

PASS on Point

VEHICLE BOOKING SYSTEM - Product Details

VERSION 1.0

Streamlined check-in process for drivers.



The PASS on Point Vehicle Booking System (VBS) provides the tools and insights for handling increased volumes, facilitating faster throughput, and eliminating gate errors. With this system in place, truck visits are validated against pre-bookings through technology at the gate, streamlining the check-in process for drivers.

Our VBS is a real-time appointment system for visitors seeking to deliver or collect cargo at logistic companies. This user-friendly platform allows them to supply and validate cargo transaction data before driving to the facility, ensuring a smooth check-in at the gate. It also allows them to select a convenient timeslot for their visit, empowering the facility to proactively manage customer demand and resources deployed, hereby avoiding unnecessary waiting times and providing transparency to the supply chain.

WHAT SETS US APART

Global Track Record

First system operational since 2003

+1000 OCR Systems operational 24/7

High Recognition Rates

Wide range of integrations

Unparalleled support 24/7

STANDARDS OF EXCELLENCE

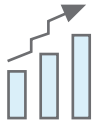
ISO 9001

ISO 27001

Health, Safety and Environment Certification

Five reasons to choose CERTUS for your traffic management

When searching for a reliable partner to implement an advanced vehicle booking system, it's crucial to ensure you'll achieve optimal results. At CERTUS, we have unwavering confidence in our solution tailored for vehicle bookings. We believe it is one of the best in the market and guaranteeing a swift Return on Investment (ROI). Here are compelling reasons why CERTUS should be your top choice.



IMPROVED OPERATION EFFICIENCY

Forecast truck visits with precision and balance workload by offering timeslots. This enables control of your resources and improves operational efficiency.



IMPROVED DATA ACCURACY

Reducing the chances of discrepancies or errors by making bookings upfront in the VBS and handle fewer exceptions at the gate.



DECREASED TRUCK TURNAROUND TIME

Validate transactions before arrival and reduce exceptions at the gate. This prevents traffic congestion and driver waiting time.



REDUCED FOOTPRINT GATE AREA

Minimize truck and driver time in the gate lane (less vehicle idling and emissions). This requires less gate infrastructure and a greener terminal.



REDUCED OPERATING EXPENSES

Improved efficiency and data accuracy reduces administrative efforts on site and thus the need for extra staff to manage gate operations.



How it works



STEP 1- Book a timeslot

A Timeslot is booked online in the VBS (by the shipping agent, Freight Forwarder, Trucking Company or Truck Driver etc.).



STEP 2- Approve booking

The VBS validates the booking request by cross-referencing it with the WMS/TOS. Information such as location and equipment are assigned to the booking.



STEP 3- Arrival at the Gate

Driver arrives at the gate, guided by his appointment details (provided by app or email).



(STEP 4- Exception handling)

Possible exceptions are handled remote.



STEP 5- Driver may proceed

Visit is validated with the system and (auto-mated) access is granted. Driver gets (location) instructions via the kiosk and may proceed.

How it works- Community Level



STEP 1- Agent Books a Service

The shipping agent initiates the process by booking a service online through the VBS (Virtual Booking System).



STEP 2- VBS Validates Booking

The VBS validates the booking request by cross-referencing it with the WMS/TOS. Information such as location and equipment are assigned to the booking.



STEP 3- Assign to Trucking Company

The agent assigns the booking to a trucking company, which, upon acceptance, schedules a timeslot through the VBS and assigns a driver.



STEP 4- Driver En Route

The assigned driver receives the appointment details through a dedicated app or email. The driver then executes according to the provided information.



STEP 5- Arrival at the AutoGate

Upon the driver's arrival at the gate, the VBS validates the visit. The booking information is updated and confirmed with the WMS/TOS. Access is granted.



STEP 6- Exception Handling

In cases of any unforeseen issues or exceptions, a remote system handles them, ensuring a smooth resolution without disrupting the overall workflow.



Extensive FEATURES

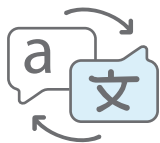
BECAUSE CERTAINTY IS MISSION CRITICAL

Extensive Features



CREATE AN ONLINE BOOKING FROM ANY DEVICE.

The solution is designed as a progressive web app that can be opened in a browser on any device.



MULTILANGUAGE

We offer English as a default but can work with you to get your language supported. All label and column name Text can be adjusted or translated.



SECURITY

For security meanings, we use the following tools: SSL internal and external communication (certificate not provided), SSO, Standard Protocols, OpenID Connect, OAuth 2.0 and SAML 2.0, LDAP and Active Directory, Identity Brokering, OpenID Connect or SAML 2.0 IdPs, Clustering, For scalability and availability, Configurable Password policies.



