

# Sybase Event Stream Processor 5.1 SP01

Windows

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Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

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Release Bulletin iii

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## **Accessing Current Documentation**

Sybase<sup>®</sup> Event Stream Processor periodically provides online documentation updates. Therefore, more recent versions of your documents may be available on the Web. To check for critical product or document information added after the product release, use the Sybase Product Documentation Web site.

To access documentation at the Sybase Product Documentation Web site:

- 1. Go to Product Documentation at http://www.sybase.com/support/manuals/.
- 2. Select Sybase Event Stream Processor.
- **3.** Select your version from the Document Set list.
- **4.** Select the link to the document you want to read. For most documents, you can either download the PDF version or browse the document online.

## **Product Summary**

Sybase Event Stream Processor enables you to create and run your own complex event processing applications to derive continuous intelligence from streaming event data in real time.

This release bulletin discusses known issues, workarounds, and late-breaking documentation updates for Sybase Event Stream Processor 5.1.

For information about supported platforms and operating systems, see the *Installation Guide*.

For information about new features in this release, see the New Features Summary.

For information about accessibility, see Accessibility Features in this release bulletin.

## Download Requirements for Separately Licensed Adapters

When you order separately licensed adapters in addition to Event Stream Processor, download only one copy of the Event Stream Processor CD image per platform.

For convenience, the Sybase Product Download Center (SPDC) and the SAP® Service Marketplace (SMP) make the Event Stream Processor CD image available on its own and with each separately licensed adapter. However, when you order separately licensed adapters with

Event Stream Processor, you only require one instance of the CD image for each platform you are using. If you are using a single platform, download a single copy of the CD image.

Ensure you download a separate license for each adapter in addition to the license for Event Stream Processor.

## **Security Recommendations**

Sybase strongly recommends that you enable operating system file access auditing capabilities to monitor and control the access of adapter and server configuration files. This is especially important for files containing passwords.

## Installation and Upgrade

Get last-minute information about installation and upgrading that was omitted from or incorrect in your installation guide, or requires special emphasis.

See the *Migration Guide* for information on migrating from Sybase Aleri Streaming Platform to Sybase Event Stream Processor 5.1.

#### **Sub-capacity Licensing**

Sub-capacity licensing refers to licensing a Sybase product on a subset of the CPUs available on a physical machine. Learn about sub-capacity licensing for this version of Event Stream Processor.

Table 1. SySAM Virtualization Sub-capacity Compatibility

Vendor	Product	Platform Support	Virtualization Type
Intel, AMD	VMWare ESX Server* Guest O/ S: Windows	VMWare ESX 3.5, ESX 4.0 and ESX 4.1, Guest OS: Windows 2008 R2, Windows 7, Windows XP	Virtual machine
Intel, AMD	Xen,** DomainU: Windows	Windows 2008 R2, Windows 7	Virtual machine

<sup>\*</sup> VMWare ESX Server excludes VMWare Workstation, and VMWare Server.

<sup>\*\*</sup> Xen excludes Solaris x64.

#### **Known Installation Issues**

Installation issues for this version of Event Stream Processor.

Table 2. Known Installation Issues

CR#	Description
668057	If you install Event Stream Processor using InstallAnywhere in the same directory as older Sybase products that also use InstallShield, uninstalling one of the products may make other products unusable because some shared components are removed by the uninstaller.
	If you install Event Stream Processor in the same directory as older Sybase products, do not uninstall.
681675	When starting the SySAM license server, you may receive an error indicating failure to connect to the license server.
	This version of Sybase Event Stream Processor includes both Internet Protocol Version 4 (IPv4) and Internet Protocol Version 6 (IPv6) versions of the Sy-SAM license server software. Use the <b>sysam configuration</b> command to choose the version of the license server based on your environment. By default, the IPv4 version of the license server is configured. This may result in an error if you have previously enabled IPv6 on the license server host.
	You can run both IPv6 and IPv4 on the same host by using the IPv4 address when specifying the SySAM server, rather than the using the host name.
707308	When installing ASE 15.0.3 ESD#4 with ESP 5.1 already installed in the same diretory, if you execute \$SYBASE\SYBASE.bat followed by <b>isql-v</b> , you may receive an error.
	Backup SYBASE.bat before installing ASE 15.0.3 ESD #4.
715637	When you are installing on Windows overtop of an existing Event Stream Processor 5.1 installation, and files from that installation are in use, the installer reboots the system at the end of the installation without warning.
716148, 716109 and 716131	Settings in a response file, generated by performing a Typical installation or by running the console installer, are not recognized when performing a silent installation.
	To work around this issue, generate a correct response file manually or by running the GUI installer and performing a Custom installation. Refer to the sample response file in the <i>Installation Guide</i> .

