Oracle® Hospitality Integration Platform

User Guide

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Preface

Oracle Hospitality Integration Cloud Service and OPERA Cloud Foundation users are authorized to access the following modules and features:

- Oracle Hospitality Integration Platform including Oracle Hospitality Developer Portal and Hospitality REST APIs.

The Oracle Hospitality Developer Portal enables users to discover Oracle Hospitality APIs, subscribe to Oracle Hospitality APIs, and to get the necessary information to consume them.

The Oracle Hospitality Developer Portal's APIs page provides information about published Oracle Hospitality APIs. Here you can find and evaluate Oracle Hospitality APIs to use with your applications.

After you discover the Oracle Hospitality APIs that you want to use, register an application and then register those APIs to your application.

To view more details about the Oracle Hospitality Developer Portal, on the user menu drop-down, click the drop-down, and select **About Developer Portal**.

Purpose

This guide explains how to use the Oracle Hospitality Integration Platform Developer Portal and how to explore the Hospitality REST APIs.

Audience

The Oracle Hospitality Integration Platform Guide is intended for customers and partners who develop applications with the Oracle Hospitality Integration Platform.

Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center at https://docs.oracle.com/en/industries/hospitality/.

Revision History

Date	Description of Change
October 2025	Initial publication
December 2025	Added Oracle Hospitality Data APIs chapter.

1

Getting Help and Contacting Support

When raising a support ticket, please note it is the owner of the application key who raises the SR. For example, if a partner is working with a customer and there is an issue requiring an SR related to the application the partner has developed, the partner must raise the SR and include the customer environment details.

Using the Support Portal

Customer Support

Use the Customer Support Portal to search the knowledgebase, access product documentation, contact Oracle Support, or to submit or view a support request to seek help resolving issues.

> **Note**
>
> First-time users must register at the Customer Support Portal. For more information about the Customer Support Portal, click the **Getting Started With Support** tile on the Customer Support Portal's main page. You will need your CSI number from your Cloud administrator's welcome email.

For escalations, please refer to https://iccp.custhelp.com.

Opening a Support Request

Access the Customer Support Portal at the following URL:

https://iccp.custhelp.com

When raising a ticket, it must be "**technical ticket**" and should be logged under "**Oracle Hospitality Integration Cloud Service – OHIP**."

When raising a support ticket, the SR should be submitted by the owner of the application integrated with OHIP that is experiencing a problem. Likewise, if the problem occurs during backend configuration (for example, when making a change in OPERA Cloud, OPERA Cloud Distribution, OPI Cloud, or Nor1), the party performing the configuration should raise the SR.

Below are a few examples for further clarification:

Example 1:

A vendor application encounters a problem when calling an OHIP API or consuming event streams. In this case, the vendor should raise the SR as only the vendor can provide the necessary details and communicate directly with support if needed.

Example 2:

A customer-developed internal application is facing a problem when calling an OHIP API or consuming event streams. Here, the customer should raise the SR as only the customer can provide the required details and engage with support if needed.

Example 3:

A customer encounters a problem while configuring an external system or business event in OPERA Cloud. Regardless of whether the configuration is needed for a customer-developed internal application or vendor application, the customer must raise the SR as the issue involves OPERA Cloud, which only the customer can access.

> **Note**
>
> General usage questions or "how-to" requests should not result in an SR. These requests must be directed to the __ community forum for general help, directed to our professional services team for APIs, or for architecture related questions, directed to our consulting services for OPERA Cloud configuration support.

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
- Screenshots of each step you take

Partners and customers will see the following prompts when logging a support request:

- Enter the Production URL.
- Enter the Production API Call Gateway.
- Enter the Production End Point URL.
- Enter the Developer Portal URL.
- Enter the Production OPERA Instance URL.
- Enter the Chain.
- Enter the Property.
- Enter the User.

If the request relates to an API call, also include the following:

- The **CURL format** request to and response from the Oracle Hospitality APIs (not a third-party system).
- This must include the **X-Request-Id** response header.

If the request relates to the Streaming API, also include the following:

- Confirm whether the environment card shows “Streaming Enabled.”
- Enter the applicationId. This can be found by going to the OHIP Developer Portal, opening the application that is being used for the streaming API, and copying the last part of the URL, which is a number.
- Confirm that changes are occurring in the environment to which Business Events are subscribed.

- Enter the client being used to access the Streaming API:
  - Postman
  - GraphiQL
  - Oracle sample NodeJS client
  - Your own code
- Enter the error messages (if any) that are being received.

Getting Premium Assistance

To receive additional assistance, customers must purchase the OHIP Premium Remote Assistance SKU (B93152) to engage with Oracle Professional Services.

Escalating Your Support Request

How to engage an Oracle Support Manager on Duty (MOD)

If your SR is not attended and you require urgent support, the first escalation path is to call Oracle Global Support and request manager assistance.

1. Access the Support Portal. Verify your contact details have a phone number and verify no actions are required from your side.
2. Call the Oracle Global Support number: Click https://www.oracle.com/corporate/acquisitions/micros/support.html to find your country's phone number.
3. Enter the existing Service Request (SR) number.
4. Choose option 2 "speak with a manager."
5. Provide a business justification (that is, why does your case need priority) and a point of contact.

> **Note**
>
> If your request is mission critical, ensure you have selected this option.

If you need to escalate a **Service Request (SR)**, follow the appropriate process based on the situation:

For creation of an SR, follow the steps described in Opening a Support Request.

Escalation for Downtime (Urgent Issue)

If your integration with OHIP is completely down or unusable, follow these steps to escalate:

Option 1: Create an SR with Severity 1

1. When logging the SR, **set the severity to Severity 1**.
2. Provide **detailed justification** (for example, business impact) **and supporting evidence** of the issue. Without this, the SR might be downgraded.
3. Include all relevant **API call examples** to avoid SR troubleshooting and resolution delays.

Option 2: Escalate through Oracle Global Support

If the issue requires immediate attention, escalate the SR by contacting Oracle Global Support:

1. **Call Oracle Global Support** – Find your country's phone number by visiting the Oracle Hospitality Support page.
2. **Provide the SR number** when prompted.
3. **Select option 2** to speak with a manager.
4. **Request escalation to Severity 1** and explain:
    a. The **business impact** of the downtime.
    b. A **clear justification** for prioritization.
    c. A **point of contact** for follow-ups.

Escalation for SR Not Being Attended

If your SR is not receiving timely attention and needs escalation, follow these steps:

1. **Check the Support Portal** – Ensure no pending actions are required from your side.
2. **Call Oracle Global Support** – Find your country's phone number by visiting the Oracle Hospitality Support page.
3. **Provide the SR number** when prompted.
4. **Select option 2** to speak with a manager.
5. **Request escalation** and provide:
    a. The **reason for escalation** (for example, lack of response).
    b. The **business impact** of the delay.
    c. A **point of contact** for further updates.

Providing Feedback on Documentation

To provide feedback on any page on docs.oracle.com, use the thumbs up icon at the bottom right of the screen. Indicate whether you like (thumbs up) or dislike (thumbs down) the page, then complete the short form to help us improve the documentation.

We read every comment and appreciate your help in improving the documentation.

2

Getting Started

Both Oracle Hospitality Integration Cloud Service users and OPERA Cloud Foundation users are authorized to access the Oracle Hospitality Integration Platform, the Oracle Hospitality Developer Portal, and Oracle Hospitality APIs.

Digital Learning Access

Oracle Hospitality Digital Learning content is available for Oracle Hospitality Integration Platform (OHIP). In Digital Learning under ‘Learn about Oracle's Products,’ you can choose from the following products:

- Oracle Hospitality OPERA Cloud
- Oracle Hospitality Reporting and Analytics
- NOR1 an Oracle Company
- Oracle Hospitality Integration Platform

After you select a product, different learning paths are available. For OHIP, there are two available Learning Paths:

- **Oracle Hospitality Integration Platform (OHIP) Learning Path** is designed for OPERA Cloud Foundation Customers who wish to access OHIP at their organization. The Oracle Hospitality Integration Platform (OHIP) Learning Path will provide an overview of the benefits, highlight features, and provide instruction on the fundamentals of OHIP.
- **Oracle Hospitality Integration Platform (OHIP) for Integrators Learning Path** is designed for Oracle Hospitality Integration Cloud Service Integrators (also known as Integration Partners) who wish to access OHIP. The Oracle Hospitality Integration Platform (OHIP) path will provide an overview of the benefits, highlight features, and provide instruction on the fundamentals of OHIP.

Getting Started for Partners (for Oracle Hospitality Integration Cloud Service Users)

There are two ways to onboard partners to the Oracle Hospitality Integration Cloud Service:

- Oracle Store — You can onboard by purchasing the Oracle Hospitality Integration Cloud Service through the Oracle Store. Follow the procedure below to onboard through the Oracle store.
- Partner Registration Cost Price Quote (CPQ) form— If you are unable to onboard through the Oracle Store, you can onboard by submitting the partner registration (CPQ) form. You can request this form through email by contacting hospitality-integrations_ww@oracle.com.

Oracle Store

To onboard through the Oracle Store:

> **Note**
>
> You must have an Oracle account to proceed with the shopping cart checkout. To create a new Oracle account, go to the Oracle Store and click the **New user?** button and complete the form. After submitting the form, follow the instructions to check your email to verify your email address.

1. Go to the Hospitality Integration Platform and click **Shop now** and then click **Add to Cart**.

   Alternatively, go directly to the Oracle Shop and click **Add to Cart**.
2. Click your shopping cart to proceed to check out.
3. Click **Checkout**.
4. Follow the instructions to complete your account details, additional information, service information, billing information, and payment method and agree to the terms and conditions of the Cloud Service Agreement.

   > **Note**
   >
   > Once you have onboarded with a credit card, you are also able to change your payment method to a PO or update your credit card details. To do this, contact Billing Support for assistance. Given the sensitivity of payment information, do not include that information in email communications.
5. Click **Place Order**.

To view and track your order, go to your Account Dashboard and click **Orders**.

After purchasing the Oracle Hospitality Integration Cloud Service, you will receive the following emails from either the Oracle Store or the CPQ process:

- The first email is a confirmation of your order and contains the order number for reference.
- A second email invites you to set up your Oracle Cloud Account. This email contains your order number.