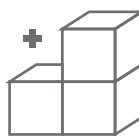
CUSTOMIZABLE WORKFLOWS

Together with our consultants you define the information and required validation steps needed for your services. Create service specific workflows for your customers to get their appointments made.



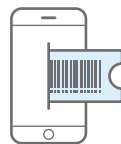
EXTENSIVE & FLEXIBLE TIMESLOT MANAGEMENT

From one generic timeslot rule to a time slot rule per offered service changing the offering every 15 minutes for each service. We got you covered.



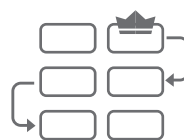
SCALABLE / MODULAR SYSTEM

our solution is built to serve a single site operation with one gate or an entire community with multiple sites each with their own number of gates and offered services.



ONLINE EIR TICKETS

Online EIR tickets (web and in app) allow drivers and trucking companies to lookup tickets that have been lost or not given via app and web. No need for a printed EIR.



VIP CUSTOMER FLOWS

Preferred customer treatment, your able to bend the rules for your preferred customer and offer them a longer grace period, more slots or allow them to skip certain validation steps.

Extensive Features



CUSTOMER BRANDING

Customer logo and naming can be added to the application. The appearance of the login screen can also be customized with customer own branding.



ROLE SPECIFIC LOG IN FLOWS

The type of user is determined during the user registration process.

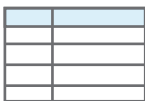


TABLE MANAGEMENT

Columns can be switched; sorting and filtering is available. Tables can be exported to Excel, PDF or CSV.



EXTENSIVE SEARCH OPTIONS AVAILABLE

We offer a variety of filters to easily find what you are looking for.



CLEAN-UP

The data clean-up function helps you remove outdated information, ensuring your system stays organized and reliable.



MESSAGE BOARD

The message board provides a simple way to share important updates through one-way communication with entire user groups.





Registration & Configuration Features

OWN USER REGISTRATION

Agents, terminals, trucking companies can register their own users (and drivers). The terminal/location will need to approve the users for their sites.

USER MANAGEMENT

Access to users, accepting, banning, role assignment.

TRANSACTION TYPE MANAGEMENT

Create your own service types and assign validations per step.

TRUCK MANAGEMENT

Import/synch trucks or create them manually.

MANDATORY BOOKING DETAILS

Option to make Agents, truck and/or driver mandatory during booking process.

DRIVER MANAGEMENT

Import/synch drivers or create them manually.

ROLE MANAGEMENT

Role definition.

MULTI-SITE SUPPORT

Support for multiple locations, multiple gates per location.

COMPANY, DRIVER, TRUCK RELATIONS

Option to create a relation between the driver and truck, company and driver, company and truck

EMAIL- QR CODE SUPPORT

QR code can be added to email updates so that emails instead of the app can be used at the gate.

Integrations

Seamless coordination between the Vehicle Booking System and both the TOS/WMS/YMS and the Gate Operating System (GOS) are essential for optimized efficiency. Some examples of integrations between the systems are:

TOS/WMS/YMS

- Option to synch companies from TOS/WMS/YMS to VBS
- Appointment validation of reference numbers
- Creation of appointments to TOS/WMS/YMS
- Creation of transactions to TOS/WMS/YMS
- Status validations with TOS/WMS/YMS
- Creation of Truck visits in TOS/WMS/YMS

CERTUS AUTOGATE (GOS)

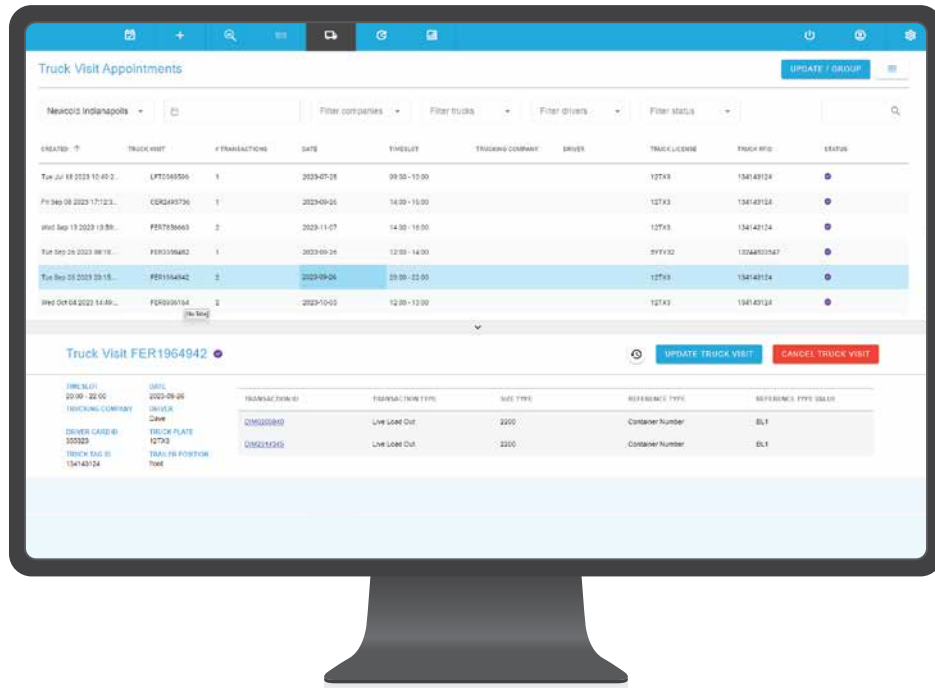
- EIR ticket retrieval
- Status updates, Increased visibility of appointment status
- Appointment validation at the gate
- Retrieving images of truck visit via truck appointment
- Update appointment information like the final driver and truck
- The VBS is able to query appointments based on truck license plate or driver

