

SYBASE®

New Features

Sybase Unwired Platform 1.5.3

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New Features

Describes new features available for Sybase® Unwired Platform. Sybase Unwired Platform provides an integrated solution for mobilizing your enterprise applications to multiple device platforms using the same infrastructure and development investment.

Unwired Platform covers end-to-end aspects of mobilizing an application—providing standards-based access to data sources, building heterogeneous device applications with reusable object-oriented frameworks, supporting end-to-end security, and managing deployment, devices, users, and applications.

New Unwired Server Features

New Unwired Server features include the DCNRole functionality, basic HTTP authentication for data change notifications (DCN), and improved DCN error reporting.

Data Change Notification Features

Sybase Unwired Platform 1.5.3 includes these data change notification (DCN) features.

DCNRole Functionality

The DCNRole is a new logical role that is required to authorize a user for any DCN request.

Unwired Platform checks the DCNRole before processing a data change notification (DCN) request. In the Sybase Unwired Platform Developer Edition with the OpenDS LDAP server, a new DCNRole group has been added, in which supAdmin and supDomainAdmin are default members. To send a DCN request to the Unwired Server, the user must have permission to modify the domain (supDomainAdmin) and the DCNRole role assigned. Only users who are members of a group that has the DCNRole assigned can submit DCN requests.

If you are using a Sybase provided OpenDS LDAP server and you are using supAdmin as the user in your DCN operations, the same setup will continue to work after applying Sybase Unwired Platform 1.5.3. For Deployment Editions without OpenDS, you must create a Role Mapping of the DCNRole logical role to a physical role in your security store.

If you do not want to use this feature, map the DCNRole to the same physical role that is mapped to the SUP Administrator role.

Basic HTTP Authentication

When you use `http://<host>:8000/dcn/DCNServlet`, the user authentication is done by Unwired Server extracting the user information from the request parameter:

```
username=<username>
password=<password>
```

Alternatively, you can use HTTP BASIC authentication instead of sending the username and password as part of the URL. To use HTTP BASIC authentication, the URL is `http://<hostname>:<port>/dcn/HttpAuthDCNServlet..`

An example of how to use HTTP BASIC authentication for a DCN request is:

```
URL url = new URL("http://<host>:8000/dcn/HttpAuthDCNServlet?
cmd=dcn&package=<package_name>:<package_version>");
HttpURLConnection huc = (HttpURLConnection)
url.openConnection();
huc.setDoOutput(true);
huc.setRequestMethod("POST");
final String login = "<login_name_of_user_with_DCN_role>";
final String pwd = "<password_of_user_with_DCN_role>";
Authenticator.setDefault(new Authenticator()
{
    protected PasswordAuthentication
getPasswordAuthentication()
    {
        return new PasswordAuthentication(login,
pwd.toCharArray());
    }
});
String dcnRequest = "{\"pkg\":
\"<package_name>:<package_version>\", \"
+ \"messages\": [{\"id\": \"1\", \"mbo\": \"CustomerState
\", \"op\": \"upsert\", \"
+ \"cols\": {\"id\": \"1020\", \"fname\": \"Paul\", \"city
\": \"Rutherford\"}}]}";
StringBuffer sb = new StringBuffer();
sb.append(dcnRequest);
OutputStream os = huc.getOutputStream();
os.write(sb.toString().getBytes());
os.close();
BufferedReader br = new BufferedReader(new
InputStreamReader(huc.getInputStream()));
System.out.println(huc.getURL());
huc.connect();
String line = br.readLine();
while (line != null)
{
    System.out.print(line);
    line = br.readLine();
}
```

HTTP POST and DCN

You can also use the new URL `http://<hostname>:8000/dcn/HttpAuthDCNServlet` if you do not want to send the DCN request as a request parameter but as an HTTP POST body instead.

If you are using HTTP BASIC authentication, the JSON encoded DCN request is always sent as the HTTP POST body.

Error Reporting Enhancements

Errors while processing data change notification (DCN) requests are reported with HTTP error codes. A single DCN request can contain multiple DCN messages and each message can have payload for a specific mobile business object (MBO).

Table 1. Sybase Unwired Platform internal errors, HTTP error code 500

| Error code | Error reason | Example of error cause |
|------------|-----------------------|--|
| 400 | DCN request error | A required parameter is missing. |
| 401 | Authentication error | The user name or password is incorrect. |
| 403 | Authorization error | The user does not have the DCNRole assigned. |
| 500 | Internal server error | The DCN filter could not be loaded. |

Increasing the Maximum Post Size

Increase the size of an HTTP request to handle larger data change notifications.

The default size of an HTTP request in Sybase Unwired Platform 1.5.3 is 10 MB. The default size is set in the `jetty-web.xml` file.

