



Release Bulletin for Sybase Mobile SDK

Sybase Unwired Platform 2.1

ESD #2

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Product Summary

This release bulletin discusses known issues, workarounds, and late-breaking documentation updates for Sybase® Mobile SDK version 2.1 ESD #2.

This release is targeted toward mobile application developers. For information about new features in this version, see *New Features for Sybase Mobile SDK and Runtime 2.1 ESD #2*.

For installation information, see *Installation Guide for Sybase Mobile SDK 2.1* and the *EBF README* included with the 2.1 ESD #2 product download.

For information about accessibility, see <http://www.sybase.com/products/accessibility>.

Upgrading and Migrating

Learn about options available in the upgrade.

You can upgrade Unwired Platform version 2.1 ESD #2 from version 2.1 and 2.1 ESD #1. You can migrate MBO projects and workflows from previous versions. Although minor point releases of Unwired Platform generally support upgrading only from the last major point release, Sybase Unwired WorkSpace can migrate MBO projects and workflows from earlier releases. See the version compatibility matrixes for details.

Native Client Object API Version Compatibility Matrix

Compatibility between versions of the Native Client Object API and Unwired Server.

Native Client Object API and Unwired Server Version Compatibility

Native Client Object API	Unwired Server 1.2	Unwired Server 1.5.x	Unwired Server 2.0.x	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
Native Client Object API 1.2	Yes	No	No	No	No	No
Native Client Object API 1.5.x	No	Yes	Yes	Yes	Yes	Yes

Native Client Object API	Unwired Server 1.2	Unwired Server 1.5.x	Unwired Server 2.0.x	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
Native Client Object API 2.0.x	No	No	Yes	Yes	Yes	Yes
Native Client Object API 2.1	No	No	No	Yes	Yes	Yes
Native Client Object API 2.1 ESD #1	No	No	No	No	Yes	Yes
Native Client Object API 2.1 ESD #2	No	No	No	No	No	Yes

Migrating Object API Applications

Make required changes to an application to use the new APIs introduced in SDK version 2.1 ESD #2. You can migrate client applications built from the previous SDK versions 2.0, 2.0 ESD #1, 2.1, or 2.1 ESD #1.

When an existing client application built from a previous SDK version is integrated with the 2.1 ESD #2 SDK and installed on a device it must be fully functional, with its related server packages deployed prior to performing an upgrade, or deploying a new server package after an upgrade.

Android

No application or project changes are required.

No additional changes were introduced in SDK version 2.1 ESD #2.

BlackBerry

Changes required for BlackBerry applications.

Application Changes Introduced in 2.1 ESD #2

Update and rebuild your application:

1. The Application APIs (in the `Application` class) are required for managing applications registrations, connections, and context. Rewrite the initialization code in your application to use the Application APIs.

For information on the `Application` interface, search for *Application APIs* in the Developer Guide for your platform.

2. Callbacks related to application events are now contained in a separate `ApplicationCallback` interface. Rewrite your application code to use this interface. For information on the `ApplicationCallback` interface, search for *Callback and Listener APIs* in the Developer Guide for your platform.
3. Replication-based synchronization clients require two data channels, a data channel for data synchronization, and a messaging channel for sending registration and push notifications to the client. Update your port configuration for both channels. See *Sybase Control Center for Sybase Unwired Platform > Administer > Unwired Server > Server Properties*.
4. To continue using server-initiated synchronization, you must write code for handling notifications. If change notifications are enabled for synchronization groups, you can implement the `onSynchronize` callback method to monitor this condition, and either allow or disallow default background synchronization.

```
public int onSynchronize(ObjectList groups,
    SynchronizationContext context)
{
    int status = context.getStatus();
    if (status == SynchronizationStatus.STARTING_ON_NOTIFICATION)
    {
        // There is changes on the synchronization group
        if (busy)
        {
            return SynchronizationAction.CANCEL;
        }
        else
        {
            return SynchronizationAction.CONTINUE;
        }
    }

    // return CONTINUE for all other status
    return SynchronizationAction.CONTINUE;
}
```

5. The new location of the required libraries is `UnwiredPlatform_InstallDir\UnwiredPlatform\MobileSDK\ObjectAPI\BB`.

Rebuild your project as follows:

- a. Modify the BlackBerry project's Java build path to point to the new location for your project.
- b. Replace the old libraries, `sup_client_rim.jar` and `UltraLiteJ.jar`, with the following new references:
 - `sup_client2.jar` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
 - `UltraLiteJ1.jar` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.

- c. In Windows Explorer, copy the new required files into the BlackBerry simulator directory:
 - `CommonClientLib.cod` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
 - `MessagingClientLib.cod` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
 - `MocaClientLib.cod` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
 - `sup_client2.cod` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
 - `UltraLiteJ12.cod` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\BB`.
- d. Delete the old `CommonClient.cod`, `sup_client_rim.cod`, and `UltraLiteJ.cod` files.

iOS

Changes required for iOS applications.

Application Changes Introduced in 2.1 ESD #2

Update and rebuild your application:

1. The Application APIs (in the `SUPApplication` class) are required for managing applications registrations, connections, and context. Rewrite the initialization code in your application to use the Application APIs. Replace references in your application to the Messaging Client API (`SUPMessage` class) with the appropriate use of the Application APIs (`SUPApplication`).
For information on the `SUPApplication` interface, search for *Application APIs* in the Developer Guide for your platform.
2. Callbacks related to application events are now contained in a separate `ApplicationCallback` interface. Rewrite your application code to use this interface. For information on the `ApplicationCallback` interface, search for *Callback and Listener APIs* in the Developer Guide for your platform.
3. Replication-based synchronization clients require two data channels, a data channel for data synchronization, and a messaging channel for sending registration and push notifications to the client. Update your port configuration for both channels. See *Sybase Control Center for Sybase Unwired Platform > Administer > Unwired Server > Server Properties*.
4. In addition to the required libraries provided in previous SDK versions (`libMO.a`, `libclientrt.a`, and `libSUObj.a`), two new libraries (`libsupcore.a`, `libAfarialSL.a`) are provided and are required for all iOS applications. These libraries also require additional Apple-provided frameworks to be included when building object API applications.

For information on importing required libraries, see *Developer Guide: iOS Object API Applications 2.1 ESD #2* > *Development Task Flow for Object API Applications* > *Creating a Project* > *Importing Libraries and Code*.

Windows and Windows Mobile

Changes required for Windows and Windows Mobile applications.

Application Changes Introduced in 2.1 ESD #2

Update and rebuild your application:

1. The Application APIs (in the `Application` class) are required for managing applications registrations, connections, and context. Rewrite the initialization code in your application to use the Application APIs.
For information on the `Application` interface, search for *Application APIs* in the Developer Guide for your platform.
2. Callbacks related to application events are now contained in a separate `ApplicationCallback` interface. Rewrite your application code to use this interface.
For information on the `ApplicationCallback` interface, search for *Callback and Listener APIs* in the Developer Guide for your platform.
3. Replication-based synchronization clients require two data channels, a data channel for data synchronization, and a messaging channel for sending registration and push notifications to the client. Update your port configuration for both channels. See *Sybase Control Center for Sybase Unwired Platform 2.1 ESD #2* > *Administer* > *Unwired Server* > *Server Properties*.
4. To continue using server-initiated synchronization, you must write code for handling notifications. If change notifications are enabled for synchronization groups, you can implement the `onSynchronize` callback method to monitor this condition, and either allow or disallow default background synchronization.

```
public int OnSynchronize(GenericList<ISynchronizationGroup>
groups, SynchronizationContext context)
{
    int status = context.Status;
    if (status == SynchronizationStatus.STARTING_ON_NOTIFICATION)
    {
        // There is changes on the synchronization group
        if (busy)
        {
            return SynchronizationAction.CANCEL;
        }
        else
        {
            return SynchronizationAction.CONTINUE;
        }
    }

    // return CONTINUE for all other status
}
```

```
return SynchronizationAction.CONTINUE;  
}
```

5. In 2.1 ESD #2, the new location of the required libraries is *UnwiredPlatform_InstallDir\UnwiredPlatform\MobileSDK\ObjectAPI*.

Rebuild your project as follows:

- a. Reset the references of the following libraries for the appropriate device platform in the Visual Studio project according to the new location:
 - For Windows Mobile:
 - *sup-client.dll* – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM*.
 - *iAnywhere.Data.UltraLite.dll* – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\Ultralite*.
 - *iAnywhere.Data.UltraLite.resources.dll* (several languages are supported) – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\Ultralite\language*.
 - For Windows:
 - *sup-client.dll* – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32*.
 - *iAnywhere.Data.UltraLite.dll* – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32\Ultralite*.
 - *iAnywhere.Data.UltraLite.resources.dll* (several languages are supported) – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32\Ultralite\language*.
- b. Remove the following libraries for the appropriate device platform as items in the Visual Studio project. The libraries are no longer required.
 - For Windows Mobile:
 - *ulnet11.dll*
 - *mlcrsa11.dll* (if HTTPS protocol is used)
 - *PUtlTRU.dll*
 - For Windows:
 - *ulnet11.dll*
 - *mlcrsa11.dll* (if HTTPS protocol is used)
 - *mlczlib11.dll* (if using compression)
- c. Add the following libraries for the appropriate device platform as items in the Visual Studio project. Set the "Build Action" to **Content** and "Copy to Output Directory" to **Copy always**.
 - For Windows Mobile:
 - *ulnet12.dll* – from *UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\Ultralite*.