ANY SYSTEM

- The VBS can share appointment information with multiple systems
- The VBS is able to receive or share companies and linked users
- The VBS can offer timeslots from an external system



Appointment Management Features



MULTI-SITE

Agent or Trucking Company has access to multiple sites from one view.

BULK TRANSACTIONS

Create as many transactions as there are linked to the reference number in one go.

COMBINE TRANSACTIONS

Combine transactions from multiple agents into one truck visit.

OVERRIDE ERRORS

Terminal is able to override errors and accept bookings that fail validations steps.

HISTORY

The terminal has access to a transaction/ truck visit log.

ENTRY TICKET DOWNLOAD

Download a ticket to be used at the gate for identification.

DRIVER RESCHEDULE APPOINTMENT

Drivers can reschedule an appointment.

COMBINED TRANSACTIONS

Transactions can be updated or combined in bulk for quicker processing.

ASSIGN TIMESLOTS

Pre-select time slot and push it to a preferred trucking company for acceptance.

ACCEPT/REJECT FUNCTION

Trucking company can accept or reject newly receive transactions.

PREFIX

Set a specific prefix for transactions or truck visits to make them more identifiable.

EXPORT

Export all shown results to excel or pdf.

APPOINTMENT FLOWS

Trucking companies and agents have different appointment creation flows.

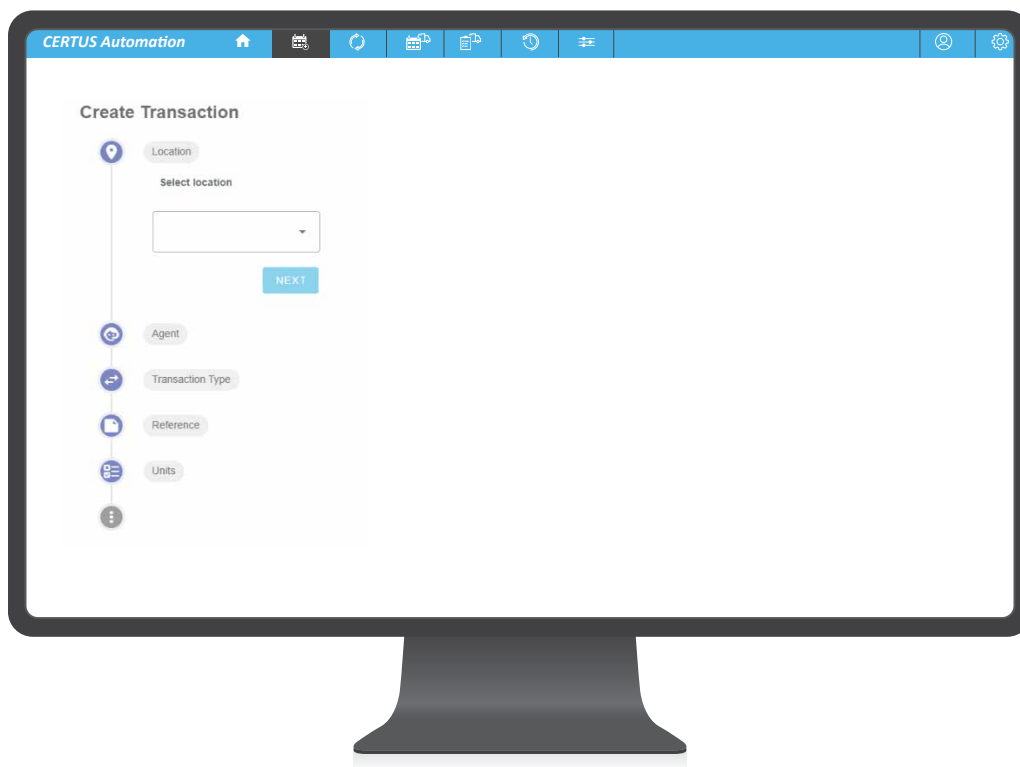
POSITION ON TRUCK

Can be added to the booking process

Transaction types

Unlimited transaction types can be created in the Vehicle Booking System. Some examples of possible transactions are:

1. Transactions linked to a specific location, gate or group. For example, cars need to go to gate A, trucks need to go through gate B.
2. Transactions with a booking window. These transactions specify that an appointment must be made at a certain number of days in advance of the appointment date.
3. Transactions with a booking deadline. These transaction specify an appointment must be made at least X days in advance of the appointment.
4. Transactions with assigned validations. Strictness of the validation is controlled per transaction/ service type.



Operational Control Functions

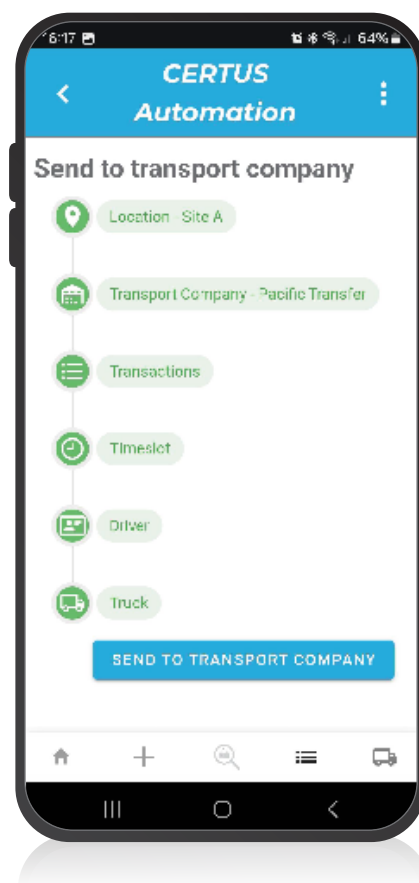
Efficiently manage and oversee the entire booking process! The PASS on Point VBS is designed to provide a comprehensive view of bookings, streamline operations, and optimize resource utilization. Here are some key aspects of operational control features in the software:

- Ban users, drivers, trucks, trucking companies, or agents.
- Query the TOS Status
- Create VIP flows
- Set Driver Limits
- Set Truck Limits
- Create Booking Windows
- Create Booking Deadlines
- Timeslot Configuration
- Timeslot Agenda
- Terminal Overrule Option
- Set Grace Period
- Set Overbooking Percentage
- Control Available Slots
- Schedule Exceptional Timeslots

Appointment validations

Appointment validation plays a crucial role in ensuring the accuracy and integrity of the Vehicle Booking System. These features are designed to verify and authenticate appointments, providing a reliable framework for effective scheduling. Some key aspects of appointment validation features of the Vehicle Booking System are:

- Double bookings
- Combined Transaction Types
- Weight Limit
- Delivery order booking
- Vessel cut off time
- VGM Payment Status
- Preannounced Status
- Line Release
- Terminal release
- Customes Release
- Unit State
- Transit State
- Gate Opening Time
- Transaction Timeslot Limit
- Terminal Disclaimer
- Banned Entities
- Size Time Combination
- Truck Limit per Timeslot
- Driver Limit per Timeslot
- Booking Window
- Booking Deadline
- VGM Single Container
- Preannounce visit

