



**Installation Guide**

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# **Sybase Event Stream Processor**

**5.1**

Solaris

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# Planning Your Installation

Before you install or upgrade, prepare your environment.

- Identify the components and options to install or upgrade.
- Obtain a license.
- Ensure your system meets all requirements for your installation scenario and planned use.

## Obtaining a License

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Before installing your product, choose a SySAM license model, determine license server information, and obtain license files.

Sybase® Event Stream Processor (ESP) is licensed through SySAM and supports both served and unserved licenses as well as sub-capacity licensing. Sub-capacity licensing is useful in virtualized environments or to license a subset of the processors available in a multiprocessor machine.

These steps summarize the actions required to install a Sybase Software Asset Management (SySAM) license. Refer to the *Sybase Software Asset Management Users Guide* for details.

1. Choose a SySAM license model.

License model	Description
<b>Unserved license model</b>	Licenses are obtained directly from a license file. If you are using an unserved license, save the license file to the machine on which you install the product.
<b>Served license model</b>	A license server manages the allocation of licenses among multiple machines.

2. For the served license model, decide whether to use an existing or new license server.

The license server and your product installation do not need to share the same machine, operating system, or architecture.

3. If you chose the served license model, do one of the following:

- Install the new license server on a machine that does not have an existing license server.
- To install on a machine that is running a SySAM 1 license server, follow migration instructions in the *Sybase Software Asset Management User's Guide* to migrate to SySAM 2.

4. Before installing your product:

## Planning Your Installation

- If you purchased your product from Sybase or an authorized Sybase reseller, go to the secure Sybase Product Download Center (SPDC) at <https://sybase.subscribenet.com> and log in to generate license keys. The license generation process may vary slightly, depending on whether you ordered directly from Sybase or from a Sybase reseller.
- If you ordered your product under an SAP® contract and were directed to download from SAP Service Marketplace (SMP), you can use SMP at <http://service.sap.com/licensekeys> to generate license keys for Sybase products that use SySAM 2-based licenses.

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**Note:** If your license is incorrectly generated or copied to an incorrect location, Event Stream Processor automatically enters a 30-day grace period. License errors or warnings, or both, appear only in the cluster log (not in the server log). When the 30-day grace period ends, Event Stream Processor cannot run until a suitable license is provided. For production environments, Sybase strongly recommends that you configure e-mail alerts during installation so you receive messages regarding license errors or warnings before the grace period ends.

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### Next

For more information on SySAM licensing, see the *Sybase Software Asset Management Users Guide* on the Sybase Product Manuals Web site at <http://sybooks.sybase.com>.

## Available Licenses

Sybase Event Stream Processor runs on various licenses that apply to the Server, the Studio, and most adapters. Some adapters are licensable, which means they require separate licenses in addition to a base license.

**Table 1. Available Server License Types**

License	Description
CP	CPU license; used in production environments
SF	Standby
DT	Develop and Test
AC	OEM Production
BC	OEM Standby
EV	Evaluation
Unknown	Select if you are unsure of the license type needed

Some licensable adapters support the standard SySAM 30-day grace period while others do not. If an adapter supports the grace period, you can use it unlicensed for a 30 day period.

When the grace period expires, the adapter stops functioning unless you provide a valid license key.

Licensable adapters include:

Adapter	License Key	Grace Period?
Reuters Marketfeed	SY_ESP_TR_MF	No
Reuters OMM	SY_ESP_TR_OMM	No
Open	SY_ESP_OPEN	Yes
FIX	SY_ESP_FIX	Yes

## Supported Operating Systems

Sybase Event Stream Processor Server and Studio run on specific platforms and operating systems.

Platform	Supported OS	Compiler	JDK Version
Sun-64 (SPARC)	Solaris 10+ (minimum patch level 139555-08)	gcc 4.4.x, 4.5.x, 4.6.x	1.7
Sun-64 (Ultra-SPARC T)	Solaris 10+ (minimum patch level 137137-09)	gcc 4.4.x, 4.5.x, 4.6.x	1.7
Sun-64 (AMD/Intel)	Solaris 10+ (minimum patch level 127128-11)	gcc 4.4.x, 4.5.x, 4.6.x	1.7

The minimum required **glibc** version for all supported operating systems is 2.5.

### *Versions Supported for SDKs*

APIs for creating custom adapters support C/C++ and Java 1.7.

The SDKs require the following so's:

- <install dir>\ESP-5\_1\lib\esp\_system\_lib.so
- <install dir>\ESP-5\_1\lib\icudata44.so
- <install dir>\ESP-5\_1\lib\icui18n44.so
- <install dir>\ESP-5\_1\lib\icuuc44.so
- <install dir>\ESP-5\_1\lib\xerces-c\_2\_6.so

## Supported Compilers

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For creating clients that communicate with Event Stream Processor servers using the SDK, these compilers are supported.

**Table 2. Supported C SDK Compilers**

Platform	Compiler Versions
Linux-64 (AMD/Intel)	gcc 4.6.x, 4.5.x, 4.4.x
Sun-64 (AMD/Intel)	gcc 4.6.x, 4.5.x, 4.4.x
Sun-64 (SPARC)	gcc 4.6.x, 4.5.x, 4.4.x
Sun-64 (SPARC Ultra T)	gcc 4.6.x, 4.5.x, 4.4.x
Windows (32-bit)	MS Visual C++ 2010
Windows (64-bit)	MS Visual C++ 2010

**Table 3. Supported Java SDK Compilers**

Platform	Compiler Versions
Linux-64 (AMD/Intel)	JDK 1.7
Sun-64 (AMD/Intel)	JDK 1.7
Sun-64 (SPARC)	JDK 1.7
Sun-64 (SPARC Ultra T)	JDK 1.7
Windows (32-bit)	JDK 1.7
Windows (64-bit)	JDK 1.7

**Table 4. Supported .NET SDK Compilers**

Platform	.NET Version	Compiler Versions
Windows (32-bit)	.NET4.0	MSDEV 2010 SP1
Windows (32-bit)	.NET3.5 SP1	MSDEV 2005 or higher
Windows (64-bit)	.NET 4.0	MSDEV 2010 SP1
Windows (64-bit)	.NET3.5 SP1	MSDE 2005 or higher



## Disk Space and Memory Requirements

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To ensure optimal performance, install Event Stream Processor on a server machine that meets or exceeds the minimum disk space and memory requirements.

The Event Stream Processor installer relies on temporary files it copies to your machine. Ensure you have enough disk space to accommodate these temporary files as well as the installed program files.

The following table lists approximate disk space requirements for Event Stream Processor, taking into account both the temporary files and the installed program files.

	ESP Server Only	ESP Server and Studio
Sun-64 (Sparc)	500MB	350MB
Sun-64 (UltraSparc T2)	500MB	350MB
Sun-64 (AMD/Intel)	500MB	350MB

**Note:** The installer requires 500MB of temporary disk space as part of the installation process. This applies to all platforms.

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These disk requirements do not take into account the sizes of your Event Stream Processor project-related files.

Memory requirements vary, depending on the size, number, and complexity of projects you run and on whether ESP Server and Studio are installed on the same machine or on different machines. In general, Sybase recommends that you allocate at least 1GB free memory for Event Stream Processor-related activities.

## Temporary Installation Files

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The installer relies on temporary files it copies to your machine. Ensure you have enough space allocated to accommodate these temporary files.

The temporary files require approximately 220 MB of free space. By default, the installer copies the files to your `/tmp` directory.

You can install the files to a different location by setting the environment variable `IATEMPDIR` to point to a different directory.

Whether you use the default `/tmp` directory or an alternate directory, you can safely delete files remaining after installation to free up disk space.

## Installed Directory Structure

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An explanation of files and folders created by the installer.

A number of directories are created after installation and contain important files. These files and directories exist in the install directory you selected or created during installation.