- `mlcrsa12.dll` (if HTTPS protocol is used) – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\Ultralite`.
- `mlczlib12.dll` (if HTTPS protocol is used) – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\Ultralite`.
- `CMessagingClient.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\WM\DeviceType`. The `DeviceType` can be Pocket PC or Smartphone as applicable.
- For Windows:
 - `ulnet12.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32\Ultralite`.
 - `mlcrsa12.dll` (if HTTPS protocol is used) – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32\Ultralite`.
 - `mlczlib12.dll` (if using compression) - from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32\Ultralite`.
 - `CMessagingClient.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32`.
 - `ECTrace.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32`.
 - `TravelerLib.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32`.
 - `zlib1.dll` – from `UnwiredPlatform_InstallDir\MobileSDK\ObjectAPI\Win32`.

Object API Changes from Version 2.1 through Version 2.1 ESD #2

Complete summary of changes in the Object API made between Unwired Platform versions 2.1 and 2.1 ESD #2.

The following topics contain a summary of all changes in the Object API. Most of these changes add new functionality and do not affect existing applications.

Object API Changes in SDK Version 2.1 ESD #2

There are changes in the Object API in SDK 2.1 ESD #2 (the changes were introduced in SDK 2.1 ESD #1 for Android). If your application is built with an earlier version of the SDK, update your application to include the required or recommended API changes.

Application APIs

Sybase Unwired Platform now supports and requires clients to use the Application APIs to manage mobile application registrations, application connections, and context. These APIs are provided in the `Application` (or `SUPApplication`) class.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, *Developer Guide: iOS Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Initializing an Application*
- *Application APIs*

ApplicationCallback APIs

Sybase Unwired Platform supports a new `ApplicationCallback` interface that is invoked by events of interest to a mobile application.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, *Developer Guide: iOS Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *ApplicationCallback API*

Large Attribute APIs

Sybase Unwired Platform supports new large attribute APIs to allow clients to import large messages containing binary objects (BLOBs) from the server or send a replay message without using excessive memory or throwing exceptions.

These new classes support large attributes:

- `BigBinary` (or `SUPBigBinary`)
- `BigString` (or `SUPBigString`)

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, *Developer Guide: iOS Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Large Attribute APIs*

Change Log APIs

(Not available in SDK version 2.1 ESD #2 for iOS). New change log APIs allow a client to retrieve entity changes from the backend. If a client application already has a list view constructed, it simply needs to add, modify, or delete entries in the list according to the change logs.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Change Log API*

Asynchronous Operation Replay APIs

(Not available in SDK version 2.1 ESD #2 for iOS). Asynchronous Operation Replay allows users to submit changed data outside a synchronization session without waiting for EIS execution. When an application calls `submitPending` on an MBO on which a create,

update, or delete operation is performed, an operation replay record is created on the device local database.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Asynchronous Operation Replay*

Encryption Key Management APIs

New methods in the connection profile support managing the encryption key for the local client database.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *ConnectionProfile*
- *Encrypt the Database*

Developer Guide: iOS Object API Applications

- *SUPConnectionProfile*
- *Encrypting the Client Database*

Change Notification APIs for Push Synchronization

(Not available in SDK version 2.1 ESD #2 for iOS). Sybase Unwired Platform now supports using a messaging channel to send change notifications from the server to the client device. Clients receive device notifications when a data change is detected for any of the MBOs in the synchronization group to which they are subscribed. By default, change notification is disabled. You can enable the change notification through setting properties in the synchronization group.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Push Synchronization Applications*

Removed APIs

The Messaging Client APIs (`SUPMessageClient` interface) are removed. If your application uses the `SUPMessageClient` interface, you must rewrite it to use functionality from `SUPApplication`.

Object API Changes in SDK Version 2.1

There are changes in the Object API in SDK 2.1. If your application is built with an earlier version of the SDK, update your application to include the required or recommended API changes.

Object Query Enhancements

The Object API provides increased access to the underlying relational persistence layer. SQL features and functions have been added to the dynamic query method, `ExecuteQuery`.

The additions allow you to:

- (Update) Exclude duplicate entries from result sets using the arbitrary Find method `Query.DISTINCT` property.
- (Update) Define a filter condition using an MBO attribute using the new conditions, `IN`, `NOT_IN`, `EXISTS`, and `NOT_EXISTS`. You can nest queries, as well as use `LIKE` keywords in queries.
- (New) Use aggregate functions.
- (New) Group your results using specific attributes.
- (New) Specify how your results are filtered.
- (New) Combine the results of multiple queries into a single result set.
- (New) Include subqueries in `SELECT` statements.

Documented in *Developer Guide: Android Object API Applications*, *Developer Guide: BlackBerry Object API Applications*, *Developer Guide: iOS Object API Applications*, and *Developer Guide: Windows and Windows Mobile Object API Applications*

- *Query API*

Hybrid Web Container Version Compatibility Matrix

Compatibility between versions of the Hybrid Web Container and Unwired Server, and Hybrid Web Container and Mobile Workflow applications.

Hybrid Web Container and Unwired Server Compatibility

Client/ Hybrid Web Container	Unwired Server 2.0	Unwired Server 2.0.1	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
Pre-2.0 Client Stack/ Applications	Yes	Yes	No	No	No

Client/ Hybrid Web Container	Unwired Server 2.0	Unwired Server 2.0.1	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
Hybrid Web Container 2.0	Yes	Yes	Yes	Yes	Yes
Hybrid Web Container 2.0.1	No	Yes	Yes	Yes	Yes
Hybrid Web Container 2.1	No	No	Yes	Yes	Yes
Hybrid Web Container 2.1 ESD #1	N/A	N/A	N/A	N/A	N/A
Hybrid Web Container 2.1 ESD #2	No	No	No	No	Yes

Note: There was no 2.1 ESD #1 Hybrid Web Container. The 2.1 ESD #1 release shipped with 2.1 clients.

Hybrid Web Container and Mobile Workflow Application Compatibility

Client/ Hybrid Web Container	Mobile Workflow Application 2.0	Mobile Workflow Application 2.0.1	Mobile Workflow Application 2.1	Mobile Workflow Application 2.1 ESD #1	Mobile Workflow Application 2.1 ESD #2
Pre-2.0 Client stack/ Applications	Yes	Yes	No	No	No
Hybrid Web Container 2.0	Yes	No	No	N/A	No
Hybrid Web Container 2.0.1	Yes	Yes	No	N/A	No
Hybrid Web Container 2.1	Yes	Yes	Yes	N/A	No

Client/ Hybrid Web Container	Mobile Workflow Application 2.0	Mobile Workflow Application 2.0.1	Mobile Workflow Application 2.1	Mobile Workflow Application 2.1 ESD #1	Mobile Workflow Application 2.1 ESD #2
Hybrid Web Container 2.1 ESD #1	N/A	N/A	N/A	N/A	N/A
Hybrid Web Container 2.1 ESD #2	Yes	Yes	Yes	N/A	Yes

Note: There was no 2.1 ESD #1 Hybrid Web Container. The 2.1 ESD #1 release shipped with 2.1 clients.

Migrating Mobile Workflow Projects

Mobile workflow projects work properly without special handling, unless you want to upgrade to the new workflow client containers.

When upgrading to SDK version 2.1 ESD #2:

- To use the new 2.1 ESD #2 functionality, use the Mobile Workflow Forms Editor to regenerate and repackage mobile workflows developed in earlier versions.
- Any customizations made in previous versions to the `Custom.js` and `Stylesheet.css` files in the mobile workflow package are maintained and functional after regenerating and repackaging.
- Any customizations made in previous versions of the `API.js`, `Utils.js`, or `WorkflowMessage.js` files in the mobile workflow package are backed up (to a `.backup` extension) the first time the mobile workflow package is generated in 2.1 ESD #2, then they are replaced with the new 2.1 ESD #2 version. If you made changes to those files in previous versions, you must manually reapply those changes.
- Mobile workflow packages generated in previous versions do not work with version 2.1 ESD #2 of Unwired Server unless you manually modify the `manifest.xml` file to reference the shared `WorkflowClient.dll` file located in `UnwiredPlatform_InstallDir\UnwiredPlatform\Servers\MessagingServer\Bin`.
- For workflows generated in previous versions, the `custom.js` and `stylesheet.css` files are backed up before being overwritten. Each backup file is created in the same directory with `.backup` appended to the original name.

