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Platform SDK Deployment Guide

Platform SDK 8.1.2

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Overview

Deploying Platform SDK in Your Environment

This deployment guide can be used to install Platform SDK on your system, configure basic settings, and verify the installation. It includes chapters with the following information:

- **New In This Release** — An overview of new features and improvements included with each release of Platform SDK.
- **Planning information** — Details related to planning and preparation for your Platform SDK installation, including prerequisites and links to related information. Genesys recommends reading this page before you begin to ensure that your system meets the minimum requirements for Platform SDK.
- **Installation procedures** — Step-by-step guide to installing Platform SDK on your computer.
- **Verification procedures** — A few quick check to ensure that the installation process was successful and all components were installed correctly.

Next Steps

After you have successfully installed Platform SDK, you might want to do the following:

- Download the latest version of the Release Note (using links on the **Platform SDK Product Page**) to see the most recent news and updates about this product.
- Read the **Platform SDK API Reference** for detailed information about Platform SDK.
- Check the **Platform SDK Developer's Guide** to find general guidelines and programming advice when working with your Platform SDK deployment.

New in this Release

Check out the new features that have been added in the latest releases of Platform SDK.

New in Release 8.1.2

- **Contact Server Protocol Updates** - This protocol has been expanded to support the latest UCS abilities and to allow lightweight requests that return document details without receiving actual binary content.
- **SIP Clustering Support** - Voice Platform SDK now supports SIP Cluster Private Service calls with the `TServerPrivateServiceMessages` helper class.
- **Improved LCA Connection Monitoring** - The LCA protocol in Management Platform SDK has been extended to support notification messages regarding the state of an SCS-to-LCA connection.
- **International Character Support** - `KeyValueCollections` now allow for strings with Unicode and non-Unicode encoding to be mixed.
- **Enhancements to the Application Template Application Block** - This application block now allows protocol options to be read from your Genesys Configuration options.
- **Updated Platform Support** - The Platform SDKs now support the following additional platforms and versions:
 - .NET Framework 4.5
 - Red Hat Enterprise Linux 6.0 64-bit
 - Microsoft Windows Server 2012 64-bit
- **Library Repackaging** - The Platform SDK installation package has been updated to include a legacy folder for deprecated libraries and related materials. Third-party libraries required for client development have also been repackaged for developer convenience.

New in Release 8.1.1



Updates to the Platform SDK API Reference for the 8.1.1 Maintenance Release are available exclusively as downloads from the [API Reference](#) page.

- **OSGi support** - Platform SDK for Java JAR files now provide a valid OSGi manifest and can be used as bundles in OSGi containers (like Equinox and Karaf) without additional modifications. The manifest exposes public Platform SDK APIs so that OSGi consumer services can use the same variety of Platform SDK functionality as non-OSGi clients.
- **Improved Event-Receiving Mechanism** - Programmers can now set a callback for handling protocol events, which is executed by the configured protocol invoker. This creates an easy and efficient way to implement event-handling logic, and supports different types of threading architecture. Previously, programmers needed to either use an event-handling thread or integrate the Message Broker Application Block into the threading architecture.

- Secure Connections: TLS (Transport Layer Security) - Platform SDK now supports secure connections to Genesys servers using TLS. Connections to Genesys servers can be authenticated and encrypted, ensuring that sensitive data is protected when transmitted.
Note: This implementation of TLS for Java is incompatible with the previous 8.1.0 release. For documentation related to TLS, please refer to online Genesys Documentation.
- Improved Methods for Connection Configuration - New, strongly-typed and easily discoverable methods have been introduced to configure connection parameters, improving the usability and robustness of Platform SDK APIs.
- Common base class for T-Server events - T-Server event classes now inherit from a common base class, allowing client code to inspect common T-Server Event attributes by using the base class. Previously, users would need to cast to the specific event type or access the attribute in a weakly-typed manner.
- Change Password at Login Feature - When logging in to Configuration Server, Platform SDK now checks if a user is required to update their password and includes a new method to update passwords when the protocol is opened.
- IPv6 Support - Platform SDK can now use IPv6 for connections.
- Updated platform compatibility - Now includes support for the following platforms:
 - Java SE 7
 - .NET 4.0
- (Java) Asynchronous Request Method - Protocols in Java now offer a new method for submitting a request and getting notified of the response through a callback. Support client asynchronous programming model which is beneficial for application responsiveness and for server efficiency.
- (Java) Application Template Application Block - This application block has been fully redesigned to contain helper classes for configuring connections. It creates either an Endpoint or WarmStandbyConfiguration object with the connection configuration parameters initialized. The helper classes use Genesys Configuration Server details received from Configuration Object Model Application Block objects as a source for configuration settings.
Note: The Application Template Application Block is designed to work with changes to the implementation of TLS. Because of these changes, it is not compatible with previous releases.