CR#	Description
720308	The installer may hang or encounter issues without reporting an error condition. This is usually caused when the temporary directory has insufficient disk space.
	To check the status and view messages of the installation, start a console install using the LAX_DEBUG environment variable. This is an installer debug environment variable that reports issues with the installation as they arise. To start a console install using this environment variable, use a command line to set its value to true prior to running the installer:
	<pre><esp_install_dir> LAX_DEBUG=true; export LAX_DEBUG&gt;</esp_install_dir></pre>

## **Known Issues**

Learn about known issues and apply workarounds for Sybase Event Stream Processor.

#### **Known Issues for Event Stream Processor Studio**

Learn about known issues and apply workarounds for ESP Studio.

Table 3. Studio Issues

CR#	Description
682543	Deleting the key column from a named schema does not update the CCL editor. The CCL editor shows the column as a primary key and the project does not compile successfully.
	Inline schema does not cause this problem. Update the project in the CCL editor to compile successfully.
690176	When running example projects from the Learning perspective, the Stream View is empty for some streams.
	If you are running a project in the Learning perspective and you are working with a small data set, work around this issue by changing the <b>stream view pulsed subscribe interval</b> value to 0.
	Set the interval back to its default value of 1 before working with any other projects.

CR#	Description
717372	The ESP input adapter is available in the Studio palette. The adapter is required for internal processing, but it is not a supported adapter.
	If you want to connect to another Event Stream Processor project, use stream binding instead. For more information, see the <i>Studio Users Guide</i> .

#### **Known Issues for Event Stream Processor Server**

Learn about known issues and apply workarounds for the Server.

Table 4. Server Issues

CR#	Description
671971	By default, the RSA login uses the "SHA1withRSA" signature algorithm and the "MD5" digest algorithm. If you change the signature and digester methods in the cluster configuration, make the same changes to the SIGN_ALGORITHM and DIGEST_ALGORITHM environment variables.
	For example, values for the SIGN_ALGORITHM environment variable are "SHA1withRSA" (default), "MD5withRSA", and "SHA1withDSA" (Java only). Possible values for the DIGEST_ALGORITHM environment variable are "MD5" (default) and "SHA1".
674280	Avoid using retention with input windows that use a log store. While the compiler does not flag this as an error, the retention policy on input windows that use a log store may not work as expected after recovery.
674786	In the case of the ESP Server crashing, if you have a join-based window using a log store, one source window using a log store, and another source window using a memory store and being derived from a window using a log store, the data in the join window is recovered up to the crash, but new records uploaded to the ESP Server do not get joined. When all the source windows use a log store, the same records that are uploaded to the ESP Server get joined.
675321	If you are using an external function that returns a string, do not assign this string to the arena. Otherwise, an unrecoverable error occurs when the Server later tries to release the memory used by the returned string because the memory would have already been released by the Server when the record was processed.
701653	The ESP compiler views the string literal "\b" as a backspace character. Therefore, CCL programs that contain \b will not compile.
	To work around this issue, use a double back slash ("\\b") for this string literal instead of a single back slash.

