SyncML Client &
Server Solutions
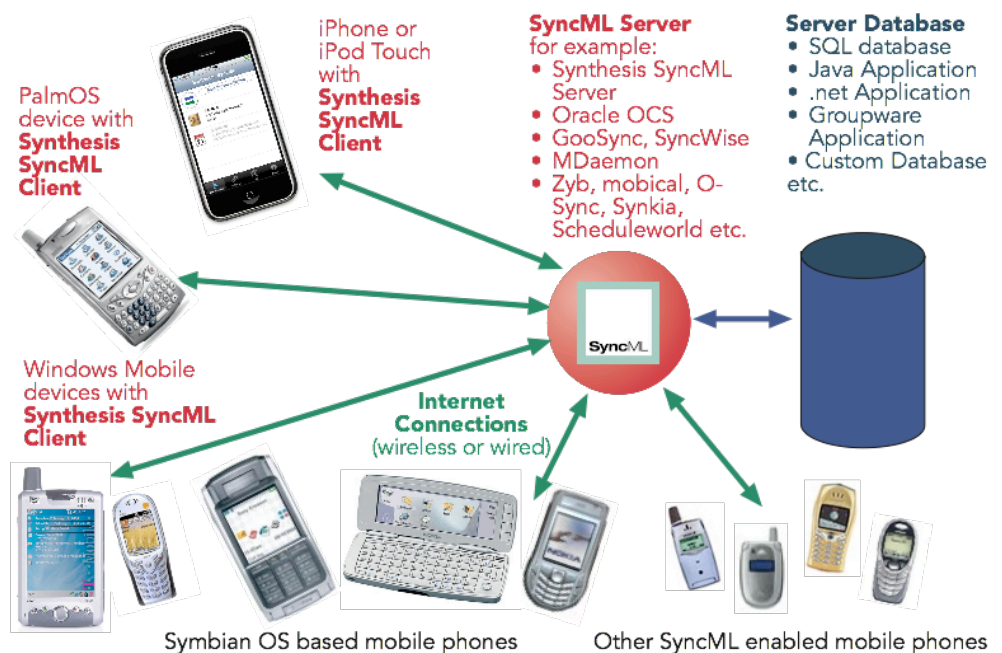
Sustainable Software
Concepts

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Synthesis SyncML Client for Windows Phone 8

for Synthesis app version V2.6.0 and newer

With Synthesis SyncML Clients for mobile devices you can synchronize the contacts stored on your mobile devices with any SyncML compliant server - over the (wireless or wired) internet.

- SyncML breaks the barriers between mobile devices from different manufacturers.

- SyncML also unchains your mobile device from extra software installed on a specific Mac or PC. Sync your data from wherever you are - over the air!

- SyncML allows Windows Phone 8 devices, Androids, iPhones, Palms, PocketPCs, Smartphones, desktop computers and mobile phones to be kept in sync with a single server.

- Data you enter into your Windows Phone 8 device will be available on your secondary mobile phone. Any new phone number you save on your mobile phone will be transferred to your second device, your desktop computer etc. as well.

PalmOS device with **Synthesis SyncML Client**

iPhone or iPod Touch with **Synthesis SyncML Client**

Windows Mobile devices with **Synthesis SyncML Client**

Internet Connections (wireless or wired)

SyncML Server for example:
- Synthesis SyncML Server
- Oracle OCS
- GooSync, SyncWise
- MDaemon
- Zyb, mobical, O-Sync, Synkia, Scheduleworld etc.

Server Database
- SQL database
- Java Application
- .net Application
- Groupware Application
- Custom Database etc.

Symbian OS based mobile phones

Other SyncML enabled mobile phones

Contents

1. Features

Synthesis SyncML client for Windows Phone 8 (or higher) is based on the widely used Synthesis SyncML engine 3.x, which powers SyncML client for a variety of platforms, including Android, iPhone, PalmOS, Windows Phone, Linux, Mac OS X, Windows. The use of a common engine in all of our products guarantees consistent behaviour among all platforms and services.

The Synthesis SyncML engine is one of the most advanced SyncML implementations with the following features:

- Full support for **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.
- Efficient and fast implementation
- Modular design - new data types can be added quickly as they become available on target platforms (like calendar on iPhone).
- Altough the Windows Phone 8 client product is new, the engine is already well tested over many years with many SyncML enabled products and services world wide, which ensures smooth operation.

2. How to get the SyncML Client Software
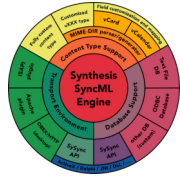
The Synthesis SyncML Client for Windows Phone 8 is available at the Windows App Store. There is no boxed product nor printed documentation (but we provide this document in nicely formatted PDF so you can print it on paper if you want to).

The software is available as:

- **LITE**   sync for **contacts** only.

  Available via Windows Phone App Store
- **STD**   sync for **contacts and calendar**: The Windows Phone calendar (8.1) as well as the calendar inside the Synthesis app (8.0 + 8.1) are supported.

  Available via the Windows Phone App Store

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Concepts

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3. 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.

• Open-Xchange (http://www.open-xchange.com), an open-source based groupware solution supports SyncML for integrating mobile devices.

• Memotoo (http://www.memotoo.com) supports the standard services like contacts, calendar and tasks sync, as well as synchronisation of documents, pictures and videos.

• Synthesis SyncML server (http://www.synthesis.ch) is a generic solution to add SyncML capability to existing databases and applications. SQL databases can be directly accessed and any other type of database or application middleware can be integrated through custom database interface plugins (in C/C++, Java or .net, based on a plugin SDK). Fully functional free demo and evaluation versions are available from Synthesis.

