



Release Bulletin 2.2 SP05

Sybase Unwired Platform 2.2

SP05

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Product Summary

This release bulletin discusses known issues, workarounds, as well as late-breaking documentation updates for Sybase® Unwired Platform version 2.2 SP05. Entries are cumulative, remaining in the Release Bulletin until resolved.

Product Limitations and SAP Notes

Understand the limitations of Sybase Unwired Platform, and view SAP® Notes.

The Sybase Unwired Platform product limitations and SAP Notes are available from the SAP Support Portal Web site to authorized users.

Point your Web browser to:

- Note 1775377 – Sybase Unwired Platform 2.2 Limitations: [https://css.wdf.sap.corp/sap\(bD11biZjPTAwMQ==\)/bc/bsp/spn/sapnotes/index2.htm?numm=0001775377](https://css.wdf.sap.corp/sap(bD11biZjPTAwMQ==)/bc/bsp/spn/sapnotes/index2.htm?numm=0001775377)
- Note 1783131 – Sybase Unwired Platform Release Notes Information: [https://css.wdf.sap.corp/sap\(bD11biZjPTAwMQ==\)/bc/bsp/spn/sapnotes/index2.htm?numm=0001783131](https://css.wdf.sap.corp/sap(bD11biZjPTAwMQ==)/bc/bsp/spn/sapnotes/index2.htm?numm=0001783131)

Known Issues for Sybase Mobile SDK 2.2 SP05

Learn about known issues and apply workarounds for Sybase Mobile SDK.

Key to issue types:

- **RTC** – SAP® Release to Customer tracking number.
- **CSN** – SAP Customer Services Network tracking number.
- **CR** – Sybase® Change Request number.
- **N/A** – No tracking number.

Known Issues with Installing, Uninstalling, and Upgrading

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

See the *Sybase Unwired Platform Installation Guide for Sybase Mobile SDK* for installation and information regarding the SDK.

Issue #	Description
<p>SMPONP-12348</p>	<p>The 2.2 SDK uninstaller in silent mode does not check if Eclipse (in the SDK installation) is running or not.</p> <p>The uninstaller requires all Sybase Unwired Platform-related processes are stopped. However, the uninstaller in silent mode cannot detect whether or not Eclipse is running.</p> <p>Workaround: Verify that all Sybase Unwired Platform processes, including Eclipse, are stopped before running the uninstaller to uninstall the Sybase Mobile SDK.</p>
<p>CR-665409</p>	<p>The installation program cannot run in graphical mode.</p> <p>If the HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags registry key contains an entry that is the path of the installer binary (for example, C:\setup.exe), you see this error, and the installation fails:</p> <p>The installer is unable to run in graphical mode. Try running the installer with the -console or -silent flag.</p> <p>Workaround: Remove the installer binary path from the HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags registry key.</p>
<p>CR-590885</p>	<p>Uninstaller might not run on Windows Vista.</p> <p>Sometimes, the uninstaller does not launch on Windows Vista. This may be caused by the operating system changing the launch command for the Unwired Platform uninstaller, preventing it from using its own JVM to start itself.</p> <p>Workaround: Launch the uninstaller:</p> <pre><jdk_installdir>\java -Dtemp.dir=%TEMP% -jar C:\Sybase\UnwiredPlatform\Uninstallers\UnwiredPlatform\uninstall.jar</pre> <p>When you uninstall or cancel out of uninstalling Unwired Platform, the Program Compatibility Assistant shows:</p> <p>This program might not have uninstalled correctly.</p> <p>Select This program uninstalled correctly instead of Uninstall with recommended settings.</p>

Known Issues for Sybase Unwired WorkSpace – Mobile Business Object Development

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

Issue #	Description
SMPONP-11470	<p>SUP tooling now supports JIT WSDL parsing features</p> <p>Problem: When you build a Web Service MBO, the Eclipse Workspace hangs when trying to connect to a Web Service.</p> <p>Solution: Contact Support for Patch 10282.</p>
SMPONP-4941	<p>Error icon is still attached on relationship mapping line in MBO diagram after deleting duplicated relationship</p> <p>If two or more relationships are created between two MBOs, an error icon displays on the relationship line in the Mobile Application diagram. The error icon continues to display, even after the duplicated relationship is deleted.</p> <p>Workaround: Close and reopen the Mobile Application diagram; the error icon disappears.</p>
SMPONP-2566	<p>Issues with previously defined output mappings in the Bind Data Source wizard.</p> <p>In the Bind Data Source wizard for operations that have multiple outputs, the Output Mapping figure does not show any previously defined mappings, and may fail to validate; however, the previously defined mappings prevent the MBO Developer from adding the same mappings again.</p> <p>Workaround: If the operation definition includes operation arguments, select Finish on the Input Mapping page, without visiting the Output Mapping page. Then make any required changes to the Output Mapping property page.</p>

Issue #	Description
<p>SMPONP-2563</p>	<p>Cannot create MBO operation when using a structure with LONG/BLOB fields</p> <p>An operation with type Other is created for an MBO using Properties > Operations > ADD. There, an SAP connection is used to create a BAPI parameter that contains a LONG/BLOB datatype. During the creation of that parameter, Next or Finish has no effect. For example:</p> <ol style="list-style-type: none"> 1. In the Properties view of an MBO, navigate to the Operations tab. 2. Select Add, provide a name for your operation; for example, MyBlobOperation, Type is Other. 3. Select data source type as SAP and select your SAP connection profile, click Next. 4. Select Browse and enter the BAPI that contains the LONG/BLOB parameter in the text box below Refresh. Click Search ..., select the BAPI, and click Next. 5. In the Parameter Definition, select the LONG/BLOB parameter as In Parameter, click Next or Finish. <p>Neither is working. The problem is caused by an exception thrown when a dialog box should open.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Create the operation as before but select Bind data source later, and click Finish. 2. In the Properties view of the created operation, click the Data Source tab. 3. Select Bind Data Source, select type as SAP and select your SAP connection profile, click Next. 4. Click Browse and enter the BAPI that contains the LONG/BLOB in the text box below Refresh, then click Search ... 5. Select the BAPI and finish the dialog. 6. In Parameter Definition select LONG/BLOB, and click Next. 7. In Input Mapping, drag the argument containing the BLOB from the Remote Operation Arguments tree on the right side to the Client Parameters folder in the Values tree on the left side, and accept the informational pop-up dialog. <p>A client parameter is added and mapped to the argument.</p>

Issue #	Description
<p>RTC-407</p>	<p>Sybase Unwired WorkSpace no longer automatically generates client parameter definitions and mappings to operation arguments.</p> <p>Prior to Sybase Unwired Platform version 2.2 SP02, Sybase Unwired WorkSpace automatically generated client parameter definitions and mappings to operation arguments. Beginning with Sybase Unwired Platform version 2.2 SP02, those client parameters and mappings would remain after migration to Sybase Unwired Platform version 2.2 SP02 and later, but if the MBO developer creates new MBO operations, Sybase Unwired WorkSpace does not automatically create the client parameter definitions and the mappings to operation arguments, except for operation of Other type. For Other operation type, client parameters are automatically created even after Sybase Unwired Platform version 2.2 SP02.</p> <p>Workaround: If the MBO developer wants to map the client parameters to operation arguments, drag and drop the operation argument to the Client Parameters folder in the Input Mapping page in the MBO Operation wizard or Input Mapping tab in the Properties view.</p>
<p>RTC-367</p>	<p>The internal default page size is used during Object API code generation if Unwired Server is not selected, which can lead to code generation failure without visible error from the code generation wizard.</p> <p>If the MBO developer does not select Unwired Server during code generation, the default page size is used. If the internal default page size is too small, code generation fails without creating objectAPI code, and the page size error only displays in the Error Log view, but not in the code generation wizard.</p> <p>Workaround: Select an Unwired Server connection profile to enable the Page size field, then select a proper page size. Also, as a common troubleshooting practice, open the Error Log in Sybase Unwired WorkSpace to find clues when the MBO developer detects any error symptoms.</p>
<p>RTC-350</p>	<p>An MBO that is modeled and bound to data source, then has all attributes deleted from the MBO at a later point, fails to deploy to Unwired Server.</p> <p>Workaround: Use the Bind data source later option to create an MBO that has no attributes.</p>
<p>RTC-346</p>	<p>Sybase Unwired WorkSpace reports an error when a synchronization parameter is mapped to more than one load argument after migrating from a previous release.</p> <p>Workaround: Remove redundant synchronization parameter to load argument mappings.</p>
<p>RTC-336</p>	<p>Deployment fails with unknown issue error when an MBO with custom object queries is renamed.</p> <p>Workaround: Modify the object query definition to reference the new MBO name.</p>

Issue #	Description
<p>RTC-217</p>	<p>Sybase Unwired WorkSpace is missing the warning message in the Input Mapping section for migrated projects that have an operation with a mapping of an argument to both an attribute and personalization key.</p> <p>Prior to Sybase Unwired Platform version 2.2 SP02, Sybase Unwired WorkSpace allowed mapping of an operation argument with 'Filled from Attribute', client parameter, and personalization key values at the same time, even though it might not work properly on the device application during runtime. Beginning with version 2.2 SP02, when adding a mapping of an operation argument, Sybase Unwired WorkSpace now allows only one of the three sources (MBO attribute, client parameter, personalization key) to map into the operation argument at one time; that is, the argument value sources are mutually exclusive. However, when migrating the Mobile Application project from earlier versions, Sybase Unwired WorkSpace preserves the original MBO operation argument value assignment choices the developer made so that it is backward compatible with the project in the earlier version. Sybase Unwired WorkSpace does not remove any mappings when migrating a project. While a warning is displayed if an argument is mapped to a client parameter and either an attribute or personalization key, no warning is displayed if mapped to an attribute and personalization key at the same time.</p> <p>Workaround: Adjust the MBO model so an operation argument maps to only one source.</p>
<p>RTC-151</p>	<p>When the MBO Developer adds load arguments that map to personalization keys, selecting Refresh may fail due to missing default values for the load arguments. The default values of the personalization keys are not used when performing the refresh.</p> <p>Workaround: Unmap the personalization key field, which allows you to specify the necessary default values so that the execution to the EIS retrieves MBO metadata successfully.</p>
<p>CR-713043</p>	<p>Foreign key constraint violation error message.</p> <p>You see a foreign key constraint violation error message if you create an MBO by dragging and dropping a table in which the foreign key and the primary key are both "identity" types.</p> <p>Workaround: The MBO is created, and you can safely ignore these error messages.</p>

Issue #	Description
CR-706312	<p>A newly created record is deleted from the EIS, but still exists in CDB and device and always remains.</p> <p>An MBO with a load argument and synchronization parameter contained in a cache group that uses an On-demand cache group policy with an interval greater than zero, where its load parameter is not mapped to a "Propagate to Attribute". If a record is created on the device (and synchronized with the EIS), then deleted later in any way from the EIS, when the On-demand cache group interval expires, a synchronization request from the device refreshes the CDB and device correctly. Although the newly created record has been deleted from the EIS, it still exists in CDB and device and will always remain.</p> <p>Workaround: Map the MBO's load argument to a corresponding Propagate to Attribute. If there is no corresponding attribute, add one, then map it.</p>
CR-705643	<p>Sybase Unwired WorkSpace does not refresh the attributes of a MBO based on a stored procedure after the stored procedure definition has been changed in the EIS.</p> <p>Workaround: After changing the stored procedure definition in the EIS re-create the JDBC MBO.</p>
CR-703200	<p>MBO operations that include old value arguments that use large object types should be ignored, but SQL clauses still include the old value arguments.</p> <p>Sybase Unwired WorkSpace automatically creates an MBO with old value arguments for operations. If the datasource includes operation arguments with large object types (BigString/BigBinary), Sybase Unwired WorkSpace shows a warning message that says the old value argument with large object types are ignored, but the SQL definition generated still includes the old value argument with the large object type.</p> <p>Workaround: Manually remove any SQL clauses that include old value arguments with large object types.</p>
CR-689859	<p>The Sybase 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 #	Description
<p>CR-689707</p>	<p>Default runtime values requirements.</p> <p>For an MBO operation, a non-nullable argument must get its runtime value from one of the following: client parameter, personalization key, default value, or fill-from-attribute. If a non-nullable argument already uses a fill-from-attribute or client parameter, its default value is ignored. Sybase 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. But if a non-nullable argument already uses a personalization key, its default value is removed and disabled, since its default value is taken from the default value of the personalization key.</p>
<p>CR-688576</p>	<p>The Oracle datatype NCLOB is not supported.</p> <p>Workaround: 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. Sybase recommends that you use a stored procedure to process the BLOB in this way. 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>
<p>CR-676634</p>	<p>For Web Service and other data sources with complex structures and deeply nested element trees, StackOverflow or OutOfMemory 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 UnwiredWorkspace.bat with -Xmx, -Xms, -Xss arguments, or reduce the complexity or nested level of the Web Service definition of the MBO operation.</p>

Issue #	Description
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 – Hybrid App Package Development

Learn about known issues and apply workarounds for Sybase Unwired WorkSpace and Hybrid App development.

Issue #	Description
SMPONP-12410	<p>Keyboard position issue on iOS 7 devices and simulators.</p> <p>The Hybrid App screen does not display well if the soft keyboard was opened and the screen orientation was changed, on iOS7 devices and simulators.</p> <p>Workaround: Close the soft keyboard before changing screen orientation.</p>
RTC-333	<p>Updating null values to non-null not supported on Windows Mobile</p> <p>Null values are not supported for the Windows Mobile platform. For example, the Allows null property in Designer has no effect on a Hybrid Apps running on Windows Mobile devices.</p> <p>Workaround: None.</p>

Issue #	Description
<p>RTC-260</p>	<p>setKeyValueNull() fails in create operations</p> <p>The setKeyValueNull function does not work in create operations.</p> <p>Workaround: Modify the contents of the if (data == null) block of the setKeyValueNull function in the generated API.js so that references to htmlElement are replaced by htmlElements[0]. Specifically, replace the line</p> <pre>var typeAttrib = getAttribute(htmlElement, "sup_html_type");</pre> <p>with</p> <pre>var typeAttrib = getAttribute(htmlElements[0], "sup_html_type");</pre> <p>the line</p> <pre>data.setKey(htmlElement.id);</pre> <p>with</p> <pre>data.setKey(htmlElements[0].id);</pre> <p>and the line</p> <pre>values.add(htmlElement.id, data);</pre> <p>with</p> <pre>values.add(htmlElements[0].id, data);</pre>
<p>RTC-252</p>	<p>Screen keyboard not shown in Hybrid App</p> <p>On some HTC versions running Android 2.3, selecting editable text in some Hybrid Apps does not display the keyboard.</p> <p>Workaround: None.</p>

Issue #	Description
<p>CR-707123</p>	<p>Cannot upload large image files using the File Manager application on some Android devices.</p> <p>Although image previews and uploads continue to work), you may see this message after selecting an image in a Hybrid App:</p> <p style="background-color: #f0f0f0;">File type is not supported!</p> <p>Workaround: Use a different gallery application by resetting the default:</p> <ol style="list-style-type: none"> 1. Open the Settings application. 2. Click Applications > Manage applications. 3. Click All. 4. Select the current default gallery application. 5. For the Launch by default setting, click Clear defaults.
<p>CR-700357</p>	<p>Comma added for int types when number is more than 1000.</p> <p>On iOS 5.0, with the Safari mobile browser, in fields with the int type, when you enter a number larger than 1000, a comma is inserted. This is expected behavior with the Safari mobile browser.</p> <p>Workaround: Set the logical-type to text instead of numeric.</p>
<p>CR-699341</p>	<p>BlackBerry 7 form labels do not use specified theme.</p> <p>On BlackBerry 7 devices, in a form that uses labels on the left, if the first field is editable, the second label does not initially use the theme set in the form.</p> <p>Workaround: Type in the field to change the label to the appropriate theme.</p>
<p>CR-698779</p>	<p>DatePicker control does not reopen in BlackBerry 7+.</p> <p>In a BlackBerry 7 or later device, if you invoke the DatePicker control in a Hybrid App by clicking in a date field, click Cancel in the DatePicker, and then click again in the same field, the DatePicker control does not reopen.</p> <p>Workaround: After clicking Cancel in the DatePicker, click in another field that is not of type DATETIME or TIME. You can then click in the original date field to open the DatePicker.</p>
<p>CR-694665</p>	<p>AsyncRequestErrorLogs key not generated in a migrated project.</p> <p>If you migrated a Hybrid App project that previously contained a submit Hybrid App action, setting its error screen property does not generate the AsyncRequestErrorLogs list key.</p> <p>Workaround: Create a new Submit Hybrid App action, or click the Generate Error Screen button.</p>

Issue #	Description
CR-690460	<p>On BlackBerry devices, in most cases, the module name is the same as the module display name, but if the module name != module display name, the device cannot receive asynchronous error messages.</p> <p>Workaround: None.</p>
CR-690438	<p>A workflow does not initiate an operation.</p> <p>This might 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 fails without any 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 there are such operations, remove them.</p> <p>Server-initiated workflow: verify that no links (between the start point and the first screen saved) precede the submit workflow operation. If there are such links, remove them.</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>
CR-682741	<p>"Validate controls as soon as the user tries to change focus away from them" option in Hybrid App Package generation wizard is not supported on Windows Mobile.</p> <p>Workaround: None.</p>

Issue #	Description
CR-681918	<p>When you click the Hybrid App 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 Hybrid App.</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&dialog-ID=1652002964&stateId=0%20%201652004660.</p>
CR-677684	<p>Locale properties file is not updated if screens, controls, menu items and so on are removed.</p> <p>During Hybrid App package generation, you see a warning that validation keys are missing from the <locale>.properties file if the number of screens, controls, menu items, have changed, 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 .properties file after making the changes.</p>
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 with has case-sensitive parameters, 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 (requiring "CA"). This is not an issue for object queries in other types of cache groups.</p> <p>Workaround: None.</p>

Issue #	Description
<p>CR-674149</p>	<p>Exception received with large amounts of data.</p> <p>When the amount of data is too large to download to the Hybrid App client device, you may get an exception similar to:</p> <pre>"iAnywhere.MobileOffice.AMP.ResponseRetryException" on device, and following error in Workflow- Client.log: 20110616T110249.554 4 My:1 -- ExecuteRequest- > Out 20110616T110249.694 1 iAnywhere.MobileOffice.AMP.Re- sponseRetryException: Exception of type 'iAnywhere.MobileOffice.AMP.ResponseRetryException' was thrown. 20110616T110249.694 1 at Sybase.UnwiredPlat- form.WorkflowClient.Utils.CheckMessageSize (String serializedMessage, ContextData oContextData, Boolean fromResponder) 20110616T110249.694 1 at Sybase.UnwiredPlat- form.WorkflowClient.Responder.ProcessMessageFromDe- vice (ContextData oContextData, String sData, Boolean is- Synchronous) 20110616T110249.694 1 at Sybase.UnwiredPlat- form.WorkflowClient.Responder.ProcessSyncRequest (ContextData oContextData, String sData) 20110616T110249.694 4 My:1 -- ProcessSyncRequest- > Out</pre> <p>Workaround: Increase the allowed maximum message size (SupMaximumMessageLength). From Sybase Control Center, expand Hybrid Apps and select the Hybrid App. Select the Context Variables tab. Modify the property.</p>
<p>CR-673572</p>	<p>Hybrid Apps 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>
<p>CR-671242</p>	<p>If a Hybrid App uses a Web Service that takes a structure as its input, submit operation is empty.</p> <p>While you can add items to a 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>

Issue #	Description
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. Physical devices work correctly.</p> <p>Workaround: None.</p>
CR-666672	<p>On BlackBerry 6.0 simulators (nontouch models), it is difficult to enter the password.</p> <p>Workarounds:</p> <ol style="list-style-type: none"> 1. When the password control has focus, press the scroll button and scroll to the left. 2. When the password control has focus, press the Menu button, choose Select, then move the cursor to the password control.

Known Issues for Native Object API

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

Issue #	Description
RTC-347	<p>iOS client requests might fail with an HTTP 500 error when using Apache as a reverse proxy.</p> <p>The cause is that Apache implements the HTTP 1.1 specification in such a way that the HTTP header coming from the client, Transfer-Encoding: "Chunked" is not accepted due to the capitalized "c" in "Chunked".</p> <p>Workaround: Change Apache configuration to rewrite incoming HTTP headers. Use <code>mod_headers</code> and add this to the Apache configuration:</p> <pre>RequestHeader edit Transfer-Encoding Chunked chunked early</pre>
RTC-304	<p>Additional information for Tracking KPI topic in Developer Guide: iOS Object API Applications.</p> <p>There is additional and corrected information for the <i>Tracking KPI</i> topic in the Developer Guide: iOS Object API Applications.</p> <p>Workaround: See <i>Tracking KPI for iOS Devices</i> on page 19.</p>

Issue #	Description
<p>RTC-285</p>	<p>Set values explicitly for synchronization parameters.</p> <p>For the Android, BlackBerry, Windows, iOS, and Windows Mobile object API, when a synchronization parameter is bound to the default personalization parameter "user-name", the default personalization parameter "username" will not take effect if the client application has never before synchronized.</p> <p>Workaround: Set values explicitly for the synchronization parameters. Do not use values from the default personalization parameters.</p>
<p>RTC-282</p>	<p>Memory warnings from autoreleased objects.</p> <p>You receive memory warnings in your application because of too many autoreleased objects. One example is when there are many objects at the application level through the <code>findAll</code> method.</p> <p>Workaround: To reduce memory growth, use the appropriate autorelease pool. For more information, see this document from Apple: https://developer.apple.com/library/mac/#documentation/Cocoa/Conceptual/MemoryMgmt/Articles/mmAutoreleasePools.html.</p>
<p>RTC-281</p>	<p>64-bit packaging tool cannot be launched on 64-bit Windows.</p> <p>By default, Sybase Mobile SDK installer configures the system to use the 32-bit packaging tool. If you try to run the 64-bit packaging tool (<code>PackagingTool64.bat</code>) after completing a new or upgrade installation of Sybase Mobile SDK on a 64-bit Windows system, launching the tool fails with this message:</p> <pre>Cannot load 64-bit SWT libraries on 32-bit JVM</pre> <p>Workaround: Set up a 64-bit JDK to work with the 64-bit packaging tool.</p> <ol style="list-style-type: none"> 1. Install a 64-bit JDK on the 64-bit Windows system. 2. Set system environment variables, <code>CLASSPATH</code>, <code>JAVA_HOME</code>, and <code>Path</code> to point to the 64-bit JDK. 3. Verify that the <code>SUP_HOME\ObjectAPI\Utils\bin\set-java-home.bat</code> has been modified to point to the installed 64-bit JDK (where <code>SUP_HOME</code> is the installation directory for Sybase Mobile SDK on the 64-bit system). 4. Launch <code>PackagingTool64.bat</code>.

