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Platform SDK Deployment Guide

Platform SDK 9.0.x

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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.
- [Platform SDK Compatibility with Genesys Framework Components](#) — A detailed list of compatibility between Platform SDK protocols and the related Genesys servers for every major Platform SDK release.
- [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 9.0.x

Platform SDK for Java

Release 9.0.010.06:

- The Netty version included with Platform SDK for Java has been upgraded to Netty 4.1.100.Final. (PSDK-9843)
- Supports OpenJDK 17. (PSDK-9826)
- Added a new system property **ReconnectOnErrorRestoreSession** in PSDKCustomization. (PSDK-9830)
- Added a new attribute **msgCheck** for the **MessageText** object of Flex Chat Protocol. (PSDK-9836)
- Added the **ConfCalculateTimeZone()** function in **CfgUtilities**. It transforms the formula stored in **CfgTimeZone** into the real timestamp value. (PSDK-9845)

Release 9.0.010.00:

- A new getAttributes method is added to the **ConfObjectBase** class. (PSDK-9764)
- New getReferenceID and setReferenceID methods are added to the **Message** class. (PSDK-9775)

Release 9.0.009.08:

- This release includes only resolved issues.

Release 9.0.009.06:

- Support has been added for Red Hat Enterprise Linux 8. (PSDK-9680)

Release 9.0.008.01:

- The DeleteInteraction message has been extended with new datasource attribute. (PSDK-9594)
- The Interaction Server protocol in Platform SDK now supports the following new attributes:
 - `_attr_place_dbid`
 - `_attr_agent_dbid`
 - `_attr_actor_place_dbid`
 - `_attr_actor_agent_dbid`

(PSDK-9593)

- EventInteractionListGet has been extended with new TotalCount (int) attribute. RequestInteractionListGet and RequestContactListGet also support two new fields:
 - ESQuery (String)
 - CloseScroll (String)

(PSDK-9589)

- Platform SDK now prevents creation of RestApiClient using RestApiClientBuilder if the schema or host are not specified. (PSDK-9370)
- Support for Platform SDK custom loggers has been improved for stability. Exceptions in custom logger implementations are now suppressed to avoid breaking main application/Platform SDK functionality. (PSDK-8242)

Release 9.0.007.09:

- The PSDKRuntime.awaitTermination() methods now wait for the ThreadPoolExecutor that is being used by Netty to shut down. Also, Platform SDK explicitly shuts down ThreadPoolExecutor when all Netty channels are closed. (PSDK-9626)

Release 9.0.007.07:

- The Netty version included has been upgraded to 4.1.51 to address [vulnerabilities](#) in earlier versions.

Release 9.0.007.05:

- Platform SDK for Java now supports Windows Server 2019.

Release 9.0.007.00:

- Platform SDK Stat Server Protocol now supports Interaction Queue and Tenant actions, and correspondent action masks (PSDK-9473, PSDK-9295)
- Enhanced session recovery for SIP Server Cluster. (PSDK-9472)

Release 9.0.005.02:

- AppTemplate Application Block logging configuration has been extended with option default-logdir. Use this option to change the default directory for application log files storage. If not specified, the default value for log file storage is your working directory. (PSDK-9366)
- Platform SDK for Java now uses Netty 4 instead of version 3. (PSDK-9304)
- Platform SDK for Java libraries and jars have been extended to support Java 11 compilation and the new Java modularization feature. (PSDK-9113)

Release 9.0.004.04:

- The AppTemplate Application Configuration Managers' built-in listener for Log4j2 configuration has been improved to check connection configuration options to Message Server.
- This release of Platform SDK for Java adds support for Open JDK 11, and discontinues support for Java 9.
- The Platform SDK pom.xml files and code generation tools have been improved to allow compilation

with Java 9 or higher. Refer to the [Platform SDK Deployment Guide](#) for more information about this dependency.

Release 9.0.003.09:

- A new group of document management messages has been added to support OMService.
- The `KeyValueCollection.toString()` helper method has been extended to filter out content of sensitive user-defined sections from logging.
- Changes to the Application Template Application Block Log4j2 logging configuration no longer causes log files to rollover unless the filename is changed or segmentation configuration is reached.
- The Application Template Application Block now supports automatic archiving of rotated Log4j2 log files.
- The Application Template Application Block client configuration helper method now uses the Reconnect Timeout value for WarmStandby configuration.
- The Application Template Application Block Log4j2 plugin now generates common LMS messages/events when the Message Server connection state changes.
- The Application Template Application Block logging configuration has been extended to support explicit log message formatting using the new "outputPattern" option.
- Platform SDK now supports the GroupBy feature for StatServer.
- The legacy Platform SDK Logger Component has been annotated with deprecation marks.