1. Stop all Sybase Unwired Platform services.
2. Open the `jetty-web.xml` file, which is located in
`<UnwiredPlatform_InstallDir>\Unwired Platform\Servers
 \UnwiredServer\deploy\webapps\dcn\WEB-INF\.`
3. Find the property, `<Set name="maxFormContentSize" type="int">10000000</Set>` and increase the value up to 100MB, for example: `<Set name="maxFormContentSize" type="int">100000000</Set>`.
4. Save the file.
5. Restart Sybase Unwired Platform services.

Increased Default Thread Count

For Sybase Unwired Platform Deployment Edition, the default thread counts for Unwired Server and the consolidated database (CDB) have been increased.

- Unwired Server default thread count is increased to 10
- Consolidated database (CDB) default thread count is increased to 300
- CDB maxPoolSize default is increased to 150

New Mobile Workflow Package Features

New Mobile Workflow package features for Sybase Unwired Platform include the ability to initiate Mobile Workflows using data change notifications, the ability to specify values for session personalization keys, and iOS 4.0 and iPad support.

Initiate Mobile Workflows using DCN

Initiate Mobile Workflows on the server through DCN requests. You can now send a Mobile Workflow notification messages to the server, which can contain one or more DCN request objects.

This enables you to process the general DCN request and also send notification to the device to keep the Mobile Workflow in sync with changes to the back-end server.

See *Developer Reference for Mobile Workflow Packages > Mobile Workflow Data Change Notification*.

Specify Values for Session Personalization Keys

If you have a mobile business object with load parameters mapped to session personalization keys, you can specify values for those personalization keys when you invoke an operation or object query from the Mobile Workflow package. This can be useful for loading only specific data into the consolidated database from large data sources.

1. Create a mobile business object that has load parameters. (Set the load parameters in the MBO Properties view, from the Load Parameters tab.)
2. Create a corresponding session personalization key for each load parameter.
3. Map each load parameter to the corresponding personalization key.
4. In the Mobile Workflow Forms Editor, map the personalization keys to the Mobile Workflow keys for the menu item (in the same way you map parameters to Mobile Workflow keys).

You can also fill the personalization key values from values extracted from the e-mail message, depending on from where you are invoking the object query.

iPad and iOS 4.0 support

You can now deploy Mobile Workflow packages to iOS 4.0 and iPad devices.

New Sybase Control Center Features

New Sybase Control Center for Sybase Unwired Platform features include new security profiles to enable strong encryption, the ability to search for client logs using "timestamp" as the criteria, and the ability to copy and paste values across the user interface.

New Security Profiles

Security profiles in Sybase Control Center let you define the certificate alias and authentication levels used to encrypt communication ports in Unwired Platform.

The new security profiles are in **Servers > <your_server> > Server Configuration > General** in the **SSL security profile** options.

New security profiles include:

| Profile | Authenticates | Cipher suites |
|----------------------|---------------|--|
| strong | server | <ul style="list-style-type: none"> • RSA_WITH_3DES_EDE_CBC_SHA • RSA_WITH_RC4_128_MD5 • RSA_WITH_RC4_128_SHA |
| strong_mutual | client/server | <ul style="list-style-type: none"> • RSA_WITH_3DES_EDE_CBC_SHA • RSA_WITH_RC4_128_MD5 • RSA_WITH_RC4_128_SHA |
| domestic | server | <ul style="list-style-type: none"> • RSA_WITH_3DES_EDE_CBC_SHA • RSA_WITH_RC4_128_MD5 • RSA_WITH_RC4_128_SHA • RSA_WITH_DES_CBC_SHA • RSA_EX-PORT_WITH_RC4_40_MD5 • RSA_EX-PORT_WITH_DES40_CBC_SHA • TLS_RSA_WITH_NULL_MD5 • TLS_RSA_WITH_NULL_SHA |

| Profile | Authenticates | Cipher suites |
|-----------------|---------------|--|
| domestic_mutual | client/server | <ul style="list-style-type: none"> • RSA_WITH_3DES_EDE_CBC_SHA • RSA_WITH_RC4_128_MD5 • RSA_WITH_RC4_128_SHA • RSA_WITH_DES_CBC_SHA • RSA_EX-PORT_WITH_RC4_40_MD5 • RSA_EX-PORT_WITH_DES40_CBC_SHA • RSA_WITH_NULL_MD5 • RSA_WITH_NULL_SHA |

A security profile that includes "mutual" means the client wants to authenticate to the server, or for a server, the client's certificate is necessary.

Search Using Timestamp Criteria

In the Unwired Server management view, in **Packages > <Package_name> > Client Log**, you can now search by **Timestamp**.