Issue #	Description
RTC-280	<p>Failure to start a connection after a shutdown of Unwired Server.</p> <p>For Windows, Windows Mobile, Android and BlackBerry Object API clients, when the device application connects to the Unwired Server, the Unwired Server shuts down, and the device application calls <code>startConnection</code> again immediately after the shutdown occurs, an <code>ApplicationRuntimeException</code> may be thrown indicating <code>Client state error. Client is already started, without attempting to reconnect to the server.</code></p> <p>Workaround: You can catch the exception in the device application, sleep a few hundreds of milliseconds, and retry by calling <code>Application.startConnection(timeout)</code> again. After one or two seconds, you can try to reconnect.</p>
RTC-264	<p>The perflog.txt file is not fully readable in a text editor.</p> <p>Workaround: To read the contents and/or import the content to an MS Excel spreadsheet, perform the following steps:</p> <ol style="list-style-type: none"> 1. Right click on <code>perflog.txt</code> to select Open with > MS Word. 2. Select Unicode 6.0 UTF-8 in Text encoding in the MS Word file conversion dialog. Click OK to see the content in MS Word. 3. Select all the content in the MS Word file and choose Tables > Convert Text to Table. In the Convert Text to Table dialog, set ":" in "Separate text at "Other", and set "AutoFit to contents" in AutoFit Behavior. 4. Choose Save as with Format set to "Web Page". Your file is saved as "PerfLog.htm". 5. Choose File > Import > HTML file in MS Excel.
RTC-258	<p>Exception when calling <code>update</code> on a new MBO instance.</p> <p>When you call the <code>update</code> method on a new MBO instance, an <code>ObjectNotSaved</code> exception is thrown. For example:</p> <pre data-bbox="364 1124 1180 1199">MBO instance = new MBO(); instance.\${UpdateMethod}(); //UpdateMethod is a update method defined in the model.</pre> <p>Workaround: Do not call the <code>update</code> method for a new instance. Only call <code>update</code> when the instance is either created or saved.</p>
RTC-216	<p>If an MBO has a synchronization parameter mapped to a personalization key, the device application client user cannot retrieve the personalization key value for the synchronization parameter if the personalization key datatype is a List.</p> <p>Workaround: Set the personalization key value manually directly in the application code.</p>

Issue #	Description
<p>RTC-206</p>	<p>Root certificate required for synchronization with an HTTPS server.</p> <p>The Android Object API is not able to synchronize with an HTTPS server unless the device has access to the root certificate of the certificate used to sign the certificate presented by the server.</p> <p>Workaround: Use the root certificate on the device.</p>
<p>CR-709353</p>	<p>Cannot pass cookies through Personalization Keys using replication-based synchronization (RBS).</p> <p>Workaround: Use the following code:</p> <pre data-bbox="368 517 1143 591">SUPStringProperties *cookies = [smnwTests cookieName]; [[[SUPApplication getInstance] connectionProperties] setHttpCookies:cookies];</pre>
<p>CR-709073</p>	<p>Operation replay records may not be processed correctly.</p> <p>In some cases, operation replay records that you upload to the Unwired Server are not processed in the correct order on the server. For example:</p> <pre data-bbox="368 736 1180 909">[customer create]; // inserts a row into the MBO table [customer submitPending]; // inserts a row into the operation replay table [customer delete]; // deletes the row from the MBO table (because of server-side processing, does not remove the row from the operation replay table) [customer submitPending]; // does nothing</pre> <p>Workaround: Call <code>cancelPending operation</code> to cancel any pending record before submitting another operation.</p>
<p>CR-708707</p>	<p>Best practice for deleting the client database.</p> <p>By default asynchronous operation replay is enabled. When an application is connected (by <code>Application.StartConnection()</code> or <code>Application.RegisterApplication()</code>), it may receive background notifications, and trigger a <code>synchronize</code> or other database operation. If you try to delete the database, you may receive database exceptions.</p> <p>Workaround: Before deleting the database, stop the application connection (<code>Application.StopConnection()</code>).</p>
<p>CR-692374</p>	<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 <i>Sybase Unwired Platform Developer Guides</i> to enable compression.</p>

Issue #	Description
CR-690308	<p>The query.getRow() API may not return the correct row to BlackBerry clients.</p> <p>For example, in this connected result set for a BlackBerry client, <code>rs.getRow()</code> may not return the correct value:</p> <pre>Query query = new Query(); query.select("c.id as Id, c.fname as Fname, c.state as countState"); query.from("Customer", "c"); query.setConnectedResultSetEnabled(true); QueryResultSet rs = MyDatabase.executeQuery(query); rs.executeQuery(); rs.last(); rs.afterLast(); rs.previous();</pre> <p>Workaround: Do not use the <code>query.getRow()</code> API <code>QueryResultSet.previous</code>/<code>next</code> return Boolean to indicate if the current position is valid. Rely on the return value instead.</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: None.</p>

Tracking KPI for iOS Devices

Access performance libraries for tracing or collecting key performance indicators (KPIs).

User interactions are measured in intervals of these types: `HttpRequest`, `PersistenceRead`, `PersistenceWrite`, `SubmitPending`, `CancelPending`, and `Transaction`. All intervals measure Wallclock Time, CPU Time, and Memory Max.

The `HttpRequest` interval type measures some additional KPIs:

- `HttpRequest`
 - `NetworkTime`
 - `Roundtrips`
 - `Total Bytes`
 - `Sent Bytes`
 - `Received Bytes`

After the interaction is stopped, a summary log in `txt` format is written to the device. The summary log contains sums of each of the KPI types. For example, total Wallclock Time, total CPU Time, total number of roundTrips, and so on. There is no detailed log that contains KPI values for each interval.

Known Issues for Sybase Mobile SDK 2.2 SP05

The administrator can invoke a Get Trace request through Sybase Control Center to send the performance log to the server domain log.

To start collecting performance metrics, call the `startInteraction` method:

```
- (void)startInteraction:(NSString *)interactionName;
```

To stop collecting performance metrics and output a summary to the reporting target, call the `stopInteraction` method:

```
- (void)stopInteraction;
```

Example of application interactions for collecting KPI:

```
// get the instance
id <SUPPerformanceAgentService> pa = [SUPPerfAgentServiceImpl
getInstance];
[pa startInteraction:@"Interaction 1"];
// application interaction
// ...
// ...
[pa stopInteraction];

[pa startInteraction:@"Interaction 2"];
// application interaction
// ...
// ...
[pa stopInteraction];
```

The following limitations apply:

- On iOS devices, there is a detailed log file only written after the interaction is stopped. There is no report on the KPI values for each interval available.

Known Issues for Hybrid Web Container

Learn about known issues and apply workarounds for Hybrid Web Container (HWC) development for all platforms except Windows and Windows Mobile.

Issue #	Description
SMPONP-12431	<p>The built-in JavaScript API <code>document.cookie</code> cannot be used to save cookies in Hybrid App pages on a device with Android API level 12 or higher.</p> <p>This issue is caused by WebView Control update, and is not related to Hybrid Web Container. The cookie is not supported when the URL schema is "content://"</p> <p>Workaround: Use <code>SUPStorage</code> to persist data.</p>

Issue #	Description
SMPONP-11897	<p>An iOS device loops infinitely between HWC and an Afaria client when trying to use Afaria registration in flight mode.</p> <p>Workaround: Press the Home button on the iOS device to exit HWC to end the loop and try to register when a network connection is available.</p>
RTC-428	<p>Server Personalization Key default value not used</p> <p>If you create a personalization key using a default value and assign the personalization key to the operation parameters of a column in an MBO, it does not use the default value as expected when the back end operation is invoked.</p> <p>Workaround: Do not specify a value for the parameter.</p>
RTC-334	<p>If you migrate or otherwise generate a Hybrid App with the Use Backwards Compatible API option set one way, for example, off, and then afterwards change that setting, for example, to on, certain key files, namely <code>API.js</code>, <code>Utils.js</code>, <code>WorkflowMessage.js</code>, and <code>Custom.js</code>, are not regenerated and, thus, use the wrong API setting compared to the other generated files.</p> <p>Workaround: SAP recommends that you decide prior to migration (or, in the case of newly written Hybrid Apps, prior to generation) which API setting you want to use. Failing that, after changing the API setting, delete the <code>API.js</code>, <code>Utils.js</code>, <code>WorkflowMessage.js</code>, and <code>Custom.js</code> files manually and regenerate the Hybrid App with the desired API setting.</p>
RTC-301	<p>The Timepicker fails to work on iOS4.3.x.</p> <p>Workaround: Use iOS version 5.0 or later.</p>
RTC-287	<p>On BlackBerry 7 simulators, when a Hybrid App is deployed from the Hybrid App Designer, the simulator crashes. See http://forum.jquery.com/topic/jquery-mobile-demo-page-causes-blackberry-7-1-simulator-browser-to-crash for information. This does not happen on a real device. Workaround:</p> <p>Workaround: Use a BlackBerry 7 device for deploying Hybrid Apps.</p>

Issue #	Description
<p>RTC266</p>	<p>Changes to JavaScript functions.</p> <ul style="list-style-type: none"> • <code>showAlertDialog()</code> – the title parameter is no longer used on iOS. It is already ignored on other platforms. This is true only for Sybase Unwired Platform versions 2.1.3 and 2.2sp02 (2.2.0 and 2.2sp01 work as before). • <code>showConfirmDialog()</code> – this function does nothing. <p>These functions are deprecated.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • <code>showAlertDialog()</code> – use the native JavaScript <code>alert()</code> function. • <code>showConfirmDialog()</code> – use the native JavaScript <code>confirm()</code> function. <p>Alternatively, you can use PhoneGap APIs to display an alert or confirmation dialog. Be aware that although the PhoneGap APIs allow you to set the title of the alert and confirmation dialogs, and buttons, the PhoneGap APIs are asynchronous rather than synchronous, so using them as a direct substitute for the <code>showAlertDialog()</code> does not work. That would require refactoring the code in each instance where it is used.</p>
<p>RTC-240</p>	<p>On Android, PhoneGap Media play function does not play sound when the source is a web server. This is a known PhoneGap issue and is fixed in PhoneGap (Cordova) version 2.1.0 so that sound files that are stored on the device play correctly.</p> <p>Workaround: Include the sound files with the application. See the discussion about this problem at: https://groups.google.com/forum/?fromgroups=#!topic/phonegap/xCOwgKh0IQ0</p>
<p>RTC-236</p>	<p>When a 2.1.3 or older client tries to connect to a 2.2 or newer server using an invalid URL suffix (such as '/'), the client receives an HTTP authentication challenge and the connection fails.</p> <p>Workaround: Use a valid URL suffix when attempting to connect a 2.1.3 or older client to a 2.2 or newer server.</p>
<p>RTC-220</p>	<p>In one page of the Hybrid App, the Save or Submit Hybrid App action fails to save the credential information to the local store by providing only "credential cached user name" without "credential cached password."</p> <p>Workaround: Use the <code>hwc.saveLoginCredentials()</code> JavaScript API to save the user name.</p>

Issue #	Description
<p>RTC-205</p>	<p>On BlackBerry Torch and Storm devices, when using the Camera API, a picture that is taken is always rotated 90 degrees to the right.</p> <p>Workaround: None. This is a known problem with RIM APIs on these devices. See https://www.blackberry.com/jira/browse/JAVAAPI-701 and http://supportforums.blackberry.com/t5/Java-Development/Storm-Torch-camera-getSnapshot-orientation-issue/td-p/1316867. These sites require authorization from BlackBerry.</p>
<p>RTC-171</p>	<p>If a password is used for automatic device registration using the <code>hwc . saveSettings ()</code> API, the password is used only once and is not saved in the Hybrid Web Container. Upon successful automatic registration, subsequent connections to the server uses the <code>userid+deviceid+authcode</code> combination (the password is not required). This is by design.</p> <p>Workaround: If you want to save the password in the application, do so in the application code with the secured storage <code>SUPStorage</code> API.</p>
<p>RTC-169</p>	<p>Using the Hybrid Web Container on older BlackBerry devices may result in warnings or errors from the operating system, such as "The memory available on your device is low. Close some of the items below."</p> <p>Workaround: Run the BlackBerry Hybrid Web Container on newer OS 6.x or OS 7.x devices with more memory. A fix for this is not available from RIM for Java-based platforms. See https://www.blackberry.com/jira/browse/JAVAAPI-2275, which requires authorization from BlackBerry.</p>
<p>RTC-139</p>	<p>On iOS, when using the JavaScript API functions (<code>hwc . openApp</code> and <code>hwc . openMessage</code>) that allow the user to open a Hybrid App or message from within another Hybrid App, when opening the Hybrid App from within another application, the previously opened application closes. On platforms other than iOS, when the user closes the newly opened application, the previously opened application is still open.</p> <p>Workaround: None.</p>
<p>RTC-135</p>	<p>On BlackBerry 5.0, the HTML5 sessionStorage object is not supported.</p> <p>On both <code>window . open ()</code> and <code>window . location . href</code> the HTML5 <code>sessionStorage</code> values are not carried to the next page.</p> <p>Workaround: None.</p>
<p>RTC-115</p>	<p>Cannot update prepackaged Hybrid Apps.</p> <p>The version number of the new Hybrid App must be higher than the current version number.</p> <p>Workaround: Edit the <code>manifest . xml</code> file to update the version number and repackage the Hybrid App files.</p>

Issue #	Description
RTC-111	<p>On Android devices, when attempting to upload log files from the Hybrid Web Container after re-registering the device user, an "Upload Failed" message is returned periodically.</p> <p>Workaround: Upload the log files again.</p>
RTC-91	<p>In Hybrid Apps running on iOS devices, when a user enters a string in a numeric field, no error message is given, which allows the user to incorrectly enter string data in a numeric field.</p> <p>In Hybrid Apps running on iOS, numeric edit boxes do not validate user entries.</p> <p>Workaround: None.</p>
RTC-90	<p>On all Hybrid Web Container device platforms, when an expired certificate is used for device registration, the error message is "MMS Authentication Failed," which does not indicate the root cause of the error.</p> <p>Workaround: If you receive an "MMS Authentication Failed" error message, check your certificate to make sure it is not expired.</p>
RTC-73	<p>On all platforms, in manual registration mode, after calling the <code>hwc . saveSettings</code> API in <code>hwc-api . js</code>, the client cannot connect to the server.</p> <p>Workaround: The <code>hwc . startClient</code> API must be called after the <code>hwc . saveSettings</code> invocation to connect to the server by manual registration.</p>
RTC-52	<p>A Hybrid App fails to deploy to the device.</p> <p>If the Sybase Unwired Platform is installed in a cluster, and different paths are used on each application service node, the Hybrid App log may contain a message similar to Updated failed for Hybrid App item. Sybase Unwired Platform currently assumes that application service nodes are installed to the same path on all the nodes in the cluster, that is, that all application server nodes are installed to the same path on all cluster nodes. It stores full paths in the database during Hybrid App package installation. When the client connects, it looks for those paths in the file system. If the node it is connecting to does not have one of those paths, you see the error.</p> <p>Workaround: Install Sybase Unwired Platform using the same installation path for each node of the cluster.</p>

Issue #	Description
<p>RTC-51</p>	<p>If you do not provision the Afaria server with the iOS Hybrid Web Container seeding file, and if the Afaria iOS client is installed on the iOS device and not configured with the connection settings in the iOS Hybrid Web Container, the Hybrid Web Container fails upon start-up. This happens because the Hybrid Web Container launches the Afaria client application to get the seeding file (settings) that can be used to connect to the Afaria server. The Afaria client application crashes before relaunching the iOS Hybrid Web Container.</p> <p>Workaround: If you do not provision the Afaria server with the iOS Hybrid Web Container seeding file, the user must manually enter the connection settings for the Hybrid Web Container before launching it.</p> <p>This issue does not occur if the Afaria client is not installed on the iOS device.</p>
<p>RTC-37</p>	<p>On Android 3.x devices, when proxy is enabled on the WiFi connection, connecting to Unwired Server directly using the HTTPS protocol makes the Hybrid Web Container client crash. This is an Android bug. See http://code.google.com/p/android/issues/detail?id=37050 for details.</p> <p>Workaround: Either turn off the proxy or connect through Sybase Relay Server.</p>

Issue #	Description
<p>RTC-53</p>	<p>On iOS, some APIs, such as SUPStorage, perform slowly when using WiFi with an HTTP proxy</p> <p>This happens only when all of the following conditions are true:</p> <ul style="list-style-type: none"> • The Hybrid Web Container experiences long (10 - 75 seconds) delays while processing the JavaScript of Hybrid Apps and navigating between screens. • The Hybrid Web Container is running on a device connecting to the network through WiFi. • The WiFi access point is using a network HTTP proxy (Settings > WiFi > Choose a Network > HTTP Proxy). <p>If all of these conditions are true, these workarounds are available depending upon whether the Hybrid App is using JavaScript generated by the Mobile Workflow Forms Designer or using the Packaging Tool in conjunction with the JavaScript container code that ships with Sybase Unwired Platform 2.2.</p> <p>Workaround #1: If you are using the JavaScript files generated by the Mobile Workflow Forms Designer, you must edit <code>API.js</code>, <code>SUPStorage.js</code>, and <code>Utils.js</code>, which are located in the <code>html/js</code> directory of the generated application code. For each file:</p> <ol style="list-style-type: none"> 1. Search for POST. Each instance is within a function, and typically there is a unique code path per platform. 2. Identify the <code>isIOS()</code> code branch where an <code>xmlHttpRequest</code> is being opened, and change the last parameter of the open function call for the <code>xmlHttpRequest</code> to change it from <code>false</code> to <code>true</code>. For example, in <code>SUPStorage.js</code>, change line 171 from: <pre>xmlHttpRequest.open("POST", "/sup.amp?querytype=work-flowstorage&" + versionURLParam, false);</pre> to: <pre>xmlHttpRequest.open("POST", "/sup.amp?querytype=work-flowstorage&" + versionURLParam, true);</pre> <p>Note: If you are deploying the Hybrid App to multiple platforms, make sure these changes affect only the iOS code path, which might mean creating a new “elseif” clause.</p> <ol style="list-style-type: none"> 3. Regenerate the Mobile Workflow package. <p>Workaround #2: Modify <code>hwc_api.js</code> (usually installed in <code>SUP_HOME\UnwiredPlatform\MobileSDK22\HybridApp\Container</code>) in the Hybrid App to look like the following example, and redeploy the application to the Hybrid Web Container.</p> <pre>/** * Encapsulate the HTTP post method. This function is called internally */</pre>

Issue #	Description
	<pre> hwc.postDataToContainer = function(queryType, data) { try { var response = ""; if (hwc.isWindowsMobile()) { xmlhttp = hwc.getXMLHttpRequest(); xmlhttp.open("POST", "/sup.amp?querytype=" + queryType + "&" + hwc.versionURLParam, false); xmlhttp.send(data); response = xmlhttp.responseText; } else if (hwc.isAndroid()) { response = _HWC.postData("http:// localhost/sup.amp?querytype=" + queryType + "&" + hwc.versionURLParam, data); } else if (hwc.isBlackBerry()) { var xmlhttp = hwc.getXMLHTTPPre- quest(); xmlhttp.open("POST", "http://localhost/sup.amp?querytype=" + quer- yType + "&" + hwc.versionURLParam, false); xmlhttp.send(data); response = xmlhttp.response- Text; } else if (hwc.isIOS()) { var xmlhttp = hwc.getXMLHTTPPre- quest(); xmlhttp.open("POST", "http://local- host/sup.amp?querytype=" + queryType + "&" + hwc.ver- sionURLParam, true); try { xmlhttp.send(data); } catch (ex) { if (ex.message.search(/XMLHttpRe- quest Exception 101/) == -1) { throw ex; } } } return response; } catch (ex) </pre>

Issue #	Description
	<pre data-bbox="422 218 1170 348"> { hwc.log("hwc.postDataToContainer error: " + ex.message, "ERROR", false); } }; </pre>
<p data-bbox="229 378 346 401">CR-708173</p>	<p data-bbox="422 378 1170 465">When the Hybrid Web Container tries to retrieve data from the MBO package, an Invalid application id <***> for package error appears.</p> <p data-bbox="422 482 1170 534">Workaround: In Sybase Control Center, manually add an application ID for the MBO package's application list.</p> <ol data-bbox="422 560 1170 748" style="list-style-type: none"> <li data-bbox="422 560 776 583">1. Log in to Sybase Control Center. <li data-bbox="422 591 1170 614">2. Go to hostname@localhost > Applications and click the Applications tab. <li data-bbox="422 623 628 645">3. Click Properties. <li data-bbox="422 654 1170 706">4. In Domains and Packages, select the domain that contains the applicable MBO package. <li data-bbox="422 715 1103 737">5. Assign the application ID to the MBO's package's applications list.
<p data-bbox="229 777 346 800">CR-705895</p>	<p data-bbox="422 777 1170 864">After adding JavaScript code in the customAfterMenuItemClick method to update the check box (using JQuery Mobile) state on the screen, the check-box fails to update.</p> <p data-bbox="422 881 1170 933">Workaround: When you use JavaScript to update the check box (using JQueryMobile) value, you must also add the refresh code. For example:</p> <p data-bbox="422 942 1170 994">Whole sample in "customAfterMenuItemClick" method of Custom.js</p> <pre data-bbox="422 1020 1170 1454"> function customAfterMenuItemClick(screen, menuItem) { if (screen === "Start" && menuItem === "setCheck- box") { var checkbox1 = document.getElement- ById('checkbox1'); checkbox1.checked = true; var checkbox2 = document.getElement- ById('checkbox2'); checkbox2.checked = false; if (isJQueryMobileLookAndFeel) { \$("input[type='checkbox']").checkboxra- dio("refresh"); } } } </pre>

Issue #	Description
CR-705219	<p>When the iOS Hybrid Web Container application tries to retrieve seeding information from an Afaría iOS App store hosted package you see this error message: Afaría client application is installed but not configured.</p> <p>Workarounds: Configure Afaría client application and try again or go to the Settings application and enter your configuration information.</p> <ul style="list-style-type: none"> • Seed Enterprise-hosted packages on the Afaría server. • Manually configure the connection information.
CR-703883	<p>Switching from one edit box to another on a BlackBerry 7.0 simulator or device using the touch screen or mouse requires two clicks or touches.</p> <p>Workaround: None for BlackBerry 7.0. Upgrading to BlackBerry 7.1 eliminates the problem.</p>
CR-702603	<p>BlackBerry 7.0 users see a white screen until the Workflow application's activation screen opens. See https://www.blackberry.com/jira/browse/JAVAA-PI-119. Note that the site requires a BlackBerry ID to access the BlackBerry Jam Zone.</p> <p>Workaround: None.</p>
CR-693907	<p>Hybrid Web Container occasionally fails on Android 2.2.</p> <p>This can happen when all of these conditions are present:</p> <ul style="list-style-type: none"> • There is only one read-only edit box control on a single screen, and • The application is using jQueryMobile GA version, and • You are using an Android 2.2 simulator or Samsung Galaxy device with Android 2.2. <p>Workaround:</p> <ul style="list-style-type: none"> • Upgrade the OS on the device to Android 2.3, or, • If using an Android 3.x simulator, see CR 673572, or, • Add one or more controls to the screen.
CR-712912	<p>iOS client container files deleted on application close.</p> <p>The container files are no longer deleted after a package loads, but when the application closes.</p>
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>

Issue #	Description
CR-689287	<p>2.0 or 2.0 ESD #1 message-based synchronization (MBS) clients and Hybrid Web Container clients may not be able to connect to 2.1 ESD #3 or 2.2 servers.</p> <p>If 2.0 or 2.0 ESD #1 clients have not connected through an activated registration, and you upgrade to 2.1 ESD #3, those clients may not be able to connect to a 2.1 ESD #3 or a 2.2 server.</p> <p>Workaround: Implement a server registration that uses an empty application ID, and use manual registration to connect the MBS and Hybrid Web Container 2.0 and 2.0 ESD #1 clients to the server.</p>
CR-686465	<p>Camera feature is supported on some device simulators/emulators.</p> <ul style="list-style-type: none"> • iOS - not supported. • Android 2.2 - not supported. See http://code.google.com/p/android/issues/detail?id=9376. • BlackBerry - supported. • Windows Mobile - supported; however, can photograph only a grey/black screen. <p>Workaround: Use a physical device.</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 appear incorrectly 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 Hybrid Web Container for Windows and Windows Devices

Learn about known issues and apply workarounds for Hybrid Web Container (HWC) development as they pertain to Windows and Windows Mobile devices.