Directory or File	Description
charsets	Contains subdirectories with collating sequence files for each supported character set including ASCII, unicode, and UTF8. This directory is installed when you install ESP Server.
collate	Contains additional supporting files for unicode. This directory is installed when you install ESP Server.
ESP-5_1	Contains the folders: <ul style="list-style-type: none"> <li>• <code>adapters</code> – holds files that relate to the configuration of adapters, examples, and batch files.</li> <li>• <code>bin</code> – holds the executable files that make up Event Stream Processor (with the exception of Studio), including the command line tools. On Windows platforms it also contains the <code>.dll</code> files used by ESP.</li> <li>• <code>cluster</code> – holds cluster configuration XML examples and node information.</li> <li>• <code>doc</code> – holds a PDF version of the terms and conditions file.</li> <li>• <code>etc</code> – holds <code>.xsd</code> files and the FIX data dictionary.</li> <li>• <code>examples</code> – holds CCL examples, as well as examples for the C, Java, and <code>.NET</code> SDKs (<code>.NET</code> on Windows platforms only).</li> <li>• <code>include</code> – holds header files for C SDK.</li> <li>• <code>lib</code> – holds adapter <code>.cnxml</code> and library files, as well as JRE used by ESP Server. On Unix, it also holds the <code>.so</code> files used by ESP.</li> <li>• <code>libj</code> – holds JAR files.</li> <li>• <code>net</code> – holds files pertaining to the <code>.NET</code> SDK (On Windows platforms only).</li> <li>• <code>security</code> – holds XML files for all security options (Kerberos, LDAP, RSA, and Native OS).</li> <li>• <code>studio</code> – holds files and folders relating to Studio, including examples for the learning perspective.</li> <li>• <code>sysam</code> – holds SYSAM licensing information.</li> </ul>

Directory or File	Description
jre	Contains the JRE used by the installer and uninstaller.
locales	Contains files that Event Stream Processor uses to load localization information. By default, US-English only. This directory is installed when you install ESP Server.
log	Contains the installer log files.
OCS-15_0	Contains supporting files for Open Client Server, including the Open Client library which the Event Stream Processor uses to communicate with the Adaptive Server Enterprise database.
SCC-3_2	Contains supporting files for Sybase Control Center (SCC). This is installed when SCC for Event Stream Processor is installed, or when the ESP Server is installed with the SCC Agent for Event Stream Processor.
shared	Contains files shared by other Sybase products installed to the same root directory.
Sybase_Install_Registry	Contains the install registry.
sybuninstall	Contains the folders: <ul style="list-style-type: none"> <li>• comp – holds the executable files for uninstalling specific components of the product.</li> <li>• ESP - holds the executable file for performing a complete uninstall of the product.</li> </ul>
SYSAM-2_0	Contains SYSAM licensing tools and a license file.
SYBASE.sh and SYBASE.csh	Used to set the ESP_HOME environment variable on Linux and Solaris platforms.
SYBASE.env	Used to set the ESP_HOME environment variable on Unix platforms.

## Before You Reinstall

There are various things to be aware of before reinstalling. For example, back up important information before reinstalling Sybase ESP Server or Sybase ESP Studio. Information that is not backed up is overwritten or deleted.

This information pertains to reinstalling the current version of Event Stream Processor over the same version. For information on updating from a previous version, see *Update from a Previous Version of Event Stream Processor* on page 33.

## Planning Your Installation

Before reinstalling the Server or the Studio in the same folder as an existing installation, ensure that the backups include:

- All custom library `.so` files
- All `.cnxml` files
- All service configuration (`services.xml`) files
- All project (`.cc1`) files
- All project configuration (`.ccr`) files

To ensure examples run cleanly in the new installation, remove any examples you have previously loaded into a workspace.

To remove a project from a workspace, within Studio, right-click the project name in the file explorer and select **Remove from workspace**.

If the chosen security type is either Kerberos or LDAP for both your previous and new installations, the option to input Kerberos or LDAP configuration does not appear, as the installer adheres to the `installer.properties` file created by your previous installation. To input Kerberos or LDAP configuration information during the new installation, select a different security type, then select Kerberos or LDAP, and the input options will appear.

# Installation Scenarios

Sybase Event Stream Processor offers typical, custom, and single component installations. A custom installation lets you select which components you install. A typical installation includes the most commonly-used components. A single component installation lets you install Sybase Control Center for Sybase Event Stream Processor.

The single-component installation process for Sybase Control Center for Sybase Event Stream Processor is the same as when you install this component as part of a custom installation. For details on the information you need to provide when installing this components, see *Performing a Custom Installation in GUI Mode* on page 16.

Sybase Event Stream Processor includes:

- Server – performs the core analytics and processing of stream data.
- Base adapters – the base Event Stream Processor license includes both internal and external adapters. Internal adapters run inside server processes, while external adapters access server processes through external APIs such as the Java SDK. Both types of adapters either read data from external sources and convert them to Event Stream Processor format, or convert data from Event Stream Processor format and write it to external sources. Internal adapters automatically install with the server. You can choose to install external adapters with the server, or on another machine entirely.
- Studio – provides a graphic view of an Event Stream Processor project, allowing you to create, modify, and monitor projects without programming knowledge. Can only be installed with the ESP Server.

In addition to base adapters, you can also purchase separately licensed enterprise adapters.

- Reuters Marketfeed adapter
- Reuters OMM adapter
- Open adapter
- FIX adapter

The Reuters Marketfeed adapter and Reuters OMM adapter are provided with their own installation media when you purchase licenses for them. The Open and FIX adapters are provided on the installation media for Event Stream Processor (accessed through the Custom install option), but require an additional license to run. You can install enterprise adapters on any machine that has network access to the machine hosting the server.

A typical installation installs the Server, Studio, Sybase Control Center for Sybase Event Stream Processor, and adapters on a single machine. A typical installation uses default values for many settings. You can distribute your installation by installing the Server and Studio on several machines, then use an Event Stream Processor server cluster to run projects from the remote machines.

## Installation Scenarios

Whether you install a typical or distributed (custom) system, you can create a server cluster during the installation. A server cluster lets you run multiple projects simultaneously, provides failover, and lets you configure centralized security for your system.

Your network infrastructure, geographic setup, and overall event processing needs will determine the type of installation that is best for you.

You can use either the graphic installer or the console (command line) installer for both typical and distributed (custom) installations.

You can also use the silent installer to install multiple instances of the Server and Studio.

## Performing a Typical Installation

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In a typical installation, install the base adapters, ESP Server, ESP Studio, and Sybase Control Center for Event Stream Processor on a single machine.

Sybase recommends a typical installation only for evaluating Event Stream Processor or testing your implementation.

To install enterprise adapters in a typical installation, run the standalone installer for your adapters or, in the case of the FIX or Open adapters, re-run the Event Stream Processor installer in custom mode to access the adapter-only installation process.

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**Note:** If your license is incorrectly generated or copied to an incorrect location, Event Stream Processor automatically enters a 30-day grace period. License errors or warnings, or both, appear only in the cluster log (not in the server log). When the 30-day grace period ends, Event Stream Processor cannot run until a suitable license is provided. For production environments, Sybase strongly recommends that you configure e-mail alerts during installation so you receive messages regarding license errors or warnings before the grace period ends.

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## Performing a Typical Installation in GUI Mode

Install the Event Stream Processor base adapters, the Server, the Studio, and Sybase Control Center for Sybase Event Stream Processor in a single process on a single machine.

### Prerequisites

If installing on Sun-64 (SPARC) or Sun-64 (Ultra-SPARC T) do not set file descriptors to `unlimited`, instead run the command: `ulimit -n 1024` in the command shell (sh, ksh, and bash shells are supported).

### Task

1. Click the installer file, `setup.bin`. On the Introduction screen, click **Next**.
2. Select an installation folder. Change the default folder by typing the filepath to the desired folder or by clicking **Choose** and selecting a folder. When finished, click **Next**.

If the selected folder does not exist, click **Yes** when prompted to create the folder. If the folder already exists, you see a warning that any software in the folder will be replaced. Click **Next** to proceed with the installation in the existing folder.

3. Choose the **Typical** install set, which installs the Event Stream Processor Server, the Event Stream Processor Studio, the base adapters, the Sybase Control Center Server for Sybase Event Stream Processor, and the Sybase Control Center Agent for Sybase Event Stream Processor. Click **Next**.
4. Select to either install a licensed copy or an evaluation version.

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**Note:** If you install the evaluation version, the software is active for 30 days, after which you are prompted for a valid license key. Proceed to step 8.