Release 9.0.002.04:

- Platform SDK supports compatibility with Java 9. See the Prerequisites section on the [Platform SDK](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information and a list of all prerequisites.
- Platform SDK Connection layer component has been updated to use newer version of Netty (3.10.6) to resolve known vulnerabilities of its earlier versions.
- Application Template Application Block Log4j2 plugin has been updated to work with Log4j v2.10.0.
- Application Template Application Block Log4j2 configuration has been extended to support custom log messages format; layout pattern may be specified explicitly.
- Application Template Application Block Log4j2 configuration functionality has been extended with ability to pass the application configuration options to custom FileHeaderProvider.
- Application Template Application Block Log4j2 Logging functionality has been updated to comply with the Microservices Requirement to have unique log files names.
- Common GEnum based enumerations values, including COM Application Block, configuration, and other servers' protocols attributes are now properly serializable.
- Configuration protocol schema generation stability has been improved.

Release 9.0.001.02:

- The Application Template application configuration structure has been extended to provide information about referred tenants.
- ESP-based cluster protocols have been extended with RequestorInfo support
- Platform SDK now supports Windows Server 2016.

- TLS target name checking now works correctly, even for TServer protocol.
- The Application Template Application Configuration Manager has been extended with internal state control methods: `init(boolean)` and `refresh(boolean)`. Set the boolean argument to `true` for synchronous waiting for application configuration readiness.
- Reading helpers for Platform SDK TLS properties have been corrected to treat null source values as empty, instead of throwing `IllegalArgumentException`.

Release 9.0.000.01:

- The build procedure for Platform SDK for Java has been updated to use Java version 8, allowing the latest versions of dependencies to be used.
- The Application Template Application Block Log4j logging configurator has been updated for the Log4j 2.7+ configuration API.
- Cluster Protocol now allows substitutes for the default implementation of the Cluster Protocol load balancer.
- Basic and Chat protocols have been extended with the new `eventAttribute` attribute of type `kvlist`.
- Interaction Server Protocol has been extended with three new messages in order to support ESP messages:
 - `EspRequest3rdServer`
 - `EspEvent3rdServerResponse`
 - `EspEvent3rdServerFault`
- You can now change the default BACKLOG size, or set it for a specified server channel.
- `ConfService` is now able to use the channel's invoker.

Platform SDK for .NET

Release 9.0.009.00:

- Platform SDK for .NET now supports Windows 11.
- TLS configuration now supports the `TLSv13` constant when setting TLS version.
- The handshake procedure with Configuration Server now distinguishes between specific exception types, allowing improved Warm Standby performance.

Release 9.0.007.00:

- Starting with release 9.0.007.00, Platform SDK for .NET supports Microsoft .NET Framework 4.8.

Release 9.0.006.05:

- Platform SDK for .NET now supports Windows Server 2019.

Release 9.0.005.01:

This release includes only resolved issues.

Release 9.0.004.00:

This release includes only resolved issues.

Release 9.0.003.02:

- Platform SDK for .Net now supports .NET Framework 4.7.x.
- A new group of document management messages has been added to support OMService.
- Platform SDK now supports the GroupBy feature for StatServer.

Release 9.0.002.01:

This release includes only resolved issues.

Release 9.0.001.02:

- The Application Template application configuration structure has been extended to provide information about referred tenants.
- ESP-based cluster protocols have been extended with RequestorInfo support.
- Platform SDK now supports Windows Server 2016.
- Platform SDK now supports .NET Framework 4.6.x.
- Platform SDK now supports **NLog** library 4.4.x version. Tests were performed using version 4.4.10, installed with the package manager command: `Install-Package NLog -Version 4.4.10`
- Improvements to the TLS layer allow Platform SDK to keep data that must be sent in an encrypted state.

Release 9.0.000.02:

- XML printer now shares the KeyValuePrinter filter set, ensuring that sensitive information is not printed to log files.
- The WarmStandby reconnection algorithm now attempts reconnection when the nodes list is no longer empty.
- Platform SDK for .NET has been extended with a new library to support UCS 9.0 clusters.
- Basic and Chat protocols have been extended with the new eventAttribute attribute of type kvlist.
- Interaction Server Protocol has been extended with three new messages in order to support ESP messages:
 - EspRequest3rdServer
 - EspEvent3rdServerResponse
 - EspEvent3rdServerFault
- The TLS certificate verification algorithm has been improved in order to support wildcard certificates.
- The Application Template application block has been extended with GFApplicationConfigurationManager.
- The WSConfig class has been extended with the new Name string property.

Planning Your Platform SDK Deployment

Introduction

Platform SDK 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](#)
- [8.5 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).
- Starting with release 9.0.001.02, the NLog third-party library is required to use the Platform SDK **NLog Adapter** and to build the **Application Template Application Block for .Net**.

3rd party Component Name	License	Download URL
NLog 4.4.x	BSD license	NLog

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.
- For Linux installations, the Linux compatibility packages must be installed prior to installing the Genesys IPs.
- To use the Platform SDK Jackson JSON Module (`jackson2-module.jar`), you must first download the following third-party component libraries:

3rd party Component Name	License	Download URL
Jackson Core 2.x		
Jackson Annotations 2.x	APL2	Jackson Download
Jackson Databind 2.x		

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/8/docs/technotes/guides/security/overview/jsoverview.html>
- <http://docs.oracle.com/javase/8/docs/technotes/guides/security/crypto/CryptoSpec.html>

Support for Java 9 or higher

If working with Java 9 or higher, there are some special considerations you need to be aware of when building your Platform SDK application.

