

# Installation Guide

**ALERI STREAMING PLATFORM 2.4**



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## Installation Guide: ALERI STREAMING PLATFORM 2.4



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# About This Guide

## 1. Purpose

This Guide provides instructions (including hardware and software requirements) for installing the Aleri Streaming Platform in Linux, Solaris and Windows environments.

It is intended for anyone wanting to install and use or evaluate the Aleri Streaming Platform.



### **NOTE:**

In this Guide, the Aleri Streaming Platform is referred to as the *Aleri Platform*.

---

## 2. Related Documents

The following documents are also provided with the product:

- **Release Notes**

Describes the features of the latest release

- **Product Overview**

Provides an introduction to the Aleri Streaming Platform and related Aleri products

- **Quick Guide to Authoring**

Provides a brief overview of the Aleri Data Model, and describes the basics of how to create one in the Aleri Studio

- **Authoring Guide**

Provides detailed information about creating an Aleri data model in XML, SQL and in the Aleri Studio

- **Guide to Programming Interfaces**

Provides detailed instructions and reference information for developers who want to use Aleri programming interfaces (APIs for Java, C++ and .NET as well as the proprietary Command and Control interface) to create Aleri Streaming Platform-compliant applications

- **Utilities Guide**

Collects man pages and other reference information for all Aleri Streaming Platform command line tools

- **Administrator's Guide**

Provides instructions for specific administrative tasks related to the Aleri Streaming Platform.

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# Chapter 1. General Product Information

## 1.1. Introduction

The Aleri Streaming Platform is a high performance event processing engine combined with high level application development tools that allow users to build and deploy real-time applications quickly and easily. The Aleri Streaming Platform increases productivity while decreasing cost and time to deploy - without sacrificing real-time performance.

What sets the Aleri Streaming Platform apart from other high level data processing or data analysis tools (databases, spreadsheets, etc.) is that the Aleri Streaming Platform has been designed to operate under extreme real-time conditions, processing very high frequency data with absolute minimal latency. You don't sacrifice performance to get the benefit of high-level authoring tools.

The Aleri Streaming Platform supports the use of high level languages or authoring tools to define the business logic, which is decoupled from the underlying data management. This approach produces applications that can be easily modified as needed, unlike custom code where the logic is hard-coded and often intertwined with the data structures and data handling logic. Aleri Streaming Platform-based applications are also more stable, since the business logic can be reviewed and tested in isolation and then deployed on a platform whose stability has already been proven.

To minimize the learning curve for application developers, the Aleri Streaming Platform provides three different authoring environments:

- **Aleri Studio** - a visual interactive development environment (IDE) based on the Eclipse™ framework.
- **Aleri SQL** - a subset of standard SQL with extensions for real-time data streams. This is a pure language that can be used with any text editor.
- **Aleri XML** - using the Aleri DTD, this provides an efficient environment for those that regularly work with XML and also provides an option for scripted generation, development of alternate "compilers", etc.

## 1.2. Overview of an Aleri Deployment

While the Aleri server – the high performance complex event processor that is the heart of the Aleri Streaming Platform – is the core component of an application built with the Aleri Streaming Platform, it is by no means the only component in the full implementation and deployment of an application. So let's put the Aleri package that we are about to install in the context of a complete Aleri application.

First, an application must have inputs and outputs. The data model running on the Aleri Platform server contains the logic that is applied to incoming data to produce the results.

### 1.2.1. Inputs

An Aleri application will normally have at least one streaming data source as an input. It may have multiple streaming sources, and it may also have static or semi-static data sets that are loaded from files or databases. All input data, regardless of the source and regardless of how often (if ever) it changes, gets streamed into the Aleri server via the Aleri pub/sub API or via an adapter implemented on the API.

See the Interfaces Guide for more information on the Aleri Pub/Sub APIs.

See the Product Overview for more information on deploying an Aleri application.

### 1.2.2. Outputs

To do something useful, an application has to have outputs: the results need to be delivered to human users and/or to other applications. Output from the Aleri Platform server can be used in several ways:

- Results can be streamed in real-time to other applications via the Aleri pub/sub APIs or via adapters implemented using the Aleri pub/sub APIs. Adapters can also be used to publish streaming results onto a message bus, or to capture output in a database.
- Streaming results can be displayed in real time using the Aleri Dashboard. The Dashboard Builder can be used to easily build visually rich real-time displays that are task and context-specific.
- Results can be streamed into Excel, feeding into further worksheet-based calculations.
- Results can be collected in the Aleri Live OLAP Server for interactive multi-dimensional analysis of event data. This provides real-time OLAP capabilities against the live set of event data.
- The Aleri server can be queried as needed via a built-in ODBC/JDBC interface. Snapshot SQL queries can be issued from any application that can connect to an ODBC/JDBC data source, querying any stream in the data model that has retained data.

See the Product Overview document for more information on options for using the output from the Aleri Streaming Platform.

### 1.2.3. Data Model

An Aleri Data Model is constructed in one of three ways:

- Using the Aleri Studio, a visual programming tool
- In Aleri SQL, a textual event programming language that closely follows the ANSI standard with extensions for handling real-time data streams
- In Aleri XML which is standard XML with an Aleri schema that defines the elements and attributes of a data model

See the Quick Guide to Authoring to get starting quickly building an Aleri Data Model in the Studio.

See the Authoring Guide for a full reference to building data models in the Studio, SQL or XML.

### 1.3. Features of the Aleri Streaming Platform

- **Ultra-low latency** - the lowest latency event processing technology available
- **High Throughput** - the ability to process hundreds of thousands of messages per second on a single machine (and far more in a clustered configuration)
- **Scalable** - multi-threaded to take full advantage of multi-CPU machines, and designed with full support for clustering
- Real-time **streaming output** *and* support for **on-demand queries**
- Optional **disk based data persistence**, optimized for throughput and latency - ensures that critical data is not lost
- **Security** features for authentication and access control



- **High availability** with support for hot standby and cold spare configurations
- Support for **Update events** - allowing incoming data to be applied as inserts, updates, deletes or upserts, unlike typical event processing that always treats each incoming event as a new item
- **FlexStream** - allows procedural logic to be layered on the relational models, providing incredible versatility for addressing the widest possible range of event processing requirements.

#### 1.4. Supported Operating System

This release of the Aleri Streaming Platform runs on the following environments:

Operating System	Details
Linux	Red Hat Linux Enterprise AS4, version 4.5 or higher, 32-bit & 64-bit
	Fedora Core 4, 5, 6 , 32-bit & 64-bit (SMP kernel required on multiprocessor machines)
Solaris	Solaris 10 Sparc 3/05 or higher
	Solaris 10 x86 3/05 or higher
Windows	Windows XP with SP2
	Windows 2003 Server with SP2

##### 1.4.1. Supported Operating Systems for Aleri RT for *Microsoft Excel*®

The Aleri Streaming Platform installation package for Microsoft Windows includes the Aleri RT for *Microsoft Excel*® plug-in. This plug-in is not included in the Linux and Solaris install packages.

See [Section 3.6.1, “Requirements”](#) for detailed requirements for Aleri RT for *Microsoft Excel*®

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# Chapter 2. Installation Guide for Linux and Solaris

## 2.1. System Requirements for Linux

Hardware requirements for Linux:

- Processors: One or more Intel or AMD CPUs (64 bit recommended; 32 bit acceptable)
- Memory: Recommended 2 GB RAM
- Disk: 1 GB recommended for installation. Amount of disk space required is directly proportional to the amount of persisted data. For the persistent database, the disk subsystems (array stripe set) should be fast and fronted by a memory cache for any performance testing or production use.



### **NOTE:**

The hardware requirements can increase depending on the complexity, data volumes, concurrency requirements, and desired performance characteristics.

---

Software Requirements for Linux:

A typical installation of RedHat or Fedora Core Linux is generally sufficient to run all software associated with the Aleri Streaming Platform. In production settings, however, many systems administrators use a minimal installation of Linux for security and other reasons. The minimal installation is sufficient to run the Aleri Streaming Platform Server. Additional packages must be installed in order to run Aleri Studio, because Aleri Studio requires a functioning X-Windows environment.

See [Section A.1, “Additional Packages for Linux”](#) for a list of extra packages that may be needed for each supported Linux distribution.

## 2.2. System Requirements for Solaris

Hardware Requirements for Solaris:

- Processors: 2 x 64-bit Ultra-Sparc(II,III,IV or IV+) CPU; Sparc v9 architecture compatible with VIS Instruction set.
- X86 Processor: one or more Intel or AMD CPU's (64 bit only)
- Memory: Recommended 2 GB RAM
- Disk: 1 GB recommended for installation. Amount of disk space required is directly proportional to the amount of persisted stream data. For the persistent database, the disk subsystems (array stripe set) should be fast and fronted by a memory cache for any performance testing or production use.



### **NOTE:**

The hardware requirements can increase depending on the complexity, data volumes, concurrency requirements, and desired performance characteristics.

---

Software Requirements for Solaris:

In production settings, many systems administrators use a minimal installation of Solaris for security and other reasons. The minimal installation is sufficient to run the Aleri Streaming Platform Server. However, Additional packages must be installed in order to run Aleri Studio, because Aleri Studio requires a functioning X-Windows environment.

See [Section A.2, “Additional Packages for Solaris”](#) for a list of extra packages that may be needed for each supported Solaris configuration.

## 2.3. Preparing For Installation

Before you start the installation process, make sure you have the following:

- *The Aleri Streaming Platform package and License Key*

If you do not already have the Aleri Streaming Platform package and License Key , go to <http://www.aleri.com> and apply to download them. The downloadable License Key enables the Aleri Streaming Platform for a 30-day evaluation period.

Contact Aleri at <http://www.aleri.com/contact.html> to purchase the Aleri Streaming Platform with a full license.

Make a note of where each file is stored.



### NOTE:

From the download page, you can also download the Release Notes for the current release of the Aleri Streaming Platform, and a .pdf version of this Installation Guide..

If you have any problems downloading these files, contact Aleri at <[download.support@aleri.com](mailto:download.support@aleri.com)>.

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- *SYSLOG Enabled*

The Aleri Streaming Platform Server uses the SYSLOG feature for recording error and warning messages.

Make sure SYSLOG is installed and enabled on the server before you install the Aleri Streaming Platform.

- *Access to Root Privileges*

You will need *root* access to your system in order to set up the accounts used by the Aleri Streaming Platform, and to perform other setup tasks. Make sure you have *root* access before you go on.



### NOTES:

The *root* account should be used when preparing for the Aleri Streaming Platform installation, but not when installing the Aleri Streaming Platform package. Installing the Aleri Streaming Platform as *root* will impair access for non-root accounts.

Follow the instructions in [Section 2.5, “Installing the Aleri Streaming Platform Package”](#) to install the package correctly.

---

## 2.4. Setting Up Aleri Streaming Platform User Accounts and Directories

Follow these steps to set up the accounts and directories used by the Aleri Streaming Platform, and to set up the system for Aleri Streaming Platform user accounts.



---

**NOTE:**

For best performance and ease of installation, it is recommended that you use the user and group names specified in the instructions.

---

1. Log in to the server as *root*.
2. Create a group for the Aleri Streaming Platform (the group name *asap* is recommended):

```
# /usr/sbin/groupadd asap
```

3. Create a user account in whose home directory the Aleri Streaming Platform will be installed (recommended name *aleri*, recommended location */home*), and assign the account to the group *asap*:

```
# /usr/sbin/useradd -m -d /home/aleri -g asap -s /bin/bash  
-c "Aleri Streaming Platform" aleri
```

4. Create a group (*dev*) for all Aleri Streaming Platform developers and users:

```
# /usr/sbin/groupadd dev
```

5. Create an account for a Aleri Streaming Platform developer or user (for example, *aleriusr*), and assign the account to the group *dev*:

```
# /usr/sbin/useradd -m -d /home/aleriusr -g dev \  
-s /bin/bash -c "Aleri Developer" aleriusr
```

6. Set the password, permissions and home directories for the Aleri home account and the user account, as follows:

```
# /bin/chmod g+rx /home/aleri  
# /bin/chmod o+rx /home/aleri  
# /bin/chmod g+rx /home/aleriusr  
# /bin/chmod o+rx /home/aleriusr
```

7. Add the user account to the *asap* group:

```
# /usr/sbin/usermod -G asap aleriusr
```



---

**TIP:**

If the setgid bit on a directory is set to **g+s** using files created in that directory will have their group set to the directory's group. For example, executing the following command:

```
# /bin/chmod g+s /home/aleri/platformFiles
```

---

creates and saves all files in the `/home/aleri/platformFiles` directory to belong to the group `asap`, which makes them accessible to all developers and users belonging to this group.

---

## 2.5. Installing the Aleri Streaming Platform Package

Follow these steps to install the Aleri Streaming Platform:

- Login to the server as `aleri`.
- Copy the Aleri Streaming Platform distribution package and installation script to the same home directory (`/home/aleri`).
- Make the installation script executable:

```
$ chmod +x install.sh
```

- Execute the Aleri Streaming Platform installation script as follows:

```
install.sh -d <INSTALL_DIR> -p <PCKG_LOC>
```

where `<INSTALL_DIR>` is the absolute path to the directory in which you want to install the Aleri Streaming Platform software and `<PCKG_LOC>` is the absolute path and filename of the distributions package.