  Follow the below steps to create your Oracle Cloud Account by clicking the **Create Cloud Account** link in the email and providing the following details.

  1. **Cloud Account Name**: A unique name for your Oracle Cloud Account.
  2. **Email Address**: Enter your email address. This is the email address to which the emails in steps 3 and 4 will be sent.
  3. Enter the email address of the cloud account admin and service admin for your services. This admin user can create other administrators or users.
- A third email prompts you to confirm your Oracle Cloud Account.
- A fourth email confirms that your setup is complete. This includes the Oracle Cloud Console URL to enable you to perform Cloud Admin tasks as well as a Service Instance URL to the Oracle Hospitality Developer Portal. This URL conforms to the following format:

  https://partner.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/<Oracle Cloud Account Name>/ui/

> **Note**
>
> If you have not received all the above emails within 24 hours of placing your order, please contact the Oracle customer service number referenced in the first email.

Digital Learning Access for Partners

Oracle Hospitality Integration Platform (OHIP) for Integrators Learning Path is designed for Integration Partners who wish to access OHIP. The Oracle Hospitality Integration Platform (OHIP) path provides an overview of the benefits and highlight features and provide instruction on the fundamentals of OHIP. To gain access, follow the instructions below:

For Partners who have purchased B92141 Oracle Hospitality Integration Cloud Service:

New Partners

- New partners as of 27-MAR-2023 will be sent a Digital Learning activation email once their order is received.
- The Digital Learning Activation email will be sent to the End User Contact that appears on the order.
- If an activation email is not received, email **operaenablement_ww@oracle.com** and include the following information:
  - **Company Name** (as it appears on the Order/Account)
  - **Primary Contact Email**

Existing Oracle Hospitality Integration Cloud Service Partners

If you have access to Oracle Hospitality Digital Learning, use the search filters on the Digital Learning Platform to find your desired OHIP content.

If you do not have access, follow these instructions:

- Email **operaenablement_ww@oracle.com** and include the following information:
  - **Company Name** (as it appears on the Order/Account)
  - **Address** (include Country)
  - **Primary Contact Name**
  - **Primary Contact Email**
  - **Approximate Purchase Date** (that is, the approximate date Oracle Hospitality Integration Cloud Service was purchased)

Once this information is received, the Digital Learning team will verify the information. Please allow five business days for responses.

Oracle Hospitality Open Forum

Oracle Hospitality Open Forum hosted within Slack is an inclusive platform designed to bring together individuals who share a passion for our industry. This vibrant community aims to foster collaboration, knowledge sharing, and networking opportunities, allowing members to connect, learn, and grow together.

This community has evolved since its launch alongside the OHIP product and is currently solely focused on partner-to-partner collaboration. The decision to create this open community was driven by several important reasons:

- **Collaboration and Knowledge Sharing**: By launching this open forum, we aim to encourage collaboration and knowledge sharing among Vendors, SIs, and Oracle Hospitality. It provides a dedicated space for members to ask questions, seek advice, and engage in thought-provoking discussions, leading to mutual growth and learning.
- **Networking and Relationship Building**: The Slack open community offers a platform for individuals to network and form valuable connections. This enables the establishment of relationships that can potentially lead to partnerships, mentorships, and career opportunities.
- **Inclusivity and Diversity**: The open community promotes inclusivity and diversity by bringing together individuals from various backgrounds and experiences. It fosters the exchange of diverse perspectives and creates an environment of understanding and empathy.

> **Note**
>
> If you need dedicated technical assistance, you have the following billable methods to accelerate your integration development:
>
> - Oracle offers premier services in the shop where a team member from Global Professional Services is assigned to you.
> - You can also engage one of the Systems Integrators (SI) who has published their services in Oracle Cloud Marketplace (Services Section).

To facilitate effective communication and organization, we have structured the open community as follows:

Channels

1. **01_announcements**: This channel (managed by Oracle Hospitality) is used to share insightful updates on our products, maintenance, and important reminders with the partner community.
2. **02_open_forum**: The open forum channel enables partners, SIs, and other community members to interact directly with each other. Oracle will moderate this channel, and we kindly request all participants to adhere to etiquette rules to maintain a collaborative approach.

Forum Etiquette

Here are some of the guidelines when interacting in the open community:

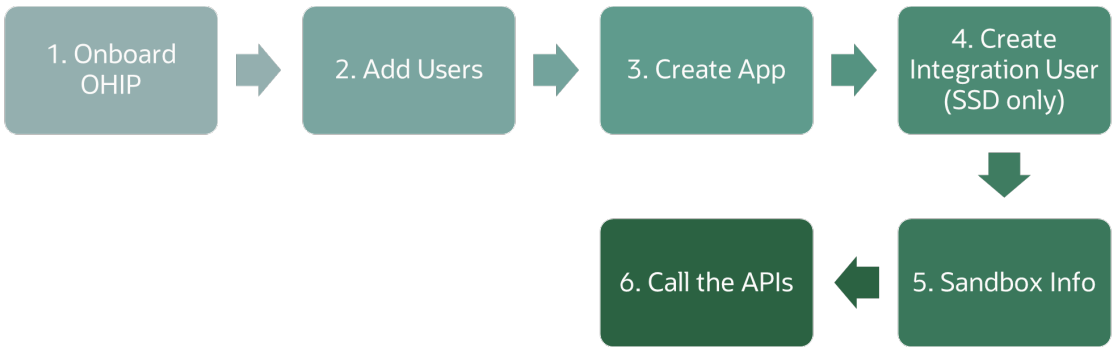
- Refrain from sharing personal or sensitive information, including usernames, passwords, and personally identifiable information (PII).
- Avoid the sharing of payment card information (PCI data) to prevent fraud or unauthorized access.
- Maintain respectful and considerate communication, avoiding harassment, discrimination, or hate speech.
- Actively participate and engage in the community by sharing expertise, asking questions, and contributing to discussions.

- Adhere to these guidelines to create a vibrant and secure space for collaboration and learning in the community.

Channel Access

You will automatically be granted access to the channels as you onboard OHIP. Please allow a few days after joining for your invitation to join.

Quick Start for Partners (Using the Partner Sandbox)



1. Onboard to OHIP via the Oracle Store.
2. Add users to the Developer Portal.
3. Sign in to the Developer Portal and register an application.
4. Create an integration user. (This step is required for SSD only. It is not required for OCIM.)
5. Obtain the credentials and gateway for the partner sandbox. These details appear on the Environments page in the Partner Developer Portal.

> **Note**
>
> The hotelId is **SAND01** for the SSD Sandbox, and **OHIPSB02** for the OCIM Sandbox.

6. Call the APIs.

   If you need additional consulting to get started, you can purchase it in groups of 2 hours. Visit the Oracle Store for more information.

Adding Developer Portal Users

Adding the application developer role gives user access to all pages of the developer portal. This does not give a user access to call APIs, but users can view all API Documentation as well as access applications, environments, and analytics pages.

Prerequisites

To add or manage Portal users, you must have the Cloud Account Administrator or Service Administrator user role, your activated Oracle Cloud account, and your Oracle Cloud Console URL. For more information on how to onboard or provision an Oracle Cloud account, please refer to Getting Started for Partners.

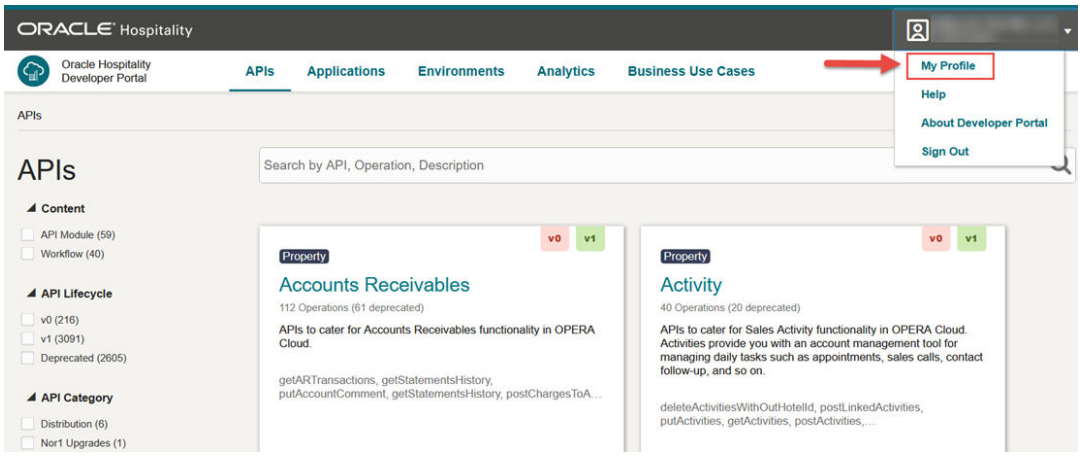
The Oracle Cloud Console is customizable and can present different views to users depending on how it is set up.

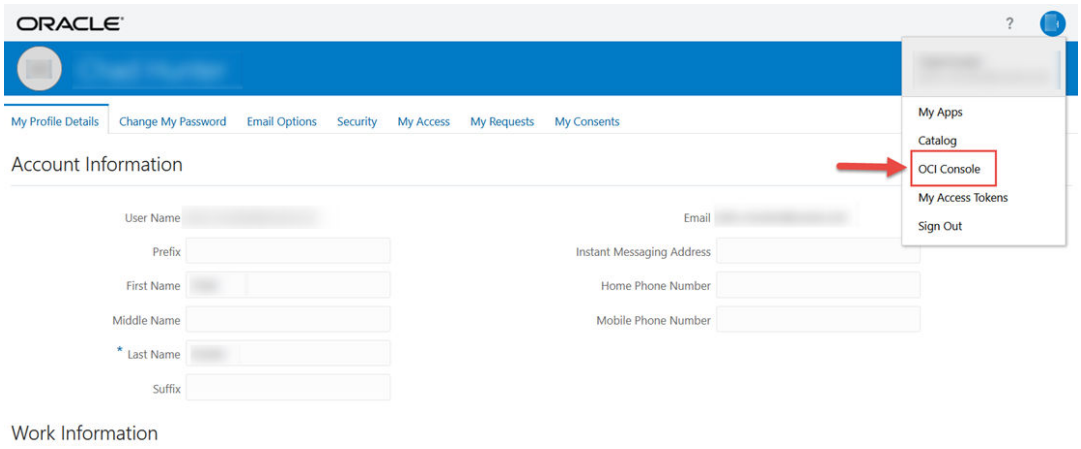
The Account Administrator and Service Administrator users can add new users from the My Oracle Services screen in the Oracle Cloud Console.