Platform SDK Configuration Protocol

When Platform SDK applications that use the Configuration Protocol are running with Java 9 or higher, the application may experience runtime exceptions such as "java.lang.NoClassDefFoundError: javax/xml/bind/JAXBException". This happens because JAXB APIs are considered to be Java EE APIs, and therefore are no longer contained in the default class path for Java SE 9. In Java 11 and subsequent releases, these APIs are completely removed from the JDK.

To resolve this issue, the Platform SDK POM files have been updated to contain required dependencies for this functionality starting in release 9.0.004.04. If your application was built using earlier releases of Platform SDK, or if your application was started without classpath construction coming from the Platform SDK POM files, you can resolve this issue by adding user application dependencies, as shown below:

```
<!-- import bom-->
<dependencyManagement>
  <dependencies>
    <dependency>
      <groupId>org.glassfish.jaxb</groupId>
      <artifactId>jaxb-bom</artifactId>
      <version>2.3.1</version>
      <type>pom</type>
      <scope>import</scope>
    </dependency>
  </dependencies>
</dependencyManagement>

<!-- required dependencies from bom-->
<dependencies>
  <dependency>
    <groupId>org.glassfish.jaxb</groupId>
    <artifactId>jaxb-runtime</artifactId>
  </dependency>
  <dependency>
    <groupId>javax.xml.bind</groupId>
    <artifactId>jaxb-api</artifactId>
  </dependency>
</dependencies>
```

A more detailed explanation, along with suggestions for alternative solutions, can be found from the following articles:

- <http://openjdk.java.net/jeps/320>
- <https://stackoverflow.com/questions/43574426/how-to-resolve-java-lang-noclassdeffoundererror-javax-xml-bind-jaxbexception-in-j>

Compiling Platform SDK and the AppTemplate Application Block, or Using Application-Specific LMS files with the AppTemplate Generator

Platform SDK uses common java annotations, which were moved out of Java SE (as a part of Java EE). When you try to compile Platform SDK and its Application Blocks, or try to use the AppTemplate LMS enumeration generation tool for application-specific LMS files support, a compilation time exception like following may occur:

```
[ERROR] ...java:[19,24] package javax.annotation does not exist
[ERROR] ...java:[23,2] cannot find symbol
```

[ERROR] symbol: class Generated

To resolve this issue, you can add user application dependencies, as shown below:

```
<dependency>  
  <groupId>javax.annotation</groupId>  
  <artifactId>javax.annotation-api</artifactId>  
  <version>1.3</version>  
</dependency>
```

Platform SDK Compatibility with Genesys Framework Components

This article provides detailed compatibility of Platform SDK protocols with the appropriate Genesys servers for each major Platform SDK release.

Notes:

- Releases 7.2 and 7.5 are no longer supported. Genesys recommends upgrading to a more recent release. (In this scenario, upgrading to Platform SDK release 7.6.x may be the easiest option.)
- Upgrading from Platform SDK release 7.x to 8.x may require code changes and recompilation.
- The most recent hot-fix version of each major release is supported and recommended for usage/update. A table showing the currently supported branches for each release of Platform SDK is provided below.

Supported Branches for Platform SDK Releases	
Release	Supported Branch
7.2	unsupported
7.5	7.6.2
7.6	7.6.2
8.0	8.0.2
8.1	8.1.4
8.5	8.5.x
9.0	9.0.x

Platform SDK for Java Compatibility

Configuration Server Protocol Compatibility Matrix

	Configuration Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Configuration								
7.2	yes	yes	yes			no**	no**	
7.5	yes	yes	yes	yes	yes*	no**	no**	
7.6	yes	yes	yes	yes	yes	yes*	yes*	
8.0	yes	yes	yes	yes	yes	yes	yes*	
8.1	yes	yes	yes	yes	yes	yes	yes	yes***
8.5	yes	yes	yes	yes	yes	yes	yes	yes

Configuration Server								
9.0	yes	yes	yes	yes	yes	yes	yes	yes

* New features of Configuration Server are not supported by old versions of Platform SDK.

** Exception on CfgRole updating occurs, and Configuration Server connection is lost. Also there is forward compatibility problem (ER# 138864945).

*** SSO and user session language selection in client registration are not supported.

Universal Contact Server (UCS) Protocol Compatibility Matrix

Universal Contact Server								
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Contacts								
7.2	The protocol does not exist.							
7.5								
7.6 *				yes	yes	yes***	yes**/**	
8.0				yes***	yes	yes	yes**/**	
8.1				yes***	yes	yes	yes****	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* Contacts Protocol was added to Platform SDK for Java starting from 7.6.200.x.