- If projects created before 2.1 ESD #2 have controls without labels, after migrating to 2.1 ESD #2, error markers appear. You must manually add any missing labels after migrating to 2.1 ESD #2.

Supported Upgrade Scenarios

When Unwired Server is upgraded to version 2.1 ESD #2, no modifications to the earlier deployed versions of Hybrid Web Containers on the server or clients are necessary for the same functionality to operate correctly.

When SDK clients are upgraded from version 2.0 or 2.0.1 to version 2.1.x, version 2.0 and 2.0.1 coexist with 2.1.x on BlackBerry and Windows Mobile platforms. Workflow messages and existing version 2.0 mobile workflows remain on the clients. Native applications continue to use version 2.0 or 2.0.1 binaries and settings.

You can install Mobile Workflow applications of different versions, for example, 2.1 and 2.1 ESD #1 on the same device, but if they have the same AppID and same device ID, they cannot connect to the same Unwired Server. Mobile Workflow applications with different AppIDs installed on the same device can connect to the same Unwired Server.

Android

If the 2.1 ESD #2 Android Hybrid Web Container is installed on an Android device in which the previous version of Android Hybrid Web Container is already installed:

- The later version of the container upgrades and replaces the previous version of the container.
- Existing mobile workflow applications and messages stay intact and are automatically mapped to the 2.1 ESD #2 Hybrid Web Container.
- No new registration or re-registration is required on Unwired Server, nor do you need to reassign mobile workflows to the 2.1 ESD #2 Hybrid Web Container.

BlackBerry

If the 2.1 BlackBerry mobile workflow container is installed on a BlackBerry device on which an earlier version of BlackBerry Hybrid Web Container is already installed:

- The Hybrid Web Containers coexist on that BlackBerry device or simulator.
- The existing mobile workflow applications and messages remain tied to the earlier version of the container and are not removed.
- A new application connection on Unwired Server is required for the 2.1 ESD #2 container, mobile workflows must be assigned to the 2.1 ESD #2 container, and the connection settings must be entered in the 2.1 ESD #2 application.

iOS

If the 2.1 ESD #2 Hybrid Web Container is installed on an iOS device on which the 2.0, 2.0.1, or 2.1 iOS Hybrid Web Container is already installed:

Upgrading and Migrating

- The version 2.1 ESD #2 Hybrid Web Container replaces the 2.0, 2.0.1, 2.1, or 2.1 ESD #1 container.
- Existing mobile workflow applications and messages stay intact and are automatically mapped to the 2.1 ESD #2 container.
- No new registration or re-registration of application connections is required on Unwired Server, nor do mobile workflows need to be reassigned to the 2.1 ESD #2 container.

Windows Mobile

If the version 2.1 ESD #2 Hybrid Web Container is installed on a Windows Mobile device on which the 2.0, 2.0.1, 2.1, or 2.1 ESD #1 Hybrid Web Container is already installed:

- The two Hybrid Web Containers coexist on that Windows Mobile device or emulator.
- The existing mobile workflow applications and messages remain tied to the version 2.0, 2.0.1, 2.1, or 2.1 ESD #1 Hybrid Web Container and are not removed.
- A new application connection on Unwired Server is required for the 2.1 ESD #2 container, mobile workflows must be assigned to the 2.1 ESD #2 container, and the connection settings must be entered in the 2.1 ESD #2 mobile workflow application.
- When the 2.1 ESD #2 container is installed, and a version 2.0, 2.0.1, 2.1, or 2.1 ESD #1 installation is present, an additional Workflow menu item is not added to the menu in the mail application. The existing Workflow menu item in the Messages application maps to the 2.0, 2.0.1, or 2.1 container.
- Workflow messages in the inbox open whichever container version they are associated with. If 2.0 or 2.0.1, or 2.1.x are assigned to the same workflow and have messages sent to the user, two e-mail messages are sent — one for each registration.

The Windows Mobile Programs folder has icons for accessing 2.0, 2.0.1, and 2.1 settings. Versions 2.0 and 2.0.1 icons and names remain. For 2.1.x, two new icons are present—

Workflow Settings for the 2.1.x settings application and **Sybase Mobile Workflow** for the 2.1.x workflow application.

OData SDK Client Version Compatibility Matrix

Compatibility between versions of OData SDK clients and Unwired Server.

OData SDK Client and Unwired Server Version Compatibility

OData SDK Client	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
OData SDK Client 2.1	Yes	Yes	Yes
OData SDK Client 2.1 ESD #1	No	Yes	Yes

OData SDK Client	Unwired Server 2.1	Unwired Server 2.1 ESD #1	Unwired Server 2.1 ESD #2
OData SDK Client 2.1 ESD #2	No	Yes	Yes

Updates to Supported Operating Systems

Sybase Unwired Platform now supports more operating systems.

Unwired Platform 2.1 ESD #2 contains updates which include support for:

- Apple iOS 6.1.x (for Native OAPI and OData application development in backward compatibility mode only)
- Apple iOS 6.0 (for Native OAPI and OData application development in backward compatibility mode only)
- BlackBerry 7.0 and 7.1 (for Native OAPI and OData application development only)

For a complete list of supported platforms and operating systems, see *Supported Platforms and Development Environments* in the *Supported Hardware and Software* guide.

Updates to Certified Devices

Sybase Unwired Platform now supports more devices.

The iPhone 5, iPad Mini, and iPad with Retina display and A6X chip have been certified for the following applications:

- Object API Applications (in Apple's backward compatibility mode)
- OData SDK Applications (in Apple's backward compatibility mode)

Changed or Deprecated Features

Some Sybase Mobile SDK behavior has changed or been deprecated.

CR #	Description
696706	<p>The Query Limiting feature in Sybase Unwired WorkSpace – Mobile Business Object Development is deprecated.</p> <p>Workaround: Use either an object query or Object API dynamic query to achieve the same effect as when the Query Limiting check box is selected.</p>
CSN 0120061532 3869546 2011	<p>OData BlackBerry deprecations for API.</p> <p><code>getSignedCertificateFromStore()</code> is deprecated and the pop-up screen has been removed from the new API Certificate Selection.</p>
CR-690900	<p>Bulk download methods deprecated for APIs.</p> <p>Bulk download methods have been deprecated in Windows Mobile and Win32 APIs. Sybase recommends that you update the initial loading model for newly deployed applications. Existing customers will be supported, but only until the functionality is fully removed. See the corresponding <i>Mobile Data Models</i> guide for alternate implementations.</p>
684329	<p>Backward compatibility issue for synchronization parameters.</p> <p>After upgrading Unwired Server to 2.1 ESD #2, when generating new code, you must modify the synchronization parameters code to properly trigger a cache refresh so that data gets updated from the backend to the client.</p> <p>Workaround: Modify client code: after saving sync parameters, explicitly call the <code>DBCClass BeginSynchronize()</code> method.</p>

Known Issues with Installing, Uninstalling, and Upgrading

Learn about known Sybase Mobile SDK installation, uninstallation and upgrade issues and workarounds.

See the *Installation Guide for Sybase Mobile SDK* for upgrade and migration information.

Issue Number	Description
CR 692901	<p>Requirements for using SAP® JCO 3 on Windows XP.</p> <p>If you plan to use SAP JCO 3 in Unwired WorkSpace running on Windows XP, JCO 3 requires Microsoft Visual C++ 2005 Service Pack 1 Redistributable.</p> <hr/> <p>Note: This is not a requirement for Windows 7 or 64-bit Windows Server 2008 system.</p> <hr/> <p>Workaround: Install the Microsoft Visual C++ 2005 Service Pack 1 Redistributable.</p> <p>Obtain the Microsoft Visual C++ 2005 Service Pack 1 Redistributable from: http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=14431.</p> <p>You can install the service pack after installing the 2.1 ESD #2 upgrade if you discover you need it.</p>

Known Issues for Sybase Unwired WorkSpace – Mobile Business Object Development

Learn about known issues and apply workarounds for Unwired WorkSpace and mobile business object (MBO) development.

