

Release Bulletin EAServer 5.3 for Sun Solaris

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1. Accessing current release bulletin information

A more recent version of this release bulletin may be available on the Web. To check for critical product or document information added after the product release, use the Sybase® Product Manuals Web site.

❖ Accessing release bulletins at the Sybase Product Manuals Web site

- 1 Go to Product Manuals at <http://www.sybase.com/support/manuals/>.
- 2 Select a product and language and click Go.
- 3 Select a product version from the Document Set list.
- 4 Select the Release Bulletins link.
- 5 From the list of individual documents, select the link to the release bulletin for your platform. You can either download the PDF version or browse the document online.

2. Product summary

Enclosed is Sybase EAServer version 5.3, build 53016 (EBF 14148). You may have a later build number if you have installed ESD patches for this release. If so, the cover letters provided with each patch contain the build number and additional documentation.

2.1 System requirements

This EAServer release is compatible with the following platform and operating system configurations:

- Sun Solaris SPARC 2.8
- Sun Solaris SPARC 2.9

2.2 Required system patches

Verify that you have the required Solaris patches for JDK versions 1.3, 1.4, and 1.5. See these Web pages for more information:

- Java 2 Platform, Enterprise Edition (J2EE) 1.3 at <http://java.sun.com/j2ee/1.3/index.jsp>
- Solaris Patches for Java 2 SDK version 1.3 Web site at <http://java.sun.com/j2se/1.3/install-solaris-patches.html>
- Solaris Patches for Java 2 SDK version 1.4 Web site at <http://java.sun.com/j2se/1.4.2/download.html>
- The console may display error messages about missing fonts when you start the installation program. You can safely ignore these messages. See Java 2 Platform, Enterprise Edition (J2EE) 1.3 at <http://java.sun.com/j2ee/1.3/index.jsp> for additional information.

Note Solaris 2.8 is the same as Sun OS 5.8 and Solaris 8. Solaris 2.9 is the same as Sun OS 5.9 and Solaris 9.

Table 1 lists versions of various products supported in EAServer 5.3.

Table 1: Product support

Product	Supported versions/builds
Operating system	2.8, 2.9
<i>Redirector plug-ins:</i>	
Apache	1.3.26, 2.0
Netscape	3.6.x
iPlanet	4.1
SunOne	6.0
Adaptive Server® Anywhere	9.0.2
Adaptive Server® Enterprise	12.0, 12.5
Oracle client	7.3.4, 8.1.7, 9.0.1, 10g
<i>PBVMs:</i>	
PB 9.0.2	7509
PB 10.0.1	5502
C++ compiler	Solaris C++ 4.2, C++ 6.0
Eclipse	3.0.1
Web browser	Netscape 6.1 and 7.0
<i>JDK versions:</i>	
1.3	1.3.1_20
1.4	1.4.2_06
1.5	1.5.0_01

2.2.1 Upgrading JDK 1.3 for Daylight Saving Time

To adjust to the new Daylight Saving Time (DST) start and end time resulting from the United States Energy Policy act, you are required to upgrade the JDK patch. For more information about the DST, refer to Daylight Saving Time and Sybase Server Products at <http://www.sybase.com/detail?id=1048699>.

For upgrading of JDK 1.4 and 1.5 to address DST, you can obtain the latest EBF. For more information, see “Sybase EBFs and software maintenance” on page 25.

❖ Upgrading JDK 1.3

If you are using JDK 1.3, do the following tasks:

- 1 Shut down the EAServer and the EAServer Manager.
- 2 Download JDK 1.3.1_20 at <http://java.sun.com/j2se/1.3/download.html>.

Accept the license terms, fill in the required information, and click Finish to start the download.

- 3 Modify the location path for JAGUAR_JDK13 in *setenv.sh* by setting
`JAGUAR_JDK13 = $JAGUAR/jdk/jdk1.3.1_20.`
- 4 Restart the EAServer and the EAServer Manager.

3. Special installation instructions

The *Installation Guide* describes how to install the software.

4. Changed functionality in this version

What's New in EAServer describes features added in this version. You can view this book on the Sybase Product Manuals Web site at <http://www.sybase.com/support/manuals/>. Browse to the EAServer 5.3 (Core Documentation) collection, then select this title. This manual is also available in HTML format in your installation.

5. Known problems

This section describes known problems in this EAServer version.

5.1 EAServer Manager issues

The following are known issues in EAServer Manager.

5.1.1 Apply buttons

(CR #347498) To apply changes in EAServer Manager dialog boxes, click OK. Some dialog boxes have Apply buttons that are disabled. There is no way to enable these buttons.

