

Oracle Hospitality OPERA Cloud Distribution Inventory Calculation



Release 22.5
F70319-01
November 2022

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

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Preface

This document provides detailed information about the Oracle® Hospitality OPERA Cloud Distribution Availability >Inventory Calculation.

DISCLAIMER: note that the interfaces names on the embedded screen shots are samples only and may not reflect the original interface names that you are using. If particular standards have must be observed for specific interfaces, they are noted accordingly.

Purpose

OPERA Cloud Distribution is designed to create efficiency for hotels by developing direct connections to high value Online Travel Agents (OTA) with a cloud native reservation connected directly to the source of availability, rate, and inventory (ARI).

Audience

This document is intended for customers subscribed to OPERA Cloud Distribution.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL: <https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name.
- Functional and technical description of the problem (include business impact).
- Detailed step-by-step instructions to re-create.
- Exact error message received.
- Screen shots of each step you take.

Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center on the [Oracle Help Center](#).

Revision History

Table Revision History

| Date | Description of Change |
|---------------|-----------------------|
| November 2022 | Initial Publication |

1

Introduction

The Inventory section shows the room availability and sell limits of your Property Management System as well as sell limits set for channels.

From the Availability main menu, select Inventory. In this section, you can:

- Search and view the House and Room Type Inventory and Sell Limits.
- Search, view, create, and update Channel Sell Limits.

The calculation of inventory in OPERA Cloud Distribution is influenced in different ways for generic property availability as well as for different channels.

In general, your available rooms are calculated with physical rooms: subtract or add Sell Limits, subtract Out of Order rooms (OOO) and subtract Rooms Sold.

If the inventory has no minus values (no overbooking), the calculation is simple.

If one or more room types are overbooked, and others not, and rooms are still available in your property, there are different options for how the inventory is calculated.

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Overbooking Protection

The Overbooking Protection parameter protects your property as best as possible against overbooking. With the active parameter, the sum of all available room types is never higher than the total available rooms in your property. The availability per room type is always automatically adjusted accordingly.

In the common way, the availability per room type is equal or lower than the total availability in your property, but the sum of all available room types can be higher than the total availability in your property.

Setting the Overbooking Protection Parameter

From the Configuration main menu, select Inventory Management and then select Inventory.

The General Configuration option offers general configuration that is used in Availability > Inventory and Shop and Book functionality.

Select the Add button in the middle of the screen to create the record. Use the pencil on the right hand side of the record to edit the configuration. For more information about General Configuration, see OPERA Cloud Distribution User Guide > Inventory Management section.

- **Overbooking Protection OFF:** The maximum available rooms per room type until the maximum available rooms per property is reached.
- **Overbooking Protection ON:** Distributes the total available rooms to the room types as a percentage. Select this check box if the sum of all available rooms shall never be higher than the total available rooms in your property.

Overbooking Protection Example 1: Without House Limit

Your property has 300 Rooms with 3 room types (A, B, C), each with 100 rooms and 250 reservations for room type A.

| Case | House | A | B | C | Sellable | Explanation |
|--|-------|------|-----|-----|----------|--|
| Start | 300 | 100 | 100 | 100 | 300 | |
| 250 definite reservations for A | 50 | -150 | 100 | 100 | 50 | 250 definite reservations for room type A which overbooks 150 rooms. But the property is not overbooked, there are still 50 rooms from other categories to sell. |
| Result with Overbooking Protection OFF | 50 | 0 | 50 | 50 | 100 | Room type B and C still have more rooms available (100) than the total of property (50). Therefore, only the maximum of property is provided, but for both room types (B+C), all rooms are available in house! <u>Advantage:</u> You can provide and book all rooms (50) for all room types, for example, make a reservation for room type B for 50 rooms. As soon as this is done, the property availability is set to 0 and at the same time, room type C has no rooms available anymore. <u>Disadvantage:</u> Your property can be overbooked by 50 rooms by creating two reservations at the same time (50 rooms for B and 50 rooms for C). |
| Result with Overbooking Protection ON | 50 | 0 | 25 | 25 | 50 | The available rooms (house 50) are split among the other room types that can still be booked: B+C each 25 rooms. <u>Advantage:</u> Your property can never get overbooked as only maximum available rooms in total are displayed (for all room types). <u>Disadvantage:</u> You cannot book all available rooms by room type, although they are available (for example, checking only room type A or B, both still have 100 rooms available). |

Overbooking Protection Example 2: With House Limit

Your property has 300 Rooms with 3 room types (A, B, C), each with 100 rooms and the house limit set to reduce the available rooms.