Other services and software known working include winfonie.de, soocial.com, qaleido.com, eGroupware.org, horde.org, syncevolution.org, funambol.com, consolidate.at, desknow.com, mdaemon.com, scheduleworld.com, zyb.com, synkia.com, o-sync.com, nexthaus.com, memotoo, mobical.net, synchronica.com, mobiledit.com, and many others.

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4. Requirements

To use the SyncML client for Windows
Phone 8 you need the following:

- A user account on a SyncML server (see above)
- A Windows Phone 8 device
- A means to connect the device to the internet, i.e. access to a WiFi access point or simply cellular network coverage.

5. Installation

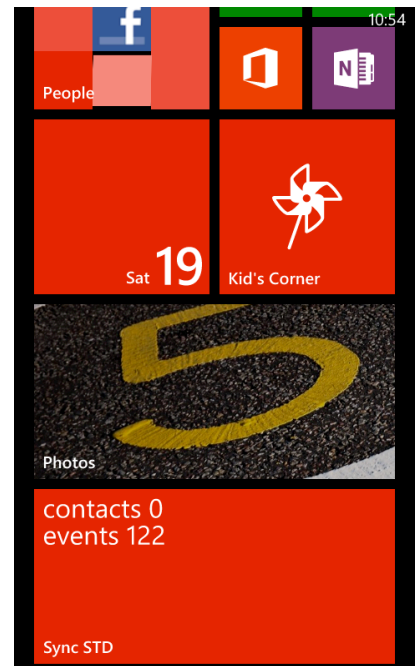Download the Synthesis app directly from the **Windows Phone App Store** into your device. After successful installation, the SyncML client will appear with the icon on home screen.

A tile (wide, square or small) can be installed on request. It contains information about the number of contacts and events.

6. Upgrading to more recent versions

You will be notified for updates automatically.

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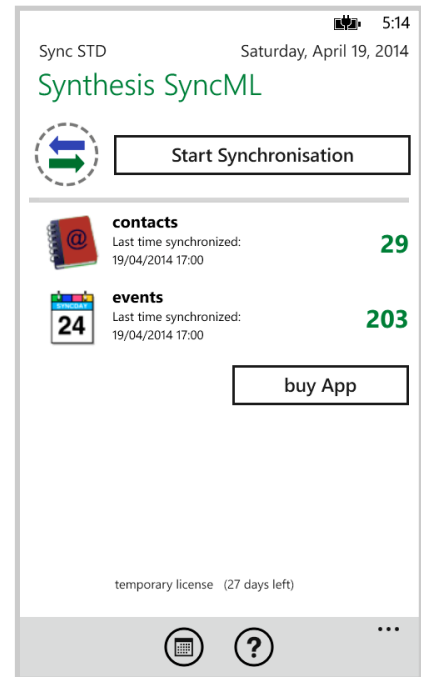Concepts

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7. Starting up

To start, tap the "Synthesis" icon at the application list of your Windows Phone 8 device.

When started, it will show its main screen as shown on the right:

Use the menu button to choose between the different screens. When opened, the "Synchronization" screen is shown. That's where you can start a synchronization and observe its progress and completion.

The "Settings" screen is used to configure the client for a specific SyncML server or service.

	5:14
Sync STD	Saturday, April 19, 2014

Synthesis SyncML

	Start Synchronisation

| contacts
Last time synchronized:
19/04/2014 17:00 | **29** |
| events
Last time synchronized:
19/04/2014 17:00 | **203** |

buy App

temporary license   (27 days left)

Tapping on the "Start Synchronization" button will start synchronization once everything is set up, however before that you need to enter your SyncML server's settings - please see next chapter.

The app can be **tested 30 days for free** ("test app") or **purchased** at the Windows Phone App store ("buy app").

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The "About" screen is useful to see the version of this application and the version of the SyncML engine.
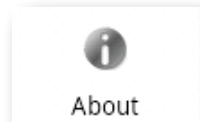
It also contains a link to the Synthesis web site.

Download docu: The most recent version of this documentation is also available here for download

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8. Sync LITE

The SyncML Client for Windows Phone
is available in a **LITE** version for
contacts sync only.

Sync LITE app is available at the
Windows Phone App Store. It can be
evaluated **30 days for free**.

The SyncML functionality and
performance is the same, also secure
connections using **https** are possible,
but some specific STD or PRO features
are not supported.

Sync LITE does not support multiple
profiles and does not have a log
viewer. However diagnostic logs can be
created and sent to Synthesis.

Sync LITE can't be upgraded to the
STD or PRO version.

Sync LITE does not have a widget (for
syncing from home screen) available.

Sync LITE is a simple and straight-
forward tool for easy use.

