SyncML Synchronisation for iOS

SyncML is an open synchronisation standard. Unlike many other synchronisation methods, which are often under control of a single vendor, SyncML is supported by many vendors across many platforms, systems and services. The power of SyncML lies in bringing together a wide variety of different devices and software to share contacts, calendar and other data.

plan44.ch has experience with SyncML synchronisation software dating back to 2001, and today has one of the most mature and feature rich SyncML implementations available.

This manual explains the SyncML features of plan44.ch's iOS apps, which are a the free **SyncML LITE for iOS** for contacts synchronisation, the **SyncML PRO for iOS** for synchronizing the built-in iPhone calendar and the **Tasks+Cal+Sync** with it's own fully SyncML enabled tasks and calendar functionality. For the first time for a mobile device these apps also contain a **full-featured SyncML server**. A mobile server opens completely new usage scenarios which were not possible before.

The plan44.ch SyncML enabled apps for iPhone are available on the AppStore. On a iPhone or a desktop machine with iTunes installed, use the following link to get the apps:

http://itunes.apple.com/us/artist/id299521020

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iPhone, iPad, iPod as a SyncML client

Acting as a SyncML client and accessing a server/service in the internet is todays most common usage for SyncML in mobile devices.

All versions of "SyncML PRO" and "Tasks+Cal+Sync" are equipped with a SyncML client.

See Chapter 2 and subsequent about how to configure and use the SyncML client.

Tasks+Cal+Sync or
SyncML PRO App

Other SyncML
enabled Phones
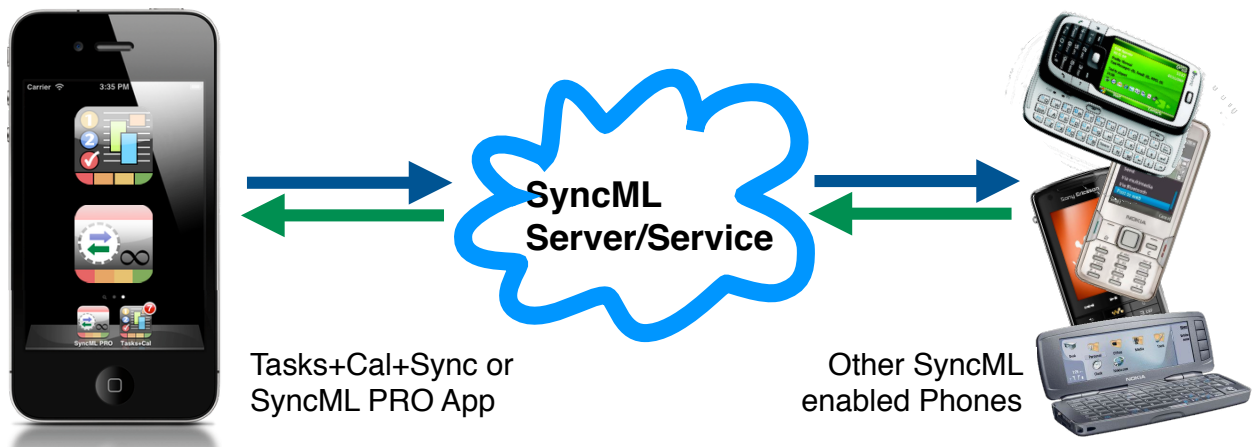
iPhone, iPad, iPod as a SyncML server

Tasks+Cal+Sync and SyncML Client for iOS also have a built-in **SyncML server** which allows completely new synchronisation scenarios:

- **direct synchronisation** between iPhones, iPads or iPod touches, with no need for exposing data to the internet or a third party service.
- direct synchronisation between an iPhone, iPad or iPod touch and any other Wi-Fi and SyncML enabled mobile phone from any vendor.
- direct synchronisation between an iPhone and desktop SyncML client software.

See Chapter "Using the SyncML Server" about how to use the SyncML server and how to configure SyncML clients to use the iPhone based server.

Tasks+Cal+Sync or
SyncML PRO App
**running as
SyncML Server**

iOS devices
or other WiFi and
SyncML enabled phones
or desktop applications
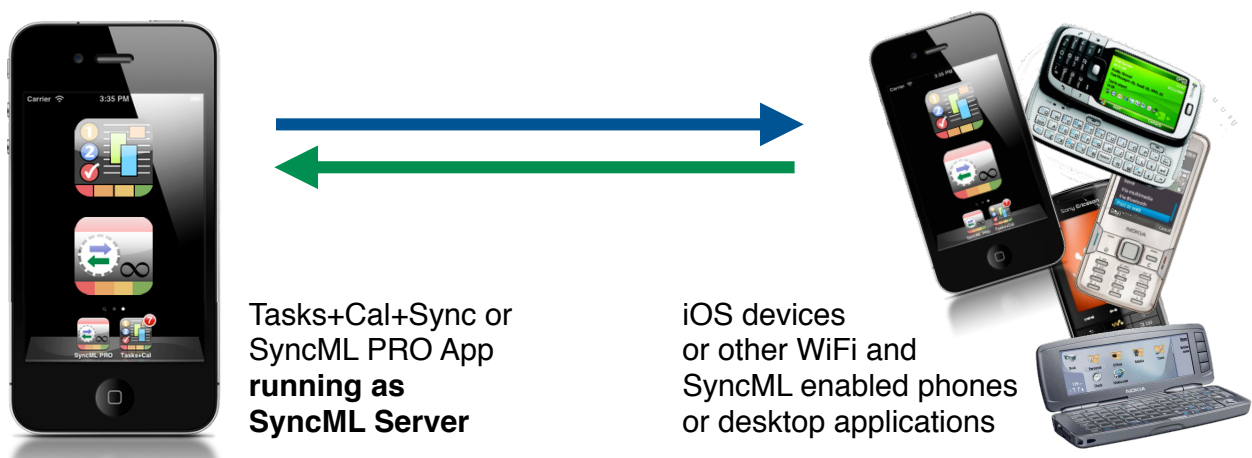
14. Choosing the SyncML service

It is important to understand that the SyncML clients are just one side of a SyncML enabled synchronisation. In order to synchronize, you usualle need a SyncML enabled internet service. Only in case you want strictly local device-to-device sync over WiFi, you can use the built-in SyncML server of Tasks+Cal+Sync and SyncML PRO (see Chapter on "Using the SyncML Server").