From the Search options, select **Timestamp**, choose a date range, and click **Go**.

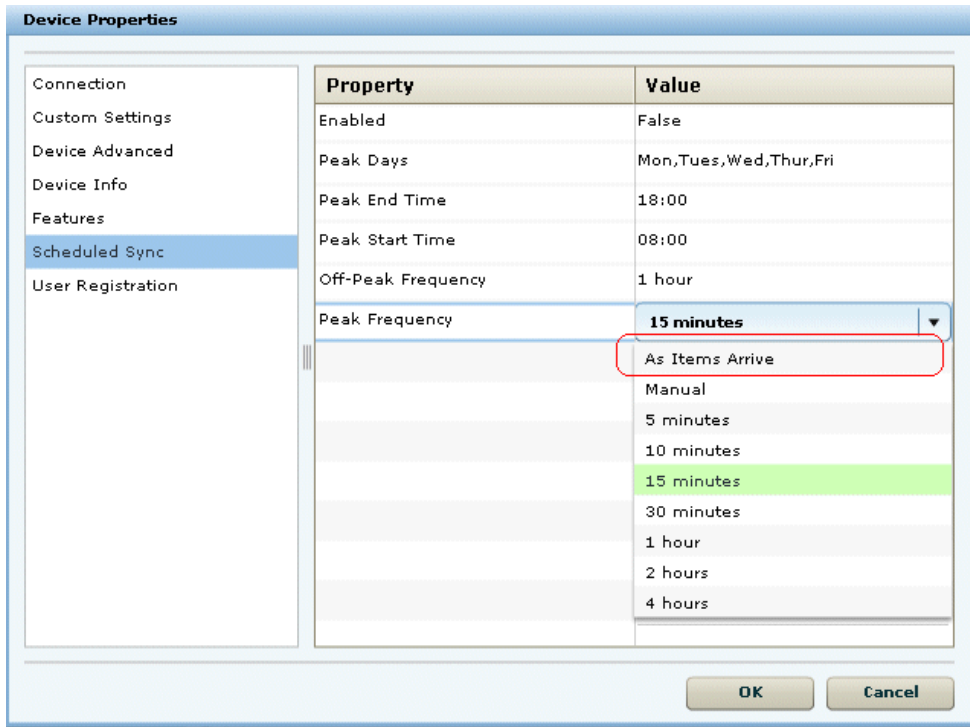
Ability to Copy and Paste Values Across the User Interface

You can now copy and paste values in the user interface for:

- **Monitoring**
- **Device Users > Devices**
 - Users
 - Registration
- **Domains > Log**
- **Servers > Log**

Scheduled Sync Value "As Item Arrives"

In **Servers > Device Users > Devices**, select a device from the list and click **Properties**. In the Device Properties window, in the Scheduled Sync settings, Peak Frequency, and Off-Peak Frequency, the value "Always On" has been changed to "As Items Arrive."



New Administration APIs

New administration APIs include new authentication types and filtering enhancement to packaging APIs.

Security Profile

When configuring an SSL security profile using the administration API, there are new authentication types that you can specify.

See *Reference: Administration APIs > Client Metadata > Server Configuration > SSLSecurityProfile*.

Filtering Enhancement to Packaging APIs

You can filter the retrieval of message-based subscriptions or replication-based subscriptions.

See *Reference: Administration APIs > Code Examples > Managing Packages > Retrieval of Filtered Subscriptions*.

New iPhone Object APIs

New iPhone Object APIs include login and synchronization enhancements.

iOS and iPad Support

Supported native application development environments now include:

- MacOS 10.6 (Snow Leopard), Xcode 3.2.3 (MacBook or iMac)
- iPhone SDK 4.0.2 (earlier SDKs are not supported in Sybase Unwired Platform 1.5.3)

Supported device operating systems include:

- iOS 3.1.3 – 4.0
- iOS 3.2.2 running on iPad

Object API Enhancements

Login API enhancements include these methods:

- `beginOnlineLogin` – sends an asynchronous login request to Unwired Server. This is the preferred login method and requires an active connection to the Unwired Server. See *Developer Reference for iPhone > Reference > iPhone Client Object API > Synchronization APIs*
- `offlineLogin` – allows the authentication of local credentials when there is no connection to the Unwired Server. See *Developer Reference for iPhone > Reference > iPhone Client Object API > Connection APIs > Authentication*

Message-based synchronization API enhancements include the `beginSynchronize` method, which sends a message to Unwired Server to synchronize data between the client and the server. The method supports synchronizing all data, or synchronizing only the MBOs in specified synchronization groups.

See *Developer Reference for iPhone > Reference > iPhone Client Object API > Message-Based Synchronization APIs > Synchronize Data*.

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