



Synchronization HOW it works Training Guide

Understanding the Synchronization Process

Synchronization Overview

- Changes can be made independently to a record that resides on both the network database and remote databases.
- Synchronization provides a mechanism for aligning the remote databases and network database.
- The Synchronization Server is the software that manages synchronization.

Synchronization Server is necessary when:

- Your company has numerous remote users that cannot, by convenience or design, be connected to a central computing environment (i.e. a wide area network or on-line system).
 - Changes made to personal sets of data quickly cause a divergence between the information on their computers and that of the Workgroup Server, or home office.
 - Your company would like to utilize the SalesLogix Agents to perform automatic processing of SQL or VBA scripts.
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Site Codes

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- Each SalesLogix user, Synchronization Server, Remote Office Synchronization Server and the Workgroup Administrator is assigned a unique four-character site code.
 - The users' site code is recorded in their SalesLogix.key file located in c:\Program Files\SalesLogix the first time the user logs into SalesLogix. (This is a system/hidden file and should not be altered.)
 - To synchronize properly, the remote user should be using a PC that contains their corresponding site code and remote database.
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Transaction Exchange Files

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- As remote users modify their database, changes are simultaneously collected in a Transaction Exchange file (TEF). Workgroup users modify the network database directly; however, their changes are logged in the WGLOG.
 - A TEF is a binary transaction file with a name that is made up of a source site code (determined from the local SalesLogix.key file), dash, index number, dot and the target site code.

XXXX - XXXXXXXXXXXXXXXXX . XXXX

Source	Sequentially	Target
Site	Assigned	Site
Code	Number	Code

- Each transaction in the file represents the date and time of the change and the values of the record before and after the change.
 - Synchronization is the process that collects the Transaction Exchange files and applies the changes to the remote and network database.
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Remote User Paths and Files

A series of directories store the files that support synchronization. The following lists the synchronization directories and files and how they are used.

Each directory or file is automatically created in the Sync directory in the SalesLogix application path that was specified upon installation.

