

Release Notes: Release Ready

SabreSonic CSS Digital Connect

Shop & Book, Manage Your Booking, Modify Trip Options

Version 3.1



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Introduction

SabreSonic® *CSS Digital Connect* exposes key capabilities of Sabre's eCommerce platform like shopping, booking, ancillaries, payments, seat selection and ticketing whilst abstracting its underlying booking engine business, architecture and infrastructure, to enable an optimized data set via JSON for airlines to consume and create their own user experiences.

This document contains "Release Ready" Release Notes information for *Digital Connect v3.1*. It contains high-level information to enable advanced identification of new features and preparation for readiness and deployment.

1.1 Document Overview

This document identifies the functionality provided by the Release Ready release of *Digital Connect v3.1* and the specific services that gives airlines to that functionality. For details, see the *Digital Connect* API documentation.

Read this document so that you are aware of changes to the solution.

1.2 Release Identification

Release Version	Type (Version, Update, or Update with Patch)	Date	Approved By	Description of Change
3.1	Update	January 2017		

Release Features

2.1 Summary of Features

Digital Connect v3.1 includes the following new and enhanced features by using *Digital Connect* v3.1 services:

2.2 Ancillaries

2.2.1 Offering seats as a part of the bundle

By selling ancillary bundles with premium (chargeable) seats airlines will able to increase their revenue and sale additional items that otherwise not would have been purchased if available only as ancillaries offered individually.

Until now seats were not included in Ancillary Bundles. *Digital Connect* v3.1 implements the new enhancement of Dynamic Retailer (Dynamic Retailer is the configuration tool allowing Airlines to bundle multiple ancillaries and selling them for a single price).

The seat may be selected before or after the bundle offer depending on the workflow.

This functionality applies to the following flows:

- The Revenue Flow (B2C),
- Manage Your Booking: Modify Trip Options Flow (MYB: MTO).

2.2.1.1 Prerequisites

- The airline has the Dynamic Retailer enabled.
- Ancillaries must be filed via ATPCO and/or Merchandising Manager.
- The aircraft seat map must be configured to display premium (paid) seats.
- The airline must have Ancillary Bundles with Seats enabled.

2.2.1.2 General Limitations

- Seat bundles will not be offered for interline and codeshare flights.
- Seat Bundles will not be offered for INS (Infant with Seat) type of the passenger for example case when 1ADT is travelling with 2 INF.
- Direct flights with change of gauge will not be eligible for Seat Bundles.
- Seat Bundles can only include flight associated (EMD-A) ancillaries, no stand-alone (EMD-S) ancillary types may be included.
- B2C Limitations: Upsell The selected ancillaries/ bundles will remain in the session when they apply to the Upsell. Conversely, ancillaries /bundles will be deleted if no longer applicable and the seat assignment will require re-selection.

2.2.1.3 Limitations in the Post Booking flows

2.2.1.3.1 Manage Your Booking - Book Now Pay Later (MYB: BNPL) Flow

• Seat bundles will not be offered in MYB: BNPL flow. The passenger will not be able to add, cancel or modify seat bundle(s) during the purchase of the on-hold booking.

2.2.1.3.2 Manage Your Booking - Modify Trip Options (MYB: MTO) Flow

- The passenger will not be able to add new seat bundle(s) in the MTO flow.
- The passenger will not be able to remove seat bundle in the MTO flow.
- The passenger will not be able to remove the premium seat associated with the seat bundle purchased in the Revenue flow (B2C) but will be able to change one premium seat associated with the seat bundle for another premium seat.

2.2.1.4 Highlights

2.2.1.4.1 The Revenue Flow (B2C)

Airlines will be able to sell the ancillary bundles with seats in the Revenue (B2C) flow with the following sequence of DC service calls:

Workflow 1 (ancillary selection first, then seat selection):

- 1. The passenger shops for flights and builds an itinerary.
- 2. The airline calls /products/ancillaries GET to obtain list of ancillaries available for the currently selected itinerary.

The Airline formats information about available ancillary bundles with seats to the passenger.

3. When the passenger selects a bundle the airline calls /products/ancillaries POST.

The airline validates the passenger selection to ensure there is no duplication in the selected single or bundled ancillaries.

The duplicate check configuration has been added to verify that selected bundles do not contain duplicate services within any selected single or bundled ancillaries on the same sector/ portion of the itinerary. By default the duplicate check is enabled. The configuration is unique to each flow allowing flexibility in selecting flows for activation.

An alternate configuration can be used when the duplicate check is disabled. It does not allow any particular ancillary to be purchased more than once for the same passenger and sector/portion. This configuration is mainly to block any ancillary which cannot be purchased more than once (example seat, Wi-Fi) but at the same time system allows to purchase duplicate ancillary bundle/bundle items.

4. The airline calls /products/seats GET to obtain seat map for the currently selected itinerary. If a seat bundle is selected by the passenger, /products/seats GET will return only premium seats as available and all free seats will be marked as unavailable to select.

When the seat bundle is removed during the flow the selected premium seat is removed along with the seat bundle and warning message ("*premium.seat.has.been.removed*") is returned in POST ancillary response.

5. When the passenger selects the premium seats the airline calls POST /products/seats to add seats selected by the passenger to the itinerary. If no premium seat is selected as a part of /products/seat

POST the response returns "premium.seat.not.selected.for.seat.bundle" warning message to indicate that premium seat has to be selected by the passenger.

- 6. The airline can call /products GET operation to obtain a current list with prices of products that the passenger has added to the itinerary and use this information to build and display a shopping cart.
- 7. When the passenger indicates that shopping is complete the airline obtains available payment options for the current itinerary by calling /paymentOptions GET.

