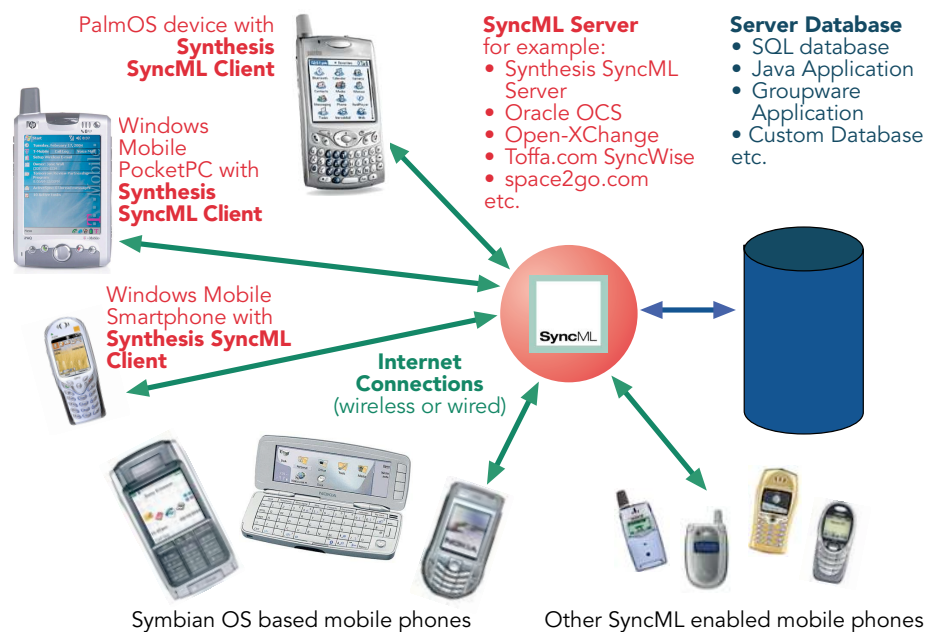


Synthesis SyncML Client for PalmOS based PDAs and Smartphones

With Synthesis SyncML Clients for mobile devices you can synchronize the contacts, events, tasks and emails stored on your mobile devices with any SyncML compliant server - over the (wireless or wired) internet. In the near future, the new SyncML/OMA DS 1.2 standard will also make synchronisation of files, images and music possible.

- SyncML breaks the barriers between mobile devices from different manufacturers.
- SyncML also unchains your mobile device from extra software installed on a specific PC. Sync your data from wherever you are - over the air!
- SyncML allows Palms, PocketPCs, Smartphones, desktop computers and mobile phones to be kept in sync with a single server.
- Any event you enter into your PDA will be available on your mobile phone. Any new phone number you save on your mobile phone will be transferred to your PDA, second mobile phone, your desktop computer etc. as well.



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1. New Features in Version 3.0

Version 3.0 is a major upgrade from the 2.5.0.x versions. It is based on a completely reworked SyncML engine. The major advantages of 3.0 over 2.5 are:

- Support for new **SyncML DS / OMA DS Version 1.2 standard**, while retaining full SyncML DS 1.1 and 1.0 server compatibility.
- Full support for **Suspend & Resume**. This is one of the most important additions to SyncML DS in Version 1.2. If the synchronisation process is interrupted - be it intentionally by the user or due to external problems like network connection failure - it will be automatically **resumed where it was interrupted** rather than restarted from the beginning. This greatly enhances user experience when working with large sets of data or large data items (such as emails with large attachments).

- **Server "Push" synchronisation** (Server Alerted Notification - SAN) supported via SMS. With SAN, servers can perform **real Push Email** or real time PIM updates.
- Supports extra data fields found in newer devices (such as **picture in contacts**)
- Synchronisation log lists operations performed on data (additions, updates and deletions) in past synchronisations.
- "Check for Update" option to **find and install latest SyncML client updates** easily directly into the device.
- Servers with HTTP authentication supported
- Proxy requiring authentication supported
- More precise textual error messages for common problems.
- Lots of improvements enhancing stability, error case behavior and interoperability with a wide range of SyncML server implementations, as well as many improvements and adaptations to newer mobile device's features.

2. Product Variants

Synthesis SyncML Client is available for different mobile platforms and in two different basic variants, **STD** and **PRO** (This manual describes both variants, differences are marked with appropriate **labels**). The following matrix shows the differences:

	PocketPC		Smartphone		PalmOS	
Feature	STD	PRO	STD	PRO	STD	PRO
Contacts Sync (with photo)	✓	✓	✓	✓	✓	✓
Events/Tasks Sync	✓	✓	✓	✓	✓	✓
Email Sync		✓		✓		✓
w/Attachments		✓		✓		
Notes Sync					✓	✓
Multiple Profiles		✓		✓		✓
Secure HTTP (SSL)	✓	✓	✓	✓	✓	✓
AutoSync/Push/SAN		✓		✓		✓
gzip compression		✓		✓		

3. How to get the SyncML Client Software

Synthesis SyncML Client for PalmOS is available only as a download from the internet. There is no boxed product nor printed documentation (but we provide this document in nicely formatted PDF so you can print it on paper if you want to).

Please download the latest version from our website at http://www.synthesis.ch/dl_client.php. Refer to the "Installation" paragraph further on in this manual for details on installation.

There are two different downloads for **STD** or **PRO** version (see first page for differences between STD and PRO), and eventually also further options for localized versions of the software.

If you have already installed a version later than 2.9.9.0 of the SyncML client on your device, you can simply choose "Check for Update..." from the "Options" menu to check for a more recent version and download and install it with a few clicks directly into the device.

If you have never installed the software before, or after major version updates you can evaluate the software for free - it runs without a license key for 30 days in demo mode (counting from the date you first use it).

After this free evaluation period, in order to continue using the software, you need to buy a license, from us or one of our re-sellers (see Chapter "Licensing - Registration" below).

For extended evaluation purposes, you can also request a temporary license from Synthesis usually at no cost.



4. How to get a SyncML Server account


In order to sync via SyncML, you need to have an account with a SyncML compliant server. Many web calendars, on-line PIM solution and mobile office services (web offices) offer SyncML or will do so in the near future. Please contact your service provider and ask for SyncML / OMA DS support.