For example: *C:\Program Files\SalesLogix\sync*

- **Outfiles** - Stores transaction exchange files to send to the Sync Server.
 - **Infiles** - Stores transaction exchange files received from the Sync Server.
 - **Archives** - Stores the archived transaction exchange files after they are sent to the Sync Server.
 - **Documents** - Stores the contact, account or opportunity file attachments. (This folder is located in the SalesLogix folder.)
 - **Library** - Stores the Library files received from the Sync Server.
 - **Syncerror.txt** - Stores errors created by synchronization.
 - **Whatsnew.tlg** - Stores the What's New information from synchronization. (This file is located in the SalesLogix folder.)
 - **SyncClient.exe** - Executes client synchronization. (This file is located in the SalesLogix folder.)
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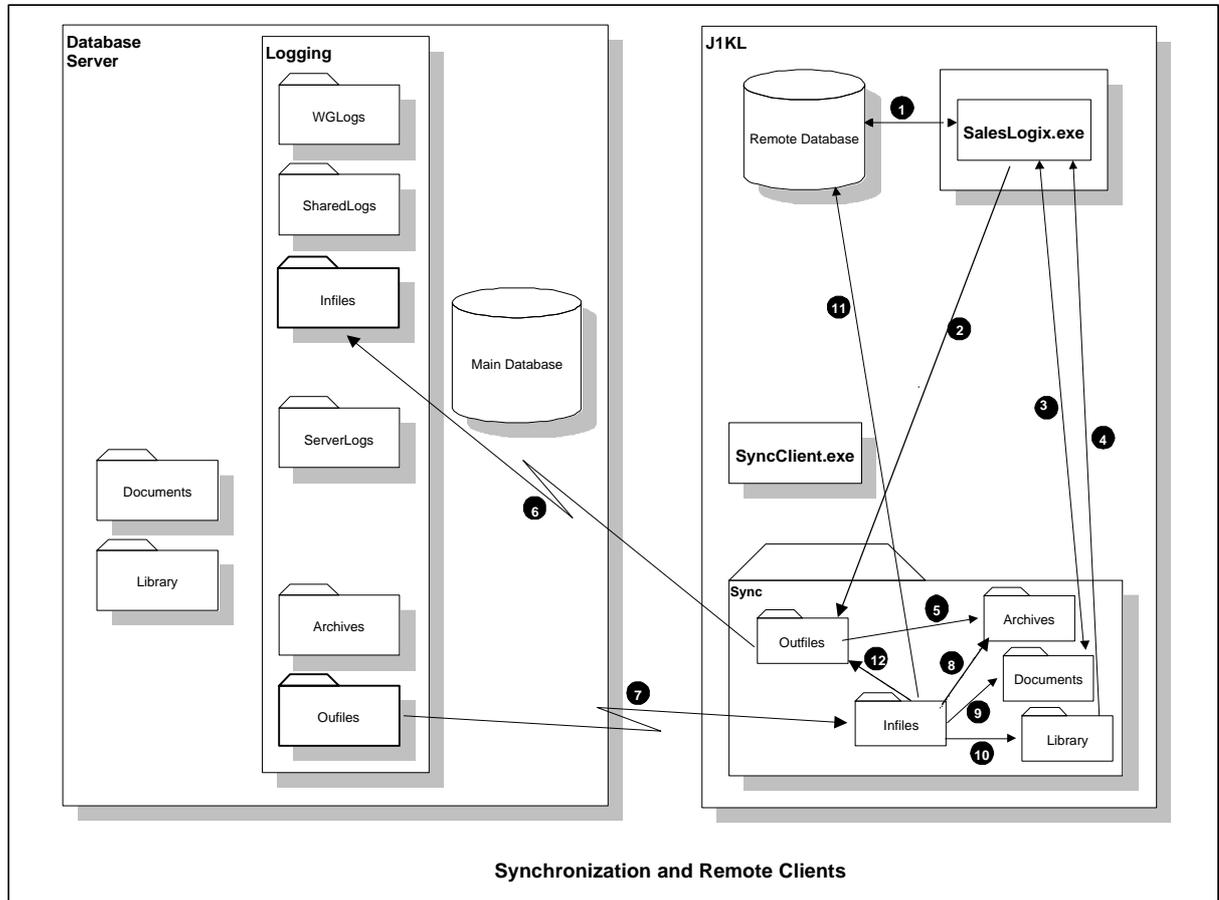
Synchronization Paths and Files

The following Sync Server synchronization directories and files are stored in a specified-shared path.

For example: \\servername\Logging

- **Outfiles** - Stores transaction exchange files to send to Remote Clients.
 - **Infiles** - Stores transaction exchange files received from Remote Clients.
 - **Archives** - Stores the archived transaction exchange files that were sent to the Remote Clients.
 - **KeyFiles** - Stores backup versions of the SalesLogix.key file for the remote users and sync server.
 - **SharedLogs** - Stores the transaction exchange files created by other sync servers. This is only populated if there is more than one sync server.
 - **ServerLogs** - Stores the transaction exchange from the last synchronization cycle. These logs are named with the date of the synchronization followed by a sequential number. For example, 97063021.log.
 - **WGLogs** - Stores the transaction exchange file created by workgroup users.
 - **Syncerrors.txt** - Stores errors created by the Remote Client and the Synchronization Server.
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Remote Client