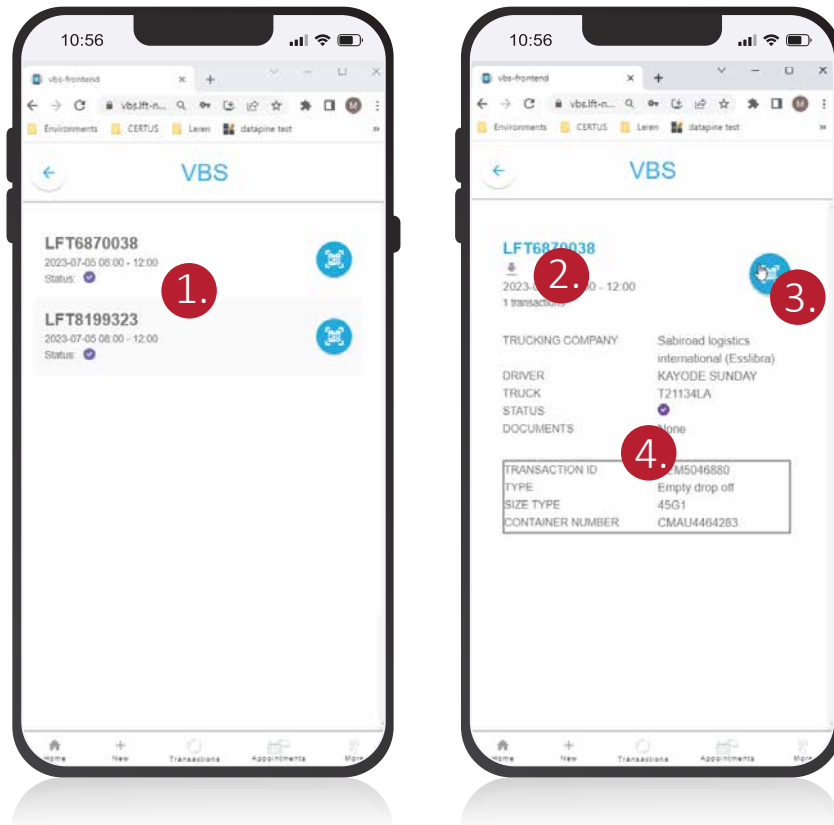


Driver APP



Driver App

To extend the efficiency and convenience of the Vehicle Booking System we have created a driver app. This addition empowers drivers with a user-friendly interface and powerful functionalities. Seamlessly integrated with our booking system, the driver app ensures a smooth and connected experience for both operators and drivers, enhancing overall operational efficiency and collaboration



1. **APPOINTMENT OVERVIEW**
Overview of all assigned appointments in one view

2. **ENTRY TICKET**
Download entry ticket

3. **QR CODE**
Show QR code for entry

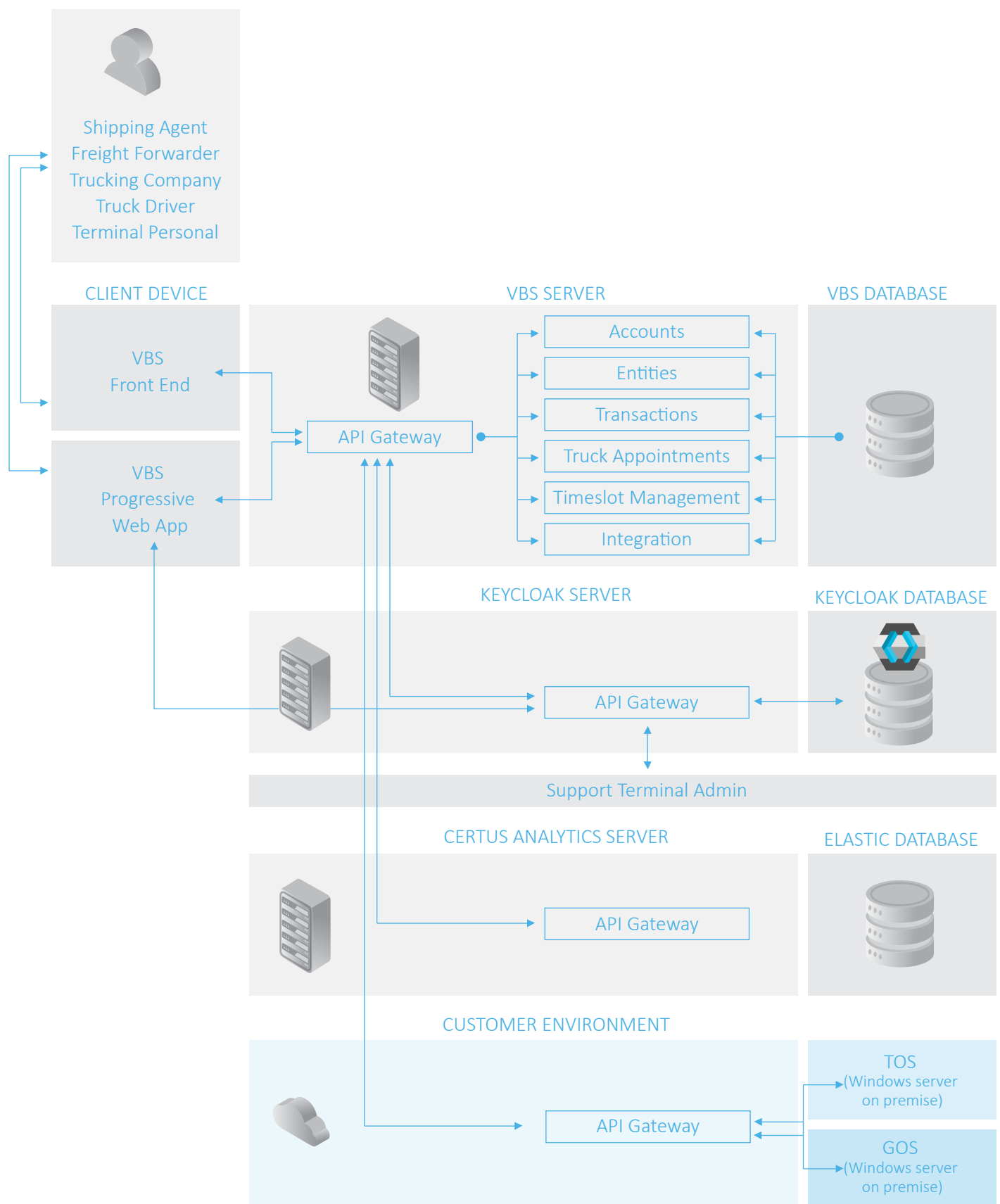
4. **UPDATE APPOINTMENTS**
Reschedule or add details while on the road