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5. If you selected to install a licensed version, select one of these options:

**Specify License Keys, Use Previously Deployed License Server, or Continue Installation Without a License Key.**

License Type	Process
<p><b>Specify License Keys</b></p>	<ul style="list-style-type: none"> <li>• Enter the license key manually or browse for and load a license key.</li> <li>• Click <b>Next</b>.</li> </ul> <p>If you are using a served license and receive an error that the installer detects a SySAM server already running on your machine, click <b>Previous</b> to return to the SySAM License Entry panel and select the Previously Deployed License Server option.</p> <p>If you enter an invalid license key, you receive a warning message but can continue with the installation. The software is active for a 30-day grace period, after which you are prompted to enter a valid key.</p>
<p><b>Previously Deployed License Server</b></p>	<p>Enter the host name and port number or IP address.</p> <p>If the license server file is not found, you receive a warning message indicating that the installer cannot verify a license server running on the selected host. Reenter the host name and port number. If the installer cannot verify the license server, select a different licensing option to continue with the installation.</p>
<p><b>Continue Without a License Key</b></p>	<p>The software will be active for a 30-day grace period, after which you are prompted for a valid license key.</p>

6. From the drop-down list, select the type of product license you want to configure and click **Next**.
7. Select **Yes** or **No** to indicate whether to configure e-mail alerts about SySAM events that may require an administrator's attention.

## Installation Scenarios

If you select **Yes**, enter the SMTP server host name, SMTP server port number, sender e-mail address, recipient e-mail address, and message severity, or accept the defaults. Click **Next**.

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**Note:** To change the SySAM alert settings after installation, edit these lines in the `ESP_HOME/sysam/esp_license.prop` file:

- `email.smtp.host=smtp`
- `email.smtp.port=25`
- `email.sender=sender@domain.com`
- `email.recipients=user@domain.com`
- `email.severity=INFORMATIONAL`

Setting `email.severity` to `NONE` disables e-mail alerts, causing all other lines to be ignored. To enable e-mail alerts, set `email.severity` with `ERROR`, `WARNING`, or `INFORMATIONAL`. Replace `SMTP` with your SMTP host name, `25` with the port number of your SMTP mail server, `sender@domain.com` with your e-mail address, and `user@domain.com` with e-mail recipients. Separate multiple e-mail recipients with a comma (,).

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8. Use the drop-down list to select your geographic location and view the corresponding End-User License Agreement. Accept the terms and conditions to continue. Click **Next**.
  9. Select a workspace folder where Studio will store projects. Change the default folder by typing the filepath to the desired folder or by clicking **Choose** and selecting a folder. When finished, click **Next**.

---

**Note:** If you are upgrading from a previous version of Event Stream Processor and want your old projects to remain in the active workspace, enter the path to your existing Studio workspace.

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10. Review installation information before continuing. Click **Previous** to go back and make changes. Click **Install** to proceed with the installation.
  11. To install Sybase Control Center for Event Stream Processor:
    - a) Enter and confirm a password for the SCC administrator. Minimum length is six characters.

This password is encrypted and written to the SCC `csi.properties` file.
    - b) Enter and confirm a password for the SCC agent administrator.
  12. A message indicates Event Stream Processor was successfully installed into the location of your choice, and to restart the system to complete the installation. Click **Done** to quit the installer.



## **Performing a Typical Installation in Console Mode**

Install the Event Stream Processor base adapters, the Server, the Studio, and Sybase Control Center for Event Stream Processor in a single process on a single machine.

### **Prerequisites**

If installing on Sun-64 (SPARC) or Sun-64 (Ultra-SPARC T) do not set file descriptors to unlimited, instead run the command: `ulimit -n 1024` in the command shell (sh, ksh, and bash shells are supported).

### **Task**

1. From the command line, navigate to the directory where the installation file (`setup.bin`) resides.
2. Type `./setup.bin -i console` and press **Enter**.
3. When prompted, press **Enter** to continue.
4. Select the installation location. To accept the default location, press **Enter**. To specify a custom location:
  - a) Enter an absolute path to the location. Select a file path that does not contain any spaces.
  - b) Press **Enter**.
  - c) Type **Y** or **N** to indicate whether the location is correct.

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**Note:** The console accepts both **Y** and **Yes** as affirmative, and everything else as a negative response.

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- d) If the directory you specified does not exist, the installer asks if you want to create it. Press **Y**. If the directory already exists, the installer warns you that any software in the folder will be replaced.  
In either case, press **Enter** to continue.
5. Enter **1** to select a typical installation, which installs the base adapters, Event Stream Processor Server, the Event Stream Processor Studio, the Sybase Control Center Server for Sybase Event Stream Processor, and the Sybase Control Center Agent for Sybase Event Stream Processor. Press **Enter**.

If you have a previous version installed in the selected location, you can either uninstall the previous version, or overwrite it. Enter your selection and press **Enter**.

6. Indicate whether to install a licensed version or an evaluation version and press **Enter**.

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**Note:** If you install the evaluation version, the software is active for 30 days, after which you are prompted for a valid license key. Proceed to step 10.

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7. If you are installing a licensed version, indicate the licensing model you want to use:

License Type	Process
<p><b>Specify License Keys</b></p>	<ul style="list-style-type: none"> <li>• Type <b>1</b> and press <b>Enter</b>.</li> <li>• Specify the absolute path to the license file and press <b>Enter</b>, or press <b>Enter</b> to accept the default.</li> </ul> <p>If you are using a served license and receive an error that the installer detects a SySAM server already running on your machine, click <b>Previous</b> to return to the SySAM License Entry panel and select the Previously Deployed License Server option.</p> <p>If you enter an invalid key, you are prompted by a warning message. You cannot proceed until you enter a valid key or select a different licensing option.</p>
<p><b>Previously Deployed License Server</b></p>	<ul style="list-style-type: none"> <li>• Type <b>2</b> and press <b>Enter</b>.</li> <li>• Press <b>Enter</b> to accept the default host name, or enter the <b>Host Name</b> and <b>Port Number</b>.</li> </ul> <p>If the license server file is not found, you receive a warning message indicating that the installer cannot verify a license server running on the selected host. When prompted, enter <b>Y</b> to reenter the license server or <b>n</b> to select a different licensing option.</p>
<p><b>Continue Without a License Key</b></p>	<p>Type <b>3</b> and press <b>Enter</b>. At the prompt asking if you want to continue, press <b>Enter</b>.</p> <p>The software will be active for a 30-day grace period, after which you are prompted for a valid license key in order to use the software.</p>

8. Enter the number corresponding to the license type you want to configure. Press **Enter**.
9. Indicate whether to configure alerts about SySAM events that may require an administrator's attention. To configure alerts:
  - a) Enter **Y** to indicate that you want to configure alerts.
  - b) Enter the SMTP server host that handles your e-mail messages.
  - c) Enter the SMTP server port.
  - d) Enter the default e-mail address of the person or group from which e-mail messages are sent.
  - e) Enter the e-mail addresses of the default recipients.
  - f) Enter the default severity level (informational, warning, or error) for e-mail messages.

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**Note:** To change the SySAM alert settings after installation, edit the lines in the `ESP_HOME/sysam/esp_license.prop` file:

- `email.smtp.host=smtp`
- `email.smtp.port=25`
- `email.sender=sender@domain.com`

- `email.recipients=user@domain.com`
- `email.severity=INFORMATIONAL`

Setting `email.severity` to `NONE` disables e-mail alerts, causing all other lines to be ignored. To enable e-mail alerts, set `email.severity` with `ERROR`, `WARNING`, or `INFORMATIONAL`. Replace `SMTP` with your SMTP host name, `25` with the port number of your SMTP mail server, `sender@domain.com` with your e-mail address, and `user@domain.com` with e-mail recipients. Separate multiple e-mail recipients with a comma (,).

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10. Enter the number corresponding to your geographic location and press **Enter**.
11. Read through the license agreement. Press **Enter** as necessary to move through the text. Stop reading the text at any point by typing back and pressing **Enter**.
12. Indicate that you agree to the license terms and press **Enter**.
13. Enter an absolute path to the workspace location for Studio projects, or press **Enter** to accept the default location.

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**Note:** If you are upgrading from a previous version of Event Stream Processor and want your old projects to remain in the active workspace, enter the path to your existing Studio workspace.

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14. At the preinstallation summary, confirm that you have enough disk space for the installation. Press **Enter** to continue.
15. Press **Enter** to install the files.
16. Enter a password for the SCC administrator and press **Enter**. Minimum length is six characters.
17. Confirm the SCC administrator password and press **Enter**.
18. Enter a password for the SCC agent administrator and press **Enter**. Minimum length is six characters.
19. Confirm the SCC agent administrator password and press **Enter**.
20. When installation is complete, press **Enter**.