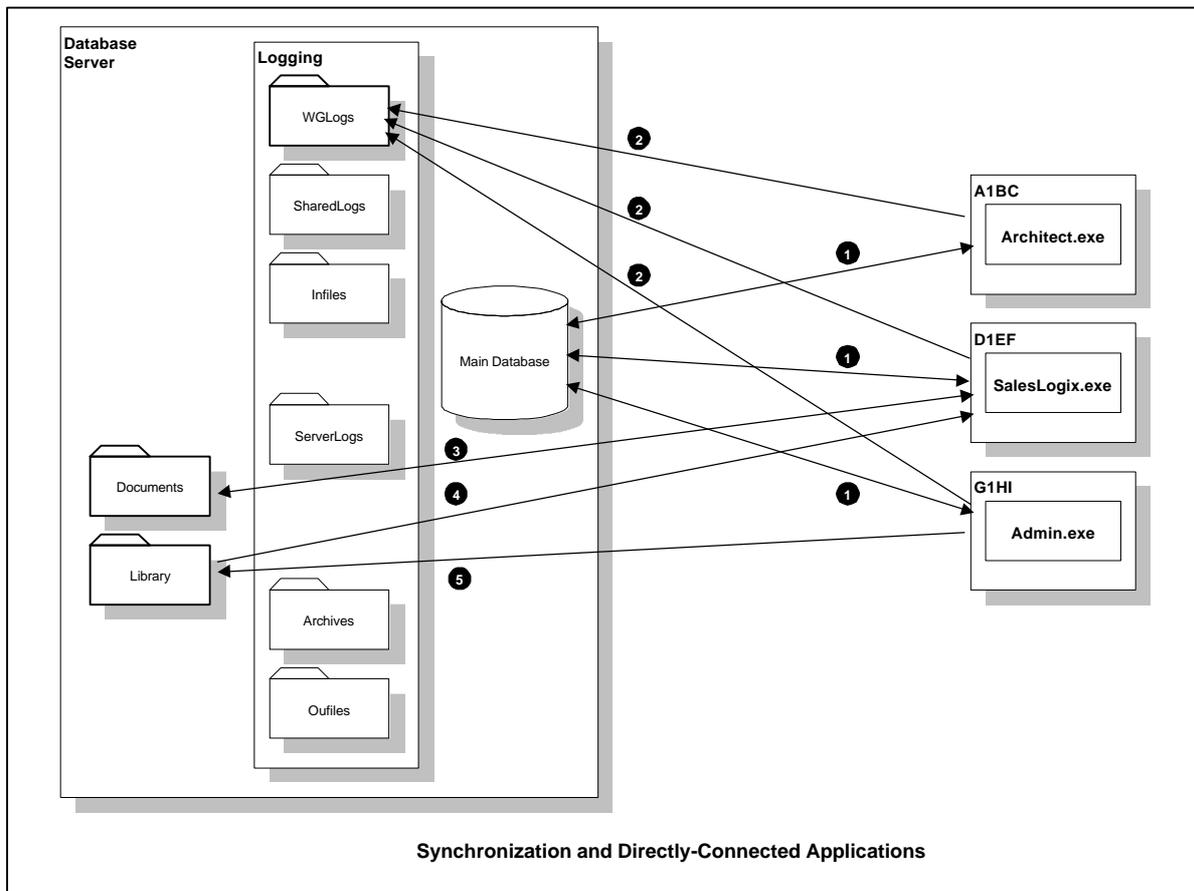


1. Remote users may insert, update or delete calls to their database.
2. For each change, a record is written to a Transaction Exchange files (TEFs) located in the application path \SYNC\OUTFILES folder. The record represents changes made to the database at the field or record level.
3. Remote users create, view, modify and delete attached files.
4. Remote users view and request Sales Library files.
5. Remote user establishes a connection and initiates synchronization, running the Sync Client. The TEFs are compressed and copied to the ARCHIVES folder.
6. The TEFs are moved to the Sync Server's INFILES folder.

Note: If the Remote Client cannot connect, the transaction file remains in the application path \SYNC\OUTFILES folder until the next successful connection.

7. The TEFs from the Sync Server OUTFILES folder are copied to INFILES folder on the remote user machine.
 8. Confirmations delete the corresponding TEFs in ARCHIVES for TEFs from previous synchronizations that were applied successfully by the Sync Server.
 9. File attachments are delivered to the DOCUMENTS folder.
 10. Library files are delivered to the LIBRARY folder.
 11. Sync Client applies the TEFs to the Remote user's local database.
 12. Requests to resend TEFs copy the corresponding TEFs from the ARCHIVES to the OUTFILES folder.
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Directly Connected Applications



1. Database changes are made in the Architect. The Workgroup users may insert, update and delete calls to the workgroup database. The Administrator makes database changes in the Workgroup Administrator.
2. Each change is also written to Transaction Exchange Files in the WGLOGS folder.

