

SIA NDC Updates

Date: 01 Dec 2023

Summary:

Updates to SIA NDC Functionality

The following improvements are now available through the SIA NDC connection for usage by partners:

1. Continuous Pricing on NDC
2. Enhanced repricing capabilities during deferred exchange flow
3. Holding existing reservation during deferred exchange flow
4. Activation of 'AgencyID' field in OrderChangeNotification message
5. Usage of PTC INE for PH tax exemption
6. Increased number of bounds supported in AirShopping
7. Sale of Chargeable Seats in NDC for select Lufthansa Group (LHG) Operated Flights
8. Involuntary Servicing on NDC

General Notices to Partners

1. Usage of Stateless Transactions
2. Clarification regarding Amount to be Paid for deferred exchange transactions

Updates to SIA NDC Functionality

1. Continuous Pricing on NDC

As part of Singapore Airlines' continual efforts to improve the customer value proposition and provide better content via our NDC channel, Continuous Pricing has been enabled on SQ NDC channels since the end of June 2023.

Details of the deployment of Continuous Pricing, as well as some Frequently Asked Questions have been shared with our trade partners via our trade communications. A sample of those communications is attached for your reference. *Note: Local deviations may apply.*

a. Update to Fare Type Option

With the deployment of Continuous Pricing and to ensure our mutual customers are presented with a full range of options, SQ will be applying a new default configuration for all existing SQ NDC partners.

Previous default configuration:

The previous default configuration applied for our NDC partners is that when a fare access code has been included with a shopping request, only Offers utilizing fares secured with the access code are returned.

New default configuration:

An updated configuration has been applied such that when a fare access code has been included with a shopping request, both Offers utilizing fares secured with the access code and non-secured fares are returned.

This ensures that Sellers and/or Customers can view more options (some of which may be adjusted with Continuous Pricing) and select their preferred choice.

This new default configuration is already activated in Production.

2. Enhanced repricing capabilities during deferred exchange flow

SQ has released two new improvements to our deferred exchange flow to improve the ability for sellers to obtain a new/up-to-date valid NDC quotation which can then be utilized for payment and ticketing.

These repricing improvements have already been made available for the prime issuance scenario (as shared in our communications dated 30 May 2022) and are now available for deferred exchange scenarios too.

The two scenarios which would automatically trigger the new repricing process on SQ NDC are as follows:

a. Repricing when no longer eligible for original Offer

Currently, SQ NDC provides Sellers the ability to utilize a previously stored (and possibly expired) Offer as a reference with which to obtain a new quotation. However, in some circumstances, the seller may no longer be eligible for the Offer used to generate the prior quotation.

This could be due to a range of factors such as but not limited to: advance purchase condition no longer met, sales validity condition no longer met, changes to the Offers the seller is provided access to etc.

In such a scenario, SQ NDC now automatically tries to generate a new quotation reutilizing wherever possible, the previous Offer context.

b. Repricing when Offer context has changed

Another scenario is when the Offer context has changed after the quotation was generated. This could be due to involuntary flight changes made by the airline, voluntary changes made by airline agents, splitting of the Order etc. In such a case, the quotation is no longer relevant to the stored Offer, and fresh quotations based on the new Offer need to be generated.

The above enhanced repricing functionalities are automatically used by SQ NDC as part of the existing OrderReshop (Reprice mode) flow and no implementation changes are required.

Feature Availability:

Available in Production

Action for Partners:

These enhancements are automatically triggered as part of the existing OrderReshop API and no integration changes need to be made by our partners. However, it is highly recommended that all partners review their implementations to ensure their Sellers may fully benefit from this feature with their current user flows.

3. Holding existing reservation during deferred exchange flow

SQ has been working to improve the range of servicing capabilities which may be utilized by our partners on the NDC channel. We are happy to share a new capability which allows users to temporarily hold their existing itinerary whilst booking an alternative itinerary. This can be done for unpaid Orders and part of a deferred exchange flow for a paid Order.

This feature allows travel agents to temporarily book and provide a quotation to their customers and provide them with some time to respond with confirmation that they would like to finalize the change to the new itinerary. The same can be used for corporate clients who require approval before finalization of the change.

Note: This capability is intended to allow Sellers to hold two itineraries temporarily whilst the passenger is finalizing their choice. As such, it is subject to strict payment (and ticketing) time limits. The alternative itinerary to be booked is also subject to duplicate and incoherent journey checks. These booking integrity checks are consistent across both NDC and EDIFACT channels.