| Case | House | A | B | C | Sellable | Explanation |
|---|-------|-----|-----|-----|----------|--|
| Start | 300 | 100 | 100 | 100 | 300 | |
| house limit reduce 250 rooms (300-250 = 50) | 50 | 100 | 100 | 100 | 50 | 100 for each room type are available, but only 50 rooms should be shown as available for the house to sell. |
| Result with Overbooking Protection OFF | 50 | 50 | 50 | 50 | 50 | <u>Advantage:</u> You can provide and book all rooms (50) for all room types, for example, make a reservation for room type A for 50 rooms. <u>Disadvantage:</u> You can overbook your property by 150 rooms, by creating three reservations at the same time (50 rooms for A, 50 rooms for B and 50 rooms for C). |
| Result with Overbooking Protection ON | 50 | 16 | 16 | 16 | 49 | The available rooms (house 50) are split among the other room types that can still be booked. The result is rounded down (not possible to sell 0,67 rooms), so the sellable total rooms can also be different from (less than) the available total rooms (50 → 49). For each availability change (such as a new reservation or cancellation) the values are recalculated, so it is still possible to sell all rooms (last room availability). For further details, see next row. |
| | 50 | 15 | 16 | 16 | 48 | After creating two definite reservations for A, the values are recalculated. Sellable rooms are now accurate: 50 (house total) -2 (reservation) = 48 (sellable) <u>Calculation:</u> Max available rooms (50) minus sold rooms (2) result (48) divided by physical rooms (300): $48/300=0,16$ (factor for multiplication) Available room by room type A (100) minus sold rooms (2) multiplied by factor (0,16): $98*0,16 = 15,68$ round down = 15. Available room by room type B (100) minus sold rooms (0) multiplied by factor (0,16): $100*0,16 = 16,00$ round down = 16 (same for room type C). |

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Inventory Calculation

The following examples show you different options with the information of calculation.

Example 1: No Rooms Sold and No Out of Order

| | Room Type | Physical | Sell Limit Control | Sell Limit | OOO | Rooms Sold | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | Description |
|-----------|-----------------------|-----------------|--------------------|------------|-----|------------|--------------------------------------|-------------------------------------|--|
| | RT1 | 50 | | | | | 50 | 50 | |
| | RT2 | 100 | | | | | 100 | 100 | |
| | RT3 | 100 | | | | | 100 | 100 | |
| | Property Total | 250 | | | | | 250 | 250 | |
| | Room Type | Sell Limit Type | Sell Limit Value | | | | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | |
| Channel 1 | RT1 | Value | 60 | | | | 60 | 60 | The entered value is used instead of physical rooms. Calculation: value=physical rooms |
| | RT2 | Value | 90 | | | | 90 | 90 | |
| | RT3 | Value | 0 | | | | 0 | 0 | |
| Channel 2 | RT1 | % of Physical | 107 | | | | 53 | 53 | The entered value for physical rooms is used as a percentage of the real physical rooms for inventory per channel. Calculation: $107\% * 50 \text{ physical rooms} / 100\% = 53,5$ (round down: 53) |
| | RT2 | % of Physical | 95 | | | | 95 | 95 | |
| | RT3 | % of Physical | 0 | | | | 0 | 0 | |
| Channel 3 | RT1 | % of Available | 50 | | | | 25 | 25 | The entered value percentage of available rooms is used for inventory per channel. Calculation: $(50\% * 50 \text{ available rooms}) / 100\% = 25$ |
| | RT2 | % of Available | 70 | | | | 70 | 70 | |
| | RT3 | % of Available | 0 | | | | 0 | 0 | |

Example 2: A Moderate Sell, a Few Out of Order, and No Sell Limit

| | Room Type | Physical | Sell Limit Control | Sell Limit | OOO | Rooms Sold | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | Description |
|-----------|----------------|----------------|--------------------|------------|-----|------------|--------------------------------------|-------------------------------------|---|
| | RT1 | 50 | | | 5 | 20 | 25 | 25 | (Sell Limit (In case not set: physical rooms) minus OOO) minus Sold |
| | RT2 | 100 | | | | 70 | 30 | 30 | (Sell Limit (In case not set: physical rooms) minus OOO) minus Sold |
| | RT3 | 100 | | | | 85 | 15 | 15 | (Sell Limit (In case not set: physical rooms) minus OOO) minus Sold |
| | Property Total | 250 | | | 5 | 175 | 70 | 70 | (Sell Limit (In case not set: physical rooms) minus OOO) minus Sold |
| | Room Type | Type | Sell Limit Value | | | | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | |
| Channel 1 | RT1 | Value | 60 | | | | 35 | 35 | (Channel Sell Limit minus OOO) minus Sold |
| | RT2 | Value | 90 | | | | 20 | 20 | (Channel Sell Limit minus OOO) minus Sold |
| | RT3 | Value | 0 | | | | 0 | 0 | (Channel Sell Limit minus OOO) minus Sold |
| Channel 2 | RT1 | % of Physical | 107 | | | | 28 | 28 | (Channel Sell Limit minus OOO) minus Sold |
| | RT2 | % of Physical | 95 | | | | 25 | 25 | (Channel Sell Limit minus OOO) minus Sold |
| | RT3 | % of Physical | 0 | | | | 0 | 0 | (Channel Sell Limit minus OOO) minus Sold |
| Channel 3 | RT1 | % of Available | 50 | | | | 12 | 12 | Percentage of available rooms |
| | RT2 | % of Available | 70 | | | | 21 | 21 | Percentage of available rooms |
| | RT3 | % of Available | 0 | | | | 0 | 0 | Percentage of available rooms |