## Performing a Custom Installation

---

Use a custom installation to install certain features of Event Stream Processor. You can also use a custom installation to install Event Stream Processor components to different machines. You can install the Server and Studio only; the Server and Studio with any combination of external and enterprise adapters; or any combination of external and enterprise adapters without the Server and Studio.

---

**Note:** Always install the SySAM License Utilities unless they have already been installed on the target machine. For example, if the machine hosts other Sybase products, you may have already installed the SySAM License Utilities.

---

## Installation Scenarios

Internal adapters are always installed with the server, whereas external and enterprise adapters can reside on any machine that has network access to an instance of the Event Stream Processor server.

Sybase recommends custom installations for production environments. The architecture of your installation—the number and location of server and Studio instances, the number of enterprise adapters, and so on—depends on your specific needs.

The steps involved in a custom installation are largely the same as those in a typical installation. However, in a custom installation, you select only the components you want to install.

---

**Note:** If your license is incorrectly generated or copied to an incorrect location, Event Stream Processor automatically enters a 30-day grace period. License errors or warnings, or both, appear only in the cluster log (not in the server log). When the 30-day grace period ends, Event Stream Processor cannot run until a suitable license is provided. For production environments, Sybase strongly recommends that you configure e-mail alerts during installation so you receive messages regarding license errors or warnings before the grace period ends.

---

## **Performing a Custom Installation in GUI Mode**

Install the ESP Server, Studio, Sybase Control Center for Sybase Event Stream Processor, and any combination of external and enterprise adapters on various machines within your network.

### **Prerequisites**

If installing on Sun-64 (SPARC) or Sun-64 (Ultra-SPARC T) do not set file descriptors to `unlimited`, instead run the command: `ulimit -n 1024` in the command shell (sh, ksh, and bash shells are supported).

### **Task**

1. Click the installer file, `setup.bin`. On the Introduction screen, click **Next**.
2. Select an installation folder. Change the default folder by typing the filepath to the desired folder or by clicking **Choose** and selecting a folder. When finished, click **Next**.

If the selected folder does not exist, click **Yes** when prompted to create the folder. If the folder already exists, you see a warning that any software in the folder will be replaced. Click **Next** to proceed with the installation in the existing folder.

3. Choose the **Custom** install set. Click **Next**.
4. Select the options you want to install and clear the options you do not.

---

**Note:** If the target installation machine hosts other Sybase products, you may have already installed the SySAM License Utilities. You need not install them again.

---

5. Click **Next**.

If, in step 4, you selected external adapters only (no enterprise adapters, Server, or Studio), the installer summarizes your installation preferences and prompts you to install. Click **Install** to complete the installation. Otherwise, continue to step 6.

6. Select to install either a licensed copy or an evaluation version.

---

**Note:** If you are installing an evaluation version, proceed to step 10.

---

7. If you are installing a licensed version, select one of these options:

**Specify License Keys, Use Previously Deployed License Server, or Continue Installation Without a License Key.**

License Type	Process
<p><b>Specify License Keys</b></p>	<ul style="list-style-type: none"> <li>• Enter the license key manually or browse for and load a license key.</li> <li>• Click <b>Next</b>.</li> </ul> <p>If you are using a served license and receive an error that the installer detects a SySAM server already running on your machine, click <b>Previous</b> to return to the SySAM License Entry panel and select the Previously Deployed License Server option.</p> <p>If the license server file is not found, you receive a warning message indicating that the installer cannot verify a license server running on the selected host, and prompting you to reenter the host name and port number you provided. If the installer cannot verify the license server, select a different licensing option to continue with the installation.</p>
<p><b>Previously Deployed License Server</b></p>	<p>Enter the host name and port number or IP address.</p> <p>If the license server file is not found, you receive a warning message indicating that the installer cannot verify a license server running on the selected host. Reenter the host name and port number. If the installer cannot verify the license server, select a different licensing option to continue with the installation.</p>
<p><b>Continue Without a License Key</b></p>	<p>The software will be active for a 30-day grace period, after which you are prompted for a valid license key.</p>

8. From the drop-down list, select the type of product license you want to configure and click **Next**.
9. Select **Yes** or **No** to indicate whether you want to configure e-mail alerts about SySAM events that may require an administrator's attention.

If you select **Yes**, enter the SMTP server host name, SMTP server port number, sender e-mail address, recipient e-mail address, and message severity, or accept the defaults. Click **Next**.

---

**Note:** To change the SySAM alert settings after installation, edit these lines in the `ESP_HOME/sysam/esp_license.prop` file:

- `email.smtp.host=smtp`
- `email.smtp.port=25`
- `email.sender=sender@domain.com`
- `email.recipients=user@domain.com`
- `email.severity=INFORMATIONAL`

Setting `email.severity` to `NONE` disables e-mail alerts, causing all other lines to be ignored. To enable e-mail alerts, set `email.severity` with `ERROR`, `WARNING`, or `INFORMATIONAL`. Replace `SMTP` with your SMTP host name, `25` with the port number of your SMTP mail server, `sender@domain.com` with your e-mail address, and `user@domain.com` with e-mail recipients. Separate multiple e-mail recipients with a comma (,).

- 
- 10.** Use the drop-down list to select your geographic location and to view the corresponding End-User License Agreement. Accept the terms and conditions to continue. Click **Next**.

---

**Note:** If you are installing enterprise adapters only, repeat steps 6 through 10 for each enterprise adapter you are installing. Then proceed to step 16.

---

- 11.** Configure cluster information:

- a) Create a name for your new cluster, or enter the name of an existing cluster.
- b) Create a name for the new node. If the node will be part of an existing multi-node cluster, all nodes names in the cluster must be unique.
- c) Enter the cache port for the node. The cluster cache is an internal cache for sharing cluster state and configuration information. It is for internal use only.
- d) By default, the installer sets the actual host name of the machine hosting this cluster node. If it cannot determine the actual host name, it sets "localhost" as the default value. Use the default "localhost" name only if this is a single node cluster that will only be accessed from within the machine you are installing on.
- e) Enter the RPC port for the cluster node. The Studio, SDK, and various other product tools use this port to access the cluster.
- f) Indicate whether the RPC port supports connections through Secure Sockets Layer (SSL) or not. When you enable SSL, connections to the cluster use HTTPS rather than HTTP. If you are creating a new cluster, you can decide whether you want to use SSL or not. If you are connecting to an existing cluster, ensure this selection matches the configuration of the existing cluster.
- g) Click **Next**.

---

**Note:** After installation, you can modify your cluster configuration to add additional nodes and clusters. For information, see the *Administrators Guide*.

---

- 12.** Indicate whether you want to specify a password for the cluster now or when you start the cluster. All nodes within a cluster have the same cluster password. To set a password now,

select **Yes**, then enter the password. Your password must be at least six characters long. If you are connecting to an existing cluster, use the password defined for that cluster.

13. Configure security for the cluster, then click **Next**. If you are connecting to an existing cluster, select the security type the existing cluster uses, and provide credentials for that cluster:

Authentication Type	Description
<b>Native OS</b>	Provides authentication based on your OS. Choose this authentication type if you wish to use the same credentials that you use to log on to your machine. No additional configuration is required.
<b>LDAP</b>	Provides LDAP authentication. Enter the following information as determined by your LDAP implementation: <ul style="list-style-type: none"> <li>• Server type</li> <li>• Provider URL</li> <li>• Default search base</li> <li>• Authentication scope</li> </ul>
<b>Kerberos</b>	Provides Kerberos authentication. Enter the following information as determined by your Kerberos implementation: <ul style="list-style-type: none"> <li>• Realm</li> <li>• KDC</li> <li>• Service Principal Name</li> <li>• Keytab Location</li> </ul> <hr/> <p><b>Note:</b> If any of these four fields are not defined during the installation process, they can be set up post-installation. See <i>Administrators Guide &gt; Security in Event Stream Processor &gt; Authentication &gt; Configuring the Server for Kerberos</i> for details.</p>
<b>RSA</b>	Provides RSA authentication.

14. Set the keystore properties for the cluster. These keys encrypt/decrypt data within Event Stream Processor, such as passwords required to read or write to databases. If you are connecting to an existing cluster, use the keystore properties already defined for that cluster:

- a) Indicate the location of the keystore file. Event Stream Processor needs access to the keystore for encryption/decryption.
- b) Select **Yes** or **No** to indicate whether you want to enter a password to access the keystore file and key. If you select **No**, you are prompted for the password at startup.