5.1.2 Start ASA9 before testing connection caches

(CR #399823) After configuring an ODBC cache in the *odbc.ini* file for the ASA9 database; upon testing the connection cache using ping, the EAServer will hang. To solve this problem, start the ASA database for the ODBC cache before testing the connection cache. This procedure is not required for ASA 8 on Solaris. You do not need to start the ASA database for ODBC cache for the other platforms.

5.1.3 No core dump generated

(CR #400621) If Apache is installed after EAServer, you need to add the JAGUAR and the JAGUAR_CLIENT_ROOT environment variables in the environment variables file in the Apache directory. Otherwise, either JAGUAR or JAGUAR_CLIENT_ROOT environment variable will prevent Apache from core dumping.

5.1.4 EAServer security libraries

(CR #401487) When EAServer's security library *libjtssect.so* *libjtssect_f140.so* is used by a client program like a JVM on Solaris, the environment variables, JAGUAR and JAGUAR_CLIENT_ROOT would have to be set before running the program which is dependent on the libraries.

5.1.5 Possible security vulnerability with Sybase Central and Sybase Central plug-ins running on Sun Solaris

(CR #415512) EAServer Manager allows users to view connection caches in a dialog box that have passwords. Normally, these passwords cannot be seen. However, due to a security issue, users with guest permission to EAServer Manager can view the password, that can be used to gain unauthorized access to a protected database. EAServer 5.3 and products that embed them, are affected by this issue.

To address the security risk using EAServer or products that embed EAServer 5.3, download EBF 13190 and apply it to your EAServer 5.3 on Solaris installation. You can download this EBF from Sybase Web site at <http://www.sybase.com> and select Downloads | EBFs/Maintenance.

For more information about this security issue, see the Sybase Technical Documents Urgent Notice at <http://www.sybase.com/detail?id=1040117>.

5.2 Security Administration issues

The following are known issues in the EAServer security administration.

5.2.1 Online help Key/Cert wizard

(CR #380451) The online help page for the Key/Cert wizard needs to be updated to reflect the changes in CR #352693. The changes are as follows:

- The Key Strength property can now support more than 1024 bits. Also, you need to select the restriction “For international users” option.
- The Mark Private Key Exportable property is no longer available.

For more information about the Key/Cert wizard, see the “Certificate Management” section in Chapter 14, “Managing Key and Certificates,” in the *EAServer Security Administration and Programming Guide*.

5.2.2 Base64 encoded X.509 certificate not compatible

(CR #400631) If you use the Jaguar Manager to export a certificate in Base64 encoded X.509 certificate, the format is not compatible with Sun’s keytool requirement. To solve this problem, the imported data must either be in a binary encoding format or in a printable encoding format (also known as Base64 encoding). If you use the Base64 encoding format, you need to enclose the imported data with a string that starts with “----BEGIN” and ends with “----END”. An example of the Base64 encoding format is as follows:

```
----BEGIN CERTIFICATE----  
---  
----END CERTIFICATE----
```

5.2.3 EAServer SSL client runtime

(CR #402979) If you are only installing EAServer client runtime to enable SSL connection from the PowerBuilder client, the SSL in PowerBuilder will not work. To work around this problem, you need to set the environment variable, JAGSSL, to “true” in the shell. SSL in PowerBuilder requires a full EAServer C++ client installation. For more information, refer to Chapter 7, “Using SSL in PowerBuilder Clients,” in the *EAServer Security Administration and Programming Guide*.

5.3 Web Services Toolkit issues

The following are known issues in the Web Services Toolkit.

5.3.1 Expired VeriSign root certificate

(CR #343954) The VeriSign root certificate has expired in the JDK 1.3 and 1.4 installations used by EAServer. As a result, publishing to the Microsoft UDDI Registry throws a certificate expired exception. For more information on how this problem may affect your applications, see Sun alert notification 57436 at <http://sunsolve.sun.com/search/document.do?assetkey=1-26-57436-1>. To work around this issue:

- 1 Shut down EAServer.
- 2 Download the most recent VeriSign PCA root certificates from the VeriSign Web site at <http://www.verisign.com/support/roots.html>.
- 3 Unzip the files to a temporary location, for example, */tmp*.
- 4 Change to the *bin* directory in the JDK 1.4 installation used by EAServer. Import the new certificates with the `keytool` command. For example, enter the following, all on one line:

```
keytool -import -v -keystore $JAGUAR_JDK14/jre/lib/security/cacerts -  
alias verisignclass3ca2028 -file "/tmp/VeriSign - Thawte Combined  
Roots/VeriSign_Roots/PCA3ss_v4.509"
```

When prompted, enter the JDK keystore password. The default is `changeit`. When prompted, accept the new certificate.

- 5 Repeat the previous step to update the VeriSign root certificate in the JDK 1.3 installation used by EAServer.