CR#	Description
715362	To reduce memory consumption growth, when allocating a vector or a dictionary using 'new' that is subsequently being used as an argument to the getData() function, check for the vector already being allocated using isnull, as follows:
	<pre>if (isnull(vector_var))     vector_var = new vector() getdata(vector_var,)</pre>

## **Known Issues for Event Stream Processor Adapters**

Learn about known issues and apply workarounds for adapters supported by Event Stream Processor.

Table 5. Adapter Issues

CR#	Description	
650777	For the Database Input adapter, when data is converted between the database and Event Stream Processor datatypes (numeric) that have different ranges, the JDBC and ODBC drivers may handle these operations differently. For example, the conversion may get rejected or convert into an incorrect value, and so on.	
680661	The Platform Input and Platform Output adapters are not supported by Event Stream Processor. The platform_in.cnxml and platform_out.cnxml files are included in the install, but are for internal use only.	
684802	<u> </u>	

CR#	Description
684922 and 684945	When running the Reuters OMM adapter in interactive publish mode, you may experience intermittent stability issues when connected directly to rmdstest-client (a Reuters utility bundled with their server).
695586	When using the Database Input adapter and the getData() built-in SPLASH function in the flex stream, there is a compatibility issue between JDK7 and the JDBC driver for MSSQL (3.0.1301.101 and 4.0 CTP3). The problem occurs when mapping a datetime2 datatype into Event Stream Processor timestamp or string datatypes as the adapter executes queries such as a SELECT statement. The value that is read in is incorrect. To work around this issue, use the SQL convert() built-in function to cast a datetime2 column into a varchar. For example, modify a SELECT statement like this:  select c bigdatetime from newalltypes
	into this:
	select convert(varchar(30), c_bigdatetime, 121) from newalltypes
	where the third argument value of 121 is the format to which the datetime2 field will be converted.
714685	You must make a few changes so that Java external adapters from Event Stream Processor 5.0 are compatible with ones from 5.1.
	<ul> <li>For all Java external adapters, due to changes in authentication types between versions, you can use only LDAP, RSA, or Kerberos (not ticket) authentication types if you want compatibility between 5.0 and 5.1 adapters.</li> <li>To make the 5.0 external FIX Input adapter compatible with the 5.1 version, add the maxPubPoolSize parameter to the 5.0 file connectors configuration files. This property was optional in 5.0 but is required in 5.1.</li> <li>If you want to start the 5.0 external FIX Input adapter with the 5.1 configuration file, remove the inputBuffer property from the 5.1 configuration file as this property is not valid in 5.0.</li> </ul>
715027	A custom internal adapter that was written using the 5.1 version of the GenericAdapterInterface. h file is not compatible with an adapter that was written using the 5.0 version. To make these adapters compatible in 5.0, change the following function signatures for these files to the 5.1 version:
	<ul> <li>change int getTotalRowsProcessed(void*) to int64_t getTotalRowsProcessed(void*)</li> <li>change int getNumberOfBadRows(void*) to int64_t getNumberOfBadRows(void*)</li> <li>change int getNumberOfGoodRows(void*) to int64_t getNumberOfGoodRows(void*)</li> </ul>

CR#	Description
715811	When the peer program publishing to the adapter does not close its socket connection cleanly the adapter's state becomes DEAD and it no longer accepts connections.
	To avoid this issue, ensure that the publisher issues a "close" on the socket connection before exiting.
716339	The CSV Input adapter does not process the last line of the CSV input file. To ensure that all data in the file is processed, add an empty line at the end of the file.
716843	If you stop the Database Input adapter while it is reading data and then start it again, the adapter does not start and therefore, does not complete reading data.
	To work around this issue, restart the ESP Server, and if you did not configure the adapters to start automatically, then manually start the Database Input adapter.
716844	If you drop the table that the Database Input adapter is polling data against, the adapter crashes.
	To work around this issue, restart the ESP Server, and if you did not configure the adapters to start automatically, then manually start the Database Input adapter.
717862	To use an adapter with ESP, you must set the <i>JAVA_HOME</i> environment variable to the location where you have installed Java 1.7 in the SYBASE.bat file.
N/A	Install Microsoft .NET Framework version 2.0 or higher prior to installing the ESP Add-In for Microsoft Excel.
721462	If ESP bigdatetime is mapped to timestamp in HANA, deletes or updates are processed in ESP, but not in HANA. This is due to an issue in HANA where the timestamp data type truncates microseconds to milliseconds. Because the original, non-truncated value is not found in the database, the delete or update fails.
	To work around this, if you insert data into HANA through the HANA adapter, issue deletes or updates outside of the adapter. When constructing your delete or update statements, use millisecond precision.