For enterprises, solutions exist to bring groupware content on-line with SyncML. A few examples:

- Oracle Collaboration Suite (OCS) from Oracle (<http://www.oracle.com/collabsuite>) provides SyncML synchronization as a standard feature, including email sync in recent versions. Synthesis SyncML clients are Oracle's recommended choice for synchronizing OCS with Windows Mobile and PalmOS based devices. 
- Toffa (<http://www.toffa.com>) provides solutions to enable GroupWise and Exchange for SyncML clients, including email Push (DMU technology) with attachments. Toffa also provides www.goosync.com, which enables SyncML for Google Calendar. 
- Open-Xchange (<http://www.open-xchange.com>), a Open-Source based groupware solution supports SyncML for integrating mobile devices. 

- A lot of other SyncML capable solutions exist and can be used with Synthesis SyncML clients, like consolidate.at, desknow.com, mdaemon.com, scheduleworld.com, zyb.com, synkia.com, o-sync.com, eGroupWare/horde.org, nexthaus.com, mobical.net, funambol.com, synchronica.com, mobiledit.com, and many others.

To use SyncML client for PalmOS you need the following:

- A user account in a SyncML Server (see 3. above)
 - A handheld computer or smart phone based on PalmOS v3.5 up to v5.x.
- 



We recommend using PalmOS 4.0 and newer with at least 8M of memory. For older de-

8M of memory. For older devices or less memory, it depends on the free memory left and the size of the address book, datebook and other data if the SyncML client works or not. Please use the free 30-day evaluation period to verify that the SyncML client runs on your Palm device.

- A means to connect the device to the internet. PalmOS based smart-phones like the Treo series have built-in wireless access to the internet. For PDAs without built-in phone, connection to the internet might be possible using WLAN or a wireless mobile phone connected via Bluetooth.

Another possibility is using the serial or USB connection to the desktop computer for establishing a connection to the internet. For example, the Softlck PPP software makes this possible via USB, Bluetooth or Serial (see <http://www.softlck.com/ppp/>)

6. Installation

Installation is very easy. Simply use the Palm Installer tool to install the "syncml_client_std.prc" (for **STD**) or "syncml_client_pro.prc" (for **PRO**) application file in your PalmOS device. After successful installation, the home screen of the PalmOS device will show a new Application named "SyncML" having an icon like shown on the right.



7. Upgrading from 2.x versions

For the new 3.0 version, the core engine of the PalmOS client has changed completely. This implies that the internal settings are in a completely new format, which is incompatible with the previous 2.5 version.



When upgrading from a 2.x client for PalmOS, you need to re-enter your SyncML settings. (However, the settings from the 2.x version are not deleted, but remain on the device, so in case you re-install a 2.x version later, the 2.x settings will still be there).

8. Upgrading to more recent versions

To upgrade to a more recent version, just install the newer version over the current one. Your settings and license information will be carried over from the old to the new version.



Starting with version 2.9.9.1, you can any time check for available upgrades via internet using the "Check for Update..." item from the "Options" menu. If there is an update available, you can download and install it with a few clicks directly into the device.



All upgrades up to and including version 3.0 are free for those who have purchased a license for any earlier version.



Future major upgrades will be free to those who purchased a license not more than 12 months ago. Older licenses can be upgraded to cover the most recent version by paying an upgrade fee.

9. Downgrading to an earlier version

Normally this is **not recommended** as newer versions are usually more compatible and have problems eliminated that were found in previous versions.



If you still need to downgrade to an earlier version for some reason, please note that **all settings will be lost and must be re-entered**, depending on what step backwards you take with the downgrade (user data like contacts and calendar however is **not** affected by a downgrade!). Newer versions of the client will warn you before deleting the settings, but older versions, including all 2.5.x.x versions will delete the newer version's settings without warning.



Downgrading from 3.0 to 2.x is a special case, as the settings are completely different between these two versions. So if you had in-

stalled a 2.x before, upgrade to a 3.0, and then downgrade to a 2.x again, the old 2.x settings will still be intact.

10. Starting up

To start, choose "SyncML" from the Palm home screen.

It will show its main screen as shown on the right:

PRO only: The "Autosync" checkbox is used to globally enable or disable automatic (unattended) synchronization features. See Chapter "Autosync" below for details.

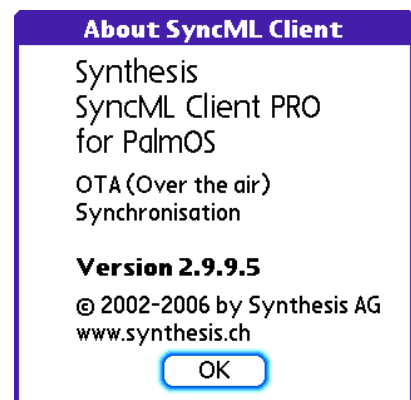
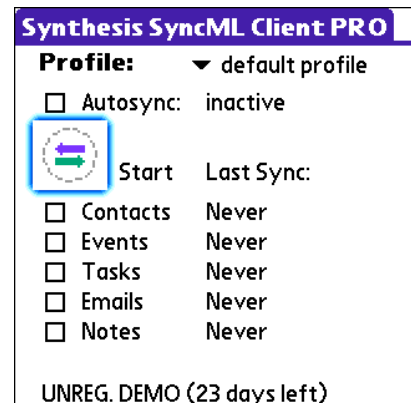
PRO only: The "Profile" popup menu allows to select between different profiles. You can keep your PDA in sync with multiple SyncML servers without the need to change any settings. **Note that multiple profiles for the same server are not recommended, as this might lead to duplicates!**

When first started, there is only a single profile called "Default Profile". You can change it's name to something more meaningful for you (see details below).

Just above the menu bar you see the licensing status. For new installations, it shows "UNREG. DEMO (30 days left)", which means that you can use the software for free for 30 days now. This is your evaluation period to find out if the software suits your needs. There is no restriction of functionality during this free demo period. Only after 30 days from the first time you have started the software, you need to purchase a license (see Chapter "Licensing - Registration" below) to continue using it.

All settings and other commands are located in the "Options" menu. The menu also contains an "About..." item which shows you exactly what version and type of SyncML client you have installed.