** ER created for message RequestCheckForUpdates, attribute is not accepted.

*** The following new messages are available:

- Add\Remove\UpdateDocument
- IdentifyContact
- AddAgentStdRespFavorite
- GetSystemSettings
- Get\Set\DeleteProperties
- Add\Update\DeleteStandardResponse

**** The following new messages are available for UCS starting from release 8.1.3:

- GetServerTime
- Refresh

Local Control Agent Protocol Compatibility Matrix

	Local Control Agent							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/LCA protocol								
7.2	The protocol does not exist							
7.5				yes	yes			
7.6				yes	yes			
8.0				yes	yes	yes	yes*	
8.1				yes	yes	yes	yes	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* The new messages RequestSCSConnectionStatus, EventHostUnderControl, and EventNoControllingSCS are available starting with Platform SDK 8.1.200.10

Message Server Protocol Compatibility Matrix

	Message Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/Message Server protocol								
7.2	The protocol does not exist							
7.5			yes	yes	yes			
7.6			yes	yes	yes			
8.0			yes	yes	yes	yes	yes*	
8.1			yes	yes	yes	yes	yes*	yes*
8.5			yes	yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes	yes

* Platform SDK doesn't provide Message Server multi-languages support.

Solution Control Server Protocol Compatibility Matrix

	Solution Control Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/Solution Control Server protocol								
7.2	The protocol does not exist							
7.5			yes	yes	yes*			
7.6			yes	yes	yes			
8.0			yes	yes	yes	yes	yes**	
8.1			yes	yes	yes	yes	yes**	yes**

Solution Control Server								
8.5			yes	yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes	yes

*SCS 7.6 has new attribute introduced for EventError which doesn't exist in 7.5 protocol.

** Platform SDK doesn't provide Solution Control Server multi-languages support.

Interaction Server Protocol Compatibility Matrix

Interaction Server								
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Open Media								
7.2	yes	yes	yes					
7.5			yes	yes	yes			
7.6			yes	yes	yes	yes*	yes*	
8.0				yes	yes	yes	yes	
8.1				yes	yes	yes	yes	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* Order of Events: EventAgentLogout and EventPlacedInQueue have been changed in release 8.0/8.1 of the server.

Outbound Server Protocol Compatibility Matrix

Outbound Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Outbound							
7.2 *	The protocol does not exist						
7.5			yes	yes	yes		
7.6			yes	yes	yes	yes	yes**
8.0				yes	yes	yes	yes
8.1				yes	yes	yes	yes
8.5				yes	yes	yes	yes
9.0				yes	yes	yes	yes

* Outbound Protocol was added to Platform SDK for Java in 7.5 release.

** Outbound Contact Server 8.1 has the optional attribute sessionId, which does not exist in earlier releases of the protocol.

Statistics Server Protocol Compatibility Matrix

	Stat Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Statistics								
7.2	The protocol does not exist							
7.5								
7.6								
8.0				yes	yes	yes	yes	
8.1				yes	yes	yes	yes	yes
8.5				no*	no*	yes	yes	yes
9.0				no*	no*	yes	yes	yes

* Stat Server protocol 8.5.301+ includes a corrected Campaign Actions enumeration. This enumeration includes DialWrongNumber and LeadWrongNumber items, and is reordered to be in sync with StatServer 8.0+ Campaign Actions Mapping. (PSDK-8539)

	Stat Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	
Platform SDK Packaged Statistics (deprecated)								
7.2 *	The protocol does not exist							
7.5					yes			
7.6			yes***	yes	yes	yes	yes	
8.0 **				yes	yes	yes	yes	
8.1				yes	yes	yes	yes/no****	
8.5	The protocol does not exist							
9.0	The protocol does not exist							

* Packaged Statistics Protocol was added to Platform SDK for Java in 7.5 release.

** Packaged Statistics Protocol was deprecated from Platform SDK 8.0.

*** Immediate notification functionality is not available in 7.2 Stat Server and some Java statistics are not supported by 7.2 Stat Server (JavaStat_Historical).

**** Packaged Statistics Protocol announced obsolete in 8.1.0 and officially unsupported in release 8.1.1 of Stat Server.

Universal Routing Server Protocol Compatibility Matrix

	Universal Routing Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	

Universal Routing Server							
Platform SDK Routing							
7.2	The protocol does not exist						
7.5							
7.6							
8.0 *					yes	yes	yes
8.1					yes	yes	yes
8.5 **					yes	yes	yes
9.0					yes	yes	yes

* The protocol was added in 8.0.1 version.

** Universal Routing Server Protocol was removed from the installation package in release 8.5.0, but was added again in release 8.5.301.03.

T-Server Protocol Compatibility Matrix

T-Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Voice							
7.2	yes	yes	yes			no*	no*
7.5			yes	yes		no*	no*
7.6			yes	yes	yes	yes*	yes*
8.0			yes	yes	yes	yes	yes
8.1			yes	yes	yes	yes	yes
8.5			yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes

* New functionality of TLib 8.0 is not supported by old versions of Platform SDK. The T-Server 8.1 release is actually backward compatible with release 7.6.

Chat Server Protocol Compatibility Matrix

Chat Server								
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Web Media/Basic Chat and Flex Chat protocols								
7.2	The protocol does not exist							
7.5				yes	yes			
7.6				yes	yes	yes**	yes*/**	
8.0				yes***	yes	yes	yes*	
8.1				yes	no****	yes	yes	yes

Chat Server								
8.5				yes	no****	yes	yes	yes
9.0				yes	no****	yes	yes	yes

* ER created for Secure Key attribute which is not accepted by the protocol.