Example 3: A Moderate Sell, a Few Out of Order, and Room Type Sell Limit

| | Room Type | Physical | Sell Limit Control | Sell Limit | OOO | Rooms Sold | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | Description |
|-----------|----------------|----------------|--------------------|------------|-----|------------|--------------------------------------|-------------------------------------|---|
| | RT1 | 50 | 5 | 55 | 5 | 20 | 30 | 22 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | RT2 | 100 | 10 | 110 | | 70 | 40 | 29 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | RT3 | 100 | 10 | 110 | | 85 | 25 | 18 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | Property Total | 250 | | | 5 | 175 | 70 (95) | 70 (69) | Total available rooms in your property (sum of all room types). |
| | Room Type | Type | Sell Limit Value | | | | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | |
| Channel 1 | RT1 | Value | 60 | | | | 35 | 28 | |
| | RT2 | Value | 90 | | | | 20 | 12 | |
| | RT3 | Value | 0 | | | | 0 | 0 | |
| Channel 2 | RT1 | % of Physical | 107 | | | | 28 | 21 | |
| | RT2 | % of Physical | 95 | | | | 25 | 17 | |
| | RT3 | % of Physical | 0 | | | | 0 | 0 | |
| Channel 3 | RT1 | % of Available | 50 | | | | 15 | 11 | |
| | RT2 | % of Available | 70 | | | | 28 | 20 | |
| | RT3 | % of Available | 0 | | | | 0 | 0 | |

Example 4: A Moderate Sell, a Few Out of Order, Room Type Sell Limit, and House Sell Limit

| | Room Type | Physical | Sell Limit Control | Sell Limit | OOO | Rooms Sold | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | Description |
|-----------|----------------|----------------|--------------------|------------|-----|------------|--------------------------------------|-------------------------------------|---|
| | RT1 | 50 | 5 | 55 | 5 | 20 | 30 | 25 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | RT2 | 100 | 10 | 110 | | 70 | 40 | 33 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | RT3 | 100 | 10 | 110 | | 85 | 25 | 21 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | Property Total | 250 | 10 | 260 | | | 80 (95) | 80 (79) | Total available rooms in your property (sum of all room types). |
| | Room Type | Type | Sell Limit Value | | | | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | |
| Channel 1 | RT1 | Value | 60 | | | | 35 | 31 | |
| | RT2 | Value | 90 | | | | 20 | 15 | |
| | Rt3 | Value | 0 | | | | 0 | 0 | |
| Channel 2 | RT1 | % of Physical | 107 | | | | 28 | 24 | |
| | RT2 | % of Physical | 95 | | | | 25 | 20 | |
| | RT3 | % of Physical | 0 | | | | 0 | 0 | |
| Channel 3 | RT1 | % of Available | 50 | | | | 15 | 12 | |
| | RT2 | % of Available | 70 | | | | 28 | 23 | |
| | RT3 | % of Available | 0 | | | | 0 | 0 | |

Example 5: One Room Type Overbooked, a Few Out of Order, Room Type Sell Limit, and House Sell Limit

| | Room Type | Physical | Sell Limit Control | Sell Limit | OOO | Rooms Sold | Inventory Overbooking Protection OFF | Inventory Overbooking Protection ON | Description |
|-----------|-----------------------|----------------|--------------------|------------|-----|------------|--------------------------------------|-------------------------------------|---|
| | RT1 | 50 | 5 | 55 | 5 | 20 | 30 | 16 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | RT2 | 100 | 10 | 110 | | 120 | 0 | 0 | |
| | RT3 | 100 | 10 | 110 | | 85 | 25 | 13 | Overbooking Protection OFF: Maximum available rooms per room type until the maximum available per property is reached. Overbooking Protection ON: Distributes the total available rooms to the room types as a percentage. |
| | Property Total | 250 | 10 | 260 | | | 30 (55) | 30 (29) | Total available rooms in your property (sum of all room types). |
| | Room Type | Type | Sell Limit Value | | | | Inventory Overbooking Protection ON | Inventory Overbooking Protection ON | |
| Channel 1 | RT1 | Value | 60 | | | | 35 | 23 | |
| | RT2 | Value | 90 | | | | 0 | 0 | |
| | RT3 | Value | 0 | | | | 0 | 0 | |
| Channel 2 | RT1 | % of Physical | 107 | | | | 28 | 16 | |
| | RT2 | % of Physical | 95 | | | | 0 | 0 | |
| | RT3 | % of Physical | 0 | | | | 0 | 0 | |
| Channel 3 | RT1 | % of Available | 50 | | | | 15 | 8 | |
| | RT2 | % of Available | 70 | | | | 0 | 0 | |
| | RT3 | % of Available | 0 | | | | 0 | 0 | |