Tapping on the icon labeled "Start" on the main screen will start synchronization, however you need to enter your SyncML server's settings first.



11. Configuration

Select "Profile Settings..." (**PRO**) / "Settings..." (**STD**) from the menu.

This will open the settings screen.

Server Account Settings

In the settings dialog, you can set the details of the SyncML server account to use:

- **PRO only: Profile name:** You can give the profile (especially if you have multiple profiles) a meaningful name.
- **SyncML Server URL:** This is the internet address of your SyncML service. Your SyncML service provider will inform you what needs to be entered here. Of course, if you have set-up a SyncML server of your own (for example the free Synthesis Demo Server) you can enter it's URL here.
- **User and Passwd:** This is how you login to the SyncML service. Normally, SyncML user and passwords are the same as for accessing the service via the web.
- **Synchronize databases:** Select or deselect the data you want to be synchronized.
- **AutoSync: (PRO only)** opens the configuration screen for scheduling automatic synchronisation (in regular intervals or server-alerted "push"), details see below.
- **Timed Sync: (PRO only)** opens the configuration screen for setting intervals for automatic synchronisation, details see below.

Profile Settings ⓘ

Profile Name: default profile

SyncML Server URL: Options...
http://www.demoserver.net/sync

User: demo **Passwd:** *****

Synchronize databases:

☐ Contacts ☐ Events ☐ Tasks more...
☐ Emails ☐ Notes more...

Autosync... Timed Sync...

Cancel OK



Note that secure connections with SSL/HTTPS are supported - simply use https:// instead of http:// to start the Server URL.



Use the "**more...**" buttons to open detail settings for contacts, events, tasks, notes and (**PRO only**) emails. Detailed description see next paragraph.



If you need to use a proxy to access your SyncML server, have a look at the "Options" tab as well (details see below).



The "AutoSync" tab (**PRO only**) is used to configure automatic scheduled or server-alerted ("push") synchronisation, details see below.

Data Type Settings

To change detail settings for each type of data synchronized, use the "more.." buttons in the settings screen.

For all data types, the following settings are present:

- **Server Path:** This is how the database is called at the server's end. Synthesis SyncML client shows default values here ("contacts", "events", "tasks" and - for PRO only in the Email tab - "emails") which are widely used for SyncML servers, so in many cases you don't need to change these.



Still, some servers need different names here - please refer to setup instructions from your SyncML provider. For example OCS needs "./contacts", "./calendar/events" and "./calendar/tasks"



Some servers (such as those based on our server engine) allow some extra options to be specified in addition to the server DB name. **Note that such options are server specific, so please refer to your SyncML service provider's instructions to see if such extras are supported.**

Therefore, in case of problems when synchronizing events or emails with a certain server, disable the extra options and try again.

- **Sync Mode:** This determines how to synchronize data:

- **Normal:** Normal two-way synchronisation. All changes on the device are sent to the server, all changes on the server are sent to the device. This is the default mode of operation.



For the initial synchronisation with a server and to recover from error conditions (like data loss on client or server, prematurely interrupted synchronisation etc.), a "Slow Sync" (see below) might be needed and will be automatically performed even if sync mode is set to "Normal".

- **Slow Sync:** Special two-way synchronisation needed for the very first synchronisation with a server and to recover from error conditions. A "slow sync" is called slow because it includes that all data is sent from the device to the server which can take some time. The server takes an inventory of the device's data, so it'll be able to use "normal sync" (only changes are transferred, which is of course much faster) in subsequent syncs.

Contacts, Events, Tasks ⓘ

Contacts: ▼ slow
Server Path: contacts

Events: ▼ slow
Server Path: events
☒ Only from 30 Days before
to 90 after today

Tasks: ▼ slow
Server Path: tasks

Done

Contacts: normal
Server Path: slow

Events: update device
Server Path: reload device
update server
reload server

☒ Only from



This mode is normally used automatically by the software when needed, there is seldom a reason to choose "slow sync" manually.

- **Update Device:** This is like "normal" sync, however only the device will be updated with changes from the server - the data on the server will NEVER be changed at all.



Using this mode means that you want to have a copy of server's data on your mobile device. This implies that when you do an "update device" sync for the first time, **all extra data on your device that does not exist in your server account will be deleted!**

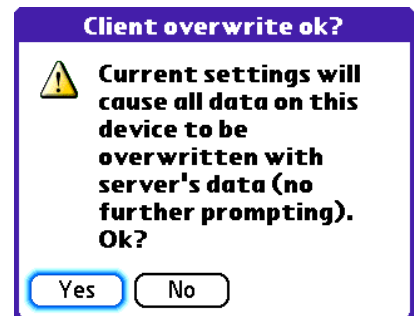
- **Reload Device:** This is a special "slow" sync as follows: First, **all data on the device will be erased**, then, all data from the server will be copied to the device.



This is a good mode to restore a device which has accidentally modified or deleted data on it.



As this involves losing all data that was not previously saved on the server, a warning message will be shown when you start syncing in this mode.



- **Update Server:** This is like "normal" sync, but only changes made on the device will be sent to the server. The data on the device will NOT be changed at all. Note that this mode does not work with all SyncML servers (server must support "one way sync from client mode")



Using this mode means that you want to make your server account an exact copy of the data on your mobile device. This implies that when you do an "update server" sync for the first time, **all extra data in your server account that does not exist on your device will be deleted!**

- **Reload Server:** This is the opposite of "reload device" and works as a special "slow" sync as follows: First, all data on the server will be erased, then, all data from the device will be copied to the server. Note that this mode does not work with all SyncML servers (server must support "refresh from client mode")

Special Options for Calendar and Email Data



Note that not all SyncML server support these extra options. In case you experience problems synchronizing events or emails, try disabling the extra options.

- **Only from:** For Events, you can limit the date range of events that are synchronized. Note that this does not work with every SyncML server, so if you encounter problems synchronizing events, just switch this option off.

Events:	▼ slow
Server Path:	events
<input checked="" type="checkbox"/> Only from	30 Days before
to	90 after today

- **PRO only: Fetch:** For Emails, the amount of data to be synchronized per message can be set here.

"Full message" means that there is no limit for the size of emails transferred. **Use "Full" for servers that do not support email size limits.**

"Headers only" means that no body text or attachments will be transmitted, only the subject, sender and recipient.