⚠️ Please be aware that not many calendar, tasks list and contact managing services support SyncML directly. For example, neither Apple iCal, nor MS Outlook, nor Google Calendar directly support SyncML. However there are third party bridging solutions which can help.

Where to look for SyncML enabled services?

A large and mostly complete list of SyncML enabled software and services can be found in Wikipedia: en.wikipedia.org/wiki/SyncML#SyncML_servers

While this list does not provide a lot of details, it is a good starting point to search for SyncML enabled solutions.

Our SyncML clients work with any standards compliant SyncML server, and have been tested with many products in the market. In particular, plan44.ch is working together with Oracle and Toffa:

- Oracle Beehive (www.oracle.com/beehive) and its predecessor Collaboration Suite (OCS) provides SyncML synchronization as a standard feature. plan44.ch and Synthesis SyncML clients are Oracle's recommended choice.

- AddressBookONE (www.addressbookone.com) GooSync (www.goosync.com) from Toffa are all SyncML based solutions which enable connecting SyncML clients with other, non-SyncML services (like Google Calendar with GooSync and various social networking services with AddressBookONE).

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

15. SyncML service setup parameters

Once you have choosen a SyncML enabled service, you should have the following information which enables you to setup the iPhone SyncML client (or any other SyncML client, for that matter):

- **The SyncML server URL.** Note that this is usually a **different** URL than the one you are using to access the service on the web.
- **The SyncML server login** (username and password). In most cases, this is the same user name and password as required to login to the service via the web. Still, some services might have a different login for sync.
- **The database names**. Each type of data (like contacts, calendar, tasks list) have a name on the server. In many cases, these are "contacts", "events", "tasks" (which are also the default settings). However, please make sure these apply to your SyncML service (e.g. Oracle uses different names).

⚠️ Note that plan44.ch is usually the wrong address to ask for these setup parameters. We don't run the SyncML service and don't have access to service specific support information. So please contact the SyncML service provider to obtain this information, not us.

16. Opening the SyncML client

First, start the SyncML enabled app. Since Version 3.0 of Tasks+Cal +Sync and SyncML PRO, the SyncML synchronisation part of the

application is integrated into the preferences - just press the preferences button in the top left to enter the preferences main screen from where you have quick access to all sync functions.

- The "About..." item at the top is useful to see the version of the program itself and the SyncML engine (important for support). It also contains an active link to the plan44.ch web site and a link for downloading a quick reference PDF.
- "Sync now" starts a synchronisation (but please configure the sync correctly first).
- "SyncML settings" is where you can configure all parameters needed for sync. You can create multiple profiles if you have different sync servers to sync with.
- "Sync Log" shows a summary of past synchronisations including the status (and error message, in case of problems).
- "Start SyncML Server" opens the SyncML server screen, which can be used to sync other devices directly with your iOS device. See chapter 9 for more information about the SyncML server.

⚠️ SyncML LITE is a sync-only app and uses a tab bar at the bottom to choose between the different screens. The functionality is the same as for the other two apps, but it has a slightly different layout:

- The "Synchronize" screen is where you can start a synchronisation and observe its progress and completion.
- The "Settings" is where you can configure the sync parameters.
- The "Profiles" screen allows to manage multiple SyncML services.
- The "Log" screen shows a short summary of the results of past synchronisations.
- The "About" screen is useful to see the version of the program itself and the SyncML engine. It also contains an active link to the plan44.ch web site.
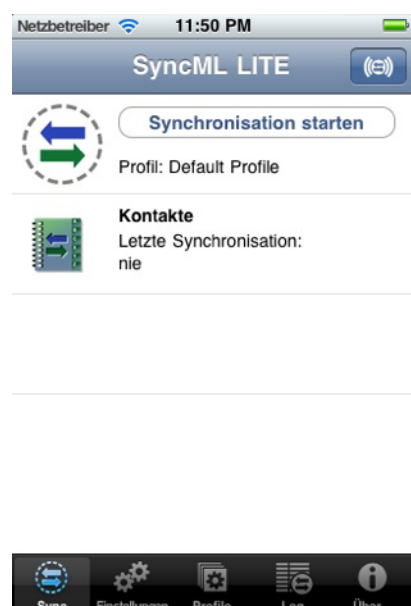
17. SyncML Configuration

Open the "SyncML Settings" from the preferences.

This will show the autosync settings and a list of your SyncML accounts. When using the app for the first time, there is no SyncML account configured yet, so please choose "Add new account..." to create one.

⚠️ In most cases, you'll synchronize with a single SyncML server so you'll only need one SyncML account.

After creating a new account or choosing one of your existing accounts for editing, you'll get to the SyncML Account screen.

The SyncML Account screen has the following options:

- **Profile name**: This is a desciptive label for the account you can choose freely. It is also used to identify the account in the sync logs and in the sync progress displays.

- **Sync this account in autosync and global sync:** If this switch is off, the only way to sync this account is by pressing the "Sync this account now" button (see below). If this switch is on, this account will be included in autosync and will be synchronized when the global "Sync Now" button (in the main preferences screen) is pressed.

  ⚠️ Make sure to enable this only for accounts that were set-up correctly and tested for working ok first in a separate (single account) sync, because tracking down setup problems with multiple accounts involved or syncs happening automatically can be very tricky.

- **Sync this account now**: Pressing this button starts a synchronisation with this account only. This is useful for testing a new account's settings before including it into autosync or global sync.

- **Server settings:** This is where you configure the server URL and login for the account (see details below)

- **Contacts, Tasks, Calendar** (it depends on the app which of these are available). This is where you can enable and configure the synchronisation of the different types of data. Each needs at least the correct "server path" (ask your SyncML server provider).

  ⚠️ Before iOS5 and iCloud, most people just had one single address book or calendar, which was usually automatically selected for synchronisation. With iOS5 and iCloud, this has changed - most iOS devices now have at least local and and iCloud address books and calendars. So **unlike before, you need to select the correct address book or calendar to sync before synchronisation can work!** See details below in paragraph "Special Options".

- **Duplicate Account:** duplicates the current account, in case you want to create a second account with similar settings.

  ⚠️ Avoid using two accounts with the same server and the same login - this will inevitably lead to massive sync confusion! Multiple accounts are fine to sync with more than one account on the same server, or more than a single server.

- **Delete Account:** This is to remove an account from the app's settings. Deleting the account in the app does however in no way modify the actual server account or it's data!

Server Settings

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

- **URL**: Enter the server URL as specified by your SyncML service provider.