** [flex] Attribute PartyID is not accepted by messages.

*** Notify request and Notification attributes have been added in 8.1 protocol.

**** If RequestMessage sends an empty sessionId, Chat Server 7.6 closes the connection.

Callback Server Protocol Compatibility Matrix

Callback Server *							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Web Media/ Callback protocol							
7.2	The protocol does not exist						
7.5		yes					
7.6		yes					
8.0		yes					
8.1		yes					
8.5		yes					
9.0		yes					

* Universal Callback Server is only available in release 7.1.

Email Server Protocol Compatibility Matrix

Email Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Web Media/Email protocol							
7.2	The protocol does not exist						
7.5				yes	yes		
7.6				yes	yes	yes (8.0.2 no**)	no**
8.0				yes	yes	yes (8.0.2 no**)	no**
8.1 *				yes	yes	yes (8.0.2 no**)	no**
8.5 *				yes	yes	yes (8.0.2 no**)	no**
9.0 *				yes	yes	yes (8.0.2 no**)	no**

* XML-based Email Protocol is deprecated in release 8.1, and replaced with ESP-based protocol.

** Email servers starting from release 8.0.2 do not support web-api port.

	Email Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Web Media/ESP Email protocol								
7.2	The protocol does not exist							
7.5								
7.6								
8.0 ***						yes	yes	
8.1						yes	yes	yes
8.5						yes	yes	yes
9.0						yes	yes	yes

*** ESP Email Protocol was added in the 8.0.2 release of Platform SDK.

DB Server Protocol Compatibility Matrix

	DB Server						
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Data Access							
7.2	The protocol does not exist						
7.5							
7.6							
8.0 *					yes	yes	yes
8.1					yes**	yes	yes
8.5	The protocol does not exist						
9.0	The protocol does not exist						

* Platform SDK Data Access protocol was created in the 8.0.2 release of Platform SDK, although it is still not added to Platform SDK Installation Package.

** EventError is not received on RequestOpenDatabase with incorrect parameters.

Platform SDK for .NET Compatibility

Configuration Server Protocol Compatibility Matrix

	Configuration Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Configuration								
7.2	yes	yes	yes			no***	no***	
7.5	yes	yes	yes	yes	yes**	no***	no***	
7.6	yes	yes	yes	yes	yes	yes**	yes**	
8.0	yes*	yes*	yes*	yes*	yes*	yes	yes**	
8.1	yes	yes	yes	yes	yes	yes	yes	yes****
8.5	yes	yes	yes	yes	yes	yes	yes	yes
9.0	yes	yes	yes	yes	yes	yes	yes	yes

* Access to new objects (for example, CFGRole) occurs without exceptions being thrown. This behavior can result in a hang-up without response.

** New features of Configuration Server are not supported by old releases of Platform SDK.

*** Protocol cannot connect to Configuration Server because of a schema error; ConfServerProtocol XSD schema compiler throws the exception. (ER# 270711494 for Configuration Server 8.0.x) Also there is a forward-compatibility issue (ER# 138864921).

**** User session language selection in client registration is not supported.

Universal Contact Server (UCS) Protocol Compatibility Matrix

	Universal Contact Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Contacts								
7.2	The protocol does not exist							
7.5								
7.6 *				yes	yes	yes**	yes**	
8.0				yes**	yes	yes	yes**	
8.1				yes**	yes	yes	yes***	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* Contacts Protocol was added to Platform SDK for .NET starting from release 7.6.000.x.

** The following new messages are available with the 8.x releases of UCS and Platform SDK:

- Add\Remove\UpdateDocument
- IdentifyContact
- AddAgentStdRespFavorite

- GetSystemSettings
- Get/Set/DeleteProperties
- Add/Update/DeleteStandardResponse

*** The following new messages are available for UCS starting from release 8.1.3:

- GetServerTime
- Refresh

Local Control Agent Protocol Compatibility Matrix

	Local Control Agent							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/LCA protocol								
7.2	The protocol does not exist							
7.5				yes	yes			
7.6				yes	yes			
8.0				yes	yes	yes	yes*	
8.1				yes	yes	yes	yes	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* New messages RequestSCSConnectionStatus, EventHostUnderControl, EventNoControllingSCS are available from release 8.1.200.10 of Platform SDK.

Message Server Protocol Compatibility Matrix

	Message Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/Message Server protocol								
7.2	The protocol does not exist							
7.5			yes	yes	yes			
7.6			yes	yes	yes			
8.0			yes	yes	yes	yes		
8.1			yes	yes	yes	yes	yes*	yes*
8.5			yes	yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes	yes

* Platform SDK doesn't provide Message Server multi-languages support.

Solution Control Server Protocol Compatibility Matrix

	Solution Control Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Management/Solution Control Server protocol								
7.2	The protocol does not exist							
7.5			yes	yes	yes			
7.6			yes	yes	yes			
8.0			yes	yes	yes	yes		
8.1			yes	yes	yes	yes	yes*	yes*
8.5			yes	yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes	yes

* Platform SDK doesn't provide Solution Control Server multi-languages support.