The airline can format the information for display to the passenger.

8. When the passenger selects their form of payment, completes the payment and decides to purchase, the airline initiates the purchase and ticketing process by calling /purchase POST. If authorization is successful, the /purchase service will create a PNR, EMD(s), etc.

The /purchase service will validate that when a seat bundle is added to booking then premium seat also got selected for that passenger, otherwise a validation error message will be returned.

9. The response indicates whether the purchase is successful.

The airline formats this information for display to the passenger.

- 10. The passenger specifies a PNR for review.
- 11. The airlines submits a /pnr GET request.

The airline can format the information for display to the passenger.

Workflow 2 (seat selection first, then seat bundle reservation):

- 1. The passenger shops for flights and builds an itinerary.
- 2. The airline calls /products/seats GET to obtain seat map for the currently selected itinerary.
- 3. When the passenger selects seat, the airline calls /products/seats POST to add to the itinerary seats selected by the passenger.
- 4. The airline calls /products/ancillaries GET to obtain list of ancillaries available for the currently selected itinerary.

The Airline formats information about available ancillary bundles for presentation to the passenger. A new query parameter that supports the filtering option gives the possibility to return only seat bundle ancillaries during GET /products/ancillaries service. Seat bundles (if any) will be presented on the Seat page and any other ancillaries (including ancillary bundles) will be shown on the Ancillaries Page. Please note: Seat Bundles will be presented on the Ancillaries Page as well allowing the passenger to select seat bundle on the Seat Page or on the Ancillaries Page.

Example:

https://host/SSW2010/ipcc/api/products/ancillaries?execution=execution&fil
terKey=SEATBUNDLES

Parameter *filterKey=SEATBUNDLES* helps to return only seat bundles in the json response. *filterKey* is the framework level support which can be used in any json service. To enable the filtering there are configuration properties that need to be set up.

5. When the passenger selects bundle(s) the airline calls /products/ancillaries POST.

If a passenger has already selected a paid (premium) seat and then selects a seat bundle, the price of the

paid seat is changed to \$0 since it becomes a part of the bundled price. A warning message is sent (seat.price.changed.to.zero.for.seat.bundle) noting the price change.

The airline validates if there is no conflict in selected single ancillaries and bundles (the same benefit cannot be selected twice by the passenger).

- 6. The airline initiates the purchase and ticketing process by calling /purchase POST; if authorization is successful the /purchase service will create a PNR, EMD(s), etc.
- 7. The response indicates the success or failure of the purchase.

Upsell

The response of the /products/upsell (/products/upgrade) POST will return the following message (since seats are always being removed from the session, the 'seats removed' message is being returned):

```
{
"level":"warn",
"code":"premium.seat.has.been.removed",
"details":{"origin":"MEX","destination":"CUN","departure":"2016-12-
07T00:55:00","passengerIndex":1,"code":"seat:6D"}
}
```

At the same time, system re-assigns the Ancillaries back (if that operation is possible) - ancillaries associated with the seat bundle(s) will be also re-assigned.

If re-association of ancillaries included in the Bundle is not possible then /products/upsell POST returns the following message:

```
{
  "level":"warn",
  "code":"seat.bundle.ancillary.has.been.removed",
  "details":{"origin":"MEX","destination":"CUN","departure":"2016-12-
07T00:55:00","passengerIndex":1,"code":"ancillary:PS3"}
}
```

Upgrade

For the /products/upgrade POST seats and ancillaries are always dropped, the above messages are returned.

2.2.1.4.2 The Revenue – Book Now Pay Later Flow (B2C: BNPL)

- 1. The passenger shops for flights, builds an itinerary and adds seat bundles to the reservation.
- 2. The passenger indicates that he wants to place the booking on hold.
- 3. The airline determines the payment options available for Book Now Pay Later by calling /products/bnpl.

The airline displays on-hold options for the passenger's selection.

- 4. The airline initiates the on-hold booking (including the hold type and the payment method) by calling /products/bnpl/purchase POST; if authorization is successful, the /products/bnpl/purchase service will create a PNR with an on-hold status.
 - Bundle AE item HD status PAYMENT REQUIRED
 - Children AE items (with 0 cost) HK status CONFIRMED (fee waived)

2.2.1.4.3 Manage Your Booking – Book Now Pay Later Flow (MYB: BNPL)

The passenger can successfully purchase on-hold booking with a seat bundle in the MYB:BNPL flow:

- 1. The passenger retrieves a booking either by supplying basic PNR information or by logging into the passenger's account. If the passenger is logged in all their reservations are visible.
- 2. The /pnr service GET operation returns information for the PNR specified in the parameters. Airlines can prompt passengers for information that identifies a PNR, to retrieve the information and format it for display to the passenger.
- 3. The airline obtains available payment options for the current itinerary by calling /pnr/bnpl/paymentOptions GET.
- 4. The airline can format the information for display to the passenger.
- 5. When the passenger selects a form of payment, completes the required payment information and decides to purchase, the airline initiates the purchase and ticketing process by calling /pnr/bnpl/purchase POST; if authorization is successful, the /pnr/bnpl /purchase service will add also remarks to the PNR.
 - Bundle AE item HI status FULFILLED;
 - Children AE items HK status CONFIRMED.
- 6. The response indicates whether the purchase is successful.

The airline formats this information for display to the passenger.

2.2.1.4.4 Manage Your Booking – Modify Trip Options Flow (MYB: MTO)

- The passenger will be able to change the premium seat associated with the seat bundle for another premium seat.
- The passenger will be able to purchase single ancillaries or ancillary bundles, but not seat bundles.