## **Known Issues for Migration**

Learn about known issues for migration and the **esp\_aml2ccl** utility.

**Table 6. Migration Issues** 

CR#	Description
684802	The esp_aml2ccl utility converts money into money (4) by default. Man-
	ually replace all money (4) instances with money in the .ccx file.

#### **Known Issues for CCL**

Learn about known issues and apply workarounds for CCL.

Table 7. CCL Issues

CR#	Description
657188	The power() function can process only NULL values of float type.
682005	On Windows 64-bit platforms, invoking the CCL function <b>xmlserialize()</b> causes esp_server.exe to fail.
	This issue does not occur on Windows 32-bit platforms.

#### **Known Issues for SPLASH**

Learn about known issues and apply workarounds for SPLASH.

Table 8. SPLASH issues

CR#	Description
662913	You can globally define dictionary and vector data structures; however, limit global use to reading them. Only one stream should write to a dictionary or vector data structure; while that stream is writing, no other stream should write to or read from that data structure. The underlying objects used to manage the global dictionary or vector data structures are not thread-safe. A stream must have exclusive access to the global dictionary or vector data structure while writing. Allowing other streams to access these data structures while one stream is writing may result in server failure.  Additionally, limit the use of these data structures to relatively static data (such as country codes) that are read by multiple streams, but that will not need to be
	updated during processing. Writing the data to the dictionary or vector must be completed before any streams read it.
	All operations that read a global dictionary or vector should perform an isnull check, as shown here:
	<pre>&gt;typeof(streamname) rec := dict[symbol]; if( not (isnull(rec)) {   // use rec }</pre>

#### Known Issues

CR#	Description
693571	SPLASH lets you define "record event" variables such as:  [ integer key1;   integer d1; string t1; ] var1;  While you can conveniently reference the individual columns in "var1" using dot notation, you can only do this after the record event variable has been initialized. Once the record event has been initialized, you can access columns directly using dot notation (for example, count := var1.d1; or var1.t1 := 'Tuesday';). If you try to set column values using dot notation before initializing the record event with the bracket notation, the compiler will not flag an error, but the record will not yet exist and the assignment will fail.

#### **Known Issues for SDKs**

Learn about known issues for the Event Stream Processor SDKs.

Table 9. SDK Issues

CR#	Description
682112	When using the .NET SDK, to avoid memory leaks when running the example, in the SubsriberExample.cs file located in the \$ESP_HOME/examples/net/SubscriberExample folder, replace:
	<pre>while (!done) {     event1 = subscriber.get_next_event(espError);     switch (event1.getType())     {   }</pre>
	<pre>with while (!done) {     event1 = subscriber.get_next_event(espError);     switch (event1.getType())     {       }     event1.release(); }</pre>
715262	If a .NET application that compiled with the .NET SDK dll in ESP5.0 cannot run in ESP5.1, compile it with the .NET SDK dll in ESP5.1.

#### **Known Issues for PowerDesigner Modeling**

Learn about known issues and apply work arounds for PowerDesigner modeling.

**Table 10. PowerDesigner Modeling Issues** 

CR#	Description
721684	On Windows 2008 R2, if PowerDesigner was installed to the default directory (system program folder), you will receive the following error when importing CCL into an ESP schema: "There was an error in compiling the given CCL. Please check the log file." This is because the default permission of the system program folder is ReadOnly and therefore, PowerDesigner cannot write CCL into the %"PowerDesigner 16"%\Examples\ESP directory.  To work around this issue, add the "Everyone" user to the %"PowerDesigner 16"% folder and give it ReadWrite permission.

