SyncStudio by HandApps

Synchronization of SQLite, LocalDB & MSSQL with MS SQL Server

SyncStudio allows developers to implement a complete Database Synchronization Solution for their mobile, desktop and web apps in minutes rather than weeks or months. Using the SyncStudio API developers embed full support for synchronization and replication into their offline apps. SyncStudio supports SQLite or MSSQL (including LocalDB or Express) at the client and Microsoft SQL Server on the server. If you are a developer of disconnected apps that need offline data with sync, then try SyncStudio now. We know you will agree that SyncStudio is the fastest, easiest, and least expensive path to creating and deploying a complete database synchronization solution, period.

The Microsoft Sync Framework is complicated and tedious to learn and use. SyncStudio totally insulates the developer from having to know anything about it. Sync configuration, database provisioning, automatic code generation, compilation, IIS Deployment, user management and more is all taken care of. Our users don't even need to know C# or how to use Visual Studio. Plus, SyncStudio has dozens of enhancements and new features that MS SyncFx is lacking. The result is a true multi-platform database sync solution that works out of the box.

Completing the solution, we provide our universal sync client class libraries and the sample code developers need to get their apps synchronizing databases fast.

- True Synchronization/Replication
- Automatic Schema Creation
- Schema Change Synchronization
- Transaction Commit/Rollback
- Sync Class Libraries for multiple platforms and client Databases
- Sync Management Console (SMC)
- Data Filtering
- Automatic Database Provisioning
- Automatic Code Generation
- Automated IIS Deployment
- Reporting and Logging

AN END-TO-END SOLUTION

From server to device and back again your data will flow seamlessly and reliably with minimal investment of time or effort.

INDUSTRY STANDARD

Using MS Sync Framework at our core means that the synchronization/replication technology is proven, dependable, scalable and secure.

UP AND RUNNING FAST

Designed for quick implementation and rapid ROI; data will be synchronizing in minutes or hours not weeks or months.

INTUITIVE INTERFACE

A wizard like point-and-click interface guides you step-by-step. The result is a zero coding sync solution built dynamically by you to your specific needs.

FLEXIBLE, POWERFUL, PAINLESS, AFFORDABLE

There is no better tool available to create the sync capability your app needs or that can delivery as robust and easy a solution at such low cost and exponential return.

SyncStudio is like the Microsoft Sync Framework on steroids. Our SMC (Sync Management Console) guides the user step-by-step through the process. Our unique enhancements to core Sync Framework libraries add critically needed enterprise functionality and make the synchronization process dramatically more reliable and robust.

True Data Synchronization

SyncStudio is a full bi-directional synchronization solution based on the Microsoft Sync Framework. Unlike simple data replication or custom created REST web services; SyncStudio only exchanges new and altered records between the client and the server. This means both databases are maintained in a synchronized state with only the minimum needed bytes flowing back and forth. SyncStudio renders custom or home-built sync and custom data transfer code completely unnecessary. Change tracking is handled automatically on the server side and at the client the developer's application has full control to flag records that have been changed, created or deleted so that SyncStudio knows what to do.

Automatic Schema Creation

The first time a SyncStudio powered app synchronizes the database schema will be downloaded from the server so the client-side database is created automatically. This local DB file will be complete with all the tables, fields and indexes that were defined at the server and published for sync. If the client side is using SQLite, then any server side field types that are not supported are automatically translated to the most compatible equivalent.

During subsequent synchronizations SyncStudio will always validate the local database schema against the server. If any schema changes are detected they are automatically applied.

Schema Change Synchronization

Database structures are not static once created. They change over time as new features are added to a solution or due to customer requested modifications. Pushing these schema changes out to 10's or 1000's of occasionally connect client devices has always been a nightmare; until now.

SyncStudio delivers Database Schema synchronization out of the box. Any changes made to the database structures at the server will be automatically propagated to all the clients the next time they synchronize. Best of all, these schema changes do not break the synchronization or force the user to lose un-synced data. Tables and fields can be added as needed to the App and these changes seamlessly flow to the devices when they connect. This feature alone will substantially lower the maintenance and upgrade effort required to support a mobile database application.