Example 6: Available Rooms for House and Channels with Different House Sell Limits and Room Type Sell Limits for one Room Type

| Example Nr. | House | | | | | | Channel Limits | | | Channel Zero Limits | | Channel | Calculation for Channel Limits | Explanation (Channel Limits) |
|---|----------------|--------------------|------------|--------------|------------|-----------------|----------------|---------------------|----------------------|---------------------|--------|-----------------|---|---|
| | Physical Rooms | Sell-Limit Control | Sell-Limit | Out of Order | Sold Rooms | Available Rooms | Value | % of physical rooms | % of available rooms | Sold value | % Sold | Available Rooms | | |
| A: Examples with Sell-Limit Control +5 | | | | | | | | | | | | | | |
| A-01 | 50 | | | 2 | | 48 | | | | | | 48 | | |
| A-02 | 50 | 5 | 55 | 2 | | 53 | | | | | | 53 | | |
| A-03 | 50 | 5 | 55 | 2 | | 53 | 60 | | | | | 58 | 60-2=58 | |
| A-04 | 50 | 5 | 55 | 2 | | 53 | | 107 | | | | 51 | 50/100*107=53.5-2=51.5 round down:51 | |
| A-05 | 50 | 5 | 55 | 2 | | 53 | | | 50 | | | 26 | 53/100*50=26,5 round down: 26 | |
| A-06 | 50 | 5 | 55 | 2 | 30 | 23 | | | | 31 | | 23 | | limit is not exceeded > all available rooms are shown |
| A-07 | 50 | 5 | 55 | 2 | 30 | 23 | | | | 30 | | 0 | | limit is exceeded > 0 available rooms are shown |
| A-08 | 50 | 5 | 55 | 2 | 30 | 23 | | | | | 61 | 23 | 50/100*61=31>30=Inventory is displayed | limit is not exceeded > all available rooms are shown |
| A-09 | 50 | 5 | 55 | 2 | 30 | 23 | | | | | 60 | 0 | 50/100*60=30<=30=No inventory is displayed as it is 0. | limit is exceeded > 0 available rooms are shown |
| A-10 | 50 | 5 | 55 | 2 | 30 | 23 | | | 50 | 31 | | 11 | 31>30=true, 23/100*50=11,5 round down:11 | |
| A-11 | 50 | 5 | 55 | 2 | 30 | 23 | | | 50 | | 59 | 0 | 50/100*59=29,5<30=No inventory is displayed as it is 0. | |
| B: Examples with Sell-Limit Control -5 | | | | | | | | | | | | | | |
| B-01 | | | | | | | | | | | | | | |
| B-02 | 50 | -5 | 45 | 2 | | 43 | | | | | | 43 | | |
| B-03 | 50 | -5 | 45 | 2 | | 43 | 60 | | | | | 58 | | no change to A-03 > calculation based in physical rooms |
| B-04 | 50 | -5 | 45 | 2 | | 43 | | 107 | | | | 51 | | no change to A-04 > calculation based in physical rooms |
| B-05 | 50 | -5 | 45 | 2 | | 43 | | | 50 | | | 21 | 43/100*50=21,5 round down:21 | calculation is based on available rooms |
| B-06 | 50 | -5 | 45 | 2 | 30 | 13 | | | | 31 | | 13 | | |
| B-07 | 50 | -5 | 45 | 2 | 30 | 13 | | | | 30 | | 0 | | |
| B-08 | 50 | -5 | 45 | 2 | 30 | 13 | | | | | 61 | 13 | | same as A-08 |
| B-09 | 50 | -5 | 45 | 2 | 30 | 13 | | | | | 60 | 0 | | same as A-09 |
| B-10 | 50 | -5 | 45 | 2 | 30 | 13 | | | 50 | 31 | | 6 | 31>30=true, 13/100*50=6,5 round down: 6 | |
| B-11 | 50 | -5 | 45 | 2 | 30 | 13 | | | 50 | | 59 | 0 | 50/100*59=29,5<30=No inventory is displayed as it is 0. | |