An example using the filename of a v2.1 distribution file:

```
$ ./install.sh -d /home/aleri -p /home/aleri/Platform_v2.1_r5411_x86_64.tar.gz
```

This will find the package in `/home/aleri`, and install the Aleri Streaming Platform software in below the directory `/home/aleri`.



### NOTE:

This example uses the path and filename of the distribution file for Release 2.1. Use the absolute path and filename of the current version of the distribution file when executing the script in your environment.

---

- Follow the prompts to install the software.

### 2.5.1. What the Installation Script Does

As the installation script runs, it does the following:

1. Checks for the required packages. If the package version is different, **install.sh** warns about the package's version. If required package is not installed, **install.sh** gives you the option to exit the installation process.

See [Section 2.5.2, “Installation Script Usage”](#) for instructions on bypassing the package check.

2. Prompts you to continue the installation.
3. Prompts you for the path to the directory to be used as workspace for the Aleri Studio.
4. Prompts you for the path to the directory to be populated with Aleri Studio examples.
5. Prompts you for the path to the License Key file. If you do not have a License Key, the script displays a message with information about obtaining this file.

See [Section 2.5.2, “Installation Script Usage”](#) for instructions on suppressing the License Key prompt.

6. Unpacks and installs the Aleri Streaming Platform package.
7. Creates a `platform.conf` file in the `INSTALL_LOC/aleri/platform/2.4` directory. This file consists of shell environment variable settings and path definitions like the following:

```
PLATFORM_HOME=/home/gaspar/AleriStudioTesting/Rel2.4/aleri/platform/2.4
#LD_LIBRARY_PATH_64=$LD_LIBRARY_PATH_64:$PLATFORM_HOME/lib
#LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$PLATFORM_HOME/lib
PATH=$PATH:$PLATFORM_HOME/bin
ALERI_EXAMPLES_HOME=/home/gaspar/AleriStudioTesting/Rel2.4
export LD_LIBRARY_PATH LD_LIBRARY_PATH_64 PLATFORM_HOME ALERI_EXAMPLES_HOME
```



## NOTE:

The above example shows what `platform.conf` would look like if you followed the preceding instructions exactly. The content of your `platform.conf` will be different if you use a different username or install the Aleri Streaming Platform in a different directory.

All user accounts which launch the Aleri Streaming Platform should include the contents of your `platform.conf` file in their `$HOME/.bashrc` file, or `.profile` file on Solaris.

---

8. Creates certificate files under `INSTALL_LOC/aleri/platform/2.2/etc/keys` (replace 2.2 with the current version number)
9. Creates example files are under `INSTALL_LOC/aleri/platform/2.2/examples/applications` (replace 2.2 with the current version number)

## 2.5.2. Installation Script Usage

The usage of installation script is as follows:

```
USAGE: ./install.sh [-d <INSTALL_LOC>] [-p <TAR_FILE_LOC>]
USAGE: ./install.sh [-d <INSTALL_LOC>] [-p <TAR_FILE_LOC>] [-L <LICENSE_FILE>]
USAGE: ./install.sh [-d <INSTALL_LOC>] [-p <TAR_FILE_LOC>] [-L <LICENSE_FILE>] \
[-f] [-s] [-w <STUDIO_WORKSPACE_DIR>] [-x <STUDIO_EXAMPLE_DIR>]
```

Where

<INSTALL\_LOC> is the absolute path to the directory where the Aleri Streaming Platform will be installed.

<TAR\_FILE\_LOC> is the absolute path to the distribution package file.

<LICENSE\_FILE> is the absolute path to the license key file.

-f forces no checking for dependent packages.

-s skips the Confirmation Prompt for Aleri Streaming Platform Installation.

<STUDIO\_WORKSPACE\_DIR> is the absolute path to the Aleri Studio Workspace Directory.

<STUDIO\_EXAMPLE\_DIR> is the absolute path where Aleri Studio Examples are copied.

Additional Usage:

To install a new License Key, use:

```
USAGE: ./install.sh -L <LICENSE_FILE>
```

Where

<LICENSE\_FILE> is the absolute path to the license key file.



### NOTE:

Important: if you specify a directory for Studio examples with the -x <STUDIO\_EXAMPLE\_DIR> option, the directory you specify must already exist.

See the [Section 2.9.1, “Install a New License Key”](#) section for more information.

---

To see the range of options for the installation script, enter `./install.sh -h`.

## 2.6. Configuring User Accounts

The following procedure assumes that the accounts *aleri* and *aleriusr* mentioned earlier have been created (Release 2.2 is used here as an example).

Perform this procedure for every user account that will launch the Aleri Streaming Platform:

1. Log in to the server as *aleriusr*.
2. Locate the Aleri Streaming Platform `platform.conf` file.

This file is located in the directory where the Aleri Streaming Platform is installed.

3. Add the contents of the Aleri Streaming Platform `platform.conf` file to the user account's profile, as follows:

- *Linux environment*

Add the lines to the account's `.bashrc` file.

- *Solaris environment*

Add the lines to the account's `.profile` file.

4. Create the following test directories under the user account's home directory:

```
$ mkdir $HOME/testPlatform
```

```
$ mkdir $HOME/testPlatform/data
$ mkdir $HOME/testPlatform/output
$ mkdir $HOME/testPlatform/store
```

## 2.7. Configuring the Aleri Streaming Platform Authentication

You can configure the Aleri Streaming Platform for authentication, i.e., validate user information on sign-in. As of Release 2.4 of the Aleri Streaming Platform, you can also choose to start the server without authentication (using the “-r” option).

Two modes of authentication are possible: PAM and RSA authentication.

### 2.7.1. Configure the Aleri Streaming Platform for PAM Authentication

One of the two methods that client applications can use to authenticate to the Aleri Platform server relies on the Pluggable Authentication Module (PAM) package found in Linux and Solaris.

In PAM authentication, client applications connecting to the Aleri Platform server through the Command and Control interface, the Gateway interface, or the SQL Query interface must supply a user name and password before they can issue commands or requests. The Aleri Platform server uses PAM to verify that the password is correct. It is up to the administrator to specify whether this password check should be made against the UNIX password file, an LDAP server, or a NIS system. The process for configuring PAM authentication the Linux and Solaris platform is shown below.

#### 2.7.1.1. PAM Configuration on Linux

To configure authentication on Linux, log in as *root* and create a new file `/etc/pam.d/sp`. The contents of the file will depend on the kind of authentication required.

- No Authentication

For no authentication, the content of the file `/etc/pam.d/sp` should be:

```
auth required pam_permit.so
auth required pam_warn.so
```

The second line tells the system to log authentication attempts to the standard syslog file.

- UNIX Password Authentication

For UNIX Password Authentication, the content of the file `/etc/pam.d/sp` should be:

```
auth required pam_unix.so
```

- LDAP Authentication

For the LDAP Authentication, the content of the file `/etc/pam.d/sp` should be:

```
auth required pam_ldap.so
```

#### 2.7.1.2. PAM Configuration on Solaris 10



To configure PAM on Solaris 10, log in as *root* and add following lines to the end of the `/etc/pam.conf` file.

- No Authentication

For no authentication, add following lines at the end of the file:

```
#
# Support for Aleri Platform
#
sp auth required pam_sample.so always_succeed
```

- UNIX Authentication

For UNIX authentication, add following lines at the end of the file:

```
#
# Support for Aleri Platform
#
sp auth required pam_authtok_get.so.1
sp auth required pam_unix_auth.so.1
```



### NOTE:

For Unix authentication, the file `/etc/shadow` must be readable by the user that starts the Aleri Platform server.

---

- LDAP Authentication

For LDAP authentication, add following lines at the end of the file:

```
#
# Support for Aleri Platform
#
sp auth required pam_ldap.so
```

## 2.7.2. Configure the Aleri Platform server for RSA Authentication

The Aleri Platform server can also be configured for RSA authentication, which uses public and private keys instead of passwords. You can generate the public key file and a private key files using an **openssl** utility. The public key is copied to a location for the Aleri Platform server. When a client application connects to the Aleri Platform server, it sends a user name and a special string encrypted with the private key. The server then checks the signature using the public key file.

### 2.7.2.1. RSA Key Generation

RSA keys are generated using the **openssl** utility (provided with the Aleri Streaming Platform distribution).

Example: to generate RSA keys for a user named *alериusr* (assuming that the Aleri Streaming Platform has been installed in the directory `/home/aleri`) execute the following two commands:

```
/home/aleri/bin/openssl genrsa 2048 > aleriusr.private
```

```
/home/aleri/bin/openssl rsa -inform PEM -outform PEM \  
-pubout < aleriusr.private > aleriusr
```

**NOTE:**

The name of the public key file (*aleriusr* in this example) should be the same as the user name; the private key file (*aleriusr.private* in this example) can have any name.

---

### 2.7.2.2. RSA Key conversion for Java

To perform RSA authentication from Java client applications (including those Java client applications using the Java Pubsub API), convert the private RSA key file (generated in the example above) into a PKCS8 DER formatted file, using the following command:

```
/home/aleri/bin/openssl pkcs8 -in aleriusr.private -nocrypt -topk8 \  
-outform DER -out aleriusr.private.der
```

Copy the `aleriusr.private.der` file created by this command onto the client computer that will run the Java client application attempting RSA authentication against the Aleri Streaming Platform.

In addition, Java client applications that perform RSA authentication against the Aleri Streaming Platform require the "Bouncy Castle" encryption utility (see [Section 2.7.2.4, "Startup of RSA Client-Side Utilities"](#) for the installation details).

### 2.7.2.3. Server Configuration

The server executables (**sp**, **sp-opt**, **sp-server**) have an extra flag, `-k` to allow the user to specify a directory that contains the public key files. The public keys created by users in the RSA Key Generation step must be copied to this directory.

Example: to enable *aleriusr* to use RSA authentication:

1. Move the public key file `aleriusr` to the directory `/home/aleri/etc/keys/rsa` .
2. Start the server with the command

```
sp -f config.XML -d 7 -k /home/aleri/etc/keys/rsa
```

### 2.7.2.4. Startup of RSA Client-Side Utilities

Each of the major client executables (**sp\_cli**, **sp\_cnc**, **sp\_convert**, **sp\_histexport**, **sp\_query**, **sp\_subscribe**, **sp\_upload**) accept an optional flag `-k` to allow you to specify the location of the private key file. For example,

```
sp_cli -c aleriusr: -k /home/aleri/aleriusr.private
```

tells the server that the private key file for the user *aleriusr* is located in directory `/home/aleri/aleriusr.private`. The password after the colon following the `-c` flag can be any string. The client encrypts a special string using the private key, and sends it along with the user name to the Aleri Platform server. The server finds the public key with the same user name in the directory specified with its `-k` flag. If the string is decrypted successfully, the server grants access to the user.

**NOTE:**

The executable **sp\_query** behaves differently than other clients. If RSA authentication has been enabled on the Aleri Platform server with the `-k` flag, then **sp\_query** must also use RSA authentication via the `-k` flag. However, for the other clients, one may still authenticate using PAM authentication.

---

In order to enable RSA authentication for a Java client application, you need a `.jar` file that contains the Bouncy Castle provider. This is a freely available utility that implements cryptographic algorithms (in this case, for Java). This file must be installed in the Java environment that will be used to launch the client application.

To do this:

1. Locate the `./jre/lib/security/java.security` file in the Java environment that will be used to launch the client application.
2. Open the `java.security` file for editing, and scroll down in the file until you get to the group of security providers. The group of providers typically look as follows,

```
#
# List of providers and their preference orders (see above):
#
security.provider.1=sun.security.provider.Sun
security.provider.2=com.sun.net.ssl.internal.ssl.Provider
security.provider.3=com.sun.rsa.jca.Provider
security.provider.4=com.sun.crypto.provider.SunJCE
```

The list of security providers may be different with more or fewer `security.provider` entries depending upon your environment.

3. Append the following Bouncy Castle to the end of the provider group as follows:

```
security.provider.N=org.bouncycastle.jce.provider.BouncyCastleProvider
```

Where `N` is the next number in the sequence. For example, given the security provider list shown above, `N` would be set to 5.

**NOTE:**

Don't be tempted to move the Bouncy Castle entry up in the list. Simply append it to the end of the existing list.

---

The Bouncy Castle third party provider implementation is contained within the `bcprov-jdk14-134.jar` file. This jar file must be specified on the classpath used to run the java client application attempting RSA authentication with the Aleri Streaming Platform. If the Bouncy Castle third party provider is not installed properly, and/or the `bcprov-jdk14-134.jar` file is not found at run time, the java client application throws the following exception:

```
java.security.NoSuchProviderException: no such provider: BC
at java.security.Security.getEngineClassName(Unknown Source)
at java.security.Security.getImpl(Unknown Source)
```

```
at java.security.KeyFactory.getInstance(Unknown Source)
```

## 2.8. Testing the Aleri Streaming Platform Installation

Follow this procedure to make sure that the Aleri Streaming Platform has installed correctly. You will use one of the example data models for this test, namely the file

```
$PLATFORM_HOME/examples/models/primitives/expiry/expiry.xml
```



### NOTE:

If you wish to use authentication, be sure the Aleri Streaming Platform is completely installed and configured as in the previous section.