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Synthesis SyncML Client for Windows Phone 8 - Page 9/32
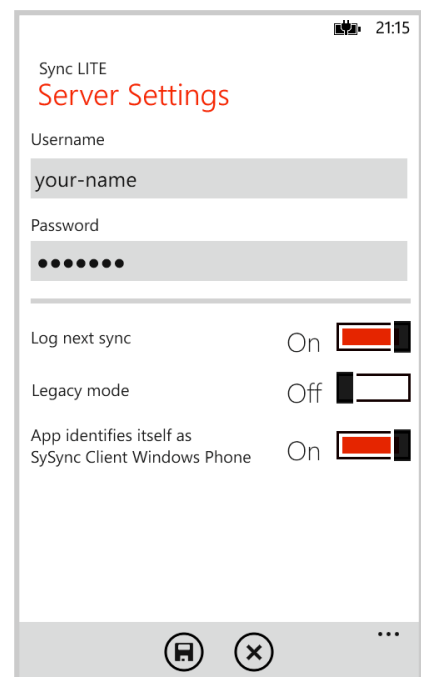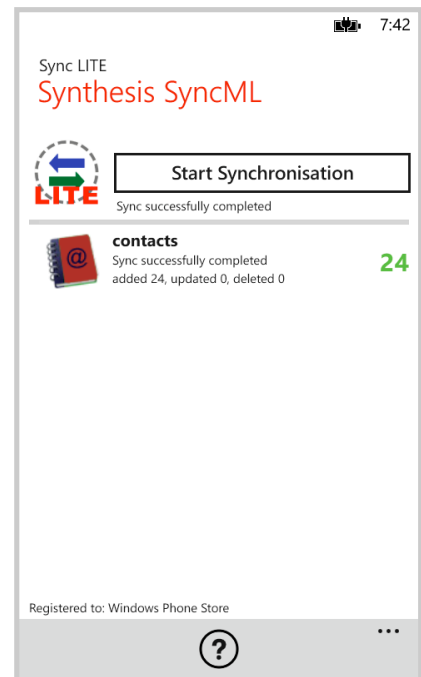
9. Configuration

Switch to the "Settings" screen by tapping on its tab bar icon. This will show the settings screen.

The settings screen looks similar to the main screen, but has a on-off switch for each of the data types supported. The switch is used to include or exclude synchronisation of the respective datatype. To be able to synchronize, at least one switch must be set to "ON".

For the LITE version this button is always on.

To configure the overall settings like the SyncML server URL, user, password etc., tap the arrow button in the "Server Settings" box. To configure settings related to only one of the datatypes (currently only contacts supported), press the arrow for that datatype.
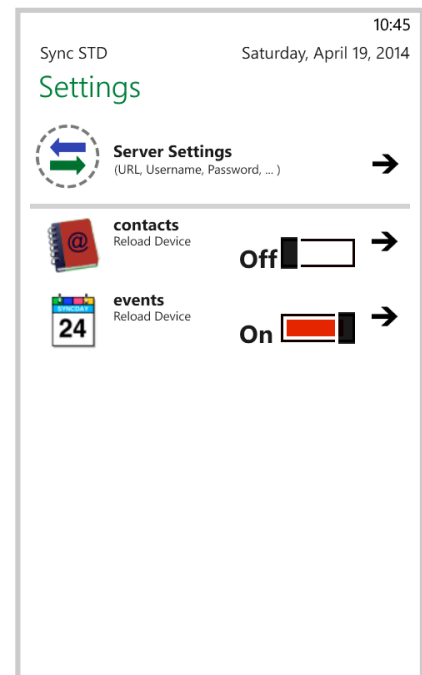
9.1. Server Settings

In the "Server Settings" screen you can set the details of the SyncML server account to use:

- **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 its URL here.

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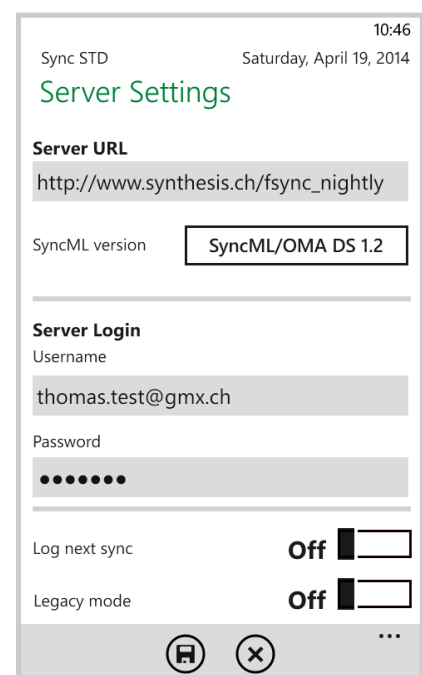
⚠ Note that secure connections with SSL/HTTPS are supported - simply use http**s**:// instead of http://, if the sync server supports it.

⚠ Windows Phone 8 currently offers no possibility to ignore SSL errors (as other platforms do), so it might not be possible to sync with a server using self signed certificates.

- **Username and Password**: 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.

- **Diagnosis and Compatibility:**

  This app contains a mechanism to **log next sync** (and/or sync messages) and send these files to the Synthesis server for inspection. It can be activated here for the next sync session. You can decide at the end of the sync session whether to **send** the files to the **Synthesis web server**, or to **remove** them again.

  If you send a log file to Synthesis and you'd like to get some help, you have to inform Synthesis about time of sync, URL, server user name and a description of your problem.

	10:47
Sync STD	Saturday, April 19, 2014

Server Settings

SyncML version | **SyncML/OMA DS 1.2** |

Server Login
Username

thomas.test@gmx.ch

Password

●●●●●●

Log next sync	**Off**
Legacy mode	**Off**
App identifies itself as SySync Client Windows Phone	**Off**
Display only active datastores	**Off**

- The **legacy mode** is used for cases where the syncML server does not support the newer formats (VCARD 3.0 and/or VCALENDAR 2.0) correctly. E.g. some versions of Alt-N's MDaemon server require this mode for syncing events correctly.

- For compatibility reasons on some SyncML servers, this app identifies as „SySync Client Pocket PC STD" (or PRO) by default. It can be changed to „**SySync Client Windows Phone**".