5.3.2 Exposing components as Web services

When exposing components as Web services, there are some restrictions to the following datatypes of the component method's arguments deployed.

- `rpc/literal`: This argument is a complex type which has an array inside the class; or the arguments are arrays of either primitive or complex type.
- `document/literal`: This argument is a complex type which has an array inside the class; or the arguments are arrays of complex type.
- `wrapped/encoded`: This argument is a complex type which has an array inside the class.

- wrapped/literal: This argument is a complex type which has an array inside the class.

(CR #396484) Exposing EJB, CORBA, or PBNVO components in the above situation in Axis 1.2 using Sybase Web services plug-in for Eclipse results in an error and the operation fails. This error occurs because of a datatype mismatch between the component layer and the Web service layer.

To work around the problem, you need to manually write a service object which calls the backend component in CORBA for CORBA and PBNVO, and in EJB for EJB. Next, deploy this object as a Web service to EAServer. This object will then act as the proxy object between the Web service layer and the component layer.

5.3.3 Incorrect datatype in WSDL by Axis 1.2

(CRs #396790 and #399573) EAServer 5.3 now supports Axis 1.2. If you use the JAX-RPC to build Web services and clients, this results an incorrect datatype in the WSDL definition. For instance, after deploying JAX-RPC for an `eyeColor` element, it generates an incorrect WSDL definition, as follows:

```
<simpleType name='eyeColor'>
  <restriction base='soapenc:string'>
    <enumeration value='Brown' />
    <enumeration value='Blue' />
    <enumeration value='Green' />
  </restriction>
</simpleType>
```

The datatype should be `xsd:string` instead of `soapenc:string`. If you use the above code to generate into Java code using `wSDL2java`, this results an error. To work around this problem, Sybase recommends that you refresh the EAServer before using the `wSDL2java` to generate WSDL to Java code.

5.3.4 Readme and sample updates

Stateless EJB sample

(CRs #369306 and #373593) The readme file in the `sample/wst_samples/EJBsample/statelessEjbSample` subdirectory of the EAServer installation describes creating a Web service named `AddEjb`. This should be `SampleEjb_AddEjb`. The resulting WSDL file is available at `http://localhost:8080/ws/services/SampleEjb_AddEjb?wsdl`, not `http://localhost:8080/ws/services/AddEjb?wsdl`.

GoogleSearch sample

(CRs #373708 and #369209) The GoogleSearch sample has an outdated readme file, *sample\wst_samples\GoogleApi\GoogleSearchEAS5.htm*. To access the updated sample instructions:

- 1 In a Web browser, log in to CodeXchange at <http://easerver.codexchange.sybase.com>.
- 2 Under Popular Sample Folders, select Web Services.
- 3 From the list of Web Services, select GoodgleSearch Service with EAServer 5.0.

5.4 Other issues

This section lists other known issues in EAServer.

5.4.1 Possible security vulnerability using password fields in J2EE or Java GUI applications on Sun Solaris

In specific circumstances the use of password fields in J2EE Application Clients and Java GUI applications with EAServer can reveal passwords. This vulnerability affects development and deployment of GUI applications and use of `javax.swing.JPasswordField` UI component from the EAServer JDK 1.4.2 installation.

To avoid direct use of the `javax.swing.JPasswordField` UI component, make these changes in your code:

- 1 Subclass `JPasswordField` and return an empty string from the `getSelectedText` method as follows:

```
public class MyPasswordField extends JPasswordField
{
    public MyPasswordField(String text)
    {
        super(text);
    }

    public String getSelectedText()
    {
        Return "";
    }
}
```

- 2 Update your existing code to use MyPasswordField rather than JPasswordField.

Alternatively, you can use EAServer JDK/JRE 1.5 to develop your GUI applications. EAServer 5.3 adds support for JDK 1.5 and its applications. To install JDK 1.5, select JDK 1.5 in the Feature Selection panel when installing EAServer. If you have already installed EAServer, use the add components option in the EAServer 5.3 installation program. For more information, see Chapter 2 of the *EAServer Installation Guide* for Sun Solaris available on Sybase Product Manuals Web site at <http://www.sybase.com/support/manuals/>.

5.4.2 Eclipse runs out of memory when handling large return values

In Eclipse, when testing Web service calls to components that return very large values (greater than 1 million bytes), the Java VM that runs Eclipse may run out of memory. To solve this problem, modify the *starteclipse.sh* script file. Change this line; adding the `-Xmx` option to increase the Java VM heap size from the default:

```
eclipse -vm jdk-path/jre/bin/java
```

For example:

```
eclipse -vm jdk-path/jre/bin/java -vmargs -Xmx512m
```

This example sets the Java VM heap size to 512MB, specified by 512m. You can adjust the size up or down as needed to prevent out-of-memory errors. For information on the syntax of the `-Xmx` option, see the Java command line documentation at <http://java.sun.com/j2se/>.