## **Documentation Changes**

Read about updates, corrections, and clarifications to the documentation released with Sybase Event Stream Processor.

**Table 11. Documentation Changes for the Adapters Guide** 

CR#	Description
N/A	The section on the JMS adapter shows you how to configure a queuing system for the JMS adapter. It should also mention that, to run the adapter, you must obtain and place vendor specific JMS jar files in the \$ESP_HOME/java folder and restart the Server.

Table 12. Documentation Changes for the Studio Users Guide

CR#	Description
680686	The guide should state:
	When you create a duplicate named window or stream in the Visual Editor, then save your file and switch to the Text Editor, a third duplicate of the original stream or window is created. You can see this third duplicate only when you switch back to the Visual Editor.
	Remove this third duplicate:
	1. In the Visual Editor, click <b>Remove all shapes from diagram</b> to clear out all the shapes.
	2. Click <b>Add all shapes</b> to get the original stream or window and the second duplicate stream or window back.
	3. Give the duplicate stream window a unique name.
682387	To redeploy a project after making changes to a running project:
	1. From the Authoring perspective, compile a project and start it.
	2. In the Run-Test perspective, do some work with the project.
	3. Stop the project.
	<b>4.</b> In the Authoring perspective, make changes to the project and the start it.
	An error displays and the Run-Test console states that a failure occurred because
	the application already exists. This is because the project still exists on the server in a stopped state.
	5. To redeploy, remove the project from the Run-Test server view, and then start the new version from the Authoring perspective.

Table 13. Documentation Changes for the CCL Programmers Guide

CR#	Description
643882	Delta streams are allowed key transformation only when performing aggregation, join, or flex operations. Because a delta stream does not maintain state, you cannot define a delta stream on a window where the keys differ.

#### **Documentation Changes**

**Table 14. Documentation Changes for the Administrators Guide** 

CR#	Description
682458	There are undocumented restrictions on user name and password credentials for the interactive mode of the <b>esp_cluster_admin</b> tool. Credentials may contain alpha numeric characters but must always start with an alphabetic character. For example, password <b>12345678</b> is invalid, whereas <b>P12345678</b> is valid.
682913	References to the "port number used by your Event Stream Processor installation" are referring to the port number of your cluster cache.

Description
The guide should contain a "Networking" section to discuss the following problems with ESP and proxy servers:
<ul> <li>It takes a long time for Studio to complete connections; the <connecting> message displays for a long time.</connecting></li> <li>Studio is unable to compile the simplest projects and reports a generic compiletic state.</li> </ul>
lation error with no obvious reason for failure.
<ul><li>Projects cannot be started; Studio reports the following errors:</li><li>The cluster had encountered a project error:</li></ul>
• Cluster error message: Invalid action: See the Problems View for a description of the compilation errors.
• [error] server returned: [FAILURE:Application wait for status is started, but application current status is not started]
• Connecting to a cluster fails with the following error: Failed to connect to server "esp://hostname:19011". Reason: "Failed to parse server's response: Content is not allowed in prolog."
• Running a publisher or subscriber return the errors: Couldn't connect to server, XML-RPC Fault(-504).
The C++ or .NET SDK returns one of the errors below (the error returned depends on platform and whether the IP address or host name is used in the URL):
• HTTP response code is 302, not 200
• HTTP response code is 403, not 200
• HTTP response code is 404, not 200
The following resolutions should then be offered to users:
The no_proxy environment variable should be set to allow the localhost (127.0.0.1), the name of the host running the ESP server, and the IP address. For example: setenv no_proxy "localhost, 127.0.0.1, archer, 10.168.131.23. When setting the environment variable on Windows, do not use quotes: set no_proxy=localhost, 127.0.0.1, archer, 10.168.131.23.  Note: Depending on where the client application is running and whether it is using the host name or the IP address during communication, it is possible to restrict no_proxy to a smaller set of values.

