

WebSphere Application Server V6.x Script Compatibility

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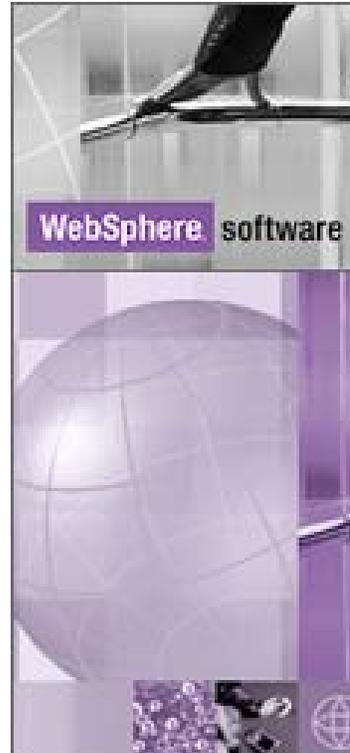




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Introduction

This document describes one particular aspect of compatibility for WebSphere Application Server, namely changes that are required for maintaining wsadmin scripts. Note that this document is based on a section of another document **“WebSphere Application Server Version 6 System Management Features”** and shares some common source with that document. Much of the Version 6 section of this document is the same as that document. Information was added for some new version 6 impacts as well as all version 6.1 information.

The table below provides a summary and indicated impacts based on WebSphere Application Version supported platform and version. The remaining sections briefly describe the change, resolution and provide references when applicable. An entry of “Yes” indicates that that column is affected, an entry of “No” indicates no impact.

The column **“Mitigation via Migration tools”** indicates whether or not using the WebSphere Migration tools with the default of scriptCompatibility will provide some mitigation. For those affected changes the tools will create the new configuration using the “old” model of the configuration so existing wsadmin scripts will still work. See the following for more information http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/rmig_convertscript.html

Change	Mitigation via Migration tools	V6.0 Distributed and i5OS	V6.0 zOS	V6.1 Distributed and i5OS	V6.1 zOS
Parsing output of the ObjectName class	No	Yes	Yes	Yes	Yes
regex Jacl command	No	Yes	Yes	Yes	Yes
Http Transports to Channels	Yes	Yes	No	Yes	Yes
Transaction log directory	Yes	Yes	Yes	Yes	Yes
ProcessDefinition rename	Yes	Yes	No	Yes	No
JMS Server removed	No	Yes	Yes	Yes	Yes
New exceptions are thrown for some conditions	No	No	Yes	No	Yes
taskInfo command keywords	No	No	Yes	No	Yes
Foreign cell bindings bootStrapAddress	Yes	No	No	Yes	Yes
CCF and SAS features removed	No	No	No	Yes	Yes
DB2 for zOS Local JDBC Provider (RRS) is removed	No	No	No	No	Yes
System SSL supported for Daemon only	No	No	No	No	Yes
SIB Bus creation	No	No	No	Yes	Yes
SSL configuration	Yes	No	No	Yes	Yes



Changes introduced in v6.0

A good general reference is

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate.html

Parsing output of the ObjectName class

Due to changes in the JMX specification for allowed format of the ObjectName class, the configID used in Version 6 contains a vertical bar character ("|") instead of a colon character (":") as a delimiter. This change in configID format should not present a problem for most wsadmin scripts because configIDs are not guaranteed to be consistent between wsadmin executions and should not be stored persistently for reuse. ConfigIDs should always be retrieved from a query of the configuration executed right before their usage in a script. Support is also provided for interoperability between v5.x and v6.x nodes. Automatic transformation is performed between v5.x and v6.x JMX when an ObjectName is transferred between the two runtimes through JMX calls.

regex Jacl command

A new Version of Jacl (1.3.1) is shipped with WebSphere Application Server V6. With this Jacl Version, regex command supports only tcl 8.0 regex command syntax. If your existing Version 5 Jacl script uses regex command syntax that is supported in Jacl 1.2.6 but not anymore in Jacl 1.3.1, you may not get a match anymore, or you may get a compile error for your regex command similar to the following:

```
com.ibm.bsf.BSFException: error while eval'ing Jacl expression:
couldn't compile regular expression pattern: ?+* follows nothing
```

