GazIntech | Technologies for Effective Growth

KeDR SYSTEM

BRIEF DESCRIPTION OF THE SYSTEM

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1. GENERAL INFORMATION

The Automated System for pass execution, access and security control at a facility (briefly, KeDR System, hereinafter referred to as the "System") is designated for a complex security assurance of separated facilities and geographically distributed groups of facilities.

Main tasks of the System:

- executing access permits (passes) of different types;
- control over access to the perimeter of a facility (facilities) according to the types of passes;
- control over passport & visa documents, including new-generation documents;
- control over access to the territories of the facility pursuant to permitted access areas;
- performing auxiliary functions (protective, the fire alarm system, management of the automatic fire-fighting system, etc.).

KeDR System is built on the basis of a modular technology that allows to separate the level of information provision to users from the level of equipment management and enables to manage actuated equipment of different types and produced by different manufacturers.

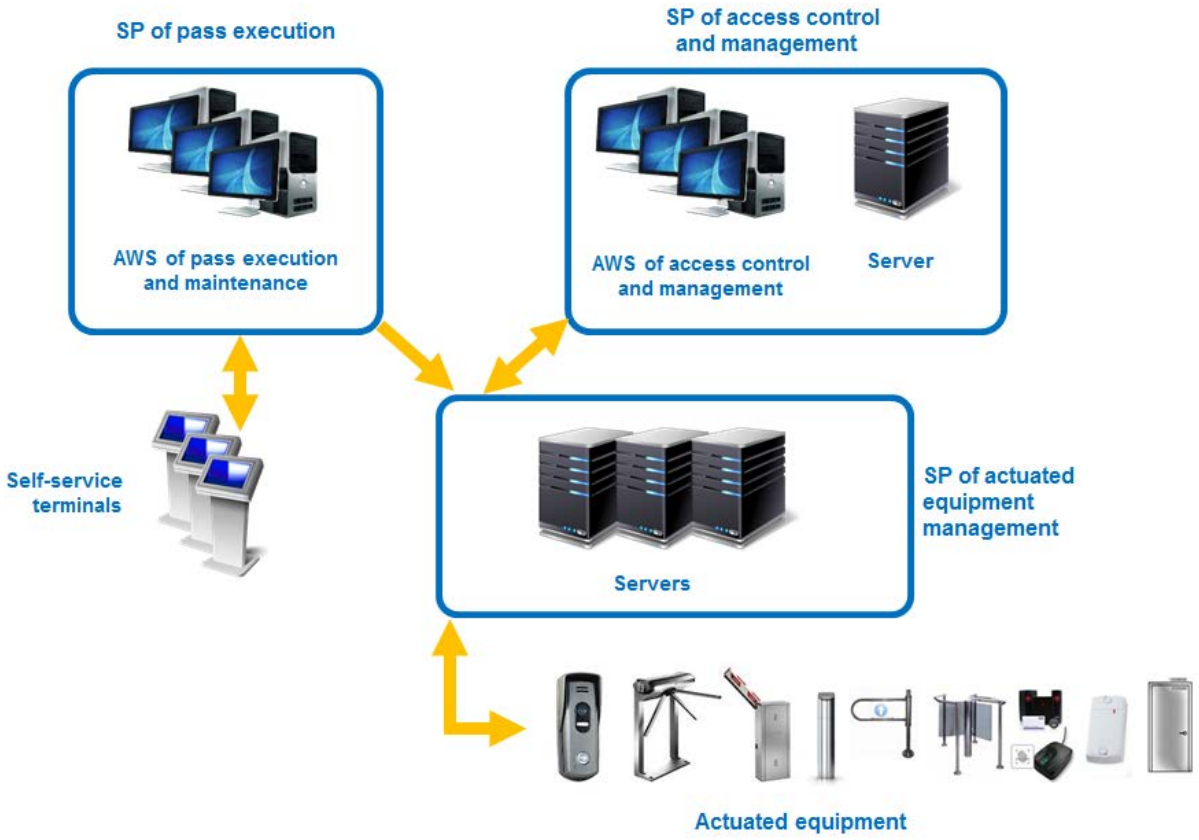
Moreover, there are the following capabilities:

- registration of biometrical data (fingerprints, etc.) and, thereafter, providing an access by fingerprints, e.g., to facilities of critical importance;
- providing an access to the perimeter of the facility upon presentation of the new-generation passport and visa documents, e.g., for a single visit, without issue of a separate pass;
- applying an electronic signature technology for usage during execution of passes;
- integration with the vehicle number plate recognition system;
- functions of the fire alarm system or integration with the fire alarm system existing at the facility for a receipt of fire warning to unblock doors.