1. To launch the Aleri Streaming Platform, first pick two unused ports. Suppose these ports are 9100 and 9101.
2. Try to start the server with the example data model. To run the server in the background with Command and Control port number 9100, SQL Listener port number 9101, and without user authentication, do the following:

```
$PLATFORM_HOME/bin/sp_server \
  -f $PLATFORM_HOME/examples/models/primitives/expiry/expiry.xml \
  -c 9100 -q 9101 -r false &
```

To run the server using the same ports, but with user authentication via PAM, do the following:

```
$PLATFORM_HOME/bin/sp_server \
  -f $PLATFORM_HOME/examples/models/primitives/expiry/expiry.xml \
  -c 9100 -q 9101 -r true &
```

To run the server using the same ports, but in encrypted mode, where the directory containing the SSL keys and certificates is `$PLATFORM_HOME/etc/keys`, do the following:

```
$PLATFORM_HOME/bin/sp_server \
  -f $PLATFORM_HOME/examples/models/primitives/expiry/expiry.xml \
  -c 9100 -q 9101 -e $PLATFORM_HOME/etc/keys
```

3. Use the `sp_cli` utility with the appropriate user name and password (any user name and password in the first case) to shut down the Aleri Streaming Platform.

```
$PLATFORM_HOME/bin/sp_cli -p 9100 -c aleriusr[:password] stop
```

### 2.8.1. Troubleshooting

After installing the Aleri Streaming Platform, you may get an error message containing the following text when you try to start up the Aleri Platform server:

```
LICENSE ERROR-100: Could not read the license.key file, make
sure the PLATFORM_HOME environment variable is set, and the
license.key file exists within the $PLATFORM_HOME/etc directory.
```

```
Error = 1
```

This message indicates that the license key has not been installed, or has been installed in the wrong place. See [Section 2.5, “Installing the Aleri Streaming Platform Package”](#) for instructions on how to install the License Key correctly.

## 2.9. Extending the Aleri Streaming Platform Installation

After you have successfully installed the Aleri Streaming Platform, you can extend the installation as detailed in this section.

### 2.9.1. Install a New License Key

If you download the Aleri Streaming Platform license key after installing the Aleri Streaming Platform, or buy a full license key after installing and running the 30-day evaluation version, you can follow this procedure to install the new License Key.

1. Verify the following:
  - The Aleri Streaming Platform has been properly installed.  
(See [Chapter 2, \*Installation Guide for Linux and Solaris\*](#) for installation instructions.)
  - The *aleri* user account has been prepared for use  
(See [Section 2.6, “Configuring User Accounts”](#) for instructions.)
  - The new License Key file (`license.key`) has been downloaded, and you know the absolute path to the file.
2. Login to the *aleri* user account.
3. Execute the Aleri Streaming Platform installation script as follows:

```
./install.sh -L <LICENSE_FILE>
```

Where

<LICENSE\_FILE> is the absolute path to the license key file.

---

# Chapter 3. Installation Guide for Windows

## 3.1. System Requirements for Windows

The following is the list of minimum hardware requirement for installing the Aleri Streaming Platform and Aleri Platform Studio on a Windows computer:

- PC with 300 megahertz (MHz) or higher processor clock speed
- 512 megabytes (MB) of RAM or higher
- 100 megabytes of available hard disk space
- Super VGA (1024 x 768) or higher resolution video adapter
- Monitor Requirements:
  - Minimum: 15" to 17" single monitor, 1024 x 768 resolution
  - Recommended: 17" to 19" single monitor, 1280x1024 resolution
  - Ideal: More than 20" to 25" (dual or other), 1600x1200 resolution
- Keyboard and Microsoft mouse or compatible pointing device

Software Requirements for Windows:

The Aleri Streaming Platform for Windows has been certified to run with the following versions of Microsoft Windows:

- Windows XP with Service Pack 2
- Windows 2003 with Service Pack 2

The Windows package for the Aleri Streaming Platform comes with default Java version 1.4.2 Revision 10 installed, but the user can also use any of the following versions of Java as well:

- Sun Java 2 Standard Edition, version 1.4.2\_08 for Microsoft Windows
- IBM 32-bit SDK for Windows, Java 2 Technology Edition, version 1.4.2SR1a
- Sun Java 2 Standard Edition 5.0 Update 2 for Microsoft Windows

## 3.2. Preparing For Aleri Streaming Platform Installation on Windows

Before you start the installation process, make sure you have the following:

- *The Aleri Streaming Platform package and License Key*



**NOTE:**

---

You can download the installation package without getting a license key. If you install the Aleri Streaming Platform package without a license key, you will be able to create data models using the Aleri Studio, but you will not be able to run those models unless you have access to a licensed Aleri Platform server instance on another computer. If you already have access to a working Aleri Platform server instance, you can download the Windows package in order to install the (freely available) Aleri Studio on a Windows computer.

See ??? for details about installing the Aleri Studio alone (without the server component).

---

The name of the distribution file for the Aleri Streaming Platform follows this format:

```
AleriPlatform_v<PLATFORM_VERSION>_r<RELEASE_NUM>_win32.exe
```

Where <PLATFORM\_VERSION> is the version number and <RELEASE\_NUM> is release number within this version.

The license key file will be named `license.key`.

Make a note of where each file is stored.

---



### NOTES:

From the download page, you can also download the Release Notes for the current release of the Aleri Streaming Platform.

If you have any problems downloading these files, contact Aleri at <download.support@aleri.com>.

---

- *User Account with Administrative Privileges*

To enable the Aleri Streaming Platform installation program to create the necessary files, subfolders and environment variables, you must run it from a user account with administrative privileges.

### 3.3. Installing the Aleri Streaming Platform on Windows

This section provides two separate sets of installation instructions. Use the most appropriate set for your situation, as follows:

- Go to [Section 3.3.1, “A “Clean Installation””](#) to install the Aleri Streaming Platform for Windows on a computer that has not had any previous version of the Aleri Streaming Platform for Windows installed on it.
- Go to [Section 3.3.2, “Installing Version 2.4 Over Version 2.3”](#) to upgrade a previous installation of the Aleri Streaming Platform for Windows to the current version.
- (Go to [Section 3.5, “Uninstalling the Aleri Streaming Platform on Windows”](#) to uninstall the Aleri Streaming Platform for Windows.)

Follow the steps in this section to install the Aleri Streaming Platform on a Windows computer.

---

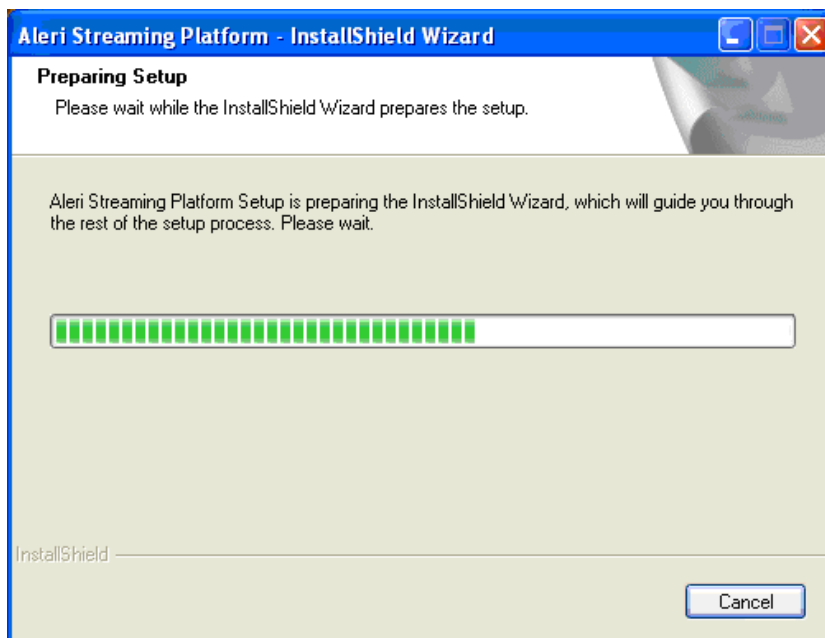
### 3.3.1. A “Clean Installation”

Follow these steps to install the current version of the Aleri Streaming Platform on a computer that does not have a previous version of the Aleri Streaming Platform installed.

1. Make sure that:
  - You have downloaded the installation package and license key, and you know the location of each file.
  - You have logged in to the Windows computer using a user account with administrative privileges.
2. Click the **Start** button, then select **Run**.

Browse to the Aleri Streaming Platform file and click **OK**.

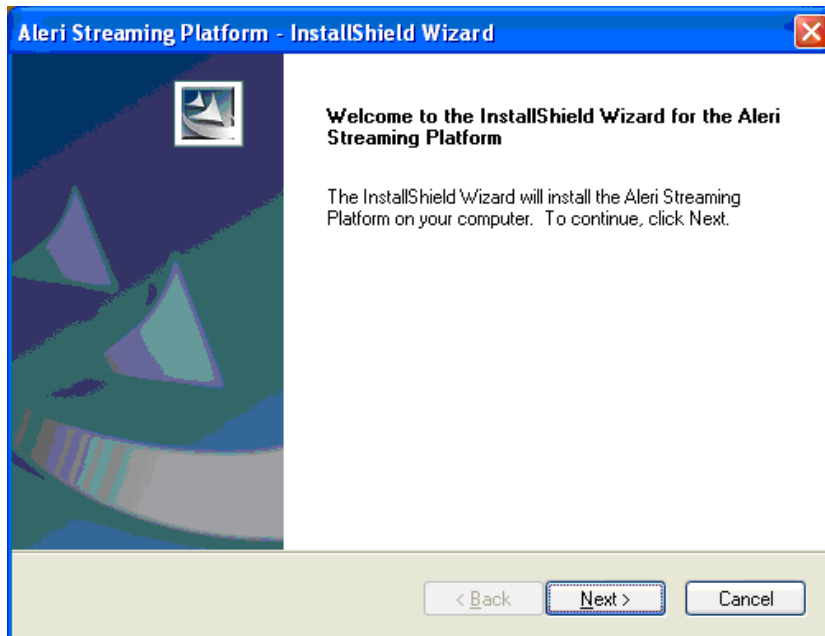
Result: the first screen of the **AleriPlatform - InstallShield Wizard** window appears.



The InstallShield wizard starts by scanning the computer to make sure it has enough resources for a successful installation.

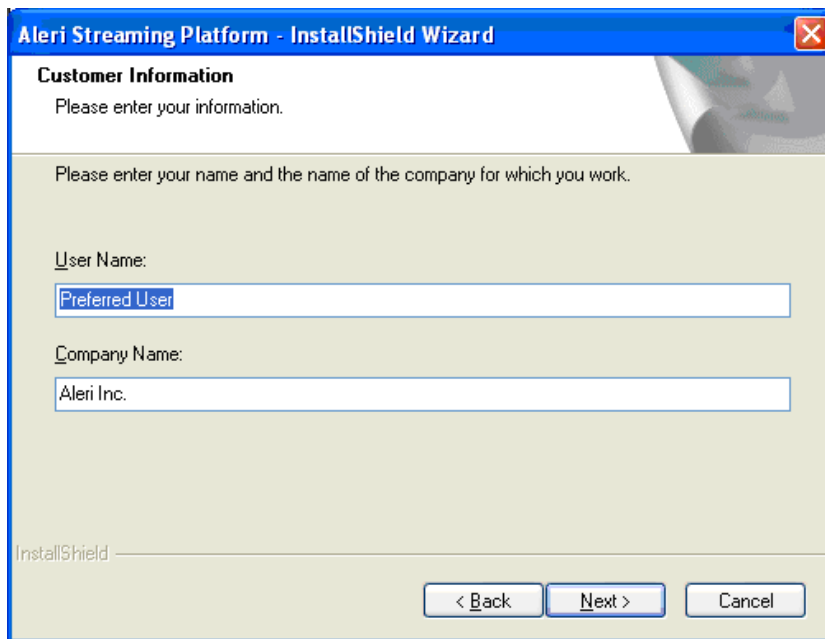
If the wizard determines that the computer is ready, it displays the "Welcome" screen:





3. Click **Next** to continue.

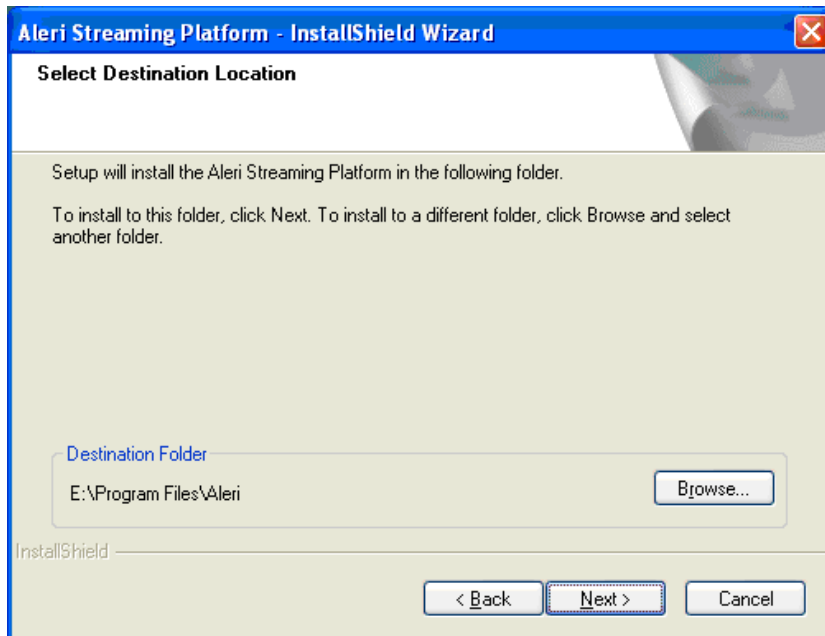
The **Customer Information** screen appears:



4. In these fields, enter your name and the name of your company.

Then click **Next** to continue.