The regular expression syntax that produces these exceptions will have to be adjusted so as to work as specified by the tcl 8.0 rules.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate5to6.html

Http Transports to Channels

The new architecture for Version 6 uses the new channel framework for communication and associated endpoint configuration. HTTP definitions for the Web Container are mapped on top of this channel framework support. When compatibility mode is chosen for Version 5 migration, the old HTTPTransport objects are left in the configuration so that existing scripts can modify these objects and will run unchanged. The channel framework runtime code will recognize the presence of old HTTPTransport configuration and issue a warning message in the logs to indicate that the configuration should be upgraded.

If new Version 6 application servers are defined, or if the migration compatibility mode for scripting is not used, the migration logic will map the old HTTPTransport objects into new channel framework configuration and older wsadmin scripts will fail to have any effect on the system. This is because the older scripts will update the HTTPTransport configuration objects but the runtime will see the new channel framework configuration and honor that instead of the older setting.

Old example (using Jacl wsadmin syntax):



```
$AdminConfig modify $web_container {{transports:HTTPTransport {{  
{address {{host *} {port 9080}} } }}}} }
```

New example (using Jacl wsadmin syntax):

```
$AdminConfig list ServerEntry $node  
set se <select one of the ServerEntry from output of above command>  
set eprs [lindex [$AdminConfig showAttribute $se specialEndPoints] 0]  
foreach ep $eprs {  
  set epName [$AdminConfig showAttribute $ep endPointName]  
  if {$epName == "WC_defaulthost"} {  
    $AdminConfig modify $ep {{ {endpoint {{host *} {port 9080}} }}  
  }  
}
```

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate5to6.html

Transaction log directory

The location of the transaction logs directory attribute has changed from the ApplicationServer::TransactionService to the ServerEntry::recoveryLogs. As long as the new location is not used, the value from the old location will continue to be used. Scripts that modify the old location can still be used; that value will take effect until a value in the new location is set. The change to scripts to use the new location is as follows:

Old location (using Jacl wsadmin syntax):

```
set transService [$AdminConfig list TransactionService $server1]  
$AdminConfig showAttribute $transService transactionLogDirectory
```

New Location (using Jacl wsadmin syntax):

```
$AdminConfig list ServerEntry $node  
set serverEntry <select one of the ServerEntry from output of above command>  
set recoveryLog [$AdminConfig showAttribute $serverEntry recoveryLog]  
$AdminConfig showAttribute $recoveryLog transactionLogDirectory
```

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate5to6.html

ProcessDefinition rename

The name of the Server Process Definition configuration object has changed from processDef to processDefs for Distributed and i5OS. This is unchanged for zOS. The change to scripts to use the new syntax is as follows:

Old example (using Jacl wsadmin syntax, assume \$server1 is configID of the default server):

```
set processDef [$AdminConfig showAttribute $server1 processDefinition]
```

New example (using Jacl wsadmin syntax, assume \$server1 is configID of the default server):

```
set processDefs [$AdminConfig showAttribute $server1 processDefinitions]
```

Further reference:



http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate5to6.html

JMS Server removed

The JMS support was re-engineered in version 6.0. A side effect of this is that the JMS Server as a separate server instance no longer exists in the version 6.0 configuration. It is unlikely that your scripts are directly referencing the JMS Server Object(more than likely you will be interacting with JMS resources), but if you are then your scripts will need to be modified.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.pmc.nd.doc/ref/rjn0040_.html

New exceptions are thrown for some conditions

The Systems management code was unified across the WebSphere platforms in version 6.0. When this happened some of the behaviors changed on the zOS platform. One of these changes was to throw exceptions for more cases than previously were detected. This can cause some scripts to change behavior, One example of this is throwing an exception on a stopServer command when that server has already been stopped.

