

Carrefour Integrated Time & Attendance Management Solution for the Entire Retail Network in Romania

Industry
Retail

Location
Romania

Solution
Time & Attendance

The Challenge

In this case study, our partners Advance S.R.L analyze the requirements for an integrated Time & Attendance-related project for **Carrefour** Romania in the retail industry, currently managing 17.000 employees.

The initial project specifications included implementing a comprehensive T&A system in which:

- Employees can record when they clock in and out, track breaks, and other attendance events on a device. The attendance devices must be accessible to the customer's (Carrefour) local network from any point and at any time. Therefore, the device must include multiple wired and wireless communication methods.
- Resources are used in the employee database in the customer's system and infrastructure.
- The system generates employee attendance reports for subsequent use by the client's Human Resources department.



Our partner

Advance S.R.L., is in Cluj-Napoca , Romania and is part of the Building Equipment Contractors Industry. With more than 120 employees and their own R&D and Project departments , Advance has developed many projects related to the security industry and to the time management sector, making a name for themselves as a complete technology solution provider . **Advance S.R.L.**, a company with deep technical know-how and a remarkable experience matured over the years , has selected ZKTeco among many other manufacturers working in the mentioned business lines.

The Project

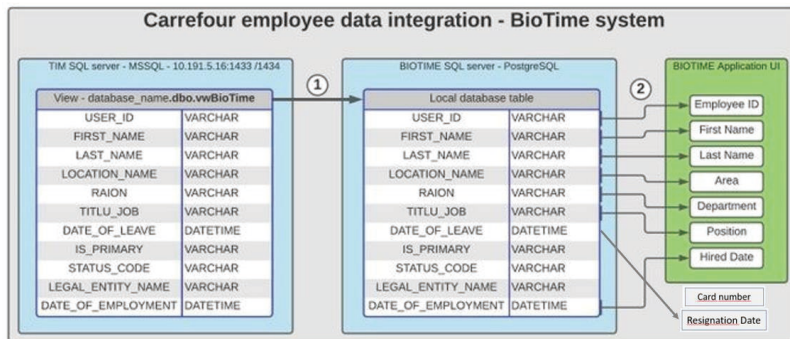
The project's key objective is to grant both effective Time & Attendance management and a seamless user experience integrating ZKTeco platforms. To this end, two main elements were used to develop the solution: **ZKBio Time** (software) and **ZPad Plus** (hardware).

ZKBio Time allows the creation of Middle tables to manage the data created within the MS SQL server (Carrefour) and convert them into a set of values that can be processed and displayed correctly.

Based on the employee's unique key name or **USER_ID** data, ZKBio Time creates the employee's anagraphic sheet and updates the existing sheet details **using a mapping table** such as the one provided below:

Mapping Table

Employee data integration with ZKBioTime



Attendance reports generation



The solution works as follows:

1. It implements a Server connection between BIOTIME POSTGRESQL and MSSQL, performing a data GET whenever deemed necessary by the system administrator.
2. Creates/Updates employees within the T&A system (software and devices), although its inception uses a different protocol.
3. Configuration and automation of recurring tasks: ZKBio Time POSTGRE database consults customer's MS SQL database scheduled tasks.
4. Data is formatted and adapted to ZKBio Time's database with employee privilege integration.
5. The device provides attendance events and punches.



Employee identification



Benefits of the Solution

Replacing the time management system with ZKTeco solutions has greatly reduced operational costs for Carrefour, providing:



A complete and unique software structure



All devices are synchronised and updated



Remote management from anywhere



Customised report generation



Multiple types of verification according to requirements



Flexible and reliable network communications



User-friendly for employees



Highly scalable solution

System Elements

Key aspects taken into account and the main functionalities implemented in the solution.

ZPad Plus

As for the hardware, ZKTeco's **ZPad Plus** is the Time&Attendance device of choice thanks to its interface communication features, flexible power supply, push protocol for real-time software data exchange, infinite customization options (thanks to its Android core) and aesthetic looks. In addition, its dual antenna makes it the ideal device to punch in and out with the currently distributed cards, allowing future optional use of QR codes or fingerprint recognition.



- ZPad Plus can display a personalized interface or company logo on the screen.
- It allows the selection of attendance events via its touch screen (Check IN, Check OUT, and Breaks).
- Wireless communication via WiFi and 4G.
- Registration using different verification systems: fingerprint, card or QR.



ZKBio Time

ZKTeco's ZKBio Time software is the ideal solution for the project requirements; thanks to its native on-premise architecture as well as the possibility to build Middle Tables for data integration.



- Installation and maintenance within the customer's infrastructure (allowing an on-premise architecture).
- Automatic update of employee database every 24 hours, proactively obtained from the company-owned server (located on a different network).
- T&A reports generation that reflects the reports currently used by the customer's HR department.