Issue #	Description
RTC-300	<p>On Windows Mobile, calling a save or submit action to a persisted cached password causes the Hybrid Web Container to crash if the Hybrid Web Container was not registered to Unwired Server.</p> <p>Workaround: Register the Windows Mobile device to the Sybase Unwired Platform server before saving credential information to the device.</p>

Issue #	Description
<p>RTC-222</p>	<p>After loading Hybrid Web Container JavaScript files (for example, Dataajs), a memory leak occurs. Within a closure code, when adding a new window property which references an object, the object is not GC correctly after closing the Hybrid App.</p> <p>For example, the dataajs-1.0.3.js file contains a code pattern like:</p> <pre data-bbox="366 355 1149 659"> (function (window, undefined) { if (!window.OData) { window.OData = {}; } var odata = window.OData; odata.defaultHttpClient = { request: function () { xhr = new ActiveXObject("Micro- soft.XMLHTTP"); } }; })(this); </pre> <p>When exiting the Hybrid App, window.OData still occupies the memory. Then after several times of opening and closing the Hybrid App, an "Out of Memory" error occurs.</p> <p>Workaround: Manually release the object. For example, add "window.OData = null;" in the hwc.close() function which is invoked when exiting the Hybrid App. Add these lines in hwc.close() to avoid the memory leak:</p> <pre data-bbox="366 885 1182 1241"> //dataajs if (window.dataajs) { window.ActiveXObject = window.oldActiveXObject; window.dataajs = null; window.OData = null; window.oldActiveXObject = null; } //hwc window.CallbackSet = null; window._Picture = null; //cordova window.console = null; window.PhoneGap = null; window.Cordova = null; window.plugins = null; window.addEventListener = null; window.removeEventListener = null; </pre> <p>On Windows Mobile, if you experience a memory leak under these conditions, restart the device.</p>
<p>RTC-197</p>	<p>On Windows Mobile, when changing between landscape and portrait orientation, the spinner disappears.</p> <p>Workaround: None.</p>

Issue #	Description
RTC-156	<p>On Windows Mobile 6.0, if you use the task manager to end the Hybrid Web Container process, you cannot restart the Hybrid Web Container.</p> <p>Workaround: Do not end the Hybrid Web Container process on Windows Mobile 6.0. It works as expected on Windows Mobile 6.5.</p>
RTC-147	<p>On Windows Mobile, when using the Media Cache function, <code>hwc.MediaCache.getUrl()</code>, if the media resource, such as an image, has a large size, it may fail to display correctly if the user opens and closes the Hybrid App frequently.</p> <p>Workaround: None.</p>
RTC-93	<p>On Windows Mobile, the <code>removeMenuItem()</code> JavaScript API in <code>API.js</code>, does not work.</p> <p>Workaround: None.</p>
RTC-88	<p>After changing the default Hybrid App in Sybase Control Center, invoking the Hybrid Web Container on Windows Mobile devices does not open the new default Hybrid App automatically.</p> <p>Workaround: After changing the default Hybrid App in Sybase Control Center, restart the device.</p>
RTC-57	<p>Native spinner does not work on Windows Mobile</p> <p>The <code>hwc.showProgressDialog</code> and <code>hwc.hideProgressDialog</code> APIs do not work for the Windows Mobile Hybrid Web Container.</p> <p>Workaround: Open the <code>hwc-comms.js</code> file, and remove for Windows Mobile in the <code>hwc.showProgressDialog</code> and <code>hwc.hideProgressDialog</code> functions. Change:</p> <pre> if (hwc.isWindowsMobile()) { navigator.cursor.setWaiting(); } else { hwc.getDataFromContainer("showprogressdialog", "&message=" + message); } </pre> <p>to:</p> <pre> hwc.getDataFromContainer("showprogressdialog", "&message=" + message); </pre> <p>And change:</p> <pre> if (hwc.isWindowsMobile()) { navigator.cursor.setDefault(); } else { hwc.getDataFromContainer("hideprogressdialog"); } </pre> <p>to:</p> <pre> hwc.getDataFromContainer("hideprogressdialog"); </pre>

Issue #	Description
RTC-55	<p>The sample code file, AppNotification.cs, which is included in the template source project under the CustomCode folder, does not show a balloon notification.</p> <p>Workaround:</p> <ol style="list-style-type: none"> In the <code>AppNotification.cs</code> file, add a <code>CreateNotificationDelegate</code> delegate definition: <pre>public delegate void CreateNotificationDelegate(string title, string content);</pre> Create a notification in UI thread using a delegate: In the <code>AppNotification_InstallEvent</code> method, change <code>ShowNotification(title, msg);</code> to <code>Sybase.HybridApp.OMAAAT.Framework.BaseForm.Invoke(new CreateNotificationDelegate>ShowNotification), new object[] {title, msg});</code>. Add a determine statement and remove the notification visible assignment: Change: <pre>private static void OnMessageNotificationClicked(object sender, BalloonChangedEventArgs e) { m_Notification.Visible = false; m_Notification.Dispose(); m_Notification = null; }</pre> to: <pre>private static void OnMessageNotificationClicked(object sender, BalloonChangedEventArgs e) { if (e.Visible == false) { m_Notification.Dispose(); m_Notification = null; } }</pre>
RTC-49	<p>On Windows Mobile devices and emulators, Cordova cannot play audio files.</p> <p>Workaround: None.</p>

Issue #	Description
<p>CR-708122</p>	<p>Native application on Windows Mobile device receives an error, Can't find an Entry Point 'DLL_setMclCallbacks' in a PInvoke DLL 'CMessagingClient.dll.</p> <p>This can occur if a 2.1.2 (or older) version of the Hybrid Web Container (HWC) is installed on the same device as a native application using the Sybase Unwired Platform 2.1.3 libraries. The HWC and native applications share a common CMessagingClient.dll.</p> <p>Workaround: In order for a 2.1.2 (or older) HWC and a 2.1.3 native app to coexist and both successfully run on the same Windows Mobile device, install only the 2.1.3 version of CMessagingClient.dll, and load it into memory on the device. Before starting either version of the application, verify that older versions of that DLL are removed from the device.</p>
<p>CR-693381</p>	<p>Cannot preview a selected picture On Windows Mobile emulator.</p> <p>When using the imageElement.src = imageUrl in the getPicture 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:</p> <ul style="list-style-type: none"> • Preview the image using an actual device instead of the emulator, or, • Assign image data instead of an image URI to the image element so the image data can be retrieved through the JavaScript API.
<p>CR-688399</p>	<p>On Windows Mobile devices, thumbnails do not show properly if an image has a large size..</p> <p>The root cause is that Internet Explorer cannot load a large image; try one of these solutions to address the image size:</p> <p>Workaround #1: Specify a small-sized image as the thumbnail instead of using the original large image, for example:</p> <pre data-bbox="366 1173 1161 1272"></pre> <p>Workaround #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="366 1364 1161 1463"></pre> <p>The width and height parameters are supported only on Windows Mobile and may cause display issues on other platforms.</p>

Issue #	Description
CR-686465	<p>Camera feature is supported on some device simulators/emulators.</p> <ul style="list-style-type: none"> • iOS - not supported. • Android 2.2 - not supported. See http://code.google.com/p/android/issues/detail?id=9376. • BlackBerry - supported. • Windows Mobile - supported; however, can photograph only a grey/black screen. <p>Workaround: Use a physical device.</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 appear incorrectly 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 Mobile Devices

Learn about known issues and apply workarounds for various mobile devices.

Issue #	Description
RTC-87	<p>When the Windows Mobile emulator is uncradled then cradled again, the first attempt to retrieve data from the server fails.This happens only on the emulator.</p> <p>Workaround: The subsequent request succeeds.</p>
RTC-85	<p>Windows Mobile devices fails with a "the connection template is not found" message when there are multiple application connection templates with the same App ID but different security configurations, trying to register.</p> <p>Workaround: You must append the specific security configuration to the user name in this format: <code>user@securityconfig</code>.</p> <p>The user name field in the Windows Mobile Hybrid Web Container settings screen is disabled when the registration type is Certificate. Enable it by building a customized container using the template source code.</p>

Issue #	Description
RTC-43	<p>On Windows 7 virtual machines, the Windows Mobile emulator cannot connect to Windows Mobile Device Center.</p> <p>Workaround: When using Windows 7, do not use a virtual machine to run the Windows Mobile emulator.</p>

Known Issues for MAKit

Learn about known issues and apply workarounds for MAKit development.

Issue #	Description
N/A	<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;=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>
RTC-137	<p>Orientation issues when running MAKit 2.2 code example in the iOS6.0 iPad Device.</p> <p>When the iPad's orientation changes from portrait to landscape or vice versa, the MAKit code example's orientation does not change.</p> <p>Workaround: follow these steps:</p> <ol style="list-style-type: none"> In the <code>MAKitCodeExamplesAppDelegate</code>, replace this line: <pre>[self.window addSubview:navController.view];</pre> with this line: <pre>[self.wndow setRootViewController:navController];</pre> In the <code>MAKitCodeExamples-info.plist</code> file, delete the sub items (item 0 and item 1) under "Supported interface orientations".

Issue #	Description
CR-703197	<p>SUPContainer iOS (iPad) what-if integer columns turns blank after clearing the value.</p> <p>When the MAKit what-if feature is used in the Unwired Platform Workflow container environment on iOS (iPad devices), the <code>what-if</code> integer column becomes blank and the slider does not reposition when the value is cleared using device keyboard input and the user taps out of the field. This field should have a value of 0 after clearing and the slider control should be synchronized to the 0 position.</p> <p>Workaround: Users can use the slider control to change the what-if column values.</p>

Known Issues for OData SDK

Learn about known issues and apply workarounds for the OData SDK.

Issue #	Description
SMPONP-12936	<p>The <code>setProperty</code> API fails through Relay Server if set after any failed post request.</p> <p>Workaround: None.</p>
SMPONP-12936	<p>End-to-end tracing fails through Relay Server.</p> <p>Workaround: None.</p>

Issue #	Description
<p>RTC-328</p>	<p>Relay Server: Server response containing header with empty value is considered malformed.</p> <p>When there is a PUT request, such as the below example, passing through Relay Server to SAP Mobile Platform proxy connection, you get an error message 400 - Bad request with no response from back-end server.</p> <p>Example</p> <p>Request Header with Input: PUT method and request URL - <code>http://<relayserver>/<farmId>/<proxyconnection></code>:</p> <pre>Content-Type: application/json</pre> <p>Body:</p> <pre>{ "name": "<smpusername>" }</pre> <p>Response Header:</p> <pre>Status Code: 400 Bad request with no response from backend server</pre> <p>Workaround: None.</p>
Issue #	Description
<p>RTC-155</p>	<p>Push notification does not work with any security configuration other than "Admin" for certificate-based mutual SSL authentication.</p> <p>If you use any other security configuration, you get an error message 403 - User not in required role.</p> <p>Workaround: Use single SSL with any security configuration or use "Admin" as the security configuration for mutual SSL to enable Push notifications.</p>

Documentation Issues and Updates for Sybase Mobile SDK

Read about updates, corrections, and clarifications to the documentation released with Sybase Unwired Platform Mobile SDK.

Issue #	Description
SMPONP-10699	<p>DataVault encryption algorithm is AES-128.</p> <p>The statement "The contents of the data vault are strongly encrypted using AES-256" is incorrect. It should read "AES-128".</p> <p>Applies to: <i>Developer Guide: iOS Object API Applications > Client Object API Usage > Security APIs > SUPData Vault.</i></p>
N/A	<p>The Sybase Unwired Platform 2.2 SP05 documentation set contains only these updated collections:</p> <ul style="list-style-type: none"> • Release Bulletin • Supported Hardware and Software • Developer Guide: iOS Object API Applications • Tutorial: iOS Object API Application Development <p>See the Sybase Unwired Platform 2.2 SP04 documentation set for any other documentation requirements, which are all applicable to Sybase Unwired Platform 2.2 SP05.</p>
N/A	<p>All tutorials, except for the iOS OAPI tutorial, were created using Sybase Unwired Platform 2.2.</p> <p>Some tutorial steps could vary slightly when using Sybase Unwired Platform 2.2 SP05.</p>
SMPONP-14026	<p>Device incorrectly listed in <i>Supported Hardware and Software Guide</i></p> <p>The topics <i>Apple iOS Versions for Object API</i> and <i>Apple iOS Versions for HTML5/JS Hybrid Apps</i> in <i>Supported Hardware and Software Guide</i> incorrectly list iPad with Retina Display and A5X chip on Apple iOS 6.0 as a tested device.</p>
SMPONP-14023	<p>New topics are added to <i>Developer Guide: iOS Object API Applications</i></p> <p>Two new topics, <i>Background Refresh</i> and <i>Performing Background Synchronization</i> are added to <i>Developer Guide: iOS Object API Applications</i>.</p>
SMPONP-11750	<p>Information about feature that allows iOS devices to disable encryption is added to <i>Developer Guide: iOS Object API Applications</i></p> <p>The topic <i>Disabling Encryption for iOS Devices</i>, is added to <i>Developer Guide: iOS Object API Applications</i>.</p>

Issue #	Description
<p>SMPONP-11517</p>	<p>The topic <i>Save Operation</i> in the <i>Developer Guide: iOS/Windows Mobile/Android/BlackBerry Object API Applications</i> needs to be updated. The topic introduction should read:</p> <p>The save operation saves a record to the local database. In the case of an existing record, a save operation calls the update operation. If a record does not exist, the save operation creates a new record. If save is called on the parent MBO in an existing composite object, the save operation will also be called on all the child objects in the composite object.</p>
<p>SMPONP-11296</p>	<p>Code correction</p> <p>The <i>Technical Details</i> for <i>Developer Guide: OData SDK > Developing iOS Applications > OData SDK Components and APIs > SDMSupportability > SDMLogger</i> shows the wrong code for retrieving all log messages. The correct code is:</p> <pre>[[SDMLogger instance] displayLogsWithLevel:DebugLoggingLevel forQueryOperation:GreaterEqual];</pre>
<p>SMPONP-8653</p>	<p>HTTP requests are recommended for all purposes</p> <p>The topic <i>SDMConnectivity Public APIs</i>, in <i>Developer Guide: OData SDK</i>, contains a sentence in the last paragraph before the protocols that states "However, for development and testing purposes you can use HTTP requests." Disregard that statement.</p> <p>HTTP requests can be used for all purposes, not only development and testing. You can develop productive OData applications using HTTP requests.</p>
<p>SMPONP-6153</p>	<p>Only SUP 2.2 and later support REST Communication Channel use of HTTPS</p> <p>The <i>REST Services Applications</i> topic in <i>Developer Guide: REST API Applications</i> incorrectly implies that versions of SUP before 2.2 can use the REST SDK and messaging channel libraries.</p>
<p>SMPONP-5423</p>	<p>Afaria does not support SCC in SUP</p> <p>Disregard the topic <i>Launching Afaria from Sybase Control Center</i> in the <i>System Administration</i> guide.</p>

Issue #	Description
SMPONP-2430	<p data-bbox="420 215 1185 267">The Sybase Unwired WorkSpace - Mobile Business Object Development collection lacks a thorough description of the various operation cache policies.</p> <p data-bbox="420 288 1147 314">Workaround: the supported operation cache policies and typical usages are:</p> <ul style="list-style-type: none"> <li data-bbox="420 335 1185 447">• Immediately update the cache with Apply merge of operation input/output – this can be used for CUD operations where the MBO attributes map one-to-one with corresponding values in the EIS (no EIS generated IDs or side-effects on MBO attributes). For example: <ol style="list-style-type: none"> <li data-bbox="458 468 1185 581">1. The MBO Developer edits the Contact MBO officePhoneNumber attribute, and the Update operation requires Unwired Server to send fname, lname, city, state, and so on attributes that have not been changed on the client. <li data-bbox="458 590 1185 673">2. Unwired Server recognizes that only officePhoneNumber has changed, and updates the cache correspondingly if the EIS operation executes without error. <li data-bbox="420 682 1185 968">• (Legacy) Apply results to the cache – used primarily to support Create operations where the EIS generates the business ID for the new entity. Sybase Unwired Platform requires the EIS developer to provide a create method that returns all the attributes of the MBO that the Unwired Server normally sees from the read/load operation. This allows Unwired Server to insert the real business ID into the MBO instead of a temporary one manufactured on the client (generateKey) as a placeholder. When Unwired Server synchronizes the newly created MBO back to the client, it contains the real EIS defined ID field, and the client can update its remote copy by matching the surrogate key. <li data-bbox="420 977 1185 1060">• Immediately update the cache with Apply output of ENTITY READ operation – applies to any operation type, and also applies to graphs of related MBOs and shared read operations. For example: <ol style="list-style-type: none"> <li data-bbox="458 1081 1185 1164">1. The MBO Developer wants to change the ShipDate attribute on the SalesOrder MBO for a customer in a SalesOrder -> LineItems object graph, then submit the Update operation. <li data-bbox="458 1173 1185 1256">2. The EIS recognizes that due to product availability, some of the line items cannot be delivered on that date, so only some of the LineItem MBOs are modified as a result. <li data-bbox="458 1265 1185 1348">3. Unwired Server recognizes that the Update operation succeeds (but this is the "normal" Update operation that has not been modified to actually return MBO values, much less the whole tree of SalesOrder->LineItem). <li data-bbox="458 1357 1185 1470">4. Unwired Server recognizes an ENTITY READ operation associated with the Update operation takes the SalesOrder.ID as input and executes the entity read operation that returns the updated SalesOrder and LineItems information from the EIS. <li data-bbox="458 1479 1185 1531">5. Using the shared read feature, Unwired Server updates the cache for both parent and child MBO values in the graph. <li data-bbox="420 1539 1185 1591">• Invalidate the cache – the cache is unaffected in terms of what is in the cache database (CDB), but Unwired Server internally marks the cache partition to

Issue #	Description
	<p>which the affected MBO belongs as invalid. The next time a client tries to synchronize values of this partition Unwired Server refreshes the cache by performing the load operation. If the cache is very finely partitioned, this can be the equivalent to the ENTITY READ approach: apply the operation and then perform an EIS read to update the cache. If the load operation takes a specific ID and returns a single MBO record, then these are equivalent. If the MBO partition is larger scale (Customer by State for example), then a lot of MBOs are invalidated and the cache refresh (all customers in State=CA) is a more expensive operation.</p> <ul style="list-style-type: none"> • None – the cache is not updated after an operation. If there is a one hour refresh policy, changes are not reflected in the cache (or the device) until that hour expires and Unwired Server refreshes the cache. If the policy is DCN, the cache is not updated until the EIS sends a DCN message reflecting the changes.
<p>SMPONP-1712</p>	<p>The topic <i>Specifying Synchronization Parameters</i> in <i>Object API Developer Guides</i> (Windows Mobile, BlackBerry, and Android) contains a step and note that should be ignored.</p> <p>Workaround: Ignore:</p> <ul style="list-style-type: none"> • Step 3 – You do not need to explicitly save synchronization parameter changes, as this is done when you add them, as described in step 2 of the topic. • This note – <hr/> <p>Note: If you do not save the synchronization parameters, no data is downloaded to the device even if there are default values set for those synchronization parameters. Call the save method for all synchronization parameters and for all MBOs when the application is first started. Do this after application registration and the first synchronization.</p>