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

- **Bonjour:** This is useful to find local SyncML servers (like another iPhone). Note that this might also show other local web servers as well, e.g. printer configuration pages, which are not suitable for sync.

- **SyncML Version:** Usually, this does not need to be changed, because the best SyncML version is negotiated automatically with the server. However, some servers which claim to support a newer SyncML version might not correctly do so - with this setting you can force the app to use a lower SyncML version (e.g. 1.1 instead of 1.2).

  ⚠️ Note that this field shows the negotiated SyncML version after the first successful sync with a server (and not longer reads "automatic").

- **User and Password**: This is how you login to the SyncML service. Normally (but not necessarily!), SyncML user and passwords are the same as for accessing the service via the web.

- **Ignore SSL errors:** This switch allows to communicate with SSL even if the certificate of the server cannot be verified or is expired.

  ⚠️ Note that this option is **potentially dangerous**, and should be only used if you really know why you have to use it (e.g. if you have your own server with self-signed certificates). Otherwise, ignoring SSL errors is a **security risk**!

- **Use Proxy:** If this switch is set to on (default), and the current network connection defines a HTTP proxy, it is used to connect to the SyncML server. To avoid using the proxy, set this switch to off.

- **Use HTTP Authentication:** If your server needs HTTP authentication (only very few do), this switch can be used to reveal secondary user and password fields for HTTP authentication.

- **Log next Sync:** In case of sync problems, switching this on will generate log files of the next sync attempt, and will ask you at the end of the synchronisation to transmit them to plan44.ch for diagnosis.

  ⚠️ Please don't just send logs - in order to diagnose problems please also send an email describing the problem, and let us know the date and time of the sync attempts so we can locate the logs.

  ⚠️ Starting with Tasks+Cal+Sync 2.0.1, you can also use the built-in web server to view the logs from a desktop computer's browser: Just choose "Keep for later" instead of "Yes, send logs", then activate the built-in SyncML server and browse it from the desktop computer (in Safari, you can find it via Bonjour, otherwise use the URL displayed on the server screen). Both iPhone and desktop computer must be logged into the same Wi-Fi network for that.

- **Legacy mode:** For certain servers which do not properly behave according to the SyncML standard, this switch can help to make sync work as it turns on a number of workarounds.

  ⚠️ Only turn on "Legacy mode" in case you experience actual problems with a certain server, because this mode restricts some SyncML operations to older and simpler "legacy" versions that may not have the same functionality than the newer versions.
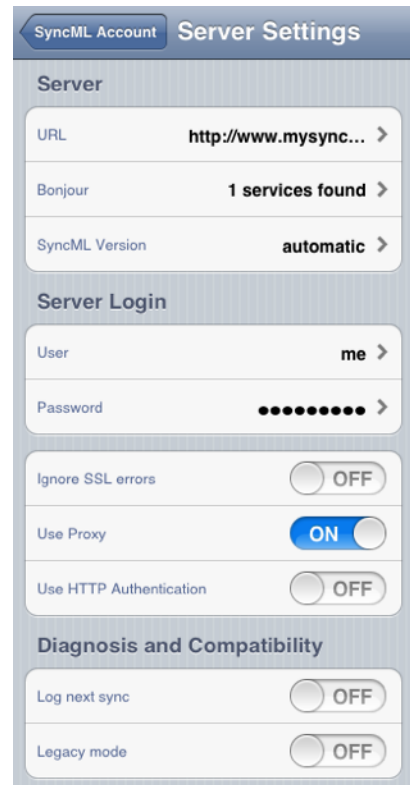
Settings for the different data types

For all data types, the following settings are present:

- **Server Path**: This is how the database is called at the server's end. The app shows default values here ("contacts", "events", ...) 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. See next paragraph for a detailed description of all sync modes. The default setting is "Normal" which means two-way synchronisation.

- **Server Filter** and **Client Filter**: These are advanced settings that can be very useful to restrict data that is sent by the server or the client by certain conditions, such as a match of a certain tag or contacts group. Please refer to the [separate chapter on filters](#) for details, example uses and syntax of the (rather technical) filter expressions.

  ⚠️ Usage of filters is no-trivial. While you can build advanced sync scenarios using filters, it requires a firm conception of the sync mechanisms in order to archieve useful results. Otherwise, toying around with filters is most probably asking for trouble.

  ⚠️ While the SyncML standard does specify the filter mechanism, only very few servers implement it (the iPhone server does). So please use the "server filter" option only with servers that understand filters.
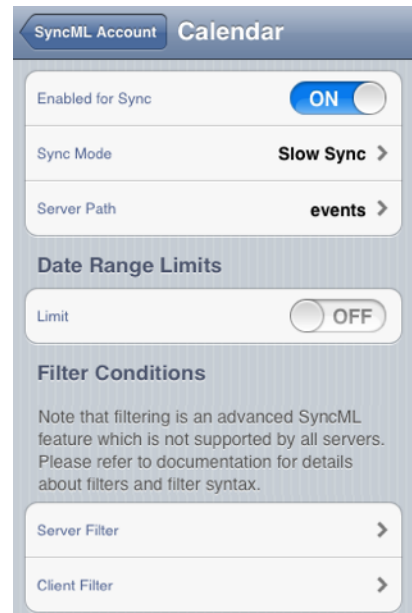
Description of the available Sync Modes

- **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.

  ⚠️ 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.

- **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

These options apply only to some of the datatypes.

- **Contact images scaling:** With iOS devices having higher resolution cameras and displays, contacts images tend to get quite large when created on the iOS device. This has two drawbacks in respect to SyncML: for one transferring large images during sync takes more time, especially in initial or slow syncs. Second, not all SyncML servers can handle large images, which means that a single contact with a large image can prevent successful contacts sync with some servers. The contacts scaling allows to prevent these problems.

  ⚠️ Note that when scaling contact images is enabled, the contact image on your iOS device will not be scaled down directly; only the image sent out is a scaled down version. Still, you might loose the full resolution of the contacts image eventually, because only the scaled down version is stored in your server. So when a contact is modified server-side, or you use "reload device" to restore all your contacts from the server, the contact will have the scaled down version of the image from then on.

- **Contacts source selection:** Starting with iOS 4.0, there can be more than one source for contacts. Before iOS 4, there was a single local address book. With iOS 4, external services such as Exchange, Google, CardDAV can be included as well. With iOS5, iCloud has been added to the possible sources.