To utilize this functionality, partners should first perform OrderReshop(Shop) and OrderReshop(Price) unchanged from existing flows and then specify at OrderChange the ActionContextCode "HOLD_INVENTORY". The new itinerary is then added to the Order as an additional OrderItem.

Subsequently, either OrderItem may be confirmed with another OrderChange with the ActionContextCode "HOLD_INVENTORY_CONFIRMATION" specifying the OrderItem to be deleted. The other OrderItem will be confirmed or paid, depending on whether a payment input was sent with the OrderChangeRQ.

A reprice of the unticketed OrderItem is also possible while holding both itineraries by specifying the OrderItemRefID within the <RepriceOrder> fields.

Feature Availability:

Available in Test Systems

Availability in Production – To be Confirmed

Action for Partners:

These enhancements require changes to partner implementations/integrations, particularly in the OrderReshop and OrderChange flows to retain the existing itinerary whilst booking the new one as well as to confirm the selected itinerary once finalized. Partners will also need to support the management of two Flight OrderItems returned in OrderView.

4. Activation of 'AgencyID' field in OrderChangeNotification message

In June 2022, SQ NDC introduced the ability to return in the OrderChangeNotification message the AgencyID of the Seller who created the order, allowing partners to filter for OrderChangeNotification messages by AgencyID and route them directly to the relevant Seller accordingly.

The current process is that OrderChangeNotification messages do not return this information unless requested by the partners. With the evolution and growth of the channel as well as SQ NDC capabilities, from 1st October 2023, this feature will be automatically activated for all partners who have implemented the OrderChangeNotification, unless they specifically request to opt out of it.

Feature Availability:

Available in Test Systems

Available in Production

Action for Partners:

No action is required by partners unless they would like to be excluded from this default activation. Exclusion requests may be made via your respective point of contact.

5. Usage of PTC INE for PH Tax Exemption

The Philippines market has specific requirements regarding which categories of passengers are to be exempt from the Philippines Travel Tax (Tax Code 'PH').

The three broad categories are:

1. Overseas Filipino Workers
2. Foreigners and certain groups of Filipinos departing PH (e.g. governmental traffic for official business) or expats working for corporations in Philippines
3. Infants (2 years and below)

Currently, categories (1) and (3) are automatically exempt from the PH tax when the relevant Passenger Type Code is used (PTC OFW and PTC INF).

SQ NDC will enable the usage of PTC 'INE' for passengers falling into category (2).

The following criteria and conditions will apply:

1. Travel Sellers remain responsible for ensuring passengers qualify for the exemption criteria and submit the relevant supporting documentation for exemption.
 - a. Note: Failure to adhere to this criterion will result in ADMs being issued by SQ.
2. Only transactions made via NDC will be automatically exempt.
3. Only transactions made from Point of Sale Philippines will be automatically exempt.
4. No adjustment will be made to the base fare.

Feature Availability:

Available in Test upon request (via SQ Implementation/Engagement Leads)

Available in Production upon request (via SQ Implementation/Engagement Leads)

Action for Partners:

Partners who wish to permit Travel Sellers to make use of this Passenger Type Code for automatic exemption of the tax in the outlined scenario(s) should review their implementations and make changes as required.

6. Increased number of bounds supported in AirShopping

From August 2023, SQ has increased the number of allowable bounds per AirShopping request to 6.

Before, agents trying to search for an itinerary with more than 4 bounds would have met with the error "Too Many Requested Segments".

Note: In case of a discontinuity in the destination of one bound and the origin of the next bound, SQ NDC automatically adds an Arrival Not Known (ARNK) bound.

An example of a complex itinerary with open jaw (5 bounds):

1. BOM - SIN
2. SIN - SFO
3. ARNK
4. LAX - SIN
5. SIN – BOM

With the increase to 6 bounds for AirShopping requests such as the above will now be processed by SQ NDC and where available, Offers will be generated and returned to the Seller in AirShoppingRS.

Feature Availability:

Available in Test

Available in Production

Action for Partners:

No action is required by partners unless they would like to be excluded from this default activation. Exclusion requests may be made via your respective point of contact.

7. Enhancement to Allow Sale of Chargeable Seats in NDC for select Lufthansa Group (LHG) Operated Flights

Currently, Sellers can select **free** seats for passengers travelling on Singapore Airlines, Lufthansa (LH), Swiss International Airlines (LX), Austrian Airlines (OS) and Brussels Airlines (SN) operated segments.