"limited to" allows to set a maximal size. Body texts exceeding this limit will be truncated at the end, attachments that do not fit the size will be suppressed.

Emails:	▼ slow
Server Path:	emails
fetch:	▼ limited to
Limit to:	2 Kbytes
<input checked="" type="checkbox"/> Only last	10 days

- **PRO only: Only last xx days:** Here you can limit from how far back into the past you want to receive emails. **Do not use this option for servers that do not support date limits for emails.**



Unfortunately, Palm does not publish documentation that would allow interfacing with the VersaMail (the standard email program on newer PalmOS 5.x devices) through SyncML.

Therefore, the SyncML email sync can only support the **old standard Mail app from PalmOS 4.x.**



The "Mail" application may not be installed by default on most PalmOS 5.x devices, but it **can be separately installed**. It can be downloaded from our website to your desktop machine and installed with HotSync, or for Palm devices with an internet browser it can be downloaded directly into the Palm. The Link to use is

<http://www.synthesis.ch/dl.php/MAILPRC/mail.prc>



Server Options: SyncML version, Proxy, HTTP auth

The "Options" button on the main screen opens another dialog with some advanced options:

- **Server Version:** Before the first sync with a server, this is set to "Automatic". This means that the client will try to figure out the highest version of the SyncML protocol a server supports automatically. After the first successful sync, this setting shows the version of the SyncML server that was detected.



Only under special circumstances it might be necessary to change this setting manually. In rare cases, the automatic detection does not work properly. So if you know for sure that a server only supports SyncML 1.1 or 1.0, and "automatic" does not work, try setting SyncML 1.1 or 1.0 manually. **Normally, you don't need to change this setting.**

- **Use following Proxy Settings:** Check this when you want to specify your own proxy settings for accessing the SyncML Server (for example in case the SyncML server needs a proxy different from what is used for other services, or the proxy needs a login to let traffic pass).
- **HTTP:** This is the IP address or name of the HTTP proxy server, followed by a colon, followed by the port number, such as 123.45.67.89:8080 or myproxy.mylan.net:3128
- **SOCKS:** This is the IP address or name of the proxy server, followed by a colon, followed by the port number, such as 123.45.67.89:3701. Leave it empty if you do not have a SOCKS proxy server that must be used to reach the HTTP proxy.
- **User/Pw:** If your proxy needs a login, enter it here. Otherwise, leave these fields empty.
- **HTTP Auth, User/Pw:** If your SyncML server needs a login at the HTTP (web server) level, enter it here. Otherwise, leave these fields empty.

Options

Server Version: ▼ Automatic

☐ Use following Proxy servers:

HTTP:

SOCKS:

User/Pw: []

HTTP Auth (empty = none):

User/Pw: []

Cancel OK


12. Disconnect Network

Choose "Disconnect Network" from the menu if you want to immediately close the network connection. Otherwise, the network connection will stay active for some period in case it is required again within the next few minutes.

13. Cleaning up deleted records

The Synthesis SyncML client for PalmOS is designed to absolutely not interfere with the PalmOS native synchronisation mechanism HotSync. This means that both SyncML and HotSync can be used in parallel.


However, this implies that the SyncML client may not completely remove records it deletes, but leave a small portion of them (the so-called header) on the Palm. These remainders are required by HotSync to properly update Palm Desktop or other software that is connected via HotSync.

 When starting a synchronisation, there is a "checking" phase where the SyncML client quickly inspects all records in the database. A counter is shown during this phase. Now if you haven't done a HotSync for a while, and many records have been deleted since then (for example when using "Reload Device" mode, all records are deleted and then reloaded!) **the "checking" count will go (possibly much) higher than you'd expect from the number of records you have.** This is caused by the remainders (headers) of deleted records.

If you use HotSync once in a while, this is no problem at all. The record headers don't occupy a lot of space in your device, and they do not require much time to be "checked" for SyncML synchronisation.

However, if you **never** use HotSync, the headers of deleted records might accumulate, and you might want to get rid of them.

To do that, choose "Clean up deleted records..." from the "Options" menu.

 Only if you really don't use HotSync, confirm the alert that is shown. A summary of how many deleted record headers were removed is then displayed.

Clean up deleted records?



Cleaning up deleted records is only recommended if HotSync is not used with this device - otherwise, please perform a HotSync to clean up deleted records. Really clean up now?

Clean up complete



Removed 188 deleted records from device

14. Synchronizing

When setup is complete, you can select the data to be synchronized using the checkboxes and start synchronization simply by tapping onto the icon with the two arrows in the middle.



That's it - everything else will happen automatically (like with HotSync):

- The device will open a connection to communicate with the SyncML server. It uses the network connection as set in PalmOS "Prefs".
 - ⚠ If you get "connection error" messages, this means that the client cannot connect to the server. Please review your network and connection settings and refer to your mobile internet provider's information about details.
 - ⚠ If you get "No SyncML Response" message, the client can connect to a server machine, but the server does not appear to be a SyncML server. Usually, this happens when your SyncML server URL is not correctly specified in the settings - please check for typos and verify with the provider of the SyncML server that you are using the correct URL. For most services, **the SyncML URL is not the same as the URL you can use in a web browser** to access the server!
- Data will be synchronized. The main screen will show some progress information, such as how many items (contacts, events, tasks, and - **PRO only** - emails) are sent and received.
 - ⚠ For each data type, synchronisation starts with a "checking" phase. This is needed to find changes, additions and deletions made since the last sync and will always go through all items in your databases. Note however that during "checking" phase, no data is transferred to the server. So even if "checking" count might be high and take some time - "checking" does not cause any network traffic (or cost).
- Finally, the screen should read "successfully completed" and "Last Sync" will show the current date and time.



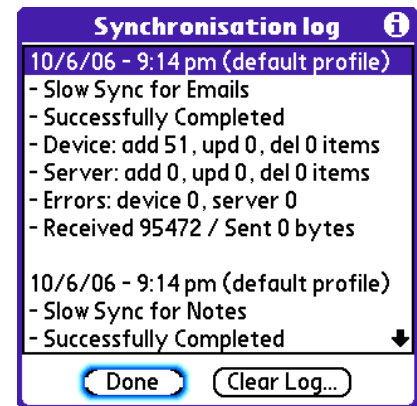
- After a completed (or failed) synchronisation, you can view its statistics by choosing "show log" from the menu. This will show the 30 most recent log entries, newest at the top. Using the "Clear" button, you can delete all log entries.