6. Fixed problems

The following issues are fixed in this version:

Bug ID	Description
400739	Incorrect behavior for related session function on <code>webapplication.sessionid=url</code> .
399576	Cannot change property values by using the cluster wizard.
398210	Unable to use environment variables in the new logging system.
398090	Seeing internal exceptions in web console.
397836	Login wizard crashes Sybase Central.
397763	EJB and JMS failures.
397186	Server exists in a HTTP keepalive session with errors when the value is larger than 2147.

Bug ID	Description
396934	Bring over fixes for CRs 382758, 381527 and 388172 to EAServer 5.3.
396700	Browsing WST Repository takes long time.
396130	Cannot identify database driver com.sybase.ejb.cmp.SybaseDriver.
396087	Deploy fails for applications with name containing.
395526	Provide support for ASA 9.0.2 with EAServer Samples.
394609	Provide support for AXIS 1.2 GA.
394383	SybAgent DOS window stays in the foreground.
393479	Cannot re-establish a connection once disconnected via network termination.
393096	Redirector problem with EAServer 4.2.4 embedded within EP 6.0.
392144	<i>JaguarhttpServlet.log</i> and <i>ArrayIndexOutOfBounds</i> errors.
391354	Changing hosts of all listeners fails.
391344	com.sybase.jaguar.server.jvm.options cannot take a long string.
390592	Security Manager Key/Cert Wizard error.
390304	Message Service:IGNORE_DUPLICATE_KEY not working properly.
389950	Fix for Stack-Based Buffer Overflow issue with WebConsole.
389551	Compile failure on skeletons on a Java-CORBA component within a particular EAS package, although same component compiles in another package.
389222	HTML files causing delay in server start.
389126	PB 9.0.2 embedded SQL delete where no rows are found, returns -1 in EAServer.
388566	HTTPS listeners not working when FIPS enabled.
387765	DBCS displays problem in <i>Jaguar.log</i> with PB components.
387106	Looping over Context.listBindings("jdbc") always throws NamingException.
385790	jConnect6.0 support.
384792	jagtool not generating Java skeletons.
384623	Eclipse cannot start and shutdown EAServer.
383026	JAR file in EAR not accessible as stream for application isolation deploy.
382758	Process keeps running on server, although the client browser is closed.
381602	EAServer Manager 5.2 cannot deploy very large EAR files.
381554	A JSP in XML syntax written in UTF-8 encoding with non-trivial characters is not compiled correctly. The UTF-8 characters are corrupted in the resulting Java file.
381527	Server crashes due to an incomplete HTTP request.

Bug ID	Description
381425	In jagmgr, the last step of Message Service configuration, if click "Ping Message Service Database", then click "Cancel" button instead of "Finish", the Message Service will also appear in "Installed Services".
381269	Java file compression routine causes EAServer to crash. Problem fixed, in <i>libjcc.dll</i> .
381116	In Axis, Type Array is referenced but not defined.
380448	The Key/Cert wizards in Security Manager and EAServer Manager now work for Key Strength values of 1024 and above.
380252	Named classloader enhancement.
379045	JDBC connection caches exceed the maximum number of physical connections.
378964	Provide support for Oracle 10g database and JDBC drivers.
378729	jagtool pre-compilation uses incorrect JDK versions.
377772	Application refresh problem with two deploys.
377743	Application refresh does not refresh Connectors in the application.
377681	Redirect file:...IIS.Extension_URI /.../libjeas_iis.dll cannot include blank line.
377185	Deploying J2EE EAR file does not display error details.
376976	When you upgrade from an earlier version of EAServer, Sybase Central is also upgraded from version 4.1 to 4.3. The installer does not migrate the existing EAServer Manager profiles from the older version of Sybase Central, so you must re-create the profiles (see the online help for instructions).
376871	To start Sybase Central using scjview, first set the LD_LIBRARY_PATH to include <i>\$JAGUAR/lib</i> ; otherwise, Security Manager will not connect.
376301	CSS does not work consistently for Mozilla browsers.
375942	When login a Jaguar Manager and check the certificates, click Cryptographic Modules. Double-click the FIPS mode. Click the help. No help content is provided.
375277	An exception is seen if you change IOP port and restart server.
374698	PB 9.0.2 embedded SQL delete where no rows are found, returns -1 in EAServer.
373713	Support for OpenClient 12.5.1.
373709	Provide EAServer Manager host name history.
373708	Update Web service sample.
373653	When a Web application is deployed but server is restarted prior to the <i>WebApp</i> being refreshed, the <i>WebApp-AppName</i> directory is created as root and not the run as user.