- **Display only active datastores**: Hides not syncing datastores (e.g. contacts) on the main screen.

9.2. Data Type Settings

To change detail settings for each type of data synchronized, tap on the green arrow in the settings screen for that datatype.

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", ...) which are widely used for SyncML servers, so in many cases you don't need to change these.

```
                                        10:47
Sync STD               Saturday, April 19, 2014

contact-Settings

  @      Sync Mode        Reload Device

Server Path

contacts/2

New server items with non-matching categories will
be synced to:
Internal Phonebook
[Synthesis SyncML]

Active SyncML Contacts

Internal Phonebook
[Synthesis SyncML]                   0 On
```
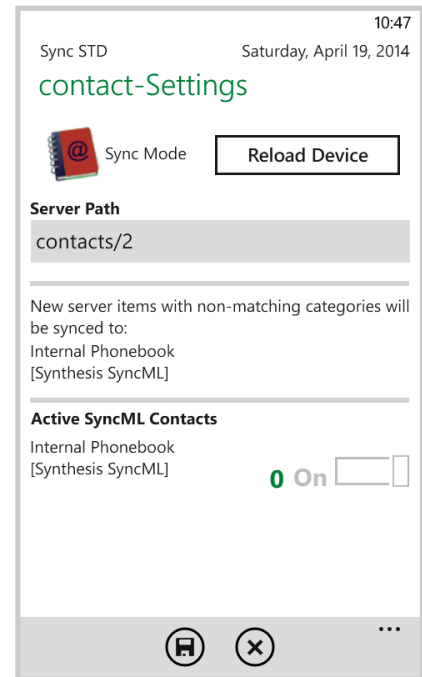
Still, some servers need different names here - please refer to setup instructions from your SyncML provider. For example Oracle's OCS/Beehive uses:

> "./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.

Currently only the internal addressbook is supported to be synced.

- **SyncML Mode**: This determines how to synchronize data: There are 6 possible modes:

  - **Normal Sync:** Normal two-way synchronization. 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 synchronization with a server and to recover from error conditions (like data loss on client or server, prematurely interrupted synchronization etc.), a "Slow Sync" (see below) might be needed and will be automatically performed
    even if sync mode is set to "Normal".
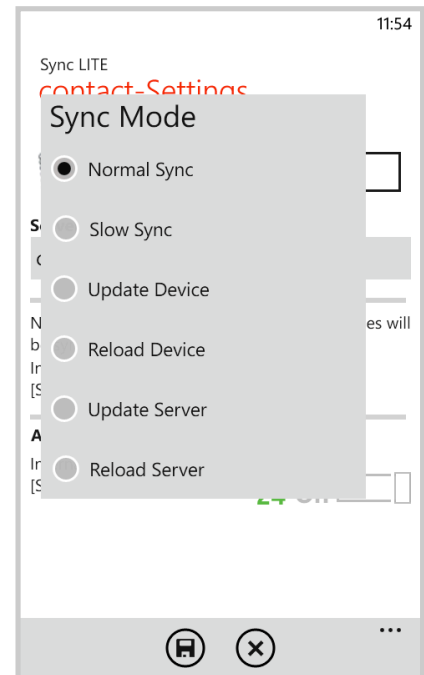
  - **Slow Sync:** Special two-way synchronization needed for the very first synchronization with a server and to recover from error conditions. A "slow sync" is called slow because it includes that all data is sent from the device to the server which can take some time. The server takes an inventory of 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.

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

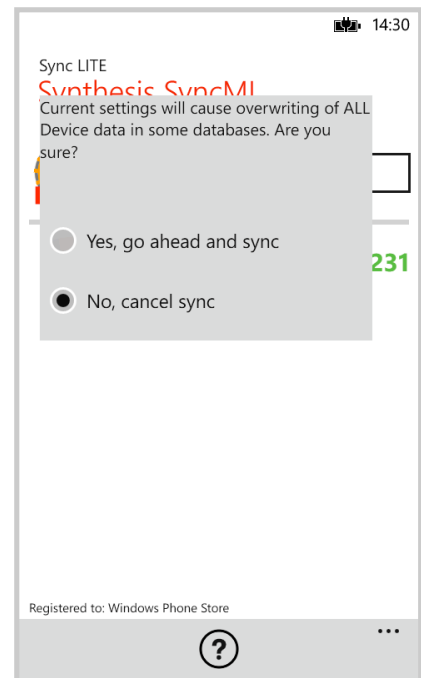 - **Update Device**: This is like "normal" sync, however only the device will be updated with changes from the server - the data on the server will NEVER be changed at all.

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

After a successful „Reload Device" the app **automatically switches back to „Normal Sync"** for all subsequent syncs.

- **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 (the 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** (the server must support "refresh from client mode")
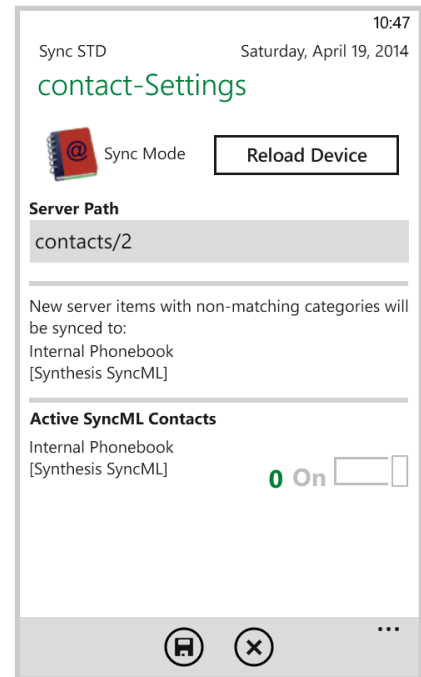
After a successful „Reload Server" the app **automatically switches back to „Normal Sync"** for all subsequent syncs.