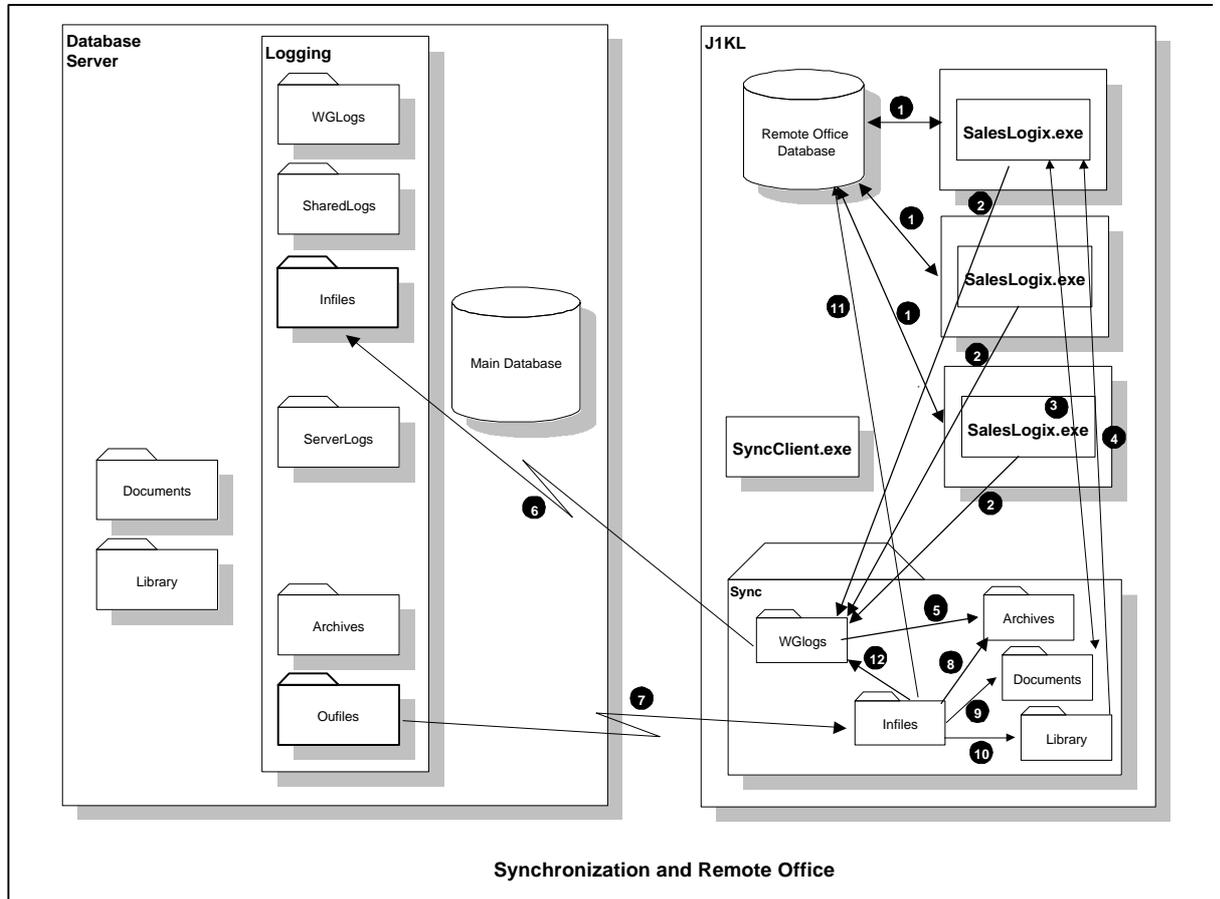
Note: The WGLOGS are closed by the interval set in the Sync Server Profile or when the Workgroup user refreshes their database or logs out.