2. SYSTEM ARCHITECTURE

System consists of the following main components:

- software package (SP) of pass execution;
- SP of access control and management;
- SP of actuated equipment management;
- Self-service terminals for order and receipt of passes;
- hardware system (HW) of computing equipment;
- HW of controllers and actuated equipment.



As pass carriers, electronic cards of the following standards may be used:

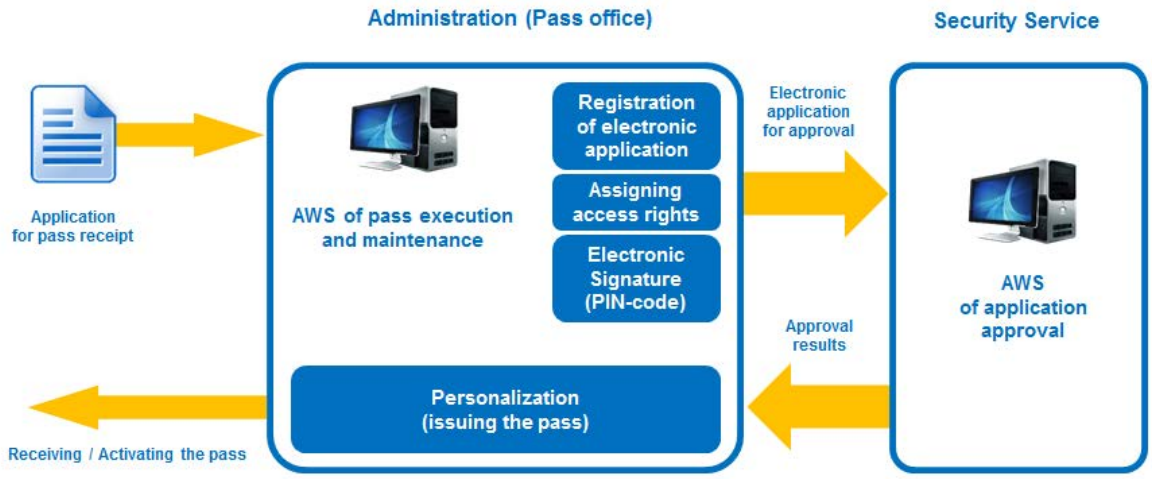
- HID;
- MIFARE.

3. MAIN FUNCTIONS

3.1. Functions of SP of pass execution

The main functions of SP of pass execution are as follows:

- entering an application for pass receipt, including determination of areas permitted for access;
- mutual approval of pass receipt (multi-tier);
- registration of biometric data of a pass owner (optionally);
- pass personalization;
- pass issue (optionally);
- entering information on lost, withdrawn, replaced passes;
- record keeping of pass forms;
- forming reports and printing forms of different types.



The system supports the following types of passes:

- by type:
  - personal;
  - transport;
  - material;
- by usage period:
  - permanent;
  - temporary;
  - single-use.

There is a module of forming electronic applications for consequent submission thereof by e-mail.

3.2. Functions of SP of access control and management

The main functions of SP of access control and management in the context of standard Automated Workstations (AWS) are as follows:

- AWS of a duty officer at a security station:
  - access management of pedestrians and vehicles;
  - receiving information on background data of the owner and validity of a pass;
- AWS of a watch officer:
  - control over a number of individuals and vehicles at the facility;
  - control over duration of stay of individuals and vehicles at the facility;
  - reviewing an event log;
  - report generation.