9.3. Special **Contacts** options

Contact photos will be sent usually as **PNG** files.

⚠️   JPEG is not a lossless compression format. So pictures can loose quality when being copied several times back and forth. Default therefore is the lossless PNG format.

⚠️   Large photos will be downsized to a maximum width/height of 1000 pixels. The relation width : height will be kept.

Currently only the internal phonebook is supported for sync.

	10:47
Sync STD	Saturday, April 19, 2014

contact-Settings

@   Sync Mode   [Reload Device]

Server Path

contacts/2

New server items with non-matching categories will be synced to:
Internal Phonebook
[Synthesis SyncML]

Active SyncML Contacts

Internal Phonebook
[Synthesis SyncML]   **0 On** ▭

💾 ✖️   ...

9.4. Special **Calendar** options

• **Date Range Limits**: For Calendar entries, you can limit the date range of entries that are synchronized. If activated, only calendar entries not older than the number of days set with "Past days" and not more in the future than set with "Future days" will be synchronized.

⚠️   Not all SyncML server support this extra option. In case you experience problems synchronizing calendar, try disabling the date range option.

	10:48
Sync STD	Saturday, April 19, 2014

events-Settings

24   Sync Mode   [Reload Device]

Server Path

events/2

Date Range Limits   **On** 🔴

Past Days   30

Future Days   60

default termin organizer (phone owner)

"Thomas Test" <thomas.test@gmx.ch>

Oracle status filter   **Off** ▭

💾 ✖️   ...

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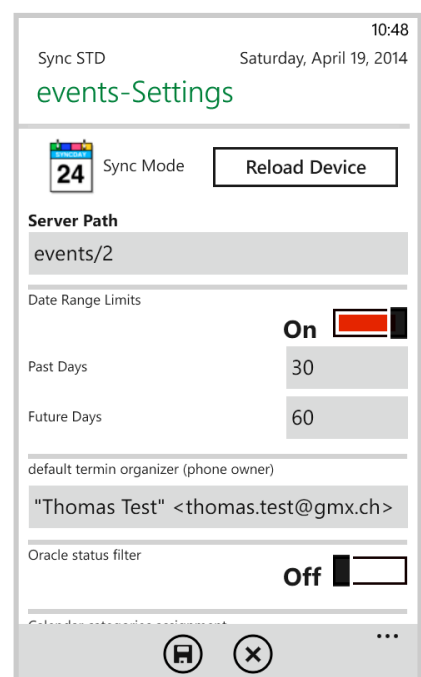
- A **changed organizer** can be added, if required. (most eGroupware Servers make problems, if this field is not set).

- **Oracle Status Filter**: Oracle's Sync Server is storing some status information at the title field. Activating this switch will filter out such irritating texts. The status is still stored locally at the Synthesis app.

10:49

Sync STD   Saturday, April 19, 2014

events-Settings

default termin organizer (phone owner)

"Thomas Test" <thomas.test@gmx.ch>

Oracle status filter   **Off**

Calendar categories assignment   **On**
→

Items with non-matching categories will be synced to: **On**
gugus

Active SyncML Calendars

cal1
(com.sysync)   **102 On**

birthdays
(com.sysync)   **8 On**
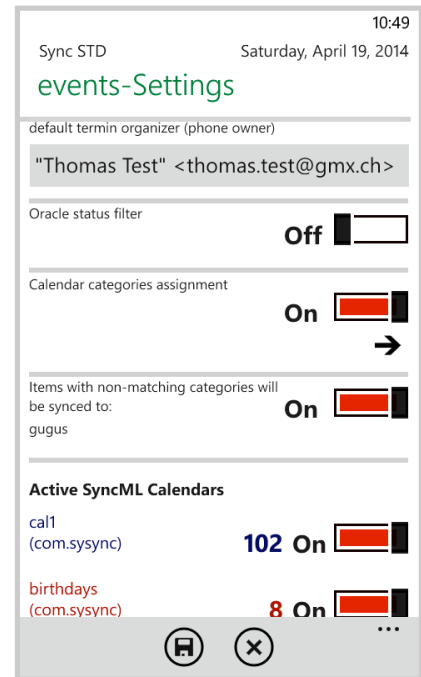
- **Calendar categories assignment**: Windows Phone does not support calendar categories, but a system with multiple calendars. That's why a category can be assigned to each of these calendars. By default this category is „cal=calendarname", but it can be changed freely (particularly the prefix „cal=" can be removed).

  All server entries which can't be assigned will be stored in the chosen default calendar.