Feature Overview:

With a recent enhancement to Altea NDC, Sellers will now be able to select and pay for **chargeable** seats for passengers for LH, LX, OS and SN operated segments.

1. LH, LX, OS, SN seat maps will be returned in the SeatAvailabilityRS, with seat price and seat characteristics information. Example:

```

<SeatRow>
  <RowNumber>16</RowNumber>
  <CharacteristicsCode>K</CharacteristicsCode>
  <Seat>
    <CabinColumnID>A</CabinColumnID>
    <OccupationStatusCode>F</OccupationStatusCode>
    <CharacteristicCode>CH</CharacteristicCode>
    <CharacteristicCode>L</CharacteristicCode>
    <CharacteristicCode>LS</CharacteristicCode>
    <CharacteristicCode>OW</CharacteristicCode>
    <CharacteristicCode>W</CharacteristicCode>
    <SeatProfileRefID>SP1-SEG4</SeatProfileRefID>
    <OfferItemRefID>PRICE1-SEG4</OfferItemRefID>
  </Seat>
</SeatRow>

```

2. Once the chargeable seat has been selected and payment made, an Electronic Miscellaneous Document-Ancillary (EMD-A) will be issued for the seat per current process.

Below is a summary of the different chargeable seat types available for each LHG carrier:

Carrier	Cabin	Seat Type	Pricing
LH	Economy	Standard	https://www.lufthansa.com/ar/en/seat-reservation-economy-class Seats are free for selection from T-52h onwards i.e. 52 hours prior to departure and onwards, all LH seats will be free.
		Preferred Zone	
		Extra Legroom	
	Premium Economy	Standard	https://www.lufthansa.com/ar/en/sitzplatzreservierung-in-der-premiumeconomy-class Seats are free for selection from T-52h onwards i.e. 52 hours prior to departure and onwards, all LH seats will be free.
LX	Economy	Standard	https://www.swiss.com/be/en/book-and-manage/swiss-choice/advance-seat-reservation Seats are free for selection from T-48h onwards i.e. 48 hours prior to departure and onwards, all LX seats will be free.
		Preferred Zone	
		Extra Legroom	
	Premium Economy	Standard	Seats are free for selection from T-48h onwards i.e. 48 hours prior to departure and onwards, all LX seats will be free.
	Business	Extra Space	
OS	Economy	Standard	https://www.austrian.com/xx/en/seat-reservation Seats are free for selection from T-48h onwards i.e. 48 hours prior to departure and onwards, all OS seats will be free.
		Preferred Zone	
		Extra Legroom	
	Premium Economy	Standard	Seats are free for selection from T-48h onwards i.e. 48 hours prior to departure and onwards, all OS seats will be free.
	Business	Extra Space	
SN	Economy	Standard	https://www.brusselsairlines.com/xx/en/extra-services/seat-reservation
		Preferred Zone	
		Extra Legroom	

	Premium Economy	Standard	Seats are free for selection from T-24h onwards i.e. 24 hours prior to departure and onwards, all SN seats will be free.
	Business	Extra Space	

Voluntary Changes:

There is no change to the current ancillary sales policy where for voluntary changes / cancellations, seat selection EMD-As are non-refundable.

Involuntary Changes:

In the scenario of involuntary change (i.e. airline-initiated change e.g. aircraft change, schedule change etc.), if applicable, a new EMD-A will be automatically issued for the paid seat and auto-associated to the ET (the new EMD number can be retrieved in the OrderRetrieveRS). Otherwise, travel agents can reach out to get offline assistance with the disassociated paid seat.

Example of OrderRetrieveRS when new EMD-A is automatically issued and auto-associated to the ET after involuntary change:

ET – 6182445345178

Old EMD – **6184567944193** [Status: E]