Issue Number	Description
CR 695596	<p>R</p> <p>Removing subsequent MBO during MBO creation fails.</p> <p>For example:</p> <ol style="list-style-type: none"> 1. Drag and drop a Web service that contains two XSLTs. 2. Unselect the subsequent MBO in the "Create mobile business objects" page, and click Finish. 3. Two MBOs are generated. <p>Unselecting the subsequent MBO in the "Create mobile business objects" page should result in generation of only one MBO. This applies to Web service, SAP, and RESTful data sources.</p> <p>Workaround: Manually remove the subsequent MBO from the Mobile Application Diagram after finishing the MBO creation wizard.</p>

Issue Number	Description
CR 695589	<p>If you choose a simple datatype as an output parameter while creating an MBO operation from an SAP EIS using the MBO Operation Creation wizard, the output mapping page does not list the simple type parameter, but does list structure parameters.</p> <p>This may also generate a warning message similar to:</p> <p>The output record of the 'CREATE' operation '<i>MBOName->OperationName</i>' with 'Apply results to the cache' option set does not contain the primary key columns.</p> <p>Workaround: You can safely ignore this message.</p>
CR 695165	<p>When creating an MBO or operation from a REST Web service data source, if you select Response and specify an XSLT in the Representation tab, then choose Request and unselect Request again, the already selected XSLT for the Response is cleared.</p> <p>Workaround: Select an XSLT for the Response again if you unselect Request in the Representation tab.</p>
CR 694409	<p>Deployment and code generation errors occur for MBOs that contain attributes with BigBinary datatypes but do not have primary-key attribute(s).</p> <p>In addition, this error appears during code generation and deployment:</p> <p>Alternate keys are missing! Please check if all attributes are BLOB/CLOB types.</p> <p>Workaround: Set MBO primary key attributes.</p>
CR 690308	<p>Open cursor does not work well for some kinds of MBOs.</p> <p>For example, a BlackBerry <code>opencursor wasNull()</code> function may throw an exception, while the C# version proceeds. This might happen if the return value from the database on the device is incorrect.</p> <p>Workaround: If you receive an <code>opencursor</code> exception, check the return value from the device's database for possible clues.</p>
CR 689859	<p>Sybase Unwired Platform Unwired WorkSpace Welcome page moves to standby mode after Eclipse is started.</p> <p>This is due to a known Eclipse 3.7 bug (https://bugs.eclipse.org/bugs/show_bug.cgi?id=355560). In standby mode, the Welcome page is docked to the right as a view in the Mobile Development perspective, since the Problem View is part of the Mobile Development perspective.</p> <p>Workaround: Double-click the docked Welcome page to extend it to full screen.</p>

Issue Number	Description
CR 689707	<p>Default runtime values requirements.</p> <p>For an MBO operation, a non-nullable argument must get its runtime value via one of the following: client parameter, personalization key, default value, or fill-from-attribute. If a non-nullable argument has fill-from-attribute or client parameter already, its default value is ignored. Unwired WorkSpace still allows the user to input a default value.</p> <p>Workaround: In this case, you need not set the default value, because it is not used during runtime.</p>
CR 688956	<p>Unwired WorkSpace fails during preview or test execute.</p> <p>When doing preview or test execute in Unwired WorkSpace during MBO development if the data volume is large, for example, either a large number of rows, or a large object in the returned result, Unwired WorkSpace may run out of memory and fail.</p> <p>Workaround: Do not select Preview or Test Execute with large results, or increase the Java VM argument, -Xss -Xms, and -Xmx in the UnwiredWorkSpace.bat to increase the stack and memory (heap) size.</p>
CR 688576	<p>The Oracle datatype NCLOB is not supported.</p> <p>Workaround: Convert the unsupported datatype to a supported datatype. Convert the CLOBs datatype to a varchar datatype There are two ways to do this:</p> <ul style="list-style-type: none"> • Create a stored procedure and call it from the MBO. In the stored procedure, convert the CLOBs to varchar • Create this Transact-SQL[®] statement, which fetches 4000 bytes of the CLOB: <code>select dbms_lob.substr(x, 4000, 1) from T.</code> <p>The maximum varchar length allowed in Transact-SQL statements is 4000 bytes. You can increase this to 32KB. To process the BLOB in this way, a Stored Procedure is recommended. For example:</p> <pre>declare my_var long; begin for x in (select X from t) loop my_var := dbms_lob.substr(x.X, 32000, 1);</pre>
CR 682651	<p>Unwired WorkSpace does not support saving files as PDF.</p> <p>Invoking File > Save As Image File from the Object Diagram context menu fails if PDF is the image format.</p> <p>This is a known Eclipse GMF bug. See https://bugs.eclipse.org/bugs/show_bug.cgi?id=338380</p> <p>Workaround: None.</p>

Issue Number	Description
CR 677453	<p>When Unwired WorkSpace is uninstalled and reinstalled in a different directory, you get a <code>ClassNotFoundException</code> message if the old workspace is used and you connect using the JDBC connection profile.</p> <p>Workaround: Update the driver definition to point to the correct path:</p> <ol style="list-style-type: none"> 1. From Unwired WorkSpace, select Window > Preferences > Sybase, Inc > Connectivity > Driver Definitions. 2. Select the driver type, and click Edit to invoke the Edit Driver Definition dialog. 3. Click the Jar List tab, and edit the path of the JDBC driver. 4. Reimport any Mobile Application Projects that require the updated driver for connecting to the database.
CR 676634	<p>For Web Service and other datasources with very complex structures with deeply nested element trees, <code>StackOverflow</code> or <code>OutOfMemory</code> messages may occur, or some of the operation input parameters may not be generated properly.</p> <p>In some cases, you see this error:</p> <pre>The assigned stack size and/or heap size is not sufficient for the attempted operation.</pre> <p>Workaround: Increase the stack and heap size of the Eclipse runtime parameter in <code>UnwiredWorkSpace.bat</code> with <code>-Xmx</code>, <code>-Xms</code>, <code>-Xss</code> arguments, or reduce the complexity or nested level of the Web Service definition of the MBO operation.</p>
CR 642942	<p>Cannot generate code with Javadoc option enabled to a folder containing Chinese characters.</p> <p>When using the code generation wizard, if you enable the option to generate Javadoc, you cannot generate the code to a folder containing Chinese characters without first changing the language for non-Unicode programs to Chinese.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Select Start > Settings > Control Panel. 2. Double-click Regional and Language Options, then click the Advanced tab. 3. From the drop-down list, select Chinese, and click Apply. 4. Click OK.

Known Issues for Sybase Unwired WorkSpace – Mobile Workflow Package Development

Learn about known issues and apply workarounds for Unwired WorkSpace and Mobile Workflow application development.

Issue Number	Description
CR 694874	<p>In iOS, pop-up menu item selections within a Mobile Workflow application stay open.</p> <p>The pop-up menu stays open after a selection is made, instead of closing as expected. Making additional selections of the same menu item are ignored. This behavior is observed only with many menu selections in a single screen (~12+).</p> <p>Workaround: Click Cancel to close the pop-up window.</p>
CR 694665	<p>AsyncRequestErrorLogs key not generated in a migrated project.</p> <p>If you migrated a Mobile Workflow project that previously contained a submit workflow action, setting its error screen property does not generate the AsyncRequestErrorLogs list key.</p> <p>Workaround: Create a new Submit Workflow action, or click the Generate Error Screen button.</p>
CR 694652	<p>In Mobile Workflow applications generated with a 2.0 version of the Mobile Workflow Package generation wizard, running on an iPad iOS 5 and running in a 2.1.2 container, edit boxes that should be editable may not be editable.</p> <p>Workaround: Regenerate and redeploy the Mobile Workflow application using a 2.1.2 version of the Mobile Workflow Package generation wizard.</p>

Issue Number	Description
CR 694232	<p>When a Mobile Workflow package is deployed in Replace mode, the subscription information is not removed from the server side.</p> <p>Even though the Mobile Workflow application is unassigned on the client side, the subscription information still shows the package is assigned to the user in Sybase Control Center.</p> <p>Workaround: Remove the subscription information manually:</p> <ol style="list-style-type: none"> 1. Log in to Sybase Control Center. 2. Go to Applications > Application Connections. 3. Select the user account, then select Package Users. 4. Click Delete.
CR 690460	<p>On BlackBerry devices, in most cases, the module name is the same as the module display name, but if there is a case when the module name != module display name, it causes issues.</p> <p>Workaround: None.</p>
CR 690438	<p>A workflow does not initiate an operation.</p> <p>This could happen if the workflow is not constructed correctly.</p> <p>On a Listview details screen, you cannot invoke a submit workflow to invoke an MBO operation that uses child keys of the list key that is bound to that listview. To prevent developers from performing an illegal operation, the keys are removed from the list. However, you can see those keys before making the workflow type operation a Listview details screen because it is not illegal in that circumstance; it is only illegal once you make it a Listview details screen. If you use those keys when it is not a Listview details screen and then make it a Listview details screen, the workflow operation will fail with no indication of the problem.</p> <p>Workaround:</p> <p>Client-initiated workflow: verify that no online request operations (such as findall) precede the submit workflow type operation. If so, remove the operations.</p> <p>Server-initiated workflow: verify that no links (between the start point and the first screen saved) precede the submit workflow operation. If so, remove the links.</p>
CR 684635	<p>Choice controls with a large number of rows do not behave as expected on some platforms.</p> <p>Workaround: For best performance, keep the number of rows in choice controls under 200.</p>