  These conditions mandatory:

  - All categories for all calendars must be unique
  - The prefix „cal=" is only allowed with its own calendar name

8:11

Sync STD   Tuesday, April 22, 2014

Categories-Settings

cal1
(com.sysync)   cal=cal1

birthdays
(com.sysync)   cal=birthdays

salary
(com.sysync)   cal=salary

gugus
(com.sysync)   cal=gugus

test7
(com.sysync)   cal=test7

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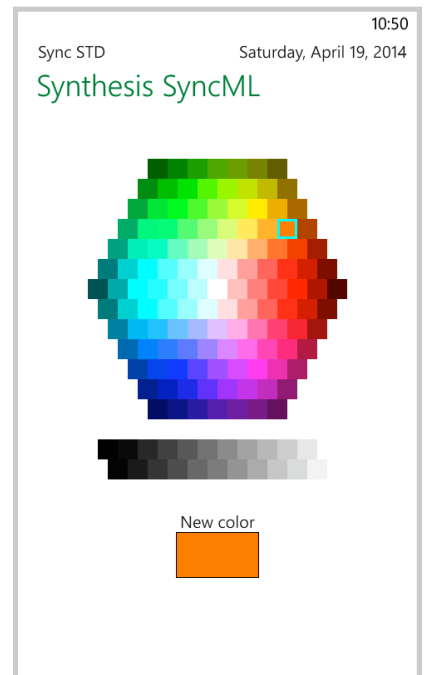Sustainable Software
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- **Create / delete accout:** Own calendars can be created. Calendars can also be deleted again. Taping to an existing calendar name, assigns name and color for a potential new calendar.
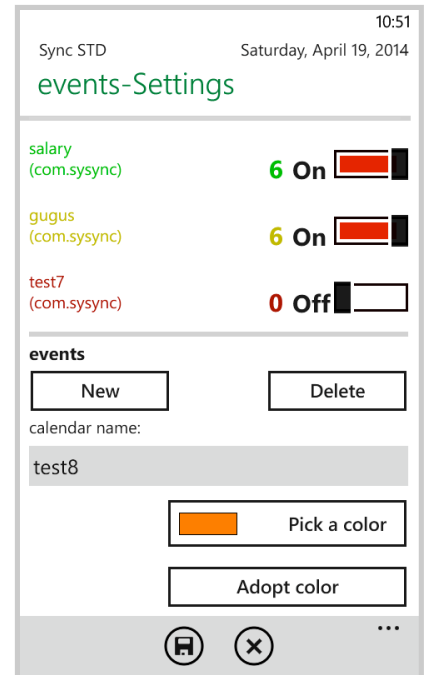
Picking a color can change the color of this calendar.

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Synthesis SyncML Client for Windows Phone 8 - Page 17/32

10. Calendar

As Windows Phone 8.0 has no access to the system's calendar, Synthesis has implemented its own calendar. It consists of a **Month View**, a **Day View** and an **Editor** for the specific events.

For **Windows Phone 8.1** and later, the system's calendar app can be used as well. Only calendars assigned to the Synthesis app can be synced however.

The **Month View** (on the right hand side) colorizes events according to their calendar color. Allday events will be displayed with an additional line.

Wipe to left / right or touch the arrows will change to the last or next month. Long click on the month name changes to th current month. Double tap opens a date selection for a different month.

Tapping to a specific date will open the **Day View**, which shows specific information of the chosen date.

From here, new events can be **added** (+), **edited**, or **deleted** (-).
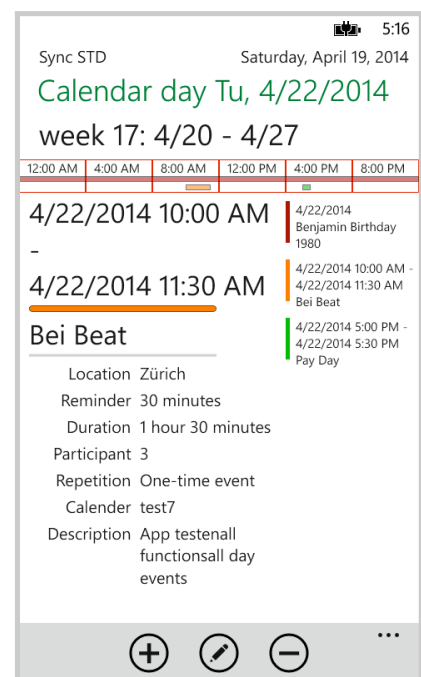
If an event will be edited (or newly created), the event editor opens with its entry fields.

An event once created is assign unchangeable to its calendar.

Besides subject, location begin/end time and description, reminders and reccurence events (including exceptions) and participants of the events can be added.

5:27

Sync STD   Saturday, April 19, 2014

Synthesis SyncML

Calender   test7

Subject

Bei Beat

Location

Zürich

Begin   Duration

4/22/2014   10:00 AM   90 min.

End

4/22/2014   11:30 AM   all day

Description

App testenall functionsall day events

Begin/end time will be displayed always in the device's time zone. Events at different time zone will be converted accordingly.

Alarms (in minutes before start time) will be entered at the alarm manager of the Windows Phone 8 device, and activated at the given time.

5:28

Sync STD   Saturday, April 19, 2014

Synthesis SyncML

Begin   Duration

4/22/2014   10:00 AM   90 min.

End

4/22/2014   11:30 AM   all day

Description

App testenall functionsall day events

Reminder   30 minutes

Repetition   Every weekday (Mo - Fr)

                  ✔ End   5/22/2014

Participant   3 Participant

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The list of participants can be built on request, eisting names of you internal addressbook will be proposed as possible selections.

| | 5:20 |
| Sync STD | Saturday, April 19, 2014 |

Synthesis SyncML

Organizer

"Beat Test" <beat.test@gmx.ch>

Participant

⊖   "Dr. Gross Bildchen Hr." <other@g

⊖   "test birthday" <testbirth@isp.solo

test@mail.ch

append participant

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Server Solutions

Sustainable Software
Concepts

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Synthesis SyncML Client for Windows Phone 8 - Page 20/32

11. Synchronizing

When setup is complete, return to the "synchronize" screen and press the "Start Synchronization" button. This will start a synchronization with the SyncML server as configured.