Issue #	Description
RTC-370	<p data-bbox="420 215 1184 326">The topic <i>Setting Up the Connection Profile</i> in the Object API Developer Guides for various platforms describes the write to the database while synchronizing feature, but is missing an example of how to use the “allowConcurrentWrite” ConnectionProfile named property.</p> <p data-bbox="420 348 1184 491">An application can have multiple threads writing to the database during synchronization by enabling the connection profile property, <code>allowConcurrentWrite</code>. Setting the property to "true" allows multiple threads to perform create, read, update, or delete operations at the same time in a package database. For example:</p> <ul data-bbox="420 513 1184 812" style="list-style-type: none"> <li data-bbox="420 513 1184 604">• Android and BlackBerry – <pre data-bbox="458 552 1153 604">SUP101DB.getConnectionProfile().setProperty("allowConcurrentWrite", "true");</pre> <li data-bbox="420 609 1184 720">• iOS – <pre data-bbox="458 644 1065 720">[[SUP101DB getConnectionProfile] setBoolean:@"allowConcurrentWrite":YES];</pre> <li data-bbox="420 725 1184 812">• WindowsMobile – <pre data-bbox="458 760 1153 812">SUP101DB.GetConnectionProfile().SetProperty("allowConcurrentWrite", "true");</pre> <hr data-bbox="420 829 1184 833"/> <p data-bbox="420 838 1184 920">Note: Multiple threads are allowed to write to the database at the same time. However, there will be errors when multiple threads write to the same row of one MBO. Avoid writing to the same MBO row in your application.</p>

Issue #	Description
<p>RTC-339</p>	<p>The Troubleshooting Guide is lacking trace information for various Object API development platforms (Windows, Android, BlackBerry, and iOS).</p> <p>Workaround: use tracing on the device side to trace Client Object API activity. Sybase Unwired Platform supports three levels of tracing:</p> <ul style="list-style-type: none"> • 1 = Tracing is disabled • 3 = SQL Trace without payload • 5 = SQL Trace with payload (values displayed) <p>There are two ways to enable tracing on the client side:</p> <ul style="list-style-type: none"> • Via Sybase Control Center through the Applications folders: <ol style="list-style-type: none"> 1. Click on the Applications folder in the Sybase Unwired Platform Cluster frame. 2. In the Applications tab, select the application you wish to enable tracing for. 3. Select the Application Connections tab and select the user you wish to enable tracing for. 4. Click on the Properties button to open the Application Connection Properties window. 5. Click on Device Advanced to display advanced connection properties. 6. Change the value of the Device Level Trace property to the appropriate level. 7. Click OK to save your changes. • Via code by calling the appropriate API for your platform: <ul style="list-style-type: none"> • iOS – in the SUPConnectionProfile class, there are two APIs that can be used: <pre style="background-color: #f0f0f0; padding: 5px;">- (void) enableTrace:(BOOL)enable - (void) enableTrace:(BOOL)enable withPayload:(BOOL)withPayload</pre> <p>The application in the initialization code can invoke these APIs to enable/disable tracing:</p> <pre style="background-color: #f0f0f0; padding: 5px;">SUPConnectionProfile *cp = [SUP101SUP101DB getConnectionProfile]; // To enable trace of client database operations (SQL statements, etc.) [cp enableTrace:YES]; // To enable trace of client database operations with values also displayed [cp enableTrace:YES withPayload:YES]; // To disable trace of client database opera-</pre>

Issue #	Description
	<pre> tions [cp enableTrace:NO]; // To enable trace of message headers sent to the server and received from the server // (this replaces the MBODEbugLogger and MBODE- bugSettings used in earlier versions of SUP) [cp.syncProfile enableTrace:YES]; // To enable trace of both message headers and content, including credentials [cp.syncProfile enableTrace:YES withPay- load:YES]; // To disable messaging trace [cp.syncProfile enableTrace:NO]; </pre> <ul style="list-style-type: none"> Android and BlackBerry – in the ConnectionProfile class, there are two APIs that can be used: <ul style="list-style-type: none"> - enableTrace(boolean enable) - enableTrace(boolean enable, boolean with Payload) <p>The application in the initialization code can invoke these APIs to enable/disable tracing:</p> <pre> ConnectionProfile *cp = SUP101DB.getConnection- Profile(); // To enable trace of client database operations (SQL statements, etc.) cp enableTrace(true); // To enable trace of client database operations with values also displayed cp enableTrace(true, true); // To disable trace of client database opera- tions cp enableTrace(false); </pre> Windows and Windows Mobile – in the ConnectionProfile class, there are two APIs that can be used: <ul style="list-style-type: none"> - EnableTrace(bool enable) - EnableTrace(bool enable, bool withPayload) <p>The application in the initialization code can invoke these APIs to enable/disable tracing:</p> <pre> ConnectionProfile cp = SampleDB.GetConnection- Profile(); </pre>

Issue #	Description
	<pre data-bbox="494 222 1174 505"> // To enable trace of client database operations (SQL statements, etc.) cp.EnableTrace(true); // To enable trace of client database operations with values also displayed cp.EnableTrace(true, true); // To disable trace of client database operations cp.EnableTrace(false); </pre> <p data-bbox="420 527 1184 696">Note: Once the trace level is set, the application must be restarted for the tracing to take effect. SQL tracing (level 3 and 5) can cause significant performance degradation, so it should be used with caution. SQL tracing should only be enabled via Sybase Control Center long enough for the device application to capture relevant tracing. When finished, shut down and relaunch the application to run with tracing disabled.</p>
<p data-bbox="229 730 323 751">RTC-308</p>	<p data-bbox="420 730 1184 909">The <i>Developer Guide: Hybrid Apps</i>, in the topic <i>Customizing Generated Code</i>, in Step 3, the line <code>hwc.showAlertDialog("The connection type is " + navigator.network.connection.type + " and the platform and version is " + navigator.device.platform + " " + navigator.device.version);</code></p> <p data-bbox="420 933 521 954">should be:</p> <pre data-bbox="420 977 1180 1095"> hwc.showAlertDialog("The connection type is " + navigator.network.connection.type + " and the platform and version is " + device.platform + " " + device.version); </pre>
<p data-bbox="229 1124 323 1145">RTC-272</p>	<p data-bbox="420 1124 1163 1182">Information on troubleshooting slow queries was omitted from the <i>Troubleshooting Guide</i> .</p> <p data-bbox="420 1204 1177 1262">A query may be slow because attributes of the MBO used in the query's where clause or join conditions are not indexed.</p> <p data-bbox="420 1274 897 1295">See <i>Problems with a Slow Query</i> included below.</p>

Issue #	Description
RTC-269	<p>The Developer Guide: iOS Object API Applications incorrectly documents the Metadata API class names.</p> <p>The <i>Developer Guide: iOS Object API Applications</i> documents incorrect class names for the Metadata API. In code examples, the guide describes the <code>SUPDatabaseMetaData</code> and <code>SUPClassMetaData</code> classes. The correct classes are <code>SUPDatabaseMetaDataRBS</code> and <code>SUPClassMetaDataRBS</code>.</p> <p>See the generated API reference information provided with the Mobile SDK for more information on these classes.</p>
CR-710930	<p>Start-up of an application always gets HTTP callback errors.</p> <p>During initialization, the client may try several URLs in an attempt to discover the correct path to the Unwired Platform server. During these attempts, 404 errors <code>Page Not Found</code> may occur and are reported to the <code>OnHttpCommunicationError</code> callback. This is expected behavior and you can safely ignore these initial 404 errors.</p> <p>If the 404 errors continue to occur after successful registration of the application or if registration never completes, verify the <code>UrlSuffix</code> setting of the application's <code>ConnectionProperties</code> object.</p>
CR-710608	<p>onHttpCommunicationError returns an unexpected code.</p> <p>In an environment configured for SiteMinder authentication, the expectation is that <code>onHttpCommunicationError</code> is called back for error condition 302. This condition is not currently fulfilled by the Windows and Windows Mobile platforms; instead, they return 404 errors.</p>
CR-708259	<p>The developer guides do not document all the methods in the ConnectionPropertyType class.</p> <p>See the generated API reference information provided with the Mobile SDK for a complete list of methods in the <code>ConnectionPropertyType</code> class.</p>

Background Refresh

Sybase Unwired Platform RBS applications can take advantage of the Apple background refresh feature to synchronize to the Unwired Server in the background, and keep the client database up to date with any server-side data changes that might occur while the user is not using the application.

Apple iOS 7 introduced background refresh to enable an application to make background network requests to the server for updated data, so that when a user opens the application the next time, the most current data is available.

Message based synchronization (MBS) cannot run in the background, and does not support background synchronization.

Note: To use of this feature, the application must have the client database encryption key and the Unwired Server password available even when the application is in the background. On iOS, the device keychains (and therefore Sybase Unwired Platform data vaults) are not available to the application when it is in the background, so the application developer must provide some other way to make the encryption key and password available.

Performing Background Synchronization

Set up the iOS application to perform a background synchronization.

1. Enable this feature in the Xcode project for the application:

- a) Select the **Capabilities** tab on the project settings screen.
- b) Expand **Background Modes** and select the **Background Fetch** mode.

This adds the requisite entry to the info plist file for your application.

2. Set the minimum fetch interval in the application's

`application:didFinishLaunchingWithOptions:` delegate method.

Typically, this is set to `UIApplicationBackgroundFetchIntervalMinimum` to fetch as often as allowed.

```
(BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
{
    [[UIApplication sharedApplication]
 setMinimumBackgroundFetchInterval:UIApplicationBackgroundFetchInt
 ervalMinimum];
    .
    .
    .
}
```

The default value is `UIApplicationBackgroundFetchIntervalNever`, so if it is not set to a new value upon launch, the application never wakes up to perform background fetches.

3. Implement the method.

```
- (void)application:(UIApplication *)application
performFetchWithCompletionHandler:(void
 (^)(UIBackgroundFetchResult))completionHandler
{
    .
}
```

This is the method that gets called when the application restarts in the background by the system to perform a fetch.

In Sybase Unwired Platform, to synchronize in the background, this method must execute as follows:

- a) Set the application ID. This is the only `SUPApplication` API that should be called.
- b) Set up the connection profile with the correct encryption key to make the client DB accessible.

- c) Set up the synchronization profile with the correct parameters (server name, port, protocol, network stream parameters, and the Sybase Unwired Platform username and password).
- d) Synchronize.

Background Synchronization Example Code

```

- (void)application:(UIApplication *)application
performFetchWithCompletionHandler:(void (^)(
(UIBackgroundFetchResult)) completionHandler
{
    UIBackgroundFetchResult result = UIBackgroundFetchResultNoData;

    NSLog(@"background fetch called");
    SUPApplication* app = [SUPApplication getInstance];
    if (![SUPApplication.applicationIdentifier]
    {
        app.applicationIdentifier = @"supsample";
    }

    if(!self.firstRun)
    {
        SUPConnectionProfile *cp = [SUPSampleSUPSampleDB
getConnectionProfile];
        [cp
setEncryptionKey:@"e77d4007dd40d75037e3bdba005f38dc1002e41043e7ad7c
17cd34eb5eb8d7bf75e01df5001db8085179f05e040c307c"];
        [SUPSampleSUPSampleDB closeConnection];
        SUPConnectionProfile *sp = [SUPSampleSUPSampleDB
getSynchronizationProfile];
        [sp setAsyncReplay:NO];
        [sp setUser:self.userName];
        [sp setPassword:@"s3pAdmin"];
        [sp setServerName:self.serverName];
        [sp setPortNumber:[self.serverPort intValue]];
        [sp setNetworkProtocol:@"http"];
        [sp setNetworkStreamParams:@"url_suffix=/ias_relay_server/
client/rs_client.dll/douglowder.dddRBS"];
        [sp setDomainName:@"default"];

        @try
        {
            [SUPSampleSUPSampleDB synchronizeWithListener:
[CallbackHandler getInstance]];
            result = UIBackgroundFetchResultNewData;
            NSLog(@"Background fetch succeeded");
        }
        @catch (NSEException *exception)
        {
            result = UIBackgroundFetchResultFailed;
            NSLog(@"Background fetch failed: %@", [exception
description]);
            NSLog(@"%@", [exception callStackSymbols]);
        }
    }
}

```

```
completionHandler(result);  
}
```

Disabling Encryption for iOS Devices

Disable the encryption for SUPApplication messages between an iOS device on the messaging channel (MBS).

For iOS devices, you can fully disable the encryption for SUPApplication messages between the device and the Unwired server by setting the iOS NSUserDefaults BOOL `MCL_NO_ENCRYPTION` property to YES.

To disable encryption on iOS devices, add the following code to your application:

```
[[NSUserDefaults standardUserDefaults] setBool:YES  
forKey:@"MCL_NO_ENCRYPTION"];
```

Note:

- When you disable encryption between the iOS device and Unwired Server this way, if the **Encryption Enabled** property on the "Device Advanced" page in the Application Connection Template is set to TRUE, the device will not encrypt messages.
 - This method of disabling encryption for SUPApplication messages is only applicable for the messaging channel (MBS). The NSUserDefaults property has no effect on the data channel (RBS).
-

Problems with a Slow Query

Problem: A query (an object query, or a `findWithQuery` or `executeQuery`) is slow.

Explanation: Some attributes of the MBO used in the query's `where` clause or `join` conditions are not indexed.

Solution: Try to add necessary indexes for those attributes used in `where` clause or `join` conditions.

You can only add indexes when defining object queries. To add indexes by defining object queries, in *Sybase Unwired WorkSpace - Mobile Business Object Development* see *Creating Object Query Indexes*.

Known Issues for Unwired Platform Runtime 2.2 SP05

Learn about known issues and apply workarounds for Unwired Platform runtime components.

Key to issue types:

- **RTC** – SAP® Release to Customer tracking number.

Known Issues for Unwired Platform Runtime 2.2 SP05

- **CSN** – SAP Customer Services Network tracking number.
- **CR** – Sybase® Change Request number.
- **N/A** – No tracking number.

Issue #	Description
SMPONP-12173	<p>The domain version does not increase in an out of sync node after it starts, when a domain with packages has been deleted.</p> <ol style="list-style-type: none"> 1. Set up a Sybase Unwired Platform version 2.2 SP05 cluster. 2. Create a new domain and deploy some packages to this domain. 3. Stop the second cluster node. 4. Delete the newly created domain in the first cluster node. 5. Start the second cluster node and check the <code>Repository</code> folder. <p>The domain-version zip files are not updated in the second cluster node.</p> <p>Workaround: None. There is no functional impact.</p>
RTC-113	<p>Login fails when the value of the "tm_max_no" parameter in the SAP® EIS is less than the number of users concurrently logged in.</p> <p>The value of the <code>tm_max_no</code> parameter in the SAP EIS limits the maximum number of active logins. If the number of concurrent users logged in is larger than this value, Unwired Server shows a <code>R3_LOGIN_FAILED</code> error.</p> <p>Workaround: Increase the value of the <code>tm_max_no</code> parameter in the SAP EIS to a suitable value.</p>
CR-714679	<p>Sybase Control Center stops responding and shows Connecting with the SCC Managed Object Server message after login.</p> <p>Workaround: Instead of using the standard URL (<code>https:// < host-name > :8283/scc</code>), if you are accessing Sybase Control Center from the same host use <code>https://localhost:8283/scc</code> or <code>https:// < host name.domain > :8283/scc</code>. Another option is to try accessing from a remote machine.</p>

Known Issues with Installing, Uninstalling, and Upgrading

Learn about known runtime installation, uninstallation, and upgrade issues and workarounds.

Issue #	Description
<p>SMPONP-12605</p>	<p>The Unwired Platform Runtime uninstaller cannot detect a running dbisqlc.exe process</p> <p>If Sybase Unwired Platform processes are running while attempting to uninstall the product, the uninstaller cannot complete the uninstallation.</p> <p>Workaround: Manually stop any running Sybase Unwired Platform processes before uninstalling the product.</p>
<p>SMPONP-12520</p>	<p>Sybase Unwired Platform Messaging Server not successfully updated.</p> <p>The following error may occur when upgrading Sybase Unwired Platform to the latest version.</p> <pre>Sybase Messaging Server was NOT successfully updated. Value 0x0 not found in Install Success registry entry.</pre> <p>You can also find the following error in the system event log:</p> <pre>Database version check failed. Database version 'nnnnn' doesn't match expected version 'NNNNN'. This may be caused by an upgrade failure. Until this issue is fixed, the services will not start.</pre> <p>Workaround: In most cases, the failure occurs due to issues in CDB connectivity. Re-running the messaging server installer as follows will fix the issue in most cases.</p> <p>If performing a cluster installation, run these steps in the primary node or the first Application Service Node to which the upgrade was applied:</p> <ol style="list-style-type: none"> 1. Stop the Sybase Unwired Server services on all cluster nodes. 2. Start only the Sybase Unwired Server CacheDB service. 3. From a Windows command window, navigate to the location where the support pack install files are extracted. 4. Navigate to the MessagingServer subfolder. 5. Run "setup.exe finishdbupdates=true" and wait for the setup to finish. 6. Start the Sybase Unwired Server service using the desktop shortcut.

Issue #	Description
<p>SMPONP-12213</p>	<p>A "failure to create endpoint" error appears in the server log after upgrading from Sybase Unwired Platform version 2.2 to Sybase Unwired Platform version 2.2 SP05.</p> <p>The <code>jca_template.properties</code> file was not installed with Sybase Unwired Platform version 2.2.</p> <p>Workaround: Copy a <code>jca_template.properties</code> file to <code>SUP_HOME\Servers\UnwiredServer\Repository\Instance\com\sybase\djc\connector\ConnectionFactory</code>, restart the server, the error disappears.</p>
<p>SMPONP-12133</p>	<p>The <code>uninstall.log</code> contains an error regarding Messaging Server after uninstalling Sybase Unwired Platform version 2.2 SP05.</p> <p>The <code>uninstall.log</code> (silent or GUI uninstallation) contains an error regarding Messaging Server:</p> <pre data-bbox="422 673 1171 777">dbg, iMO: command: C:\Sybase\UnwiredPlatform\Servers \MessagingServer\UninstallMessaging.bat dbg, iMO: arguments: err, ERROR: return value: 1</pre> <p>Workaround: This error can be safely ignored.</p>
<p>SMPONP-12110</p>	<p>After upgrading to version 2.2 SP05, the Uninstallers folder is not removed during uninstallation of Unwired Platform Runtime.</p> <p>When you uninstall the Unwired Platform Runtime from a Windows Server 2003 machine, by silent uninstallation or uninstallation wizard, the <code>Uninstallers</code> folder is not removed.</p> <p>Workaround: Manually remove the remaining folder after uninstalling.</p>
<p>SMPONP-11789</p>	<p>if you have encrypted Sybase Unwired Platform database files and log files, you must decrypt them before upgrading your installation.</p> <p>Database files and log files that are used as part of the Sybase Unwired Platform data tier can be encrypted. The databases that use this database type are the CDB, cluster database, monitoring database, and the domain log database.</p> <p>Workaround: decrypt the database files, then upgrade. See <i>CREATE DECRYPTED DATABASE statement</i></p>

Known Issues for Unwired Platform Runtime 2.2 SP05

Issue #	Description
RTC-12361	<p data-bbox="420 215 1005 239">Potential file locked on Server may cause upgrade to fail.</p> <p data-bbox="420 256 1184 368">When upgrading, there is a potential problem with a Windows process holding a lock on one of the 12 Adaptive Server Anywhere (ASA) libraries (DLLs), even though all the ASA processes have shut down. This causes the upgrade to fail because the upgrade cannot overwrite the file.</p> <p data-bbox="420 388 561 413">Workaround:</p> <ol data-bbox="420 437 1184 652" style="list-style-type: none"><li data-bbox="420 437 951 461">1. Shut down all Sybase Unwired Platform processes.<li data-bbox="420 468 1157 524">2. If services were set to automatic, set the start-up for the Sybase Unwired Platform services to manual.<li data-bbox="420 531 642 555">3. Restart the system.<li data-bbox="420 562 911 586">4. Run the upgrade after the system has restarted.<li data-bbox="420 593 1184 649">5. If step 2 was performed prior to upgrade, set the start-up for the services back to automatic. <hr data-bbox="420 673 1184 680"/> <p data-bbox="420 680 1163 736">Note: This is an issue when upgrading from 2.2.X to 2.3.X using the GUI installer.</p>

Issue #	Description
<p>SMPONP-6464</p>	<p>Sync Data Not Found Exception</p> <p>After upgrading a cluster installation to 2.2 SP05, the following error message appears in the server log:</p> <pre> 2013-05-23 11:31:25.606 ERROR Cluster Scheduled- Task:SynchronizeNode [com.sybase.sup.server.cluster.ClusterUtils] [] [] Cluster Synchronization failed. Message : The sync data could not be found in SYNC_DATA table for domain: 2,version: 8 java.lang.RuntimeEx- ception: The sync data could not be found in SYNC_DATA table for domain: 2,version: 8 at com.sybase.sup.server.cluster.ClusterU- tills.downloadSyncData(ClusterUtils.java:1239) at com.sybase.sup.server.cluster.ClusterU- tills.syncNodeForDomain(ClusterUtils.java:223) at com.sybase.sup.server.cluster.ClusterU- tills.syncNode(ClusterUtils.java:693) at sun.reflect.NativeMethodAccessorImpl.invoke0(Na- tive Method) at sun.reflect.NativeMethodAccessorImpl.in- voke(NativeMethodAccessorImpl.java:39) at sun.reflect.DelegatingMethodAccessorImpl.in- voke(DelegatingMethodAccessorImpl.java:25) at java.lang.reflect.Method.invoke(Method.java: 597) at com.sybase.djc.scheduler.ScheduledTask.exe- cute(ScheduledTask.java:1155) at com.sybase.djc.scheduler.ScheduledTask_DJC.ac- cess\$001(ScheduledTask_DJC.java:4) at com.sybase.djc.scheduler.ScheduledTask_DJC \$1.invoke(ScheduledTask_DJC.java:29) at com.sybase.djc.transaction.TransactionManag- er.invokeNotSupported1(TransactionManager.java:682) at com.sybase.djc.transaction.TransactionManag- er.invokeNotSupported(TransactionManager.java:644) at com.sybase.djc.scheduler.ScheduledTask_DJC.ex- ecute(ScheduledTask_DJC.java:47) at com.sybase.djc.scheduler.Scheduled- Task.run(ScheduledTask.java:961) </pre> <p>Workaround: Ignore the error message. Cluster synchronization will complete successfully in next synchronization loop, generally, within 60 seconds.</p>