Bug ID	Description
373589	<p>The following changes are required in the <i>readme.txt</i> file located in the <i>sample\wst_samples\CORBAComponent\client</i> subdirectory of the EAServer installation:</p> <ul style="list-style-type: none"> • After the following lines: Expand the Other Components folder. The <i>IntroSamples</i> package should display. Expand this folder to display the <i>IntroJavaIDL (CORBA)</i> component. Add: If the <i>IntroSamples</i> package is not listed, go to EAServer Manager and select Servers Jaguar Installed Packages, and right-click Installed Packages; click Install an Existing Package; select IntroJavaIDL from the Choose Package to Install list; then click OK. Restart or refresh EAServer. • Error at lines: Only the <i>getXXX</i> methods and Boolean <i>b</i> method should be selected. Click OK. The component is now exposed as a Web service. should be: Only the <i>getXXX</i> methods and Boolean <i>throwException</i> method should be selected. Click Finish. The component is now exposed as a Web service. • Step 6 of the <i>readme.txt</i> file describes the <i>Client.java</i> file. This should be <i>IntroJavaIDL_ServiceTestClient.java</i>.
372932	jagant tool gives jag_connect local mode error.
371916	Absolute path should be supported when setting JAR file for SAX2 parser factory.
370851	Class is not loaded by customer's class loader during new component creation.
370223	Log SSL properties set to "false" but SSL errors still get logged.
370058	EJB run-as settings result in BAD_OPERATION under certain circumstances.

Bug ID	Description
369093	<p>The <i>readme.html</i> file in the <i>EAServer\html\classes\Sample\Intro</i> subdirectory of the EAServer installation contains these errors:</p> <ul style="list-style-type: none"> • Error at the line: <ul style="list-style-type: none"> d. Check “Compile Java Files.” <p>should be:</p> <ul style="list-style-type: none"> d. Check “Compile Java Stubs.” • Error at the line: <ul style="list-style-type: none"> a. Uncheck Compile Java Skeletons. b. Under Advanced Options, check “Generate Skeletons on Server.” <p>should be:</p> <ul style="list-style-type: none"> a. Under “Skeleton Generation Options”, uncheck “Compile Java Skeletons.” b. Check “Generate Skeletons on Server.”
368839	Currently, EAServer does not support J2SE 5.0 so to make code changes and add support for it.
367194	When there are many log files in a directory (160 or more), the File Viewer will cause EAServer 5.1 to crash during navigating and opening this directory.
367079	When enabling "Custom Class Loader Tracing", no output is being generated when using the default level 1 class loader.
367031	When you upgrade from an earlier version of EAServer, Sybase Central is also upgraded from version 4.1 to 4.3. The installer migrates plug-ins that are compatible with Sybase Central 4.3 to the new installation; other plug-ins remain in the Sybase Central 4.1 installation. To use the migrated plug-ins, start Sybase Central 4.3. To use the other existing plug-ins, start Sybase Central 4.1.
364182	Improve usability of dialog in EAServer Manager dealing with JMS Dead Queue.
362067	Some configuration options of a message driven bean are not set correctly during deployment from EJB-JAR file.
360227	[EXCEPTION_ACCESS_VIOLATION(0xc0000005)] received while executing the <i>getServerEnvironmentVariables</i> method of the <i>Jaguar/Management</i> component.
354606	Memory leak with EJB CMP.
341533	You see errors for unresolved <i>javax.ejb</i> dependencies when importing the <i>EJBSample</i> . This sample is not intended to be built or used in Eclipse, but is rather meant to be compiled manually and then deployed to EAServer using EAServer Manager. <i>EJBSample</i> contains the source code for an EJB and requires classes that Eclipse does not have, such as <i>javax.ejb.*</i> .

Bug ID	Description
341509	You see several errors caused by the lack of Web service client classes that must be generated after importing. This is expected, since the client classes must be generated for each sample project according to the readme files that accompany each sample.
341411	When running the Eclipse plug-in on Solaris 2.9, if you create a server profile that restarts the server, after the first time you use the profile to restart and connect to the server, the folder items under the profile may be out of order and cease to function. To work around the issue, exit and restart Eclipse.
341222	When you upgrade from an earlier version of EAServer, the installer upgrades the sample test certificates and installs new versions of the VeriSign CA certificates. The upgrade may leave obsolete copies of the Sample1 Test ID and Sample2 Test ID certificates. This is an expected behavior. You can delete these manually using EAServer Manager or Security Manager. Delete the older version of each certificate.
323094	Chapter 4, "Web Services Administration," in the <i>Web Services Toolkit User's Guide</i> describes how to use the Apache XML-Security package to provide digital signatures and encryption for the SOAP messages sent to and from the Web services container in EAServer. To use this feature, replace the file <i>xalan.jar</i> in the <i>EAServer/java/classes</i> directory with the version that is included with the Apache XML-Security package. Follow the instructions to add the other JAR files to the EAServer CLASSPATH setting.
288769	Trying to create proxies for EJB 1.1 containing <code>public static final String</code> in home interface causes PB to GPF. Basically, when there is a Datamember in the EJBs home, no matter if static, final, and so forth, it will GPF PB.