Large Databases Live Here

SyncStudio was built for mobile database synchronization. It fully understands the physical memory constraints of mobile environments and how to deal with them. By properly managing memory usage SyncStudio can easily sync large databases with tens or even hundreds of thousands of records.

Transaction Commit/Rollback

SyncStudio has full transactional support at the Sync *session* level (across multiple transmission batches) —all data changes will be applied under a single transaction, which will either succeed or fail.

Some synchronization solutions ONLY implement commit/roll-back at the *batch* level. Consequently, any errors during a multi-batch synchronization could leave the databases in a corrupted state. This won't happen with SyncStudio.

Universal Sync Client Class Libraries (USCCL)

The SyncStudio solution includes a device side universal synchronization client in the form of a class library (.JAR, .DLL). Any developer that wants to build database synchronization directly into their application would add the appropriate class library to their solution.

Once incorporated our USCCL handles all aspects of the synchronization and frees the developer to focus on building his app.

Stand-Alone Sync Client

SyncStudio also includes free apps that can be used as a stand-alone synchronization utility. Rather than adding our Class Library into their application a developer can choose to use this stand-alone sync client and leave his app untouched. Also, we provide source code to our stand-alone app so the developer could use it as a starting point for adding sync features into his solution.

With this approach the total client-side development effort using our free sample sync client is also zero.

The SyncStudio SMC

The SyncStudio SMC (Sync Management Console) is the Windows application where the developer creates the synchronization project. Here is where they specify the tables and fields to sync with the database on the client devices. They can set sync direction, conflict resolution, filters and user access privileges. The SMC is an extremely easy to use (wizard like) tool that guides the developer step-by-step through the process. Its features include automated database provisioning, automated code generation and compilation of custom sync component library and automated deployment to IIS.

Sync Schema Configuration

The SyncStudio SMC allows the developer to specifically select which tables and fields he wants to sync with the device. He also has full control (without programming) to define the direction in which data will flow and how conflicts will be handled. The ability to enable data filtering on a table by table basis is also available.

Data Filtering

SyncStudio supports both simple and complex data filtering. Developers and system admins can control which records are synced to each device on a table-by-table basis.

Automatic Database Provisioning

The SyncStudio SMC automatically handles the provisioning (and de-provisioning) of the server side SQL database; making all the changes necessary for synchronization to work. The developer simply chooses the tables and fields he wants to sync with SQLite and we take care of the rest. All needed and appropriate tracking tables, triggers and other objects are added to the selected SQL DB automatically.

Automatic Code Generation

The SyncStudio SMC will automatically generate and compile the .NET code for a custom WPF Synchronization Web Service. The result is a ready to go .NET .DLL that is specific to the selections of tables and fields made by the developer. Once this uniquely created .DLL is deployed to IIS everything is ready to start synchronizing data. With the SyncStudio SMC developers have absolutely ZERO custom coding on the server-side.

Automated IIS Deployment

The SyncStudio SMC will automatically deploy the sync project to IIS. The developer simply chooses the folder were the various files will be copied to and presses one button. IIS is then configured with the appropriate virtual folder, application pool, etc. to enable synchronization.

Reporting and Logging

SyncStudio has a full synchronization logging feature, both at the client and the server. Using the Reporting features in the SMC the developer or system admin can review sync stats and other info.

Free Trial

An evaluation version of SyncStudio is available for download from our website.

Please visit:

http://www.dbsyncstudio.com/dwnld/

System Requirements

- Microsoft SQL Server 2008 R2 or above
  - **Including Microsoft SQL Express**
- Windows 7, Windows 8.1, Windows 10 or Windows Server 2008/2012/2016 at the server
- Android 2.33 (Gingerbread, API Level 10) or later on the device
- Windows 7, 8.1 or 10 if client is Windows
- Windows CE or Windows Mobile 6.5
- Universal Windows is also supported
- MS Sync Framework 2.1
- MS Internet Information Server (IIS 7+)
- MS Visual Studio 2010+
  (Full, Express Web or Integrated Shell)