Known Issues for Unwired Platform Runtime 2.2 SP05

Issue #	Description
<p>SMPONP-4059</p>	<p>Error message after upgrade</p> <p>After upgrading a cluster installation to 2.2 SP05, the following error message appears in <code>SMP_HOME\SCC-3_2\sccRepoPwdChange\supA-TUpgrade.log</code> for each Application Node:</p> <pre> 2013-01-27 18:38:34,815 [INFO] [main] (SCCRepositoryPwdUpdater.java:29) - Begin database password update. 2013-01-27 18:39:48,245 [ERROR] [main] (SCCRepositoryPwdUpdater.java:45) - ASAEngine: The "scc_repository" dataserver Engine could not be started java.lang.Exception: ASAEngine: The "scc_repository" dataserver Engine could not be started at com.sybase.sup.sysadmin.asa.ASAEngine.startEngine(ASAEngine.java:145) at com.sybase.sup.sysadmin.sccconfig.SCCRepositoryASAInstance.startEngine(SCCRepositoryASAInstance.java:36) at com.sybase.sup.sysadmin.sccconfig.SCCRepositoryASAInstance.open(SCCRepositoryASAInstance.java:29) at com.sybase.sup.sysadmin.sccconfig.apps.repoPwdUpdate.SCCRepositoryPwdUpdater.update(SCCRepositoryPwdUpdater.java:32) at com.sybase.sup.sysadmin.sccconfig.apps.SCCRepositoryPwdUpdate.main(SCCRepositoryPwdUpdate.java:28) </pre> <p>Workaround: Ignore the error message. This error does not have any functional impact.</p>
<p>N/A</p>	<p>When running the 2.2 SP02 upgrade from the command prompt window, ensure the path to which you upgrade contains an uppercase drive letter. For example: C:\Sybase\UnwiredPlatform.</p>
<p>RTC-360</p>	<p>Backing up the Sybase Unwired Platform Runtime installation fails because the Sybase Control Center path is too long.</p> <p>The path to the Embedded Web Container in the <code>SCC-3_2</code> folder is too long for Windows to process.</p> <p>Workaround: Before backing up the Sybase Unwired Platform Runtime installation, you must delete the contents of <code>SUP_HOME\services\EmbeddedWebContainer\container\Jetty-7.6.2.v20120308\work</code>. You must delete the contents of this folder from the command prompt, and not from Windows Explorer.</p>

Issue #	Description
<p>RTC-359</p>	<p>Upgrade cannot proceed because GWC . war cannot be deployed.</p> <p>When running the 2.1.3, 2.2 SP01 PL00 or 2.2 SP01 PL01 upgrade from a command prompt window with a path that has a lowercase drive letter, the update may produce an error that indicates that it was unable to undeploy GWC . war. This only affects the listed updates with the specific circumstance where the drive letter is lowercase.</p> <p>Workaround: To recover, perform the following steps:</p> <ol style="list-style-type: none"> 1. Open a command prompt window with administrator privileges. 2. Change directories to the <code>SUP_HOME\Servers\UnwiredServer\bin</code>, where <code>SUP_HOME</code> is the install location for Sybase Unwired Platform, typically <code>C:\Sybase\UnwiredPlatform</code>. Make sure to specify the drive letter in uppercase. This is required. 3. Undeploy GWC with the following command: undeploy.bat webapp-gwc 4. If there are no errors, delete <code>SUP_HOME\Servers\UnwiredServer\deploy\webapps\gwc</code>, if it exists, with the following command: rmdir /S /Q SUP_HOME\Servers\UnwiredServer\deploy\webapps\gwc 5. Deploy the new GWC with the following command: deploy.bat SUP_HOME\Servers\UnwiredServer\temp\GWC.war 6. Undeploy notifications with the following command: undeploy.bat webapp-notifications 7. If there are no errors, delete <code>SUP_HOME\Servers\UnwiredServer\deploy\webapps\notifications</code>, if it exists, with the following command: rmdir /S /Q SUP_HOME\Servers\UnwiredServer\deploy\webapps\notifications 8. Deploy the new notifications WAR file with the following command: deploy.bat SUP_HOME\Servers\UnwiredServer\temp\notifications.war
<p>RTC-267</p>	<p>Upgrade process hangs when calling <code>start-unwired-services.bat</code></p> <p>The upgrade process hangs after upgrading the first server node if all nodes were not shut down before the upgrade.</p> <p>Workaround: Online upgrade is not supported. You must stop all the Sybase Unwired Platform services, including the data tier, before running the upgrade installer.</p>

Issue #	Description
<p>RTC-263</p>	<p>Test package deployment is skipped when upgrading Unwired Server from 2.1.x to 2.2.</p> <p>The Runtime installer requires the supAdmin user to exist in order for an upgrade installation to complete normally. If you removed the supAdmin user, the installer cannot perform the test package deployment that verifies that the upgraded Unwired Server is functioning properly. The installer displays this message:</p> <pre data-bbox="422 409 1174 510">The Unwired Platform admin login information provided were not valid. Upgrade was completed but test deploying a package to server for verification was skipped.</pre> <p>Workaround: Ignore the message. You can perform a manual package deployment if you wish to be sure that the upgraded server is function properly. See <i>Creating new users in SQL Anywhere Server - Database Administration</i>, available at http://infocenter.sybase.com/help/topic/com.sybase.help.sqlanywhere.12.0.0/dbadmin/umannew.html.</p>
<p>RTC-157</p>	<p>Error messages when adding a secondary node to a cluster.</p> <p>In a cluster installation that involves Sybase Unwired Platform 2.2, if you add a new secondary node to the cluster using the Sybase Unwired Platform 2.2 installer after any of the existing Sybase Unwired Platform application server nodes have been upgraded to a patch level (for example Sybase Unwired Platform 2.2 SP02), the installation may report the following failure:</p> <pre data-bbox="422 892 1174 1093">Sybase Messaging Server installation completed with errors. **Error!!! Error!!!** The Messaging installer completed with the following errors. These errors will have to be addressed before the services become functional. Please refer to documentation for recovery process. Database upgrade failed</pre> <p>Additionally, you can see the following message in the <code>\$SUP_HOME\Servers\MessagingServer\Bin\Scripts\DBUpgraderTrace_xxxxxxx.txt</code> file.</p> <pre data-bbox="422 1183 1174 1308">-- Upgrade started at 11/6/2012 4:28:31 PM Downgrading is not supported -- Caught unexpected exception: Downgrading is not supported Got global error [Downgrading is not supported]</pre> <p>This error occurs because the installer incorrectly tries to upgrade the database when it should not.</p> <p>Workaround: If you see this error when adding a new secondary node, you can ignore it, and proceed with applying the patch. By running the patch installation (for example Sybase Unwired Platform 2.2 SP02), you can complete the installation.</p>

Issue #	Description
<p>RTC-34</p>	<p>Warning messages when installing secondary Unwired Server node.</p> <p>When installing a secondary Unwired Server node before the primary server successfully installs, you see a warning similar to this in the server log:</p> <pre>2012-08-21 01:26:15.753 WARN MMS ScheduledTask:Syn- chronizeNode...</pre> <p>Workaround: Ignore this warning, or install the secondary Unwired Server node after the primary server installation completes.</p>
<p>CR-692901</p>	<p>Requirements for using SAP® JCO 3 on Windows XP.</p> <p>SAP JCO 3 in Unwired WorkSpace running on Windows XP 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: 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>CR-665409</p>	<p>The installation program cannot run in graphical mode.</p> <p>If the HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags registry key contains an entry that is the path of the installer binary (for example, C:\setup.exe), you see this error, and the installation fails:</p> <pre>The installer is unable to run in graphical mode. Try running the installer with the -console or -silent flag.</pre> <p>Workaround: Remove the installer binary path from the HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags registry key.</p>

Known Issues for Unwired Platform Runtime 2.2 SP05

Issue #	Description
<p>CR-590885</p>	<p>Uninstaller might not run on Windows Vista.</p> <p>Sometimes, the uninstaller does not launch on Windows Vista. This may be caused by the operating system changing the launch command for the Unwired Platform uninstaller, preventing it from using its own JVM to start itself.</p> <p>Workaround: Launch the uninstaller:</p> <pre><jdk_installdir>\java -Dtemp.dir=%TEMP% -jar C:\Sybase\UnwiredPlatform\Uninstallers\UnwiredPlatform\uninstall.jar</pre> <p>When you uninstall or cancel out of uninstalling Unwired Platform, the Program Compatibility Assistant shows:</p> <p>This program might not have uninstalled correctly.</p> <p>Select This program uninstalled correctly instead of Uninstall with recommended settings.</p>
<p>RTC-397</p>	<p>QueueNotReadyException appears in <i>server1</i> log</p> <p>A <code>QueueNotReadyException</code> appears in <i>server1</i> log when installing Sybase Unwired Platform with primary install <i>node1</i> and secondary <i>node2</i>, but starting <i>node2</i> before <i>node1</i>.</p> <p>Workaround: Ensure <code>node1.properties</code> appears in the <code>SUP_HOME/repository/Instance/com/sybase/djc/server/ApplicationServer</code> folder, then restart <i>node1</i>.</p>

Known Issues for Security

Learn about known issues and apply workarounds for Unwired Platform security.

Issue #	Description
SMPONP-13496	<p>HTTPS port has SSLv3/TLS renegotiation vulnerability</p> <p>The Sybase Control Center HTTPS port (default value is 8283) is susceptible to the SSLv3/TLS renegotiation vulnerability. The way in which SSL and TLS protocols handle renegotiation requests may allow an attacker to inject plaintext into an application protocol stream, resulting in a situation where the attacker may be able to issue commands to the server that appear to be coming from a legitimate source.</p> <p>For vulnerability details see:</p> <ul style="list-style-type: none"> • <i>Vulnerability Note VU#120541</i> • <i>Common Vulnerabilities and Exposures</i> <p>Workaround: Fixed in 2.3 SP04. Upgrade is recommended.</p>
SMPONP-2610	<p>SiteMinder external cookie scenario not supported for REST SDK Application on boarding with Sybase Unwired Platform using external SiteMinder SMSESSION cookie is not supported using REST SDK.</p> <p>Workaround: Application can use basic authentication with SiteMinder and onboard with SUP.</p>
RTC-60	<p>Unwired Server restart is needed after changing truststore or keystore.</p> <p>Workaround: If you change anything relating to keys or certificates in the truststore or keystore, you must always restart the server. Changes only take effect after a server restart.</p>
RTC-48	<p>A user with the "SUP Helpdesk" role can execute all DOE-C package operations using the command line utility, including modify operations such as deploying DOE-C packages or setting DOE-C endpoint properties.</p> <p>Help desk operators should not be able to perform modify operations.</p> <p>Workaround: Prevent direct or remote access to Unwired Server for users with the "SUP Helpdesk" role.</p>
CR-708833	<p>External authentication token is not properly handled by iOS Hybrid Web Container (HWC).</p> <p>Workaround: For an external token to be passed to and used by iOS Hybrid Web Container for performing single sign-on (SSO), make the call to <code>setHttpHeaders</code> before starting the client engine by placing <code>[self setHttpHeaders]</code> in the first line in the <code>startEngine</code> function. See <i>Setting HTTP Headers in Developer Guide: Mobile Workflow Packages</i>.</p>

Known Issues for Unwired Server

Learn about known issues and apply workarounds for Unwired Server.

Issue #	Description
SMPONP-13039	<p>Oracle support for JDK ended December 31, 2013</p> <p>The support agreement between Oracle and SAP is no longer in effect as of December 31, 2013.</p> <p>Workaround: See <i>SAP Note 1949332</i> for workaround and additional instructions.</p>
SMPONP-12328	<p>jetty-web.xml was removed from . . \DCN\WEB-INF folder</p> <p>Problem: DCN POST results in error message that the form is too large.</p> <p>Workaround: Set the maxFormContentSize property to 100 MB:</p> <ol style="list-style-type: none"> 1. In Sybase Control Center, select Configuration. 2. Set the value of Max form content size(byte) to 10000000. 3. Restart the server.
SMPONP-11952	<p>A removed server node displays in Sybase Control Center and clusterdb</p> <p>If you set up a cluster database in SUP 2.2, upgrade to 2.2 SP04 or later, and then uninstall any application node or scale out node, that node still appears in Sybase Control Center and the cluster_member table.</p> <p>Workaround: Stop all Sybase-related services before uninstalling the server node.</p>
SMPONP-5911	<p>SUP server log does not correctly sort all records by time and date</p> <p>When the log level of Proxy is set to debug to send HTTP channel requests through the proxy server, some of the records are not sorted correctly by the time and date stamps.</p>

Issue #	Description
<p>SMPONP-9965</p>	<p>Key store and Keypair passwords must match</p> <p>If the key store and keypair passwords do not match, you are unable to save the certificate alias, and receive the following error message:</p> <pre>Save failed. Cannot recover key.</pre> <p>Workaround: Configure the key store and keypair passwords as follows:</p> <ol style="list-style-type: none"> 1. While configuring the Unwired Server for mutual SSL, generate the keypair with the same password as the keystore password. For example, if the key-store.jks has password "changeit", the corresponding keypair generated must also have the password "changeit". 2. Save the keystore file. 3. Check for the correctness using the following from the command prompt: C:\>keytool -list -alias alias_name -keystore keystore.jks -storepass changeit 4. Restart the services. 5. Set the alias value in the Sybase Control Center SSL configuration tab. The save is successful. 6. Restart the server to apply the changes.
<p>SMPONP-7089</p>	<p>Auto purge function of monitor db is not properly functioning</p> <p>Workaround: From the SCC console, select Monitoring, and click Purge in the right panel. Enter the proper time range for the purge and click OK to execute the purge operation. The monitoring log is purged within the specified time range. Alternatively, use SUPCluster.deleteMonitoringData() to clean up monitoring data. See <i>Developer Guide for Unwired Server Runtime, Management API</i> for additional details.</p>
<p>SMPONP-6637</p>	<p>If domain or package is deleted in cluster during one server stopped, some PropertiesNotFoundException error messages can be found in server log when starting the server node. These messages are harmless, and will not affect any functionalities.</p> <p>Workaround: No action is needed.</p>
<p>RTC-364</p>	<p>Unwired Server reports error during startup from the command line</p> <p>When starting the server from the command line, the following error message displays:</p> <pre>Could Not Find SUP_HOME\Servers\UnwiredServer\bin ..\smp_server.lock</pre> <p>Workaround: None. This error has no impact.</p>

Issue #	Description
<p>RTC-329</p>	<p>Failed deployment when a name of a child MBO begins with lower case.</p> <p>For a composite operation, if the name of a child MBO in the composite relationship begins with lower case, deployment would fail.</p> <p>Workaround: Change the first character of the child MBO's name to upper case using Unwired WorkSpace.</p>
<p>RTC-238</p>	<p>Update deployment allows definition of a new MBO attribute default, but the new default value does not take effect.</p> <p>While the MBO developer can modify the MBO attribute default value for a deployed package, and redeploy the package to Unwired Server in Update mode without an error or warning, the new default value does not take effect.</p> <p>Workaround: Use Replace mode to update the MBO default setting.</p>
<p>RTC-268</p>	<p>Process of stopping Unwired Server service hangs.</p> <p>When stopping the Windows service for Unwired Server, very infrequently the process hangs. This problem is independent of the means used to stop the service.</p> <p>Workaround: See <i>Process of Stopping Unwired Server Service Hangs</i> on page 69.</p>
<p>RTC-42</p>	<p>Business transaction XML (BTX) uploads when end-to-end tracing is not enabled for an application connection.</p> <p>You can still upload BTX to the configured Solution Manager server, even if you have not enabled end-to-end tracing for an application connection.</p> <p>Workaround: None.</p>
<p>RTC-38</p>	<p>Server logs Chinese environments result in garbled characters under certain conditions.</p> <p>Due to an issue with SySAM licensing 64-bit operating systems running in a zh_CN locale result in characters appearing incorrectly.</p> <p>Workaround: None.</p>

Issue #	Description
N/A	<p>Error: 584 Message: Server public key verification failed when running the diagtool.exe tool.</p> <p>Workaround: Either:</p> <ul style="list-style-type: none"> • Run the diagtool.exe tool from another host, or, • Edit the registry on the machine where the diagtool.exe tool is being run: <ul style="list-style-type: none"> • Remove the HKCU\Software\Sybase\Messaging Client registry key. • Remove the HKCU\Software\Sybase\Messaging-ClientLib registry key. <hr/> <p>Note: Use caution when editing the registry. Ensure that the key entries removed do not contain any currently used Unwired Platform applications (sub entries).</p>
CR-709892	<p>Unwired Server records deployment errors in the domain log rather than in the Unwired Server logs.</p> <p>Workaround: None. Look for deployment errors in the domain log.</p>
CR-708431	<p>Data on the EIS, cache, and device is not in sync.</p> <p>If a Create operation succeeds at the enterprise information system (EIS), but its corresponding Entity Read operation fails, the EIS is updated but the cache database (CDB) is not. Error information may be reported in the Unwired Server log, but the error is not propagated to the device client. LogRecord shows 0 (zero), but findAll does not show the new record on the device.</p> <p>Workaround: None. The change appears in the CDB and the device when the CDB is refreshed (for example, when the cache interval expires).</p>
CR-703515	<p>LDAP role/authentication search base cannot support special characters.</p> <p>The following characters have special meaning when they appear in a name in LDAP: , (comma), = (equal sign), + (plus sign), < (less than), > (greater than), # (number sign), ; (semicolon), \ (backslash), and " (quotation mark).</p> <p>LDAP providers do not currently handle these special characters in any names or DNs, including username, DefaultSearchBase, AuthenticationSearchBase, RoleSearchBase, AuthenticationFilter, and RoleFilter.</p> <p>Workaround: None.</p>
CR-701975	<p>When deploying a package from Unwired WorkSpace or Sybase Control Center using Update mode, the package's "onDemand" coherence window is not updated on Unwired Server.</p> <p>Workaround: After deployment, adjust the "onDemand" coherence window from Sybase Control Center.</p>

Known Issues for Unwired Platform Runtime 2.2 SP05

Issue #	Description
CR-699590	<p data-bbox="427 213 1181 244">Large messages are processed incorrectly on 32-bit runtime installations.</p> <p data-bbox="427 256 1186 369">A 32-bit Unwired Server is not supported when you are developing messaging applications that process large messages. 32-bit servers run into memory issues and can potentially further result in incorrect data synchronizing with the Unwired Server cache.</p> <p data-bbox="427 387 1177 418">Workaround: Install Unwired Platform runtime components on 64-bit hosts.</p>

Issue #	Description
<p>CR-699343</p>	<p>For native Object API applications, the upgrade process silently deletes composite orphans from the server cache.</p> <p>Unwired Platform no longer allows composite orphans, that is MBO child entities within a composite relationship that have no parent entity. Depending on the system configuration, the upgrade may physically delete the orphans, or may only logically delete them, then physically delete them during a subsequent cache purge process. Either way, applications that use MBOs with composite orphans may not behave as expected after migration.</p> <p>Workaround: Before upgrading, eliminate composite orphans from native Object API applications:</p> <ul style="list-style-type: none"> • Look for existing MBOs that generate composite orphans. Examine each MBO in Unwired WorkSpace, looking for any instance in which the application loads child entities before the related parent entity. • For any MBOs you find that generate composite orphans, change the data model in the MBO so that the application always loads parent entities before the related child entities. See the "Composite relationship behavior" row in the <i>Relationship Guidelines and Restrictions</i> topic, in the <i>Sybase Unwired WorkSpace - Mobile Business Object Development</i> guide. • Test any changes you make to ensure that the application still behaves as expected. • After you are satisfied that you have eliminated composite orphans from your MBOs, proceed with the upgrade. <p>Additional Information on Composite Orphans</p> <p>An example of a scenario in which parentless child entities can occur is a two MBO parent-child model integrated with JDBC for sales orders and line items. If the data model specifies that line items are inserted first, the application attempts to load child line items for a sales order that does not yet exist. Those line items disappear from the cache before the application can load the parent sales order.</p> <p>To be sure that composite orphans do not cause problems in your migrated applications:</p> <ul style="list-style-type: none"> • After migration, if you have mobile application projects that contain composite relationships and the child MBO load operation has no parameter dependencies on its parent, redeploy the package from Unwired WorkSpace using Update mode to generate the correct loadGroups for the deployed package. • Child load operations that do not depend upon parameters from the parent do not always generate orphans. <p>Consider the case where the user wants to load all sales orders and line items created in the New York office. New York may be a load parameter for both parent and child that is bound to a personalization key and results in no orphans even though the child does not get any load parameters from the parent.</p>

Issue #	Description
<p>CR-695671</p>	<p>The mlsrv_err.log reports error: java.lang.OutOfMemoryError.</p> <p>When performing a listview object query with very large data sets, the client returns an error code 571 or 1053, and the server becomes temporarily unavailable, or tries to restart.</p> <p>Workaround: Modify the maximum Java heap size to handle very large amounts of data in an object query. See <i>Configuring Unwired Server Performance Properties</i> in <i>System Administration</i>.</p>
<p>CRs 693116 and 692218</p>	<p>Devices on 3G/4G network cannot connect to Unwired Server.</p> <p>A connectivity issue may occur between the device and Unwired Server. The current client libraries use a protocol that support only HTTP chunked transfer-encoding. 3G/4G traffic might, in some cases, be subject to content filtering and convert the messages from chunked transfer-encoding to fixed content-length if communication is via standard HTTP ports, which most commonly are 80 and 8080. Since the client application can support only chunked transfer-encoding, the communication cannot be established. In effect, a response cannot be returned to the server indicating that the device is online.</p> <hr/> <p>Note: For devices on WiFi networks, the connection between a device and Unwired Server establishes without error.</p> <hr/> <p>Workaround: Use a nonstandard HTTP port (any port other than 80 or 8080) or an HTTPS port, that is, 443 for Unwired Server client communication from devices to the Relay Server or external load balancer, whichever one is used, in the DMZ.</p>
<p>CR-692374</p>	<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 <i>Sybase Unwired Platform Developer Guides</i> to enable compression.</p>
<p>CR-691517</p>	<p>Adding new operations onto a mobile business object in a deployed package using the Update deployment method may render client applications based on the previous package model version nonfunctional.</p> <p>Workaround: None.</p>
<p>CR-686043</p>	<p>In a disabled domain, messaging clients continue to receive messages from server.</p> <p>Workaround: To disable any outbound activity to a client, lock the application connection associated with that client.</p>

Issue #	Description
CR-576726	<p>The full range of valid values is not supported if an attribute uses the default datatype (<code>int</code>) for a SQL Anywhere® database column of type <code>unsigned int</code>.</p> <p>Workaround: To support the full range of valid values for an <code>unsigned int</code> attribute in the EIS, set the datatype for the corresponding MBO attribute as <code>long</code>.</p>

Process of Stopping Unwired Server Service Hangs

Problem: When stopping the Windows service for Unwired Server, very infrequently the process hangs. This problem is independent of the means used to stop the service..