7. Product compatibilities

This section contains information about other Sybase products that are compatible with this version of EAServer.

7.1 PowerBuilder

For additional information on PowerBuilder®, see the PowerBuilder Manuals Web Site at <http://sybooks.sybase.com/onlinebooks/group-pb>. The *PowerBuilder Release Bulletin* for your PowerBuilder version may contain additional late-breaking information.

This version of EAServer includes the following PowerBuilder virtual machines (PBVMs):

- PowerBuilder 9.0.2 – build 7509
- PowerBuilder 10.0.1 – build 5502

Note EAServer 5.3 does not support PowerBuilder versions 7.x or 8.0.4.

On Solaris, the EAServer binaries and libraries are provided in formats that are compatible with the Solaris C/C++ compiler version 4.x or 6.x. You can specify which version to use with the `-compilerversion` command line argument. PowerBuilder support requires that you run the server binary that is compatible with version 6.x of the Solaris C/C++ compiler. For more information, see the *EAServer System Administration Guide*.

If you previously received a private PowerBuilder EBF version containing newer file versions, do not install the PowerBuilder support files included in this version.

If you choose to install the PowerBuilder support files contained in this version:

- Before installing this version, back up your existing PowerBuilder files by copying them to another location. Back up the following:
 - `lib/*pb*`
 - `html/classes/pbjdbc12.jar`
- In the setup program, on the Select Products to Install window, click Customize for Sybase EAServer features, and choose the PowerBuilder Support features.
- After the installation completes, ensure that the corresponding PowerBuilder version is installed on PowerBuilder client machines. To run PowerBuilder components in EAServer, the runtime dynamic shared libraries for the version of PowerBuilder in which the components were developed must be available on the server. The PowerBuilder runtime files on the client and the server must be at the same build level. Using different build levels on client and server machines may result in unpredictable behavior or data corruption.

You can download the corresponding PowerBuilder Windows client software from the PowerBuilder downloads page of the Sybase downloads site at <http://downloads.sybase.com>.

- Use the Library Painter to perform a full rebuild of your PowerBuilder application to ensure that all descendant objects are synchronized with their ancestors and to incorporate any compiler fixes in your code.

Known issue (CR #358585) If there is a memory leak, it will cause EAServer to crash when you run PBVM version 9.0.2 on a Solaris machine with multiple CPUs.

7.1.1 Code set interoperability

By default, EAServer uses UTF-8 as the transmission code set. This applies to in-server intercomponent calls as well as component invocations from base clients. Since PowerBuilder does not support UTF-8, you must specify another encoding if your application uses character values greater than 127.

To specify the encoding for components, specify the component or server code set properties as follows:

- For components, specify the Codeset setting on the General tab in the EAServer Manager Component Properties dialog box, or use jagtool or the Advanced tab to set the `com.sybase.jaguar.component.code.set` property.
- For the server, specify the Codeset setting on the General tab in EAServer Manager Server Properties dialog box, or use jagtool or the Advanced tab to set the `com.sybase.jaguar.server.code.set` property.

To specify the encoding for clients, set the `ORBCodeSet` property in the PowerBuilder connection object.

Make sure the operating system locale is compatible with the code set used by the server, components, and clients. For example, if the operating system locale is `zh_CN.gb18030` on the server machine, set the server code to `gb18030`. The client and server code sets do not need to match, but both must be compatible with the operating system locale. That is, the client code set must be compatible with the operating system locale on the client machine, and the server code set must be compatible with the operating system on the server machine.

Note To support logging of localized messages from PowerBuilder components, the component code set and server code set must be identical, and the system locale must be compatible with the specified code set.

7.2 Borland JBuilder

Sybase provides an EAServer plug-in that allows you to develop, deploy, and debug EAServer components from Borland JBuilder. For more information, see Sybase EAServer Plug-in for JBuilder X at <http://www.sybase.com/detail?id=1028830>.

Known issue Due to a change in the packaging of runtime classes in EAServer 5.3, deployment from JBuilder may not work after upgrading to EAServer 5.3. To correct this problem, add the *java\lib\eastools.jar* file from your EAServer 5.3 installation to the configured libraries in JBuilder, as follows:

- 1 In JBuilder, select Tools | Configure Libraries...
- 2 On the User Home | Sybase EAS Client | Class tab, click Add.
- 3 Select the *java\lib\eastools.jar* file from you EAServer 5.3 installation.
- 4 Click OK.