To create Developer Portal users:

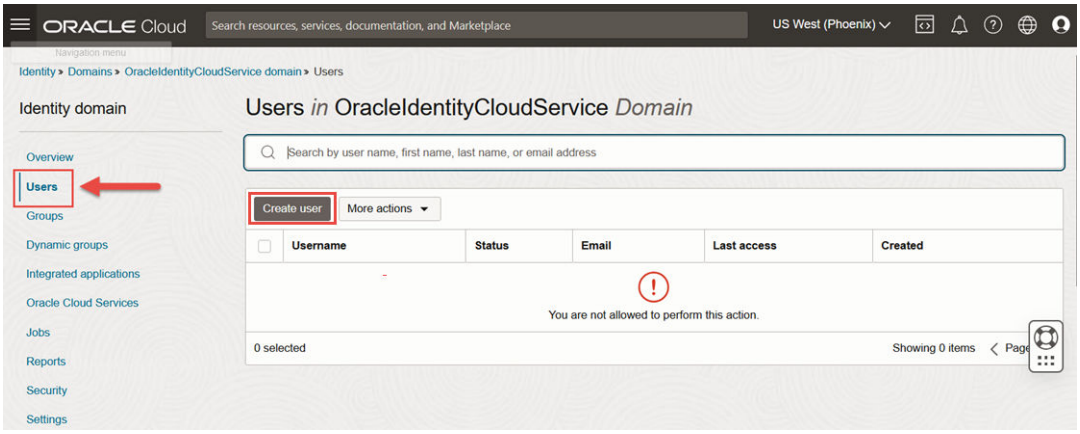
1. Go to the Oracle Cloud Infrastructure (OCI) Console.
2. Sign in with your administrator credentials.

> **Note**
>
> If your OHIP Admin already has the Developer Portal role, you can navigate directly from the Developer Portal to Cloud Console by selecting **My Profile** and selecting **OCI Console**.

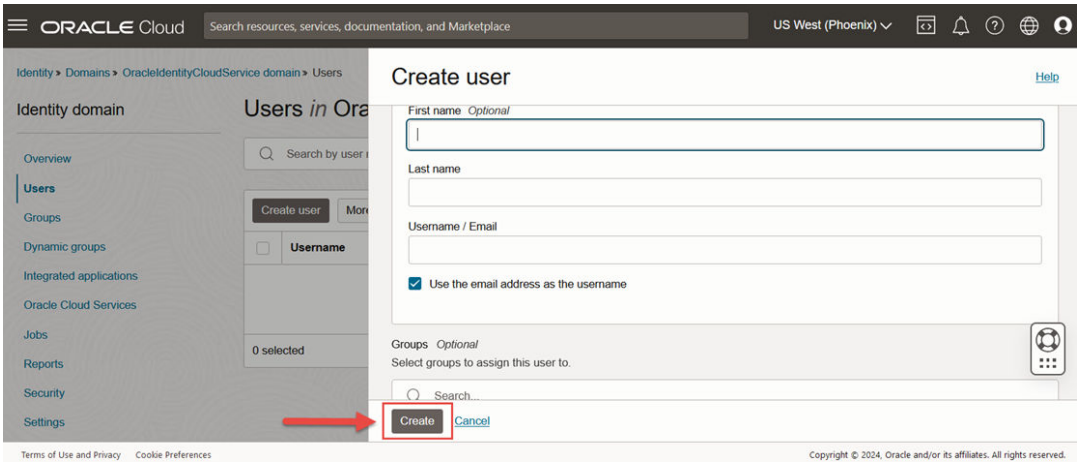




3. Select the **Users** menu and click **Create user**.



4. Enter the following details:
   a. **First name**: (Optional) Enter the user's first name.
   b. **Last name**: Enter the user's last name.
   c. **Username / Email**: Enter a unique name or enter the user's email for the username.



5. Click **Create** when finished.

Assigning Users to Roles

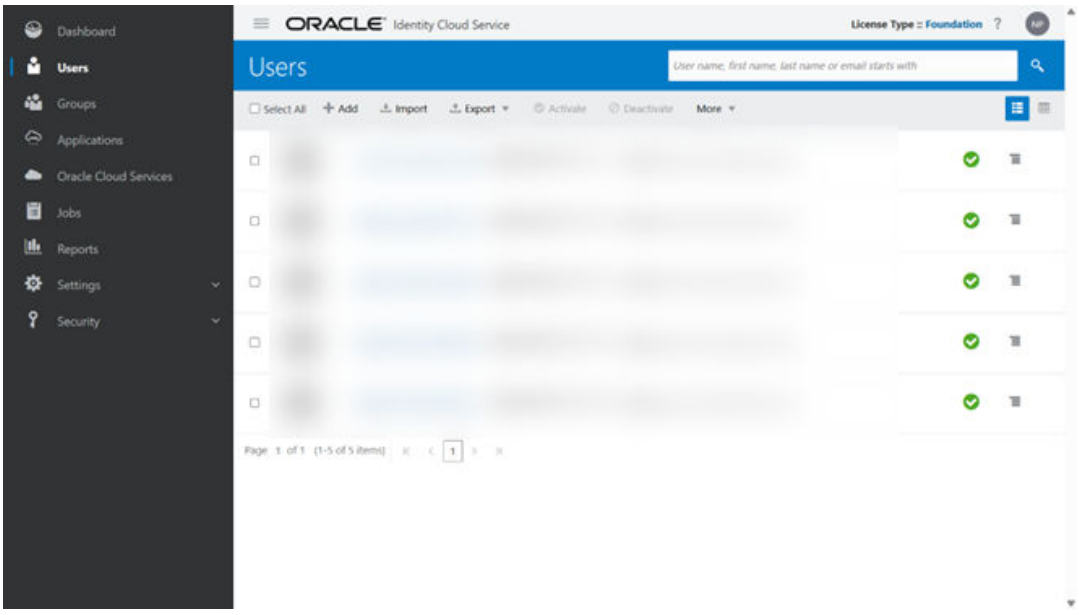
Application Roles

Refer to the table below for the application roles that are available.

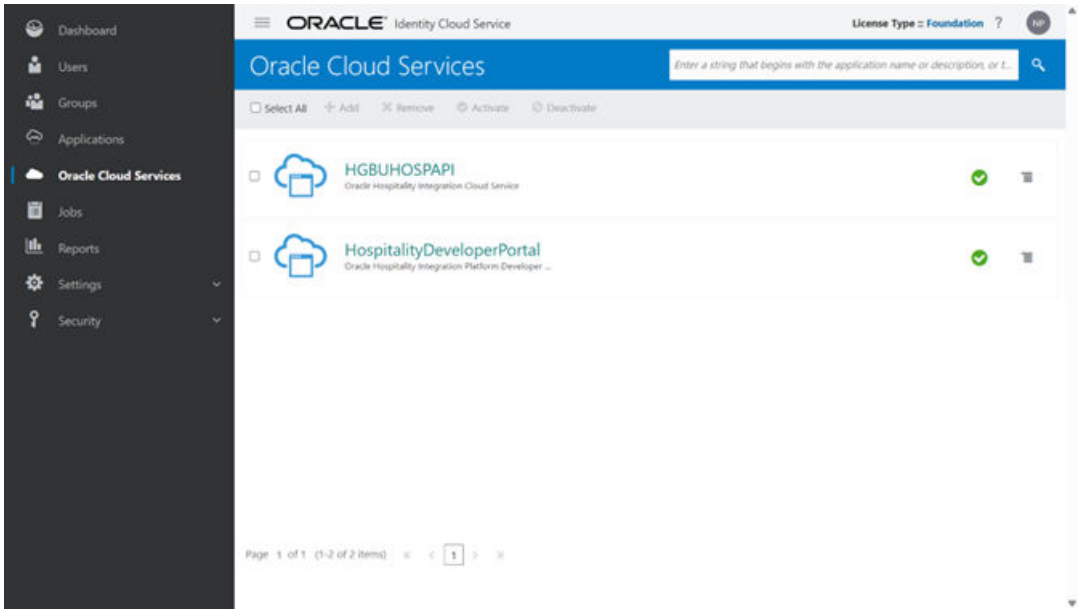
	OHIPADMIN	OHIPDEVELOPER	OHIPANALYTICS	OHIPENVIRONMENTS	OHIPVIEW	APPLICATIONDEVELOPER
API Documentation	View	View	No Access	No Access	View	View
Applications	View-Add-Edit-Delete	View-Add-Edit-Delete	No Access	View	View	View-Add-Edit-Delete

	OHIPADMIN	OHIPDEVELOPER	OHIPANALYTICS	OHIPENVIRONMENTS	OHIPVIEW	APPLICATIONDEVELOPER
Application Key	View-Reissue-Copy	View-Reissue-Copy	No Access	No Access	No Access	View-Reissue-Copy
Environment	View-Add-Remove	View	No Access	View-Add-Remove	View	View-Add-Remove
API Analytics	View	View	View	No Access	View	View
Client Secret	Read-Issue	Read	No Access	Read-Issue	No Access	Issue
Approve Partner Connections (Includes module and Property Level Access)	Yes	No Access	No Access	Yes	No Access	Yes
Approve Streaming Applications (Within Applications)	Yes	No Access	No Access	Yes	No Access	Yes