2.2.1.4.5 Error handling

1. Revenue Flow (B2C):

(The premium) Seat and Seat Bundle will always be purchased together. If either one fails all are removed:

• If the premium seat associated with the seat bundle fails to be added during /purchase POST, all seats for that portion/sector are removed. No Seat Bundle is sent in the UpdateResevationRQ for that passenger and sector/ portion. The Seat Bundle will not be added to the PNR and the passenger will not be charged for the failed Seat Bundle. A warning message will be returned in the /purchase POST response: "errorReservingAncillaries" and "ssrFailedToAddSomeSeats".

- If the premium seat is successfully added during /purchase POST operation and the Seat Bundle fails to be added, the seat which is associated with that Seat Bundle for that passenger and sector/ portion will also be removed. The warning message above will be returned in the /purchase POST response.
- 2. Manage Your Booking: Modify Trip Options Flow (MYB:MTO):
 - If the passenger wants to change the premium seat associated with the Seat Bundle and for some reason seat assignment (4G) fails to add the new seat selection during /purchase POST operation, the downline will retain the original seat selection.

Service Name	Operation	Change
/products/ancillaries	POST	Response - Array of <i>Messages</i> has been added for the <i>AncillaryOperationResult</i> Object.
		New warning messages have been added to POST ancillary service to support seat bundle functionality:
		 premium.seat.not.selected.for.seat.bundle seat.price.changed.to.zero.for.seat.bundle free.seat.has.been.removed premium.seat.has.been.removed
/products/seats	POST	Request - Array of <i>Messages</i> has been added for the <i>SeatOperation</i> Object.
		Response - Array of <i>Messages</i> has been added for the <i>UpsellRequestResult</i> Object.
		New warning message has been added:
		• premium.seat.not.selected.for.seat.bundle
/products/seat	GET	New warning message has been added:
		• premium.seat.not.selected.for.seat.bundle
		New info message has been added:
		seatBundle.selected.for.passenger
/products/upsell	POST	Response - Array of <i>Messages</i> has been added for the <i>UpsellRequestResult</i> Object.
		New warning message has been added:
		• seat.bundle.ancillary.has.been.removed
/products/upgrade	POST	Response - Array of <i>Messages</i> has been added for the <i>UpgradeRequestResult</i> Object.

2.2.1.4.6 API Modifications

		New warning message has been added: seat.bundle.ancillary.has.been.removed
/purchase	POST	 There is a new validation added to POST purchase service., for example when seat bundle selected for pax1, but no premium seat selected: <i>premium.seat.not.selected.for.seat.bundle</i>

2.3 Calendar Matrix

Digital Connect v3.1 makes it possible to search for flights using NxN or NxM Calendar Matrix display. Airlines can now display both inbound and outbound flights combined for the corresponding period of time in a Calendar Matrix format.

Following enhancements have also been added to the Calendar Matrix:

- Displaying a correct status of flights i.e. *sold out* and *non-operational*.
- Providing departure date and time of a return trip (*Inbound*) instead of arrival date and time.

Note that Calendar Matrix is not displayed by passenger but by trip.

This functionality applies to the following flows:

- The Revenue Flow (B2C),
- The Redemption Flow (RBE).

2.3.1.1 Limitations

This search type only applies for Round Trip type searches.

2.3.1.2 Prerequisites

- Airlines have RT (return) display and Matrix format configured (Matrix is available for RT trips only).
- Airlines have Advanced Shopping enabled (Matrix is available for advanced shopping only).

2.3.1.2.1 API Modifications

Service Name	Operation	Change
/products/air/search	POST	Added parameter "plusMinusDays" with number of the alternate pricing days that will be shown in the matrix before and after the selected date. Example plus/minus 2 days for the matrix 5x5.

2.4 Dynamic Retailer

2.4.1 Auto Inclusion of free ancillaries

This feature allows ancillaries included by fare to be shown in the shopping cart with a zero cost:

- In case of extras, these will be automatically added to the shopping cart with a cost of zero;
- For seats, the seat map will display the seat type as zero cost no pre-selection the passenger will select seat on his own.

To achieve that a new JSON service was introduced POST /products/ancillaries/search (and equivalent services for other paths). This service consumes *AncillarySearchContext* with a *preselectFreeDiscountedAncillaries* parameter. If this parameter is set to *true* then all available free discounted ancillaries are being added to the shopping basket.

Note that this is a copy of the GET functionality moved to POST to support the new data return.

2.4.1.1 Prerequisites

Branded Fare Inclusions must be defined in the Dynamic Retailer.

2.4.1.2 Highlights

Airlines can now drive information about the free ancillaries in The Revenue Flow (B2C) with the following sequence of DC service calls:

- 1. The passenger shops for flights and builds an itinerary.
- The airline calls /products/ancillaries/search POST* to obtain list of ancillaries available for the currently selected itinerary (with AncillarySearchContext and parameter preselectFreeDiscountedAncillaries set to true to automatically preselect 100% discounted ancillaries).
 *If the preselectFreeDiscountedAncillaries parameter is set to false this service is interchangeable with /products/ancillaries GET, since it provides the same results.

The Airline formats information about available ancillaries to the passenger.

- 3. When the passenger selects ancillaries, the airline calls /products/ancillaries POST and adds ancillaries to the reservation. Product cart is updated accordingly.
- 4. When the passenger indicates that the booking is complete the airline obtains available payment options for the current itinerary by calling /paymentOptions GET.