Issue Number	Description
CR 682741	<p>Validate controls as soon as the user tries to change focus away from them option in Mobile Workflow Package generation wizard is not supported on Windows Mobile.</p> <p>Workaround: None.</p>
CR 681918	<p>When you click the Workflow icon on iOS devices, you see the message Sybase Mobile Workflow please go to the settings application and enter your configuration....</p> <p>This happens if you attempt to open a version 2.0 Workflow on the iOS device and connect to version 2.1 of Unwired Server.</p> <p>Workaround: In Sybase Control Center, use the HWC template to create an application connection and leave the application identifier empty.</p>
CR 678440	<p>On BlackBerry devices, you receive an error when running an HTTPS GET method from the Mobile Workflow</p> <p>Workaround: Refer to the BlackBerry Knowledge Base article at http://btsc.webapps.blackberry.com/btsc/search.do?cmd=displayKC&docType=kc&externalId=KB20833&sliceId=1&docTypeID=DT_SUPPORTISSUE_1_1&dialogID=1652002964&stateId=0%200%201652004660.</p>
CR 677684	<p>Locale properties file is not updated if screens, controls, menu items and so on are removed.</p> <p>During Mobile Workflow package generation, you see a warning that validation keys are missing from the <code>locale.properties</code> file if screens, controls, menu items and so on have changed in number, for example, if you deleted a menu item. Resource strings associated with screens, controls, and menu items do not correctly update the sequence.</p> <p>Workaround: Either do not remove screens, controls, menu items and so on after localizing, or manually correct the localization <code>.properties</code> file after making the changes.</p>

Issue Number	Description
CR 675904	<p>Object queries in the Online cache group are case-sensitive.</p> <p>If the enterprise information system (EIS) to which an object query is associated has case-sensitive parameters, then the client must pass matching parameters or no data is returned. For example, if the Customer MBO is in an Online cache group, has a load parameter "state" that is propagated to the attribute "state," and a findByParameter object query defined as:</p> <pre>SELECT x.* FROM Customer x WHERE x.state = :state</pre> <p>No data is returned to the client if they enter state=Ca, since the database parameter is case-sensitive (CA). This is not an issue for object queries in other types of cache groups.</p> <p>Workaround: None.</p>
CR 674149	<p>Exception received with large amounts of data.</p> <p>When the amount of data is too large to download to the workflow client device, you may get an exception similar to:</p> <pre>"iAnywhere.MobileOffice.AMP.ResponseRetryException" on device, and following error in WorkflowClient.log: 20110616T110249.554 4 My:1 -- ExecuteRequest- > Out 20110616T110249.694 1 iAnywhere.MobileOffice.AMP.ResponseRetryException: Exception of type 'iAnywhere.MobileOffice.AMP.ResponseRetryException' was thrown. 20110616T110249.694 1 at Sybase.UnwiredPlatform.WorkflowClient.Utils.CheckMessageSize (String serializedMessage, ContextData oContextData, Boolean fromResponder) 20110616T110249.694 1 at Sybase.UnwiredPlatform.WorkflowClient.Responder.ProcessMessageFromDevice (ContextData oContextData, String sData, Boolean isSynchronous) 20110616T110249.694 1 at Sybase.UnwiredPlatform.WorkflowClient.Responder.ProcessSyncRequest (ContextData oContextData, String sData) 20110616T110249.694 4 My:1 -- ProcessSyncRequest- > Out</pre> <p>Workaround: Increase the allowed maximum workflow message size (SupMaximumMessageLength). From Sybase Control Center, expand Workflows and select the workflow of interest. Select the Context Variables tab. Modify the property.</p>

Issue Number	Description
CR 673572	<p>Workflows do not work with Android simulators version 2.3.3.</p> <p>See http://code.google.com/p/android/issues/detail?id=12987 for a description of this issue.</p> <p>Workaround: Use an earlier version of the Android simulator.</p>
CR 671242	<p>Submit operation is empty if the workflow uses a Web Service that takes a structure as its input.</p> <p>While you can add items to the listview and save the list, when you submit the operation, it is empty. Array/list fields in structure parameters are not supported. You can have a top-level parameter that is an array/list, and you can have a top-level parameter that is a structure that has non-array/list fields and substructures.</p> <p>Workaround: None.</p>
CR 669251	<p>On a BlackBerry AsiaBB9800 simulator, data with the DATETIME type does not display in certain circumstances.</p> <p>Workaround: None.</p>
CR 667325	<p>On BlackBerry 5.0, if there is a dynamic choice on the screen, labels for the drop-down and comments fields overlap, which hides the drop-down control.</p> <p>This happens only on some BlackBerry 5.0 devices, and only intermittently.</p> <p>Workaround: If you know where to click for the drop-down, you can access the drop-down control, and it accepts your choice.</p>
CR 667187	<p>The BlackBerry Bold 9700 device simulator sometimes does not allow the user to have full control of the screen for an application, and may perform the wrong operations, and return the wrong results. Real devices work correctly.</p> <p>Workaround: None.</p>
CR 666672	<p>On BlackBerry 6.0 simulators (non-touch models), it is difficult to enter the password.</p> <p>Workaround: There are two workarounds for this issue:</p> <ol style="list-style-type: none"> 1. When the password control has focus, press the scroll button and scroll to the left, then it accepts input. 2. When the password control has focus, press the Menu button, choose Select, and then move the cursor to the password control.
CR 628826	<p>Cannot copy and paste with multiple objects.</p> <p>Workaround: Copy and paste only one Listview or Htmlview at a time.</p>

Known Issues for Native Object API

Learn about known issues and apply workarounds for Native Object API and custom development.

Issue Number	Description
CR 707244	<p>ARC applications fail due to SUPApplication and SUPBASICTYPES implementation.</p> <p>If you use ARC (memory management for iOS) in development, for example, with iOS 5 when creating Object API applications, the ARC applications will fail. The singleton implementation in SUPApplication and SUPBASIC TYPES is incorrect.</p> <p>Workaround: Request patch from CS&S.</p>
CR 692374	<p>Enabling compression incurs additional processing on the device and the server side to optimize the amount of data to be transferred over the network.</p> <p>Workaround: Carefully evaluate whether the compression trade-off is appropriate in the deployment environment, and carefully size the server capacity to support it. If appropriate in a particular environment, follow the Sybase Unwired Platform <i>Developer Guides</i> to enable compression.</p>
CR 675716	<p>SQLite cannot support create operations with more than 3MB of data, which is roughly 128 columns at 64KB per column on Windows Mobile devices.</p> <p>In Windows Mobile applications that use message-based synchronization, when a row reaches 3MB or more, and the client invokes the SQLite create operation during subscription, an internal exception is generated, data import fails, and the import operation fails to commit the transaction.</p> <p>Workaround: Use bulk load instead of the common subscribe, which first initializes the client database, then downloads the database from Unwired Server to the client.</p>

Known Issues for Hybrid Web Container

Learn about known issues and apply workarounds for Hybrid Web Container (HWC) development.

Issue Number	Description
CR 722779	<p>Hybrid Workflow Application does not use the full screen on iPhone5</p> <p>The Hybrid Workflow Application does not use the full screen on iPhone5. In portrait mode, narrow black bars appear on the top and bottom of the screen. In landscape mode, narrow black bars appear along the left and right side of the screen.</p> <p>Workaround: None.</p>
CR 721056	<p>Date/time picker does not open for iOS 6.0</p> <p>The date and time picker does not pop up in iOS 6.0. This is not an issue on iOS 5.1.1.</p>
CR 705219	<p>When the iOS Hybrid Web Container application tries to retrieve seeding information from an Afaria® iOS App store hosted package you receive an error message:</p> <p>Afaria client application is installed but not configured. Please configure Afaria client application and try again or go to the Settings application and enter your configuration information.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Seeding works for Enterprise hosted packages on the Afaria server. • You can still manually configure the connection information.
CR 701485	<p>'PictureOption.PictureSourceType' [undefined] is not an object.</p> <p>In custom.js, the customGetPictureDataFromCamera() and customGetPictureDataFromLibrary() methods contain a typographical error in the camera source type.</p> <p>Workaround: Change the PictureOption.PictureSourceType.CAMERA to PictureOption.SourceType.CAMERA.</p>
CR 693907	<p>Hybrid Web Container occasionally fails on Android.</p> <p>This can happen when all of these conditions are present:</p> <ul style="list-style-type: none"> • There is only one edit box control on a single screen • Using jQueryMobile GA version • On Samsung Galaxy devices with Android 2.2 <p>Workaround: Either:</p> <ul style="list-style-type: none"> • Upgrade the OS on the device to Android 2.3, or • Add controls to the screen (even one more would suffice)