The **Select Destination Location** window appears. The default destination is C:\Program Files\Aleri.



5. To choose a different Destination Folder, click **Browse...** and choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder you have chosen.

To accept the listed Destination Folder and continue, click **Next**.



### **NOTE:**

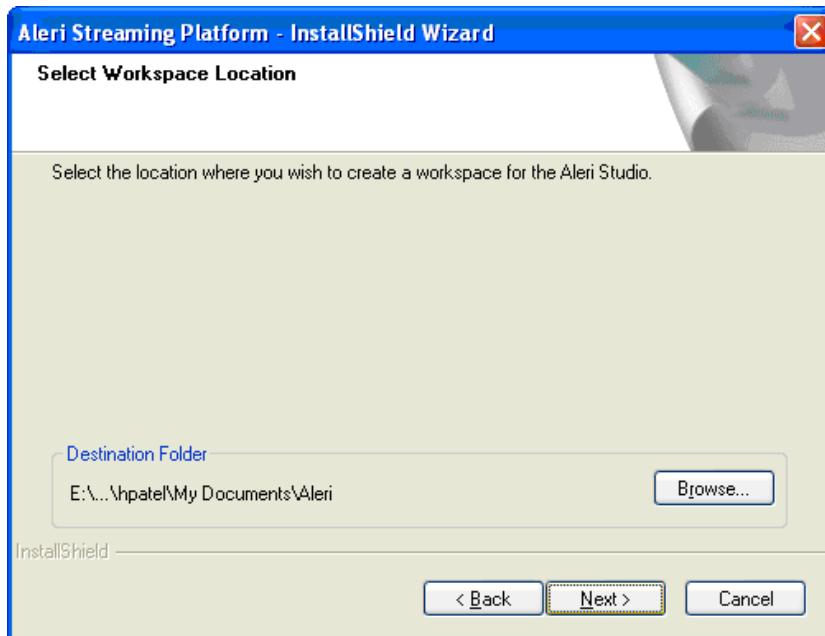
All the basic components of the Aleri Streaming Platform will be installed in the folder you select in this step. (Exceptions: example files and personal settings, whose location you choose in the next step.)

This folder is referred to in this Guide (and in all other Aleri documents) as *PLATFORM\_HOME*.

---

The **Select Workspace Location** screen appears, listing the folder *Aleri* under this user account's *My Documents* folder as the workspace for the Aleri Studio.

Your Workspace is where your user preferences and data models will be saved.



6. To choose a different workspace folder:

- Click **Browse...** And choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder you have chosen.



### NOTE:

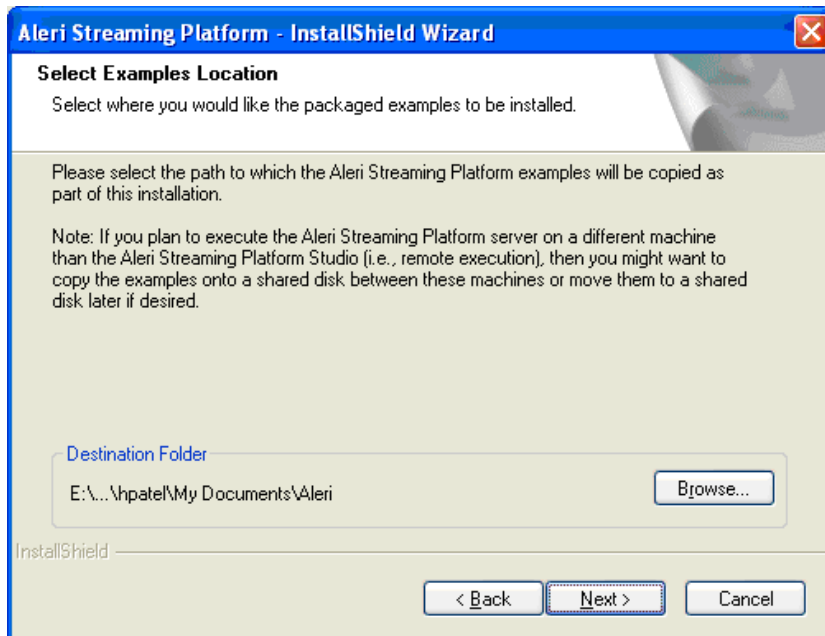
The defaults in this installation process set up the Aleri Streaming Platform for access by only one user account (the one being used to do the installation). If you intend to give other user accounts access to the Aleri Streaming Platform on this computer, you might want to set up the Studio workspace in some more general location.

See [Section 3.4.1, “Configure the Aleri Streaming Platform for Windows for Multiple Users”](#) for more information.

---

To accept the listed Destination Folder and continue, click **Next**.

The **Select Examples Location** screen appears.



The Aleri Streaming Platform is shipped with several examples that can help you get started with Aleri data model authoring. Each example includes:

- .XML and .sql versions of the example data model
- A Data Model diagram displayable in the Aleri Studio

The default location for the example files is the folder `Aleri` under the user account's `My Documents` folder.

7. To choose a different folder for the Aleri examples:

- Click **Browse...** And choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder you have chosen.

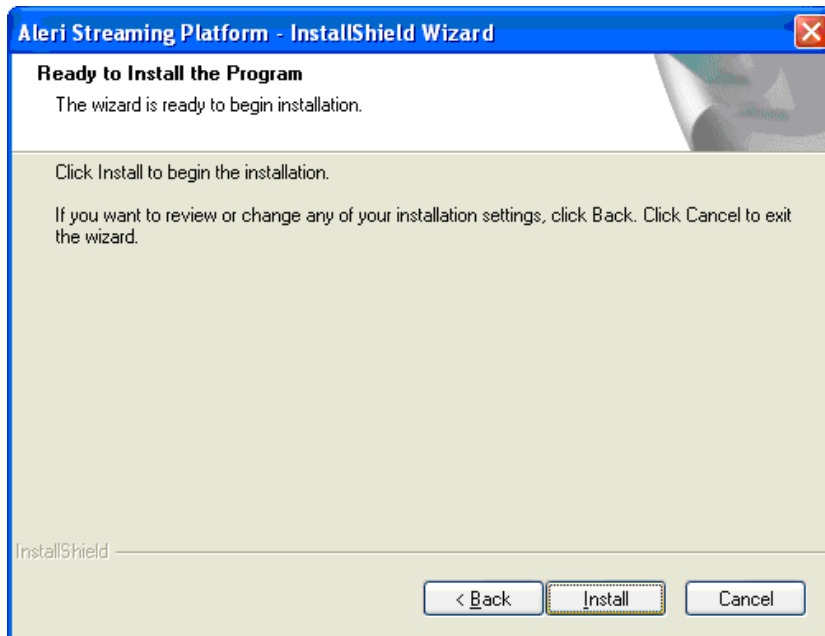


### NOTE:

If you plan to create models on this Windows computer and execute them on a different computer, you should choose a folder that is shared between these two computers, or make the folder sharable after you have finished this installation.

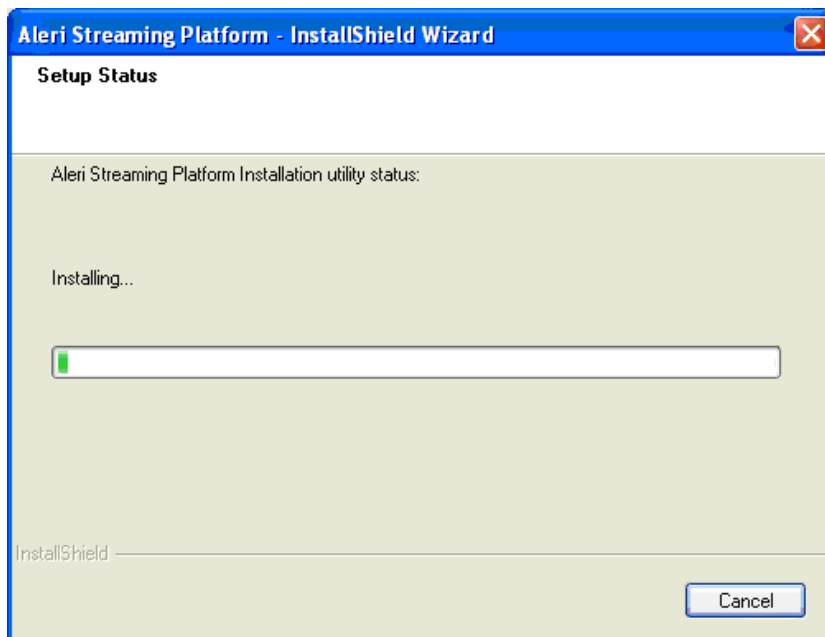
To accept the listed Destination Folder and continue, click **Next**.

The **Ready to Install the Program** screen appears.



8. Click the back-arrow button to review your choices, or click **Install** to proceed with the installation.

The **Setup Status** screen appears:

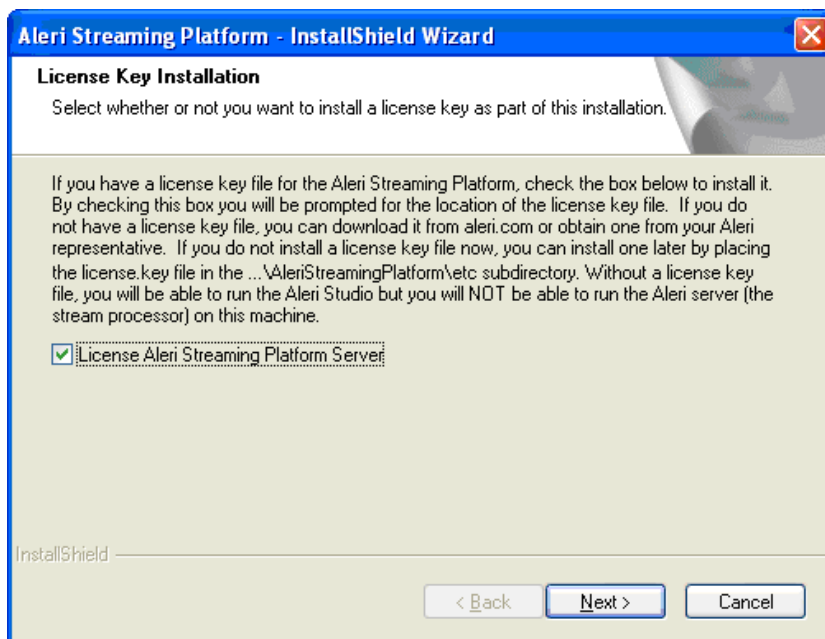


As the installation proceeds, the status bar fills in from left to right, and the names of the components being installed appear above the status bar.

After installing the software, the install program updates your system. This may take as long as 30 seconds.

The **License Key Installation** screen appears.

The text in this screen explains what the Aleri license key file is, how to get one, and what happens if you proceed without one.



9. Check the **License Aleri Streaming Platform Server** check box to tell the installation wizard to install the Aleri Platform server software on this computer (not just the Aleri Studio).



### NOTES:

- Check this box if you have downloaded the Aleri Streaming Platform evaluation distribution and the evaluation License Key.
- If you leave this box unchecked, the installation wizard will install only the Aleri Studio. You will be able to use the Aleri Studio to create data models, but you will not be able to execute a model unless you connect remotely to an instance of the Aleri Platform server running on another machine.
- If you only intend to use the Aleri Studio on this computer, leave this box unchecked. If you plan on getting a license key later, and running a complete Aleri Platform server installation on this computer, check this box. (If you do leave this box unchecked for this installation and get a license key for this computer later, you will have to reinstall the Studio and the Server components.)

[Section 3.4.2, “Install a New License Key on Windows”](#) contains instructions for installing a License Key after the main installation.

Click **Next** to continue.

