Additional Properties
	Endpoint Listeners
	Debugging Service
	Thread Pools

Select the WebContainer thread pool.

A threa Creatin	ed pool allows component ng new threads is typically ferences	is of the server to reuse threads to r a time and resource intensive op	eliminate the need to o eration.	reate new threads at runti
New	Delete			
	同 半 省			
Select	Name 🛟	Description 🗘	Minimum Size 🗘	Maximum Size 🗘
	Default		5	20
	SIBFAPThreadPool	Service integration bus FAP outbound channel thread pool	4	50
	WebContainer		50	1001
	server.startup	This pool is used by WebSphere during server startup.	0	10

This page will display the minimum and maximum sizes for the WebContainer Thread Pool. Ensure that "Allow thread allocation beyond maximum thread size" check box is clear. Use this page to update the values if required.

figuration		
eneral Properties		Additional Properties
Name		Custom Properties
WebContainer		= Custom Properties
Description		
Minimum Size		
50	threads	
Maujanum Cine		
1001	threads	
Thread inactivity tin	neout	
3500	milliseconds	

Determining the WebContainer thread pool sizes using the configuration files

Follow these steps to determine the configured sizes for the WebContainer thread pool using the xml configuration files.

- Locate the server.xml file under this location: WAS_installdir/profiles/profile_name/config/cells/cell_name/nodes/node_name/servers/WAS_server_name/serv er.xml
- 2. Open server.xml in a text editor
- 3. An entry similar to the following will show the configured values for the WebContainer thread pool. <threadPools xmi:id="ThreadPool_1186161170688" minimumSize="25" maximumSize="25" inactivityTimeout="3500" isGrowable="false" name="WebContainer"/>
- 4. Ensure isGrowable is set to false.

If you are required to update the configuration, do not update server.xml directly. Instead, use the WebSphere Administrative Console.

Database Connection Pool

Maximum Connection Pool Size

When determining the maximum size of the database connection pool, consider the following issues:

The total number of connections that the WebSphere Commerce cluster can open to the database should not overwhelm your database.

In order to prevent deadlocks, there should be connections available for all the threads that might require one. It is not only the web container that uses database connections. The following equation can help you determine the maximum number of database connections you should allow:

DataSource Connection Pool Size >=

- (# Of WebContainer Threads)
- + (# Of WC Scheduler Threads)
- + 1 (for WC Key Manager)
- + 1 (for WC Auditing)
- + (# of Parallel and Serial MQ listener threads)
- + (# of non-WebContainer Threads used by Custom Code)

In order to satisfy the rule that all the threads have connections available, you might need to either increase the number of database connections or reduce the number of WebContainer and other threads.

Minimum Connection Pool Size

The default value of the minimum connection pool size is 5. This value is appropriate to most configurations. If you have a firewall configured between the WebSphere Application Server nodes and the database, you should follow the technote on How to configure WebSphere data source parameters when a firewall is present and configure the firewall to ensure it doesn't interfere with the connections.

Recommended starting values for the WebContainer and database connection pool sizes

The following table lists recommended starting values for configuring the WebContainer and database connection pool sizes. The optimal configuration in your system might be different. Finding the best configuration for your environment can only be done by completing a performance tuning exercise.

	Minimum	Maximum
WebContainer	25	25
Database Pool	0	55

The values were determined following these considerations:

- The WebContainer minimum and maximum sizes are configured to be the same to avoid the overhead of creating and destroying threads.
- A value of 25 for the WebContainer is usually enough to allow high throughput and concurrency without overloading the server.
- The database pool is configured to ensure there will be enough connections available for all the WebContainer threads.
- The minimum value of the database pool is set to 0 to prevent firewall related problems and avoiding maintaining unused connections.

June 23, Thursday 2011 All tables whose source is Aurora is in database is 'AURORA'

In the Web application:

supp.database.resourceRef.suppDB= AuroraDBReference supp.database.resourceRef.coredataDB= AuroraDBReference

Create a new DataSource:

Go to: Resources > JDBC providers > entry 'WebSphere embedded ConnectJDBC driver for MS SQL Server' > Data sources > New >

Scope: cells:WG-O980Node01Cell:nodes:WG-O980Node01 Name: WebSphere embedded ConnectJDBC 4 SQLServer DataSource 4 AuroraDB JNDI name: **jdbc/aurorajndi** Check Use this Data Source in container managed persistence (CMP) Description: JDBC DataSource 4 AuroraDB

Data store helper class name: check Select a data store helper class For Data store helper classes provided by WebSphere Application Server , should see 'WebSphere Branded ConnectJDBC data store helper'

Component-managed authentication alias: none

Container-managed authentication: Container-managed authentication alias, select the Alias 'xxx/alias_jdbc1/suppl_web_services'

Click on Apply > Save.

Mapping-configuration alias (deprecated in V6.0, use resource reference authentication settings instead) is set to (none).

Fill Connect JDBC data source properties: Database name: AURORA Server name: 129.129.160.3 Port number: 1433

Click on Apply > Save.

Resource Reference Name: "**jdbc/**AuroraDBReference" as used in the JavaBean as "**java:comp/evn/jdbc/** AuroraDBReference"

Desc: JDBC Resource Reference for Aurora DB 4 Supplier Web services

Add JNDI name: jdbc/aurorajndi

References:

Data source minimum required settings for Microsoft SQL Server

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.base.doc/info/aes/ae/rdat_minreqmssql.html

Connection pool settings

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/udat_conpoolset.html

Connection pool settings for Application Server Network Deployment Ver6.0

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/udat_conpool

WebSphere Application Server data source properties

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.base.doc/info/aes/ae/udat_jdbcdatasorprops.html

Tuning the JDBC data source of a messaging engine

http://publib.boulder.ibm.com/infocenter/dmndhelp/v6rxmx/index.jsp?topic=/com.ibm.websphere.pmc.zseries.doc/tasks/tjm0230_.html set.html

Tuning connection pools

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.nd.multiplatform.doc/info/ae/ae/tdat_ccrtpds.html

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