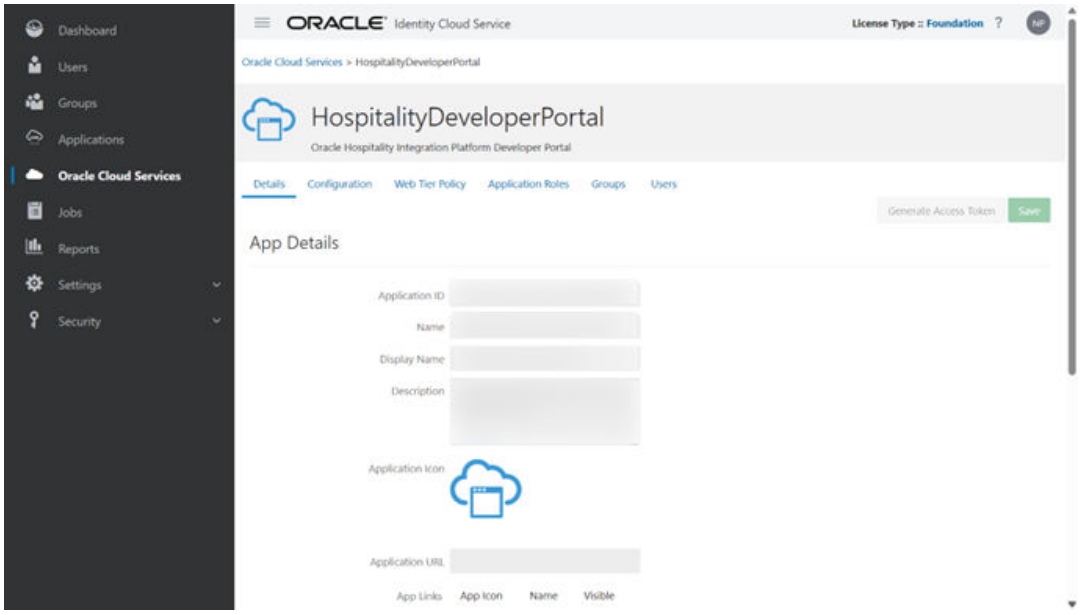
1. In Oracle Identity Cloud Service, select the **Oracle Cloud Services** menu from the left-side panel.

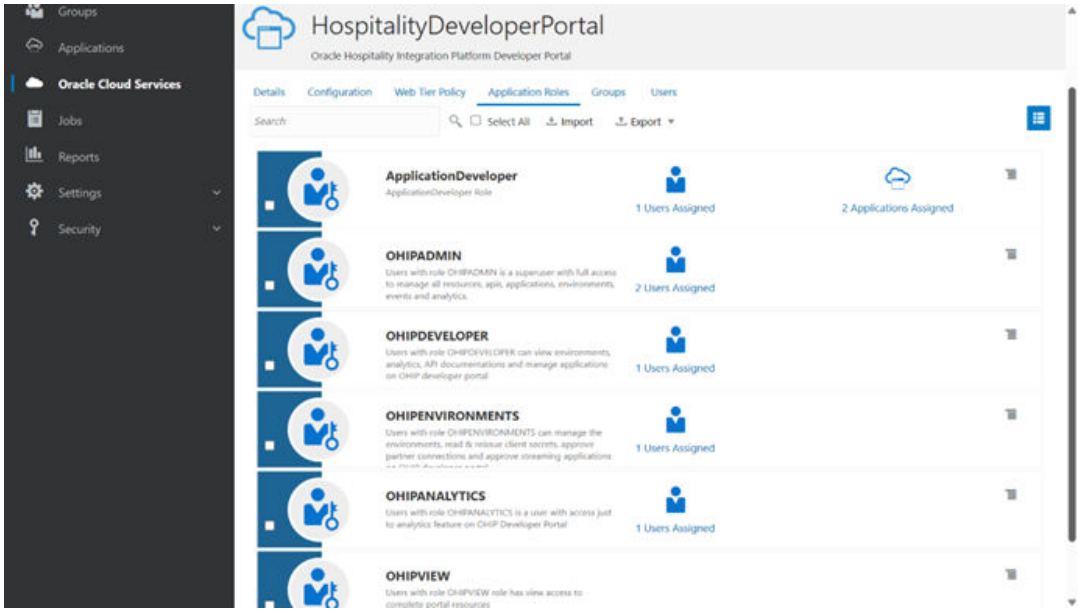


2. Select **HospitalityDeveloperPortal**.

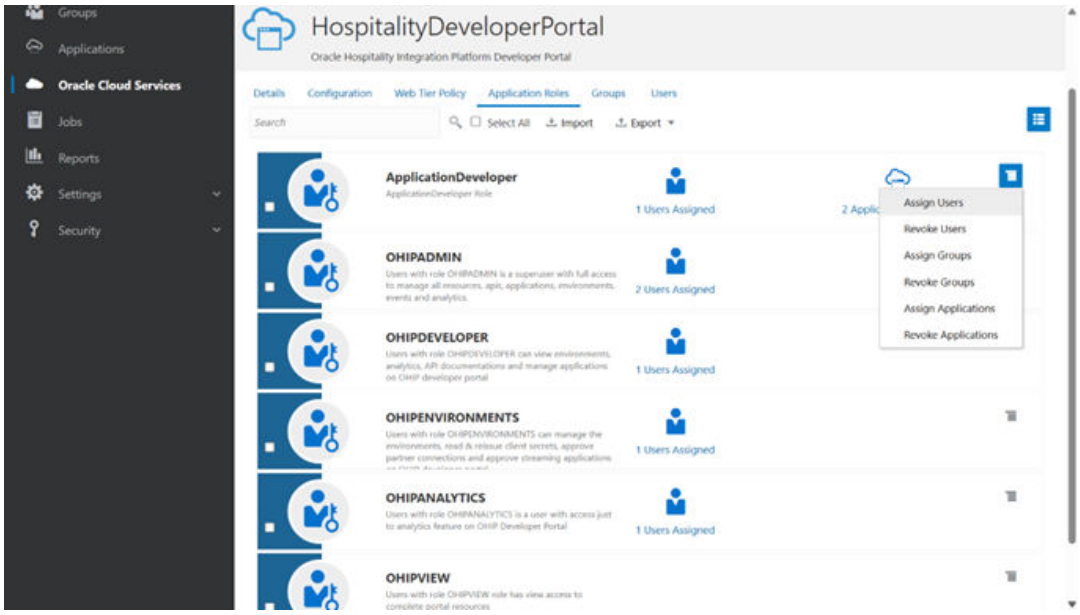


3. Select the **Application** roles tab in HospitalityDeveloperPortal. Refer to the 'Application Roles' table above for more information on the available roles.

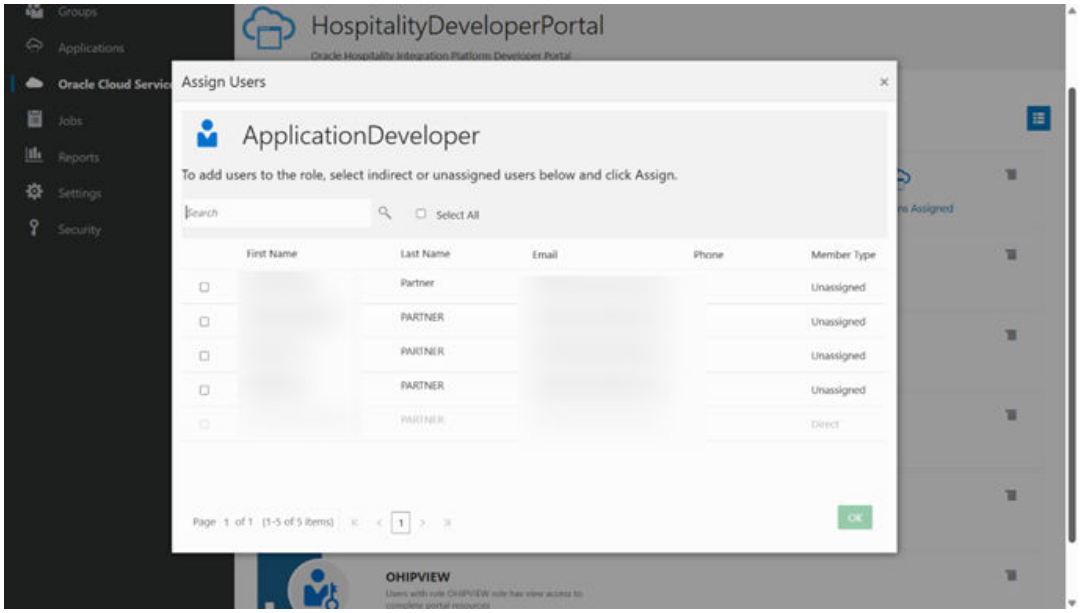




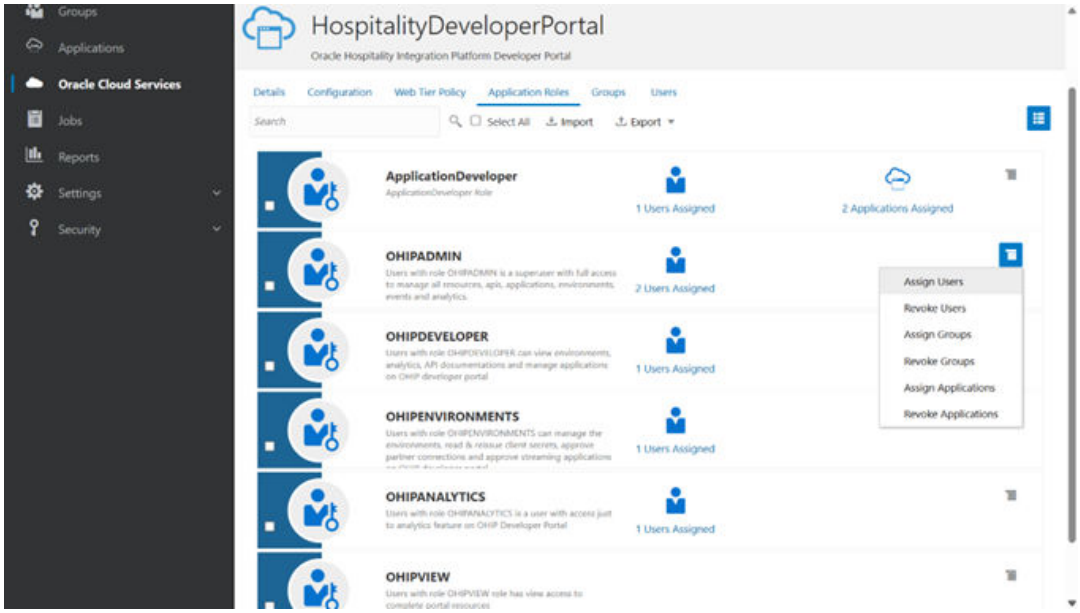
4. Click the menu present for the ApplicationDeveloper role and click **Assign Users**.