CR#	Description
	In Studio, navigate to Edit>Preferences>General>Network Connections and set Active Provider to direct.

Table 15. Documentation Changes for the .NET SDK Guide

CR#	Description
648988	The guide should state:
	In general terms, the return code from a Publish call indicates whether or not the row was successfully transmitted. Any error that occurs during processing on the Event Stream Processor (such as a duplicate insert) will not get returned. The precise meaning of the return code from a Publish call depends on the access mode and the choice of synchronous or asynchronous transmission.
	When using callback or select access mode, the return only indicates whether or not the SDK was able to queue the data. The indication of whether or not the data was actually written to the socket will be returned by the appropriate event. The callback and select access modes do not currently support synchronous publishing.
	When using direct access mode, the type of transmission used determines what the return from the Publish call indicates. If publishing in asynchronous mode, the return only indicates that the SDK has written the data to the socket. If publishing in synchronous mode, the return from the Publish call indicates the response code the Event Stream Processor sent.
	In no case will errors that occur during processing (such as a duplicate insert) be returned by a Publish call.

Table 16. Documentation Changes for the Utilities Guide

CR#	Description
682458	There are undocumented restrictions on user name and password credentials for the interactive mode of the <b>esp_cluster_admin</b> tool. Credentials may contain alpha numeric characters but must always start with an alphabetic character. The document also provides an invalid sample password of <b>1234</b> .

Table 17. Documentation Changes for the SDK Guides

CR#	Description
724643	The following information should be added to the Java and C SDK Guides:
	Starting and Stopping the C SDK
	Before any of the SDK's functionality can be used, it needs to be initialized. This allows the SDK to start its internal threads and register required resources. Make this call from any thread before any of the other SDK functionality is used. For example:
	<pre>int rc; EspError * error = esp_error_create(); // create an error object rc = esp_sdk_start(error); // start the SDK</pre>
	<pre>if (rc) {</pre>
	Once the application using the SDK is ready to exit or the SDK functionality is no longer needed, stop the application. This allows the SDK to stop its internal threads and release any held resources. For example,
	<pre>rc = esp_sdk_stop(error); // stop the SDK if (rc) {</pre>
	Note: Multiple SDK start calls can be made, but the SDK requires a corresponding number of stop calls to properly shut down.
	Starting and Stopping the Java SDK
	Before any of the SDK's functionality can be used, it needs to be initialized. This allows the SDK to start its internal threads and register required resources. Make this call from any thread before any of the other SDK functionality is used. For example:
	<pre>static final SDK sdk = SDK.getInstance();// retrieve the SDK singleton     sdk.start();</pre>
	Once the application using the SDK is ready to exit or the SDK functionality is no longer needed, stop the application. This allows the SDK to stop its internal threads and release any held resources. For example,
	<pre>sdk.stop(); = esp_sdk_stop(error); // stop the SDK</pre>

CR#	Description
	Note: Multiple SDK start calls can be made, but the SDK requires a corresponding number of stop calls to properly shut down.

## **Obtaining Help and Additional Information**

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- The Getting Started CD (or download) contains release bulletins and installation guides in PDF format, and may contain other documents or updated information.
- Product Documentation at <a href="http://sybooks.sybase.com/">http://sybooks.sybase.com/</a> is an online version of Sybase documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. In addition to product documentation, the Web site also has links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, Community Forums/Newsgroups, and other resources.
- Online help in the product, if available.

To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

**Note:** A more recent release bulletin, with critical product or document information added after the product release, may be available from the Product Documentation Web site.

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- b) Select **Support > EBFs/Maintenance**.
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- e) Select a product.

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- 1. Go to http://www.sybase.com/mysybase.
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Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

Sybase HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. Documents that comply with Section 508 generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.

**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 information about how Sybase supports accessibility, see the Sybase Accessibility site: <a href="http://www.sybase.com/products/accessibility">http://www.sybase.com/products/accessibility</a>. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.