New in Release 8.1.0

- LCA Protocol Extensions - Expose improved application monitoring capabilities.
- Lazy Message Parsing - Lazy message parsing allows parsing of messages to be delayed until actually necessary.
- Application Template Application Block - This application block creates a framework for building an application which integrates with Management Layer and Configuration Server to provide core Genesys functionality.
- Support for Switch Versions in Switch Policy Library (SPL) - Switch functionality can vary between different versions of the same switch type. SPL now provides an API which allows user to specify the switch version and receive the data specific to the given version.
- Profiling Services - The Platform SDK now provides profiling services to help evaluate SDK performance.
- Improved OS Support - The Platform SDKs now support the following additional operating systems and versions:
 - HP-UX 11i v3 Integrity

- Red Hat Enterprise Linux 5 64-bit
- IBM AIX 7 64-bit
- Microsoft Windows Server 2008 64-bit

Planning Your Platform SDK Deployment

Introduction

Platform SDK 8.1.x allows you to write .NET and Java applications that communicate with Genesys servers in their native protocols. You can think of the APIs in Platform SDK as “Server APIs,” since each one unlocks the capabilities of the server it connects to. In contrast to the abstraction found in other Genesys SDKs, Platform SDK was designed to offer low-level components and fine-grained, message-driven interfaces which are also XML friendly.

Every Genesys product also includes a Release Note that provides any late-breaking product information that can often be important. Direct links to the latest Release Notes for this product are provided under the Release Information section of the [product page](#).

What You Should Know

This document is primarily intended for application developers who are familiar with Java or .NET technologies and who are planning to develop customer applications for the Genesys Framework environment.

It has been written with the assumption that you have a basic understanding of:

- The underlying concepts and terminology for the type of application you plan to develop. For instance, an understanding of CTI technology is important for developing an application with Voice Platform SDK
- Network design and operation
- Your own network configurations

You should also be familiar with messaging-compliant programming, Java- and .NET-related development tools, and how client and server applications work.

Deployment Prerequisites

To work with Genesys Platform SDK, you must ensure that your system meets the requirements established by the [Genesys System-Level Guides](#)—in particular the *Genesys Supported Operating Environment Reference Guide* and the *Genesys Interoperability Guide*.

- [Supported Operating Environment: Platform SDK](#)
- [8.1 Interoperability with Configuration Layer Environment](#)

In addition to system-level requirements, the following prerequisites must be met:

.NET Prerequisites

- All underlying servers which your custom applications will connect to must be release 7.2 or higher.
- .NET Framework 3.5 or later is installed on the computer where you plan to run your Platform SDK application. The .NET Framework can be downloaded free of charge from Microsoft (<http://www.microsoft.com/net/download>).

Java Prerequisites

- All underlying servers which your custom applications will connect to must be release 7.2 or higher.
- Refer to the Genesys Supported Operating Environment Reference Manual for supported versions of JDK. Note that application blocks may require a different version of JDK.
- Configuration Platform SDK for Java, and all application blocks or code samples that make use of this SDK, require JAXB 2.1 (Java Architecture for XML Binding). The JAXB 2.1 libraries are available with your installation of the Platform SDK under the thirdparty folder.
- Switch Policy Library for Java requires the following third party components to be downloaded separately from installation:

Component Name	Version	Vendor	Type
Spring Beans	3.0.5 or later	Spring Framework	Dynamically Linked
Spring Context			
Spring Core			

Platform SDK and AES Cryptography

Platform SDK uses AES cryptography as part of the Configuration Platform SDK API. AES encryption uses a 128-bit encryption key, which is considered too strong for some countries and thus subject to export restrictions. Please check the documentation provided for your Java environment for more details.