## Installation Scenarios

- c) (Optional) Enter and confirm the password for the keystore. Your password must be at least six characters long.
  - d) Click **Next**.
15. Select a workspace folder to store projects. Change the default folder by typing the filepath to the desired folder or by clicking **Choose** and selecting a folder. When finished, click **Next**.
- If you are installing enterprise adapters, repeat steps 6 through 10 for each adapter.
16. Review installation information before continuing. Click **Previous** to go back and make changes. Click **Install** to proceed with the installation.
17. If you are installing Sybase Control Center for Event Stream Processor:
- a) Specify values for the HTTP Port and the HTTPS Port for Sybase Control Center that do not conflict with ports used by other applications and services on the system, or accept the default values.
  - b) Specify a value for the RMI Port for the RMI Service that is not used by other applications and services on the system, or accept the default value.
  - c) Enter and confirm a password for the SCC administrator. Minimum length is six characters.  
This password is encrypted and written to the SCC `csi.properties` file.
  - d) Enter and confirm a password for the SCC agent administrator.
  - e) Select **Yes** or **No** to indicate whether you want to start the Sybase Control Center service.
18. A message indicates Event Stream Processor was successfully installed into the location of your choice, and to restart the system to complete the installation. Click **Done** to quit the installer.

## Performing a Custom Installation in Console Mode

Install the ESP Server and Studio with Sybase Control Center for Sybase Event Stream Processor, and any combination of external and enterprise adapters on various machines within your network.

### Prerequisites

If installing on Sun-64 (SPARC) or Sun-64 (Ultra-SPARC T) do not set file descriptors to `unlimited`, instead run the command: `ulimit -n 1024` in the command shell (sh, ksh, and bash shells are supported).

### Task

1. From the command line, navigate to the directory where the installation file (`setup.bin`) resides.
2. Type `./setup.bin -i console` and press **Enter**.



3. When prompted, press **Enter** to continue.
4. Select the installation location. To accept the default location, press **Enter**. To specify a custom location:
  - a) Enter an absolute path to the location. Select a file path that does not contain any spaces.
  - b) Press **Enter**.
  - c) Type **Y** or **N** to indicate whether the location is correct.

---

**Note:** The console accepts both **Y** and **Yes** as affirmative, and everything else as a negative response.

---

- d) If the directory you specified does not exist, the installer asks if you want to create it. Press **Y**. If the directory already exists, the installer warns you that any software in the folder will be replaced.

In either case, press **Enter** to continue.

5. Enter **3** to select the **Custom** install set. Press **Enter**.
6. Enter the numbers corresponding to the features you want to select or deselect for installation, separated by a comma with no space. If you select the Studio for installation, also select the Server.

The installer selects specific components by default. Selected components are indicated by an X, deselected components are indicated by a blank. Enter the number of a component to toggle the current selection. When finished, press **Enter**.

---

**Note:** If the target installation machine hosts other Sybase products, you may have already installed the SySAM License Utilities. You need not install them again.

---

7. If, in step 6, you selected external adapters only (no enterprise adapters, Server, or Studio), the installer summarizes your installation preferences and prompts you to install. Click **Enter** to continue, then **Enter** again to complete the installation. Otherwise, continue to step 8.
8. If you have a previous version installed to the selected location, a message indicates that you can uninstall the previous version, or overwrite it. Enter your selection and press **Enter**.
9. Indicate whether you want to install a licensed version or an evaluation version and press **Enter**.

---

**Note:** If you are installing an evaluation version, proceed to step 13.

---

10. If you are installing a licensed version, select one of these options:

License Type	Process
<p><b>Specify License Keys</b></p>	<ul style="list-style-type: none"> <li>• Type <b>1</b> and press <b>Enter</b>.</li> <li>• Enter the license key.</li> <li>• Press <b>Enter</b>.</li> <li>• Once your license key is validated successfully, press <b>Enter</b> to continue installation.</li> </ul> <p>If you are using a served license and receive an error that the installer detects a SySAM server already running on your machine, click <b>Previous</b> to return to the SySAM License Entry panel and select the Previously Deployed License Server option.</p> <p>If you enter an invalid key, you are prompted by a warning message. You cannot proceed until you provide a valid key or select a different licensing option.</p>
<p><b>Previously Deployed License Server</b></p>	<ul style="list-style-type: none"> <li>• Type <b>2</b> and press <b>Enter</b>.</li> <li>• Press <b>Enter</b> to accept the default host name, or enter the <b>Host Name</b> and <b>Port Number</b>.</li> </ul> <p>If the license server file is not found, you receive a warning message indicating that the installer cannot verify a license server running on the selected host. When prompted, enter <b>Y</b> to reenter the license server or <b>n</b> to select a different licensing option.</p>
<p><b>Continue Without a License Key</b></p>	<p>Type <b>3</b> and press <b>Enter</b>. At the prompt asking if you want to continue, press <b>Enter</b>.</p> <p>The software is active for a 30-day grace period, after which you are prompted for a valid license key.</p>

11. Indicate the product license type you want to configure and press **Enter**.

12. Indicate whether you want to configure SySAM e-mail alerts. To configure alerts:

- a) Enter the SMTP server host that handles your e-mail.
- b) Enter the SMTP server port.
- c) Enter the e-mail address of the person or group from which e-mail messages are sent.
- d) Enter the e-mail addresses of the default recipients.
- e) Enter the default severity level (informational, warning, or error) for e-mail messages.

---

**Note:** To change the SySAM alert settings after installation, edit the lines in the `ESP_HOME/sysam/esp_license.prop` file:

- `email.smtp.host=smtp`
- `email.smtp.port=25`
- `email.sender=sender@domain.com`

- `email.recipients=user@domain.com`
- `email.severity=INFORMATIONAL`

Setting `email.severity` to `NONE` disables e-mail alerts, causing all other lines to be ignored. To enable e-mail alerts, set `email.severity` with `ERROR`, `WARNING`, or `INFORMATIONAL`. Replace `SMTP` with your SMTP host name, `25` with the port number of your SMTP mail server, `sender@domain.com` with your e-mail address, and `user@domain.com` with e-mail recipients. Separate multiple e-mail recipients with a comma (,).

- 
13. Enter the number corresponding to your geographic location and press **Enter**.
  14. Read through the license agreement. Press **Enter** as necessary to move through the text. Stop reading the text at any point by typing back and pressing **Enter**.
  15. Indicate that you agree to the license terms and press **Enter**.

---

**Note:** If you are installing enterprise adapters only, repeat steps 9 through 15 for each enterprise adapter you are installing. Then proceed to step 20.

---

16. Configure cluster information:
  - a) Create a name for the new node. If the node will be part of an existing multi-node cluster, all nodes names in the cluster must be unique.
  - b) By default, the installer sets the actual host name of the machine hosting this cluster node. If it cannot determine the actual host name, it sets "localhost" as the default value. Use the default "localhost" name only if this is a single node cluster that will only be accessed from within the machine you are installing on.
  - c) Enter the RPC port for the cluster node. The Studio, SDK, and various other product tools use this port to access the cluster.
  - d) Indicate whether the RPC port supports connections through Secure Sockets Layer (SSL) or not. When you enable SSL, connections to the cluster use HTTPS rather than HTTP. If you are creating a new cluster, you can decide whether you want to use SSL or not. If you are connecting to an existing cluster, ensure this selection matches the configuration of the existing cluster.
  - e) Enter the cache port for the node. The cluster cache is an internal cache for sharing cluster state and configuration information. It is for internal use only.
  - f) Create a name for your new cluster, or enter the name of an existing cluster.
  - g) Indicate whether you want to provide a password for accessing the cluster now. All nodes within the cluster use the same password. If you select **No**, you are prompted to provide a password when you start the cluster node.  
If you select **Yes**, enter a password for the cluster and press **Enter**. Your password must be at least six characters long. If you are connecting to an existing cluster, use the password defined for that cluster.
  - h) Enter the number corresponding to the security type to apply to your cluster. If you are connecting to an existing cluster, select the security type the existing cluster uses, and provide credentials for that cluster:

Authentication Type	Description
<b>Native OS</b>	Provides authentication based on your OS. Choose this authentication type if you wish to use the same credentials that you use to log on to your machine. No additional configuration is required.
<b>LDAP</b>	Provides LDAP authentication. Enter the following information as determined by your LDAP implementation: <ul style="list-style-type: none"> <li>• Server type</li> <li>• Provider URL</li> <li>• Default search base</li> <li>• Authentication scope</li> </ul>
<b>Kerberos</b>	Provides Kerberos authentication. Enter the following information as determined by your Kerberos implementation: <ul style="list-style-type: none"> <li>• Realm</li> <li>• KDC</li> <li>• Service Principal Name</li> <li>• Keytab Location</li> </ul> <hr/> <p><b>Note:</b> If any of these four fields are not defined during the installation process, they can be set up post-installation. See <i>Administrators Guide &gt; Security in Event Stream Processor &gt; Authentication &gt; Configuring the Server for Kerberos</i> for details.</p>
<b>RSA</b>	Provides RSA authentication.