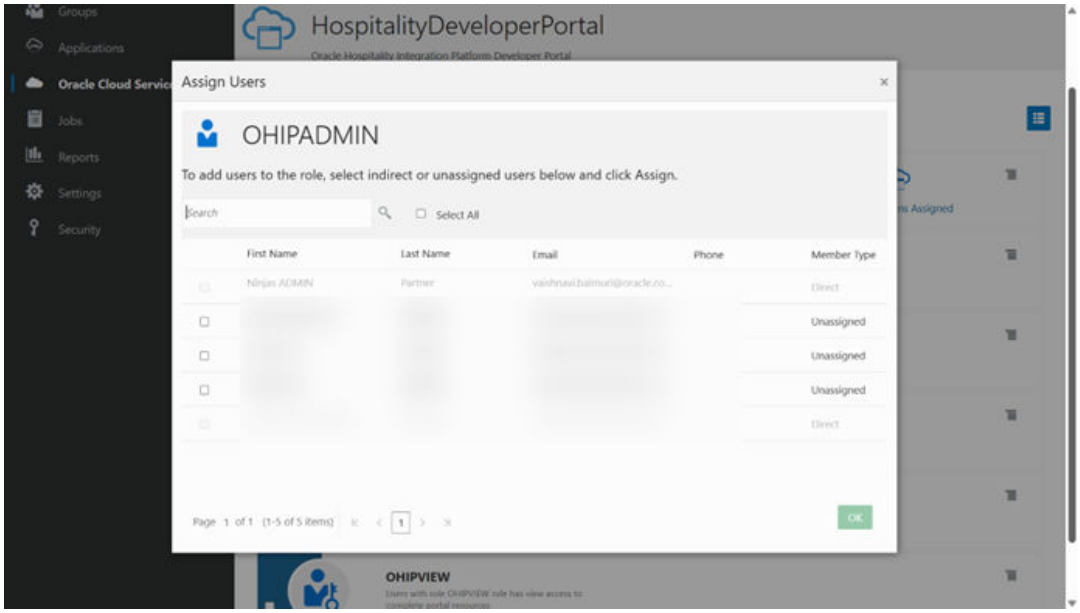
5. On the Assign Users screen, select the users to assign the role and click **OK**.



6. For newly created Role Based Access Control (RBAC) roles, such as **OHIPADMIN**, **OHIPDEVELOPER**, **OHIPENVIRONMENTS**, **OHIPANALYTICS**, and **OHIPVIEW**, follow steps 1 to 3.
7. Click the side menu present for any one of the application roles (for example, OHIPADMIN) and click **Assign User**.



8. On the Assign Users screen, select the users to assign the role and click **OK**.



Signing In to the Oracle Hospitality Developer Portal

Signing In to the Developer Portal

Sign in to the Oracle Hospitality Developer Portal to create applications, discover available Oracle Hospitality APIs, and register Oracle Hospitality APIs to your applications.

1. Open the Oracle Hospitality Developer Portal in a browser to the URL provided.
2. Enter your username and password.
3. Click **Sign In**.

> **Note**
>
> Your account locks if you enter an incorrect username or password three times. For help getting back into your account, click **Can't sign in** and the follow instructions on the screen.

Signing In to the Developer Portal While in a Suspended Status

When you sign in to the developer portal while in a 'SUSPENDED' status, you can do the following:

- See that your service is suspended as indicated by the 'SUSPENDED' label.
- View the APIs tab.
- View and interact with the Analytics tab including downloading usage reports.
- View applications, but you cannot:
  - Create new applications.
  - Change the application key on an application.
  - Add events to the event template.

  - Subscribe to consume events from new environments.
  - Alter usage.
  - View the application key.
- View the Environments tab, but you cannot:
  - Add environments.
  - View or reissue the clientSecret on an environment.
  - Alter the property or module level access control.

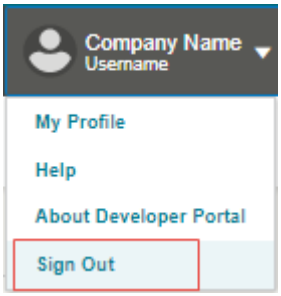
When a Suspended Partner Service is Resumed:

- The 'SUSPENDED' label is removed from the developer portal.
- All service access and functionality revert to the previous operational state. The only exception is the application key is regenerated.
- Partners must update their applications to use the regenerated application key.

Signing Out of the Oracle Hospitality Developer Portal

You can sign out of the Oracle Hospitality Developer Portal using the User menu.

1. On the Oracle Hospitality Developer Portal, click the **User** menu drop-down.
2. Click **Sign Out.**



Changing Your Password

> **Note**
>
> These instructions for changing your password apply to those who onboarded through the Oracle Hospitality Integration Cloud Service.
>
> If you onboarded through Oracle Hospitality OPERA Cloud Foundation/OPERA Cloud Services, refer to Changing Your Password in the *Onboarding Customers* section.

To change your password:

1. Sign in to the Oracle Hospitality Developer Portal.
2. On the user drop down menu, click **My Profile**.
3. Click the **Change My Password** tab:

a. Enter your **Old Password**.

b. Enter the **New Password**.

c. After all password criteria are met, enter the new password to confirm, and then click Submit.

Getting Started for Hoteliers (for Oracle Hospitality OPERA Cloud Foundation Users with Oracle Hospitality Shared Security Domain)

Oracle Hospitality OPERA Cloud Foundation includes access to the Oracle Hospitality Integration Platform.

Upon provisioning of or migration to Oracle Hospitality OPERA Cloud Foundation, you will receive an email advising you of the Oracle Hospitality Developer Portal URL.

For production OPERA environments, it will follow this URL format:

- https://customer.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/ashburn/ui/

  or

- https://customer.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/frankfurt/ui/

For non production OPERA environments, it will follow one of these URL formats:

- https://customer.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/ashburnuat/ui/
- https://customer.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/ashburnuat02/ui
- https://customer.hospitality-dev-portal.us-ashburn-1.ocs.oraclecloud.com/frankfurtuat/ui/

Digital Learning Access for Customers

Oracle Hospitality Integration Platform (OHIP) Learning Path is designed for OPERA Cloud Foundation Customers who want to access OHIP at their organization. The Oracle Hospitality Integration Platform (OHIP) Learning Path provides an overview of the benefits and highlight features and provides instruction on the fundamentals of OHIP.

New Customers

For Customers with Oracle Hospitality OPERA Cloud Foundation (Hotel/Resorts/Reseller), follow these instructions to access Digital Learning:

- The Digital Learning Activation email will be sent to the End User Contact that appears on the customer’s order.
- If an activation email is not received, email **operaenablement_ww@oracle.com** and include the following information:
  - **Customer Name** (as it appears on their Order/Account)
  - **Primary Contact Email**

Existing Customers

If you have access to Oracle Hospitality Digital Learning, use the search filters on the Digital Learning Platform to find your desired OHIP content.

If you do not have access, but have OPERA Cloud Foundation, follow these instructions:

- Email **operaenablement_ww@oracle.com** and include the following information:
  - **Customer Name** (as it appears on the customer's Oracle account)
  - **Address** (include Country)
  - **Primary Contact Name**
  - **Primary Contact Email**

  Once this information is received, the Digital Learning team will verify the information. Please allow five business days for responses.

Quick Start for Hoteliers (in UAT Environment)

Prerequisites

OPERA Cloud Foundation SKU

- The hotel must purchase an OPERA Cloud Foundation SKU.

> **Note**
>
> OHIP is not available for hotels using a legacy OPERA Cloud SKU.

Onboarded in OHIP

- The chain containing properties that are on OPERA Cloud Foundation must be onboarded with OHIP.

Oracle Cloud Infrastructure

- The onboarded chain and properties must be on Oracle Cloud Infrastructure (OCI) and NOT in a legacy data center.

Making API Calls

An OPERA Cloud chain administrator must create the DEVELOPERPORTALACCESS role via Oracle Identity Management (OIM) for both UAT and PRODUCTION.

1. Assign the DEVELOPERPORTALACCESS role to all OPERA Cloud users requiring access to the OHIP Developer Portal. This will support Single-Sign On (SSO) with OPERA Cloud. See Getting Started for more information.
   - **UAT**: Refer to your Welcome email for this URL.
   - **PROD** : Refer to your Welcome email for this URL.
2. Create a new integration user via Self Service using the UAT and PROD URLs. Refer to your Welcome email for these URLs. Once a request is submitted, the OPERA Cloud chain administrator must approve it. See Using the Oracle Hospitality APIs for more information.
3. Access the Developer Portal for UAT or PROD (using the URLs from your Welcome email) and click the **Environment** tab.
4. Click the environment card and to copy the client Id and secret. See Using the Oracle Hospitality APIs for more information.

5. Register a new application in the **Applications** tab of the OHIP Developer Portal. When creating a new application, subscribe the application to all the APIs that appear. See Register and Manage Applications for more information.
6. Enter the hotel ID from which you want to get data. This is not the same ID as the chain admin and should be the ID of a specific hotel.

   If you need to call early adopter (v0) APIs, send an email to hospitality-integrations_ww@oracle.com requesting to join the early adopter programme. You must reply to the email accepting the terms and conditions of the programme before access is provided.

Configuring Postman

1. Obtain the postman collections via the following:
   - Cloning our github repo and then importing the collections / environment under the postman-collections folder.
   - Forking our public postman workspace directly.
2. Set up a postman environment (one for UAT and one for PROD) with the previously obtained information plus the gateway URL:
   a. **HostName**: API gateway URLs for UAT and PROD. Refer to your Welcome email for these URLs.
   b. **Username**: The integration username previously obtained for UAT or PROD.
   c. **Password**: The integration password previously obtained for UAT or PROD.
   d. **CLIENT_ID**: Client ID previously obtained from the Developer Portal for UAT or PROD.
   e. **CLIENT_SECRET**: Client ID previously obtained from the Developer Portal for UAT or PRO.
   f. **AppKey**: The application key previously obtained .
   g. **HotelId**: Hotel ID against which you want to perform actions. For example, obtaining reservation data.
3. Once all environments have been configured, select the **Get OAuth Token** collection and make a call.