- <http://docs.oracle.com/javase/7/docs/technotes/guides/security/overview/jsoverview.html>
- <http://docs.oracle.com/javase/7/docs/technotes/guides/security/crypto/CryptoSpec.html>

Related Resources

- [Platform SDK API Reference](#)
- [Platform SDK Developer's Guide](#)

Installing Platform SDK

Installation Overview

 **Note:** Before you begin with the installation process, be sure that your environment meets the minimum requirements specified on [Planning Your Platform SDK Deployment](#).

Installing Platform SDK is a simple process. No special configuration is required before installation, although you will need an understanding of your Genesys environment before starting development. Once the installation is complete, your Platform SDK deployment should be verified. For more information refer to [Next Steps](#).

Java Installation Considerations for UNIX

Take the following into consideration for a Java deployment on a UNIX-based operating system:

- To terminate your installation process, avoid the use of Ctrl+C. Instead, use the character defined by your site administrator to send an interrupt signal.
- If you choose an installation directory that already exists, and which has files in it, you cannot opt for an alternative directory without terminating the installation process.
- If you decide to use a shell script to perform your installation, you may want your script to include the following logic:
 1. If the selected directory already has files in it, suspend the installation and then launch a new shell job to examine the unexpected directory.
 2. If that directory cannot be reused, terminate the installation.
 3. If that directory can be reused, continue with the original installation.

Procedure

Purpose: To install Platform SDK in your environment.

Start of Procedure

1. In your installation package, locate and double-click the setup application for your development platform (.NET or Java) and operating system to run the *Genesys Installation Wizard*.
 - .NET:
 - `\PlatformSDK\DotNet\windows\setup.exe`
 - Java:
 - `\PlatformSDK\Java\windows\setup.exe`

- `\PlatformSDK\java\<Unix-based OS>\install.sh`
2. Click *Next* at the welcome screen.
 3. Read the *Genesys License Agreement*, and select the checkbox to accept the terms and conditions described.
 4. Click *Next* to continue with the installation.
The *Choose Destination Location* dialog appears, showing the default destination. For Windows installations, the default directory is:
`C:\Program Files\GCTI\Platform SDK for <.NET/Java> 8.1`
 5. Click *Next* to accept the default destination folder.
If you wish to install Platform SDK in a location other the default directory, complete the following steps:
 1. Click *Browse* to open the *Choose Folder* dialog.
 2. Navigate to and select a directory path.
 3. Click *OK* to return to the *Choose Destination Location* dialog.
 4. Click *Next* to accept the destination folder that you have selected.
 6. Click *Install* at the *Ready to Install* dialog.
The Wizard installs the Platform SDK, and all associated files, in the directory you selected. When the installation is finished, the *Installation Complete* dialog appears.
 7. Click *Finish*.

End of Procedure

Next Steps

Although the installation is complete, there are several additional steps required before using the Platform SDKs.

- **Verify** that your installation was successful.
- Review the **Platform SDK Developer's Guide** to learn about how you can better take advantage of the features included with this release.
- Consult the **Platform SDK API Reference** to get detailed information about using the Platform SDKs.