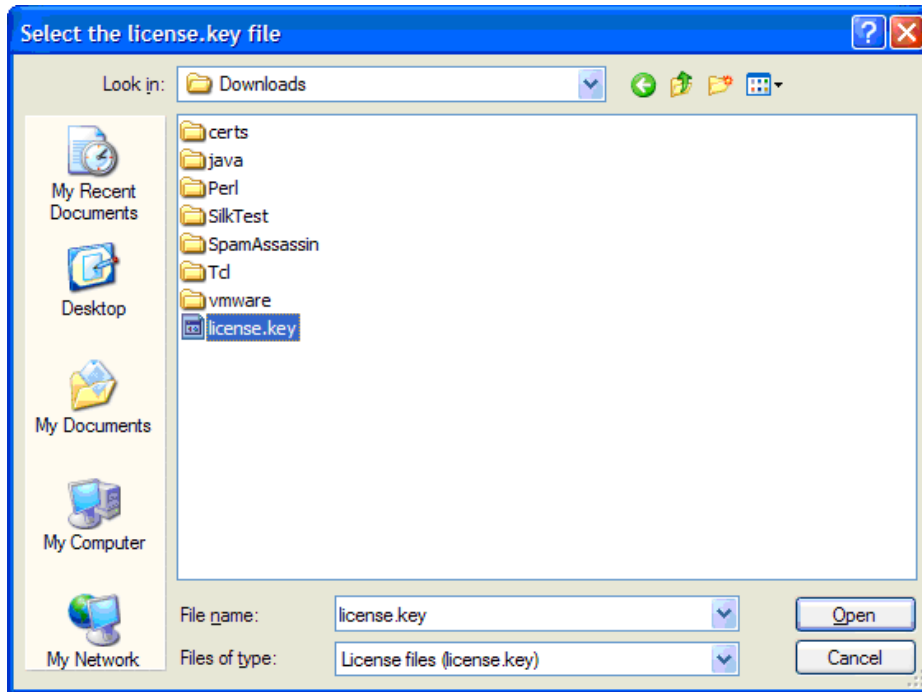
If you checked **License Aleri Streaming Platform Server** in the previous step, the **Select the license.key file** screen appears.



### NOTE:

Again, this screen will not appear if you did not check the **Enable Server Component** check box in the previous step. If you are only installing the Aleri Studio, go on to the next step.

---



10. Browse to `license.key` and click **Open**.

Result: The **Select the license.key file** screen disappears.

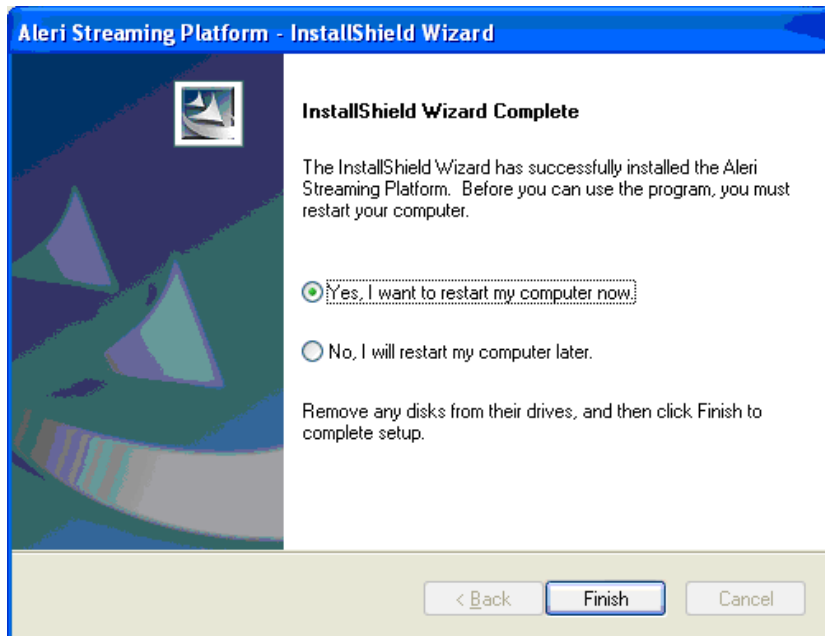
A dialog box pops up displaying the path and filename of the license key.

Click **OK** to continue.

A dialog box pops up with the message **File successfully copied**.

Click **OK** to continue.

The **InstallShield Wizard Complete** screen appears.



11. Choose whether to restart the computer immediately or wait until later.



### NOTE:

The Aleri Platform server will not run until after this computer has been restarted.

---

Click **Finish** to complete the installation.

Result: the **AleriPlatform - InstallShield Wizard** window closes.

### 3.3.2. Installing Version 2.4 Over Version 2.3

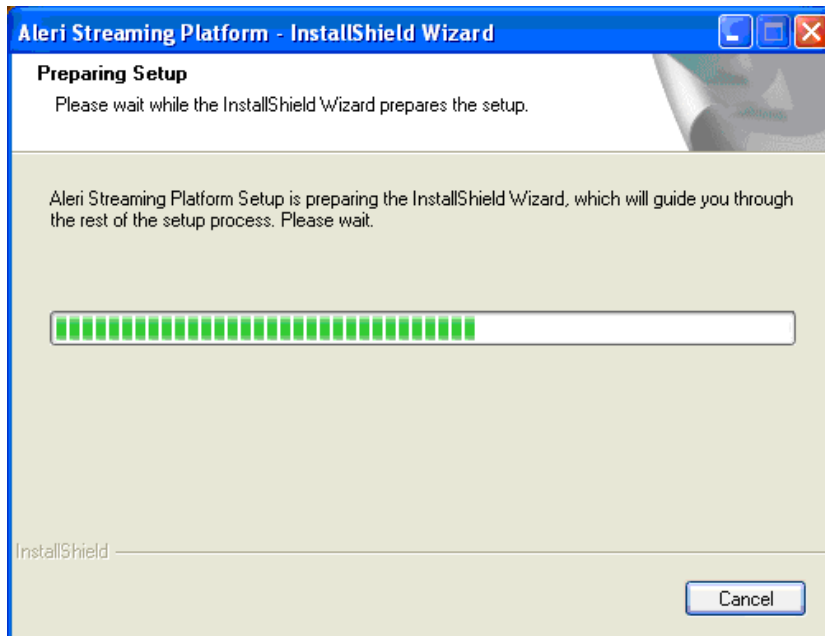
Follow these instructions to install the latest version of the Aleri Streaming Platform for Windows on top of a previous version. This is a two-stage process: you must uninstall the old version first, then install the new one.

1. Make sure that:
  - You have downloaded the installation package and license key, and you know the location of each file.
  - You have logged in to the Windows computer using a user account with administrative privileges.
2. Click the **Start** button, then select **Run**.

Browse to the Aleri Streaming Platform file and click **OK**.

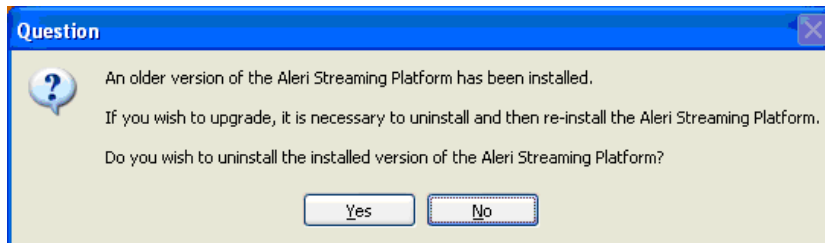
Result: the first screen of the **AleriPlatform - InstallShield Wizard** window appears.





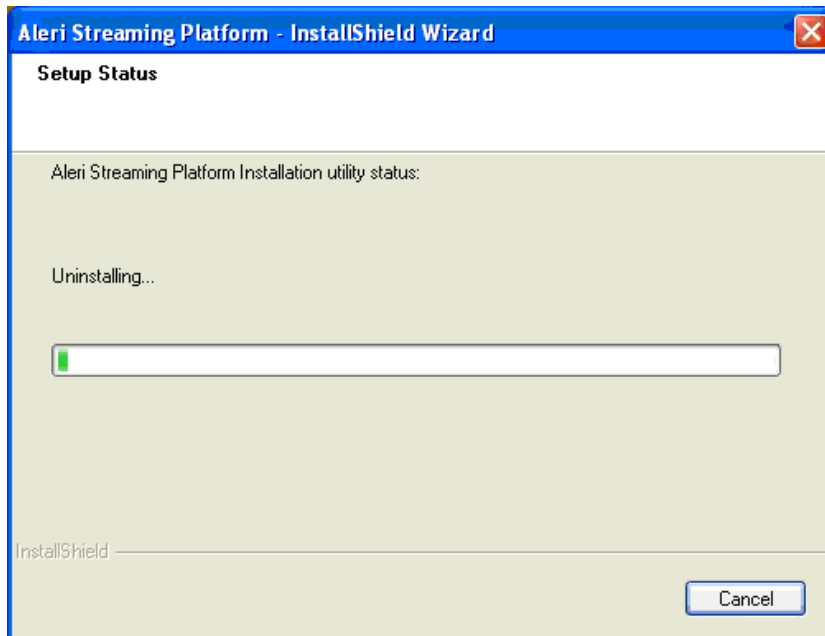
The InstallShield wizard starts by scanning the computer to make sure it has enough resources for a successful installation.

In this case, it finds the previous version of the Aleri Streaming Platform, and displays the **Question** dialog box as follows:

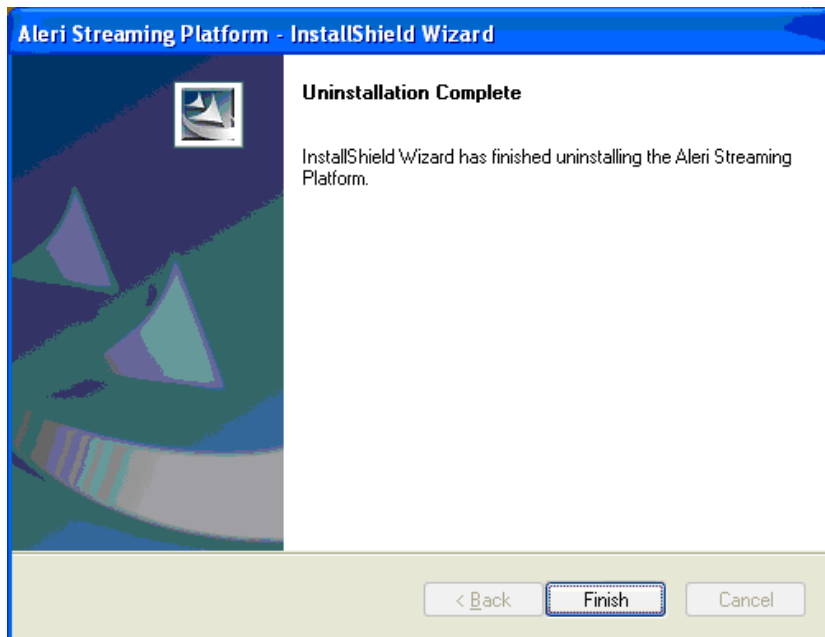


Click **No** to cancel the procedure, or click **Yes** to start uninstalling the previous version.

The **Setup Status** screen appears, featuring the message **Uninstalling...** and a progress bar that shows the progress of the installation.



Eventually, the **Uninstallation Complete** screen appears.



3. Click **Finish**.

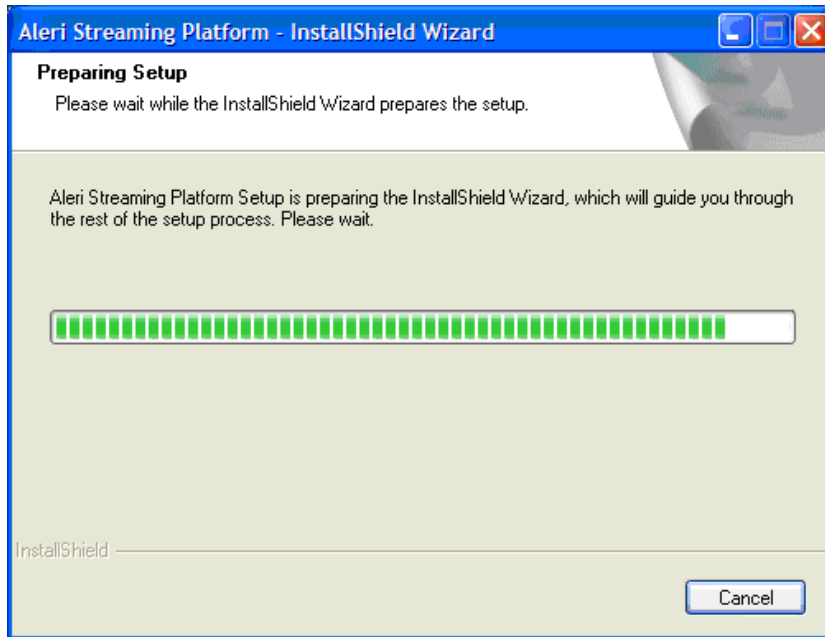
The **Aleri Streaming Platform - InstallShield Wizard** window disappears.

Start the same process to install the new version of the Aleri Streaming Platform.

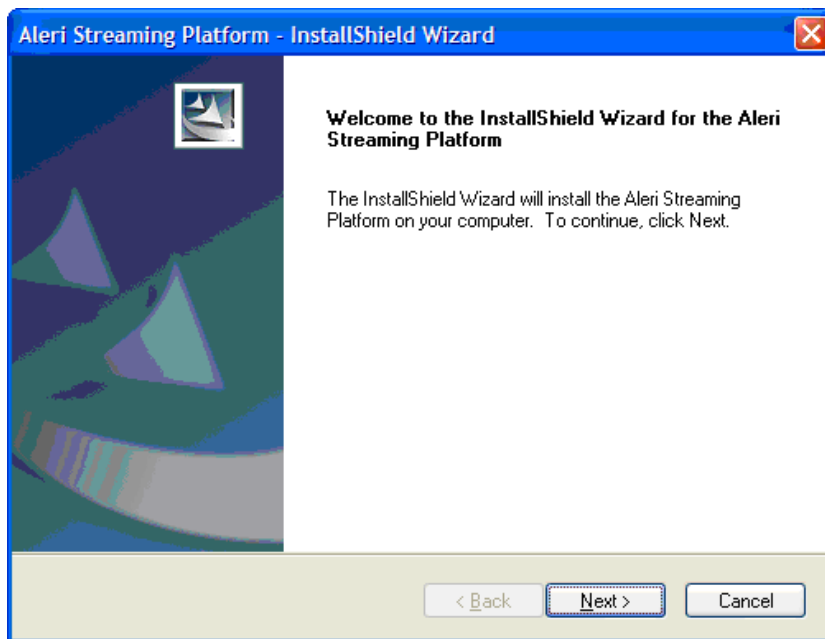
4. Click the **Start** button, then select **Run**.