The solution is to include more try/catch blocks around wsadmin commands using syntax as follows:

```
if { [catch {"yourCommandHere"}] }
  { puts "it failed" }
else
  { puts "it was ok" }
```

taskInfo command keywords

The Systems management code was unified across the WebSphere platforms in version 6.0. When this happened some of the behaviors changed on the zOS platform. One of these changes as in the casing of AdminApp taskInfo command keywords. Many task names have changed between V5.x and V6.x for similar or the exact same operation. You may need to update existing scripts if you are migrating from V5.x to V6.x

For example, some of the old task commands were: "module", "EJB", "uri", while the new task commands are: "Module", "EJB", "URI",

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/topic/com.ibm.websphere.zseries.doc/info/zseries/ae/rxml_adminapp.html

Changes introduced in v6.1

A good general reference is

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/txml_migrate.html



Foreign cell bindings bootstrapAddress

The ability to configure foreign cell name bindings enables your applications to access other applications in other cells. A *foreign cell* is a cell other than the one in which an application resides. A foreign cell name binding is a context binding that resolves to the Cell Root context of a foreign cell. The format of this has changed in the v6.1 default configuration.

Edit your version 5.x or 6.0.x foreign cell binding scripts, replacing bootstrapAddress with bootstrapAddresses, the list property introduced in version 6.1.

The bootstrap address properties are in the context of the ForeignCell class. The fully qualified name for the version 5.x or 6.0.x property now deprecated is the following:

```
topology.cell:Cell/foreignCells/bootstrapAddress
```

The fully qualified name for the bootstrap address list property introduced in version 6.1 is the following:

```
topology.cell:Cell/foreignCells/bootstrapAddresses
```

Version 6.1 and later foreign cell binding scripts should use the bootstrap address list property, bootstrapAddresses.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/tnam_migrat_bootstrap.html

CCF and SAS features removed

Both CCF and SAS have been removed from version 6.1 after proper deprecation. Any resources that were configured to use these features will need to be changed to use the new functions. For CCF this is J2C, for SAS it is JAAS. The exception is the Daemon process of zOS. This will still use System SSL.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/rmig_deprecationlist.html

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/tdat_impjcaapi.html

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.doc/info/ae/ae/tsec_migratecorba.html

DB2 for zOS Local JDBC Provider (RRS) is removed

WebSphere® Application Server for z/OS version 6.1 will not support integration with the legacy DB2 JDBC Driver. This was accomplished in prior versions of WebSphere Application Server for z/OS using the DB2 for zOS Local JDBC Provider (RRS). You will need to use the DB2 Universal driver instead. There is migration tooling available to assist in this conversion as noted below.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.zseries.doc/info/zseries/ae/cmig_pre.html

JDBC migration utility for Legacy to Universal DB2 drivers



<http://www-1.ibm.com/support/docview.wss?uid=swg27007826>

System SSL supported for Daemon only

In version 6.1 support for zOS System SSL has been removed for all servers except the Daemon. Use JSSE instead of System SSL.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.zseries.doc/info/zseries/ae/rmig_deprecationlist.html

SIB Bus creation

A new parameter is on the createSIBus command related to Security. This change is a side-effect of the other changes to the Security model in v6.1. The `–secure` parameter has been deprecated and is ignored. It controlled whether or not global security controlled the SIBus Security. The `busSecurity` parameter has been added.

Set this option to TRUE to enforce the authorization policy for the bus, which also requires administrative security to be enabled. Set this option to FALSE if you always want to disable bus security. If administrative security is disabled the bus is insecure.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.pmc.nd.iseries.doc/ref/rjj_cli_bus_create.html

SSL configuration

A new way of configuring SSL was introduced in version 6.1. When migrating to version 6.1, you can update the format for SSL configuration or you can continue to use the version 6.0 format. If you encounter errors with your existing administration scripts for SSL configurations, you can manually convert your SSL configuration to the V6.1 format. If you create a new profile without doing Migration you will be using the new SSL model and you must modify your scripts.

Further reference:

http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/topic/com.ibm.websphere.nd.iseries.doc/info/seriesnd/ae/xml_migratesecurity.html

History:

Version	Date	Changes
1.0	January 16 2007	Initial Version
1.1	January 30 2007	Added JMS Server and foreign cell references