The airline can format the information for display to the passenger.

- 5. When the passenger selects form of payment, completes the payment and decides to purchase, the airline initiates the purchase and ticketing process by calling /purchase POST; if authorization is successful, the /purchase service will create a PNR, EMD(s), etc.
- 6. The response indicates whether the purchase is successful.

The airline formats this information for display to the passenger.

7. The passenger specifies a PNR for review.

8. The airlines submits a /pnr GET request.

The airline can format the information for display to the passenger

Airlines can now drive information about the free ancillaries in the Manage Your Booking – Book Now Pay Later (MYB: BNPL) Flow with the following sequence of DC service calls:

- 1. The passenger booked ancillary in the Booking flow and placed the reservation on hold with the Book Now Pay Later option.
- 2. The passenger selects the option to complete the purchase of a booking that was previously booked with Book Now Pay Later.
- 3. The airline prompts the passenger for the information needed to retrieve the PNR, and the passenger supplies the information.
- 4. The airline calls /pnr/bnpl to retrieve the PNR and initialize the BNPL Purchase flow.
- 5. The airline displays the retrieved PNR to the passenger for review.
- 6. The airline can prompt the passenger to add or remove ancillaries.
- 7. The airline calls /products/ancillaries/search POST to obtain list of ancillaries available for the currently selected itinerary (with *AncillarySearchContext* and parameter *preselectFreeDiscountedAncillaries* set to *true* to automatically preselect 100% discounted ancillaries).

*If the *preselectFreeDiscountedAncillaries* parameter is set to *false* this service is interchangeable with /products/ancillaries GET, since it provides the same results.

The Airline formats information about available ancillaries to the passenger.

- 8. When the passenger selects ancillaries, the airline calls /products/ancillaries POST and adds ancillaries to the reservation. Product cart is updated accordingly.
- 9. When the passenger indicates that the booking is complete the airline obtains available payment options for the current itinerary by calling /paymentOptions GET.

The airline can format the information for display to the passenger.

- 10. When the passenger selects form of payment, completes the payment and decides to purchase, the airline initiates the purchase and ticketing process by calling /purchase POST; if authorization is successful, the /purchase service will create a PNR, EMD(s), etc.
- 11. The response indicates whether the purchase is successful.

The airline formats this information for display to the passenger.

- 12. The passenger specifies a PNR for review.
- 13. The airlines submits a /pnr GET request.

The airline can format the information for display to the passenger.

2.4.1.2.1 API Modifications

Service Name	Operation	Change
/products/ancillaries/search	POST	New services have been introduced.
/pnr/bnpl/products/ancillaries/search		
/pnr/exchange/products/ancillaries/search		
/pnr/mto/products/ancillaries/search		

2.4.2 Flight Promotions

Airlines create promotions to increase sale and acquire new customers. By discounting existing fares they encourage people to travel. Certain routes or flights can be managed better and create higher revenue if they get promoted.

This feature introduces a new way of managing Promo Codes. Currently they are available only via Deals Manager, *Digital Connect* v3.1 enables managing of Promo Codes via Dynamic Retailer Flight Promotions.

- Create flight promotions restricted by Promo Codes promotion will be applied only after inserting Promo Code on the Search Page by the customer;
- Display strike-through original price and new price on Flight Select page;
- Highlight flights that match promotions with *special fare* indicator.

This functionality will be available in the following flows:

- The Revenue Flow (B2C),
- The Revenue: Book Now Pay Later Flow (B2C:BNPL).

2.4.2.1 Prerequisites

- Dynamic Retailer needs to be activated with Flight Promotions.
- Dynamic Retailer Flight Promotions has to be configured.

2.4.2.2 Highlights

There will be no changes in the standard flow of DC service calls for the Revenue Flow (B2C) and the Revenue - Book Now Pay Later Flow (B2C:BNPL – when the reservation is put on hold). In the Manage Your Booking – Book Now Pay Later Flow (MYB: BNPL) the promo code will be used during the purchase, but the passenger will not get the option to add or edit the promo code during the fulfillment.

Service Name	Operation	Change
/products/air/search	POST	New warning messages have been added to the response. They are presenting <i>QueryProductsRS</i> promo code related statuses.
/products/air	POST	New messages have been added.
/products	PUT	The messages field was added to BreakdownResponse. If any promo code related warning is presented in RepriceRS it is being propagated to JSON response. In this case also the promo code is being removed from

	reservation and is not being sent in any subsequent calls.
--	--

2.5 Dynamic Rewards/Redemption

2.5.1 Cancel and Refund (Manage Your Booking: Cancel and Refund flow)

Digital Connect v3.1 services will introduce an enhancement to the Manage Your Booking: Cancel and Refund Flow (MYB: CR) and allow airlines to support the following scenario:

• Airlines that support redemption bookings (whether fixed or dynamic rewards or combination) that have not used any flight coupons will be able to cancel and refund redemption bookings (reservations that have been paid in points).

This enhancement will allow Airlines, in case of Redemption bookings, to refund points back into the LMS (Loyalty Management System). Passengers will no longer need to contact the Call Centre to refund their tickets that were paid with points and Airlines will no longer need to create Travel Bank accounts for refunding booking originally paid with points.

In case of tickets issued with MFOP (Multiple Form of Payment), points payment will be refunded back into the LMS account and CC (Credit Card) payment will be refunded back to the original FOP or to Travel Bank (when AER is returning "Refund to voucher only"), depending on airline configuration.