---

**Note:** After installation, you can modify your cluster configuration to add additional nodes and clusters. For information, see the *Administrators Guide*.

---

17. Indicate the location of the keystore file or press **Enter** to accept the default.  
 These keys encrypt/decrypt data within Event Stream Processor, such as passwords required to read or write to databases. By default, the keystore type is set to JKS and the algorithm is RSA.
18. Indicate whether you want to provide a password to access the keystore file and key. If you select **No**, you are prompted for one at startup. If you select **Yes**, enter a password for the keystore. The password must be at least six characters long. If you are connecting to an existing cluster, use the keystore password already defined for that cluster.
19. Enter an absolute path to the workspace location for Studio projects, or press **Enter** to accept the default location.
20. If you are installing enterprise adapters, repeat steps 9 through 15 for each adapter. Otherwise, continue to step 22.

21. At the pre-installation summary, confirm that you have enough disk space for the installation. Press **Enter** to continue.
22. Press **Enter** to install the files.
23. If you are installing Sybase Control Center for Event Stream Processor:
  - a) Specify a value for the HTTP Port for Sybase Control Center that does not conflict with ports used by other applications and services on the system, or press **Enter** to accept the default values.
  - b) Specify a value for the HTTPS Port for Sybase Control Center that does not conflict with ports used by other applications and services on the system, or press **Enter** to accept the default values.
  - c) Specify a value for the RMI Port for the RMI Service that is not used by other applications and services on the system, or press **Enter** to accept the default value.
  - d) Enter and confirm a password for the SCC administrator. Minimum length is six characters.

This password is encrypted and written to the SCC `csi.properties` file.
  - e) Enter and confirm a password for the SCC agent administrator.
  - f) Select **Yes** or **No** to indicate whether you want to start the Sybase Control Center service.
24. When prompted, press **Enter** to finish the installation process.

## Running a Silent Installation

---

A silent installation installs Sybase ESP Server and Sybase ESP Studio without the conventional prompts used in a standard installation.

Sybase recommends a silent installation for installing multiple identical or near-identical copies of the Server and the Studio. You can install these components silently:

- The Server, internal adapters, and the Studio
- The Server and internal adapters only
- One or more external or enterprise adapters (either by themselves or with any server installation)

Once you have created a silent installation response file, you can run it as many times as necessary to install multiple copies of the software.

## Creating a Response File

Generate a response file by running a GUI mode custom installation, using all the settings that you want to use in your silent installation. Then use the response file to reproduce your installation preferences when installing on other machines.

When creating a response file, save it in the same directory as the installer, and name it `installer.properties`. For multiple different installations, name each response file

## Installation Scenarios

`installer_<name>.properties` where `<name>` is a user-defined identifier that distinguishes different installation settings.

You can input your installation preferences directly into the response file or you can run the GUI custom installer:

---

**Note:** For security reasons, passwords, such as the cluster and keystore passwords, are not saved to the response file. To run a silent installation with user-defined cluster and keystore passwords, manually add the passwords to the file, or specify them in the command line.

---

1. From a command line, navigate to the directory where the installation file (`setup.bin`) resides.
2. At the command line, run: `./setup.bin -r <response file>` where `<response file>` is the name of the response file. The specified file name should be an absolute path. This command launches the GUI custom installer and creates a response file. All of the selections that you make, while installing with the GUI custom installer, are saved into a response file and used to complete your silent installations.
3. (Optional) Modify the response file to correct any errors made during installation.

---

**Note:** If you add password parameters to the response file, Sybase recommends that you either delete the response file, or delete the password parameters from the response file after the silent installation is complete.

---

Use the following response file sample as a reference for manually modifying or creating your own response file:

```
# Tue Aug 07 20:48:22 CST 2012
# Replay feature output
# -----
# This file was built by the Replay feature of InstallAnywhere.
# It contains variables that were set by Panels, Consoles or
# Custom Code.

#Validate Response File
#-----
RUN_SILENT=true

#Choose Install Folder
#-----
USER_INSTALL_DIR=/opt/sybase

#Choose Install Set
#-----
CHOSEN_FEATURE_LIST=fserver,fesppap,fstudio,fsysam_util,ffix,ftibco_rv,fflex,fhttp,fopen,flogfile_input,frepserver,frtview,fsc
CHOSEN_INSTALL_FEATURE_LIST=fserver,fesppap,fstudio,fsysam_util,ffix,ftibco_rv,fflex,fhttp,fopen,flogfile_input,frepserver,frtview,fsc
CHOSEN_INSTALL_SET=Custom

#Choose Product License Type
#-----
```

```

SYBASE_PRODUCT_LICENSE_TYPE=evaluate

#Choose Sybase Software Asset Management License
#-----
SYSAM_EXISTING_LICENSE_SERVER_HOSTNAME=hostname

#Cluster Configuration
#-----
CACHE_NAME=test-name-1
NODE_NAME=node1
CACHE_PORT=19001
HOST_NAME=hostname
RPC_PORT=19011
USE_SSL=1

#Cluster Password
#-----
PROMPT=0
ENTER_NOW=1
CACHE_PASSWORD=MyClusterPassword
#Minimum length of password is six characters

#Security Options
#-----
IS_NATIVEOS=1
IS_LDAP=0
IS_KERBEROS=0
IS_RSA=0

#Keystore Properties
#-----
FILE=/opt/sybase/ESP-5_1/security/keystore_rsa.jks
PROMPT_KEY_PASSWORD=0
ENTER_KEY_PASSWORD=1
PASSWORD=MyKeystorePassword
#Minimum length of password is six characters

#Choose workspace folder
#-----
CHOSEN_WORKSPACE_FOLDER=/usr/user/SybaseESP/5.1/workspace

#Install
#-----
-fileOverwrite_/opt/sybase/sybuninstall/ESP/main/
uninstall.lax=Yes

#Sybase Control Center Service
#-----
CONFIG_SCC_HTTP_PORT=8282
CONFIG_SCC_HTTPS_PORT=8283

#Sybase Control Center - Configure RMI Port
#-----
SCC_RMI_PORT_NUMBER=9999

#Sybase Control Center - Security Login Modules

```

## Installation Scenarios

```
#-----  
CONFIG_SCC_CSI_SCCADMIN_PWD=MySCC_AdminPassword  
CONFIG_SCC_CSI_UAFADMIN_PWD=MySCCAgent_AdminPassword  
  
#Start Sybase Control Center  
#-----  
START_SCC_SERVER=No
```

### Using a Response File

Use the silent installation response file to install Sybase Event Stream Processor on multiple computers.

If you do not specify a response file, the `installer.properties` file located in the same directory as the installation file is used. If an `installer.properties` file does not reside within this directory, the installer does not launch properly.

Run a response file as often as necessary to install the Sybase Event Stream Processor on the required number of machines.

On the target machine, for each installation, enter the following command at the command line:

```
setup.bin -i silent -f <response_file> -DRUN_SILENT=true -  
DAGREE_TO_SYBASE_LICENSE=true
```

where *<response file>* is the input response file. The specified file name must be an absolute path.

For security reasons, passwords, such as the cluster and keystore passwords, are not saved to the response file. To run a silent installation with user-defined cluster and keystore passwords, manually add the password parameters to the response file, or add them at the command line using the `-DCACHE_PASSWORD` and `-DPASSWORD` options:

```
setup.bin -i silent -f <response_file> -DRUN_SILENT=true -  
DAGREE_TO_SYBASE_LICENSE=true -DCACHE_PASSWORD=MyPass123 -  
DPASSWORD=MyOtherPass123
```

For security reasons, Sybase recommends that you either delete the response file, or delete the password parameters from the response file after the silent installation is complete.