The log shows a separate entry for each datatype synchronized. So if you have checked "Contacts", "Events" and "Tasks" on the main screen and start a sync, you will get 3 new entries in the log.



The number of bytes shown are net content only (your data) - but note that the total amount of bytes transferred over the network is always higher as there is some protocol overhead (8 KBytes sent and received extra in a typical session).



15. Suspend & Resume

A synchronisation can be interrupted, either manually or for external reasons e.g. when the network connection breaks. In SyncML versions before 1.2, this caused the session to **abort**, and a subsequent sync had to **repeat the entire sync from start**, and sometimes even required a **slow sync** to recover. With large data sets, this could be very annoying.

Fortunately, SyncML DS 1.2 has a now a solution for this named **Suspend & Resume**. This means that an interrupted sync will simply be resumed in the next attempt - at the point it was interrupted.

So if your sync aborts for whatever reason, you can resume it by simply pressing the sync button again.



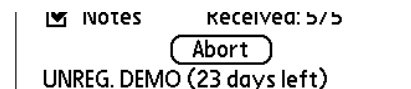
Suspend & Resume is fully supported in the Synthesis SyncML clients 3.0. But it can work **only with servers that support SyncML DS Version 1.2 and actually have the resume feature implemented**. For example, Synthesis SyncML Server 3.0 fully supports Suspend&Resume (but the older 2.1 version does not).



To suspend a sync manually (for example because you need to leave the office and your device is in the middle of a sync in the cradle), press the "Abort" button

once. This causes a "soft" suspend - the client tells the server it wants to suspend and **waits for the server to acknowledge the suspend**. This takes some time until the sync actually stops.

If you hit the "Abort" button a **second time** in a row, this will cause a "hard" suspend - the client then **immediately** stops the sync (but as it needs to save some data to be able to resume, this might still take a few seconds). This is quite similar to what happens when suddenly the network connection to the server breaks. Even in this case, SyncML 1.2 can resume the session later. But if you can avoid "hard" suspend, using "soft" suspend is the better choice for manually aborting a sync session.



If you want to explicitly prevent that the next sync resumes a previously aborted or suspended sync, change the sync mode in the settings to something different. This will clear the suspended sync information and ensures that the next sync will start at the beginning.

16. AutoSync + Push

PRO only: The PRO version has a feature called "AutoSync". This means that it can automatically start an unattended synchronization under certain conditions. With **Push** enabled servers true **email-push** is possible!



Synthesis SyncML client **PRO** for PalmOS supports **SAN (Server Alerted Notification)**, which is fully standardized in SyncML 1.2 based on SMS. It is available in **PRO** clients by default, but requires a device with a built-in phone to receive SMS (Treo series). The SyncML server side must support SAN based push to make use of SAN.



Scheduled AutoSync (Timed Sync) works with any SyncML server and needs no server side support nor special license. This means that it can be used in all SyncML environments without restriction.

Configuring AutoSync

To view and change the Autosync settings, press the "AutoSync" button in the settings screen.

The "Automatic Sync activated" settings work as follows: There are two identical groups of conditions, each consisting of

- A **time of day range**, such as 8:00 ... 17:00. Note that it is possible to specify ranges such as 22:00 ... 5:00 as well, this would mean through the night from 10 p.m. to 5 am. For 24 hour all-day syncing, specify 0:00... 0:00 or 0:00...24:00.
- A **list of weekdays**. Select those days when you want to have automatic sync active.
- A **minimal battery charge level**. This is useful to prevent unattended syncing to drain the battery of the device. To allow automatic syncing only when the device is connected to a power supply, set the charge level to 100%. To allow automatic syncing regardless of the battery level, specify 0%.

AutoSync activated:

08:00 ... 17:00 Bat > 60 %

Mo Tu We Th Fr Sa Su

Autosync mode: Off

00:00 ... 00:00 Bat > 0 %

Mo Tu We Th Fr Sa Su

Autosync mode: Off

Other time / Condition:

Autosync mode: Off

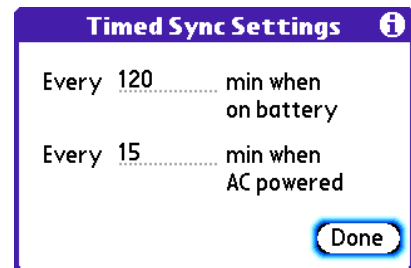
Done

For each of the condition groups, you can select what should happen when the condition is met with a row of radio buttons (A third row of these buttons are available to specify what should happen when none of the conditions are met):

- **Off** means that no automatic synchronization takes place.
- **Timed** means that the device will automatically synchronize in the intervals specified in the "Timed Sync" box (see below).
- **Push:** This option enabled "Push" sync (using SAN technology, see above).

To set intervals for timed synchronisation, press the "Timed Sync..." button in the main settings screen.

You can set different intervals for mobile and AC powered operation.



Using AutoSync

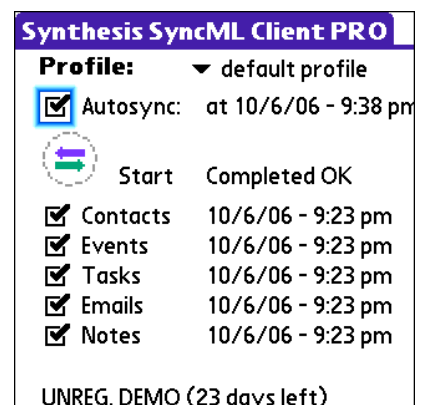
To enable Autosync activities, the "Autosync" checkbox on the main screen of the software must be checked, otherwise Autosync is disabled regardless of the other settings made.



An exception to this is SAN-based push as follows: SAN has background modes and an interactive mode. Interactive mode means that the server only recommends a synchronisation by showing an Alert, **but does not start the sync by itself**. The user can accept or reject the alert. This interactive mode is always enabled, even if the AutoSync checkbox is not set.