  ⚠️ With the upgrade to iOS5, most users automatically got a iCloud address book in addition to the local one. So it is important to check the contacts settings such that the right contacts are actually selected.

- **Where to store new entries:** When new contacts are synced from a SyncML server which do not have a category label that matches one of the contact source names, the SyncML client needs to know which contact source to send these to.

  ⚠️ Note that this contact source must be one of the contact sources selected for synchronisation. Otherwise, sync attempts will fail with the "No data: check settings!" error message.

- **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 servers support the date range option. In case you experience problems synchronizing calendar, try disabling the limit option.

    ⚠️ The date range option is conceptually a special kind of "server filter" and is also transmitted to the server as such (depending on the SyncML version). So in case you are also using server filters *and* this limit option please be aware that these will be combined. See the separate chapter on filtering for details.
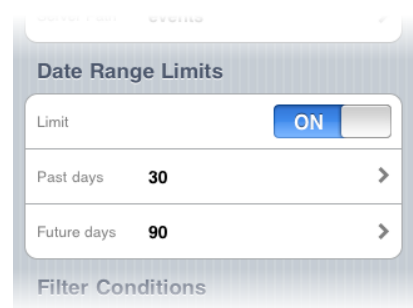
- **Calendars to include in sync:** For the SyncML PRO app, you can select which of the iPhone's calendars should be included in sync. You can either select to include all local calendars (e.g. calendars created and synchronized via iTunes and iCal on the Mac) or individually select the calendars you want to synchronize.

    ⚠️ Note that only calendars which can be modified are available for sync (so read-only subscribed calendars will not appear in the selection menu).

- **Allow creating new calendars from server categories in:** This option appears only on iOS5 and newer. When new entries are synced from a SyncML server which have no category label that matches one of the calendar labels and this option is configured, SyncML PRO will create a new calendar in the specified calendar account. If this option is disabled, the "store new entries in" setting (see below) will apply.

- **Store new entries in:** When new entries are synced from a SyncML server which do not have a category label that matches one of the calendar names, and "allow creating new calendars…" setting (see above) is off, the SyncML client uses the calendar specified to store these entries.

    ⚠️ Note that this calendar must be one of the calendars selected for synchronisation. Otherwise, sync attempts will fail with the "No data: check settings!" error message.

- **Include Tags**: For tasks entries, this switch allows to include the tags from the Tasks+Cal+Sync application as specially labelled task items. This is useful to back up to a SyncML server or when synchronizing with another iPhone with Tasks+Cal+Sync installed.

    ⚠️ After changing this switch, you should do a complete refresh in either direction ("reload server" or "reload device") to avoid mixing tags and tasks.
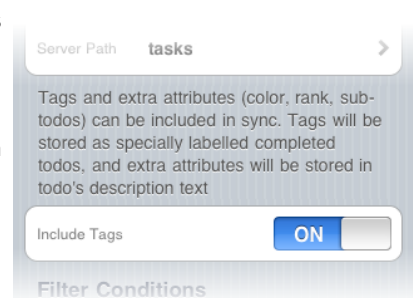
18. Synchronizing

When setup is complete, return to the root level "Preferences" screen and press the "Sync now" button. (For SyncML LITE, switch to the "Synchronize" screen and press the "Start Synchronisation" button).

⚠️ The "Sync now" button starts a sync for all accounts that are configured for sync (see previous chapter). Usually there is only one account configured, but if you have multiple accounts, you can also start a sync for single accounts by opening the account's settings and use the "Sync this account now" button.

This will start a synchronisation 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 or 3G, depending on your iOS device and network availability).

  ⚠️ If you get "connection error" messages, 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 "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 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, when sync is complete, the progress information bar disappears automatically. In case of a problem, the progress information bar remains visible until you tap it. To see details about past synchronisations, have a look at the "Sync Log" screen, which can be opened from the preferences.

⚠️ On devices with iOS 4.0 and multitasking (i.e. iPhone 3GS, iPhone 4/4S) and later, you can exit the app while synchronisation is still running and it will complete in the background. In older iPhone OS versions, no background processing is possible so leaving the app will abort the synchronisation.

⚠️ In Tasks+Cal+Sync and SyncML PRO you can enable more than one SyncML account to be synchronized.

⚠️ In Tasks+Cal+Sync and SyncML PRO, the preferences button reverts to a activity indicator (spinning wheel) while a sync is in progress. It can be tapped to show or hide the sync progress information bar, however, preferences are not accessible during sync.

Viewing the Sync logs

After a completed (or failed) synchronisation, you can view its statistics by going to Preferences and choosing "Sync Log" (in SyncML LITE, just switch the "Log" screen)
This will show the 30 most recent log entries, newest at the top. Using the Trash can button, you can delete all log entries.

⚠️ The log shows a separate entry for each datatype synchronized. So if you have enabled sync for "Contacts" and "Calendar" in the settings and start a sync, you will get 2 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).

⚠️ The "Rejected" counts show how many records that were sent to the server or received by the client were rejected due to an error. Usually, these should be zero. In some cases, a server might not be able to store a certain record, for example due to some particular properties like a large note or photo, and therefore will reject the item. The client will try re-sending the item in the next sync.

Viewing debug logs

There is another type of logs, the technical SyncML log files that can be useful to diagnose problems. When a sync is run with "Log next sync" switch set to on in the server settings, the SyncML engine will produce extended logs during sync and will offer to send these to plan44.ch.

⚠️ Please don't just send logs - in order to diagnose problems please also send an email describing the problem, and let us know the date and time of the sync attempts so we can locate the logs.

Starting with Tasks+Cal+Sync 2.0.1, you can also use the built-in web server to view the logs from a desktop computer's browser: Just choose "Keep for later" instead of "Yes, send logs", then activate the built-in SyncML server and browse it from the desktop computer (in Safari, you can find it via Bonjour, otherwise use the URL displayed on the server screen). Both iPhone and desktop computer must be logged into the same Wi-Fi network for that.

If you are using Tasks+Cal+Sync as a SyncML server, you can also have the server create logs by setting the "Log server session" switch to ON on the server screen. These logs can be viewed in the same way as described above (browse the URL displayed on the server screen from a desktop browser).