   If everything is set up correctly, OHIP responds with a HTTP 200 OK response, which includes the OAuth token.

   Now you can try out other collections as required.

Creating the Developer Portal Access Role

> **Note**
>
> The below steps are required only for OPERA Cloud environments that are integrated with Oracle Hospitality Shared Security Domain. For environments with OPERA Cloud Identity Domain, the role should be available in the tenant domain.

This procedure is for a user with Chain Admin access in SSD-OIM to create an OHIP Developer Portal role for the corresponding OPERA instance. The role name is DEVELOPERPORTALACCESS.

When creating the role, ensure the role is assigned to the correct chain code.

Once the role is created, you can assign it to users so they can access the OHIP Developer Portal with the URLs specified in Getting Started for Hoteliers.

To add the DEVELOPERPORTALACCESS role

1. Navigate to and log in to the Oracle Identity Self Service portal.

   This step must be performed by a Chain Administrator because OHIP only supports CHAIN level access.

   > **Note**
   >
   > The Oracle Identity Self Service URL is listed in the Welcome Letter received by your designated OPERA Property Administrator.

2. Click the **Manage** button.
3. Click the **Roles** tile and then click the **Create** link.
4. Enter the following required information into the General Role section:
   a. **Name**. Enter the Chain Organization name followed by DEVELOPERPORTALACCESS. For example, PARCHN01-DEVELOPERPORTALACCESS.
   b. **Display Name**. Reenter the same name as above.

   > **Note**
   >
   > The **Owned By** field will automatically populate based on who created the role.

5. The Hierarchy, Access Policy, and Members steps are not required. Click the **Next** to arrive on the Organization step.
6. Click the **Add Chain Organizations** button.
7. Search for the Chain Organization name and click the **Add Selected** button to add the role.
8. Click the **Select** button.
9. Verify the DEVELOPERPORTALACCESS and then click **Next**.
10. Verify the information you entered and then click the **Finish** button.

Adding Developer Portal Users

To access the Developer Portal, a hotel administrator assigns the DEVELOPERPORTALACCESS role to a chain org-level user in the Oracle Hospitality Shared Security Domain. For the steps to create this role, see Creating the Developer Portal Access Role.

> **Note**
>
> Users assigned to this role must belong to the same organization specified in Creating the Developer Portal Access Role. Further, users must be chain org-level users to be granted the DEVELOPERPORTALACCESS role and to successfully access the Developer Portal.

> **Note**
>
> Developer Portal users do not have access to call APIs.

For details on how to manage users in the Oracle Hospitality Shared Security Domain, refer to the Customer Support Portal document:

Oracle Hospitality Shared Security Domain (SSD) for OPERA

Signing In to the Oracle Hospitality Developer Portal

Signing In to the Developer Portal

Sign in to the Oracle Hospitality Developer Portal to create applications, discover available Oracle Hospitality APIs, and register Oracle Hospitality APIs to your applications.

1. Open the Oracle Hospitality Developer Portal in a browser to the URL provided.
2. Enter your username and password.
3. Click **Sign In**.

> **Note**
>
> Your account locks if you enter an incorrect username or password three times. For help getting back into your account, click **Can't sign in** and the follow instructions on the screen.

Signing In to the Developer Portal While in a Suspended Status

When you sign in to the developer portal while in a 'SUSPENDED' status, you can do the following:

- See that your service is suspended as indicated by the 'SUSPENDED' label.
- View the APIs tab.
- View and interact with the Analytics tab including downloading usage reports.
- View applications, but you cannot:
  - Create new applications.
  - Change the application key on an application.
  - Add events to the event template.
  - Subscribe to consume events from new environments.

  - Alter usage.
  - View the application key.
- View the Environments tab, but you cannot:
  - Add environments.
  - View or reissue the clientSecret on an environment.
  - Alter the property or module level access control.

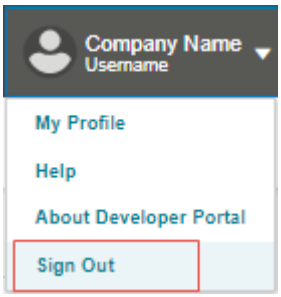
When a Suspended Partner Service is Resumed:

- The 'SUSPENDED' label is removed from the developer portal.
- All service access and functionality revert to the previous operational state. The only exception is the application key is regenerated.
- Partners must update their applications to use the regenerated application key.

Signing Out of the Oracle Hospitality Developer Portal

You can sign out of the Oracle Hospitality Developer Portal using the User menu.

1. On the Oracle Hospitality Developer Portal, click the **User** menu drop-down.
2. Click **Sign Out.**



Changing Your Password

> **Note**
>
> These instructions for changing your password apply to those who onboarded through the Oracle Hospitality OPERA Cloud Foundation.
>
> If you onboarded through the Oracle Hospitality Integration Cloud Service, refer to Changing Your Password in the *Onboarding Partners - Oracle Hospitality Integration Cloud Service* section.

To change your password:

1. Sign in to the Oracle Hospitality Developer Portal.
2. On the user drop down menu, click **My Profile**. A new browser tab opens for Oracle Identity Manager (OIM).
3. Click the **My Information** tile.

4. In the **Change Password** section, enter your **Old Password**, enter your **New Password**, and reenter your new password in the **Confirm New Password** field.
5. Click **Apply**. After a password change, a confirmation message shows that your password was successfully updated.

Getting Started for Hoteliers (for Oracle Hospitality OPERA Cloud Foundation Users with OPERA Cloud Identity Management)

Oracle Hospitality OPERA Cloud Foundation includes access to the Oracle Hospitality Integration Platform.

Upon provisioning of or migration to Oracle Hospitality OPERA Cloud Foundation, you will receive an email advising you of the Oracle Hospitality Developer Portal URL.

For production OPERA environments, it will follow this URL format:

- https://<ohip-domain>/<enterpriseID>prd/ui

For non production OPERA environments, it will follow one of these URL formats:

- https://<ohip-domain>/<enterpriseID>uat/ui

For example, the production URL for a customer portal with enterpriseID "testenterprise" would be the following: https://oracle-test.com/testenterpriseprd/ui.

Digital Learning Access for Customers

Oracle Hospitality Integration Platform (OHIP) Learning Path is designed for OPERA Cloud Foundation Customers who want to access OHIP at their organization. The Oracle Hospitality Integration Platform (OHIP) Learning Path provides an overview of the benefits and highlight features and provides instruction on the fundamentals of OHIP.

New Customers

For Customers with Oracle Hospitality OPERA Cloud Foundation (Hotel/Resorts/Reseller), follow these instructions to access Digital Learning:

- The Digital Learning Activation email will be sent to the End User Contact that appears on the customer’s order.
- If an activation email is not received, email **operaenablement_ww@oracle.com** and include the following information:
  - **Customer Name** (as it appears on their Order/Account)
  - **Primary Contact Email**

Existing Customers

If you have access to Oracle Hospitality Digital Learning, use the search filters on the Digital Learning Platform to find your desired OHIP content.

If you do not have access, but have OPERA Cloud Foundation, follow these instructions:

- Email **operaenablement_ww@oracle.com** and include the following information:
  - **Customer Name** (as it appears on the customer’s Oracle account)
  - **Address** (include Country)

- **Primary Contact Name**
- **Primary Contact Email**

Once this information is received, the Digital Learning team will verify the information. Please allow five business days for responses.

Quick Start for Hoteliers (in UAT Environment)

Prerequisites

OPERA Cloud Foundation SKU

- The hotel must purchase an OPERA Cloud Foundation SKU.

> **Note**
>
> OHIP is not available for hotels using a legacy OPERA Cloud SKU.

Onboarded in OHIP

- The chain containing properties that are on OPERA Cloud Foundation must be onboarded with OHIP.

Oracle Cloud Infrastructure

- The onboarded chain and properties must be on Oracle Cloud Infrastructure (OCI) and NOT in a legacy data center.

Making API Calls

1. Assign the DEVELOPERPORTALACCESS role to all OPERA Cloud users requiring access to the OHIP Developer Portal. This will support Single-Sign On (SSO) with OPERA Cloud. See Getting Started for more information.
   - **UAT**: Refer to your Welcome email for this URL.
   - **PROD** : Refer to your Welcome email for this URL.
2. Access the Developer Portal for UAT or PROD (using the URLs from your Welcome email) and click the **Environment** tab.
3. Click the environment card and to copy the enterpriseID, scope, client Id, and secret. See Using the Oracle Hospitality APIs for more information.
4. Register a new application in the **Applications** tab of the OHIP Developer Portal. When creating a new application, subscribe the application to all the APIs that appear. See Register and Manage Applications for more information.
5. Enter the hotel ID from which you want to get data. This is not the same ID as the chain admin and should be the ID of a specific hotel.

   If you need to call early adopter (v0) Oracle Hospitality Distribution APIs, send an email to hospitality- integrations_ww@oracle.com requesting to join the early adopter programme. You must reply to the email accepting the terms and conditions of the programme before access is provided.

Configuring Postman

1. Obtain the postman collections via the following:

- Cloning our github repo and then importing the collections / environment under the postman-collections folder.
- Forking our public postman workspace directly.

2. Set up a postman environment (one for UAT and one for PROD) with the previously obtained information plus the gateway URL:
   a. **HostName**: API gateway URLs for UAT and PROD. Refer to your Welcome email for these URLs.
   b. **CLIENT_ID**: Client ID previously obtained from the Developer Portal for UAT or PROD.
   c. **CLIENT_SECRET**: Client ID previously obtained from the Developer Portal for UAT or PRO.
   d. **AppKey**: The application key previously obtained .
   e. **EnterpriseID**: The unique identifier for the enterprise.
   f. **Scope**: The scope variable representing the permissions of the client for authorization.
   g. **HotelId**: Hotel ID against which you want to perform actions. For example, obtaining reservation data.
3. Once all environments have been configured, select the **Get OAuth Token** collection and make a call.

   If everything is set up correctly, OHIP responds with a HTTP 200 OK response, which includes the OAuth token.

   Now you can try out other collections as required.