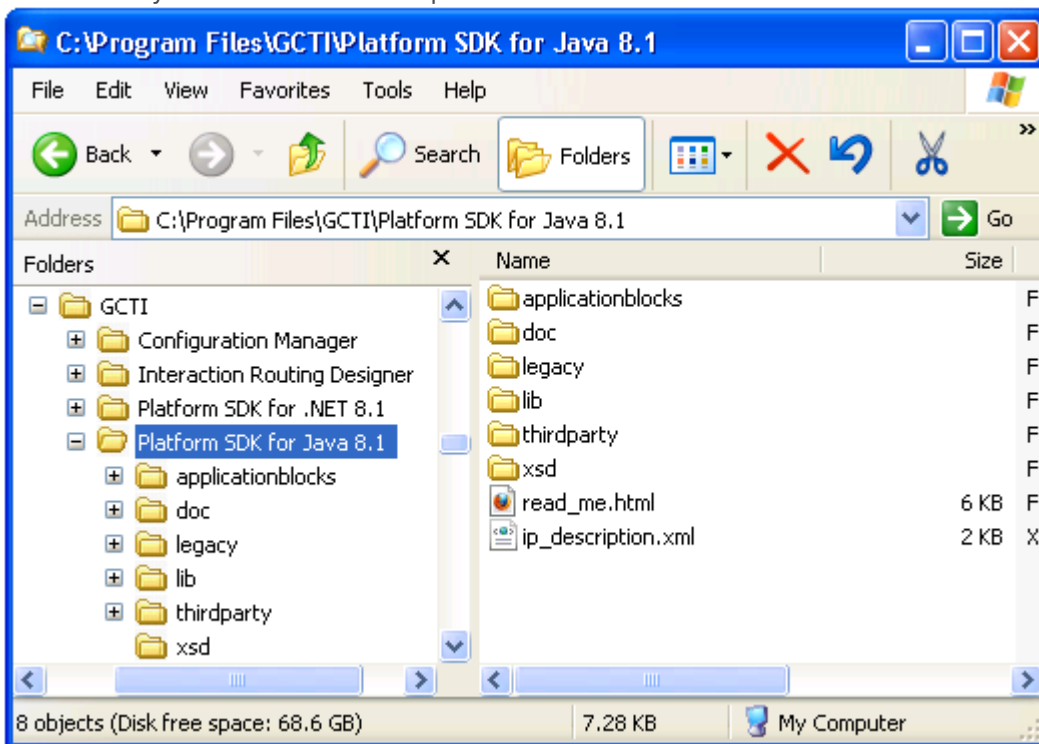
Verifying Deployment

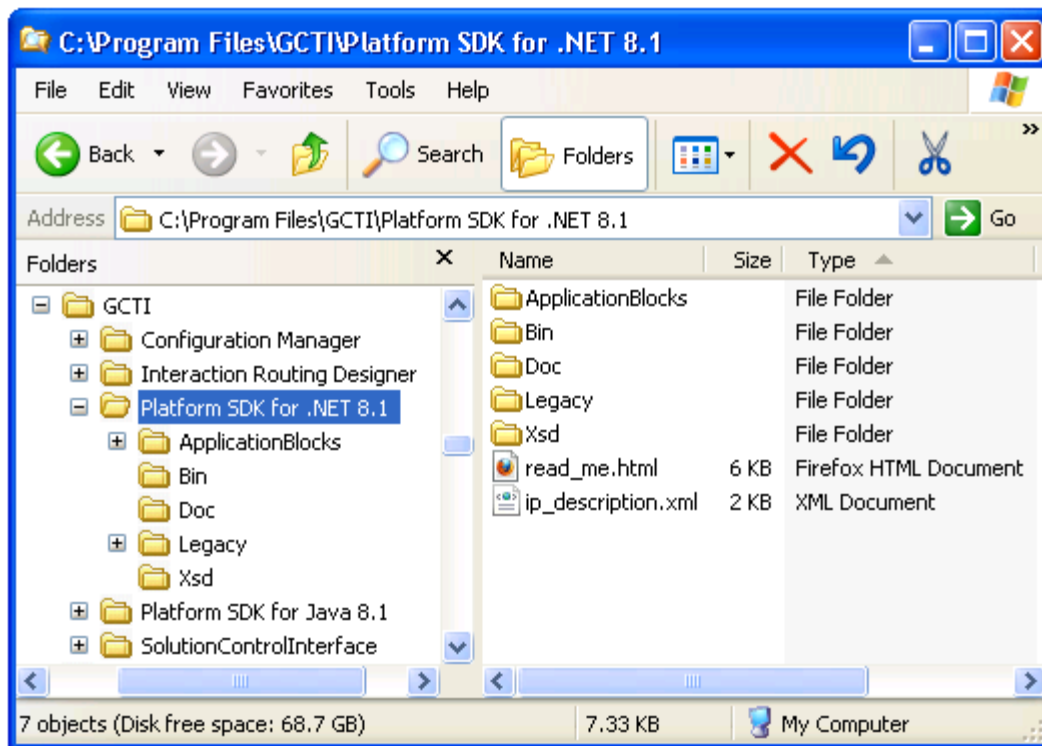
Procedure

Prerequisites: You must first complete the procedure that is found at [Installing Platform SDK](#).