Browse to the Aleri Streaming Platform file and click **OK**.

Result: the first screen of the **AleriPlatform - InstallShield Wizard** window appears again.

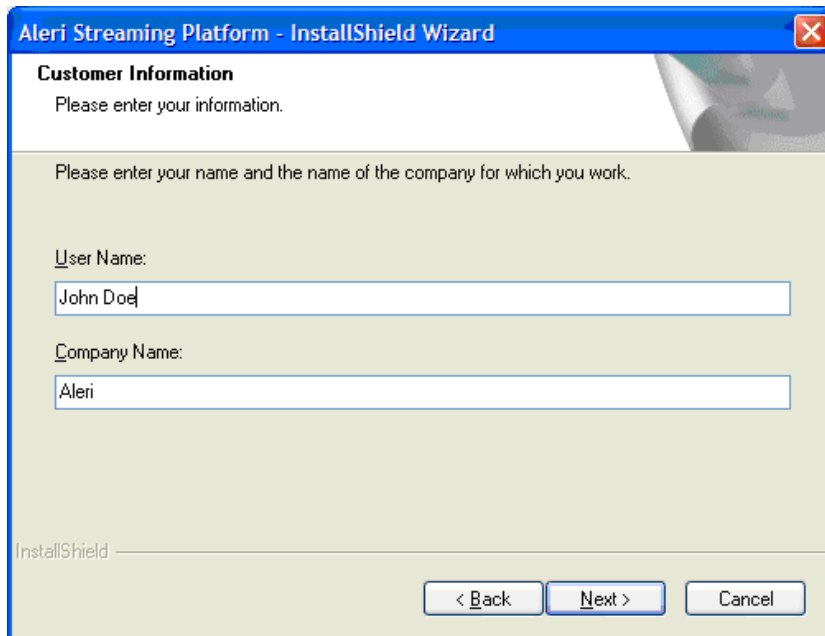


If the wizard determines that the computer is ready, it displays the "Welcome" screen:



5. Click **Next** to continue.

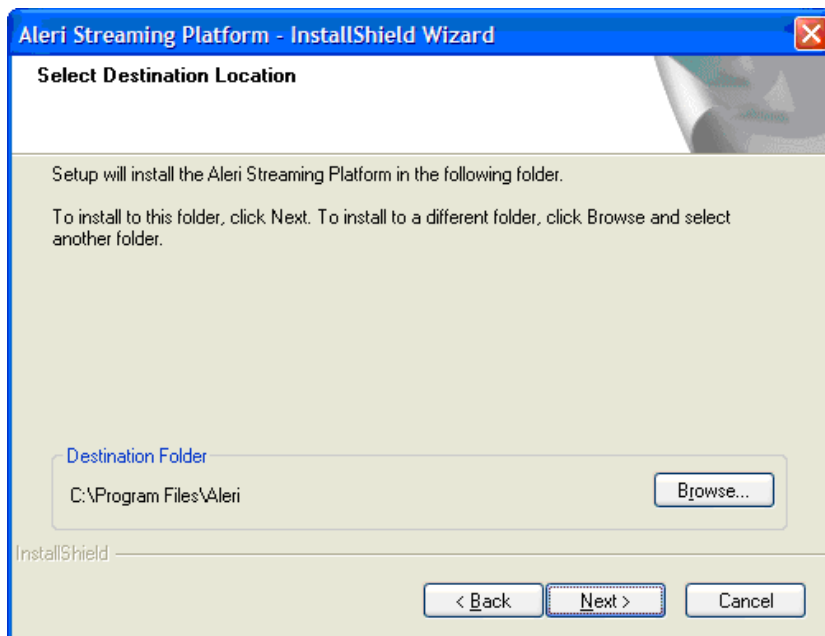
The **Customer Information** screen appears:



6. In these fields, enter your name and the name of your company.

Then click **Next** to continue.

The **Select Destination Location** window appears. The default destination is C:\Program Files\Aleri.



7. To choose a different Destination Folder, click **Browse...** and choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder

you have chosen.

To accept the listed Destination Folder and continue, click **Next**.



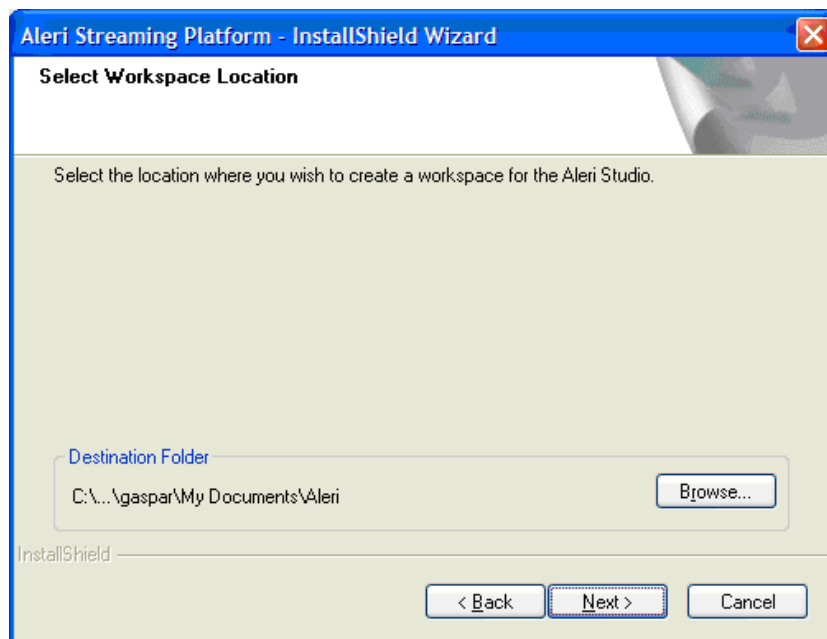
**NOTE:**

All the basic components of the Aleri Streaming Platform will be installed in the folder you select in this step. (Exceptions: example files and personal settings, whose location you choose in the next step.)

This folder is referred to in this Guide (and in all other Aleri documents) as *PLATFORM\_HOME*.

The **Select Workspace Location** screen appears, listing the folder *Aleri* under this user account's *My Documents* folder as the workspace for the Aleri Studio.

Your Workspace is where your user preferences and data models will be saved.



8. To choose a different workspace folder:

- Click **Browse...** And choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder you have chosen.



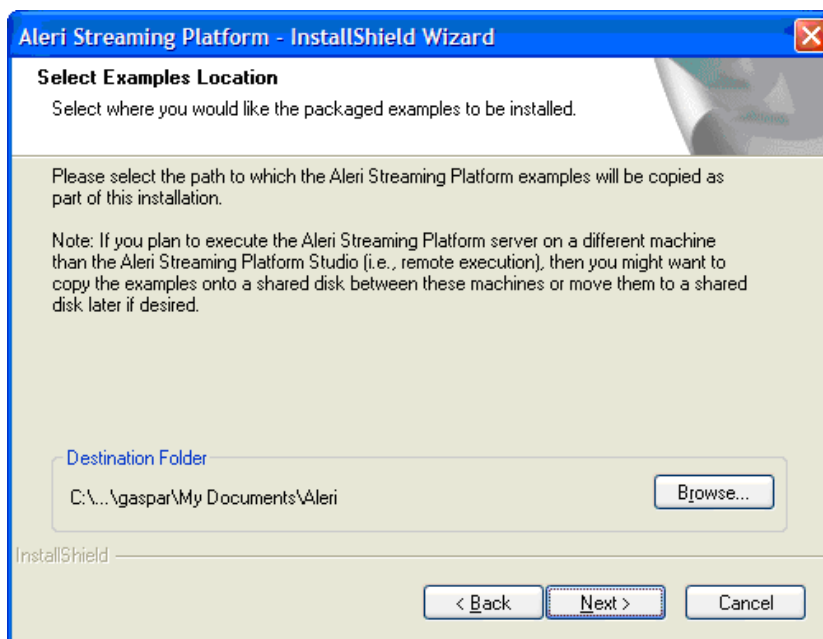
**NOTE:**

The defaults in this installation process set up the Aleri Streaming Platform for access by only one user account (the one being used to do the installation). If you intend to give other user accounts access to the Aleri Streaming Platform on this computer, you might want to set up the Studio workspace in some more general location.

See [Section 3.4.1, “Configure the Aleri Streaming Platform for Windows for Multiple Users”](#) for more information.

To accept the listed Destination Folder and continue, click **Next**.

The **Select Examples Location** screen appears.



The Aleri Streaming Platform is shipped with several examples that can help you get started with Aleri data model authoring. Each example includes:

- .XML and .sql versions of the example data model
- A Data Model diagram displayable in the Aleri Studio

The default location for the example files is the folder `Aleri` under the user account's `My Documents` folder.

9. To choose a different folder for the Aleri examples:

- Click **Browse...** And choose a different folder from the **Choose Folder** dialog box.

Result: After the **Choose Folder** dialog disappears, the **Destination Folder** box now lists the folder you have chosen.

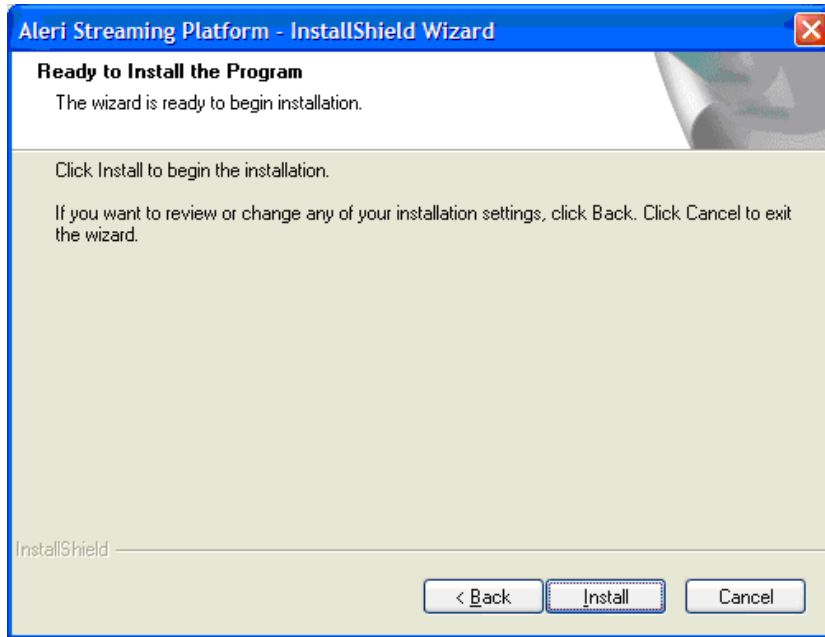


**NOTE:**

If you plan to create models on this Windows computer and execute them on a different computer, you should choose a folder that is shared between these two computers, or make the folder sharable after you have finished this installation.

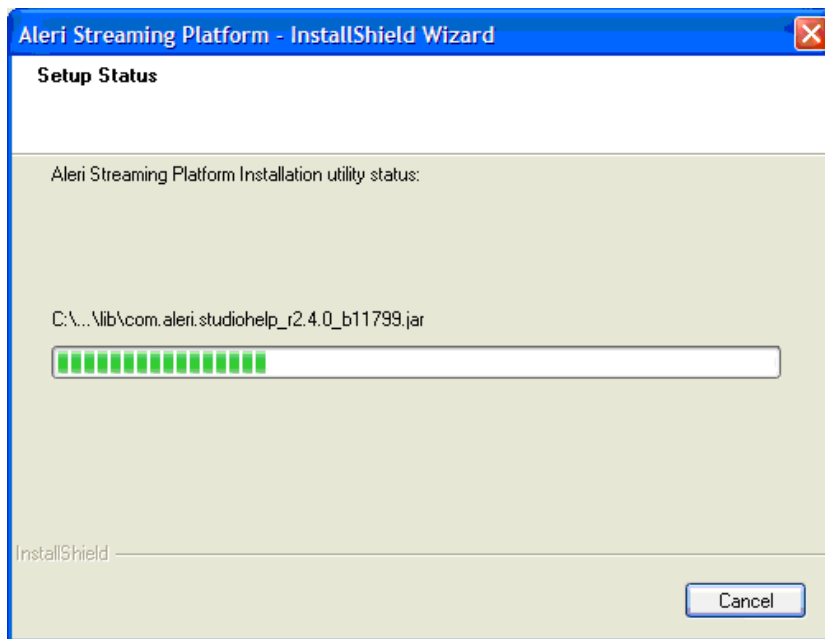
To accept the listed Destination Folder and continue, click **Next**.

The **Ready to Install the Program** screen appears.