Issue Number	Description
CR 693381	<p>Cannot preview a selected picture on Windows Mobile emulator.</p> <p>When using the <code>imageElement.src = imageUri</code> in the <code>getPicture</code> function, you cannot preview the selected image on the Windows Mobile emulator. This is because the HTML browser adds an unexpected prefix to the URI, so the Hybrid Web Container cannot find the file to which the URI refers.</p> <p>Workaround: Either:</p> <ul style="list-style-type: none"> • Preview the image using an actual device instead of the emulator, or • Assign image data instead of image URI to the image element so the image data can be retrieved through the JavaScript API
CR 691005	<p>Image upload may fail on BlackBerry 6 simulators older than version 6.0.0.499.</p> <p>Workaround: Use a BlackBerry 9800 simulator with version 6.0.0.499 or later.</p>
CR 690013	<p>In iOS, the Listview in a Scroll screen does not zoom in or out well.</p> <p>A pinch-to-zoom gesture must use some of the screen background and/or the header or footer. On a Listview screen (particularly one with many rows), there may not be any background revealed, making it appear that pinch-to-zoom is disabled, when it is not.</p> <p>Workaround: The gesture can use some small amount of background space surrounding the Listview, combined with the header or footers. Also, zooming can be toggled (Zoom In/Zoom Out) by clicking the title in the header.</p>
CR 688399	<p>On Windows Mobile devices, thumbnails do not show properly if an image has a large size.</p> <p>Workaround: The root cause is that Internet Explorer cannot load a large image; try one of these solutions to address the image size:</p> <p>Solution 1: Specify a small-sized image as the thumbnail instead of using the original large image, for example:</p> <pre data-bbox="357 1138 1174 1225"></pre> <p>Solution 2: Pass the width and height as the parameters in the source of the image control, so the container compresses the original image on the fly, for example:</p> <pre data-bbox="357 1312 1174 1399"></pre> <p>The width and height parameters are supported only on Windows Mobile and may cause display issues on other platforms.</p>

Issue Number	Description
CR 686465	<p>Camera feature is supported on some device simulators/emulators.</p> <ul style="list-style-type: none"> Android 2.2: not supported, http://code.google.com/p/android/issues/detail?id=9376. BlackBerry: supported. iOS: not supported. Windows Mobile: supported; however, can photograph only a grey/black screen. <p>Workaround: None.</p>
CR 680253	<p>Images do not appear correctly on mobile devices.</p> <p>Hybrid Web Container/Workflow applications can display pictures from binary enterprise information system (EIS) data. But when a MBO developer drags and drops a table that contains an image field to create the MBO, the image field maps to a Binary datatype that has a length of approximately 3KB, which may not be large enough for the entire image. At runtime, the binary data of the image may be truncated in the cache database (CDB), and not appear correctly on the device.</p> <p>Workaround: When creating the MBO, manually modify the length of the binary field to make sure it is large enough to hold the image binary data, or use the BigBinary datatype instead.</p>

Known Issues for MAKit

Learn about known issues and apply workarounds for MAKit development.

Issue Number	Description
CR 733167	<p>When opening a MAKit PDF from the Product Documentation Web site, some users may be prompted to update Adobe Flash Player.</p> <p>When some users attempt to open the MAKit Developer Guides at http://sybooks.sybase.com/sybooks/sybooks.xhtml?id=1289&camp;c=firsttab&camp;a=0&camp;p=categories, they may get an error stating an updated version of Flash is required to view the PDF package.</p> <p>Workaround: Update to the most recent version of both Adobe Reader and Adobe Flash Player by visiting the Adobe Downloads Web site at http://www.adobe.com/downloads/.</p>

Documentation Issues and Updates for Mobile SDK

Read about updates, corrections, and clarifications to the documentation released with Sybase Unwired Platform 2.1 ESD #2.

Issue Number	Description
None	<p>Do not compile and run the example projects</p> <p>The following note was omitted from the prerequisites in the 2.1.2 Tutorials:</p> <p>Do not try to compile and run the tutorial example projects posted in http://scn.sap.com/docs/DOC-8803#section2. They are meant only as code examples.</p> <p>This applies to:</p> <ul style="list-style-type: none"> • Tutorial: Android Object API Application Development • Tutorial: BlackBerry Object API Application Development • Tutorial: iOS Object API Application Development • Tutorial: Windows Mobile Object API Application Development • Tutorial: Mobile Workflow Package Development
NA2-1743	<p>Corrected user authentication information</p> <p>In the topic <i>Logging In</i>, the second paragraph incorrectly lists the startConnection method as an appropriate method for user authentication. The paragraph should read:</p> <p>Authenticate the user for data synchronization by calling the generated database API beginOnlineLogin method.</p> <p>This topic is found in:</p> <ul style="list-style-type: none"> • <i>Developer Guide: Android Object API Applications > Developing the Application Using the Object API > Initializing an Application > Initially Starting an Application</i> • <i>Developer Guide: BlackBerry Object API Applications > Developing the Application Using the Object API > Initializing an Application > Initially Starting an Application</i> • <i>Developer Guide: iOS Object API Applications > Developing the Application Using the Object API > Initializing an Application > Initially Starting an Application</i> • <i>Developer Guide: Windows and Windows Mobile Object API Applications > Developing the Application Using the Object API > Initializing an Application > Initially Starting an Application</i>

Issue Number	Description
CR 730839	<p>REST Service endpoint does not support JSON</p> <p>In the topic <i>REST Web Services</i> in <i>Sybase Unwired WorkSpace - Mobile Business Object Development</i> the statement:</p> <p>"Supports resources with multiple representations (Transfer XML, JavaScript Object notation(JSON), or both)"</p> <p>is not correct. The REST Service endpoint does not support JSON, so resources with multiple representations are not supported.</p>
CR 716466	<p>The topic Retrieving Information About Synchronization Groups does not apply to iOS</p> <p>The topic Retrieving Information About Synchronization Groups in Developer Guide: iOS Object API Applications is not relevant to iOS.</p>
CR 714445	<p>DCN syntax and example use incorrect JSON format in user documentation.</p> <p>References in the <i>Developer Guide: Mobile Workflow Packages > Mobile Workflow DCN Without Payload</i> topic are not valid JSON, because the data value is an object and should be an array, and there is an extra colon. For example, this syntax is incorrect:</p> <pre data-bbox="360 791 1036 869">{ "id": "", "op": "", "sub- ject": "", "to": "", "from": "", "read":, "priority":, "body": "", "data{ } }</pre> <p>And should be:</p> <pre data-bbox="360 930 995 1025">{ "id": "", "op": ":upsert", "sub- ject": "", "to": "", "from": "", "read":, "priori- ty":, "body": "", "data": [] }</pre> <p>And this example:</p> <pre data-bbox="360 1086 1120 1190">{ "id": "", "op": "", "sub- ject": "test", "to": "test", "from": "test", "read":, "priority":, "body": " MATCH: SUP_MWF, TaskID: TS97200149, WIID: 1470577, USER: PERF0111*#END#*", "data{ } }</pre> <p>Should be:</p> <pre data-bbox="360 1251 1166 1373">{ "id": "", "op": ":upsert", "sub- ject": "test", "to": "test", "from": "test", "read":, "priori- ty":, "body": " MATCH: SUP_MWF, TaskID: TS97200149, WIID: 1470577, USER: PERF0111*#END#*", "data": [] }</pre>

Issue Number	Description
CR 709807	<p>Updated result checker documentation.</p> <p>Result checkers are now implemented through the <code>OperationHandlerBase</code> class, which replaces the <code>ResultChecker</code> class.</p> <p>These topics have been added to <i>Result Checkers</i> in the <i>Mobile Data Models: Using Mobile Business Objects 2.1 ESD #2</i>.</p>
CR 708703	<p>SAPResultChecker information is missing from Sybase Unwired WorkSpace - Mobile Business Object Development and Mobile Data Models: Using Mobile Business Objects.</p> <p>The following topics cover the missing information:</p> <ul style="list-style-type: none"> • <i>Editing the Result Checker</i> on page 36 • <i>Writing a Custom Result Checker</i> on page 36 • <i>Result Checker Logging</i> on page 39
CR 705560	<p>Updated parameter and synchronization documentation.</p> <p>This change affects these topics in the Android, BlackBerry, iOS, and Windows and Windows Mobile Object API Applications Developer Guides:</p> <ul style="list-style-type: none"> • <i>Nonblocking Synchronization</i> • <i>Specifying Personalization Parameters</i> • <i>Specifying Synchronization Parameters</i> <p>You must set and save both the personalization and synchronization parameters.</p> <ul style="list-style-type: none"> • Add this information to <i>Specifying Personalization Parameters</i> and <i>Specifying Synchronization Parameters</i>. <hr/> <p>Note: If a synchronization parameter is mapped to a personalization parameter, no data is downloaded to the device until that mapped personalization parameter is set and saved."</p> <hr/> <ul style="list-style-type: none"> • In <i>Nonblocking Synchronization</i>, add this step 2, or modify the existing step 2 to include: <p>If there are personalization parameters and synchronization parameters, set and save them before making the first full synchronize call.</p> <pre>PersonalizationParameters pp = SUP101DB.getPersonalizationParameters(); pp.setPKCity("New York"); pp.save();</pre> <pre>CustomerSynchronizationParameters sp = Customer.getSynchronizationParameters(); sp.setCityname("Kansas City"); sp.save();</pre>