19. AutoSync

⚠ Since version 3.0, Tasks+Cal+Sync and SyncML PRO have an "autosync" option. Please note however that **Apple still does not allow sync to happen entirely in the background**.
Therefore, in order to have the apps sync automatically, they **must be opened from time to time** to allow the sync to happen.
While using Tasks+Cal+Sync at all implies it will be opened freqently (to access tasks and calendar), this is not automatically the case for SyncML PRO, because traditionally, SyncML PRO was a sync-only-app and accessing the calendar was done using Apple's calendar app or other third party apps.
That's why SyncML PRO now has inherited the calendar views from Tasks+Cal. With this, SyncML PRO can be used as calendar app and this will guarantee it is opened many times during a day and thus autosync has many opportunities to occur. You can still use other calendar apps in parallel, but if you want autosync, make sure you adopt the habit of using SyncML PRO regularily.

Setting up Autosync

To enable Autosync, just go to preferences, SyncML Settings and set the switch "Automatically sync" to on.

Three additional options will appear:

- **when app is entered:** This sets how often autosync occurs maximally when the app is opened or re-opened. This is to prevent a lot of syncinc when quickly opening and hiding the app in sequence, which often happens when switching between apps.

  ⚠ Note that this does **not define how often the autosync happens in general**. Apple does not allow that the app would sync in a fixed interval in background. So the sync can happen only when opening or closing (see below) the app, and this setting can be used to prevent that to happen too often. You can also prevent autosync at app opening completely by choosing "no" for this setting.

- **when the app is left with local changes:** This sets if and how often maximally autosync occurs when the app is closed (meaning, made disappear from view, like pressing the home button or switching to another app).

  ⚠ Sync at close is for commiting changes to the server you might have made to your data (unlike sync at open, which is meant to make sure you get the most recent data from your SyncML server whenever you open the calendar or tasks).
  Therefore sync at close **only runs if you have actually made any changes since the last sync.** So using the "always" setting here does not cause a lot of syncs. You can also prevent autosync at app closing completely by choosing "no" for this setting.

- **only when WiFi is available:** If you don't want sync to happen over 3G or Edge, but only in WiFi networks, enable this option. This simply suppresses any autosync activity when there is no WiFi available.

⚠ Autosync only syncs SyncML accounts which have "Sync this account in autosync and global sync" set to on.

⚠ Autosync does not happen for first syncs (for safety reasons). You need to do at least one successful manual sync before autosync will happen.

⚠ If one of the accounts included in autosync fails to complete, the remaining accounts will not be synced. Again, this is for safety reasons, to avoid messing up other accounts after a failed sync with one account.
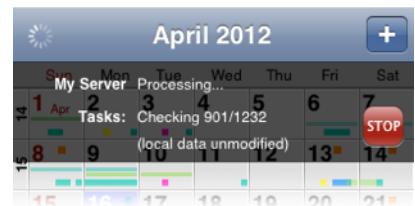
20. Suspend & Resume

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 SyncML engine. But it can work **only with servers that support SyncML DS Version 1.2 and actually have the resume feature implemented.** For example, libsynthesis based servers fully supports Suspend&Resume.

⚠️ To suspend a sync manually (for example because you need to leave WiFi coverage with an iPod touch while it is in the middle of a sync, press the "Stop" 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 this takes some time until the sync actually stops. During this time, the progess text changes to "Suspending...".
If you now press the stop 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. 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, got to the sync mode setting and tap it to show the choices. If you hit "save" in the sync mode choices (event if you don't change the sync mode), this will clear the suspended sync information and ensures that the next sync will start at the beginning with no attempt to resume.

21. Using multiple SyncML accounts

Tasks+Cal+Sync and SyncML PRO allow creating multiple SyncML accounts. This is useful to synchronize a iPhone with more than one server or service. For example, you might want to backup your data to a private server, but still be able to sync with your office server. This is possible by setting up more than one SyncML account in the preferences.

⚠️ SyncML accounts are for using more than one SyncML server. Please **don't create multiple SyncML accounts for the *same* server/user combination** - this will inevitably cause troubles like duplicates or deleted items.

⚠️ With the possibility of multiple SyncML accounts, it becomes also possible to create a so-called **circular sync** situation, which **must be avoided under all circumstances** because a circular sync can severely mess up your data. Please **always make sure you have one single sync path** between any two participants in a sync scenario, and take into account other means of synchronisation, not just SyncML

⚠️ **Especially users of iCloud and SyncML PRO should be aware that their calendar is synchronized to other devices and computers automatically**, and make sure SyncML does not try to sync two devices/computers that are already kept in sync by iCloud, directly or indirectly.
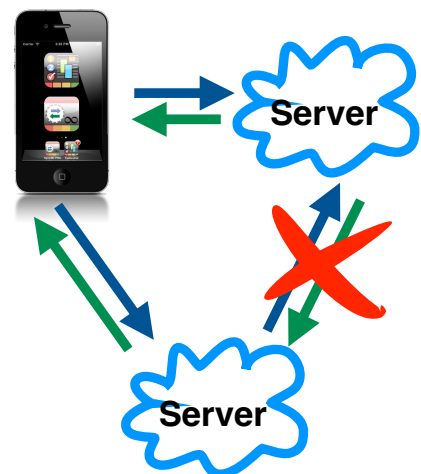
Creating new SyncML accounts

To create a new SyncML account, open Preferences and select "SyncML Settings". Under "SyncML Accounts" use the "Add new account..." button to create a new SyncML account. Alternatively, you can select an existing SyncML account and use the "Duplicate account…" button to create a new account with the same settings.

⚠️ Duplicating an account for the same server/user combination is not recommended (see above), therefore a warning appears and if you choose to duplicate the account, the duplicate will have the user name cleared to avoid accidental use of the same user name.

Synchronizing accounts

Each SyncML account has a "Sync this account now" button to start a synchronisation with only this account.

To automatically include a SyncML account for autosync or global sync (when you press the "Sync now" button in the root level of the preferences), set the "Sync this account in autosync and global sync" switch to on.

Deleting a SyncML account

To delete a profile, scroll down in the SyncML Account settings screen and press the red "Delete Account..." button.

⚠️ Deleting a profile does not delete any data from the associated server or the device, but only the sync settings.

22. Using the SyncML server

Until Tasks+Cal+Sync and SyncML PRO, mobile devices could only play the client role in SyncML. For the first time now Tasks+Cal+Sync and SyncML PRO allow your iOS devices to act as a SyncML server, which means that **other devices can directly sync with it in the local Wi-Fi network** without needing a SyncML service in the internet. This opens completely new sync scenarios, which were not possible before.

To make the iOS device act as a server, simply choose "Start SyncML Server" in the preferences screen.

This opens the server status screen and starts the SyncML server immediately.