New EMD – **7244553847357** [Status: I]

```

<TicketDocInfo>
  <AgentIDs>
    <AgentID>
      <Type>B</Type>
      <ID>9999WS/SU</ID>
    </AgentID>
  </AgentIDs>
  <TicketDocument>
    <TicketDocNbr>6184567944193</TicketDocNbr>
    <Type>J</Type>
    <NumberOfBooklets>1</NumberOfBooklets>
    <CouponInfo>
      <CouponNumber>1</CouponNumber>
      <Status>E</Status>
      <InConnectionWithInfo>
        <InConnectionDocNbr>6182445345178</InConnectionDocNbr>
        <InConnectonCpnNbr>3</InConnectonCpnNbr>
      </InConnectionWithInfo>
      <ReasonForIssuance/>
    </CouponInfo>
    <ReportingType>Airline</ReportingType>
  </TicketDocument>
  <PassengerReference>PAX2</PassengerReference>
</TicketDocInfo>
<TicketDocInfo>
  <AgentIDs>
    <AgentID>
      <Type>B</Type>
      <ID>9999WS/SU</ID>
    </AgentID>
  </AgentIDs>
  <TicketDocument>
    <TicketDocNbr>7244553847357</TicketDocNbr>
    <Type>J</Type>

```

```

<NumberOfBooklets>1</NumberOfBooklets>
<DateOfIssue>2023-09-21</DateOfIssue>
<CouponInfo>
  <CouponNumber>1</CouponNumber>
  <Status>I</Status>
  <ServiceReferences>SEAT812</ServiceReferences>
  <InConnectionWithInfo>
    <InConnectionDocNbr>6182445345178</InConnectionDocNbr>
    <InConnectonCpnNbr>3</InConnectonCpnNbr>
  </InConnectionWithInfo>
  <ReasonForIssuance>
    <RFIC>A</RFIC>
    <Code>0B5</Code>
  </ReasonForIssuance>
</CouponInfo>
<ReportingType>Airline</ReportingType>
</TicketDocument>
<PassengerReference>PAX2</PassengerReference>
</TicketDocInfo>

```

Feature Availability:

Available in Test

Available in Production as follows:

- **LH:** 7 November 2023 onwards
- **LX, OS, SN:** to be rolled out progressively at a later date

Action for Partners:

No action required by partners to activate this feature. SeatAvailabilityRS will return LH/LX/OS/SN seat maps for chargeable seat selection once available.

8. Involuntary Servicing on NDC

Starting 01 June 2023, Singapore Airlines released the capability for Sellers to automatically request for a refund without penalties after an airline-initiated involuntary change.

Singapore Airlines continues to further develop our SQ NDC capabilities, particularly to manage involuntary servicing. The following are features that are now available in test system for all partners, and can be activated in Production on a Partner level.

a. Identifying impacted Orders and eligible actions

When involuntary actions are taken by SQ on an Order, an OrderChangeNotification will be triggered to the corresponding partner to notify that a change has been effected. The Order should then be retrieved and the contents checked to determine the change that has occurred.

The various services in the Order will have their statuses updated to reflect any changes. In the case where a flight has been rebooked, the original flight service will have status 'UN' and the new flight service will have the status 'TK'. In the case where the timing of a flight has been changed, the flight service status will be updated to 'TK' only.

With this information, partners should adapt their implementations to determine the bound(s) affected.

Partners should also determine what actions are permitted for each bound. Three actions are possible for paid Orders: Acknowledgement, Rebooking and Refund.

To aid this process, SQ NDC will now return two additional indicators in OrderViewRS:

```
<RuleMetadata MetadataKey="ACK_INVOL_ELIGIBILITY">
  <RuleID>ACK_INVOL_ELIGIBILITY</RuleID>
  <Status>false</Status>
</RuleMetadata>
<RuleMetadata MetadataKey="ATC_INVOL_ELIGIBILITY">
  <RuleID>ATC_INVOL_ELIGIBILITY</RuleID>
  <Status>true</Status>
</RuleMetadata>
```

These indicators will aid partners in identifying whether the change effected may be acknowledged or rebooked.

Note: ACK flag is for acknowledgement while ATC is for rebooking. Either status can be TRUE or FALSE.

b. Acknowledging a Change

If the passenger is satisfied with his new itinerary, Sellers may opt to acknowledge the change. This is an explicit action which informs the airline that the passenger has acknowledged and accepted the new itinerary. Any rebook or refund performed after an acknowledgement will incur applicable penalties associated to the ticket.

An additional ActionContextCode is to be included in the OrderChangeRQ within the <Request> field.

```
<ActionContextCode>ACKNOWLEDGE_DISRUPTED_BOUND</ActionContextCode>
```

Note: In some cases, it may not be possible to acknowledge the change effected by the airline as certain flight connection requirements are not met.

c. Re-booking to alternative flight(s)

If the passenger is not satisfied with his new itinerary but still wishes to travel, Sellers may opt to search for new alternatives with penalties waived. Singapore Airlines permits Sellers to search for alternative flights up to 7 days before/after the originally scheduled flight. This is done via the existing OrderReshop flow.