Explanation: When this happens, the process tree for the service for the Unwired Server service is no longer intact, so you cannot use the Task Manager End Process Tree option to complete the process of stopping the service.

Workaround:

1. Open Windows Task Manager on the system where you want to stop the Unwired Server service.
2. Activate the **Process** tab and click the **Image Name** column heading to sort the names in alpha order.
3. For each of the following processes that are present in the list, right-click the process and select **End Process**.
 - AdminWebservices.exe
 - AMPService.exe
 - Dbsrv12.exe
 - Dbsrv11.exe
 - Java.exe
 - JmsBridge.exe
 - LBManager.exe
 - mlsrv12.exe
 - MlsrvWrapper.exe
 - OBMO.exe
 - Rsoe.exe
 - Sccservice.exe
 - wmiprvse.exe
4. If the OBSERVICEManager.exe processes is present in the list, right-click the process and select **End Process Tree**. All child processes should also end. If not, end them individually.
5. Go to the Windows Services panel and verify that the Unwired Server service is stopped.

Known Issues for Sybase Control Center

Learn about known issues and apply workarounds for Sybase Control Center.

Issue #	Description
SMPONP-12865	<p>The HTTPS port of Sybase Control Center (default port is 8283) poses a SSLv3/TLS renegotiation vulnerability.</p> <p>The vulnerabilities are described here:</p> <ul style="list-style-type: none">• http://www.kb.cert.org/vuls/id/120541• http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2009-3555 <p>Workaround: N/A</p>

Issue #	Description
SMPONP-11459	<p data-bbox="420 215 1180 296">due to a Sybase Unwired Platform version 2.3 installer problem, Sybase Control Center does not work after upgrading from Sybase Unwired Platform version 2.2 SP04 or later (for example 2.2 SP05) to version 2.3.</p> <p data-bbox="420 317 1173 366">Workaround: Run the following SQL script after upgrading to fix the Sybase Control Center issue:</p> <ol data-bbox="420 392 1180 449" style="list-style-type: none"> <li data-bbox="420 392 1180 449">1. Save this SQL script to a file on the local file system, for example: C:\temp\fix_SCC.sql: <pre data-bbox="458 465 1180 1534"> begin UPDATE SEC_CONFIG SET SCFG_VALUE='true' WHERE SCFG_KEY='RESKEY_SECOPT_AUTO_CREATE_LOGIN'; UPDATE SEC_CONFIG SET SCFG_VALUE='true' WHERE SCFG_KEY='RESKEY_SECOPT_AUTO_GRANT_USER_ROLE'; commit; end; begin declare curs2 cursor for select rtv.rtv_id from "DBA"."RES_RE- SOURCE_TYPE_VER_M" rtv, "DBA"."RES_RE- SOURCE_TYPE_M" rt where rtv.rtv_rt_id=rt.rt_id and rtv.RTV_SHORT_VER_STR! ='Unknown' and (rt.rt_class='com.sybase.uep.ad- min.agent.plugin' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.ClusterMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.ServerMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.DomainMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.PackageMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.PersonalizationMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.SubscriptionMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.UserMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.SecurityMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.ConnectionMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.MessageMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.DeviceUserMO' or rt.rt_class='com.sybase.uep.sysadmin.manage-</pre>

Issue #	Description
	<pre> ment.mo.MonitorMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.MBOMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.OperationMO' or rt.rt_class='com.sybase.uep.sysadmin.manage- ment.mo.ApplicationMO'); declare current_rtv_id int; open curs2; updateVersionLoop: loop fetch next curs2 into current_rtv_id; IF SQLCODE <> 0 THEN LEAVE updateVersionLoop END IF; update "DBA"."RES_RESOURCE_TYPE_VER_M" set "RTV_VER_A"=2, "RTV_VER_B"=3, "RTV_VER_C"=0, "RTV_SHORT_VER_STR"=re- place(RTV_SHORT_VER_STR, (select RE- GEXP_SUBSTR(RTV_SHORT_VER_STR, '^\.d\.d'), '2.3.0'), "RTV_DESC"=replace(RTV_DESC, (select RE- GEXP_SUBSTR(RTV_DESC, '\.d\.d'), '2.3.0') where "RTV_ID"=current_rtv_id; end loop updateVersionLoop; close curs2; commit; end; </pre> <p>2. From the command line, run the SQL script:C:\SAP\MobilePlatform\Servers\SQLAnywhere16\BIN32\dbisql.exe -c "uid=dba;pwd=SAP2010_SCC" -host localhost -port 3638 C:\temp\fix_SCC.sql</p> <p>Note: The dbisql.exe location varies depending on your Sybase Unwired Platform installation. The default Sybase Control Center database password is "SAP2010_SCC".</p> <p>3. Restart Sybase Control Center.</p>
<p>RTC-221</p>	<p>Redeploying a package to Unwired Server after changing a Cache Group policy from "Scheduled" to "On Demand" may result in Sybase Control Center displaying an invalid cache interval.</p> <p>Workaround: Update the cache interval in Sybase Control Center.</p>

Issue #	Description
<p>RTC-225</p>	<p>Redundant properties displayed for application templates and connection settings</p> <p>Several push notification properties in the application connection settings are no longer applicable.</p> <ul style="list-style-type: none"> • Blackberry Push Notifications: <ul style="list-style-type: none"> • BES Notification Name • Delivery Threshold (Minutes) • Apple Push Notifications <ul style="list-style-type: none"> • Delivery Threshold (Minutes) <p>Workaround: Ignore these properties.</p>
<p>CR-707565</p>	<p>Domain log purging can take a significant amount of time if too much data accumulates.</p> <p>Workaround: Purge the domain log at regular intervals.</p>
<p>CR-705003</p>	<p>Sybase Control Center does not ask user to delete packages and connections before deleting the domain.</p> <p>Workaround: Before you delete a domain, verify package and connection deletion is not an issue.</p>
<p>CR-704917</p>	<p>If an administrator takes action from Sybase Control Center while the primary server is being shut down, you may see an internal or unexpected error if the server has not completely shut down.</p> <p>Workaround: Before taking any action in Sybase Control Center, ensure that the primary server shutdown is complete and another server has taken over as the new primary.</p>
<p>CR-704913</p>	<p>When an iOS device goes offline, it continues to show as being online for about 8 minutes in Sybase Control Center.</p> <p>Workaround: None.</p>
<p>CR-703367</p>	<p>Domain log messages in Data Sync and Operation Replay subsystems are not logged to the 'default' domain.</p> <p>Workaround:</p> <ul style="list-style-type: none"> • Create a domain log profile for the 'default' server connection (JDBC type) to enable logging of Data Sync and Operation Replay messages. • If you have a similar configuration, make changes as appropriate. Contact Technical Support for guidance.

Issue #	Description
CR-703321	<p>Exporting a domain log after upgrading generates a Domain log export failed error message.</p> <p>Workaround: Clear the cache for the browser you are using to access Sybase Control Center.</p>
CR-696373	<p>When retrieving a domain log for large data, you receive an unknown error in Sybase Control Center.</p> <p>Workaround: Check whether the Unwired Server or Sybase Control Center agent.log reports an out of memory error. If so, increase the JVM heap size appropriately for Unwired Server from the Sybase Control Center Configuration tab.</p> <p>If this does not resolve the issue, try decreasing the time range set in the domain log in Sybase Control Center.</p>
CR-695792	<p>Suspending a large volume (100 or more) of DOE-C package subscriptions may cause Unwired Server to stop responding.</p> <p>Workaround: Suspend subscriptions in batches of no more than 50.</p>
CR-691963	<p>MBO package deployment in Update mode after adding a new load argument without default value succeeds even though deployment should fail.</p> <p>Workaround: None. To avoid deploying client-incompatible changes, Sybase recommends that you first use Verify mode deployment; if verify succeeds, proceed to Update mode deployment.</p>
CR-690482	<p>Using Firefox, the Sybase Control Center main page shows Invalid Login and the agent.log shows Received fatal alert: bad_certificate error.</p> <p>Workaround: The Firefox browser appears to be using an incorrect server certificate. Clean up any such previously existing certificates:</p> <ol style="list-style-type: none"> 1. Select Tools > Options > Advanced > View Certificates. 2. Click the Servers tab, then identify existing certificates issued to the same host to which you are connecting. 3. Click Delete to remove all such certificates. Alternatively, use Internet Explorer.

Issue #	Description
CR-683775	<p>In some instances, when using the Windows Services tool or the Stop Sybase Control Center Service shortcut to stop the Sybase Control Center3.2 service, Sybase Control Center displays Stopping in the Windows Control Panel yet fails to stop.</p> <p>Workaround: To stop the Sybase Control Center service:</p> <ol style="list-style-type: none"> 1. Launch Windows Task Manager. 2. Locate the <code>sccservice.exe</code> process, right-click and select End Process Tree. This option also kills the Sybase Control Center database repository server process <code>dbsrv11.exe</code>.
n/a	<p>Domains and Packages tab</p> <p>Sybase Control Center for Online Data Proxy does not have a way to add a new domain to an application from the Application Properties dialog. Domains can only be associated in the Application Creation wizard.</p>
RTC-396	<p>Modification of JVM properties in SCC does not take effect if server is restarted using Windows Services</p> <p>Workaround: Restart server from SCC, use <code>restart-unwired-server.bat</code>, or click the stop/start Unwired Server services icons.</p>

Known Issues for Sybase SAP® Data Orchestration Engine Connector

Learn about known issues and apply workarounds for Sybase SAP® Data Orchestration Engine Connector (DOE-C).

Issue #	Description
SMPONP-11521	<p>Issue with security configuration assignment in silent mode in the DOE-C command line utility.</p> <p>In the DOE-C command line utility, when you try to assign a non-existing security configuration to a package in silent mode, the package's security configuration is set to empty.</p> <p>Workaround: Do not try to assign a non-existing security configuration to a package in silent mode.</p>

Issue #	Description
<p>SMPONP-6760</p>	<p>Error Retrieving DOE-C packages while resynchronizing appeared in the server log after upgrading from 2.2 to 2.2.4</p> <p>Workaround 1: Manually modify the Servers\UnwiredServer\Repository\Package\d{domainId}\sup\components\d{domainId}_{packageName}\{packageVersion}.properties file to input the techuser-password property value as plain text, and restart the server.</p> <p>Workaround 2: update the password in SCC, localhost@localhost (running) > Domains > {your domain} > Connections, select the connection in the connections list, click Properties, update the password and save.</p>
<p>RTC-207</p>	<p>For DOE-C package, If a device with an expired x.509 certificate initiates unsubscribe, the DOE subscription is not cleaned up.</p> <p>Workaround: The DOE administrator must clear all such disconnected DOE subscriptions manually.</p>
<p>RTC-39</p>	<p>Package Not found error occurs randomly when DOE-C package is deployed on a cluster.</p> <p>Workaround: Redeploy the package.</p>
<p>RTC-28</p>	<p>Long response time to show DOE-C subscription with packet dropped state.</p> <p>When a DOE-C subscription encounters a packet-dropped state, it takes more than 10 minutes to show the updated subscription information on the Subscription tab in Sybase Control Center.</p> <p>Workaround: None.</p>
<p>CR-709691</p>	<p>Unwired Server fails with OutOfMemory error during subscription SUSPEND/RESUME operations.</p> <p>Workaround: In Sybase Control Center, select Configuration > General > performance configuration and set the default value for Maximum number of in memory messages to 100.</p>
<p>CR-708754</p>	<p>When the load balancer is shut down due to an HTTP 404 error, DOE-C package subscriptions may be automatically removed.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. Implement SAP note number 1722501 to prevent DOE from automatically removing subscribed users. 2. Create a scheduled job to execute the report, SDOE_RESTART_OUTBOUND_QUEUES to restart the queues in regular intervals in the DOE system.

Known Issues for Unwired Platform Runtime 2.2 SP05

Issue #	Description
CR-705888	<p>Domain deletion may cause HTTP 500 error in DOE-C device queue.</p> <p>When DOE sends data to a subscription for a device for which the domain has already been deleted from Unwired Platform, Unwired Platform should send a recoverable HTTP 404 error, indicating that either the subscription or the domain is not found. Instead the DOE device queue shows an unrecoverable internal server error (HTTP 500) and the Unwired Server log file has a <code>java.lang.IllegalStateException: domain already cleared</code> error.</p> <p>Workaround: Remove the subscription in DOE.</p>
CR-703909	<p>When DOE-C sets domain log context properties, it leaves the "domain name" field blank in the server log entry.</p> <p>Workaround: The domain name is set correctly in the DomainLog table.</p>
CR-700957	<p>If the DOE server is down, the device receives a long HTML exception.</p> <p>Workaround: None.</p>

Known Issues for Relay Server

Read about updates, corrections, and clarifications to the documentation released with Sybase Unwired Platform Runtime.

Issue #	Description
<p>SMPONP-3934</p>	<p>Requests fail with error 400 bad request with session error reported by RSOE</p> <p>This error typically happens after Relay Server has been restarted. Relay server maintains client socket and back-end server socket affinity using a section named <code>ias-rs-sessionid</code>, which is provided by the client application. With this mechanism, a stateful request can be transferred to the original back-end server, even from a different relay server in the relay server farm. After restarting the relay server, the socket and session affinity that originated from this relay server are both cleared, and the back-end server socket connection is dropped. The Outbound Enabler responds with a 400 error when it receives a request that is still using the previous <code>ias-rs-sessionid</code> value. Moreover, for a stateless request that does not provide the <code>ias-rs-sessionid</code>, relay server transfers the request to any back-end server in the targeted farm according to the load balancing algorithm.</p> <p>Workaround:</p> <ol style="list-style-type: none"> 1. In the relay server configuration file, create a property named <code>renew_overlapped_cookie</code> in the <code>backend_farm</code> configuration section. 2. Set the <code>renew_overlapped_cookie</code> default value to <code>yes</code>. In the future, Outbound Enabler will create new connections instead of responding with a 400 error.
<p>RTC-46</p>	<p>When an HTTP client connects through Relay Server to Unwired Platform to get a proxy connection, the URL rewrite in the response is missing the Relay Server prefix information.</p> <p>Workaround: None.</p>

Documentation Issues and Updates for Unwired Platform Runtime

Read about updates, corrections, and clarifications to the documentation released with Sybase Unwired Platform Runtime.

Issue #	Description
SMPONP-12494	<p>Code change for starting domain, package, and operations management</p> <p>The correct code for starting the management of a domain, an Unwired Server package, and an Unwired Server operation is:</p> <pre>domainContext = clusterContext.getDomainContext("<domain name>");</pre> <p>(In the original documentation, change serverContext to clusterContext.)</p> <p>Applies to: <i>Developer Guide: SAP Mobile Server Runtime > Management API > Code Samples ></i></p> <ul style="list-style-type: none"> • <i>Managing Domains > Start Domain Management</i> • <i>Managing Packages > Start Package Management</i> • <i>Managing Operations > Start Operations Management</i>
N/A	<p>The Sybase Unwired Platform 2.2 SP05 documentation set contains only these updated collections:</p> <ul style="list-style-type: none"> • Release Bulletin • Supported Hardware and Software • Developer Guide: iOS Object API Applications • Tutorial: iOS Object API Application Development <p>See the Sybase Unwired Platform 2.2 SP04 documentation set for any other documentation requirements, which are all applicable to Sybase Unwired Platform 2.2 SP05.</p>
SMPONP-12747	<p>You must first start the Unwired Server that hosts the SQLAnywhere database when changing the DBA password.</p> <p>The <i>Changing DBA Passwords for SQLAnywhere Databases in a Single-Node Installation</i> topic in the Sybase Unwired Platform 2.2 SP04 <i>Security Guide</i> incorrectly describes how to change the DBA password. Before you can update the DBA password for the SQLAnywhere database, you must first start the Unwired Server that hosts the database.</p> <p>Workaround: Before updating any properties, start the Unwired Server (cacheDB service) that hosts the database.</p>

Issue #	Description
SMPONP-10014	<p>Consume REST services with HTTP or HTTPS connectivity</p> <p>In <i>REST SDK Components - General Description</i>, in the <i>Developer Guide: OData SDK</i>, it should state that Sybase Unwired Platform REST services can be consumed with pure HTTP/HTTPS connectivity, not only HTTPS.</p>
SMPONP-9917	<p>Update to steps for Using Multiple Hybrid Web Containers on the Same BlackBerry Device</p> <p>There are changes to steps in <i>Developer Guide: Hybrid Apps</i>. See <i>Using Multiple Hybrid Web Containers on the Same BlackBerry Device</i> on page 85.</p>
SMPONP-6800	<p>SAP Note 1250795 is not a valid solution for SSO</p> <p>Disregard the steps referring to SAP Note 1250795 in <i>Creating and Assigning a Security Configuration That Uses SSO2 Tokens</i> in the <i>Security</i> guide. It is a simple demo application that should not be used.</p>
SMPONP-3399	<p>More information on using MBS with LoadRunner C#</p> <p>See <i>Enabling MBS Performance Testing with LoadRunner</i> on page 86.</p> <p>Corrected text: That topic includes the <code>BeginOnlineLogin</code> method in <code>Action.cs</code>. An update to this content is that it is better to call <code>BeginOnlineLogin</code> in <code>vuser_init.cs</code>, rather than in <code>Action.cs</code>. A client application should not need to login more than once, even if the Action is to be repeated multiple times during a benchmark run.</p> <p>Applies to <i>System Administration</i>.</p>
SMPONP-9304	<p>REST API allows access to external non-OData services</p> <p>In <i>Developer Guide: REST API Applications > Developing the Application > Accessing a Service through a Proxy URL</i>, we clarified that you can access an OData service or an external non-OData service.</p>
SMPONP-7775	<p>When preparing to upgrade, shut down ADS</p> <p>In the <i>Installation Guide for Runtime</i>, step 7 in the <i>Preparing to Upgrade</i> topic states that all services with names that begin with "Sybase Unwired..." should be shut down. You should also shut down the Windows service Advantage Database Server.</p>
SMPONP-6154, SMPONP-6156, SMPONP-6157	<p>Revisions to REST Services Applications topic</p> <p>In the <i>Developer Guide: REST API Applications</i>, the <i>Rest Services Applications</i> topic has been corrected and revised. See <i>REST Services Applications</i> on page 91.</p>

Issue #	Description
SMPONP-6152	<p>Do not add certain libraries to pure REST-based applications</p> <p>In the <i>Developer Guide: REST API Applications</i>, the <i>Client Libraries</i> topic states that you should not include certain libraries. The reason is that Sybase Unwired Platform proxy libraries from the OData SDK and other native Sybase Unwired Platform libraries negatively affect pure REST-based applications.</p>
SMPONP-9022, CR 743257	<p>SUP does not download certificate for RBS</p> <p>In iOS, if you use SSL for data synchronization, you must embed the certificate in the application and reference it. To set up end-to-end encryption or HTTP for synchronization with the Mobilink server, see <i>Synchronization Profile</i> on page 93. This updated topic should be included in the <i>Developer Guide: iOS Object API Applications</i>.</p> <p>There is now a note in the <i>System Administration</i> guide about iPhone restrictions for Synchronization Server Stream Parameters. See <i>Connection Properties</i> on page 95.</p>
SMPONP-8085	<p>Parameter change to sample code for hybrid apps</p> <p>There are changes to the sample code in the <i>Creating a Gallery View</i> and <i>Creating Categorized Views</i> topics in the <i>Developer Guide: Hybrid Apps</i>. Change <code>HybridAppDb.getInvocableHybridApps()</code> to <code>HybridAppDb.getInvocableHybridApps(false)</code>.</p>
SMPONP-6923	<p>Changes to procedure for making multiple hybrid apps co-exist</p> <p>See <i>Using Multiple Hybrid Web Containers on the Same iOS Device</i> on page 96.</p>
SMPONP-5946	<p>Security x.509 does not work correctly</p> <p>The security module is configured with the technical user and password. When this is done in the SUP log instead of SUP server using the client user ID and certificate to authenticate, it uses the technical user.</p> <p>Workaround: Keep the login and password fields blank in the connection pool to the back-end SAP.</p>
SMPONP-5638	<p>New topic for troubleshooting APNS notification errors</p> <p>See <i>Troubleshoot APNS Notification Errors</i> on page 96 to learn how to troubleshoot errors that are logged in the Messaging Server APNSProvider module log.</p>
CR 698878	<p>Topic <i>Asynchronous Operation Replay</i> was omitted from the <i>Developer Guide: iOS Object API Applications</i></p> <p>We have included the topic in this release bulletin: see <i>Asynchronous Operation Replay</i>. The topic belongs in <i>Customizing the Application Using the Object API > Initially Starting an Application > Setting Up Callback Handlers</i>.</p>

Issue #	Description
SMPONP-7764	<p>Topic <i>Enabling Single and Mutual SSL Authentication</i> should be added to the <i>Developer Guide: OData SDK</i></p> <p>We have included the topic in this release bulletin: see <i>Enabling Single and Mutual SSL Authentication</i> on page 101. The topic belongs in <i>Developing Android Applications > Development Task Flow Using REST SDK (HTTP Channel)</i> after <i>Enabling Network Edge for HTTP</i>.</p>
SMPONP-7627	<p>Correction to <i>No Workflow Message is Sent in Troubleshooting</i></p> <p>The first four paragraphs in the <i>Troubleshooting</i> guide <i>No Workflow Message is Sent</i> for Hybrid App DCN failures should read:</p> <p>Following response is returned if the request is sent for a user that has no application connection registered yet.</p> <pre>no workflow message is sent because no device is found to send the notification</pre> <p>Explanation: Server could not find a matching application connection for the user identified in the Hybrid App DCN request. In this case, the response is similar to:</p> <pre>{"id":"dcntest_test_001","success":false,"statusMessage": "no workflow message is sent because no device is found to send the notification","result": [{"id":"dcntest_test_data_1","success":true,"statusMessage":""}]}</pre> <p>The other text in the topic is correct.</p>
SMPONP-7630	<p>BlackBerry devices do not use BES push to send the provisioning file</p> <p>In the <i>System Administration</i> topic <i>Deploying the Provisioning File</i>, step 1 states that BlackBerry devices use BES push but that is not the case for the provisioning file. BES push is used for other forms of notifications.</p>
SMPONP-7368	<p>Correction to <i>Sybase Control Center for Sybase Unwired Platform</i> topic <i>Proxy Properties</i>, and <i>Developer Guide: REST API Applications</i> topic <i>Creating a Proxy Connection (Whitelisting)</i></p> <p>The topic does not mention a requirement to configure anonymous access when creating multiple proxy connections.</p> <p>Whenever you create multiple proxy connections in the connection pool with the same proxy endpoint, set Allow Anonymous Access to True in all of those proxy connections. This configuration ensures that the endpoint is whitelisted only once in the connection pool.</p>

Issue #	Description
<p>SMPONP-6624</p>	<p>Correction to Sybase Control Center for Sybase Unwired Platform topic <i>Configuring Native Notification: APNS and GCM native push</i></p> <p>The topic describes three possible values for the push Notification Mode that determines the way in which the notifications are delivered to the device.</p> <ul style="list-style-type: none"> • Only native notifications • Only online/payload push • Online/payload push with native notification <p>When selecting the push notification mode, devices registered by the HTTP REST API support only the Only native notifications mode. REST API applications do not have access to the client libraries required to allow them to receive notifications in the other two modes. For this reason, neither the Only online/payload push mode nor the Online/payload push with native notification mode are supported for devices registered by the REST API.</p>
<p>N/A</p>	<p>Missing password information for PreconfiguredUserLoginModule</p> <p>References to the Password property for the <code>PreconfiguredUserLoginModule</code> do not mention that passwords must:</p> <ul style="list-style-type: none"> • Be a minimum of 8 characters and a maximum of 32 characters. • Contain only ASCII alphanumeric characters, plus underscores (<code>_</code>), hyphens (<code>-</code>), and periods.