Issue Number	Description
CR 702795	<p>How Passwords Are Stored on a Device.</p> <p>Best practices and security audits require you to know how passwords are stored on a device. The Sybase Unwired Platform environment using native object APIs does not automatically store passwords on a device. It does support you using a secure DataVault to store passwords or using an offlineLogin feature.</p> <p>The DataVault API is the recommended feature to use a password to access the application's sensitive data on the device. To use DataVault, you first create the application, an encryption key, the database, and a DataVault. You then create the log-in screen and display it during application startup. It calls the DataVault API to validate the one password entry. You must enter the password to unlock the application and provide access to any on-device data.</p> <p>DataVault stores sensitive data securely such as the encryption key used to encrypt/decrypt the on-device database and the user's password. With that one valid password, the Unwired Platform application retrieves the database encryption key from the DataVault and uses that to open the encrypted on-device database.</p> <p>Create a DataVault using the <i>Security APIs</i> section of the Developer Guide for the device you are using.</p> <p>The offlineLogin feature uses a username and password to access the on-device data. To use the feature, you first create the application, an encryption key, and the database. A hashcode of your password is computed and applied automatically the first time you synchronize the application. It is stored in the offlineLogin table. You then create the log-in screen and display it during application startup. It calls the offlineLogin API to validate the username and password entries. You must enter the credentials to unlock the application and provide access to any on-device data.</p> <p>You can access the data locally without Unwired Server communications. You must know the Unwired Platform username and password to log in. If successful the process authenticates the current credentials against the last successfully authenticated credentials and provides access to the on-device data.</p> <hr/> <p>Note: The DataVault replaces the offlineLogin feature, which older applications may use to provide some security for on-device data.</p>
CR 698385	<p>Running multiple applications on iOS simulator is not supported.</p> <p>This affects <i>Testing Applications</i> in the <i>Developer Guide: iOS Object API Applications</i>.</p> <p>On a device, multiple applications are supported as expected (App1 uses App1 PIN and App2 uses App2 PIN after multiple launches); however, this multiple application support is not possible with the iOS simulator.</p>

Issue Number	Description
CR 697632	<p>Incorrect path for Workflow Client files in tutorials.</p> <p>In <i>Tutorial: Mobile Workflow Package Development > Developing the Mobile Workflow Package > Installing the Mobile Workflow Package > Configuring the BlackBerry Simulator > Configuring the Mobile Workflow in the BlackBerry Simulator</i>, step 4 gives the incorrect path for the Workflow client files.</p> <p>The document states that they are located in C : Sybase\UnwiredPlatform\MobileSDK\ClientAPI\Workflow\BB; however, they are located in <i>UnwiredPlatform_InstallDir\UnwiredPlatform\MobileSDK\HybridWeb\BB</i>.</p> <p>In <i>Tutorial: Mobile Workflow Package Development > Developing the Mobile Workflow Package > Installing the Mobile Workflow Package > Configuring the Windows Mobile Emulator > Installing Sybase Messaging Runtime</i>, step 5 gives the incorrect path for the SybaseMobileWorkflow.cab file.</p> <p>The document states that the CAB file is located in: <i>UnwiredPlatform_InstallDir\ClientAPI\Workflow\WM</i>; however, the CAB file is located in <i>UnwiredPlatform_InstallDir\UnwiredPlatform\MobileSDK\HybridWeb\WM</i>.</p>
CR 692374	<p>The topic <i>Synchronization Profile</i> in <i>Developer Guide: Windows and Windows Mobile Object API Applications > Client Object API Usage</i> incorrectly states that compression is enabled by default. By default, compression is not enabled.</p>

Issue Number	Description
CR 691080	<p>Adding local resources to a Mobile Workflow project.</p> <p>When loading resources using custom JavaScript, be aware of the folder structure. Depending on localization, the structure and path to the local resource may be different. Possible folder paths include:</p> <ul style="list-style-type: none"> • .../html/default/workflow.html • .../html/locale/workflow.html • .../html/workflow.html <p>Referencing custom resources in HTML elements requires the use of relative URLs. The parent directory may be the HTML directory, the root, or something else. There is no guarantee that the URL structure is always <code>http://hostname/html/workflow.html</code>. It is possible to copy the resources into each localization directory or reference the resources from one directory (paying attention to localization paths).</p> <p>An example of a useful helper function to get the relative path to the HTML directory is:</p> <pre>/** * Returns relative URL to the html directory */ function getRelativeRoot() { return ((resources != null) ? "../" : "") } // Helper function usage var imageElement = document.getElementById("ImageElement"); imageElement.src = getRelativeRoot() + "images/my-Image.gif";</pre> <p>This affects <i>Mobile Workflow Development</i> in the <i>Developer Guide: Mobile Workflow Packages</i>.</p>
CR 674889	<p>Apple Push Notification Service (APNS) Works on iPad Devices.</p> <p>These topics incorrectly state that APNS cannot be used with iPad devices:</p> <ul style="list-style-type: none"> • <i>iOS Provisioning with APNS</i> in <i>System Administration</i> • <i>Apple Push Notification Service Configuration</i> in <i>OData SDK Developer Guide</i>
None	<p>Use a custom Java class to implement custom error checking.</p> <p>See the topic <i>Writing a Custom Result Checker</i>.</p>
None	<p>Use OHLog to trap warnings but not halt execution of the result checker.</p> <p>See the topic <i>Result Checker Logging</i>.</p>

Issue Number	Description
None	The <i>Developing Applications in the Blackberry Development Environment</i> topic in <i>Developer Guide: OData SDK 2.1 ESD #2</i> incorrectly references APIs for Android applications.

Editing the Result Checker

Change the result checker settings using the Change Definition dialog.

1. Right-click inside the Mobile Application Diagram and select **Show Properties View**, or select **Window > Show View > Properties**.
2. In the Properties view, click the **Attributes** or **Operations** tab, then the **Definition** tab.
3. Click **Edit**.
4. Make your changes in the Change Definition dialog, and click **OK**.
SAP custom result checkers do not support the Unwired WorkSpace Preview option.

Writing a Custom Result Checker

Use a custom Java class to implement custom error checking.

Provide a Java class that extends the appropriate class for the enterprise information system (EIS).

- **SAP –**

```
package com.sybase.sup.sap3;

import com.sap.conn.jco.JCoFunction;
import com.sybase.vader.core.OperationHandlerBase;

public abstract class SAOperationHandler extends
    OperationHandlerBase {

    /**
     *
     * @param f - JCO function that has already been executed.
     * Use the JCO API to retrieve returned values and
     * determine if the RFC has executed successfully.
     *
     * Throw OHEException to return an error.
     * Call OHLog.log() as often as needed to return
     * warnings and other informational messages.
     */
    public void resultCheck(JCoFunction f) {
    }

    /**
     * @param cause Exception thrown by the call to the EIS
     */
}
```



```

*
* @param f - JCO function that has already been executed.
* Use the JCO API to retrieve returned values and
* determine if the RFC has executed successfully.
*
* Throw OHEException to return an error.
* Call OHLog.log() as often as needed to return warnings
* and other informational messages.
*/
public void onError(Throwable cause, JCoFunction f) {
}
}

```

- **Web service (SOAP) –**

```

package com.sybase.sup.ws.soap;

import com.sybase.vader.core.OperationHandlerBase;

public abstract class SoapOperationHandler extends
OperationHandlerBase {

    /**
     *
     * @param response the SOAP Envelope response from
     * a web service execute.
     * Use the SOAP API to retrieve values and determine
     * if the SOAP request has executed successfully.
     *
     * @param request the SOAP Envelope request sent to
     * the web service.
     * Use the SOAP API to retrieve values.
     *
     * Throw OHEException to return an error.
     * Call OHLog.log() as often as needed to return warnings
     * and other informational messages.
     */
    public void resultCheck(
        javax.xml.soap.SOAPEnvelope response,
        javax.xml.soap.SOAPEnvelope request) {
    }

    /**
     *
     * @param cause Exception thrown by the call to the EIS
     *
     * @param request the SOAP Envelope request sent to the
     * web service.
     * Use the SOAP API to retrieve values.
     *
     * Throw OHEException to return an error.
     * Call OHLog.log() as often as needed to return warnings
     * and other informational messages.
     */
    public void onError(Throwable cause,
        javax.xml.soap.SOAPEnvelope request) {
    }
}