After the passenger has selected an alternative itinerary, the Seller may initiate the rebooking via the existing OrderChange API (with \$0 sent in the payment field). The passenger will then be re-accommodated to the new flight.

Note: It is currently not possible to change the Origin and Destination, only alternative flights to the same city within the same cabin will be offered. Currently, only the disrupted bound will be eligible for rebooking. If there are multiple bounds disrupted, this flow has to be repeated for each affected bound.

d. Requesting a refund

If the passenger is unable to find a suitable alternative, or no longer wishes to travel, he may request for a refund with penalties waived. This is an existing functionality which can be executed via OrderReshop and OrderCancel.

e. Ticketing

In most cases, the ticket(s) in the Order will be automatically processed along with the acknowledgement/rebooking of the passenger. Nonetheless, partners and sellers are reminded to check the Order. Should there be a need for manual involuntary re-issuance of the ticket, sellers should first

rebook the flight segments (to ensure that the passenger has a confirmed reservation on their desired flights) before requesting ticketing support from our Singapore Airlines sales operations teams.

Note: When seller acknowledges an involuntary time change, it is expected that there will not be an automatic revalidation of ticket i.e. Ticket will still reflect original schedules.

Feature Availability:

Available in Test for all partners

Available in Production upon request (via SQ Implementation/Engagement Leads)

Action for Partners:

Some development work is required by partners to integrate the new fields returned in OrderViewRS and Acknowledgement flow. Exclusion requests in Test may be made via your respective SQ point of contact.

General Notices to Partners

1. Usage of Stateless Transactions

Prior to October 2022, SQ NDC API utilized a mix of stateful and stateless transactions. Specifically, transactions requiring 3DS authentication may have required partners to initiate a session and keep the session open whilst the customer performs authentication via the re-direction link.

This was done by including a line such as the following in the message header:

```
<ses:Session TransactionStatusCode="Start"/>
```

However, following the deprecation of 3DS1 which utilized a re-direction link as part of the authentication flow, all SQ NDC API are now stateless transactions. As a result, there is no need for any partner to explicitly keep a session open whilst executing any of the NDC transactions. Doing so unnecessarily increases the load on SQ NDC infrastructure.

Action for Partners:

Partners should revise their implementations to remove any explicit request to keep the session open and SQ NDC will automatically close the sessions once the SQ NDC response is sent to the partner.

2. Clarification regarding Amount to be Paid for deferred exchange transactions

As part of our ongoing monitoring of the NDC channel, Singapore Airlines has noticed an increase in the occurrence of the error message “Unable to Create Payment Solution – Refer to Dispatch Report”. This error is typically returned when the payment amount provided by the Seller does not match the payment amount expected by the airline.

As a result, SQ would like to provide a clarification regarding the implementation of the deferred exchange flow where we see this error occurring.

Incorrect Implementation:

When performing a deferred exchange of a ticketed order, many partners rely on the TotalPrice/TotalAmount field from OrderViewRS to determine the amount to be paid and subsequently send this amount when providing payment via OrderChangeRQ. However, this field does not always reflect the amount to be paid by the Seller. In such a scenario, the error “UNABLE TO CREATE PAYMENT SOLUTION – REFER TO DISPATCH REPORT” at OrderChange because the attempted paid amount is incorrect.

Correct Implementation:

Instead, we recommend partners to adopt the following process when determining the amount to be paid in the case of deferred exchanges:

1. Determine for each OrderItem present in the Order whether it is already paid
 - a. Unpaid OrderItems will have a <StatusCode> of “NOT ENTITLED”
2. Determine for each OrderItem whether it is due to or due by the Passenger/Seller
 - a. OrderItems with a Service Definition of “Residual Value” and Service Code of “RSVR” are items to be refunded to the passenger. Other OrderItems are to be paid to the airline
 - b. Residual Value amounts typically only occur in the case of refundable taxes which are not netted

3. Sum the individual amounts (under Price/TotalAmount) of the OrderItem(s) to be paid to the airline to obtain the total amount to be paid.
 - a. Any amount(s) to be refunded will be automatically refunded concurrently with the processing of the payment.

Action for Partners:

Partners who have integrated deferred exchanged for paid Orders to review their implementations and ensure the implemented flow is accurate to avoid errors/failures being experienced by Sellers.