Issue #	Description
N/A	<p>Incorrect Sample Code Example for Start Security Configuration Management API</p> <p>The code sample for the Start Security Configuration Management API in <i>Developer Guide: Unwired Server Runtime</i> contains an error: <code>serverContext.getSecurityContext</code> should be <code>clusterContext.getSecurityContext</code>.</p> <p>Incorrect::</p> <pre>//Start administration on one of the security configurations securityContext = serverContext.getSecurityContext("<security configuration name>"); SUPSecurityConfiguration supSecConf = SUPObjectFactory.getSUPSecurityConfiguration(securityContext);</pre> <p>Correct:</p> <pre>//Start administration on one of the security configurations securityContext = clusterContext.getSecurityContext("<security configuration name>"); SUPSecurityConfiguration supSecConf = SUPObjectFactory.getSUPSecurityConfiguration(securityContext);</pre>
NA10-904	<p>Incorrect Sample Code Line in <i>Custom.js File</i></p> <p><i>Custom.js File</i> in <i>Developer Guide: Hybrid Apps</i> was updated to fix an incorrect line of code in the sample. See below for the updated topic.</p>
N/A	<p>Incorrect Sample Code for Retrieve Application Connections API.</p> <p>The code sample for the Retrieve Application Connections API in <i>Developer Guide: Unwired Server Runtime</i> contains an unsupported filter. Only the following filters are supported for this API: APPLICATION_ID, APPLICATION_CONNECTION_ID, NUMERIC_ID, SECURITY_CONF and USER_ID.</p>
RTC-358	<p>The Configuring Deployment Properties topic in <i>Sybase Control Center for Sybase Unwired Platform</i> describes the REPLACE deployment mode. There is no REPLACE option in the MBO package deployment wizard.</p>

Issue #	Description
SMPONP-4797	<p>NetWeaver Connection Restrictions Trigger Error 500 Messages in OData SDK Applications</p> <p>Generally, the maximum concurrency on the Gateway system is limited by the number of available dialog processes (kernel parameter <code>rdisp/wp_no_dia</code>). Therefore, the Gateway system rejects connections when there are no resources available. Ensure that enough work processes exist in both the Gateway system and in any SAP EIS systems (for example, SAP ERP or CRM) to handle the peak load.</p> <p>You can throttle the number of connections used by setting a proxy connection pool size on each Unwired Server node. Generally, Sybase recommends that you limit this value to be less than 70% of backend concurrent working processes for the Gateway. For example, if the Gateway uses the maximum of 25, then set this value to 10 or 12.</p> <p>For details on how to create a Proxy connection in the client, see <i>Creating a Proxy Connection (Whitelisting)</i> in <i>Developer Guide: REST API Applications</i> and for configuring a Proxy connection the server, see <i>Configuring Unwired Server to Securely Communicate With an HTTP Proxy</i> and <i>Proxy Properties</i> in <i>Sybase Control Center Online Help</i>.</p>

Using Multiple Hybrid Web Containers on the Same BlackBerry Device

Configure the Hybrid Web Container so that two or more Hybrid Web Containers can coexist on the same BlackBerry device.

Use a different COD module name, and make other changes to your new Hybrid Web Container, such as for the icon .png image, to differentiate between the Hybrid Web Containers on the device.

1. Double-click on the file `BlackBerry_App_Descriptor.xml` to open it.
2. In the **Application** tab, change the title of the Hybrid Web Container.
3. In the **Build** tab, change the output file name to the name you used in step 2, but remove any spaces or dashes, since these are illegal characters for output files.
4. Open the `CustomizationHelper.java` file for editing.
5. Find the method named `getAppId()` and replace `Brand.OEM_HYBRIDAPP_APPID` with a unique name for your application.

The user must be registered in Sybase Control Center with a device ID that matches the value you use in this step. You may need to create the device ID in Sybase Control Center.

6. Open the `CustomizationHelper.java` file for editing.
7. Change the return value of `getApplicationIndicatorIconName` to the new indicator icon name, for example:

```
public class CustomizationHelper
{
    ....
}
```

```
public final String getApplicationIndicatorIconName()  
{ //return HWCMessagesScreen.INDICATOR_PNG; return "icon.png"; }  
}
```

Enabling MBS Performance Testing with LoadRunner

Use the sample test program to perform load testing of MBS in Sybase Unwired Platform with LoadRunner.

1. Create an empty .NET script in LoadRunner and edit it in Microsoft Visual Studio.
2. In LoadRunner 11, set the target platform to .NET Framework 3.5.
3. Include the MBS OAPI code that you generated. To generate MBS code from the command line:

```
codegen -output <outputDir> -mbs -cs -client -domain testdomain -  
sqlite <deployment_unit.xml>
```

4. Reference the following libraries:

- sup-client.dll
- System.Data.SQLite.dll
- System.Data (.NET)
- System

The following is the example code for vuser_init.cs. USER_IDENTIFIER = "Client-2" assigns a constant value to allow the program to run in Visual Studio. Although different VUs have their own directory and database file, because the connection profile is shared you must avoid calling `ConnectionProfile.save()`.

```
vuser_init.cs  
//-----  
//Script Title      :  
//Script Description :  
//  
//  
//Recorder Version  :  
//-----  
using System;  
using System.IO;  
  
using Sybase.UnwiredPlatform;  
using Sybase.UnwiredPlatform.Data;  
using Sybase.Mobile.Framework;  
using Sybase.Mobile;  
using Sybase.MessagingClientLib;  
using Sybase.Persistence;  
using Sybase.Reflection;  
using Sample;  
using LoadRunner;  
  
namespace Script  
{  
    public partial class VuserClass  
    {
```

```

// Connection Information for SAP Mobile Server
private const String USERNAME = "supAdmin";
private const String PASSWORD = "s3pAdmin";
private const String HOST =
"10.172.85.200"; //"PALN00527192A";
private const int PORT = 5011; // typically 5001

// Registration timeout in seconds
private const int TIMEOUT = 60;

// The Messaging Client Application
private Sybase.Mobile.Application app;

private String USER_IDENTIFIER;
private String USER_DATA_DIRECTORY;

public int vuser_init()
{
    // initialize this instance to identify separate users
    USER_IDENTIFIER = "Client" + lr.vuser_id.ToString();
    //USER_IDENTIFIER = "Client-2";
    USER_DATA_DIRECTORY = Directory.GetCurrentDirectory() + "\\\"
+ USER_IDENTIFIER;

    // initialize client library
    app = Sybase.Mobile.Application.GetInstance(USER_IDENTIFIER,
USER_DATA_DIRECTORY);
    app.ApplicationIdentifier = "Sample";

    ConnectionProfile cp = SampleDB.GetConnectionProfile();
    cp.SetProperty("databaseFile", USER_DATA_DIRECTORY + "\
\database.udb");
    //don't call cp.Save() otherwise multiple vu will contend on
the same .scp file
    //cp.Save();

    //Make sure databaseFile property on the connection profile
is setup before setApplication
    //because SetApplication will create the database
    SampleDB.SetApplication(app);
    SampleDB.GetSynchronizationProfile().ServerName = HOST;

    ConnectionProperties connProps = app.ConnectionProperties;
    LoginCredentials loginCredentials = new
LoginCredentials(USERNAME, PASSWORD);
    connProps.LoginCredentials = loginCredentials;
    connProps.ServerName = HOST;
    connProps.PortNumber = PORT;

    if (app.RegistrationStatus != RegistrationStatus.REGISTERED)
    {
        lr.start_transaction("Register Application");
        app.RegisterApplication(TIMEOUT);
        lr.end_transaction("Register Application", lr.AUTO);
    }
}

```

```

    }
    app.StartConnection (TIMEOUT);
    }
    return 0;
}
}
}
}

```

The following is the example code for `Action.cs`. The test code subscribes to the package you deployed to the server, waits for the server to push the data, and when all data are imported, continues the main thread and executes a `findAll` method. You can add more test code such as CRUD (create, update, and delete) operations. The `lr.think_time(1)` call inserts think time between actions and can be configured dynamically in the runtime settings.

```

//-----
//Script Title      :
//Script Description :
//
//
//Recorder Version  :
//-----

using Sybase.UnwiredPlatform;
using Sybase.UnwiredPlatform.Data;
using Sybase.Mobile.Framework;
using Sybase.Mobile;
using Sybase.MessagingClientLib;
using Sybase.Persistence;
using Sybase.Reflection;
using LoadRunner;
using System.Threading;
using Sample;

namespace Script
{
    public partial class VuserClass
    {
        private static int IMPORT_TIMEOUT = 300000;
        public int Action()
        {
            Sample.SampleDB.BeginOnlineLogin();
            bool success = true;
            if (!Sample.SampleDB.IsSubscribed())
            {
                subscribe();
                lock (this)
                {
                    lr.start_transaction("wait for import");
                    success = Monitor.Wait(this, IMPORT_TIMEOUT);
                    if (success)
                    {
                        lr.end_transaction("wait for import", lr.AUTO);
                    }
                }
            }
        }
    }
}

```

```

    }
    else
    {
        lr.end_transaction("wait for import", lr.FAIL);
    }
}

}

    if (success)
    {
        query();
        return 0;
    }
    else
    {
        return 1;
    }
}

//a transaction to register and begin sync
public int subscribe()
{
    //can be overridden by runtime setting in controller
    lr.think_time(1);
    lr.start_transaction("subscribe Application");
    SampleDB.RegisterCallbackHandler(new PerfCallback(this));

    Sample.SampleDB.Subscribe();

    lr.end_transaction("subscribe Application", lr.AUTO);
    return 0;
}

public int query()
{
    //can be overridden by runtime setting in controller
    lr.think_time(1);
    lr.start_transaction("FindAll");
    Sybase.Collections.GenericList<Customer> cusList =
Customer.FindAll();
    lr.end_transaction("FindAll", lr.AUTO);
    if (cusList.Size() > 0)
    {
        return 0;
    }
    else
    {
        return 1;
    }
}
}

public class PerfCallback:

```

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```
Sybase.Persistence.DefaultCallbackHandler, ICallbackHandler
{
    private object obj;

    //obj: lock object to be notified
    public PerfCallback(object obj)
    {
        this.obj = obj;
    }

    override public void OnImportSuccess()
    {
        lock (obj)
        {
            Monitor.Pulse(obj);
        }
    }
}
}
```

The following is the example code for `vuser_end.cs`:

Note: If you do not include a `TIMEOUT` parameter in `app.UnregisterApplication(TIMEOUT)`, the call is an asynchronous method and immediately returns. The next statement is `DeleteDatabase`; these two operations may interfere and result in an error at the server. It is possible that no further `app.RegisterApplication(TIMEOUT)` calls may succeed.

```
//-----
//Script Title      :
//Script Description :
//
//
//Recorder Version  :
//-----

using Sample;
using System;
using System.IO;

namespace Script
{
    public partial class VuserClass
    {
        public int vuser_end()
        {
            lr.start_transaction("Unsubscribe Application");
            SampleDB.Unsubscribe();
            lr.end_transaction("Unsubscribe Application", lr.AUTO);

            lr.start_transaction("Deregister Application");
            //unregister and disconnect. make it block, so that it won't
            interfere with DeleteDatabase
        }
    }
}
```

```

app.UnregisterApplication(TIMEOUT);
lr.end_transaction("Deregister Application", lr.AUTO);

//Cleanup
try
{
    if (SampleDB.DatabaseExists())
    {
        lr.start_transaction("DeleteDatabase");
        SampleDB.DeleteDatabase();
        lr.end_transaction("DeleteDatabase", lr.AUTO);
    }
}
catch
{
}
//When debugging you might want to comment out this line to
check MOCA log
Directory.Delete(USER_DATA_DIRECTORY, true);

return 0;
}
}

```

5. When running the test, observe or set the following runtime settings:
- `vuser` must be run as a process
 - `pacing` allows you to specify multiple iterations for the code in `Action.cs`
 - `think time` can be used to simulate a more realistic usage scenario

REST Services Applications

The Sybase® Unwired Platform REST Services API enables standard HTTP client applications running in any platform to access Sybase Unwired Platform REST services.

Unwired Server provides REST services so that applications can be built as any standard HTTP application to leverage Unwired Server for security and push features among others.

The client application should first register an application connection with device information, such as device type, push information and password capability and so on. After registering, the application can retrieve and update the application connection settings through REST API. You can enable or disable the push notification only after registering.

Note: The application connection can be deleted through REST API, when it is not in use. In this case, the data stored by application in the custom string of the application connection properties will be lost.

The application can download resources (such as meta-data files, multimedia files, and so on.) through resource bundles service, in order to initialize client application.

Then, the application can access OData compatible data sources through the proxy service, and receive native push notifications triggered by the gateway if push properties are configured and enabled. If supported, the application can also upload the business transactions

for tracing using BTX service. See *Uploading Business Transactions for Tracing in Developer Guide: REST API Applications* for more information on how to upload business transaction for tracing.

This development approach supports:

- Registration (creating an application connection)
- Authentication
- Native push notification
- Configuration

You build your client applications using third party developer tools, and without using any Sybase Mobile SDK or native client libraries. Sybase Unwired Platform provides management and monitoring of the applications, and support for native push notification such as Apple Push Notification Service (APNS), BlackBerry Enterprise Server (BES) push, or Google Cloud Messaging (GCM).

Note: BlackBerry Internet Service (BIS) push is not supported.

Optionally, you may use certain Sybase Unwired Platform native client libraries to enable complex application capabilities, such as OData parsing and building, caching, or data vault management. For more information, see *Developer Guide: OData SDK*. You may also use third-party JavaScript framework and helper libraries.

REST SDK Library

(Applicable to iOS and Android platforms) The REST SDK libraries enable consumption of Sybase Unwired Platform REST services with pure HTTPS connectivity. The REST SDK provides simplified APIs for registration, exchange settings between client and server, and end-to-end tracing. The SDK also supports native push notifications.

REST SDK components are implemented as static runtime libraries, and each component can be used independently.

The REST SDK supports the following functionalities:

- Client connection initialization
- User on-boarding or registration
- Anonymous onboarding
- Application connection setting exchange
- Customization resource bundle
- Security configurations - Basic authentication, SSO certificate authentication, anonymous access, network edge (Siteminder authentication - always asynchronous), non-network edge, single SSL, and mutual SSL authentication
- End-to-end tracing
- Native notification support

- (Cloud version) CAPTCHA support for both synchronous and asynchronous requests. However, SAP recommends that, in a production scenario, you use asynchronous CAPTCHA requests during on-boarding.
- Non-network edge authentication support.
- In network edge (Siteminder) scenario, you must configure a relay server. User needs to get authenticated against the server and then against the backend.

Note: For more information on each functionality, see *Developer Guide: OData SDK* and *Sybase Control Center for Sybase Unwired Platform*.

Synchronization Profile

The Synchronization Profile contains information for establishing a connection with the Unwired Server's data synchronization channel where the server package has been deployed. The

`com.sybase.persistence.ConnectionProfileSybase.Persistence.ConnectionProfileSUPConnectionProfile` class manages that information. By default, this information includes the server host, port, domain name, certificate and public key that are pushed by the message channel during the registration process.

Settings are automatically provisioned from the Unwired Server. The values of the settings are inherited from the application connection template used for the registration of the application connection (automatic or manual). You must make use of the connection and security settings that are automatically used by the Object API.

Typically, the application uses the settings as sent from the Unwired Server to connect to the Unwired Server for synchronization so that the administrator can set those at the application deployment time based on their deployment topology (for example, using Relay Server, using e2ee security, or a certificate used for the intermediary, such as a Relay Server Web server). See the *Applications* and *Application Connection Templates* topics in *System Administration*.

```
ConnectionProfile profile = SMP101DB.getSynchronizationProfile();
profile.setDomainName( "default" );
profile.setServerName( "smp.example.com" );
profile.setPortNumber( 2480 );
profile.setNetworkProtocol( "http" );
profile.getStreamParams().setTrusted_Certificates( "rsa_public_cert.crt" );
```

```
SynchronizationProfile sp = SMP101DB.getSynchronizationProfile();
sp.setDomainName( "default" );
sp.setServerName( "smp.example.com" );
sp.setPortNumber( 2480 );
sp.setNetworkProtocol( "http" );
sp.getStreamParams().setTrusted_Certificates( "rsa_public_cert.crt" );
```

You can allow clients to compress traffic as they communicate with the Unwired Server by including "compression=zlib" into the stream parameters:

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```
DatabaseClass.getSynchronizationProfile().getStreamParams().setZlibCompression(true);
```

Compression is disabled by default.

```
SUPConnectionProfile* sp = [SMP101SMP101DB
getSynchronizationProfile];
[sp setDomainName:@"default"];
```

```
ConnectionProfile profile = SMP101DB.GetSynchronizationProfile();
profile.DomainName = "default";
profile.ServerName = "host-name";
profile.PortNumber = 2481;
profile.NetworkProtocol = "https";
profile.StreamParams.Trusted_Certificates = "rsa_public_cert.crt";
```

You can allow clients to compress traffic as they communicate with the Unwired Server by including "compression=zlib" into the sync parameters:

```
SMP101DB.getSynchronizationProfile().getStreamParams().setZlibCompression(true);
```

```
NetworkStreamParams streamParams =
MyDatabase.GetSynchronizationProfile().StreamParams;
streamParams.Compression= "zlib";
streamParams.Zlib_Upload_Window_Size= 12;
streamParams.Zlib_Download_Window_Size= 12;
```

By default, compression is disabled.

You can allow clients to authenticate with a proxy server by including a username and password in the sync parameters. This feature supports Basic and Digest authentication as described in RFC 2617. With Basic authentication, passwords are included in HTTP headers in clear text; however, you can use HTTPS to encrypt the headers and protect the password. With Digest authentication, headers are not sent in clear text but are hashed.

```
SMP101DB.GetSynchronizationProfile().NetworkStreamParams +=
";http_userid=supAdmin;http_password=supPwd";
```

When a Blackberry application connects to the Unwired Server through the BlackBerry BES TLS Proxy server, you must include an additional parameter, ";EndToEndRequired", as part of the url_suffix in the network stream of the synchronization profile.

```
DatabaseClass.getSynchronizationProfile().setNetworkStreamParams("trusted_certificates=;url_suffix=\\;EndToEndRequired");
```

A Blackberry application can get or set the size, in bytes, of the output buffer used to store data before it is sent to the Unwired Server during synchronization. The default value is 4096 and valid values range between 512 and 32768. When calling the `setOutputBufferSize` method, a `ConnectionPropertyException` is thrown if the value of the size parameter is not in the range between 512 and 32768.

```
ConnectionProfile profile =
DatabaseClass.getSynchronizationProfile();
NetworkStreamParams params = profile.getStreamParams();
params.setOutputBufferSize(1024);
```

You can allow clients to compress traffic as they communicate with the Unwired Server by including "compression=zlib" into the stream parameters:

```
SMP101DB.getSynchronizationProfile().getStreamParams().setZlibCompression(true);
```

By default, compression is disabled.

Encryption and Trusted Certificates for Data Synchronization

When using end-to-end encryption for synchronization with Unwired Server, the public keys need to be encapsulated in a PEM encoded X.509 certificate and be supplied with an E2EE private key. For example:

```
SUPConnectionProfile *sp = [SUP101SUP101DB
getSynchronizationProfile];
[sp
setNetworkStreamParams:@"e2ee_public_key=publickeyCertificate;trusted_certificates=trustedCertificate"];
```

For details about encryption on iPhone, see *iPhone and Mac OS X considerations* in the Ultralite documentation.

