API SAMPLE GUIDE

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Overview

This documentation describes the standard API calls to connect a Channel Manager (CM) with Hotelogix Property Management system. It contains a set of Open Travel Alliance (OTA) compliant messages that allows Hotelogix to push rates and availability to a Channel Manager and for the Hotelogix to retrieve reservations, modifications and cancellations from the Channel Manager.

These API's can be used as standard guidelines for developing interface to connect Hotelogix with a Channel Manager.

All messages exchanged with Channel Manager are soap messages. They include a SOAP Security header for authentication purposes and contain the SOAP Body contains the OTA message.

Intended Audience

This document is intended for developers to develop interface for connecting Hotelgix with a Channel Manager. It assumes that the reader has working knowledge of XML and SOAP.

Communications

Communications between both systems is via the exchange of SOAP messages over secure HTTP (HTTPS). Operations are synchronous request/response pairs. A message is considered to be atomic and is either processed entirely or not at all by the Web Service.

Supported Functions

OTA_HotelAvailNotifRQ - Used to update availability, stop sell, minimum stay, closed to arrival and closed to departure.

OTA_HotelRateAmountNotifRQ - Used to update rate and rate inclusions.

OTA_ReadRQ - Used to retrieve reservations, modifications and cancellations.

OTA_NotifReportRQ - Used confirm that reservations, modifications or cancellations have been processed.

Reservation API

"CM" will transfer reservations to a property management system (PMS) using a PULL based model. The PMS should use OTA_ReadRQ with a selection criteria to request reservations, modifications or cancellations and OTA_NotifReportRQ to confirm that a reservations, modifications or cancellations has been processed.

It is currently only possible to query undelivered reservations per hotel. Undelivered identifies all reservations, modifications or cancellations which have not been previously acknowledged with an OTA_NotifReportRQ message by the PMS.

The exchange involves 4 different messages:

Using the OTA_ReadRQ message, the PMS will request reservations, modifications or cancellations from "CM".

Using the OTA_ResRetrieveRS message, "CM" will return reservations, modifications or cancellations which meets the requested criteria.

The PMS will process the response and send an OTA_NotifReportRQ with success or errors after processing.

"CM" will then respond with an OTA_NotifReportRS to acknowledge the receipt.

Retrieve Reservations

The connected PMS should retrieve reservations, modifications and cancellations from Channel Manager using the OTA_ReadRQ message. "CM" will respond with a OTA_ResRetrieveRS that contain the reservations, modifications or cancellations that meet the request criteria in the read request.

OTA_ReadRQ

The message below will return all undelivered reservations, modifications and cancellations for the hotel with HotelCode ABC

Request all undelivered for a hotel

```
<OTA_ReadRQ xmlns="http://www.opentravel.org/OTA/2003/05" Version="1.0" TimeStamp="2005-
08-01T09:30:47+08:00" EchoToken="echo-abc123">

  <POS>
```

```
    <Source>

      <RequestorID Type="22" ID="PMS1"/>

    </Source>

  </POS>

  <ReadRequests>

    <HotelReadRequest HotelCode="ABC">

      <SelectionCriteria SelectionType="Undelivered"/>

    </HotelReadRequest>

  </ReadRequests>

</OTA_ReadRQ>
```

OTA_ReadRQ Specification

Element	Number	Description
OTA_ReadRQ	1	Root element
@Version	1	Current Version 1.0
@EchoToken	1	Globally unique identifier for the request, value will be returned as an EchoToken in the response.
@TimeStamp	1	Time of the transaction in xml schema dateTime format
OTA_ReadRQ / POS / Source / RequestorID	1	This identifies the system which is sending the reservation. This element must appear in the first Source element.
@Type	1	Fixed at 22 (ESRP)
@ID	1	The ID used will be agreed by the trading partners and remain the same throughout the messages.
OTA_ReadRQ / ReadRequests	1	
ReadRequests / HotelReadRequest	1	
@HotelCode	0..1	Hotel code as recognised by "CM". If omitted all reservations for the PMS will be returned. Note: This attribute is only optional for central property

Element	Number	Description
		management systems. It is mandatory for on-site systems.
HotelReadRequest / SelectionCriteria	1	
@SelectionType	1	Must be "Undelivered"

OTA_ResRetrieveRS

This message is returned by "CM" in response to the OTA_ReadRQ. It's primary payload is a list of HotelReservations which meet the request criteria in the OTA_ReadRQ.