```

```

    }
}

```

- **RESTful Web service –**

```

package com.sybase.sup.ws.rest;

import java.util.List;
import com.sybase.vader.core.OperationHandlerBase;

import java.net.URL;

public abstract class RestOperationHandler extends
OperationHandlerBase{

    public RestOperationHandler () {
        super();
    }

    /**
     * REST Result Check.
     *
     * @param responseBody HTTP response body.
     *
     * @param responseHeaders HTTP response headers in the form
     * {{header1,value1}, {header2,value2}, ...}.
     *
     * @param httpStatusCode HTTP status code.
     *
     * @param url HTTP URL.
     *
     * @param requestBody HTTP request body.
     *
     * @param requestHeaders HTTP request headers in the form
     * {{header1,value1}, {header2,value2}, ...}.
     *
     * Throw OHEException to return an error.
     * Call OHLog.log() as often as needed to return warnings
     * and other informational messages.
     */
    public void resultCheck( String responseBody,
        List<List<String>> responseHeaders, int httpStatusCode, URL
url,
        String requestBody, List<List<String>> requestHeaders) {
    }

    /**
     * REST On Error
     * Note that errors are virtually never thrown by REST.
     * Instead, HTTP Error codes are returned.
     * The Result Check method can handle these codes
     * before any exception is thrown by Data Services.
     *
     * @param cause Exception thrown by the call to the EIS

```

```

*
* @param url HTTP URL.
*
* @param requestBody HTTP request body.
*
* @param requestHeaders HTTP request headers in the form
* {{header1,value1}, {header2,value2}, ...}.
*
* @return Result Checker Return
*
* Throw OHException to return an error.
* Call OHLog.log() as often as needed to return warnings
* and other informational messages.
*
*/
public void onError(Throwable cause, URL url,
    String requestBody, List<List<String>> requestHeaders) {
}
}

```

Result checkers depend on the Unwired Server `sup-ds.jar` file. For example, `<UnwiredPlatform_InstallDir>\Servers\UnwiredServer\lib\ext\sup-ds.jar`.

Result Checker Logging

Use `OHLog` to trap warnings but not halt execution of the result checker.

You can influence the error or warning code and message in the result checker by throwing a `DSEException`, which produces errors and halts execution, or by calling `OHLog`, which is used for warnings and does not halt execution.

Use `OHLog.log()` to write to the client log. This method returns `true` if it successfully wrote the log entry, and `false` if no client is defined. For example, no client is typically defined for a scheduled refresh.

The following code examples illustrates implementation of `OHLog` for various enterprise information systems.

Data Source: SAP

```

package com.sybase.vader.test.mms;

import com.sap.conn.jco.JCoFunction;
import com.sybase.sup.sap3.SAPOperationHandler;
import com.sybase.dataservices.OHException;
import com.sybase.dataservices.OHLog;

public class TestSAPOperationHandler extends SAPOperationHandler {

    public void resultCheck(JCoFunction f) {
        OHLog.warn(901, 101, f.toXML());
    }
}

```

```
//throw new OHEException(901, 101, "Throwing test OHEException with
901 and 101.");
}

public void onError(Throwable cause, JCoFunction f) {
    if(f !=null) {
        OHLog.warn(901, 101, f.toXML());
    } else {
        OHLog.warn(902, 102, "JCoFunction null");
    }
    throw new OHEException(904, 103, "old exception said
    '"+cause.getMessage()+"'");
}
}
```

Data Source: Web Service (SOAP)

```
package com.sybase.vader.test.mms;

import java.io.StringWriter;

import com.sybase.dataservices.OHEException;
import com.sybase.dataservices.OHLog;
import com.sybase.sup.ws.soap.SoapOperationHandler;

import javax.xml.transform.OutputKeys;
import javax.xml.transform.TransformerFactory;
import javax.xml.transform.Transformer;

import javax.xml.transform.dom.DOMSource;
import javax.xml.transform.stream.StreamResult;

import javax.xml.soap.SOAPFault;
import javax.xml.soap.SOAPEnvelope;

public class TestSoapOperationHandler extends SoapOperationHandler {

    public void resultCheck(
        javax.xml.soap.SOAPEnvelope response,
        javax.xml.soap.SOAPEnvelope request) {

        OHLog.info(901, 101, toXML(request));
        OHLog.warn(902, 102, toXML(response));

        try{
            SOAPFault fault = response.getBody().getFault();
            if(fault!=null) {
                throw new OHEException(900,
Integer.valueOf(fault.getFaultCode()), fault.getFaultString());
            }
        } catch (Exception e) {
            // ignore
        }
    }

    public void onError(Throwable cause,
```

```

    javax.xml.soap.SOAPEnvelope request) {
        if(request != null) {
            OHLog.info(901, 101, toXML(request));
        }
        throw new OHException(904, 103, "old exception said
        '"+cause.getMessage()+"'");
    }

    private String toXML(javax.xml.soap.SOAPEnvelope env) {
        String xmlString="";
        try {
            TransformerFactory transfac = TransformerFactory.newInstance();
            Transformer trans = transfac.newTransformer();
            trans.setOutputProperty(OutputKeys.OMIT_XML_DECLARATION, "yes");
            trans.setOutputProperty(OutputKeys.INDENT, "yes");

            StringWriter sw = new StringWriter();
            StreamResult result = new StreamResult(sw);
            DOMSource source = new DOMSource(env);
            trans.transform(source, result);
            xmlString = sw.toString();
        }
        catch(Exception e) {

        }
        return xmlString;
    }
}

```

Data Source: RESTful Web Service

```

package com.sybase.vader.test.mms;

import java.net.URL;
import java.util.List;

import com.sybase.sup.ws.rest.RestOperationHandler;
import com.sybase.dataservices.OHLog;
import com.sybase.dataservices.OHException;

public class TestRestOperationHandler extends RestOperationHandler {

    public void resultCheck( String responseBody,
        List<List<String>> responseHeaders, int httpStatusCode, URL url,
        String requestBody, List<List<String>> requestHeaders) {

        OHLog.info(901, 101, url.toString());
        if(requestBody != null) {
            if(requestBody.isEmpty()){
                OHLog.debug(902, 102, "request body empty");
            }
            else {
                OHLog.debug(902, 102, requestBody);
            }
        } else {
            OHLog.debug(902, 102, "request body null");
        }
    }
}

```

```

    }
    int i=0;
    for(List<String> list : requestHeaders) {
        String msg = "" + list.get(0) + "=" + list.get(1);
        OHLog.warn(903, i++, msg);
    }

    OHLog.info(905, 105, "httpStatusCode="+httpStatusCode);
    if(responseBody != null) {
        if(responseBody.isEmpty()){
            OHLog.debug(906, 106, "response body empty");
        }
        else {
            OHLog.debug(906, 106, responseBody);
        }
    }
    else {
        OHLog.debug(906, 106, "response body null");
    }
    i=0;
    for(List<String> list : responseHeaders) {
        String msg = "" + list.get(0) + "=" + list.get(1);
        OHLog.warn(903, i++, msg);
    }

    if(httpStatusCode>=300) {
        throw new OHEException(500, httpStatusCode, "HTTP status code
["+httpStatusCode+"] too high");
    }
}

public void onError(Throwable cause, URL url,
    String requestBody, List<List<String>> requestHeaders) {

    if(url != null) {
        OHLog.info(901, 101, url.toString());
    }
    if(requestBody!=null){
        OHLog.debug(902, 102, requestBody);
    }
    int i=0;
    if(requestHeaders != null) {
        for(List<String> list : requestHeaders) {
            String msg = "" + list.get(0) + "=" + list.get(1);
            OHLog.warn(903, i++, msg);
        }
    }
    System.out.println("onError called with following stack trace:");
    cause.printStackTrace();
    System.out.println("^^^^^^");
    throw new OHEException(904, 103, "old exception said
 '"+cause.getMessage()+"'");
}
}

```

Obtaining Help and Additional Information

Use the Sybase Getting Started CD, Product Documentation site, and online help to learn more about this product release.

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

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

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

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 - b) Select **Support > EBFs/Maintenance**.
 - c) If prompted, enter your MySybase user name and password.
 - d) (Optional) Select a filter, a time frame, or both, and click **Go**.
 - e) Select a product.

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Sybase Product and Component Certifications

Certification reports verify Sybase product performance on a particular platform.

To find the latest information about certifications:

- For partner product certifications, go to http://www.sybase.com/detail_list?id=9784
- For platform certifications, go to <http://certification.sybase.com/ucr/search.do>

Creating a MySybase Profile

MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1. Go to <http://www.sybase.com/mysybase>.
2. Click **Register Now**.

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Accessibility ensures access to electronic information for all users, including those with disabilities.

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Note: You may need to configure your accessibility tool for optimal use. Some screen readers pronounce text based on its case; for example, they pronounce ALL UPPERCASE TEXT as initials, and MixedCase Text as words. You might find it helpful to configure your tool to announce syntax conventions. Consult the documentation for your tool.

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