⚠️ As long as the server screen is open, SyncML clients in the local network (and even the internet if the local network has no firewall) can potentially access the iPhone server. So please make sure to activate the server only in trustworthy environments.

Now the iPhone based SyncML server can be accessed from other SyncML clients (other iPhones or any other SyncML equipped device, like many mobile phones, PDAs, Netbooks etc.)

To configure a client for accessing the iPhone server, you need to know the following parameters:

- **The SyncML server URL.** This is shown right below the title on the server status screen (like **http://192.168.1.77:8888**). For most SyncML phone clients, you need to enter this URL manually - for Bonjour capable clients (like plan44.ch's SyncML apps) you can select the iPhone server from a list by name (like **iPhone 3G - Tasks+Cal SyncML Server**)

- **The SyncML server login** (username and password). For this local SyncML server, both username and password are "iphone"

- **The database names**. The names of the different data types on the iPhone are:
  - "contacts" for the iPhone address book contacts
  - "events" for the calendar in Tasks+Cal+Sync or the iOS calendar in SyncML PRO
  - "tasks" for the tasks list in Tasks+Cal+Sync
  - "taggedtodo" for the tasks (to-do) list including the tags with all attributes and hierarchy. This usually makes sense only when the client is another Tasks+Cal+Sync equipped iOS device.
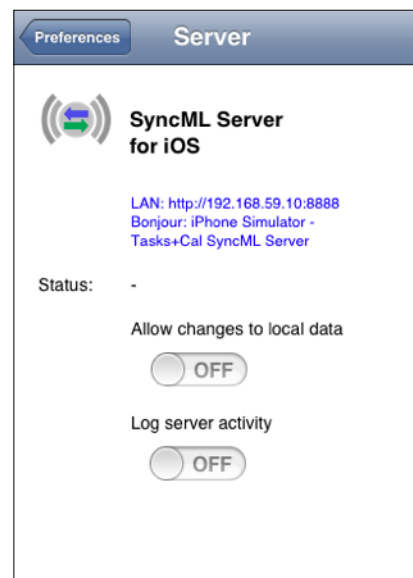
Synchronizing two iOS devices

You can use the built-in server to keep two (or more) iPhones' or iPad's contacts, calendar and task data in sync without any external server or service required:

Tasks+Cal+Sync or
SyncML PRO App
**running as
SyncML Server**

Tasks+Cal+Sync or
SyncML PRO App
**running as
SyncML Client**
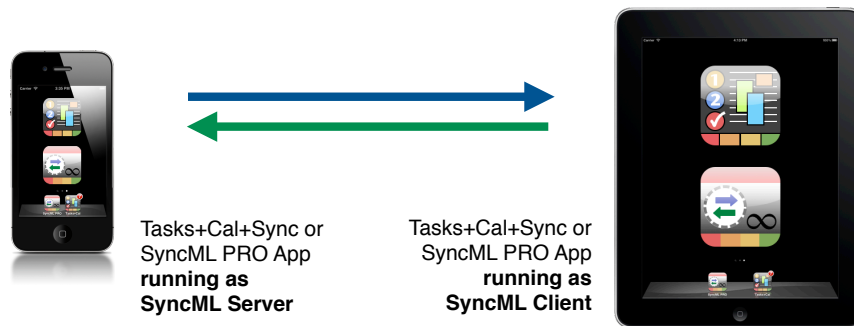
To setup this kind of synchronisation, perform the following steps:

1. Start the SyncML server from within Tasks+Cal+Sync or SyncML PRO in one of the iOS devices.

   ⚠️ For safety reasons, the SyncML server does not allow clients to modify data by default. If you want to update data on the iPhone acting as server, change the "Allow changes to local data" switch to "ON".

2. Setup the other iOS device sync settings as follows (you might want to create a new profile for that, see "Using multiple SyncML accounts" chapter)

   • In the server settings, use the "Bonjour" option to choose the other iOS device's server (make sure both devices are logged into the same Wi-Fi network).

   • Enter "**iphone**" as user name and also "**iphone**" as password.

   • In the settings for the different data types, make sure the path for the address book contacts is "**contacts**", for the calendar "**events**" and for the tasks/to-dos "**taggedtodo**". The latter is impor-tant as it selects not only tasks, but also the tags with all attributes.

   • For the tasks, make sure the "**Include Tags**" switch is set to on.

3. Now you are ready to sync (like with any other SyncML server)

⚠️ After initial sync, don't switch client and server roles! Always use the same device as a server. Otherwise, the sync mecha-nism cannot track the changes correctly and duplicates are likely to occur.

⚠️ Never create a so called "circular sync" - this means if you sync device A to device B, and device A to a server, **never sync device B to the same server as well!**
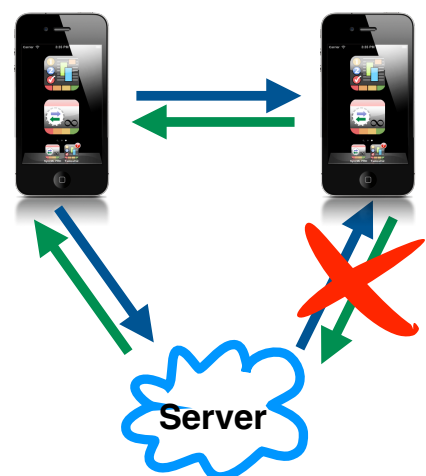
Server

Synchronizing other SyncML devices

The SyncML server built into Tasks+Cal+Sync and SyncML PRO is fully standards compliant, so it will work with any other SyncML enabled device which also conforms to the SyncML standard, like many featurephones and smartphones from nearly all vendors.

Tasks+Cal+Sync or
SyncML PRO App
**running as
SyncML Server**

Any other SycML
and WiFi enabled
device

To setup sync with a SyncML enabled phone (or other device, like a Linux powered netbook with SyncEvolution client for example):

1. Start the SyncML server from within Tasks+Cal+Sync or SyncML PRO in the iOS device.

    ⚠️ For safety reasons, the iOS SyncML server does not allow clients to modify data by default. If you want to update data on the iOS device acting as server, change the "Allow changes to local data" switch to "ON".
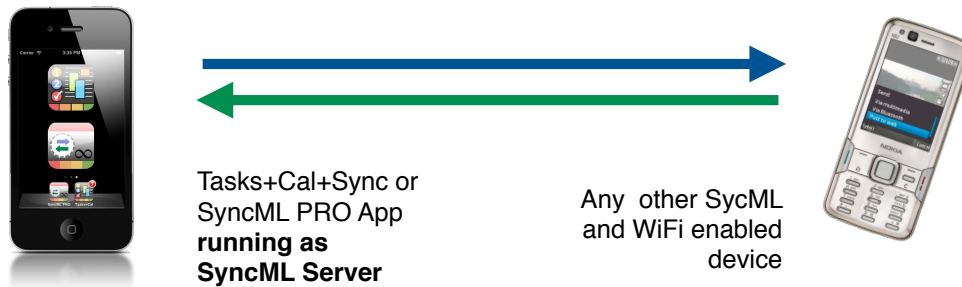
2. Configure the following settings in the device you want to sync

    • Make sure the **device can access the same Wi-Fi network as the iPhone**.