The device will open a connection to communicate with the SyncML server. It uses the system wide network settings (WiFi, EDGE, 3G or LTE).

⚠ If you get the "connection error" message, this means that the client cannot connect to the server. Please make sure you have network connectivity (WiFi hotspot or cellular network coverage).

⚠ If you get the message "No SyncML Response", 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!
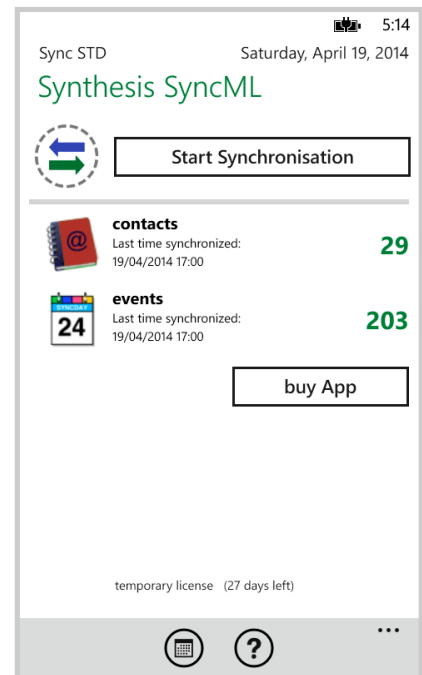
Data will be synchronized. The main screen will show some progress information, such as how many items are sent and received.

⚠ For each data type, synchronization starts with a „reading" and „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 „reading" and „checking" phase, no data is transferred to the server. So even if the "checking" count might be high and take some time - „reading" and „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.

12. Sending debug log files

There is another type of logs, the technical SyncML log files that can be useful to diagnose problems. When a sync is performed with either a **long click** on the sync button (and second line chosen), or "**Log next sync**" switch on in the server settings (the Synthesis logo arrow will change its color from green to red), the Synthesis SyncML engine will produce extended logs during sync and will offer to send these to the web server of Synthesis AG. You have to inform Synthesis by email afterwards about the **problem**, the **server URL**, the server **user name** and the **sync time** that the according log file can be found by Synthesis.

You can also use an html viewer to inspect the log file: Just choose "Keep for later" instead of "Yes, send logs". In this mode the log file (in HTML format) will be copied to the download directory.

13. Suspend & Resume

A synchronization 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 can be time consuming and very annoying.

Fortunately, SyncML DS 1.2 has 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 where 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 WiFi coverage with a device while it is in the middle of a sync), press the "Suspend Sync" 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. During this time, the button text changes to "Abort Sync".

⚠ If you now press the button a **second time**, this will cause a "hard" suspend to occur - 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, or the SyncML application is terminated by pressing the home button. 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.

14. Hidden Options

The Synthesis Client for Windows Phone 8 contains several hidden options which can be activated on request. These settings aren't available as normal switches at the user interface, as unneeded confusion should be avoided.

Switching on these options is always done the same way: At the end of the server's username (or the license text) a string of the form " :ABCD" (space colon ABCD) can be added. Multiple options can be added. Their ordering has no effect. These options are existing just once (not per profile), they will be shown at the end of the registration info of the main menu for reference.

For theses options no support or additional documentation will be provided. Therefore they must be used with great care.

```
:OLDC  // use old contacts datastore   (Android 2.X devices can
          use old contacts DS)
:CVIS  // calendar visible at settings (used when creating screen
          shots on emulator)
:SHOT  // screen shot mode is active
:RHOT  // screen shot mode with red title

:CA10  // use VCALENDAR 1.0 only (switch it off in the config)
:CA20  // use VCALENDAR 2.0 only
:CO21  // use VCARD     2.1 only (switch it off in the config)
:CO30  // use VCARD     3.0 only

:ACCC  // new accounts can be created, create field is visible
:BETA  // check for beta updates
:SMST  // SMS time in readable format
:XML   // use XML encoding for messages
:ACFU  // always check for updates
:ACGP  // always check Google Play
:ADBG  // additional debug info
:CDBG  // additional debug info: console
:STEP  // additional debug info: time steps
:DBAE  // debug all events
:CTPW  // cleartext password (not recommended)
:FILT  // summary filter

:FEXD  //        force exdates
:IEXD  // don't force exdates (is stronger than FEXD)
:FBRK  // forced break testing
:FBRK2 // forced break testing
:CERT  // check Synthesis certificate
:ASSL  // use alternative Synthesis SSL server
:ALTA  // use alternative deviceID
:LITE  // LITE identifies as LITE (default STD)
:STD   // PRO  identifies as STD  (default PRO)
:ANDI  // identifies as Android (also on WP8)
```

