



## Database Synchronization Overview

The following is the overview for data synchronization between Aljex Software and Aljex Software's customer.

### 1. Overview

The synchronization service is implemented in two parts: a morning export and a live sync of individual data records as they are updated in Aljex.

**Morning Sync:** Early in the morning, an export of the customer's data in Aljex is sent via SFTP. There is one .csv file generated per Aljex file. The files are sent early in the day to ensure the customer has a refresh of the previous day's data. The customer will provide Aljex with a hostname, username, password, and directory to upload the files.

Below are the available files to be sent:

- Employees
- Customers
- Carriers
- Loads\*\*\*
- Payments (Accounts Payable)
- Invoicing\*\*\*
- Payments Received (Accounts Receivable)\*\*\*
- Debits\*\*\*
- Credits\*\*\*
- Salesreps
- Quotes\*\*\*
- Payable
- New Purchases\*\*\*

**\*\*\*Note: all records for each Aljex file are sent except for the following:**

Loads – all active loads, plus those created, updated, or with a ship date starting 3 days in the past

Invoicing – records created, updated, or with a ship date/invoice date starting 3 days in the past

Payments Received – records created starting 7 days in the past

Debits – records created starting 7 days in the past

Credits – records created starting 7 days in the past

Quotes – records created starting 7 days in the past

New Purchases – records created starting 7 days in the past

**Live Sync:** Throughout the day as updates are made in Aljex, an HTTP post request sends the changes to the customer's database server. All data changes are sent real-time from Aljex to the customer using a standard HTTP post request.

When signing up for the Aljex data sync, please specify whether you want the morning sync, live sync, or both. Please also specify which files you want sent, if not all.

## 2. Live Sync URL

All synchronization requests will be sent to a URL (hostname) provided to Aljex by the customer. The URL must be in the HTTPS format.

To prevent unauthorized requests from being sent to the customer's database, access should be restricted to Aljex by providing a username and password. If needed, to restrict access even further, Aljex can provide the IP address the live data will be coming from.

## 3. Live Sync Parameter Encoding

All data sent in the POST message body will be in the *application/x-www-form-urlencoded* format as described in the HTML 4.01 Specification W3C Recommendation:

<http://www.w3.org/TR/html4/interact/forms.html#h-17.13.4.1>

## 4. Live Sync Parameters

Each POST request will contain the data for a single record. The synchronization service will not provide a mechanism for creating or updating multiple records with a single request. There are two constant parameters for every synchronization request:

Name	Description
web_sync_table_name	The name of the data table
web_sync_action	The action to be performed on the record

Note: the **web\_sync\_action** will be create, update, or delete.

In addition to the two constant parameters, each request will contain a unique parameter for each field of the record to be synced. The parameter names will match the names of the fields in the **API Name** column of the [Aljex Software Database Synchronization Tables](#).

## 5. Live Sync Example

The below example would create a new record in the customer's database for the table named *employees* with fields *id*, *name*, *email*, *team*, *type*, *phone*, and *status*.

**These parameters would be sent to create a new employee record:**

```
web_sync_table_name=employees  
web_sync_action=create  
id=demo  
name=Bill Smith  
email=bill.smith@aljex.com  
team=4  
type=employee  
phone=7323578700  
status=good
```

**Modifying the phone number and email address of the record could be done using the following parameters:**

```
web_sync_table_name=employees  
web_sync_action=update  
id=demo  
name=Bill Smith  
email=bsmith@aljex.com  
team=4  
type=employee  
phone=7323578777  
status=good
```