Interaction Server Protocol Compatibility Matrix

	Interaction Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Open Media								
7.2	yes	yes	yes					
7.5			yes	yes	yes			
7.6			yes	yes	yes	yes*	yes*	
8.0				yes	yes	yes	yes	
8.1				yes	yes	yes	yes	yes
8.5				yes	yes	yes	yes	yes
9.0				yes	yes	yes	yes	yes

* Known issue (ER): New attribute `_attr_itx_is_held` is not accepted by the messages.

Outbound Server Protocol Compatibility Matrix

	Outbound Server						
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Outbound							
7.2			yes	yes	yes		
7.5			yes	yes	yes		
7.6			yes	yes	yes	yes	yes*
8.0				yes	yes	yes	yes
8.1				yes	yes	yes	yes

Outbound Server							
8.5				yes	yes	yes	yes
9.0				yes	yes	yes	yes

* Outbound Contact Server 8.1 has new optional attribute sessionId, which does not exist in earlier versions of the protocol.

Statistics Server Protocol Compatibility Matrix

Stat Server								
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Statistics								
7.2	The protocol does not exist							
7.5								
7.6								
8.0				yes	yes	yes	yes	
8.1				yes	yes	yes	yes	yes
8.5				no*	no*	yes	yes	yes
9.0				no*	no*	yes	yes	yes

* Stat Server protocol 8.5.301+ includes a corrected Campaign Actions enumeration. This enumeration includes DialWrongNumber and LeadWrongNumber items, and is reordered to be in sync with StatServer 8.0+ Campaign Actions Mapping. (PSDK-8545)

Stat Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Packaged Statistics (deprecated)							
7.2					yes		
7.5					yes		
7.6			yes**	yes	yes	yes	yes
8.0 *				yes	yes	yes	yes
8.1 *				yes	yes	yes	yes/no***
8.5	The protocol does not exist						
9.0	The protocol does not exist						

* Packaged Statistics Protocol was deprecated since 8.0.

** Immediate notification functionality is not available in 7.2 Stat Server and some Java category statistics are not supported by 7.2 Stat Server (JavaStat_Historical).

*** Packaged Statistics Protocol announced obsolete in 8.1.0 and officially unsupported in release 8.1.1 of Stat Server.

Universal Routing Server Protocol Compatibility Matrix

	Universal Routing Server						
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Routing							
7.2	The protocol does not exist						
7.5							
7.6							
8.0 *						yes	yes
8.1						yes	yes
8.5 **						yes	yes
9.0						yes	yes

* The protocol was added in 8.0.1 release.

** Universal Routing Server Protocol was removed from the installation package in release 8.5.0, but was added again in release 8.5.301.03.

T-Server Protocol Compatibility Matrix

	T-Server						
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Voice							
7.2	yes	yes	yes			no*	no*
7.5			yes	yes		no*	no*
7.6			yes	yes	yes	yes*	yes*
8.0			yes	yes	yes	yes	yes
8.1			yes	yes	yes	yes	yes
8.5			yes	yes	yes	yes	yes
9.0			yes	yes	yes	yes	yes

* New functionality of TLib 8.0 is not supported by old versions of Platform SDK. The T-Server 8.1 release is actually backward compatible with version 7.6.

Chat Server Protocol Compatibility Matrix

	Chat Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Web Media/Basic Chat and Flex Chat protocols								
7.2	The protocol does not exist							
7.5				yes	yes			
7.6				yes	yes	yes	yes*	

Chat Server								
8.0				yes**	yes	yes	yes*	
8.1				yes	no***	yes	yes	yes
8.5				yes	no***	yes	yes	yes
9.0				yes	no***	yes	yes	yes

* ER created for Secure Key attribute which is not accepted by the protocol.

** Notify request and notification attributes has been added in 8.0/8.1 protocol.

*** If RequestMessage sends an empty sessionId, Chat Server 7.6 closes the connection.

Callback Server Protocol Compatibility Matrix

Callback Server *							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Web Media/ Callback protocol							
7.2	The protocol does not exist						
7.5		yes					
7.6		yes					
8.0		yes					
8.1		yes					
8.5		yes					
9.0		yes					

* Universal Callback Server is only available in release 7.1

Email Server Protocol Compatibility Matrix

Email Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Web Media/Email protocol							
7.2	The protocol does not exist						
7.5				yes	yes		
7.6				yes	yes	yes (8.0.2 no**)	no**
8.0				yes	yes	yes (8.0.2 no**)	no**
8.1 *				yes	yes	yes (8.0.2 no**)	no**
8.5 *				yes	yes	yes (8.0.2 no**)	no**
9.0 *				yes	yes	yes (8.0.2 no**)	no**

Email Server							
							no**)

* XML-based EmailProtocol is deprecated in 8.1 branch - it is replaced with ESP-based protocol.