Connection Properties

Connection properties define the connection information for a client application so it can locate the appropriate Unwired Server synchronization service.

Typically, production client applications connect to the synchronization server via Relay Server or some other third-party intermediary reverse proxy server. In those cases, the settings for the synchronization host, port, and protocol need to use Relay Server property values. For more information on how these properties are used in a synchronization environment, see *Replication in System Administration*.

- **Activation Code** – (not applicable to replication clients) the original code sent to the user in the activation e-mail. Can contain only letters A – Z (uppercase or lowercase), numbers 0 – 9, or a combination of both. Acceptable range: 1 to 10 characters.
- **Farm ID** – a string associated with the Relay Server farm ID. Can contain only letters A – Z (uppercase or lowercase), numbers 0 – 9, or a combination of both. Default: 0.
- **Server Name** – the DNS name or IP address of the Unwired Server, such as "myserver.mycompany.com". If using Relay Server, the server name is the IP address or fully qualified name of the Relay Server host.
- **Server Port** – the port used for messaging connections between the device and Unwired Server. If using Relay Server, this is the Relay Server port. Default: 5001.
- **Synchronization Server Host** – the server host name used for synchronization.
- **Synchronization Server Port** – the port used for synchronization.
- **Synchronization Server Protocol** – the synchronization protocol - HTTP or HTTPS.
- **Synchronization Server Stream Parameters** – the synchronization server stream parameters that are used to explicitly set client-specific values. After the client application successfully registers with the Unwired Server, it receives the trusted certificate

configured in the Server configuration (either the Secure Sync Port Public Certificate or Trusted Relay Server Certificate). If you are using Relay Server, ensure the Trusted Relay Server Certificate property is configured to point to a file that has the server's public certificate.

You can configure these parameters as one or more *name=value* entries.

- **trusted_certificates** – the file containing trusted root certificate file.
- **certificate_name** – the name of the certificate, which is used to verify certificate.
- **certificate_unit** – the unit, which is used to verify certificate.
- **certificate_company** – the name of the company issuing the certificate, which is used to verify certificate.

For more information about certificates, see *Security*.

- **Synchronization Server URL Suffix** – the server URL suffix. For Relay Server, suffixes vary depending on the Web Server used. For example, */cli/iarelayserver/FarmName* for Apache, or *ias_relay_server/client/rs_client.dll/FarmName* for IIS.
- **Use HTTPS** – forces clients to use HTTPS protocol for the connection.

Troubleshoot APNS Notification Errors

Resolve runtime errors reported in the APNS Notification log file located in *SUP_HOME\Servers\UnwiredServer\logs\APNSProvider*, by taking the recommended action.

- **20130502T131941.847|1| - Feedback Error: A call to SSPI failed, see inner exception. 20130502T131947.647|1|Error. FeedBack ensureconnected exception. A call to SSPI failed, see inner exception** – recommendation: from Sybase Control Center, confirm that the certificate used in Apple push configuration has not expired.
- **20130516T175645.847|1|Device Token length is not 64** – recommendation: an empty token in the application connection due to a timing related error that should correct itself once the token arrives from the device. It occurs when a notification is sent to the device in the time-frame between the application connection getting activated when the token is empty and APNS token getting sent to the server from device.
- **Error: Unable to write data to the transport connection: An existing connection was forcibly closed by the remote host** – recommendation: this error is seen when the token length is empty or an expired certificate is used. This error may also be logged in cases of occasional issues with the Apple push service itself.

Using Multiple Hybrid Web Containers on the Same iOS Device

You can configure two or more Hybrid Web Containers to coexist on the same device.

This customization allows two or more independent users to use the same device, but with their own private version of the application. In summary, you need to change the application ID, the bundle identifier, and possibly the URL scheme.

The application ID is used by the server to identify the application, and because of this, you cannot run two applications on the same device with the same application ID. By default, the Hybrid Web Container uses “HWC” for its application ID. Changing the application ID involves a minor change to `CustomizationHelper.m`. Additionally, you must signify to iOS that this is a distinct application. This requires a minor change to update the application bundle ID in the `plist` file. Finally, if your application needs to communicate with the Afaria client for provisioning your application or retrieving a certificate, you need to specify a unique URL scheme in the `plist` file. If your application does not need to communicate with the afaria client, then you should delete the “URL types” item from the same `plist` file.

1. Change the project name:
 - a) In the Xcode Project Navigator, click on the root Hybrid Web Container element.
 - b) With the Hybrid Web Container element highlighted click on the Hybrid Web Container text to rename.
 - c) Change the name of the Hybrid Web Container element to your new project name.
 - d) A window to rename project content items appears. Click **Rename**.
2. Change the application ID:
 - a) In Xcode Project Navigator, find and open the `CustomizationHelper.m` file, which is located in the `Classes` group folder,
 - b) Locate the customization point that accompanies the `getAppId` function, and change it so that it returns a unique name.
 - c) Save and close the file.
3. To differentiate this version of the Hybrid Web Container from another:
 - a) In Xcode Project Navigator, find and open the `HWC-Info.plist` file, which is located in the `Resources` group folder.
 - b) Change the bundle identifier value to something unique.
 - c) Save and close the file.

The container template project has a URL schema setting in the project `plist` file, which is used to communicate with Afaria client.
4. To avoid multiple container applications from interfering with each other when communicating with the Afaria client, the URL schema must be unique among all container applications that are installed on the device, otherwise, the application may be launched by the afaria client by mistake, or fail to launch altogether.
 - a) In Xcode Project Navigator, find and open the `HWC-Info.plist` file, which is located in the `Resources` group folder.
 - b) Expand the **URL types item > Item 0 > URL Schemes item**.
 - c) Select **Item 0**, and change its value to a unique value among all other applications.
 - d) Save and close the file.

Asynchronous Operation Replay

Upload operation replay records asynchronously.

Note: This topic is not applicable for DOE-based applications.

When an application calls `submitPendingSubmitPending` on an MBO on which a create, update, or delete operation is performed, an operation replay record is created on the device local database.

When `synchronizeSynchronize` is called, the operation replay records are uploaded to the server. The method returns without waiting for the backend to replay those records. The `synchronizeSynchronize` method downloads all the latest data changes and the results of the previously uploaded operation replay records that the backend has finished replaying in the background. If you choose to disable asynchronous operation replay, each `synchronizeSynchronize` call will wait for the backend to finish replaying all the current uploaded operation replay records.

For DOE-based applications, the operation replay record is sent to Unwired Server through the message channel when **submitPending** is called. When operation replay is done on server, one of the callback methods **onReplaySuccess** and **onReplayFailure** will be invoked depends on the result of the replay.

When Sybase Unwired Platform does an `update` operation replay, if the primary key or foreign key of the MBO is generated by the EIS and the MBO's content coming from the device has no primary key or foreign key, the Unwired Server loads the primary key or foreign key from the CDB to merge the incoming values with the CDB content so that a full row (graph) can be communicated to the EIS.

```
oneMBO mbo = new oneMBO();
mbo.setXX(xx);
....
mbo.create();
mbo.submitPending();
mbo.setXX(yy);
....
mbo.update();
mbo.submitPending();
DBClass.synchronize()
```

```
oneMBO mbo = new oneMBO();
mbo.SetXX(xx);
....
mbo.Create();
mbo.SubmitPending();
mbo.SetXX(yy);
....
mbo.Update();
mbo.SubmitPending();
DBClass.Synchronize()
```

This feature is enabled by default. You can enable or disable the feature by setting the `asyncReplay` property in the synchronization profile. The following code shows how to disable asynchronous replay:

```
SMP101DB.getSynchronizationProfile().setAsyncReplay(false);
[[SMP101SMP101DB getSynchronizationProfile] setAsyncReplay:NO];
SMP101DB.GetSynchronizationProfile().AsyncReplay = false;
```

When the application is connected

(by `Application.startConnection()` `Application.StartConnection()` or `Application.registerApplicationApplication.RegisterApplication()`), it may receive background notifications and trigger a synchronize or other database operation. If you try to delete the database, you may receive database exceptions.

Before deleting the database, stop the application connection

(`Application.stopConnection()` `Application.StopConnection()`).

You can specify an upload-only synchronization where the client sends its changes to the server, but does not download other changes from the server. This type of synchronization conserves device resources when receiving changes from the server.

```
public static void
beginSynchronize(com.sybase.collections.GenericList<com.sybase.pers
istence.SynchronizationGroup> sgs, Object context, boolean
uploadOnly)

public static void
beginSynchronize(com.sybase.collections.ObjectList sgs, Object
context, boolean uploadOnly)

+ (void)beginSynchronize:(SUObjectList*) synchronizationGroups
withContext:(NSString*) context withUploadOnly:(BOOL) uploadOnly

public static void
BeginSynchronize(Sybase.Collections.GenericList<Sybase.Persistence.
ISynchronizationGroup> sgs, object context, bool uploadOnly)
```

When asynchronous replay is enabled and the replay is finished, the `onSynchronizeOnSynchronize` callback method is invoked with a `SynchronizationStatus` value of `SynchronizationStatus.ASYNC_REPLAY_COMPLETED`. Use this callback method to invoke a synchronize call to pull in the results, as shown in the following callback handler.

```
public class MyCallbackHandler extends DefaultCallbackHandler
{
    public int onSynchronize(GenericList<SynchronizationGroup> groups,
SynchronizationContext context)
    {
        switch(context.getStatus())
        {
            case SynchronizationStatus.ASYNC_REPLAY_UPLOADED:
                LogMessage("AsyncReplay uploaded");
                break;
        }
    }
}
```

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```
        case SynchronizationStatus.ASYNC_REPLAY_COMPLETED:
            // operation replay finished, return
            SynchronizationAction.CONTINUE
            // will start a background synchronization to pull in the
            results.
            LogMessage("AsyncReplay Done");
            break;
        default:
            break;
    }

    return SynchronizationAction.CONTINUE;
}
}
```

```
public class MyCallbackHandler extends DefaultCallbackHandler
{
    public int onSynchronize(ObjectList groups, SynchronizationContext
context)
    {
        switch(context.getStatus())
        {
            case SynchronizationStatus.ASYNC_REPLAY_UPLOADED:
                LogMessage("AsyncReplay uploaded");
                break;
            case SynchronizationStatus.ASYNC_REPLAY_COMPLETED:
                // operation replay finished, return
                SynchronizationAction.CONTINUE
                // will start a background synchronization to pull in the
                results.
                LogMessage("AsyncReplay Done");
                break;
            default:
                break;
        }

        return SynchronizationAction.CONTINUE;
    }
}
```

```
public class MyCallbackHandler extends DefaultCallbackHandler
{
    public int onSynchronize(ObjectList groups, SynchronizationContext
context)
    {
        switch(context.getStatus())
        {
            case SynchronizationStatus.ASYNC_REPLAY_UPLOADED:
                LogMessage("AsyncReplay uploaded");
                break;
            case SynchronizationStatus.ASYNC_REPLAY_COMPLETED:
                [SUP101SUP101DB synchronize:@"default"];
                LogMessage("AsyncReplay Done");
                break;
            default:
                break;
        }
    }
}
```



```

    }

    return SynchronizationAction.CONTINUE;
}
}

public virtual SynchronizationAction OnSynchronize(
    Sybase.Collections.GenericList<ISynchronizationGroup> groups,
    SynchronizationContext context)
{
    switch(context.Status)
    {
        case SynchronizationStatus.ASYNC_REPLAY_UPLOADED:
            LogMessage("AsyncReplay uploaded");
            break;
        case SynchronizationStatus.ASYNC_REPLAY_COMPLETED:
            // operation replay finished
            if (busy)
            {
                // if busy, don't do synchronize now
                return SynchronizationAction.CANCEL;
            }
            break;
        default:
            break;
    }

    return SynchronizationAction.CONTINUE;
}
}

```

Enabling Single and Mutual SSL Authentication

Secure sockets layer (SSL) is a protocol that governs certificate authentication. It exchanges the certificate information. SSL also encrypts all information that flows between a client and a server.

In single SSL connection, the client needs to trust the server certificate. This can be done one of the three ways:

- The CA certificate can be installed on the device trust store which the application takes while connecting to the HTTPS URL.
- The CA certificate can be bundled in the application and the `setServerCertificate` method can be invoked to provide the certificate. This is not a recommended way, but can be used in case of backward compatibility.

Note: Applicable to android device older than 4.0 version.

- If the application does not provide the certificate, application can implement the `ISSSLChallengeListener`. The application receives a callback to the `isServerTrusted` method. Where the application receives the server certificate it can choose to trust the certificate or not. Based on that it returns the boolean value as true or false.

In mutual SSL connection, the server needs to trust the client certificate. In this case the application implements `IMutualSSLChallengeListener`. And

`getClientCertificate` callback method is invoked to request the client certificate. The client returns an X.509 certificate, and a private key, which together will be formed into an `HttpClientCertInfo` object.

Note:

- For mutual SSL, both single and mutual listeners need to be implemented.
 - During onboarding with single and mutual SSL, add fully qualified domain name of the Unwired Server. For example, `vmw5541.wdf.sap.corp` or `vw<xxx>.dhcp.wdf.sap.corp`.
-

Examples

- **Example code to implement Single SSL and Mutual SSL authentication** – Implement listeners for SSL callbacks.

```
public class LaunchActivity extends Activity implements
    ISSIChallengeListener, IMutualSSLChallengeListener {

    SDMRequestManager srm;
    ISDMLogger logger;
    SDMConnectivityParameters params;
    ISDMPreferences prefer;
    String url=<Backend URL>;

    public void mreg(View v){
        ClientConnection clientConnection;
        UserManager userManager;
        logger=new SDMLogger();
        prefer=new SDMPreferences(this, logger);
        params=new SDMConnectivityParameters();
        params.setLanguage("en");
        params.setUserName(<User name>);
        params.setUserPassword(<Password>);

        Context c = getApplicationContext();
        try{ InputStream certStream =
        c.getResources().openRawResource(<certificate>);
        CertificateFactory cf = CertificateFactory.getInstance("X509");
        Certificate cer= cf.generateCertificate(certStream);

            param.setServerCertificate(cer); //to place certificate
in the devices less than 4.0

            Log.i("tag", "In Set Server certificate API");

        }catch(Exception e){
            Log.i("tag", "set certificate from file failed" +
e.getMessage());
            e.printStackTrace();
        }
    }
}
```

```

        srm=new SDMRequestManager(logger,prefer,params,1);

        /**
         * The set methods which should be called to register the
         listeners to the request manager
         *
         */
        srm.setSSLChallengeListener(this);
        srm.setMutualSSLChallengeListener(this);

        ClientConnection.initInstance(getApplicationContext(),
"<application>", "<domain>", "<security configuration>", <request
manager>);
        try {
            j=ClientConnection.getInstance();
            j.setConnectionProfile("<connection url>");
            UserManager.registerUser(true);

        } catch (SMPEException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }

    }

```

Send X.509 certificate and private key to the client as an `HttpClientCertInfo` object.

```

public HttpClientCertInfo getClientCertificate()
{
    InputStream inStream;
    int cert="<p12 certificate location>";
    Context context=this.getApplicationContext();
    try {

        inStream =
context.getResources().openRawResource(cert);

        /*following code loads the key store, and retrieves
        The alias under which it is loaded. */

        KeyStore ks = KeyStore.getInstance("PKCS12");
        ks.load(inStream, "mobile".toCharArray());
        Enumeration aliases=ks.aliases();
        String keyname=(String)aliases.nextElement();

        /* using the alias stored in the variable "keyname"
        We get the Private Key and the X509 Certificate
        Which we use to return HttpClientCertInfo object.*/

```

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```
        PrivateKey
        pk=(PrivateKey)ks.getKey(keyname,"mobile".toCharArray());
            X509Certificate xcer=(X509Certificate)
            (ks.getCertificate(keyname));

            return new HttpClientCertInfo(xcer,pk);}

        catch(Exception e){
            return null;
        }

    }

    /*
     * This is the callback which is invoked if
     * 1) SSL is enabled,
     * 2) The correct certificate is not installed on the device,in
     which case it is required of the application to verify the server
     certificate.
     */

    @Override
    public boolean isServerTrusted(X509Certificate[]
    paramArrayOfX509Certificate) {
        // TODO Auto-generated method stub

        return true;
    }

}
```

Custom.js File

The first time you generate the Hybrid App package files, the `Custom.js` file is generated.

In subsequent file generations for the same Hybrid App package, this file will not be overwritten, so any customizations you make are preserved.

These touch points are available for customization: `WorkflowLoad`, `Submit`, `NavigateForward`, `NavigateBackward`, `ShowScreen`, `MenuItemClick`, and `Save`. At each touch point, a **customBefore** method is invoked and a **customAfter** method is invoked. The `customBefore` method returns a boolean. If it returns true, it continues to execute the default behavior, for example, navigating to a new screen or performing an online request. If it returns false, it does not execute the default behavior, so you can override the default behavior by customizing these methods.

The `Custom.js` file contains these methods:

Note: You can delegate the implementation of these functions to different functions supplied in other custom JavaScript files. It is not necessary to include all of your customization logic in the single `Custom.js` file.

```
//Use this method to add custom html to the top or bottom of a form
function customBeforeWorkflowLoad() {

    var form = document.forms[curScreenKey + "Form"];
    if (form) {
        // header
        var topOfFormElem = document.getElementById("topOf" +
curScreenKey + "Form");

        if (topOfFormElem) {
            topOfFormElem.innerHTML = "<img id='ImgSylogo' src='./
images/syLogo.gif' /><br/>";

            // footer
            var bottomOfFormElem = document.getElementById("bottomOf"
+ curScreenKey + "Form");
            bottomOfFormElem.innerHTML = "<p>Copyright 2010, Sybase
Inc.</p>";
        }
    }
    return true;
}
```

When using the **customBeforeNavigateForward(screenKey, destScreenKey) {}** function, if you want to create your own JQuery Mobile style listview, remember that JQueryMobile does not allow duplicate ID attributes. So if there is an existing listview with the same ID attribute, you must:

1. Delete the existing listview with the same ID attribute.
2. Re-create the listview.
3. Call **refresh** for your listview.

For example:

```
//Use this method to add custom code to a forward screen transition.
If you return false, the screen
//transition will not occur.
function customBeforeNavigateForward(screenKey, destScreenKey) {

..
try {
    if (destScreenKey == 'Personal_Work_Queue') {

        //grab the results from our object query
        var message = getCurrentMessageValueCollection();
        var itemList = message.getData("PersonalWorkQueue");
        var items = itemList.getValue();
        var numOfItems = items.length;
        var i = 0;

        //iterate through the results and build our list
        var htmlOutput = '<div id="CAMSCustomViewList"><ul data-
role="listview" data-filter="true">';
        var firstOrder = '';
```

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```
        while ( i < numOfItems ){
            var currItem= items[i];
            var opFlags =
currItem.getData("PersonalWorkQueue_operationFlags_attribKey").getV
alue();
            var orderId =
currItem.getData("PersonalWorkQueue_orderId_attribKey").getValue();
            var operationNumber =
currItem.getData("PersonalWorkQueue_operationNumber_attribKey").get
Value();
            var description =
currItem.getData("PersonalWorkQueue_description_attribKey").getValu
e();
            try {
                var promDate =
currItem.getData("PersonalWorkQueue_datePromised_attribKey").getVal
ue();
            } catch (err) {
                var promDate = "";
            }
            try {
                var planDate =
currItem.getData("PersonalWorkQueue_dateStartPlan_attribKey").getVa
lue();
            } catch (err) {
                var planDate = "";
            }
            var onHold =
currItem.getData("PersonalWorkQueue_onHold_attribKey").getValue();
            htmlOutput += '<li><a id ="' + currItem.getFullKey() +
'" class="listClick">';
            htmlOutput += '<p><b>Flags: </b>' + opFlags + '</p>';
            htmlOutput += '<p><b>Order Id: </b>' + orderId + '</
p>';
            htmlOutput += '<p><b>Operation No: </b>' +
operationNumber + '</p>';
            htmlOutput += '<p><b>Title: </b>' + description + '</
p>';
            htmlOutput += '</a></li>';
            i++;
        }
        htmlOutput += '</ul></div>';
//append the html to the appropriate form depending on the
key
        if (destScreenKey == 'Personal_Work_Queue') {
            var listview = $('div[id="CAMSCustomViewList"]');
            //Try to remove it first if already added
            if (listview.length > 0) {
```

```

        var ul = $(listview[0]).find('ul[data-
role="listview"]');
        if (ul.length > 0) {
            htmlOutput = htmlOutput.replace('<div
id="CAMSCustomViewList"><ul data-role="listview" data-
filter="true">', '');
            ul.html(htmlOutput);
            ul.listview('refresh');
        }
    } else {
        $
('#Personal_Work_QueueForm').children().eq(2).hide();
        $
('#Personal_Work_QueueForm').children().eq(1).after(htmlOutput);
    }
}
//add the listener based on the class added in the code
above
$(".listClick").click(function() {
    currListDivID = $(this).parent().parent();
    $(this).parent().parent().addClass("ui-btn-active");

    //special case for bb
    navigateForward("Shop_Display", this.id );

    if (isBlackBerry()) {
        return;
    }
});
}

```

Obtaining Help and Additional Information

Use the Product Documentation site and online help to learn more about this product release.

- Product Documentation at <http://sybooks.sybase.com/>— online documentation that you can access using a standard Web browser. You can browse documents online, or download them as PDFs. The Web site also has links to other resources, such as white papers, community forums, maintenance releases, and support content.
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To read or print PDF documents, you need Adobe Acrobat Reader, which is available as a free download from the *Adobe* Web site.

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

Documentation for this product is available in an HTML version that is designed for accessibility.

Vision impaired users can navigate through the online document with an adaptive technology such as a screen reader, or view it with a screen enlarger.

HTML documentation has been tested for compliance with accessibility requirements of Section 508 of the U.S Rehabilitation Act. Documents that comply with Section 508 generally also meet non-U.S. accessibility guidelines, such as the World Wide Web Consortium (W3C) guidelines for Web sites.

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.

For information about how Sybase supports accessibility, see the Sybase Accessibility site: <http://www.sybase.com/products/accessibility>. The site includes links to information about Section 508 and W3C standards.

You may find additional information about accessibility features in the product documentation.