Start of procedure

1. Use your file manager to locate the destination directory for the Platform SDK installation. It will be assumed that the default location, which is the *C:\Program Files\GCTI\Platform SDK for <.NET/Java> 8.1* directory, was used for this procedure.
2. Confirm that your Platform SDK components look similar to what is shown in the following images:





- Examine each directory (including the root installation directory) to confirm its contents. The tables below give a description of the expected result for **.NET** and **Java** installations.

End of procedure

Folder Contents for a .NET Installation

Folder	Contents
\	<p>The root directory contains the following two files:</p> <ul style="list-style-type: none"> <code>ip_description.xml</code>—This file contains data for the <code>read_me.html</code> file. <code>read_me.html</code>—This Read Me file identifies the build number, platform compatibility, and a link to the latest Release Note.
\ApplicationBlocks	<p>Contains one subdirectory for each application block that is included with this release of Platform SDK.</p> <p>Each subdirectory is a self-contained unit that contains all files required for that application block. Subdirectories typically include Visual Studio solution files and the following folders:</p> <ul style="list-style-type: none"> <i>QuickStart</i>—A small code sample that shows the application block in action. (Not provided for all application blocks.) <i>Src</i>—Source code for each application block is

Folder	Contents
	provided for you to use as-is, or to customize as needed.
\Bin	This directory holds the .NET libraries (as both .dll and .xml files) for all APIs and application blocks contained in the .NET version of Platform SDK, including the Core and Commons namespaces.
\Doc	This directory stores the combined Platform SDK API Reference (in .chm format). This document contains detailed information about how to develop content using the Platform SDKs.
\Legacy	This directory collects legacy files for deprecated features, including the Packaged Statistics SDK. It contains the following subdirectories: <ul style="list-style-type: none"> • Bin—Deprecated libraries. • Doc—Related documentation. • Xsd—XML Schema Definition files.
\Xsd	This directory contains XML Schema Definition files that define the structure of the serialized messages used by the Platform SDKs.

<references />

Folder Contents for a Java Installation

Folder	Contents
\	The root directory contains the following two files: <ul style="list-style-type: none"> • ip_description.xml—This file contains data for the read_me.html file. • read_me.html—This Read Me file identifies the build number, platform compatibility, and a link to the latest Release Note.
\applicationblocks	Contains one subdirectory for each application block that is included with this release of Platform SDK. Each subdirectory is a self-contained unit that contains all files required for that application block. Subdirectories typically include build files and the following folders: <ul style="list-style-type: none"> • <i>quickstart</i>—A small code sample that shows the application block in action. (Not provided for all application blocks.) • <i>src</i>—Source code for each application block is provided for you to use as-is, or to customize as needed.

Folder	Contents
\doc	Contains the combined Platform SDK API Reference (as expanded JavaDoc files, or as a <code>api.jar</code> archive). This document contains detailed information about how to develop content using the Platform SDKs.
\legacy	This directory collects legacy files for deprecated features, including the Packaged Statistics SDK. It contains the following subdirectories: <ul style="list-style-type: none"> • <code>doc</code>—Related documentation. • <code>lib</code>—Deprecated libraries. • <code>xsd</code>—XML Schema Definition files.
\lib	This directory contains the Java archive (<code>.jar</code>) files for all APIs and application blocks contained in the Java version of the Platform SDK, including: <code>commons.jar</code> , <code>connection.jar</code> , <code>kvlistbinding.jar</code> , <code>kvlists.jar</code> , <code>protocol.jar</code> , <code>system.jar</code> , along with <code>netty-3.5.11.Final.jar</code> and the related Netty license file.
\thirdparty	This directory contains JAXB 2.1 (Java Architecture for XML Binding) which is required for Configuration Platform SDK for Java, and for all application blocks or code samples that make use of this SDK with JDK 1.5.
\xsd	This directory contains XML Schema Definition files that define the structure of the serialized messages used by the Platform SDKs.

<references />

Next Steps

- Review the [Platform SDK Developer's Guide](#) to learn about how you can better take advantage of the features included with this release.
- Consult the [Platform SDK API Reference](#) to get detailed information about using the Platform SDKs.