    • As SyncML server URL, enter the URL displayed on the server status screen of the iPhone app (something like **http://192.168.1.42:8888**)

    • Enter "**iphone**" as user name and also "**iphone**" as password.

    • In the settings for the different data types, make sure the path for the address book contacts is "**contacts**", for the calendar "**events**" and for the tasks "**tasks**".

3. Now you are ready to sync the device (like you would sync it with any other SyncML server).

    ⚠️ Never create a so called "circular sync" - this means if you sync the iOS device with another phone, and also sync the iOS device to a server, **never sync the other phone to the same server as well!**

Server
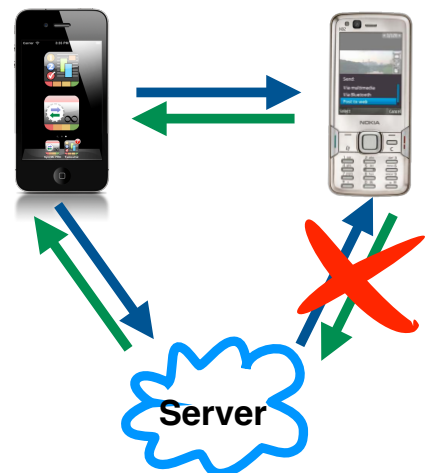
23. Using Filters

⚠️ Be warned - filters are a **rather technical topic**. Filters can help to set up **advanced sync scenarios**, but can also cause hard to diagnose problems if not used with care and some insight into what is actually happening during synchronisation. The following first describes the filter basics.

⚠️ If you are looking for some examples of simple filter usage you can use as-is without diving into technical details, please see the example section at the end of this chapter.

Despite the warning above, the basic mechanism behind filters is quite simple: Filters restrict the data items involved in a synchronisation according to certain criteria. Because there is always a server and a client which both contain data, both can be potentially filtered. This is why there's a "Server Filter" and a "Client Filter" under "Filter Conditions".

Server Filters

A server filter is a condition which restricts the data to be synchronized on the server to a **subset of the entire server data available**. A common case is restricting to a certain category or date range. Often, the reason to use server filters is to reduce the amount of data transferred to and kept on the mobile.

⚠️ Server filters are entered in the client, but then transmitted as-is to the server. As long as the filter term is syntactically correct, the server *should* be able to apply it. However, not many servers are capable of filtering *at all* (but the Tasks+Cal+Sync and SyncML PRO servers of course do support them!), or only with restrictions. Please check with your server provider if and what filter features are supported.

⚠️ The "Date Range Limits" in the calendar settings is also a server filter with a more convenient user interface. It tells the server to filter the calendar by date. Not every server actually supports date ranges. So if you experience sync errors with calendar, make sure to switch off the "Limit" switch, as missing server support for date range could be the problem.

Client Filters

A client filter is a condition which restricts which data present in the iOS device is actually included in a synchronisation with a server. It allows to **expose only a subset of what you have on the iPhone/iPad/iPod** to your SyncML server. For example, you might want to synchronize with your office SyncML server, but exclude the private part of your contacts and calendar from being ever transferred to the office server. Client filters are applied locally in the iPhone application where you define them.

Filter Syntax

The filter syntax as defined by the SyncML standard with a few extensions is exposed as is (with the exception of the "Date Range Limits" filter). We took this decision because filters are not a common feature of many SyncML implementations (altough the standard defines them for a long time now).

The disadvantage is that you'll need to handle a slightly techie-style way to enter filters (funny symbol characters, no arbitrary spacing allowed etc.).

The advantage is that no unexpected wizardry happens between what you enter and what your server will see. So if you get instructions from your server provider what filter expressions are possible, you can type them in exactly that way and it will work.

If you are interested in the full SyncML filter syntax (also called TAF, Target Address Filter in older SyncML versions), you can look it up in the technical manual for libsynthesis which is available as PDF in "doc/SySync_config_reference.pdf" of [the open source repository for libsynthesis on gitorious](#), chapter 7 "Filters", especially 7.2. The following description is a bit simplified to better suit everyday filtering needs.

Filter expressions look like:

```
FIELDNAME=value
```

Where *FIELDNAME* is a the criteria you want to test, and *value* is the literal value you want to compare. The equal sign is the operator which expresses how to compare.

For client filters, and for some servers, the commonly used operator notation (=, <>, >, <, >= etc.) can be used. However, the SyncML standard uses a special way to express operators as shown in the following table:

client filter	server fil-ter	case insensitive client filter	case insensi-tive server filter	meaning
=	&EQ;	^=	&iEQ;	equal
<>	&NE;	^<>	&iNE;	not equal
%	&CON;	^%	&iCON;	contains
$	&NCON;	^$	&iNCON;	does not contain
>	>	^>	&iGT;	greater than
>=	&GE;	^>=	&iGE;	greater or equal
<	<	^<	&iLT;	less than
<=	&LE;	^<=	&iLE;	less or equal

So for maximum SyncML conformance (= maximum chance a server will understand the filter) the example filter, when used as server filter should be written as:

```
FIELDNAME&EQ;value
```

The possible *FIELDNAMEs* and values allowed depends on the data format and the server capabilities. The following table shows some commonly supported fields:

FIELDNAME	possible Values	used for
CATEGORIES	category, tag, group names	all datatypes that support categories
GROUP	same as CATEGORIES	contacts
FAMILY	family (last) name	contacts
GIVEN	first name	contacts
DUE	due date	tasks
STATUS	status string (COMPLETED, IN PROGRESS etc.) or numeric value like for example 0=open 1=completed - depends on implementation.	tasks
CLASS	classification string (PUBLIC, PRIVATE, CONFIDENTIAL) or numeric value like for example 0=public, 1=private, 2=confidential)	all datatypes that support classification

The values are written as is, with no quotes or other special chars:

```
GROUP=Private
```

or for a server filter

```
GROUP&EQ;Private
```

To express "has no value" or "has value", the following notation must be used:

client filter	server filter	meaning
FIELD*=E	FIELD&EQ;&NULL;	field is empty (no value)
FIELD*<>E	FIELD&NE;&NULL;	field is not empty (has value)

For more complex filter conditions, logical operators can be used:

client filter	server filter	meaning
&	&AND; or &	logical AND
|	&OR;	logical OR

These can be used to chain multiple conditions like:

```
FIELD1=Value1|FIELD2=Value2
```

Filter usage examples

Client filter by CATEGORY to keep private data away from corporate server

⚠️ Note that in SyncML PRO, there is a special option to select only some calendars for sync, so you don't need to use filters unless you have a more complicated scenario.