Next to the checkbox, the current Autosync status will be shown:

- **inactive:** Autosync is not active, either because the checkbox is unchecked or because none of the conditions (time, weekday, battery) specified in the settings are met.
- **at 5/10/2006 - 16:38:06:** Timed Autosync is active, the next time when a timed synchronization will take place is shown.
- **Push (SAN):** SAN-based Push is enabled. The server can start a sync remotely when required (e.g. new email or event arrived).



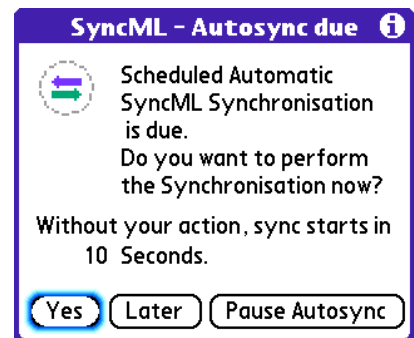
The server can request sync happening entirely in the background, brought to your attention by switching the SyncML client into the foreground or even asking you to confirm or reject the sync (interactive mode, see note above)

- **off, low battery:** Autosync is inactive because the battery charge is below the level specified in the settings.
- **Syncing now...:** an automatically started synchronization is currently running.

PalmOS is a single task operating system. This makes it very efficient and power saving, because there is not much software running all the time in background. Background tasks are possible, but should only be used when really needed.

SAN "Push" and timed SyncML synchronisation do not need real background operation, so the implementation is semi-background as follows:

- When a synchronisation is due, either because it was alerted by the server or because the defined time interval specified for timed sync has passed since the last synchronisation, an Alert (similar to a calendar alarm) is shown.
- If you press "Yes", the SyncML client will be started and a synchronisation automatically starts.
- If you press "Later", you will be alerted again when the next time a synchronisation is due.
- If you press "Pause Autosync", timed autosync will be temporarily disabled, until you start the SyncML client again manually and re-enable it.



- ⚠ Automatic Sync will not take place when the sync mode is set to either "reload device" or "reload server" for security reasons: These sync modes involve deleting all data at either client or server, and therefore it is required to manually initiate them to avoid unintentional data loss.
- ⚠ Automatic Sync will only take place with a server that has been successfully synchronized at least once before. Again, this is a security measure to make sure a proper sync relationship is established between client and server before letting sync happen automatically.
- ⚠ Autosync might be delayed when other applications have pending notifications (such as SMS, calendar alarms etc.) or open modal dialogs. As soon as the notifications or dialogs are closed, due automatic syncing will take place.

17. Licensing - Registration

The Synthesis SyncML Client for PalmOS which you can download for free from our website initially runs only for 30 days after the first use.

At the bottom of the main screen you see how many days are remaining of the trial period. After these 30 days, you must license the software, that is, buy a registration code.

Purchasing a license on-line

For immediate on-line purchase of licenses in small quantities (for other possibilities to obtain a license see note below) we provide a web store at Kagi, which is linked from our website or can be directly reached at the following URL: http://order.kagi.com?L3U_LIVE.



Note that the **entire purchase and payment process is handled by Kagi**, a company specialized in processing orders for software registration for many years. Kagi offers secure processing for all major credit cards, check, money order and even cash payment and also collects VAT when applicable. **Please always contact Kagi in case of purchase or payment questions, including VAT issues.**



Before ordering, please make sure you order a registration code for the product variant (**STD or PRO**) you actually want to use. To see what version you have currently installed on your device, please have a look at the "About..." screen.

A **PRO** license will work with both STD and PRO software variants, but a **STD** license **does not** work with the PRO software.

Within a few hours (usually only minutes) after your payment, you will receive an email containing your registration details.

Other ways to obtain a license

There are a number of Re-Sellers of Synthesis SyncML clients, who offer the software under different terms like DMU push support (see details in "Autosync" chapter) enhanced support conditions, already pre-configured for and bundled with a service subscription or other software, etc. Some enterprises might have a site license or another volume licensing agreement.

So please check with the provider of your SyncML server solution if there are better ways to obtain the software for your particular case before buying directly.



One important reason to buy from the provider of a SyncML based solution might be terms of support. Synthesis AG can only provide support for purely client-related issues, and usually cannot help you with server-side problems.

If you buy from the provider of the SyncML service, this might entitle you for support covering the entire solution.



In case you intend to buy a large number of licenses directly from us or want to become a re-seller yourselves, please contact us at sales@synthesis.ch for details.

Entering Registration Details

When purchasing a license, you will receive licensing information consisting of a "license text" (usually name and email address) and a "license code" (or "registration code").

With these two pieces of information, your already installed SyncML software running in demo mode can be "registered", which means removing the 30-day demo restriction and make it a permanent installation.

Please start SyncML Client on your device, choose "Registration..." from the menu and enter the licensing information.



Enter the license text (usually your name and email address) **as one line of text** (no manual linefeed, but no problem if the text wraps automatically) **exactly as shown in the registration email, including character case**. You may enter extra spaces, but no other extra characters.



For the license code, character case is irrelevant and the dashes separating the four groups may be omitted. Note that an O in the code is always the character "O" (Oh) and never the digit "0" (zero). Make also sure that you don't mix digit "1" and letter "i" or "L".

If the data you entered is correct, your name will be displayed at the bottom of the main screen and the software will continue to work without any time limit.

If the registration information is rejected, please check

- Is the name and email address entered exactly as shown, including character case, on a single line?
- Is the code entered correctly?
- Was the license purchased for the right variant (**PRO** codes will work with **STD** version software, but **STD** code only works with the **STD** version software)



Please keep the registration code in a safe place, in case you need it again when re-installing the software after a hard reset of your device.



Future major upgrades will be free to those who purchased a license not more than 12 months ago. Older licenses can be upgraded to cover the most recent version by paying an upgrade fee.

18. Troubleshooting




This section gives some information about common problems that might occur with SyncML synchronisation. In addition, especially for more specific problems like compatibility with certain environments etc., **please always consult our Frequently Asked Questions Page on our Web site:**
<http://www.synthesis.ch/faq.php>



Basically, if your connection to the internet is stable, synchronization should be no problem. Just start a synchronization whenever you want to update your data.

Still, there are a few possible problems, mostly caused by interrupted sync sessions.