Assigning Roles to Users

Non-Federated OPERA Cloud Identity Management Customers

The following roles are available for OCIM Customers. These roles allow customers to assign their users to one or more roles.

- **OHIPADMIN**
- **OHIPDEVELOPER**
- **OHIPANALYTICS**
- **OHIPENVIRONMENTS**
- **OHIPVIEW**
- **DEVELOPERPORTALACCESS** (will be deprecated in future)

Table 2-1 Application Roles

	OHIPADMIN	OHIPDEVELOPER	OHIPANALYTICS	OHIPENVIRONMENTS	OHIPVIEW	DEVELOPERPORTALACCESS
API Documentation	View	View	No Access	No Access	View	View
Applications	View-Add-Edit-Delete	View-Add-Edit-Delete	No Access	View	View	View-Add-Edit-Delete

Table 2-1 (Cont.) Application Roles

	OHIPADMIN	OHIPDEVELOPER	OHIPANALYTICS	OHIPENVIRONMENTS	OHIPVIEW	DEVELOPERPORTALACCESS
Application Key	View-Reissue-Copy	View-Reissue-Copy	No Access	No Access	No Access	View-Reissue-Copy
Environment	View-Add-Remove	View	No Access	View-Add-Remove	View	View-Add-Remove
API Analytics	View	View	View	No Access	View	View
Client Secret	Read-Issue	Read	No Access	Read-Issue	No Access	Issue
Approve Partner Connections (Includes module and Property Level Access)	Yes	No Access	No Access	Yes	No Access	Yes
Approve Streaming Applications (Within Applications)	Yes	No Access	No Access	Yes	No Access	Yes

For details on how to assign group membership to users in Non-Federated OPERA Cloud Identity Management, refer to Assigning and Removing Group Membership in the OPERA Cloud Identity Management Administrator Guide.

Federated OPERA Cloud Identity Management Customers

To access the Developer Portal, identity administrators must first create a Custom Group for OHIP at a chain level (<Chain Code>-DEVELOPERPORTALACCESS, <Chain Code>-OHIPADMIN, <Chain Code>-OHIPDEVELOPER, <Chain Code>-OHIPANALYTICS, <Chain Code>-OHIPENVIRONMENTS, <Chain Code>-OHIPVIEW) in their respective identity provider. For more details on Custom groups, refer to OPERA Cloud Identity Management Seeded Groups in the Identity Federation Overview guide.

Once the Custom group for OHIP is created at a chain level, administrators must assign the users to this custom group in their respective identity provider.

> **Note**
>
> Users must be chain-level users to be granted DEVELOPERPORTALACCESS, OHIPADMIN, OHIPDEVELOPER, OHIPANALYTICS, OHIPENVIRONMENTS, and OHIPVIEW group membership and to successfully access the Developer Portal.

> **Note**
>
> Developer Portal users do not have the ability to call APIs.

Signing In to the Oracle Hospitality Developer Portal

Signing In to the Developer Portal

Sign in to the Oracle Hospitality Developer Portal to create applications, discover available Oracle Hospitality APIs, and register Oracle Hospitality APIs to your applications.

1. Open the Oracle Hospitality Developer Portal in a browser to the URL provided in the welcome letter.

   The customer portal URL can also be obtained using the EnterpriseID.

   - For production environments: https://<ohip-domain>/<enterpriseID>prd/ui
   - For non-production environments: https://<ohip-domain>/<enterpriseID>uat/ui

2. Enter your username and password.
3. Click **Sign In**.

   > **Note**
   >
   > Your account locks if you enter an incorrect username or password three times. For help getting back into your account, click **Can't sign in** and the follow instructions on the screen.

4. If your portal user has access to multiple chains or environments, you are prompted to make a selection to ensure you access the correct resources.

   - **Single Chain Code**, **Multiple Environments**: If your enterprise utilizes one chain code across different environments, you must choose the specific environment. The chain code will already be selected and unchangeable.
   - **Multiple Chain Codes**, **Multiple Environments**: In cases where your enterprise has multiple chain codes and environments, you must select both the chain code and the environment from the dropdown menus.
   - **Multiple Chain Codes**, **Single Environment**: Where there are multiple chain codes within a single environment, you must select the chain code from the dropdown menus. The environment will be predetermined and unchangeable.
   - **Default Chain and Environment**: You can streamline your login process by setting a default chain and environment. This eliminates the need to make selections each time.

   You can also select this chain and environment as the default chain for login by selecting the **Set this chain as default** option. This will avoid selecting the chain and environment on each login and will directly log in to the default chain and environment on each login.

5. Click **Select**.

Switching between Chains

If your portal user has access to multiple chains, you can switch between chains once logged in to the Oracle Hospitality Developer portal.

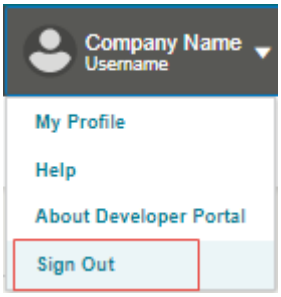
To switch between chains:

1. On the Oracle Hospitality Developer Portal, click the **User** menu drop-down.
2. Select **Switch Chains**.
3. Search for and select the chain to which you want to switch. You can also change the default chain for login to this chain by selecting the **Set this chain as default** option.
4. Click **Select**.

Signing Out of the Oracle Hospitality Developer Portal

You can sign out of the Oracle Hospitality Developer Portal using the User menu.

1. On the Oracle Hospitality Developer Portal, click the **User** menu drop-down.
2. Click **Sign Out.**



Changing Your Password

> **Note**
>
> These instructions for changing your password apply to those who onboarded through the Oracle Hospitality OPERA Cloud Foundation.
>
> If you onboarded through the Oracle Hospitality Integration Cloud Service, refer to Changing Your Password in the *Onboarding Partners - Oracle Hospitality Integration Cloud Service* section.

To change your password:

1. Sign in to the Oracle Hospitality Developer Portal.
2. On the user drop down menu, click **My Profile**.
3. Click the **Change My Profile** tab.
   - Enter your **Old Password**.
   - Enter the **New Password**.
   - After all password criteria is met, enter the new password to confirm and then click **Submit**.

3

Discover and Subscribe to Oracle Hospitality APIs

Learn how to discover and subscribe to Oracle Hospitality APIs for your applications in the Oracle Hospitality Developer Portal.

API Search Engine

The API Search Engine enables you to filter by modules, workflows, lifecycle, and method. You can also search by free text to find an API or operation that meets your business case. Search results include operation level details from which you can access links to the API documentation and the Postman sample.

The table below lists all of the filters available on the left side of the page. Select from these filters to refine your API search results. The API search results appear in the center of the page in the form of API display cards.

Table 3-1 Side Filters

Filter	Description
Content	Search by API module or workflow. A workflow is a sample list of operations a user would perform for a specific scenario, such as creating a new block or performing a check-in.
API Lifecycle	APIs can be V0, V1, or Deprecated. V0 are described in the Early Adopter API Program chapter. V1 are production ready and guaranteed for backward compatibility. Deprecated are no longer recommended for use. You should plan to cease using these and move to a V0/V1 equivalent operation.
API Category	The APIs are split into categories relevant to different Oracle Hospitality products. For example, Property are the APIs for OPERA Cloud, and Distribution are the APIs for the distribution platform.
API Module	Within a category, there are many APIs divided into modules and each module contains many operations. Filter by Module to narrow your search or leave this blank to view all the available modules.
API Workflow	API workflows are a collection of many different API call samples showing steps on how to perform functional workflows (for example, digital check-in and checkout).

Table 3-1 (Cont.) Side Filters

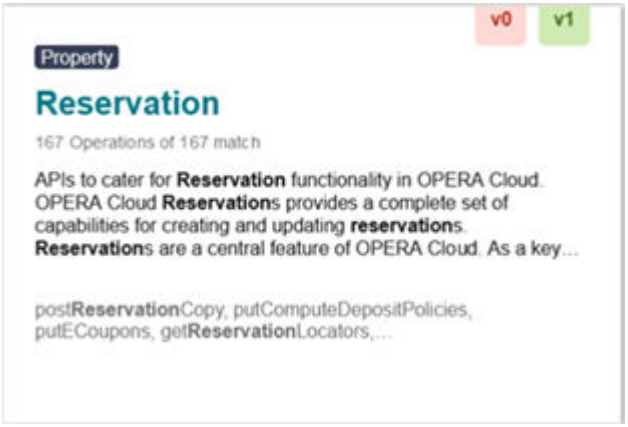
Filter	Description
Method	Filter by the following REST API Methods: **Get**: Retrieve information about the REST API resource. **Post**: Create a REST API resource. **Put**: Update a Rest API resource. **Delete**: Delete a REST API resource or related component. **Head**: Similar to a get, but the server does not return a response body. This method determines if a resource exists and is currently used for Property Asynchronous APIs.

> **Note**
>
> The number in brackets next to an API indicates the number of operations within it.

API Display Cards

API cards appear based on the search criteria you enter. If the search field is left blank, all API cards appear in alphabetical order.

Figure 3-1 API Display Card Example



The API Display Card displays the below information.

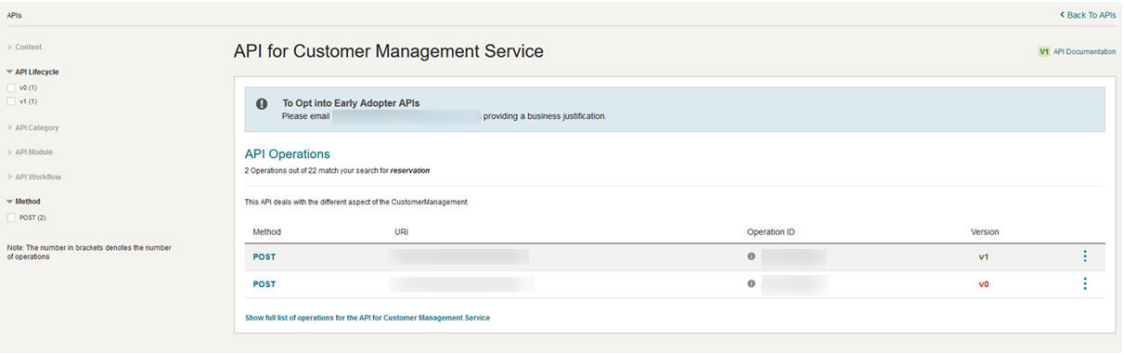
Table 3-2 API Display Card Fields

Field	Description
Property	This icon shows the category to which this API belongs. For example, Property are the APIs for OPERA Cloud, and Distribution are the APIs for Oracle Hospitality Distribution.
API Module Name	The name of the module. For example Reservation, Blocks, Cashiering, Reservations, and so on.
V0 / V1	V0 and V1 flags represent the operation level versioning in the API. If both flags are shown, it indicates that some operations are V1 and some are V0 within the module.
Number of Operations	Depending on your search, the API card will display the number of operations matching your search. If the search is left blank, the API card will show the total number of operations in that specific API.
Summary of the API	A short description of the API.
Operations that match your search	If you search a specific phrase or word and it matches the operations, the operations are highlighted on the card to provide a preview of the results displayed on the next page.