2.5.1.1 Prerequisites

- Airlines will need to have a LMS (Loyalty Management System) service provider. The airlines LMS needs to support refunds, with either full refunds or partial refunds.
- Airlines need to enable the Redemption (RBE) Flow and the Manage Your Booking Cancel and Refund Flow (MYB: CR).
- MFOR functionality needs to be enabled.
- Original booker who used his points to pay for a booking must be the logged in user during the cancel flow.
- Airline has to configure cancellation fee ancillary in the Merchandising Manager and in QueryAncillaries to represent cost of flight cancellation.
- If the airline wants to offer free of charge cancellation and refund process it is recommended to configure cancel change fee with zero amount.

2.5.1.2 Limitations

- Will not support any scenarios where any part of itinerary has been flown/ used.
- Only entire VCR can be cancelled the passenger cannot cancel only inbound or outbound.
- If any segment has been upgraded, the passenger needs to contact the Call Center.
- If there is an involuntary exchange, the passenger needs to contact the Call Center.
- If there are any segments with unconfirmed schedule change, the passenger needs to contact the Call Center.

- Cancellation can be done only for all passengers split PNR functionality is not supported.
- Will not support cancellation of ancillaries/seats paid in points as currently LMS systems do not support partial refunds.
 If the passenger has ancillaries paid in points he will be redirected to the existing flow so refund will be done through AER and refund will go to Travel Bank, unless it's a fixed reward booking then segments are cancelled, OTHS segment is added to keep the PNR active, and PNR is queue placed for manual handling by airline agent to refund the ticket.
- AER has a limitation that it cannot refund tickets with zero value. It will have an impact on infant fares that have a zero value. For such cases ticket will remain in the PNR with OK status. New ticket will be issued for the new route.

2.5.1.3 Highlights

There will be no changes for the standard sequence of DC service calls – only new logic that supports cancellation and refund of the redemption bookings has been introduced:

- 1. The airline prompts the passenger for login credentials; the passenger supplies them.
- 2. The airline logs the passenger in with the /login POST service.
- 3. The /pnr/cancelAndRefund service GET operation initializes Cancellation process, checks (validates) MYB rules (separate for logged-in and guest user) and returns information for the PNR specified by the parameters (PNR locator, first name, last name and email).

If the PNR is found all the flight details will be returned (including the payment details).

- New rule in GET/pnr/cancelAndRefund to ensure that the passenger is logged in (for VCR paid in points)
- New rule in GET/pnr/cancelAndRefund to ensure that logged in passenger is also the original person who booked and paid for the initial booking to continue with exchange and refund.
- 4. The airline submits /pnr/CancelAndRefund/cancel request, GET operation to obtain information about refund targets and cancel fees (GET request is based on the information stored in the session).
 - New breakdown elements: *NEW_CHARGE* and *REFUND_SUMMARY* have been added:
 - *NEW_CHARGE* it refers to the cancellation fee that will be charged against credit card or will be deducted from Frequent Flyer account.
 - *REFUND_SUMMARY* sum of the total refunded amount and new charge.
 - Amounts will be returned as the alternative of the monetary and award amount (if both forms of payment are configured).
 - For the award payment the response will return AWARD type of the RefundTarget
 - Information about the payment options for the cancellation fee (Array of *Payment Product* Objects) has been added
 - For AWARD type of the RefundTarget balance before and after transaction will be exposed.
- 5. If the passenger accepts the calculated refund amount, the airline uses /pnr/CancelAndRefund/confirm request, POST operation to finalize the 'Cancel and Refund' process and to get the cancellation refunds.

• *PaymentData* property has been added. It contains payment details of the selected form of payment - monetary or award.

2.5.1.3.1 Refund Summary calculations – VCR + Cancelation fee

CancellationResult.totalRefund will contain following subElements:

For the standard cancel flow we used to have only refund process. For the new award cancel flow we are refunding all founds and taking new charge for cancelation fee. Please find below an example that shows that difference:

→ Old cancel flow (current behavior):

✓ Fare \$1000

✓ Cancelation fee \$300

TOTAL_REFUND : \$700 ORIGINAL_FARE : \$1000 ORIGINAL_FARE_AMOUNT : \$800 ORIGINAL_FARE_TAX_PRICE : \$200 CANCELLATION_FEE : \$300 CANCELLATION_FEE_BASE : \$250 CANCELLATION_FEE_TAX : \$50 NON_REFUNDABLE_AMOUNT : \$0 NEW_CHARGE : \$0 (new label) **REFUND_SUMMARY** : \$700 (new label)

→ New award cancel flow:

✓ Fare \$900 and 1000P

✓ Cancelation fee \$300 or 3000P

1 = 10P

TOTAL_REFUND : \$900 and 1000P ORIGINAL_FARE : \$900 and 1000P ORIGINAL_FARE_AMOUNT : \$750 and 500P ORIGINAL_FARE_TAX_PRICE : \$200 CANCELLATION_FEE : \$300 or 3000P CANCELLATION_FEE_BASE : \$250 or 2500P CANCELLATION_FEE_TAX : \$50 or 500P NON_REFUNDABLE_AMOUNT : \$0 (new label) NEW_CHARGE : \$300 or 3000P **REFUND_SUMMARY** : \$900 - 2000P or \$600 + 1000P (new label)

2.5.1.3.2 Error handling scenarios

- Pre-point of no return errors (hard failures)
 - /pnr/cancelAndRefund GET Flow initialization and cancel request errors
 - When there is a call to the /pnr/cancelAndRefund GET for the PNR that is eligible for an award cancel but the user is not logged in.
 - When there is a call to the /pnr/cancelAndRefund/cancel GET but the user is not logged in.
 - When there is a call to the /pnr/cancelAndRefund/cancel GET for the logged passenger with an award account that is different than the account used in the original booking.
 - When there is a call to /pnr/cancelAndRefund/cancel GET and system receives an exception that refund is not allowed. It is caused by AER returning nonrefundable fare message.
 - When there is a call to /pnr/cancelAndRefund/cancel GET and system receives temporary pricing error. It may be caused by multiple issues including failed AER call and SE returning inconsistent cancellation fee offers.
- Cancel confirm errors
 - When there is a call to the /pnr/cancelAndRefund/confirm POST for the logged in passenger with an award account that is different than the account used in the original booking.