- **Synchronization aborts with error code:** See error code explanation in next chapter for details.
- **Registration does not work:** Please make sure that...
 - name and email address is entered exactly as shown, including character case, on a single line.
 - the code is entered correctly ("O" is always letter "o" and not digit zero; also make sure not to mix up digit one "1", letter "L" and letter "i").
 - the license purchased is for the right variant (PRO codes will work with STD version software, but STD code only works with the STD version software).
- **Strange behavior in general:** If it seems to you that your data is not synchronized as it should, it is a good thing to make a fresh start. SyncML is an incremental method - which means that the things that happened in the past synchronizations influence what will happen in future synchronizations. This is a good thing (saves a lot of time) under normal circumstances, but sometimes this dependency on the past is replicating old problems. To make a new starting point, make sure you have all recent data stored on the server and then set the sync mode to "reload device". This will cut all dependency on past synchronization problems.
- **Last Sync date does not update or settings are not stored:** This indicates that the internal data of the SyncML client might have become corrupted. To rebuild that data please uninstall the software and install it again.
 -  You will lose all settings of the SyncML client (but no data!) when uninstalling it. So please make sure you write down the original settings or have a documentation of your SyncML server provider at hand which lists the required setting values.
- **Sync always takes a long time:** Most probably, the previous synchronization did not complete successfully, so a slow sync occurs. If this happens all the time, this indicates either a very poor quality of the internet connection or a compatibility problem with the server used.



If you need to report the problem to the SyncML service provider, please include date and exact time of the failing sync attempt(s), username, and also the error message displayed at the end of the synchronization in your report. Without this information, it is difficult for the service provider to track down the problem.

- **Duplicates:** In some cases you might notice that some of your data gets duplicated. If this happens only for a few contacts, this is perfectly normal, it shows that a record has been modified on your device and on the server in parallel. In order not to lose either modification, the server has decided to keep both versions of the record so you can decide which version is the "right" one. Just delete the version that is obsolete on the device or on the server.
If you encounter a lot of duplicates without having modified anything, this indicates a compatibility problem with the server used. Please note that if you cannot successfully complete a synchronization, the probability of getting duplicates is slightly higher as there might have been problems in the previous synchronization.
- **Missing fields:** If you think that you don't get all data stored on the server or vice versa, not all server fields get update with data you have on your mobile device - please consider that this might be perfectly normal. Why? Unlike proprietary synchronization technologies such as HotSync and ActiveSync, SyncML is an open standard which allows synchronizing any compliant device with any compliant server. However, not all servers and not all devices support the same set of data fields. A mobile phone is likely to support only telephone numbers, but no street address. Or some devices are restricted to one address per contact, while others support separate work and private addresses. This might be confusing on the first sight, but a properly set-up server will be smart enough to preserve your data even if there is no exact 1:1 mapping possible.

Using debug (DBG) versions to track down problems

For solving some problems, especially interoperability problems with a specific server or a special set of data, additional information about what's going on "inside" a sync session is required.

SyncML servers usually write so-called log files by default, and often these server side logs are sufficient to track down a problem.

Synthesis SyncML clients do not create log files by default, because log files can get very large (several megabytes) and useful (that is - detailed) logging reduces performance on mobile devices considerably.

Still, in some cases client side logs are needed to analyze difficult problems. Therefore, special debug versions of Synthesis SyncML clients exist and can be obtained from Synthesis when needed.



To see if the software you are using is a debug version, have a look at the "About..." screen. If the version number is followed by a (DBG), it is a debug version.

Debug versions create so-called stream databases containing log information on your PalmOS device. To retrieve them to a desktop computer or sending them to us for analysis, please use one of the following methods::

If you can use Bluetooth or Infrared to transfer data to your PC or Mac:

- Use a tool like FileZ (download for example from <http://www.palmgear.com>) to send the files **sysynclog_palm** and **sysynclog_palm_session** to a computer using bluetooth or infrared.

Via HotSync:

- Do a HotSync. This will back up databases, including the stream databases containing the SyncML client logs.
- Find the backup folder for your device on your PC. This is usually somewhere within your Palm Desktop installation. For example, on Windows for a Treo 650 it might be "C:\Programs\palmOne\650\Backup". To find the backup folder, you might do a search for a logfile by name: "sysynclog_palm.PDB".
- Copy the files named "**sysynclog_palm.PDB**" and "**sysynclog_palm_session.PDB**" to a safe place. These are basically HTML files, and can be viewed with a web browser when you rename them to "*.html". However they are in PalmOS specific "stream database" format, so they contain some extra "funny characters". You can ignore these for quick viewing, or use a tool like "streamdb.exe" to convert "*.PDB" to clean HTML files.



Log files can grow quite large and will occupy considerable amount of memory on your device. So please make sure you switch back to a non-DBG-Version of the software once the problems are sorted out. If you need to keep the DBG version installed for a longer period of time (for example to "catch" a problem that only rarely occurs), please use a file management tool like FileZ (see above) or TomCatalog to delete the sysynclog_* files from time to time.

Error messages and error codes

Config incomplete/bad

This message is shown when trying to start a sync session while missing configuration information.

The reason for this message could be missing server URL, missing server paths of the individual data stores, no database selected for sync at all, or database to sync with is not available on the device (for example, corrupted Contacts or calendar database on the device)

Demo/License Expired

This means that either the free trial period of 30 days (counted from the first time the software is used) is over or the temporary license code you were using has expired. You need to buy a permanent license or obtain a new temporary license (usually granted by our re-

sellers and Synthesis for evaluation and piloting) to continue using the software (see chapter "Licensing - Registration").

License code too old

This means that the software version is too new to be covered by the license you have. Major upgrades to the software are free for 12 months after purchasing a license. To use upgrades that are released after this period, you need to upgrade your license.

License does not match product

Most common reason for this message is when you try to use a license for a STD product with a PRO software version. It can also occur when the license you have is for a completely different product (like a Synthesis Server).

License not valid here

This message means that your license, although basically valid, cannot be used with this server at this time.

This can be the case for licenses that are restricted to a certain type of server or to a certain server URL (those licenses have a double colon followed by some server specification in the license text like "::u=*my.domain.com/sync" or "::t=servertime").