A man with a beard and glasses, wearing a grey shirt and a dark tie, is standing in a server room. He is looking down at a laptop he is holding. To his left are several server racks filled with equipment. The room is dimly lit with blue and white light from the servers and overhead lights.

TECHNICAL details

BECAUSE CERTAINTY IS MISSION CRITICAL

SYSTEM ARCHITECTURE



SYSTEM DETAILS

VBS SERVER (Blue Box)

The core of the VBS application is in the VBS Server (blue box). The VBS Server consists of several microservices responsible for handling the business logic, entity management, and account management. Furthermore, the internal gateway is responsible for routing and managing the traffic from, between, and to the microservices. This gateway is the entry point of the application and will communicate with GOS, TOS, Keycloak, and the front end of the application.

Keycloak is the IDM provider responsible for managing logins, permissions, users, and token management. Keycloak is an open-source platform used by many well-known companies(Keycloak website). In production, the Keycloak server should be isolated from the application server, but for testing, it could also run on the same server as the application. The Keycloak server is also dockerized, hence can easily be installed and separated from the rest of the application server.

The application and Keycloak both have their database. For testing, this can also be hosted on the same database server. To manage the integration between on-site systems (TOS, GOS) we suggest to either set up a VPN or an intermediary API gateway so that CMA will have full control and insights into the messages sent between the VBS and the other systems.

KEYCLOAK

The Vehicle Booking System uses the application Keycloak for the authentication of users and services. This application also provides secure communication between services. It is an open source tool licensed with Apache License 2.0.

The Keycloak server is isolated from the application server and has its own database. This server is dockerized and can easily be installed and separated from the rest of the application server.

SECURITY

Our Vehicle Booking System (VBS) leverages Keycloak to implement robust security and authentication protocols. Keycloak supports Single Sign-On (SSO), Multi-Factor Authentication (MFA), and role-based access control, ensuring secure access to both the Customer Access Portal and Appointment System. It integrates seamlessly with customer Active Directory environments using standard protocols such as OpenID Connect and OAuth 2.0, allowing identity brokering and centralized user management. All communications are encrypted via SSL, and the system enforces configurable password policies and supports clustering for scalability and availability. These measures collectively safeguard against unauthorized access and cyber threats.

HOSTING OPTIONS



DEDICATED HOSTING

On premise dedicated server hosting



VIRTUAL PRIVATE SERVER

A high level of customization and a decent level of performance and more affordable

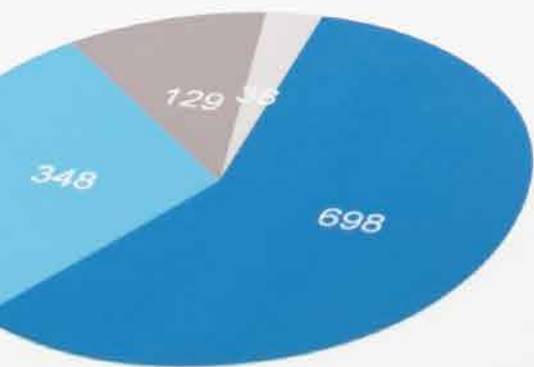
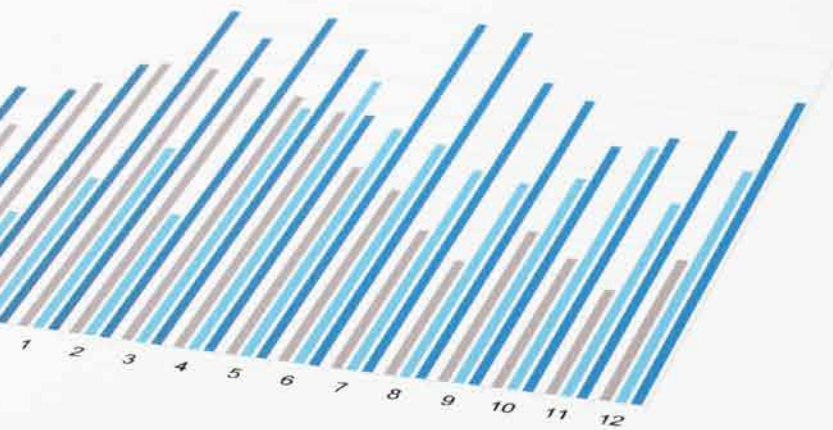


CLOUD HOSTING (private, public, hybrid)

Flexibility, scalability, and reliability Resources can be provisioned or released as needed, and costs are typically based on usage. (pay as you go).