7.3 PowerDynamo

EAServer 5.3 does not include PowerDynamo™, though you can use an existing PowerDynamo installation with this EAServer version. Sybase recommends that you do not use PowerDynamo for new application development. Instead, use the J2EE-standard Java servlet and JSP technologies. Support for PowerDynamo will be removed from later versions of EAServer.

EAServer 5.3 includes the Dyn2JSP utility to convert PowerDynamo Web sites into JSP-based J2EE Web applications. Sybase recommends that you migrate your PowerDynamo Web sites to the J2EE model. For information on using the Dyn2JSP utility, see the HTML documentation included in the *PDynamo2JSP* directory of the installation.

Note The Dyn2JSP utility converts static-file or dynamic-file sites. If your site is stored in a database, export it to a dynamic-file site before running the conversion.

7.4 Application Integrator

Application Integrator for CICS and Application Integrator for Stored Procedures are no longer included with EAServer. These products are available as open source on the EAServer CodeXchange pages at <http://easerver.codexchange.sybase.com/>.

7.5 Earlier EAServer (Jaguar CTS) versions

Clients using IIOP and earlier versions of the EAServer (or Jaguar CTS®) client runtime files can connect to EAServer 5.3. To manage EAServer 5.3, use a 5.2 installation to run EAServer Manager, jagtool, or a client that calls the EAServer management APIs.

8. Documentation updates and clarifications

This section contains updates and clarifications for the EAServer product manuals.

8.1 EAServer Troubleshooting Guide

8.1.1 Chapter 6, Advanced Topics

Third-party JARs loaded by system class loader If you specify third-party JARs in the CLASSPATH or BOOTCLASSPATH in *setenv.sh*, they are loaded by the EAServer system class loader. If any class within these JARs calls `getClassLoader`, it returns null. If any class within these JARs calls JNI, the JVM ignores this and searches only `sun.boot.library.path`. The problem is that third-party JARs are typically installed outside the EAServer installation. In EAServer 5.3, JARs cannot be loaded by the server class loader, unless they are in *\$JAGUAR/java/lib*, *\$JAGUAR/html/classes*, or *\$JAGUAR/java/classes*.

To troubleshoot this problem, put third-party JARs in the *\$JAGUAR/java/classes* directory, and add “`com.sybase.jaguar.server.java.classes=third_party_library.jar`” to *\$JAGUAR/Repository/Server/Jaguar.props*. This allows the server class loader, instead of the system class loader, to load the third-party JARs.

8.2 EAServer System Administration Guide

8.2.1 Chapter 4, Database Access

JDBC level 1 connection pool drivers The Sybase jConnect level 1 driver class property should be `com.sybase.jdbc3.jdbc.SybDriver`.

JDBC level 2 connection pool drivers The Sybase jConnect level 2 driver connection pool driver property should be `com.sybase.jdbc3.jdbc.SybConnectionPoolDataSource`.

Table 4-1: UNIX platform connection libraries If you are using a Sybase ASA or Adaptive Server Enterprise database, the values for the JDBC driver class properties should be:

- `com.sybase.jdbc3.jdbc.SybConnectionPoolDataSource`
- `com.sybase.jdbc3.jdbc.SybDriver`

Table 4-2: Windows platform connection libraries If you are using a Sybase ASA or Adaptive Server Enterprise database, the values for the JDBC driver class properties should be:

- `com.sybase.jdbc3.jdbc.SybConnectionPoolDataSource`
- `com.sybase.jdbc3.jdbc.SybDriver`

Table 4-3: Connection libraries and XA resource libraries for Solaris

The XA resource library for JDBC database driver should be `com.sybase.jdbc3.jdbc.SybXADataSource`.

Table 4-4: Connection libraries and XA resource libraries for Windows

The XA resource library for JDBC database driver should be `com.sybase.jdbc3.jdbc.SybXADataSource`.

Configuring an XA resource The value for the Driver property (DLL or Class Name) to configure the connection cache should be `com.sybase.jdbc3.jdbc.SybXADataSource`.

8.2.2 Chapter 8, Setting up the Message Service

Using the Configure Message Service Wizard The value for the database driver in the Note section in step 3 of the Configure Message Service Wizard setup should be `com.sybase.jdbc3.jdbc.SybDriver`.

8.2.3 Appendix B, Repository Properties Reference

Connection Cache for XA properties

Note the newly documented XA properties that are used for connection caches.

`com.sybase.jaguar.conncache.xa.conlibdll` This property specifies the DLL, shared library, or JDBC driver class name used for a two-phase commit (XA) connection.

`com.sybase.jaguar.conncache.xa.remotesvrname` This property specifies the name of the server to connect to, which may be a URL for JDBC connection caches.