SyncML Client &
Server Solutions

Sustainable Software
Concepts

SYNTHESIS AG

```
:PROV  // provisioning debug info
:DUEX  // delete unused exdates
:NCOL  // no button color, just grey
:SESC  // slash escaping for document sync
:EDSP  // disp ds with editors on main screen
:FGS   // SET/GET info
:HASH  // store hash data
:SDIR  // show internal directory contents
:LOGO  // show different logo
:DEXD  // display exdate information for each UpdateField with
:EVTE  // event test module
:R404  // recall at 404 error

// datastore adapters
:VRAW  // include raw device adapter
:VFIL  // include files adapter
:VEXP  // include example adapter

:USR1  // include user defined adapters
:USR2
:USR3
:USR4

:VALL  // switch on all additional adapters
:VDSP  // display   all additional adapters

:NUAG  // no user agent
:NUZI  // no userzone input conversion
:JAZO  // java timezone
:N999  // virtual 999 display (for checking disp sizes)
:MTOK  // market token mode
:SAVD  // *sav.txt display mode
:STAT  // show statistics info at adb logcat
:STIT  // small title mode
:SSRC  // sync source disp
:NCOH  // no contacts hash
:NCO1  // no contacts oneHash
:NCAH  // no calendar hash
:NHDU  // don't handle duplicates
:SUBS  // settings at sub directory
:SYAC  // write to sync account vars
:WDUR  // activate duration
:TRYU  // try update
:NWAR  // no WiFi acquire/release
:NEWE  // use new events datastore
:SLIC  // slice support for documents
:MULO  // multi locale mode (for screenshots)
:ROSA  // tsync purple bar info

// SyncML fields
:NCOC  // no contacts categories (switch on  categories field in
          contacts settings)
:NCAC  // no calendar categories (switch off categories field in
          calendar settings)
:PHOT  // no PHOTO  field
:NOTE  // no NOTES  field
:TRNS  // no TRANSP field
:ALRM  // no ALARM  field
```

```
// Logging
:LALL  // log all, don't ask
:LASK  // log all  and   ask
:LOG   // same as LASK
:LOGM  // plus message logs
```

15. Troubleshooting

This section gives some information about common prob-
lems that might occur with SyncML synchronization.
In addition, especially for more specific problems like
compatibility with certain environments etc., please al-
ways consult first 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 expla-
  nation in next chapter for details.

- **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) un-
  der 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.

- **Sync always takes a long time**: Most probably, the previous syn-
  chronization 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 used
  server. It's also possible that other apps are hampering the Synthesis
  app. E.g. it's known that „Smooth Calendar" is reducing the perform-
  ance of the Synthesis app strongly as it accesses the calendar exten-
  sively.

⚠ 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 loose either modification, the server has kept 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 used server.
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 like iTunes and MobileMe, 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 simple 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.

  Known restrictions:
  - due to the Windows Phone 8 database layout, only a restricted number of phone numbers, e-mail/www/postal addresses can be stored for each contact entry.

<u>Error messages and error codes:</u>

Configuration missing or no datastore enabled

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 which is not available on the device (for example, corrupted contacts or calendar database on the device)

License or demo period expired

This means that the free trial or preview period of the software is over. Please check on our web page if there is an update for the software.

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=servertype").

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

Network error - please check internet connection

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.

If this error occurs in the middle of a synchronization, this is most likely an intermittent problem.

Invalid data from server (wrong URL?)

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

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).

Aborted by user

The synchronization was manually aborted by the user.

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

Server database not found

A database (contacts, events, tasks…) was not found on the server.

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

Local Database 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 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.

Server busy - try later

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

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Concepts

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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
301	Moved permanently
302	Moved temporarily (e.g. for mobile networks with login)
400	Bad request (usually a server compatibility problem)
405	Command not allowed (compatibility problem)
407	Authentication required (no credentials found)
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	Synchronization failed (generally failed due to some server error)

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Sustainable Software
Concepts

SYNTHESIS AG

Synthesis SyncML Client for Windows Phone 8 - Page 30/32

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. **Example:** 10400 is a bad request locally.
20001	Bad or unknown transport protocol
20002	Fatal problem with SyncML encoder/decoder
20003	Cannot open communication
20004	Cannot send data
20005	Cannot receive data
20006	Bad content type (message received with an unknown MIME-type)
20007	Error processing incoming SyncML message (for example invalid XML or WBXML formatting)
20008	Cannot close communication
20009	Transport layer authorisation (e.g. HTTP auth) failed
20010	Error parsing XML config file
20011	Error reading config file
20012	No configuration found at all, or not enough for requested operation (client) - you might have forgotten to enter username or password.
20013	Config file could not be found
20014	License expired or no license found
20015	Internal fatal error
20016	Bad handle
20017	Session aborted by user
20018	Invalid license
20019	Limited trial version
20020	Connection timeout
20021	Connection SSL certificate expired
20022	Connection SSL certificate invalid
20023	incomplete sync session (some datastores failed, some completed)
20025	Out of memory
20026	Connection impossible (e.g. no network available)
20027	Establishing connection failed (e.g. network layer login failure)
20028	element is already installed

SyncML Client &
Server Solutions

Sustainable Software
Concepts

SYNTHESIS AG

Synthesis SyncML Client for Windows Phone 8 - Page 31/32

20029	this build is too new for this license (need upgrading license)
20030	function not implemented
20031	this license code is valid, but not for this product (e.g. STD license used in PRO product, or client license in server product)
20032	Explicitly suspended by user
20033	this build is too old for this SDK/plugin
20034	unknown subsystem
20036	local datastore not ready
20037	session should be restarted from scratch
20038	internal pipe communication problem
20039	buffer too small for requested value
20040	value truncated to fit into field
20041	bad parameter
20042	out of range
20043	external transport failure (no details known in engine)
20044	class not registered
20500..20599	These represent SIG_xxx codes in Linux and Mac OS X versions of the SyncML engine. Unexpected SIG_xxx will generate an error code of 20500+signal_code.
20998	Internal exception (client encountered an internal exception - a possible reason could be extreme shortage of memory in the device)
20999	Undefined internal error
21000...21999	Database plugin module specific error codes

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Server Solutions

Sustainable Software
Concepts

SYNTHESIS AG

16. How to report 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 V2.6.0)

- **Type, model name/number and brand/manufacturer** 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!