Service Name	Operation	Change
/pnr/cancelAndRefund/cancel	GET	• New object <i>PaymentProduct</i> has been added – for exposing payment options for the cancellation fee.
		 New type of the RefundTargets - AWARD has been added
		 New labels "NEW_CHARGE" and "REFUND_SUMMARY" below BreakdownElement.subElements have been added.
/pnr/cancelAndRefund/confirm	POST	New type of the RefundTargets - AWARD has been added
		 New labels "NEW_CHARGE" and "REFUND_SUMMARY" below CancellationPaymentData object have been added.

2.5.1.3.3 API Modifications

2.6 Fare Rules

2.6.1 Fare rules support in the post-booking flows.

Fare rules display in post-booking flows has been enhanced in *Digital Connect* v3.1:

• There will be an option to retrieve fare rules as a part of the PNR retrieval. New optional parameter has been added to the /pnr GET request to indicate if fare rules should be included in the response.

Note: PNR retrieval will return only actual fare rules, not the historical ones.

• There will be an option to retrieve fare rules in post-booking flows for flights stored in the current session. The passenger will select a flight from the display of available flights and the airline will send a request to obtain fare rules.

This functionality applies to the following flows:

- The Revenue Flow (B2C),
- The Revenue: Book Now Pay Later Flow (B2C: BNPL),
- The Manage Your Booking: Book Now Pay Later Flow (MYB: BNPL),
- The Manage Your Booking: Upgrade Flow (MYB: FFU),
- The Manage Your Booking: Modify Trip Options Flow (MYB: MTO),
- Manage Your Booking: Change Itinerary Flow (MYB: CI).

2.6.1.1 Highlights

Airlines can now offer an online display of fare rules in the Manage Your Booking: Change Itinerary Flow (MYB: CI) with the following sequence of *Digital Connect* v3.1 service calls:

- 1. The passenger retrieves a booking either by supplying basic PNR information or by logging into the his/her account.
- 2. The /pnr service GET returns information of the PNR specified in the parameters.
 - New query parameter *fareRulesRequired* has been added to the /pnr GET request. It obtains fare rules for fares stored in the PNR (actual ones).
- 3. After the passenger selects flights to be exchanged, the airline calls pnr/exchange GET to initialize an Exchange process.
- 4. The airline calls /pnr/exchange/products/air/search POST to pass search criteria from the passenger and to obtain the list of available flights matching the criteria.

The Airline formats this information for display to the passenger.

- 5. The passenger selects a flight.
- 6. The airline submits /pnr/exchange/products/air POST to add selected flight to the itinerary.
- 7. The airline calls /pnr/exchange/products/air/farerules GET to obtain fare rules for the itineraries stored in the current session.

The Airline formats this information for display to the passenger.

2.6.1.2 API Modifications

Service Name	Operation	Change
/pnr /pnr/bnpl /pnr/mto /pnr/exchange /pnr/upgrade /pnr/cancelAndRefund	GET	 New query parameter "fareRulesRequired" added to the request. Added property "fareRulesResult" – shows rules retrieved for fares stored in the PNR.
/pnr/exchange/products/air/farerules /pnr/bnpl/products/air/farerules /pnr/mto/products/air/farerules /pnr/upgrade/products/air/farerules	GET	New services have been added.

2.7 Travel Agencies

2.7.1 Profiles creation and management

Digital Connect v3.1 services support an option to create and activate Agency's profiles in the Customer Insights (CI) and in the Agency Manager System (AMS).

Enrolling agency is a multi-step procedure which begins with the airline administrator enrolling the agency, then the airline administrator must access the Agency Management System to change the agency market to active and appropriate, activate the agency via STAN, and assign agency funds or credit limit in the Agency Management System.

All Travel Agencies will have a credit limit - their profiles will be created in the CI and in the AMS, and the CI profile will be updated with BT FOP received from AMS.

Digital Connect v3.1 will also allow airlines to incorporate additional data that needs to be stored in the Agency's profile, including TaxId. TaxId will be provided during Agency profile create, and might be modified by an airline in STAN.

2.7.1.1 Prerequisites

The airline administrator enabled the travel agency module in STAN.

2.7.1.2 Highlights

Airlines can manage agency profile with the following sequence of *Digital Connect* v3.1 service calls:

- 1. On the Agency Login page, the airline administrator clicks the **Enroll Agency** link and the Enroll Agency page opens (on the airline UI).
- 2. The administrator provides all the necessary agency information and clicks **Enroll Now**. Call to the /profile/agency POST is being sent (with in-line and after-submit validation to detect any errors).

IATA number is being sent in the UniqueId field (if configured) during Agency creation in the ProfileCreateRq (CustomerInsight).