Reservations that meet the request criteria are returned

"CM" is channeling reservations from multiple different booking sources. See Minimum Content XML Sample and Maximum Content XML Sample for two sample messages showing the minimum and maximum amount of data that can be expected in a HotelReservation. The OTA_ResRetrieveRS Specification below has a number listed next to the node name to indicate if the node is mandatory or not. The OTA_ResRetrieveRS spec below is not designed to appear exactly in the order presented below. Coding to "CM" v2 should be flexible and allow for order variations to nodes/elements.

The <Success/> element indicates a successful response

In this example 2 new reservations are returned. The "CM" reservation identifiers are "WTF-001" and "HTL-002" and the message ids for these reservations are "1243132" and "1243133".

```xml
<OTA_ResRetrieveRS xmlns="http://www.opentravel.org/OTA/2003/05"
Version="1.0" TimeStamp="2005-08-01T09:32:47+08:00" EchoToken="echo-abc123">

  <Success/>

  <ReservationsList>

    <HotelReservation CreateDateTime="2007-12-09T08:51:45.000+0000"
ResStatus="Book">

      <UniqueID Type="14" ID="WTF-001"/>

      <UniqueID Type="16" ID="1243132" ID_Context="MESSAGE_UNIQUE_ID"/>

      <!-- HOTEL RESERVATION DETAILS OMITTED -->

    </HotelReservation>

    <HotelReservation CreateDateTime="2007-12-09T08:51:45" ResStatus="Book">
```

```
        <UniqueID Type="14" ID="HTL-002"/>

        <UniqueID Type="16" ID="1243133" ID_Context="MESSAGE_UNIQUE_ID"/>

        <!-- HOTEL RESERVATION DETAILS OMITTED -->

      </HotelReservation>

    </ReservationsList>

</OTA_ResRetrieveRS>
```

No reservations are found that meet the request criteria

The presence of the <Success/> element indicates successful processing but the lack of the ReservationsList element shows no reservations were available.

```
<OTA_ResRetrieveRS xmlns="http://www.opentravel.org/OTA/2003/05"
Version="1.0" TimeStamp="2005-08-01T09:31:00+08:00" EchoToken="echo-abc123">

    <Success/>

</OTA_ResRetreiveRS>
```

An error occurred processing the request

The presence of the <Errors/> element indicates an error in business logic occurred.

```
<OTA_ResRetrieveRS xmlns="http://www.opentravel.org/OTA/2003/05"
Version="1.0" TimeStamp="2005-08-01T09:31:00+08:00" EchoToken="echo-abc123">

    <Errors>

      <Error Type="3" Code="392">Invalid Hotel Code</Error>

    </Errors>

</OTA_ResRetreiveRS>
```

OTA_ResRetrieveRS Specification

The main payload of the OTA_ResRetrieveRS message is a list of HotelReservation elements. The content will vary because "CM" is delivering reservations from many different upstream sources (Booking Channels), many of which have vastly different reservation formats and data structures.

In general, the following can be said about HotelReservations:

- A HotelReservation represents a single reservation made with an upstream system.

- A HotelReservation can have one or more RoomStays, one for each room type booked.
- A RoomStay represents a stay in one room type over a continuous timespan, non-continuous timespan stays (split stays) will result in multiple RoomStays.
- A HotelReservation can have zero, one or many ResGuests linked to either the RoomStay the guest stay in or the reservation.

NOTE:

Elements and attributes marked with Number=1 or more are mandatory and will always be sent. 0..n means that the element or attribute is optional.

Element	Number	Description
OTA_ResRetrieveRS	1	Root element
@EchoToken	1	Return the EchoToken from the request message.
@Version	1	Current Version 1.0
@TimeStamp	1	Time of the transaction in xml schema dateTime format.
OTA_ResRetrieveRS / Success	0..1	Should only be present if the request processed successfully. The Errors node will not be present if the Success node is present.
OTA_ResRetrieveRS / Errors	0..1	Contains a list of errors if the request failed to process.
Errors / Error	1..n	Should be at least one node if there is an Errors Node.
@Type	1	Mandatory if Error present. Any type from the OTA code table for 'Error Warning Type (EWT)' can be used. In particular, the following types are used