3. Workgroup users create, view, modify and delete attached files.
 4. Workgroup users view Sales Library files.
 5. The Administrator adds, modifies and deletes library files.
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Remote Office Overview

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- All remote offices must synchronize with the main office (no remote office has the ability to synchronize to another remote office).
 - The remote office only supports one remote sync server, which is included in the remote office license.
 - A remote office only supports Workgroup users. All remote users must synchronize with the main office.
 - The remote office is administered from the main office.
 - The remote office database can be Interbase, MS SQL Server, or Oracle.
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Remote Office



1. Remote office workgroup users may insert, update or delete calls to their remote office database.
2. Each change is also written to Transaction Exchange Files in the WGLOGS folder.

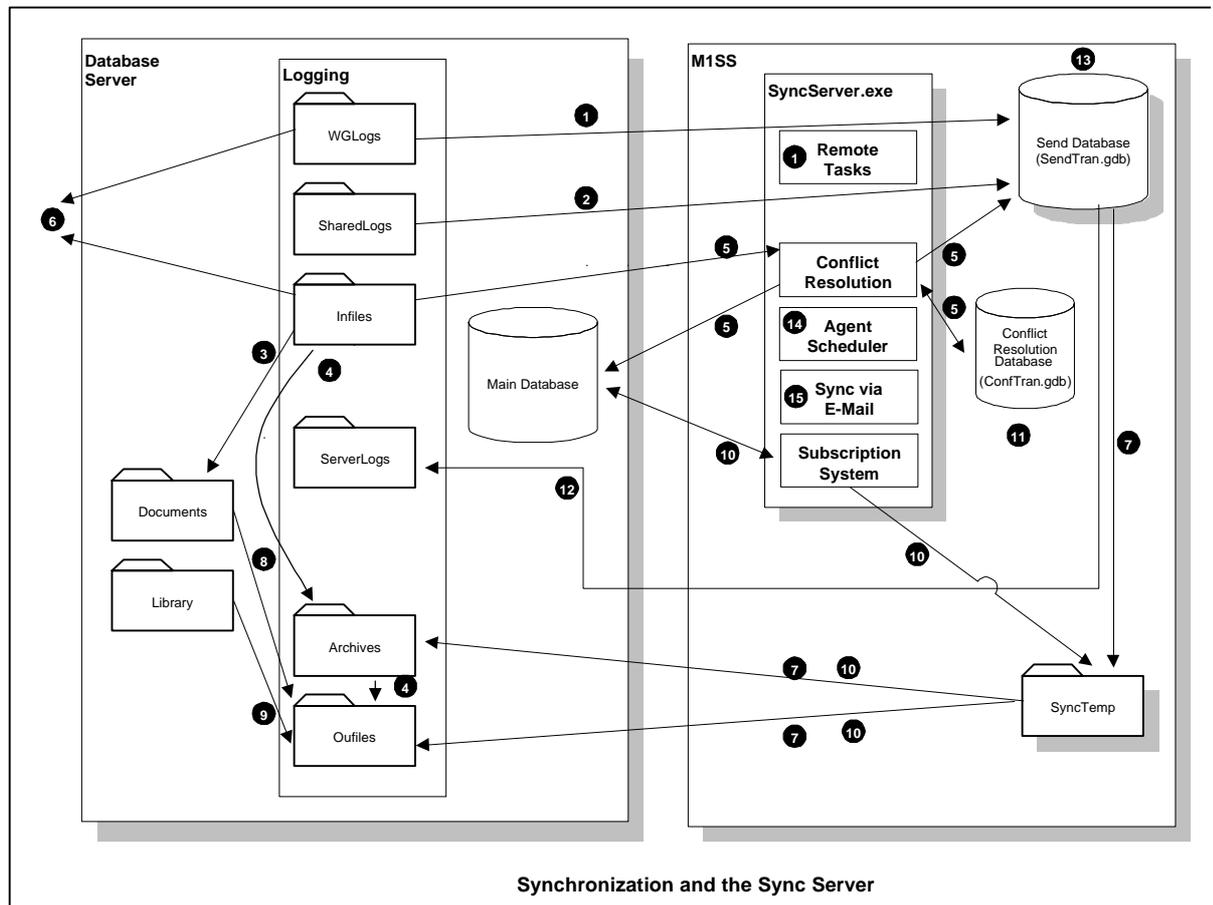
Note: The WGLOGS are closed by the interval set in the Synchronization Server Profile or when the Workgroup user refreshes their database or logs out.