- 3. If all the information was provided correctly, *Digital Connect* response shows a successful message in the /profile/agency POST response and sends a confirmation email to the administrator, if enabled. The agency is created in the Customer Insight (CI), as inactive, and does not have any funds assigned to it in the Agency Management System (AMS). Airline Admin needs to change the market in AMS, Activate the account using STAN and assign ACL funds in AMS system.
- 4. The administrator accesses the Agency Management System from the Community Portal and changes the agency market to an active appropriate market.
- 5. The airline administrator logs in to an active STAN (active and editable) version, goes to Agencies tab and searches for the agency. He can search by agency name, IATA number, and state (active and inactive).
- 6. From the search results, the administrator selects the agency. The Agency Information window opens. The administrator changes the agency status to active, assigns the password and saves the changes. The airline updates the agency's profile information with a /profile/agency PUT request. In-line and after-submit validation is applied to the page.

If the airline enabled confirmation email, after activating and updating the agency account, the agency administrator receives two confirmation emails, one containing the user name, and another one containing password.

- 7. The airline administrator can retrieve all the agencies created and update the agency-related information such as administrator information and agency information. The airline can decide what fields are available for editing.
- 8. The administrator logs in to the Agency Management System. The administrator can now assign funds and credit limit to the agency.
- 9. The administrator can now log in to the Administrator Portal (with loginID and password). The airline logs the agency in with the /login/agency POST service.
- 10. After successful login the airline retrieves the agency profile with the /profile/agency GET service and displays the agency profile information.
- 11. When the administrator clicks the logout link the airline calls /login/agency DELETE to remove from the session the agency information. If the agency is successfully logged out the response returns the result of the logout operation.

Airlines can offer an option to reset agency profile password with the following sequence of *Digital Connect* v3.1 service calls:

- 1. Airline displays prompts for agency login (login data credentials).
- 2. The administrator supplies login(username) and click Forgot password link
- 3. The airline sends /profile/resetPasswordKey POST with the "username" as a parameter. The airline retrieves the agency profile and email address (if found). In the response the airline gets "resetPasswordKey".
- 4. The airline send an email with a reset password link.
- 5. The administrator provides the new password. The airline calls /profile/resetPassword POST with new password and "resetPasswordKey" (to match it with a proper profile).

2.7.1.3 API Modifications

Service Name	Operation	Change
/profile/agency	POST	New service has been introduced – Creates an Agency profile.
/profile/agency	GET	New service has been introduced – Retrieves profile for logged in Agency user.
/profile/agency	PUT	New service has been introduced – Updates an existing Agency profile.
/profile/agency/resetPassword	POST	New service has been introduced - Allows the passenger to reset the forgotten password.
/profile/agency/resetPasswordKey	POST	New service has been introduced - Requests for a change of the password key. It is sent to the passenger via email.
/login/agency	POST	New service has been introduced – Authenticates Agency user in the current conversation.
/login/agency	GET	New service has been introduced - Retrieves authenticated Agency user's information.
/login/agency	DELETE	New service has been introduced – Logs out Agency user.

Defect Fixes

3.1 Defect 1

Title: DC-211 PaymentRq goes twice during single CC payment

Description:

The current result: Two PaymentRQ/RS - first one is without price and for failing CC application does care about failure from PaymentRS and goes forward with the booking.

Resolution:

Expected Result: Only one PaymentRQ/RS for single CC payment.

3.2 Defect 2

Title: PG Gap - UC (unable to confirm) handling for codeshare flights.

Description:

CollectMiscFee requests failed because of lack segment numbers in fee price components.

Resolution:

It was a code change to reassign segment numbers inside fee price components after a reprice request.

Contacting Customer Care

4.1 About Sabre Airline Solutions Customer Care

Sabre Airline Solutions[®] maintains the *Sabre*[®] *Global Customer Care* help desk that is available for all customers 24 hours a day, 7 days a week. *Customer Care* analysts facilitate the resolution of issues, questions, and requests for *Sabre Airline Solutions* products and services.

When you contact *Customer Care*, an analyst collects specific information about the issue, opens a service request in the tracking system, and then documents the issue to track handling and resolution. This logging and tracking process facilitates complete and accurate communication, which improves the resolution process, implementation process, and design of future enhancements to ultimately prevent recurrence of the issue.

Customer Care analysts manage all service requests throughout the service request's life cycle, from beginning to end. The analysts are committed to resolving all service requests in a professional and timely manner. They coordinate with subject matter experts to resolve issues and escalate as needed to ensure resolution. The analyst does not close a service request until it is fully resolved and communicated back to you.

4.1.1 Sabre Community Portal / eService Tool

Sabre Airline Solutions maintains the Sabre® Community Portal at community.sabre.com that offers:

- Access to the eService tool, from which you can submit and track service requests.
- Access to Sabre hosted applications.
- Training and documentation information.
- Application release notes and patches.
- User forums, news, and events.

4.1.1.1 Registering for Community Portal Access

Access to the *Community Portal* is generally provided within 24 to 48 business hours. If your organization has a Delegated Administrator to approve the request, your access may be granted faster.

To register for Community Portal access

- 1. Go to community.sabre.com.
- 2. Click New Account.

The New User Registration page appears.

- 3. Enter required information.
- 4. Click Submit.

Once your request is approved, you will receive an email with additional information. Follow the instructions within this email to complete the registration process.

4.1.1.2 Requesting Access to eService

Access to eService is generally provided within 24 hours.

Note You should only enter low or medium impact issues in the eService tool. If you have a high or critical impact level issue, you must call *Customer Care* for immediate attention. If you use eService to submit a critical impact level request, the service request will be excluded from time-to-resolution calculations.

To Request Access to eService

- 1. Login to community.sabre.com.
- 2. On the Home page, in the Support Services-eService tool area, click Request Access.