10. Click the back-arrow button to review your choices, or click **Install** to proceed with the installation.

The **Setup Status** screen appears:

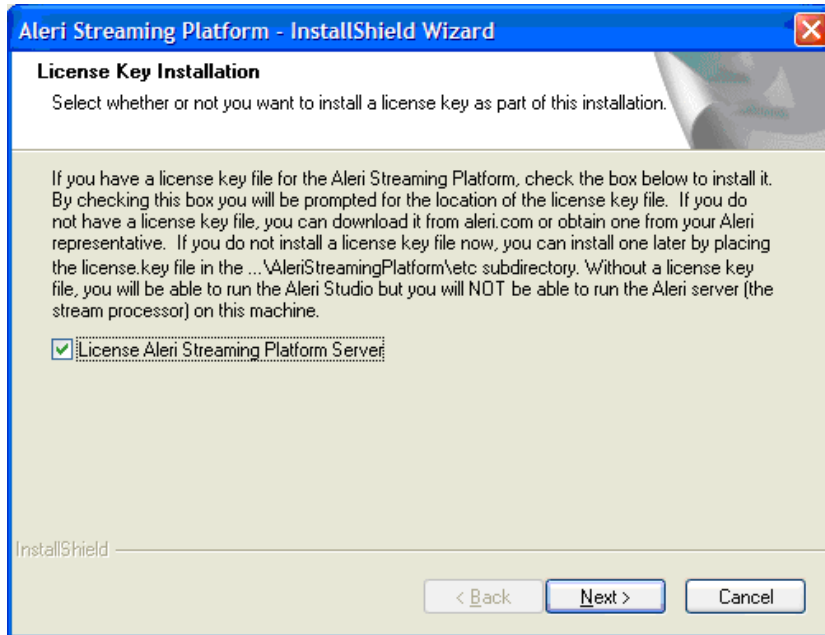


As the installation proceeds, the status bar fills in from left to right, and the names of the components being installed appear above the status bar.

After installing the software, the install program updates your system. This may take as long as 30 seconds.

The **License Key Installation** screen appears.

The text in this screen explains what the Aleri license key file is, how to get one, and what happens if you proceed without one.



11. Check the **License Aleri Streaming Platform Server** check box to tell the installation wizard to install the Aleri Platform server software on this computer (not just the Aleri Studio).



## NOTES:

- Check this box if you have downloaded the Aleri Streaming Platform evaluation distribution and the evaluation License Key.
- If you leave this box unchecked, the installation wizard will install only the Aleri Studio. You will be able to use the Aleri Studio to create data models, but you will not be able to execute a model unless you connect remotely to an instance of the Aleri Platform server running on another machine.
- If you only intend to use the Aleri Studio on this computer, leave this box unchecked. If you plan on getting a license key later, and running a complete Aleri Platform server installation on this computer, check this box. (If you do leave this box unchecked for this installation and get a license key for this computer later, you will have to reinstall the Studio and the Server components.)

[Section 3.4.2, “Install a New License Key on Windows”](#) contains instructions for installing a License Key after the main installation.

Click **Next** to continue.

If you checked **License Aleri Streaming Platform Server** in the previous step, the **Select the li-**

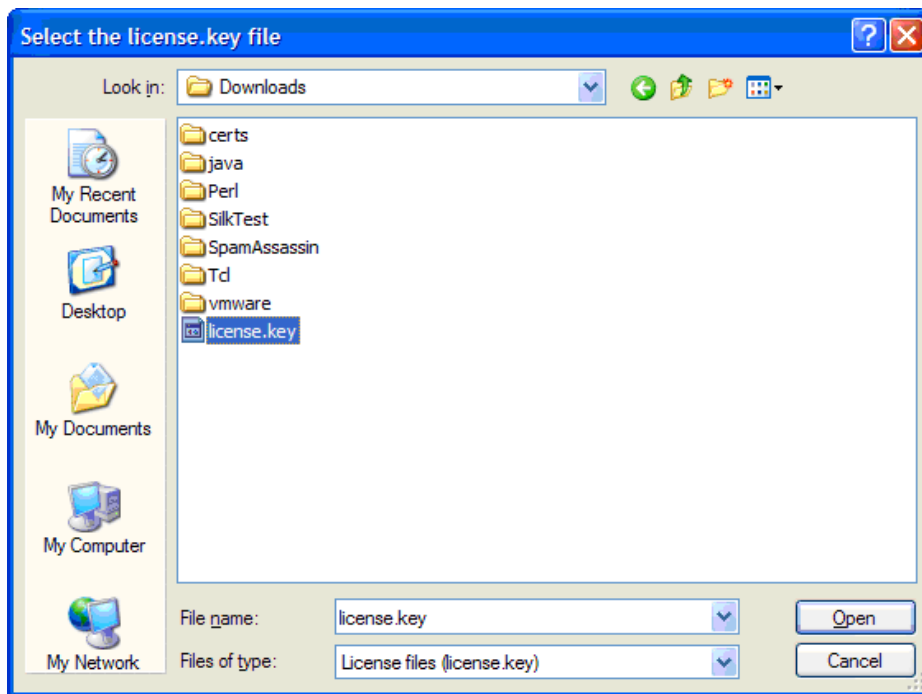


**cense.key** file screen appears.



**NOTE:**

Again, this screen will not appear if you did not check the **Enable Server Component** check box in the previous step. If you are only installing the Aleri Studio, go on to the next step.



12. Browse to `license.key` and click **Open**.

Result: The **Select the license.key file** screen disappears.

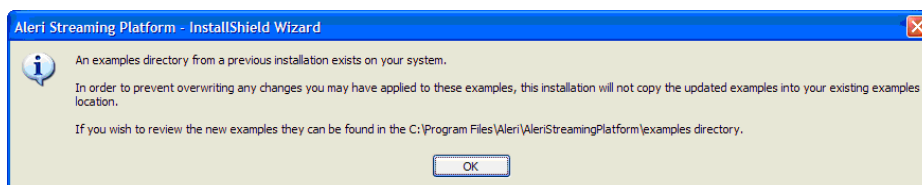
A dialog box pops up displaying the path and filename of the license key.

Click **OK** to continue.

A dialog box pops up with the message **File successfully copied**.

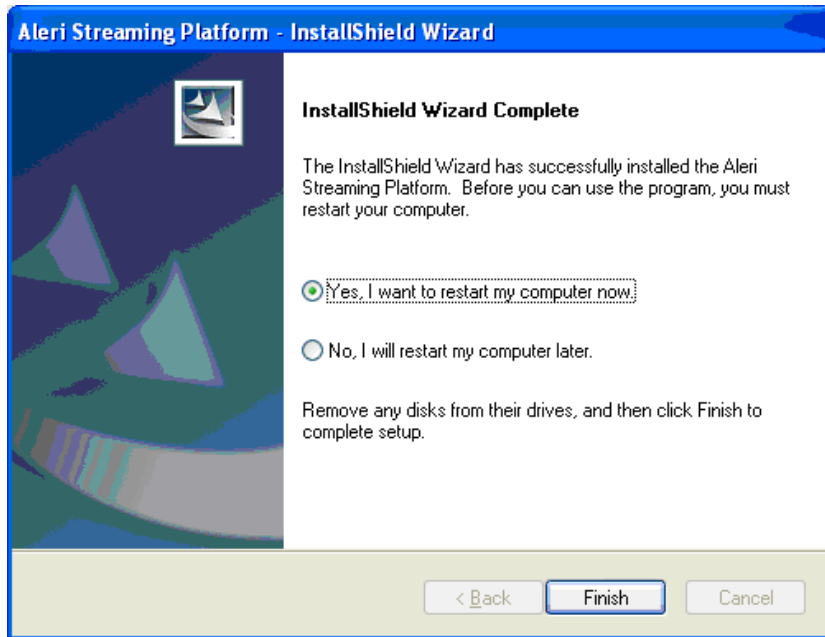
Click **OK** to continue.

At this point, the InstallShield Wizard detects the Examples folder from the previous installation on your computer, and displays the following dialog box:



13. Click **OK** to go on.

The **InstallShield Wizard Complete** screen appears.



14. Choose whether to restart the computer immediately or wait until later.



**NOTE:**

The Aleri Platform server will not run until after this computer has been restarted.

---

Click **Finish** to complete the installation.

Result: the **AleriPlatform - InstallShield Wizard** window closes.

### 3.3.3. What the InstallShield Wizard Does

As it works, the InstallShield Wizard for the Aleri Streaming Platform does the following:

- Unpacks the files contained in the distribution package
- Creates new folders and puts the new files in these folders
- Creates the following environment variables:

```
ALERI_EXAMPLES_HOME  
ALERI_PLATFORM_HOME  
ALERI_USER_HOME
```

- Adds support items to the Windows registry

As it works, the InstallShield Wizard keeps a log its activities.

### 3.3.4. Troubleshooting

After installing the Aleri Platform server and the Aleri Studio, starting the Aleri Studio, and loading or creating a data model, you may get an error message containing the following text when you try to start up the Aleri Platform server:

```
LICENSE ERROR-100: Could not read the license.key file, make
sure the PLATFORM_HOME environment variable is set, and the
license.key file exists within the $PLATFORM_HOME/etc directory.
Error = 1
```

This message indicates that the License Key has not been installed, or has been installed in the wrong place. See [Section 3.4.2, “Install a New License Key on Windows”](#) for instructions on how to install the License Key correctly.

## 3.4. Extending the Aleri Streaming Platform Installation on Windows

As installed, the Aleri Streaming Platform runs on this Windows computer for one user only.

The following section provide instructions and information for extending the basic installation.

### 3.4.1. Configure the Aleri Streaming Platform for Windows for Multiple Users

As installed, the Aleri Streaming Platform on Windows only runs properly for the user account that installed it. The main reason for this is that the environment variables used by the Aleri Streaming Platform and by Aleri Studio are only defined for that user account.

To give a different user account access to the Aleri Streaming Platform installation on a Windows computer:

- Add the environment variables `ALERI_EXAMPLES_HOME`, `ALERI_PLATFORM_HOME` and `ALERI_USER_HOME` to the environment of the new user account.
- Convert the folder being used as the Aleri Studio workspace to a shared folder, and make sure the new user account has access to it.

### 3.4.2. Install a New License Key on Windows

If you installed both the Server and Studio components on your Windows computer, but did not install the license key at that time, follow these instructions to activate the server component on this computer.

1. Obtain a License Key for the Aleri Streaming Platform. See [Section 3.2, “Preparing For Aleri Streaming Platform Installation on Windows”](#) for detailed instructions.
2. Save the License Key to the folder `PLATFORM_HOME\AleriStreamingPlatform\etc`, where `PLATFORM_HOME` is the directory in which the Aleri Streaming Platform software has been installed (the default location is `C:\Program Files\Aleri`).

## 3.5. Uninstalling the Aleri Streaming Platform on Windows

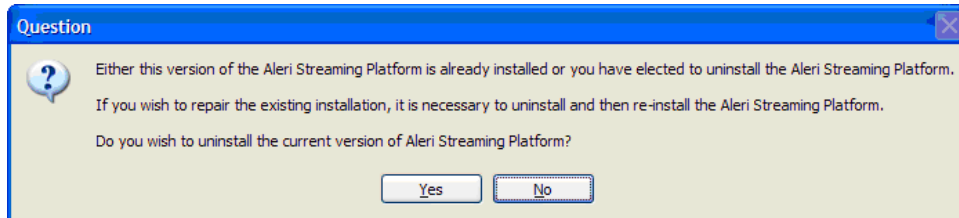
To uninstall the Aleri Streaming Platform on a Windows computer:

1. Start the Windows Control Panel.
2. Double-click the **Add or Remove Programs** icon.

The **Add or Remove Programs** window opens.

3. Click **AleriPlatform** in the list of **Currently installed programs**, then click the **Change/Remove** button that appears.

Result: the **AleriPlatform - InstallShield wizard** window appears, and then a **Question** box like the following appears on top of it:



4. Click **Yes** to go on.

Result: the **Question** box disappears, and the **AleriPlatform - InstallShield wizard** window becomes active.

5. Follow the directions in the InstallShield wizard to uninstall the Aleri Streaming Platform.

### 3.6. Installing AleriRt for *Microsoft Excel*®

AleriRt for Microsoft Excel is a Real-Time Data (RTD) add-in for Excel that provides the ability to view records in one or more instances of the Aleri Streaming Platform and publish records to them. As the name suggests, AleriRt uses Microsoft Excel's RTD technology to provide this ability.

On the display side, **AleriRt** also provides the capability to select the streams and view the columns within the stream. It also enables the user to filter records based on data values. One can view the most recent record or the most recent “N” records that match the specified filter(s) within a user-configurable window of transactions, where “N” is the specified number of records.

On the publish side, **AleriRt** provides the ability to automatically publish data whenever data changes in a range of cells. Alternatively, one can manually publish data to the Aleri Platform server by selecting a range of cells and using the Publish Wizard.