3. Workgroup users create, view, modify and delete attached files.
4. Workgroup users view Sales Library files.
5. The local SyncClient.exe establishes a connection and initiates synchronization. The TEFs are compressed and copied to the ARCHIVES folder.
6. The WGLOGS are moved to the Sync Server's INFILES folder.

Note: If the Remote Office cannot connect, the transaction file remains in the application WGLogs folder until the next successful connection.

7. The TEFs from the Sync Server OUTFILES folder are copied to INFILES folder on the remote office server.
 8. Confirmations delete the corresponding TEFs in ARCHIVES for TEFs from previous synchronizations that were applied successfully by the Sync Server.
 9. File attachments are delivered to the DOCUMENTS folder.
 10. Library files are delivered to the LIBRARY folder.
 11. Sync Client applies the TEFs to the Remote Office database.
 12. Requests to resend TEFs copy the corresponding TEFs from the ARCHIVES to the WGLOGS folder.
 13. Sync Client copies the TEFs to application path\SYNC\ARCHIVES folder then deletes the TEFs from application path\SYNC\WGLOGS folder.
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Synchronization Server



Synchronization occurs at specified intervals set in the Sync Server Profile:

1. The WGLOGS TEFs are copied to the Send Database in the SENDTRAN.GDB on the Sync Server and the WGLOGS are then deleted. The Remote Tasks are sent to the Send Database.
2. The Shared Logs TEFs are copied to the Send Database in the SENDTRAN.GDB on the Sync Server and are then deleted.
3. All new attached files are moved to the network DOCUMENTS folder.
4. Requested TEFs to resend are copied from the ARCHIVES folder to the OUTFILES folder. Confirmed TEFs are deleted from the ARCHIVES folder.
5. APPLICATION OF TEFs: The TEFs are sorted and checked for duplicates. Sync Server applies the TEFs from the INFILES folder and imports into the Send Database in the SENDTRAN.GDB. If a conflict is determined, Sync Server views the Conflict Resolution Database (CONFTRAN.GDB) to determine the winner/loser. The winner's change is applied to the database and recorded in the Send Database in the SENDTRAN.GDB on the Sync Server.
6. The WGlogs and INFILES are copied to the other Sync Servers' SHAREDLOGS folder.
7. The Send Database creates TEFs for each Remote user and Remote Office in the SYNC TEMP folder. The TEFs are compressed and copied to the ARCHIVES and OUTFILES folders.
8. New or updated attached files are compressed and copied to the OUTFILES folder.
9. Requested or Forced-distributed Sales Library documents are compressed and copied to the OUTFILES folder.
10. Subscription rules run for each remote user in the following order:
 - Deleted Rules
 - Regular Subscription Rules
 - Unsubscription Rules
 - Forced Subscription RulesSubscription creates TEFs for each Remote user in the SYNC TEMP folder. The TEFs are compressed and copied to the ARCHIVES and OUTFILES folders.

11. Old transactions in the Conflict Resolution Database (CONFTRAN.GDB) are removed.
 12. The Send Database (SENDTRAN.GDB) is exported to a log, named YYDDMMHH, in the SERVERLOGS folder.
 13. The SENDTRAN.GDB is deleted. A new SENDTRAN.GDB is created from the SYNCSYS32.DAT for the next synchronization.
 14. Any outstanding Agents are executed.
 15. If Synchronization via E-mail is being used, the OUTFILES are transferred to the SMTP post office and incoming TEFs in the SMTP post office are transferred to the INFILES folder.
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