`com.sybase.jaguar.conncache.xadllname` This property specifies the XA resource DLL used to support two-phase commit transactions.

8.3 EAServer Programmer's Guide

8.3.1 Chapter 2, Understanding Transactions and Component Lifecycles

Resource recovery and transaction logging This section describes resource recovery, which enables object persistence and recovery operations. You can set the following recovery options on the Transactions tab in the Server Properties dialog box:

- **Enable Recovery** – check to enable resource recovery. This value is stored in the `com.sybase.jaguar.server.TxManager.RecoveryEnabled` property.
- **Recovery Log File Name** – enter the name of the transaction log file, which the recovery manager reads to perform transaction recovery. You can specify either a file name only, or an absolute path to a file. If you specify a file name only, the file is created in `$JAGUAR/bin` or `$JAGUAR/devbin`. The default is `<serverName>Recovery.log`. The log file name is stored in the `com.sybase.jaguar.server.TxManager.logfile` property.
- **Log File Size** – enter the minimum size of the transaction log file; the default is 1MB. This value is stored in the `com.sybase.jaguar.server.TxManager.logsize` property.

8.3.2 Chapter 23, Using Filters and Event Listeners

Application lifecycle event listeners In the Sample listener example, the following `com.sybase.jdbc2.jdbc.SybDriver` should be replaced with `com.sybase.jdbc3.jdbc.SybDriver` in the section where it creates a database connection.

8.4 EAServer Performance and Tuning Guide

8.4.1 Chapter 4, EJB CMP Tuning

Using CMP JDBC wrapper drivers In the section where it specifies Sybase wrapper driver, the connection cache properties for this wrapper driver used should be `com.sybase.jdbc3.jdbc.SybDriver`.

8.5 EAServer Feature Guide

8.5.1 Chapter 1: Introducing EAServer

Support for asynchronous messaging If you are running the message service and your server is in a cluster, all the servers in the clusters must use the same repository.

8.6 EAServer Cookbook

8.6.1 Chapter 4: Creating Enterprise JavaBeans Components and Clients

Creating the connection cache The value for DLL or Class Name in the Tab/Setting in the Connection Cache wizard should be `com.sybase.jdbc3.jdbc.SybConnectionPoolDataSource`.

8.7 EAServer API Reference Manual

8.7.1 Chapter 5, C Routines Reference

JagCmCacheProps Routine The property, JAG_CM_CACHEBYNAME found in JagCmCacheProp routine is incorrect. This property that appears in this routine should be replaced with JAG_CM_BYNAMEALLOWED. You may find this property in the Parameter and Usage sections.

9. Technical support

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you have any questions about this installation or if you need assistance during the installation process, ask the designated person to contact Sybase Technical Support or the Sybase subsidiary in your area.

10. Other sources of information

Use the Sybase Getting Started CD, the SyBooks™ CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

To access the Sybase Product Manuals Web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

10.1 Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ Finding the latest information on product certifications

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click Certification Report.
- 3 In the Certification Report filter select a product, platform, and timeframe and then click Go.
- 4 Click a Certification Report title to display the report.

❖ Finding the latest information on component certifications

- 1 Point your Web browser to Availability and Certification Reports at <http://certification.sybase.com/>.

- 2 Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
 - 3 Select Search to display the availability and certification report for the selection.
- ❖ **Creating a personalized view of the Sybase Web site (including support pages)**
- Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.
- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
 - 2 Click MySybase and create a MySybase profile.

10.2 Sybase EBFs and software maintenance

- ❖ **Finding the latest information on EBFs and software maintenance**
- 1 Point your Web browser to the Sybase Support Page at <http://www.sybase.com/support>.
 - 2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.
 - 3 Select a product.
 - 4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the “Technical Support Contact” role to your MySybase profile.
 - 5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

11. Accessibility features

EAServer 5.3 has been tested for compliance with U.S. government Section 508 Accessibility requirements. The online help for this product is also provided in HTML, JavaHelp, and Eclipse help formats, which you can navigate using a screen reader.

EAServer Manager supports working without a mouse. For more information, see Chapter 2, “Sybase Central Overview,” in the *EAServer System Administration Guide*.

The Web Services Toolkit plug-in for Eclipse supports accessibility features for those that cannot use a mouse, are visually impaired or have other special needs. For information about these features refer to Eclipse help:

- 1 Start Eclipse.
- 2 Select Help | Help Contents.
- 3 Enter `Accessibility` in the Search dialog box
- 4 Select Accessible User Interfaces or Accessibility Features for Eclipse

Note You may need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

For additional information about how Sybase supports accessibility, see Sybase Accessibility at <http://www.sybase.com/accessibility>. The Sybase Accessibility site includes links to information on Section 508 and W3C standards.