Another reason for this message can be if the license is already in use by more devices than allowed (e.g. a 5 user license being used on 7 devices).

Connect not possible

Unlike "Connection error" (see below), this indicates that the software finds no way to even try to establish a connection, for example when the device has no network interface configured at all.

Connection error

This means that the client cannot establish a connection to the server.

If this error occurs right after starting the synchronization, either the URL entered for the server is wrong (no such server exists) or there is a basic networking problem. Note that if you can reach the internet only via a proxy server, your proxy settings must be configured correctly. To test the connection, try to browse a web site using Pocket Internet Explorer.

If this error occurs in the middle of a synchronization, this is most likely an intermittent problem, see Sending/Receiving error below.

No SyncML Response

This is usually caused by an incorrect SyncML Server URL entered in the settings. It means that the SyncML client can connect the server, but does not get a SyncML response as it should, but something different, like a error message web page.

Sending error

Receiving error

An error occurred during sending or receiving data. This indicates a (possibly only temporary) network problem.

No response (timeout)

This means that the server is not responding within a reasonable amount of time (several minutes, usually).

This can indicate that the server has experienced a problem and cannot answer in time, but this could also be caused by a network connection vanishing (not working any more, but no error detected yet).

Invalid data

This means that the data received from the server is not a syntactically valid SyncML message (containing invalid tags or WBXML encoding).

This usually indicates some sort of network problem that causes data corruption on the way.

Another possible cause is that the server is actually generating invalid SyncML messages - however this is not likely with well tested and officially SyncML conformant servers (it might occur for new servers still under development).

In case of network problems, a frequent cause are mobile operators who feed data traffic from mobile devices through equipment that tries to optimize bandwidth. This is fine for web browsing, but often interferes with SyncML. To find out, try to synchronize using the ActiveSync network connection which is available when the device is in the cradle, or insert another mobile operator's SIM card to see if it makes a difference.

Access denied

This message is shown when the client cannot login with the server.

Usually, the reason is an invalid user name and/or password; Please check the settings and eventually re-enter the password (note that depending on the server it usually is case sensitive).



In case your SyncML server needs additional authentication at the web server (HTTP) level or if you are using a proxy server that needs extra authentication, "access denied" might also indicate that one of these secondary authentications failed. For details, see paragraph "Other Profile Options" in the "Configuration" chapter.

Sync mode not supp.

This means that the sync mode specified for a datastore in the settings is not supported by the server.

Usually, this is caused by selecting "update server" or "reload server" mode, which is not supported by all SyncML servers.

Aborted by user

The synchronization was manually aborted by the user.



If the server supports SyncML Version 1.2, aborted synchronizations can be resumed simply by starting sync again. See Chapter "Suspend & Resume" for details.

DB not found

A database (contacts, events, tasks...) was not found.

Usually, this means that the database does not exist on the server side or has a different name than what was entered as "server path" in the settings (see "Data Type Settings" paragraph in the "Configuration" chapter).

Device DB error

Some problem occurred accessing the device's databases.

This also indicates some internal database problem, usually caused by corrupted data on the device.

Server busy - try later

The SyncML server is not ready for processing a synchronisation right now. Just wait a few minutes and try again.

Server Database Error

The server reported a problem accessing its data.


This usually indicates a server problem - please check with your SyncML service provider if you repeatedly get this message.

Error Code=<number>

Some rarely occurring error codes do not have a text message, but are shown like this.

Some codes you might encounter are:

- | | |
|-----|---|
| 101 | Server is busy |
| 400 | Bad request (usually a server compatibility problem) |
| 405 | Command not allowed (compatibility problem) |
| 408 | Timeout |
| 412 | Incomplete command (compatibility problem) |
| 413 | Too large - the server cannot process some data sent by the client because it is too large. If this happens when sending emails, it might be caused by large attachments - try sending without attachments. |
| 415 | Unsupported media type or format (usually this means that the server does not support this type of data - for example synchronizing task to a server that has no support for tasks). |
| 417 | Retry later. This indicates some sort of temporary failure - retrying after a while might solve the problem. |

421	Unknown search grammar (compatibility problem)
422	Bad CGI script. This might indicate that the server does not understand the special options like date range restrictions for events or size limit for emails (see "Special Options for Calendar and Email data" in the "Configuration" chapter). Try turning off these options.
424	Size mismatch. This indicates a transmission problem of a large object, possibly caused by a temporary network problem. Retrying (resuming) the session might help.
426	Partial item not accepted.
500	Command failed (usually a server malfunction of some kind or a SyncML compatibility problem)
501	Not implemented (compatibility problem)
503	Service unavailable. This usually indicates a temporary problem.  Some servers send this error code when a session was interrupted with error only a short time ago, and the server is not ready yet to start another session. Please wait a few minutes and try to run the session again.
511	Server error (some general server error)
512	Synchronisation failed (generally failed due to some server error)
520	Server database full (the server has no room to store more data)
10xxx	This has the same meaning like xxx, but indicates that the problem has occurred locally in the client rather than in the server.
20025	Out of memory
20998	Internal exception (client encountered an internal exception - a possible reason could be extreme shortage of memory in the device)
20999	Undefined internal error

Reporting problems



Before reporting a problem by email to us, please have a look at our FAQ page at <http://www.synthesis.ch/faq.php> and our public forum at <http://forum.synthesis.ch>.



In most cases, sync problems are specific to a SyncML service provider's environment. Therefore, please first ask your service provider in case of problems and mention that you use Synthesis client software. The service provider will then be able to analyze the problem and will contact us directly in case they think the problem is in our client software.



To report a bug or a problem (to the SyncML service provider or to us), please collect the following data before reporting a problem to Synthesis AG

- Version of the Software (please choose "About..." from the menu to find out the exact version number, such as 3.0.1.4)
- Type, model name/number and brand/manufacture name of the device.
- URL of the server you are using to synchronize with.
- Error messages shown by the software.
- As the problem needs to be tracked down together with the SyncML service provider, please include your user name you used to login to the SyncML service and the exact date and time when you tried to synchronize.

You can contact us at support@synthesis.ch for support issues, but please first have a look at our FAQ at <http://www.synthesis.ch/faq.php> or our forum at <http://forum.synthesis.ch>. Suggestions or ideas for enhancing the product are also welcome!