#### 3.6.1. Requirements

The following are prerequisites for **AleriRt**:

- A working installation of the Aleri Streaming Platform
- Microsoft Windows™ XP SP1, Microsoft® Windows™ 2000 SP4, or later
- Microsoft Excel 2003
- .NET Framework 2.0 (installed, if not available)
- Windows Installer 2.0 (installed, if not available)
- 512 MB Memory
- 100 MB of available hard disk space

- Super VGA (800 \* 600) or higher Display

### 3.6.2. Installation

To install **AleriRt** for *Microsoft Excel*®, perform the following steps:

1. Make sure there is a working installation of the Aleri Streaming Platform to which you can connect.



#### **TIP:**

To prevent Excel from asking whether a Macro is to be loaded:

- a. In the **Tools** menu, point to **Macros**, then select **Security...**
  - b. In the **Security** dialog box, click the **Trusted Publishers** tab to bring this tab panel to the front.
  - c. Click the **Trust all installed add-ins and templates** check box, then click **OK**.
- 

2. Click the **OK** button, and then close Excel.

3. Run the `setup.exe` program located in

```
INSTALL_DIR\drivers\aleriRt\win32
```

4. Follow the screen instructions to install the .Net Framework 2.0, Windows Installer and a patch for the .Net Framework 2.0, if needed.



#### **TIP:**

If the Installer installs the .Net Framework, you will be required to reboot before the installation can proceed.

---

5. Follow the screen instructions to install **AleriRt**.



#### **TIP:**

If **AleriRt** installs correctly, the toolbar button named Aleri RT is displayed when Excel opens. If Aleri RTD isn't displayed, click the >> button to expand the toolbar to display all buttons. Check to see, if the Aleri RTD button is visible. If it is still not visible, there may be some problem with the installation.

---

6. Open Excel and go to Tools->Add-Ins. In the screen that appears click on the 'Automation...' button. In the screen that follows choose 'AleriRt.RTP' from the list box and click on the 'OK' button. The 'AleriRt.RTP' add-in is now visible in the first screen with a check mark against it. Now click 'OK'.



---

**NOTE:**

The current release of AleriRT cannot subscribe to any stream with more than 64 columns.

---

---

# Appendix A. Packages for the Aleri Platform server on Linux and Solaris

## A.1. Additional Packages for Linux

A typical installation of RedHat or Fedora Core Linux is generally sufficient to run all software associated with the Aleri Streaming Platform. In production settings, however, many systems administrators use a minimal installation of Linux for security and other reasons. The minimal installation is sufficient to run the Aleri Streaming Platform Server. Additional packages must be installed in order to run Aleri Studio, because Aleri Studio requires a functioning X-Windows environment.

For completeness, this Appendix contains a list of packages required beyond the minimal installation of the supported versions of Linux. Casual users who install typical installations of Linux can generally skip this section.

### A.1.1. Red Hat Linux Enterprise AS4, 32bit, kernel 2.6.9-5.EL or higher

In addition to the minimal baseline installation, the packages in [Table A.1, “Packages for RedHat Linux Enterprise AS4, 32-bit”](#) need to be installed to run Aleri Studio:

**Table A.1. Packages for RedHat Linux Enterprise AS4, 32-bit**

---

atk-1.8.0-2.i386.rpm  
chkfontpath-1.10.0-2.i386.rpm  
compat-libstdc++-33-3.2.3-47.3.i386.rpm  
fonts-xorg-base-6.8.1-1.noarch.rpm  
gtk2-2.4.13-12.i386.rpm  
openssh-3.9p1-8.RHEL4.1.i386.rpm  
openssl-0.9.7a-43.1.i386.rpm  
pango-1.6.0-7.i386.rpm  
ttmkfdir-3.0.9-14.i386.rpm  
xorg-x11-deprecated-libs-6.8.1-23.EL.i386.rpm  
xorg-x11-font-utils-6.8.1-23.EL.i386.rpm  
xorg-x11-xauth-6.8.1-23.EL.i386.rpm  
xorg-x11-xfs-6.8.1-23.EL.i386.rpm

---

### A.1.2. Red Hat Linux Enterprise AS4, 64bit, kernel 2.6.9-5.EL or higher

In addition to the minimal baseline installation, the packages in [Table A.2, “Packages for RedHat Linux Enterprise AS4, 64-bit”](#) need to be installed to run Aleri Studio with X-Windows:

**Table A.2. Packages for RedHat Linux Enterprise AS4, 64-bit**

---

atk-1.8.0-2.x86\_64.rpm  
chkfontpath-1.10.0-2.x86\_64.rpm  
compat-libstdc++-33-3.2.3-47.3.x86\_64.rpm  
fonts-xorg-base-6.8.1-1.noarch.rpm  
gtk2-2.4.13-12.x86\_64.rpm  
openssh-3.9p1-8.RHEL4.1.x86\_64.rpm  
openssl-0.9.7a-43.1.x86\_64.rpm  
pango-1.6.0-7.x86\_64.rpm  
ttmkfdir-3.0.9-14.x86\_64.rpm

---

---

```
xorg-x11-deprecated-libs-6.8.1-23.EL.x86_64.rpm
xorg-x11-font-utils-6.8.1-23.EL.x86_64.rpm
xorg-x11-xauth-6.8.1-23.EL.x86_64.rpm
xorg-x11-xf86-dev-6.8.1-23.EL.x86_64.rpm
```

---

### A.1.3. Fedora Core 4, 32bit, SMP version of kernel, 2.6.11-1.1369\_FC4 or higher

(SMP version of the kernel required on multiprocessor machines)

In addition to the minimal baseline installation, the packages in [Table A.3, “Packages for Fedora Core 4, 32-bit”](#) need to be installed to run Aleri Studio with X-Windows:

**Table A.3. Packages for Fedora Core 4, 32-bit**

---

```
atk-1.9.1-1.i386.rpm
chfontpath-1.10.0-4.i386.rpm
compat-libstdc++-33-3.2.3-47.i386.rpm
fonts-xorg-base-6.8.2-1.noarch.rpm
gtk2-2.6.7-4.i386.rpm
openssh-4.0p1-3.i386.rpm
openssl-0.9.7f-7.i386.rpm
pango-1.8.1-2.i386.rpm
ttmkfdir-3.0.9-16.i386.rpm
xorg-x11-deprecated-libs-6.8.2-31.i386.rpm
xorg-x11-font-utils-6.8.2-31.i386.rpm
xorg-x11-xf86-dev-6.8.2-31.i386.rpm
xorg-x11-xauth-6.8.2-31.i386.rpm
```

---

### A.1.4. Fedora Core 4, 64bit, SMP version of kernel, 2.6.11-1.1369\_FC4 or higher

(SMP version of the kernel required on multiprocessor machines)

In addition to the minimal baseline installation, the packages in [Table A.4, “Packages for Fedora Core 4, 64-bit”](#) need to be installed to run Aleri Studio with X-Windows:

**Table A.4. Packages for Fedora Core 4, 64-bit**

---

```
atk-1.9.1-1.x86_64.rpm
chfontpath-1.10.0-4.x86_64.rpm
compat-libstdc++-33-3.2.3-47.x86_64.rpm
fonts-xorg-base-6.8.2-1.noarch.rpm
gtk2-2.6.7-4.x86_64.rpm
openssh-4.0p1-3.x86_64.rpm
openssl-0.9.7f-7.x86_64.rpm
pango-1.8.1-2.x86_64.rpm
ttmkfdir-3.0.9-16.x86_64.rpm
xorg-x11-deprecated-libs-6.8.2-31.x86_64.rpm
xorg-x11-font-utils-6.8.2-31.x86_64.rpm
xorg-x11-xauth-6.8.2-31.x86_64.rpm
xorg-x11-xf86-dev-6.8.2-31.x86_64.rpm
```

---

### A.1.5. Fedora Core 5, 32bit, 2.6.15-1.2054.FC5 or higher



(SMP version of the kernel required on multiprocessor machines)

No other packages need to be added to the default installation to run Aleri Studio with X-Windows.

#### A.1.6. Fedora Core 5, 64bit, 2.6.15-1.2054.FC5 or higher

(SMP version of the kernel required on multiprocessor machines)

In addition to the default installation, the packages in [Table A.5, “Packages for Fedora Core 4, 64-bit”](#) must be installed to run Aleri Studio with X-Windows:

**Table A.5. Packages for Fedora Core 4, 64-bit**

---

compat-libstdc++-33-3.2.3-55.fc5.x86\_64.rpm

---

#### A.1.7. Fedora Core 6, 32bit, 2.6.18-1.2798.FC6 or higher

(SMP version of the kernel required on multiprocessor machines)

In addition to the default installation, the packages in [Table A.6, “Packages for Fedora Core 4, 32-bit”](#) must be installed to run Aleri Studio with X-Windows:

**Table A.6. Packages for Fedora Core 4, 32-bit**

---

xorg-x11-deprecated-libs-6.8.2-31.i386.rpm

---



**NOTE:**

This package is no longer packaged with Fedora Core 6. It must be obtained from the Fedora Core 4 distribution.

---

#### A.1.8. Fedora Core 6, 64bit, 2.6.18-1.2798.FC6 or higher

(SMP version of the kernel required on multiprocessor machines)

In addition to the minimal baseline installation, the packages in [Table A.7, “Packages for Fedora Core 4, 64-bit”](#) need to be installed to run Aleri Studio with X-Windows:

**Table A.7. Packages for Fedora Core 4, 64-bit**

---

compat-libstdc++-33-3.2.3-61.x86\_64.rpm  
xorg-x11-deprecated-libs-6.8.2-31.x86\_64.rpm

---



**NOTE:**

The package `xorg-x11-deprecated-libs-6.8.2-31.x86_64.rpm` is no longer packaged with Fedora Core 6. It must be obtained from the Fedora Core 4 distribu-

---

tion.

---

## A.2. Additional Packages for Solaris

For completeness, this Appendix contains a list of packages required beyond the baseline installation of the supported versions of Solaris. Users who already have functional X-windows environments on Solaris can generally skip this section.

### A.2.1. Solaris 10 6/06 or higher for x86

In addition to the minimal baseline installation, the packages in [Table A.8, “Packages for x86 Solaris 10”](#) need to be installed to run Aleri Studio with X-Windows (the version numbers are taken from the Solaris 10 x86 6/06 distribution):

**Table A.8. Packages for x86 Solaris 10**

---

SUNWGtku, REV=2005.01.08.01.09 (requires SUNWGtkr, SUNWgcmn, SUNWGlib)  
 SUNWgnome-a11y-base-libs, REV=10.0.3.2004.12.16.15.35 (requires SUNWgnome-base-libs, SUNWjpg, SUNWTiff, SUNWpng, SUNWlibpopt, SUNWxorg-clientlibs, SUNWgnome-base-libs-share, SUNWgnome-base-libs-root, SUNWfontconfig, SUNWfontconfig-root, SUNWfreetype2)  
 SUNWmfrun, REV=10.2004.12.17 (requires SUNWctpls)  
 SUNWmlib, REV=2005.08.17.16.20  
 SUNWsshcu, REV=2005.01.21.16.34  
 SUNWsshdr, REV=2005.01.21.16.34  
 SUNWsshdu, REV=2005.01.21.16.34  
 SUNWuiu8, REV=2004.11.24.10.12  
 SUNWxwplt, REV=0.2004.12.15 (requires SUNWxwfnt, SUNWxwice, SUNWxwrtl, SUNWxwplr)  
 SUNWxwxft, REV=0.2004.12.15 (requires SUNWxwxst, SUNWstsf, SUNWicu)

---

### A.2.2. Solaris 10 3/05 or higher for "SUNWreq" Core OS (Sparc)

In addition, the packages in [Table A.9, “Packages for SPARC Solaris 10”](#) need to be installed to run Aleri Studio with X-Windows:

**Table A.9. Packages for SPARC Solaris 10**

---

SUNWGlib, REV=2005.01.08.05.16  
 SUNWGtkr, REV=2005.01.08.05.16  
 SUNWGtku, REV=2005.01.08.05.16 (requires SUNWgcmn)  
 SUNWfontconfig, REV=0.2004.12.15 (requires SUNWfontconfig-root, SUNWfreetype2, SUNWlexpt)  
 SUNWgnome-a11y-base-libs (requires SUNWgnome-base-libs, SUNWgnome-base-libs-root, SUNWgnome-base-libs-share, SUNWxorg-clientlibs, SUNWlibpopt, SUNWpng, SUNWTiff, SUNWjpg)  
 SUNWmfrun, REV=10.2004.12.17 (requires SUNWctpls)  
 SUNWmlib, REV=2004.10.21.10.21  
 SUNWsshdr, REV=2005.01.21.15.53  
 SUNWsshdu, REV=2005.01.21.15.53 (requires SUNWsshcu)  
 SUNWuiu8, REV=2004.11.24.10.12  
 SUNWxwfnt, REV=0.2004.12.15  
 SUNWxwice, REV=0.2004.12.15  
 SUNWxwplr, REV=0.2004.12.15  
 SUNWxwplt, REV=0.2004.12.15  
 SUNWxwrtl, REV=0.2004.12.15

---

SUNWxwxft, REV=0.2004.12.15 (requires SUNWgnome-a11y-base-libs, SUNWgnome-libs, SUNWgnome-libs-root, SUNWgnome-libs-share, SUNWgnome-vfs, SUNWgnome-vfs-root, SUNWgnome-vfs-share, SUNWgnome-component, SUNWgnome-component-root, SUNWgnome-config, SUNWgnome-config-root, SUNWgnome-config-share, SUNWsmbau, SUNWsmbar, SUNWgnome-audio, SUNWlibexif, SUNWgnome-panel, SUNWgnome-panel-root, SUNWgnome-panel-share, SUNWxwxst, SUNWicu, SUNWstsf)

---