Customer eService Tool	
The eService module allows you to submit Service Requests through the Sabre Community Portal Request Access	If you don't have toll-free access, send us your phone number and we'll call you back.

4.1.2 Telephone

Note To ensure the most expedient response, you must submit all critical and high impact issues directly by phone to *Customer Care*.

Call *Customer Care* at the following toll free number for your country:

Country	Toll Free Number
Antigua	888-832-4738
Argentina	0800-666-1664
Australia	1-800-081-993
Austria	800-291-705
Bahamas	1-800-389-0417
Bahrain	800-00-002 (WSC 5050)
Belarus	880-0114 PIN 375
Belgium	0800-77-029
Bolivia	800-10-0350
Brazil	0800-891-9210
Brunei	800-013 PIN 673
Canada	1-866-598-1706
Chile	800-412555
China	4001-202-315

Country	Toll Free Number
Colombia	01-800-954-1326
Cyprus	800-96110
Czech Republic	800-700-117
Denmark	808-85884
Egypt - Cairo	7955-770 PIN 5670
Egypt - Other	02-7955-770 PIN 5670
El Salvador	800-0000-0011
Estonia	800-12-122 PIN 5047
Finland	0800-914-860
France	0800-909-657
Germany	0800-181-7245
Greece	00800-16-122-055-533
Hong Kong	800-908-742
Iceland	800-8667
India	000-800-100-6116
Indonesia	001-803-016-1722
Ireland	1-800-657-198
Israel	1-809-246-033
Italy	800-787-417
Jamaica	1-866-402-6835
Japan	0053-116-0811
Korea	0030-813-1943
Malaysia	1-800-813-609
Malta	800-90112 PIN 356
Mexico	01-800-123-8537
Netherlands	0800-023-2237
New Zealand	0800-450-960
Norway	800-18-798
Pakistan	00800-9004-4226
Panama	00800-226-0662
Paraguay	009-800-598-1-0004
Peru	0800-52-226
Philippines	1-800-111-00338 or 1-800-111-00339

Country	Toll Free Number
Poland	800-900-807
Russia	810-800-240-31012
Saudi Arabia	1-800-11 PIN 5671
Singapore	800-101-1651
South Africa	0800-980-981
Spain	900-995-926
Sweden	0200-285-836
Switzerland	0800-894-354
Tahiti	888-832-4738
Thailand	 Dial 1-800-000-133 (AT&T) Wait for the recording asking for the number you are dialing. Dial 888-832-4738.
Trinidad and Tobago	888-870-9002
UAE	800-035-702-569
UK	0800-0288446
Uruguay	2518-6642
USA	1-888-421-8889 or 1-800-677-0856
Venezuela	0800-100-3851
Vietnam	 Dial 1-201-0288 (AT&T Toll Free Number). Wait for the recording asking for the number you are dialing. Dial 866-947-8059.
Countries with no-toll free service	+1 770 261 0080 (toll call).

You can also use the **Call Me** button when you need a *Customer Care* analyst to call you back. You can access the **Call Me** button from the following two locations on the *Community Portal*:

- On the **Home** page, in the **Support Services-eService tool** area.
- On the Contacts page, in the **Customer Care** area.

When calling in an issue, the *Customer Care* analyst will ask a number of basic questions to initiate a diagnosis of the issue. Questions may include:

- What is your name and telephone number?
- What is a valid email address?
- What is an alternate contact name and telephone number?
- What is your company name?
- What is the issue description?

- Which application and module were you using when the error occurred?
- What is the applications version number?
- What is the <u>impact on your company's operations</u>?
- Is the application completely disabled?
- Have you restarted the application?
- What error messages are you encountering, if any?
- What sequence of events (keystrokes/button clicks) led to the issue?
- Has the issue occurred before? If Yes, when?
- Does the issue occur on other workstations?
- Have you rebooted the workstation? (Cold/Warm)
- What logon ID were you using?

4.2 Customer Impact Levels

When you submit a service request, you specify the level of impact that the issue causes to your business. The following table defines the customer impact levels:

conditions
System failure causes extreme business impact to operationally critical procedures.
Key personnel are unable to perform operational tasks due to system outage.
Current business practices cannot be performed due to system failure and continued work stoppage has severe financial consequences.
Time critical functionality necessary to continue operations and resolution must be made as soon as possible.
90 – 100% of users are impacted by system failure.
System failure causes significant business impact.
Workaround exists, but is impractical or labor intensive for extended outage duration.
The financial consequence is significant.
50 – 90% of users are impacted by system failure.
Impact to system is noticeable, but has little or no consequence to productivity.
Issue exists in a non-business critical function.
Workaround exists or is not necessary.
Less than 50% of users are impacted.
Functional impact is negligible or non-existent.
Functionality (or system change) not necessary for business to continue.
-

4.2.1 Severity Levels

After you submit a service request, a *Customer Care* analyst reviews it and sets the severity level according to the following guidelines:

Severity Level	Description
1	A complete loss of service. The system is inoperable. Work cannot continue.
2	A severe loss of service. Issue affects a critical business function. However, work can continue in a restricted operating mode.
3	A moderate loss of service. A workaround is available.
4	No loss of service. Issue is minor. No workaround is required.

4.2.2 Product Availability Levels

All products are classified into the following product availability levels:

Availability Level	Application Type	Description
High	Real time and operational (such as, crew tracking/assignment applications).	Any outage or issue that has a major impact on a customer's ability to conduct day-to-day business operations.
Normal	Business management/planning (such as, planning and scheduling and yield management applications).	Any outage or issue that can potentially affect a customer's ability to conduct day-to- day business operations.