3.3. Functions of SP of actuated equipment management

The main functions of SP of actuated equipment management are as follows:

- dispatching valid data related to access arrangement to the controllers;
- receiving alarm signals and initiating transfer thereof to the respective AWS of operators;

- receiving current security events and storing thereof in a data base.

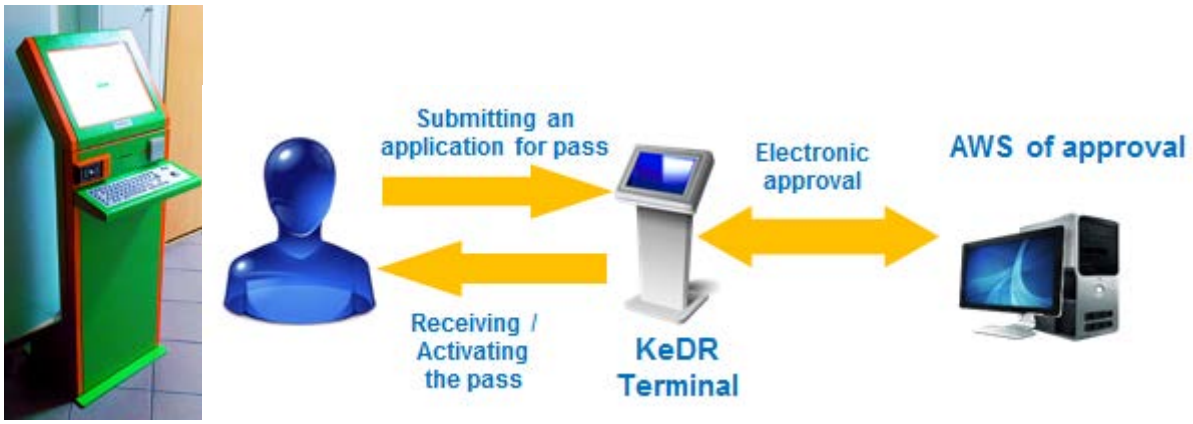
Controllers' management is performed according to the information contained in valid passes:

- what facilities an access is permitted to for the pass owner;
- what areas at each facility an access is permitted to for the pass owner.

3.4. Functions of the self-service terminal

The main functions of the self-service terminal are as follows:

- submitting an application for a personal single-use pass;
- submitting an application for a transport single-use pass;
- receiving the pass upon completion of mutual approval (if any).



3.5. Functions of HW of computing equipment

Computing equipment ensures functioning of the system server and AWS of users.

3.6. Functions of HW of controllers and actuated equipment

The main functions of HW of controllers and actuated equipment are as follows:

- data reading from passes/fingerprints;
- blocking/unblocking doors/turn gates;
- withdrawal of single-use passes (card reader);
- registration of illicit intrusion (optionally);
- registration of inflammation (optionally);
- launch of the automated gas fire-fighting system (optionally);

4. SOFTWARE

SP of pass execution and access control and management are implemented pursuant to the three-tier architecture and use the server of JBoss AS 5.0.1 GA and Data Base Management System PostgreSQL 9.1.4 applications. Client-based applications are implemented in C++.

SP of actuated equipment management is implemented pursuant to the two-tier architecture: the server part is implemented in C++, Data Base Management System PostgreSQL 9.1.4.

Interaction between servers (in case of a configuration of several servers) is performed by exchange of XML-messages with the use of web-services.

All software is multi-platform and may be controlled by both Windows OS and Linux family OS.

5. HARDWARE

As computing equipment, any servers and personal computers created on the base of intel-architecture may be used. The important point is that the server part of software packages may be either installed on one server or distributed between several servers for reduction of load on separate servers and/or territorial distribution of the System.

A self-service terminal consists of the following equipment:

- touch screen display;
- sheltered keyboard;
- combined reader of proximity cards;
- external USB-port;
- device for issue of plastic cards;
- computing machine;
- uninterruptible power supply.

The system architecture allows to ensure management of controllers and, consequently, of equipment produced by different manufacturers by elaboration of the additional software unit for SP of the System's actuated equipment management.