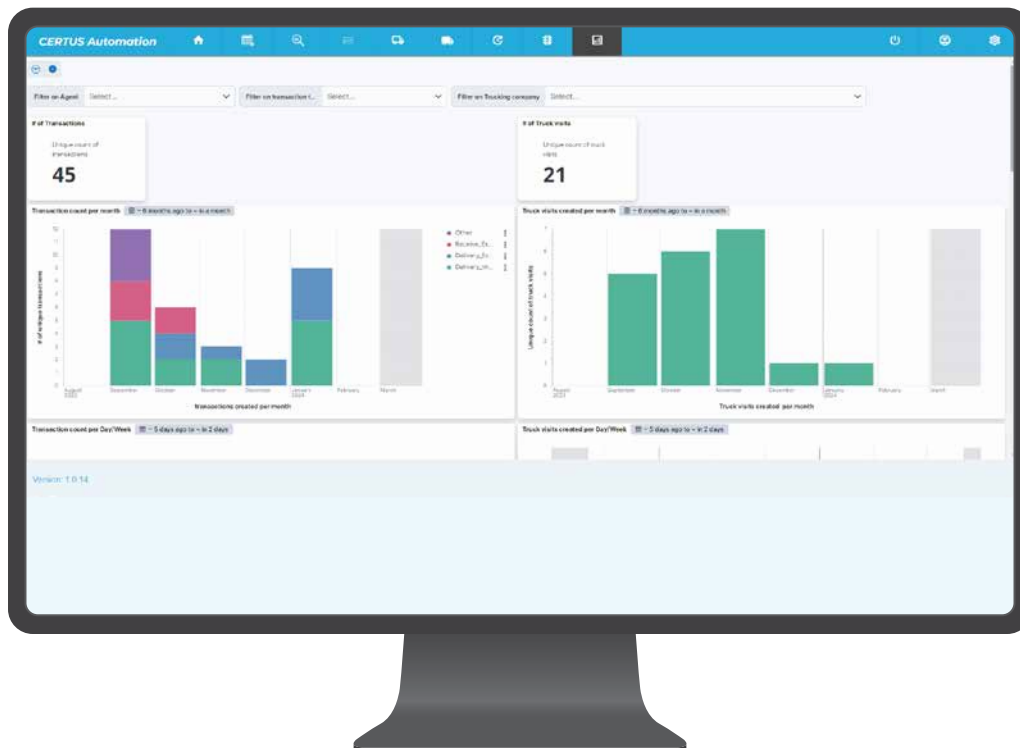
REPORTING



Reporting

Insights are needed to forecast truck visits with precision and balance workload by offering timeslots. As part of the Vehicle Booking System, a reporting tool converts data into information for useful and needed insight on the activities.

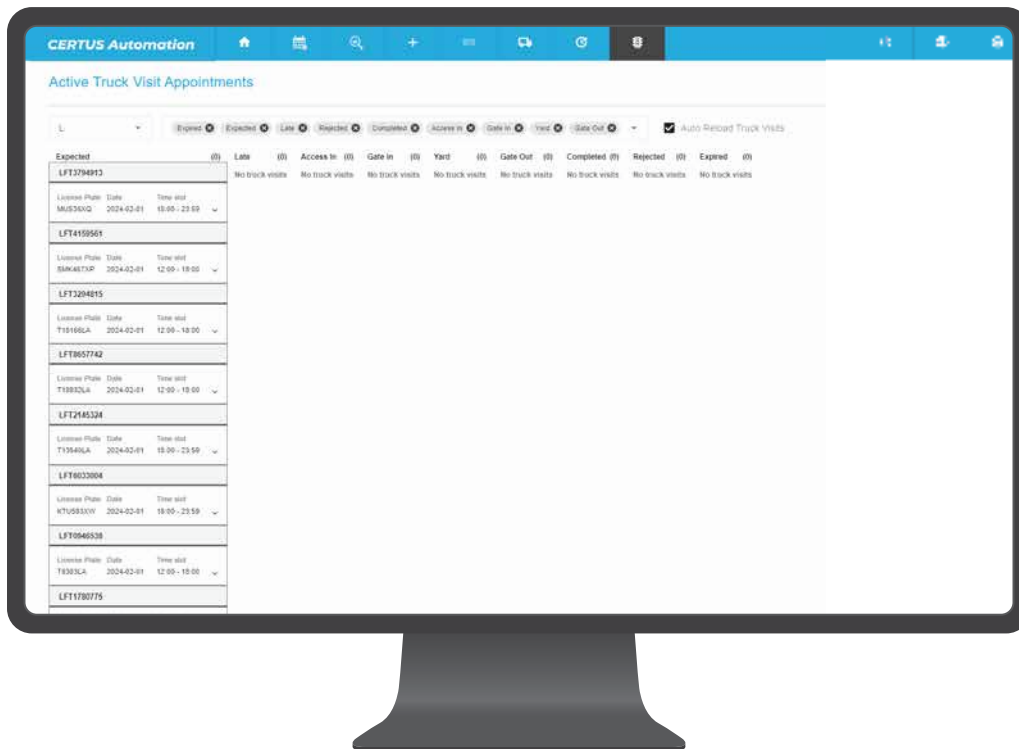
The reporting tool offers the following features:



REPORTS

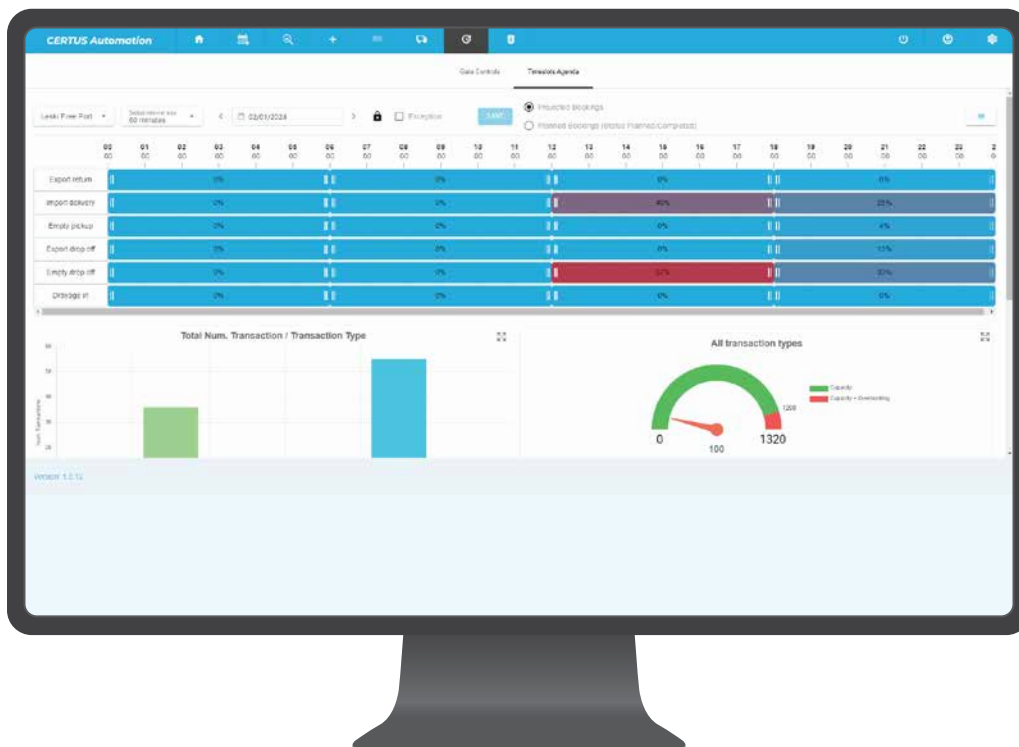
The default report offers the following points (with filters on agent, transaction type, trucking company and time frame):

- Total transactions
- Total truck visits
- Transactions per month
- Truck visits per month
- Transactions per day of the week
- Truck visits per day of the week
- Transactions per status
- Truck visits per status
- Transactions per top 15 agents
- Transactions per top 15 trucking companies
- Custom (custom reports can be added but need to be defined during the project or by change order)



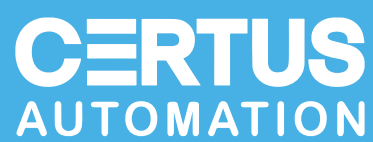
VISIT DASHBOARD

See the truck visits that are expected, delayed, no show, or at your terminal.



TIMESLOT AGENDA

A daily (future and historic) view of the timeslots offered and their capacity. For example Timeslot capacity (a percentage of used capacity per type and a total), Projected capacity (a way to include the truck visits that are assigned to the timeslot but not yet planned and confirmed) and an overview of the number of transactions per status and type.



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