### **What is PSS (Passenger Service System)?**

An airline uses a software solution called **Passenger Service System (PSS)**comprised of a central reservation system (CRS), airline inventory system, and departure control system (DCS). Also, PSSs include data storage and an Internet booking engine for direct booking processing, and a merchandising system for ancillary distribution. We’ll look at these systems closer later in the article. Some key players among PSSs are [New Skies](https://www.navitaire.com/new-skies-reservation-system) by Navitaire, [Altea](https://amadeus.com/en/portfolio/airlines/altea-reservation-desktop-web-retailing-and-digital) by Amadeus, and [Avantik](https://www.bravo.aero/) by Bravo Aero.

### **What is a CRS (Central Reservation System)?**

An airline’s deckhouse that manages ticket distribution is called a **Central Reservation System (CRS)**, or **Computer Reservation System**. It’s responsible for storing and managing all flight-related information, inventory, and ticketing. This type of software is present in any organization that distributes its inventory online, namely, hotels and airlines. It allows managers to control reservations on all distribution platforms.

### **What is a Flight/Airline Reservation System?**

Also known as an **Airline Reservation System, a flight reservation system**, is a part of a CRS, which contains schedules, fares, reservations and ticket records. Its goal is to support bookings through different distribution channels. It stores a database of fare tariffs, rules and booking conditions, all considering different zones, classes, and [inventory buckets](https://www.youtube.com/watch?v=jxKg65AimSI).

An airline sends its inventory and booking data to the GDS – the main hub for distributors online.

### **What is a GDS (Global Distribution System)?**

A **Global Distribution System (GDS)** is a computer network operating as a middleman between travel agents and numerous travel service providers. A GDS aggregates content of airline inventory, schedules, and fares. It then connects with travel agents via manual terminals and with OTAs, using connectivity APIs. The [main three GDSs](https://www.altexsoft.com/blog/travelport-vs-amadeus-vs-sabre-gds/) to know about are Amadeus, Sabre, and Travelport.

What is GDS

A GDS collects inventory and schedule data from the following sources:

* Airline Tariff Publishing Company ([**ATPCO**](https://www.atpco.net/)) for public and non-public fare collection and distribution, and fare-related content;
* [**OAG**](https://www.oag.com/) and **[Innovata](http://www.innovata-llc.com/data/flight-schedules-database/)**, which store data on schedules;
* airline Passenger Service System (PSS) for inventory and ancillary services.

The GDS data is then distributed among booking platforms and directly to travel agents who request it. OTAs and metasearch engines request inventories using the [API technology](https://www.altexsoft.com/blog/engineering/what-is-api-definition-types-specifications-documentation/) and human agents get access to them via a manual terminal.

### **What is PNR (Passenger Name Record)?**

**Passenger name record (PNR)**is a personal code that contains a traveler’s information and itinerary. Depending on the booking source, it’s created either by an airline’s CRS or a GDS. The PNR is generated based on a passenger’s personal information, contact details, ticket number, and itinerary. An airline uses a PNR to easily track the passenger’s record and exchange information between different airlines. We will discuss its use a little bit later.

## **What is CRS and GDS?**

The primary**function of a GDS is to assist travel agents who are looking for hotels** that satisfy certain criteria. These business-to-business systems are used by organisations to keep abreast of information about travel arrangements, like hotel room availability. This allows customers to make bookings on demand. This technology gives travel professionals a common point of entry to access real-time data about travel reservations.

A central reservation system, or CRS, is designed for the hospitality sector – and in particular for hotel operations – to **manage room availability and rates**. These systems relay relevant data across several distribution channels, such as the GDS, metasearch engines and OTAs (online travel agencies). Whenever rates are adjusted or bookings are made, the CRS updates your hotel’s rates and availability on each channel appropriately. Bookings from these third-party channels are transferred to the CRS immediately, before being logged in the property management system so rooms can be allocated.

The three main systems currently used for hotel reservations are Amadeus, Sabre and Travelport. Let's take a closer look at these popular platforms.

## **Examples of CRS and GDS**

### **Amadeus**

At the time of writing, Amadeus accounts for roughly forty percent of travel bookings, making it the world's **biggest reservation system**. With its main database in Germany and its Spanish headquarters, it provides hotels with great access to European customers. Approximately 90,000 travel agents across the world use this software to book flights, although it is popular with hoteliers too. Established in 1987, Amadeus has led the way in the industry's adaptation of ecommerce.

### **Sabre**

Currently, Sabre accounts for roughly **thirty-five percent of travel bookings**, making it the world's second-biggest reservation system. Approximately 220,000 hotels in North America connect to this software, and about 60,000 travel agents worldwide sell travel products through it. With its American headquarters in Southlake, TX, Sabre was founded over forty years ago. In 2015, the company bought Travelocity, a well-known online travel booking platform.

### **Travelport**

Travelport started in the 1970s and is smaller than the two systems mentioned above. Nonetheless, it is still commonly **used by business travel agents to book hotel arrangements**. This software is prevalent in America, where it was founded, although the company has UK headquarters. Travelport encompasses the Apollo, Worldspan and Galileo platforms. Interestingly, the company is less dependent on its native market than other systems of its kind. While North America accounts for most of its use, Asia and Europe have embraced it too.