⚠️ Note that for contacts sync under iOS 4 and later, there is a special option to choose which of potentially multiple address books are to be synchronized. You might still want to use filters to restrict the sync to only a certain group *within* one of the address books like shown in this example.

This is a common scenario. You have business contacts and calendar stored in a a corporate SyncML server, and you sync it with your iOS device. But you also want to use Tasks+Cal for your private calendaring needs. Client filters provide a elegant solution to that.

Use **two different tags** in Tasks+Cal **to mark "Home" and "Work" entries** on the iPhone. You can use the predefined green and blue tags, or any of your own choice (name, color).

If you include contacts sync, create a **contact group** (named "Work" in this example) to put your business contacts into. Note that at the time of writing iOS does not allow you to create contact groups directly; however, you don't need to do that because when you set up the filter like described here, the SyncML client will create the "Work" group as soon as it receives contacts from the server.

Now use a **client filter** to include only those entries having the "Work" tag or are in the "Work" contacts group to be included in sync:

```
CATEGORIES:^%Work
```

"%" means *contains* and "^" means *case insensitive* (see paragraph "Filter Syntax" above).

So this tests for "Work" to be *contained* in CATEGORIES. Note that we don't use "=" (*equals*), because a entry might have more than one tag or group (category) attached.

When synchronizing now, only those entries that are marked "Work" will be synchronized - all others will be omitted from the sync and will never be sent to the server.

⚠️ Note the **colon** in the filter expression. It tells the sync engine that **all entries *coming* from the server must get the "Work" category *assigned*** in case it isn't present already. This is very important because the server might not support categories/tags at all, so incoming entries might not have a category at all. The colon ensures they will be put into "Work", so in the next sync, the new record will match the filter condition. Without this, new records from the server would fall out of the sync set.

⚠️ Note that you need to enter the filter for the contacts and calendars separately, if you want the "work only" restriction for both.

Server filter by CATEGORY to synchronize only certain calendars

If you have a server which shows multiple calendars by assigning them different categories, you might want only some calendars to sync to the iPhone.

Assume the server has a calendar for each member of the family, plus one called "common" for events all need to know. Using a filter like:

```
CATEGORIES&iCON;Common&OR;CATEGORIES&iCON;Joe
```

would sync all entries from the "common" calendar plus those from from "Joe".

If the server only supports one category per entry, the "contains" condition might not work as expected, so you can also try:

```
CATEGORIES&EQ;Common&OR;CATEGORIES&EQ;Joe
```

⚠️ The built-in servers of Tasks+Cal+Sync and SyncML PRO (see [Using the SyncML Server](#)) fully support filters. To specifiy server filters with a phone that does not have a settings option for it, just include it in the server path as follows:

```
events?/fi(filter_expression_here)
```

24. 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 the plan44.ch support & FAQ page at http://www.plan44.ch/support.php first.**

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, many caused by interrupted sync sessions.

- **SyncML PRO does not synchronize all calendar fields:** SyncML PRO is restricted to what Apple's calendar API allows, which unfortunately is not full access to all aspects of the calendars. In particular, meeting attendees cannot be synchronized.

  ⚠️ The separate calendar in Tasks+Cal+Sync was specially built to cover the features and fields available in SyncML, so Tasks+Cal+Sync does support meeting attendee sync (and also a number of other fields not available or accessible in the Apple iOS calendars).

- **Synchronization aborts with error code:** See error code explanation below 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) 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 dependencies on past synchronization problems.

- **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 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 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 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.

Error messages and error codes

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

No data: check settings!?

This message is shown when no suitable contact sources or calendars (SyncML PRO) are selected, and/or no calendar/contact source is selected for writing new entries to which is also part of the synchronisation. Please check in the settings, under contacts or calendar that at least one calendar or contact source is selected, and that the place where new entries go to is included in the synchronisation.

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 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.

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 possibly 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 synchronizations 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 than what was entered as "server path" in the settings (see "Data Type Settings" paragraph in the "Configuration" 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 synchronisation right now. Just wait a few minutes and try again.

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 synchronizing contacts, it might be caused by large photos - try reducing the photo size by using the "scale contact images" option.
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 (server compatibility problem, usually with filters)
422	Bad CGI script. This might indicate that the server does not understand the special options like date range restrictions or filters (see "Special Options" in the "SyncML Configuration" chapter and the "Filters" chapter). Try turning off these options and remove server filter expressions if you have set any.
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.
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
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 a 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

Reporting problems

⚠️ Please report problems via the plan44.ch support & FAQ page at
http://www.plan44.ch/support.php. This page automatically looks up keywords as you type in your support request and suggests matching FAQ entries which might provide an immediate solution to your problem. If not, you have the option to send your request to plan44.ch directly.

⚠️ 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 plan44.ch 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.

⚠️ Before reporting a bug or a problem (to the SyncML service provider or to us), please collect the following data:

- Version of the software (please select the "About..." screen to find out the exact version number of the application (like 2.0.0) and the SyncML engine (like 3.4.0.1)
- Type of device (iPod, iPad, iPhone, what generation).
- 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.
- If possible, please re-run a sync which shows the problem with "Log next sync" switch in server settings enabled, and allow logs to be sent to plan44.ch. Please note the date and time of the test sync and report it together with your problem report by email, so we can locate the logs you sent. **Just sending logs without a problem report** via our support page **does not trigger any action on our part.**

Please use the plan44.ch support & FAQ page at http://www.plan44.ch/support.php for reporting problems. Suggestions or ideas for enhancing the product are also welcome!