---

**Tip:** If Studio does not start, try manually deleting the `.metadata` folder within the workspace directory.

---



## Post Installation

When you have successfully installed Sybase Event Stream Processor, complete post installation tasks as necessary for the components you want to use.

The post installation tasks provided here are not mandatory to run ESP itself, but they do influence whether specific features are available in your implementation or not.

### Enabling the WebSphere MQ Input and Output Adapters

If you plan to use the WebSphere MQ Input or Output adapter, enable the files for use within Event Stream Processor. You must install the WebSphere MQ Client to use these adapters. For installation instructions, see the *Adapters Guide*.

The WebSphere MQ input and output adapter configuration files are shipped with a suffix that renders them disabled. To use the adapters, remove this suffix to enable the configuration files:

1. Navigate to: `$ESP_HOME/lib/adapters/`
2. Remove the `.disabled` suffix from the following files:
  - `wsmq_in.cnxml.disabled`
  - `wsmq_out.cnxml.disabled`

The resulting files—`wsmq_in.cnxml` and `wsmq_out.cnxml`—are properly named configuration files (`.cnxml` files) that enable you to configure the adapter properties as desired for use within Event Stream Processor.

### Installing the SDK on Other Machines

Set up an external machine so that you can link and compile clients that will use the SDK to communicate with a server running ESP.

#### **Prerequisites**

You must have a supported compiler for the SDK you plan to use. Refer to the *Supported Compilers* topic.

#### **Task**

You can construct clients on different machines that communicate with an ESP server using the C/C++, Java, or .NET SDK. These clients can communicate with servers running different operating systems: for example a client on a Windows system can communicate with a Linux

## Post Installation

server. In order to compile these SDK clients you must put the necessary libraries in place on the remote machine.

1. Select or create a directory to hold the libraries on the remote machine and make sure that directory is in the search path your compiler will use.
2. Determine what libraries you will need to link to, based on which SDK you want to use and what operating system your remote machine is running.

**Table 5.**

SDK	OS	FILES
C	Linux, Solaris	All of the header files in <code>include/sdk</code> and <ul style="list-style-type: none"><li>• <code>lib/libesp_sdk_lib.so</code></li><li>• <code>lib/libesp_system_lib.so</code></li><li>• <code>lib/libgcc_s.so.1</code></li><li>• <code>lib/libicu18n.so.44</code></li><li>• <code>lib/libicuuc.so.44</code></li><li>• <code>lib/libicudata.so.44</code></li><li>• <code>lib/libsasl2.so.2</code></li><li>• <code>lib/libstdc++.so.6</code></li></ul>
C	Windows	All of the header files in <code>include/sdk</code> and <ul style="list-style-type: none"><li>• <code>bin/esp_sdk_lib.dll</code></li><li>• <code>bin/esp_system_lib.dll</code></li><li>• <code>bin/icudt44.dll</code></li><li>• <code>bin/icuin44.dll</code></li><li>• <code>bin/icuuc44.dll</code></li><li>• <code>bin/libeay32.dll</code></li><li>• <code>bin/msvcpl100.dll</code></li><li>• <code>bin/msvcr100.dll</code></li><li>• <code>bin/ssleay32.dll</code></li><li>• <code>bin/xerces-c_2_6.dll</code></li><li>• <code>lib/static/esp_sdk_lib.lib</code></li></ul>
Java	Linux, Solaris, Windows	<ul style="list-style-type: none"><li>• <code>libj/esp_sdk.jar</code></li><li>• <code>libj/xmlrpc-common-3.1.3.jar</code></li><li>• <code>libj/xmlrpc-client-3.1.3.jar</code></li><li>• <code>libj/ws-commons-util-1.0.2.jar</code></li><li>• <code>libj/postgresql.jar</code></li></ul>

SDK	OS	FILES
.NET	Windows	All of the files listed for the Windows C SDK, plus <ul style="list-style-type: none"> <li>net\interfaces\sdk\esp_net_sdk_lib.dll for .NET4.0</li> <li>net\interfaces\sdk\net35\esp_net_sdk_lib.dll for .NET3.5</li> </ul>

---

**Note:** All file paths are relative to the `ESP_HOME` directory.

---

- Copy those files from the server where you installed Sybase Event Stream Processor to the remote machine on which you want to compile SDK clients.

## Starting Sybase Control Center

---

Sybase Control Center (SCC) is a Web-based tool for managing and monitoring Sybase servers, including Sybase Event Stream Processor servers. One SCC server can manage and monitor all the Event Stream Processor servers in your enterprise.

Start the SCC server to allow users to connect to it from their Web browsers. Once connected to SCC, users can access the online help for detailed instructions on managing and monitoring Event Stream Processor.

- From a command prompt, navigate to your Event Stream Processor base installation directory and run `SYBASE . sh` or `SYBASE . csh`.  
This sets the necessary environment variables.
- From the command-prompt, navigate to `<Install_Dir>/SCC-3_2/bin` and run `scc . sh`.

This starts the SCC server, which can now start accepting connections.

---

**Note:** If you encounter errors, view the error log in the `<Install_Dir>/SCC-3_2/log` directory.

---

- Connect to the Sybase Control Center server. In your Web browser, enter:
  - If SSL is enabled: `https://<scc-hostname>:<port>/scc` where `<scc-hostname>` is the name of the machine running the SCC server. The default port is 8283.
  - If SSL is disabled: `http://<scc-hostname>:<port>/scc` where `<scc-hostname>` is the name of the machine running the SCC server. The default port is 8282.

- Log in.

When logging in to a newly installed Sybase Control Center for which secure authentication has not been configured, use the **sccadmin** account and the password you specified during installation.

## Post Installation

If you use SCC with Event Stream Processor, leave the SCC server running whenever ESP is running. The easiest way to do this is to run the SCC server as a service that restarts automatically.

## Updating Environment Variables

---

Create and update environment variables by running the `SYBASE . csh` or `SYBASE . sh` file.

Run `SYBASE . csh` or `SYBASE . sh` to update or create the following environment variables:

- `SYBASE_JRE7=<Install_Dir>/shared/JRE-7_0_1`
- `SYBASE_JRE7_32=<Install_Dir>/shared/JRE-7_0_1`
- `SYBASE_JRE7_64=<Install_Dir>/shared/JRE-7_0_1`
- `PATH=<Install_Dir>/SCC-3_2/bin:$PATH`
- `SCC_JAVA_HOME=<Install_Dir>/shared/JRE-7_0_1`
- `SYBASE=<Install_Dir>`
- `SYBASE_OCS=OCS-15_0`
- `INCLUDE=<Install_Dir>/OCS-15_0/include:$INCLUDE`
- `LIB=<Install_Dir>/OCS-15_0/lib:$LIB`
- `PATH=<Install_Dir>/OCS-15_0/bin:$PATH`
- `LD_LIBRARY_PATH=<Install_Dir>/OCS-15_0/lib:<Install_Dir>/OCS-15_0/lib3p64:<Install_Dir>/OCS-15_0/lib3p:$LD_LIBRARY_PATH`
- `LD_LIBRARY_PATH_64=<Install_Dir>/OCS-15_0/lib:<Install_Dir>/OCS-15_0/lib3p64:<Install_Dir>/OCS-15_0/lib3p:$LD_LIBRARY_PATH_64`
- `ESP_HOME=<Install_Dir>/ESP-5_1`

The environment variable `ESP_HOME` represents the directory where you installed Event Stream Processor. Specifically, the value of `ESP_HOME` is:

```
$install_location/ESP-5_1
```

Use this environment variable when referencing file paths relative to the Event Stream Processor installation directory.

For both internal and external adapters, the environment variable `JAVA_HOME` must be set to the JRE version 1.7.0\_01, or later.

# Update from a Previous Version of Event Stream Processor

Sybase Event Stream Processor maintains backwards compatibility with previous versions. If desired, you can continue running the previous version after you have installed your update.

When you update Event Stream Processor:

- Projects written for the previous version will run on the current version and produce the same results without having to be recompiled. Use the Studio interface to open or import existing projects.
- With the following exceptions, adapters and client programs written with the previous SDK are compatible with the current release without having to be recompiled with the latest SDK:
  - Java client code compiled against the 5.0 Java SDK must run using JRE 7 under Event Stream Processor version 5.1.
  - For the Custom Adapter Framework, the return type for the following functions has changed from `int` to `int64_t`: `getNumberOfGoodRows`, `getNumberOfBadRows`, `getTotalRowsProcessed`. If your application written in 5.0 uses any of these functions, rewrite the application for 5.1.
  - For security reasons, Event Stream Processor no longer supports the no authentication option.
  - Kerberos authentication is now ticket-based. Update existing adapters and clients to use Kerberos ticket-based authentication and setter methods.
- Deployment scripts work the same way in the current version as they did in the previous version without any changes.