3: Biz rule (The business rules for the request message were not met)
4: Authentication error (If username and password are not authenticated)
6: Authorization error (If authenticated username is not authorized to alter hotel data)
10: Required field missing (If xml does not meet the schema, i.e missing request fields or invalid data types.) |

Element	Number	Description
@Code	0..1	Any code from the OTA code table for 'Error Codes (ERR)' can be used.
OTA_ResRetrieveRS /ReservationsList	0..1	ReservationList is only present if there are HotelReservation elements.
ReservationsList /HotelReservation	1..n	At least one reservation element if ReservationList exists

Confirm Reservation

The OTA_NotifReportRQ message is sent by the PMS to "CM" in order to confirm the delivery of one of more reservations, modifications or cancellations. If a reservation, modification or cancellation is not confirmed as delivered it will continue to be delivered to the PMS in response to the OTA_ReadRQ message. Please note that confirming the delivery of a reservation does not necessarily mean that the reservation was successfully created in the PMS. The OTA_NotifReportRQ message allows for confirming a delivery which was erroneous.

OTA_NotifReportRQ

NOTE:

OTA_NotifReportRQ must contain either a Success or an Errors element. If multiple reservations were processed and both a success and an error message need to be returned then two OTA_NotifReportRQ messages need to be sent. One containing the Success element and ids for the successfully processed reservations and one containing the Errors and ids for the reservations that failed to process.

Example of PMS confirming the delivery of a reservation what was processed successfully

- The presence of the <Success/> element indicates that the reservation was created in the PMS
- The UniqueID element informs "CM" which reservation message is being confirmed
- The HotelReservationID holds the ID of the newly created reservation in the PMS

```
<OTA_NotifReportRQ xmlns="http://www.opentravel.org/OTA/2003/05"
Version="1.0" TimeStamp="2005-08-01T09:30:47+02:00" EchoToken="echo-abc123">

   <Success/>
```

```
            </HotelReservationIDs>

         </ResGlobalInfo>

      </HotelReservation>

    </HotelReservations>

  </HotelNotifReport>

 </NotifDetails>

</OTA_NotifReportRQ>
```

Example of PMS confirming the delivery of a reservation what was NOT processed successfully

- The presence of the <Error/> element indicates that the reservation was not created in the PMS
- The UniqueID element informs "CM" which reservation is being confirmed
- No HotelReservationID is present if the PMS was unable to save the reservation

```
<OTA_NotifReportRQ xmlns="http://www.opentravel.org/OTA/2003/05"
Version="1.0" TimeStamp="2005-08-01T09:30:47+02:00" EchoToken="echo-abc123">

  <Errors>

    <Error Type="3" Code="402">Invalid room type</Error>

  </Errors>

  <NotifDetails>

    <HotelNotifReport>

      <HotelReservations>

        <HotelReservation CreateDateTime="2010-01-01T12:05:00"
ResStatus="Book">

          <UniqueID Type="16" ID="3123456"/>

        </HotelReservation>

      </HotelReservations>

    </HotelNotifReport>

  </NotifDetails>

</OTA_NotifReportRQ>
```

OTA_NotifReportRQ Specification

Node	Number	Description
OTA_NotifReportRQ	1	Root element
@Version	1	Current Version 1.0
@EchoToken	1	Globally unique identifier for the request, the value will be returned in the response EchoToken.
@TimeStamp	1	Time of the transaction in xml schema dateTime format
OTA_NotifReportRQ / Success	0..1	Either Success or Error element present
OTA_NotifReportRQ / Errors	0..1	Contains a list of errors if the reservation, modification or cancellation failed to process.
Errors / Error	1..n	Should be at least one node if there is an Errors Node.
@Type	1	Mandatory if Error present. Any type from the OTA code table for 'Error Warning Type (EWT)' can be used. In particular, the following types are used. 3: Biz rule (The business rules for the request message were not met) 4: Authentication error (If username and password are not authenticated) 6: Authorization error (If authenticated username is not authorized to alter hotel data) 10: Required field missing (If xml does not meet the schema, i.e missing request fields or invalid data types.)
@Code	0..1	Any code from the OTA code table for 'Error Codes (ERR)' can be used.
OTA_NotifReportRQ / NotifDetails / HotelNotifReport	1	Container for HotelReservations
HotelNotifReport / HotelReservations / HotelReservation	1..n	One for each reservation being confirmed