** Email servers starting from 8.0.2 do not support web-api port.

Email Server								
	7.0	7.1	7.2	7.5	7.6	8.0	8.1	8.5
Platform SDK Web Media/ESP Email protocol								
7.2	The protocol does not exist							
7.5								
7.6								
8.0 ***						yes	yes	
8.1						yes	yes	yes
8.5						yes	yes	yes
9.0						yes	yes	yes

*** EspEmail Protocol was added in Platform SDK release 8.0.2.

DB Server Protocol Compatibility Matrix

DB Server							
	7.0	7.1	7.2	7.5	7.6	8.0	8.1
Platform SDK Data Access							
7.2	The protocol does not exist						
7.5							
7.6							
8.0 *					yes	yes	yes
8.1					yes**	yes	yes
8.5	The protocol does not exist						
9.0	The protocol does not exist						

* Platform SDK Data Access protocol was created in Platform SDK 8.0.2 version, though it is still not added to Platform SDK Installation Package.

** EventError is not received on RequestOpenDatabase with incorrect parameters.

Installing Platform SDK

Installation Overview

Tip

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 (`setup.exe` or `install.sh` file) under the folder for your development platform and operating system of choice to start the *Genesys Installation Wizard*.

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> 9.0
```
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

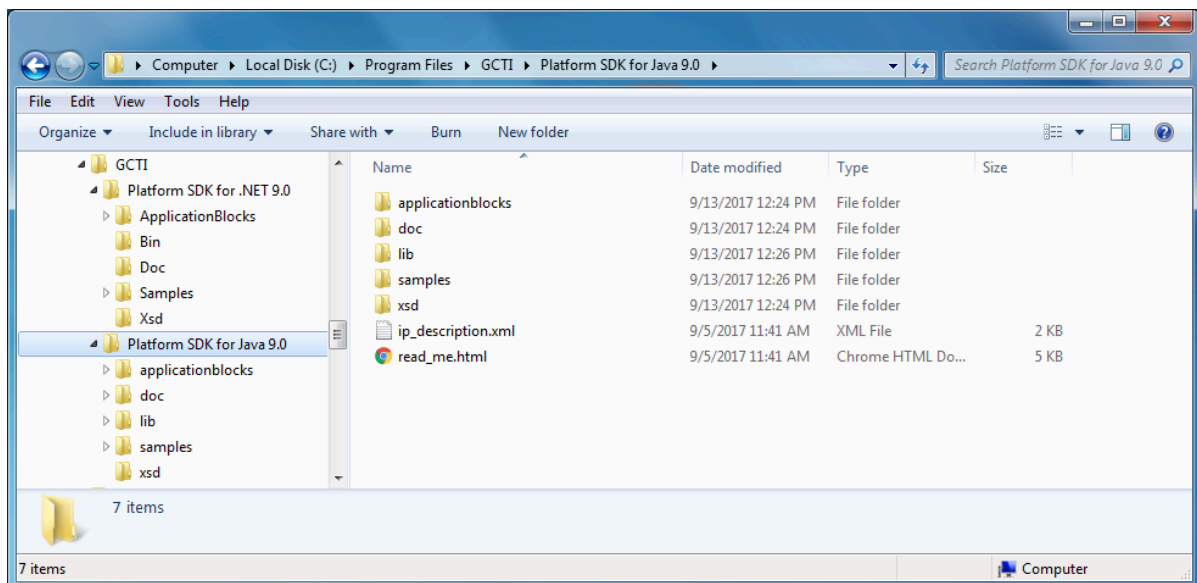
Procedure

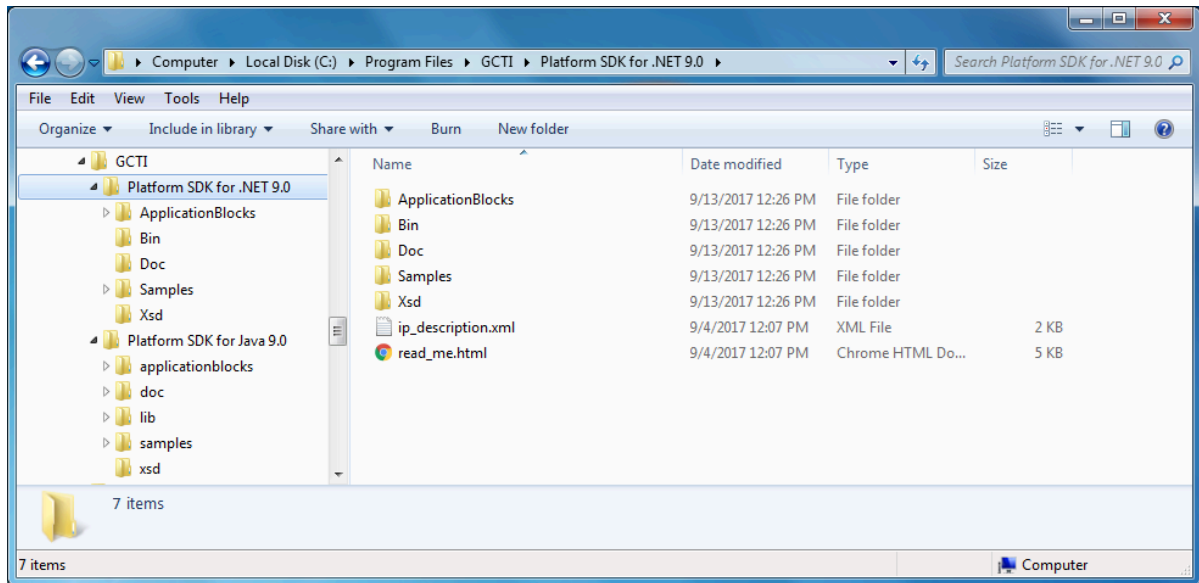
Prerequisites: You must first complete the procedure that is found at [Installing Platform SDK](#).

Start of procedure

1. Use your file manager to locate the destination folder for your Platform SDK installation.
2. Confirm that your Platform SDK components look similar to what is shown in the following images:

Note: These images assume that the default location was used during a Windows-based installation.





3. Examine each folder (including the root installation folder) 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 Java Installation

Folder	Contents
\	The root folder 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 a number of subfolders (listed in more detail below) that hold Maven projects (including a pom.xml file, Java source files, and a README.TXT file with some build instructions) for the application blocks included with this release of Platform SDK. You can use these files to gain a better understanding of, or to expand upon, the application block functionality. <p>Some subfolders also contain an additional QuickStart application to demonstrate the basic functionality of that application block.</p> <ul style="list-style-type: none"> apptemplate—source files clusterprotocol—source files com—source files and QuickStart application

Folder	Contents
	<ul style="list-style-type: none"> • commons—common interfaces required for the COM Application Block and Message Broker Application Block (<i>introduced in release 8.5.0</i>) • messagebroker—source files (<i>deprecated</i>) • protocolmanager—source files (<i>deprecated</i>) • warmstandby—source files and QuickStart application <p>Deprecation Notice: The Message Broker and Protocol Manager application blocks are considered a legacy application blocks. Documentation and source code are provided for backwards compatibility, but new development should not use these application blocks.</p>
\doc	Contains the combined Platform SDK API Reference (as expanded JavaDoc files, or as a <code>api.jar</code> archive). This reference contains detailed information about how to develop content using the Platform SDKs.