## Installation Location

---

When installing the current version of Event Stream Processor, you can either install to an entirely new directory, or you can install to the same directory as your previous version (or to the same directory as any installed Sybase product).

The installation process creates a version-based sub-directory under the base installation directory. If, for example, you are installing version 5.1 to a base installation directory called `Sybase`, the installer creates a sub-directory called `ESP-5_1`. This naming scheme allows more than one version of Event Stream Processor to coexist in the same base installation directory. Note, however, that the installer updates the `ESP_HOME` environment variable to point to the current version. Therefore, to run the previous version of Event Stream Processor after updating to the current version, manually modify the `ESP_HOME` environment variable to point to the previous installation sub-directory.

## Update from a Previous Version of Event Stream Processor

If you install the current version to a new base installation directory, you do not have to manually modify the `ESP_HOME` variable to run the previous version. However, each time you want to switch between versions, prior to starting Event Stream Processor, run the `SYBASE.sh` or `SYBASE.csh` file from the base installation directory of the version you want to run. This ensures all environment variables point to the correct installation.

## Clearing the PATH Variable

---

When you update your installation, ensure that the previous setting for the `PATH` system variable is cleaned up.

After installing your update, check your system `PATH` variable. If this variable includes `<install_location>\ESP\lib\jre\bin`, remove it prior to running version 5.1. To subsequently run version 5.0, add it back.

## Updating your License

---

Sybase Event Stream Processor requires a valid license. If your evaluation license expires, update your license.

When you install Event Stream Processor, you are prompted to provide a license type. The installer, based on your selection, copies the license file to the appropriate location and generates an `esp_license.prop` file under `<Install_Dir>/ESP-5_1/sysam`.

If you installed using an evaluation license, or have since purchased a different license type, perform the following procedure to update your license:

1. Populate the `<Install_Dir>/SYSAM-2_0/licenses` directory.
  - a) For an unserved license, copy the `unserved.lic` file to `<Install_Dir>/SYSAM-2_0/licenses`.
  - b) For a served license, create a `token.lic` file and add it to the `<Install_Dir>/SYSAM-2_0/licenses` directory to link to the license server. If, for example, the license server is called `my_license_server`, create the text file `<Install_Dir>/SYSAM-2_0/licenses/my_license_server.lic` and add the following content:  

```
SERVER my_license_server ANY  
  
USE_SERVER
```
2. Edit the licence type (`LT`) parameter for the `esp_license.prop` file:
  - a) Navigate to `<Install_Dir>/ESP-5_1/sysam` and open `esp_license.prop` with a text editor.

## Update from a Previous Version of Event Stream Processor

- b) Change the LT parameter to reflect the value present in your SySAM license file or server. Available license types are:

<b>CP</b>	CPU license; used in production environments
<b>SF</b>	Standby
<b>DT</b>	Develop and Test
<b>AC</b>	OEM Production
<b>BC</b>	OEM Standby
<b>EV</b>	Evaluation
<b>Unknown</b>	Select if you are unsure of the license type needed

3. Save and close the file to finish updating your license.





# Uninstalling using the Graphic Uninstaller

Uninstall Event Stream Processor from a test or production environment to ensure all components are fully removed.

## Prerequisites

Backup any important project, cluster, and service configuration files. Specifically, create a back up of:

- \$ESP/security folder
- \$ESP\_HOME/bin/service.xml
- the cluster configuration file (for example, node1.xml)

## Task

To use the graphic uninstaller:

1. Navigate to <install\_directory>/sybuninstall/ESP/main and double-click `uninstall.bin` to launch the uninstaller.
2. To start uninstalling, click **Next**.
3. Choose either:

Type	Description
<b>Complete Uninstall</b>	Removes all installed features and components of Sybase Event Stream Processor.
<b>Uninstall Specific Features</b>	Select specific features of Sybase Event Stream Processor to uninstall.

4. If you are uninstalling specific features, select the features to remove and click **Next**.

---

**Note:** If you are performing a complete uninstallation, proceed to step 5.

---

5. A summary screen lists the components selected for uninstallation. To uninstall the files, click **Next**.
6. (Optional) During a complete uninstall, a Delete User File screen lists all user files and folders created within the ESP\_HOME directory since installation. To uninstall these files, select **Delete all of these files**. Click **Next**.
7. Click **Done**.

---

**Note:** If you reinstall Sybase Event Stream Processor, copy all backup files into your new installation location.

---

## Uninstalling using the Graphic Uninstaller

8. (Optional) If your installation of Event Stream Processor included Sybase Control Center (SCC), some SCC components may not uninstall. If this occurs, run the uninstaller under `<install dir>\sybuninstall\comp\<SCC comp>` where `<SCC comp>` is:
  - `SCC-3_2.ESPMAP`
  - `SCC-3_2.SCCServer`
  - `JRE7`

### **Next**

Manually delete all files, folders, and subdirectories that remain after uninstalling if you no longer need them. When deleting files, ensure that they are not needed by another Sybase product installed on your machine.

# Uninstalling using the Console

Uninstall Event Stream Processor from a test or production environment to ensure all components are fully removed.

## Prerequisites

Backup any important project, cluster, and service configuration files. Specifically, create a back up of:

- \$ESP/security folder
- \$ESP\_HOME/bin/service.xml
- the cluster configuration file (for example, node1.xml)

## Task

To uninstall using the console:

1. From the command-line, navigate to `<install_directory>/sybuninstall/ESP/main`.
2. Type `./uninstall -i console` and press **Enter**.
3. A new window opens. Press **Enter** to continue.
4. Select an uninstall option by entering 1 (complete uninstall) or 2 (custom uninstall). Press **Enter**.

If you select a complete unintsall, the uninstaller summarizes the components to be removed. To revert to a custom uninstall, type `back` and press **Enter** to make your selection again.

---

**Note:** If you select a complete uinstall, proceed to step 6.

5. If you select a custom uninstall, enter the number of the component you want to select or deselect for uninstallation. Selected components are indicated by an X; unselected components are indicated by a blank. Enter the number of the component to toggle its status as selected or unselected. When you have made your selections, press **Enter**.
6. Review the pre-uninstall summary. To uninstall the files, press **Enter**.
7. After uninstalling all files created by the installer, a prompt appears to delete remaining user files that were created outside of the installer. Select Y or N. Press **Enter** to complete the uninstallation.

---

**Note:** If you reinstall Sybase Event Stream Processor, copy all backup files into your new installation location.

---

## Uninstalling using the Console

8. (Optional) If your installation of Event Stream Processor included Sybase Control Center (SCC), some SCC components may not uninstall. If this occurs, run the uninstaller under `<install dir>\sybuninstall\comp\<SCC comp>` where `<SCC comp>` is:
  - `SCC-3_2.ESPMAP`
  - `SCC-3_2.SCCServer`
  - `JRE7`

### **Next**

Manually delete all files, folders, and subdirectories that remain after uninstalling if you no longer need them. When deleting files, ensure that they are not needed by another Sybase product installed on your machine.

# Troubleshooting

Common techniques for troubleshooting issues you may encounter.

## SySAM Logging

---

By default, when you are using a served license, all license server status and error messages are written to the `SYBASE.log` debug log file in the `log` directory.

`SYBASE.log` is used to diagnose issues with the license server. For information on messages written to this log file, see *The Debug Log File* in the *FLEXnet Licensing End User Guide* provided with your SySAM documentation.

Over time, the debug log can become large and the value of older messages decreases. Sybase recommends that you periodically truncate the debug log file:

1. On the license server machine, enter:

```
lmutil lmswitch -c license_directory_location SYBASE tmp.log
```

2. Delete or archive `SYBASE.log`.
3. To return to using `SYBASE.log`, enter:

```
lmutil lmswitch -c license_directory_location SYBASE SYBASE.log
```

4. Delete the temporary file `tmp.log`.

For more information on SySAM logging, see *Troubleshooting SySAM Errors* in the *SySAM Users Guide*.



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