\lib	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-<i><version></i>.Final.jar</code> and subfolders containing the related Netty license file and Maven POM files.
\samples	<p>Contains a <code>readme.html</code> file describing the code samples included with your Platform SDK installation, and subfolders with the source code for each sample.</p> <ul style="list-style-type: none"> • <code>apptemplate</code> • <code>chat</code> • <code>clusterprotocol</code> • <code>com</code> • <code>message-server-subscription-ui</code> • <code>statistic-invoker</code> • <code>statistic-ui</code> • <code>tserver</code> • <code>warmstandby</code> <p>For more information or to download the latest versions of these samples, see the Platform SDK code samples documentation.</p>
\xsd	Contains XML Schema Definition files that define

Folder	Contents
	the structure of the serialized messages used by the Platform SDKs.

Folder Contents for a .NET Installation

Folder	Contents
\	<p>The root folder 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 a number of subfolders (listed in more detail below) that hold self-contained Visual Studio solutions (with all source files) for the application blocks included with this release of Platform SDK. You can use these files to gain a better understanding of, or to expand upon, the application block functionality.</p> <p>Some subfolders also contain an additional Visual Studio solution that provides a QuickStart application to demonstrate the basic functionality of that application block.</p> <ul style="list-style-type: none"> • <code>AppTemplate</code>—source files • <code>ClusterProtocol</code>—source files • <code>Com</code>—source files and QuickStart application • <code>Commons</code>—common interfaces required for the COM Application Block and Message Broker Application Block (<i>introduced in release 8.5.0</i>) • <code>MessageBroker</code>—source files (<i>deprecated</i>) • <code>ProtocolManager</code>—source files (<i>deprecated</i>) • <code>WarmStandby</code>—source files and QuickStart application <p>Deprecation Notice: The Message Broker and Protocol Manager application blocks are considered a legacy application blocks. Documentation and source code are provided for backwards compatibility, but new development should not use these application blocks.</p>
\Bin	<p>This folder holds the .NET libraries (as both <code>.dll</code> and <code>.xml</code> files) for all APIs and application blocks contained in the .NET version of Platform SDK, including the Core and Commons namespaces.</p>
\Doc	<p>This folder stores the combined Platform SDK API Reference (in <code>.chm</code> format). This reference contains detailed information about how to develop content using the Platform SDKs.</p>

Folder	Contents
\samples	<p>Contains a readme.html file describing the code samples included with your Platform SDK installation, a Samples.sln solution file, and subfolders holding source code for each sample.</p> <ul style="list-style-type: none"> • Src/AppTemplate • Src/ClusterProtocol • Src/COM • Src/Common • Src/FlexChatSample • Src/MessageServerSubscription • Src/StatServerConsoleSample • Src/StatServerSample • Src/TServer • Src/WarmStandby <p>For more information or to download the latest versions of these samples, see the Platform SDK code samples documentation.</p>
\Xsd	<p>This folder contains XML Schema Definition files that define the structure of the serialized messages used by the Platform SDKs.</p>

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.