API Page

Once you click an API display card, the page for the API appears and shows more details about the operations within that API.

Figure 3-2 Example of an API Page — API for Customer Management Service



The API page shows the following details for the operations:

Table 3-3 API Page Details

Field	Description
API Documentation	Click this link to view the API documentation.

Table 3-3 (Cont.) API Page Details

Field	Description
Information button	Click the  button to view a short description of this operation.
Method	The type of API method, such as POST, GET, PUT, DELETE, and so on.
URI	The URI path for this operation. The URI is depreciated if it has a strike through.
Operation ID	The ID for the API operation.
Version	The API version, which is either v0 or v1.
Vertical ellipsis	Click to access links to the API documentation and the Postman sample.
Show full list link	Click the link below the table to view a complete list of operations for the API.

Viewing Oracle Hospitality APIs

The Oracle Hospitality Developer Portal's APIs page provides information about Oracle Hospitality APIs. Here you can find and evaluate Oracle Hospitality APIs to use with your applications.

1. Click the **API Documentation** link to view the embedded documentation for the APIs.
2. On the left and middle panels, you can view all the available API resources and view an explanation for each field in both the request and the response. In the search field, you can enter the full name or partial name of a resource to further filter the results.
3. The right panel shows example requests and responses.

Early Adopter API Program

The Early Adopter API Program offers program members early access to newly released "version 0" Oracle Hospitality APIs. In your Developer Portal, these APIs are in a separate Early Adopter section, and you can discover and subscribe to these APIs within your registered application.

In this release of Oracle Hospitality Integration Cloud Service, Oracle is elevating the benefits of the Early Adopter program. Members of the program benefit from the following:

- Early access to version 0 Oracle Hospitality Distribution APIs.
- Best endeavors assistance provided by Oracle Hospitality Integration Cloud Service product management.
- The ability to provide feedback that can potentially influence the product roadmap.

> **Note**
>
> Please keep to in mind that some of the (v.0) API capabilities offered as part of the early adopter program may be less stable than Production APIs and can experience some difficulties. Furthermore, our aim is to avoid breaking changes in v.0 APIs, however we cannot guarantee full backward compatibility as we roll out patches to improve functionality and/or usability of our early adopter APIs.
>
> Also note that the best endeavors assistance provided by product management as part of the program is not subject to service level agreements (SLAs); however, we do offer a premium (paid) service for partners and/or customers who desire dedicated support. Please contact hospitality-integrations_ww@oracle.com if this is of interest.

As an early API adopter, we look forward to your active insight and feedback as we refine and improve these API capabilities together.

Eligibility for the Early Adopter Program

Anyone who has access to the Oracle Hospitality Integration Platform is eligible to opt in to the Early Adopters Program. However, we have the following expectations from those that do opt in:

- Provide ongoing feedback that can help us improve the APIs.
- Share examples of API calls that worked or didn't work.
- When experiencing issues, provide context that can help us replicate the issue and also understand the business criticality. This information will help us prioritize accordingly.
- Be a bit patient as some of the APIs may be a little bumpy around the edges.

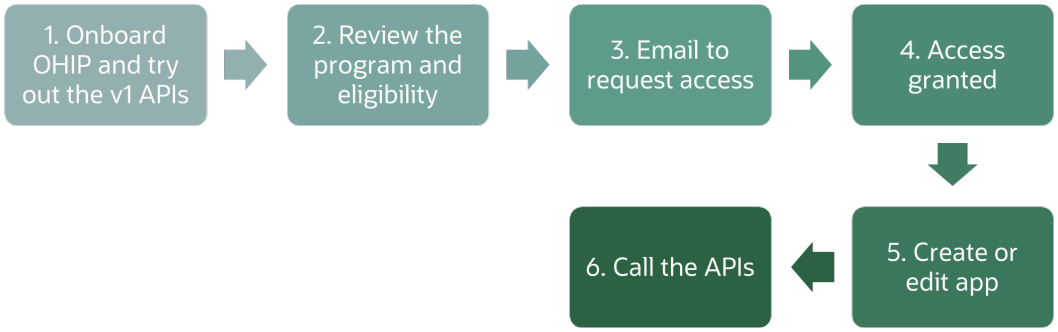
We're open to any feedback but ask that you please maintain a constructive tone. You can opt out at any time if this program is not for you.

How to Opt In to the Early Adopter Program

Opting in is easy. Just send an email to hospitality-integrations_ww@oracle.com and include the following information:

- use case(s)
- desired timelines
- why you think our early adopter APIs will help you be successful
- that you want to opt in to use the Distribution early adopter APIs

Joining the Early Adopter Program



1. Onboard OHIP and try out the v1 APIs. For partners, follow the steps in Quick Start for Partners (Using the Partner Sandbox). For customers, see Getting Started for Hoteliers.
2. Review the Early Adopter API Program, review the APIs in the program, and review the program eligibility and program expectations.
3. Email us at hospitality-integrations_ww@oracle.com.com to request access. In the email, state your use case(s), deadline timelines, and why you think our early adopter APIs will help you. For more information, see How to Opt In to the Early Adopter Program.

   If you meet the eligibility criteria, Oracle will grant you access to the Early Adopter program.
4. Sign in to the Developer Portal.
5. Register or edit an application. At step 10, on the subscription panel, select the **Hospitality APIs** tab and then select the check box. Next, select the **Early Adopter** tab and then select the check box.
6. Call the APIs.

   If you need additional consulting to get you started, you can purchase it in groups of 2 hours. Visit the Oracle Store for more information.

How to provide Early Adopter Program feedback

We anticipate our early adopters to be very active in the development of integrations using our APIs and providing feedback and insight that can help improve and refine our product.

Send an email to hospitality_apis_ww_grp@oracle.com with the following information:

- Ease of use.
- Insights as to what improvements or refinements to make.
- Successful or unsuccessful examples.

4

Register and Manage Applications

Learn how to register and manage applications using the Oracle Developer Portal.

Registering an Application

Register new applications from the Applications page.

1. In the Oracle Hospitality Developer Portal, click the **Applications** tab.
2. Click **Register Application**.
3. On the Register Details panel, enter the application name and an optional description.
4. Enter the **Application Name** that applies to your application.
5. Optionally, add a Description for the application.
6. Optionally, select the Application Type.
7. Select the environment: **Non Production** or **Production**. An application can be either a non production application or a production application.
   - **Non Production**: By default, an application has access only to non production environments. A non production application may not access production environments, so to move from calling non production to calling production environments, you must create a new production application. To access production environments, please email your Oracle Partner Network (OPN) reference number to hgbu_integrations_provisioning_grp@oracle.com.
   - **Production**: Production refers to Oracle Hospitality APIs that can access Oracle Hospitality systems such as a production Oracle Hospitality OPERA Cloud Services environment. A production application may not access non production environments.
8. If an application is a customer application linked to a Production environment, then you must enter a Business Justification for the new application and click to confirm the Oracle Terms & Conditions before the application can be created.
9. In the **Contact Information** section, enter your **First Name**, **Last Name**, and **Email Address**. Entering the Email Address, Phone Number, and Company Name is mandatory.

   The email address provided during application registration in Oracle Hospitality Integration Platform (OHIP) is utilized the following ways:

   - **Deprecated API Notifications**: When a Customer or Partner calls APIs that have been deprecated, OHIP sends weekly notifications to the email address provided.
   - **Usage Alerts**: Refer to Call Usage Alerts.
   - **Major Incident Alerts**: In the event of a major incident with your production integration, Oracle Hospitality will reach out to you using these contact details to inform you of the incident. Oracle Hospitality will temporarily work with you to disable the integration and determine what actions must be taken before the integration can be re-enabled. If you do not respond when Oracle Hospitality reaches out to you, Oracle Hospitality will disable your integration. Therefore, it is vital these contact details are monitored 24x7.

10. Click **Next**.
11. On the Subscriptions panel, select the group of Oracle Hospitality APIs to which you want to subscribe this application and then select the **Subscribe** check box.

> **Note**
>
> ONLY subscribe to API Catalog if your application will be used for Oracle Integration Cloud (OIC) Hospitality Adaptor.

12. Click **View API documentation** to view the API documentation for the Oracle Hospitality APIs to which the application will be subscribed.
13. Click **Register**. The message *Application Registered Successfully* confirms the registration.
14. Your newly registered application appears at the top of the list on the **Applications** tab.

> **Note**
>
> You are allowed a maximum of 100 applications for registration. You cannot register additional applications if you have reached the allowed limit. If you do so, the following error appears:
>
> **Error: Cannot create your application as you have reached the maximum number of applications allowed.**

Viewing Application Details

When viewing your application details, you can view the application key, the application contact details, application description, application type, and so on. The application key is masked by default.

To view Application Details:

1. On the Oracle Hospitality Developer Portal, click **Applications**.
2. On the All Applications page, select the registered application for which you want details.
3. Click **View details**.

Viewing the Application Key

When in your application details, you can view and copy the application key. The application key is masked by default.

To view and copy your Application key:

1. On the Oracle Hospitality Developer Portal, click **Applications**.
2. On the All Applications page, select the application for which you need the application key.
3. Click **View details**, and then under the Application Key, click **Show** or click **Copy**.

Editing Application Details

Edit an Application from the Application details page:

1. On the Oracle Hospitality Developer Portal, click the **Applications** tab.
2. On the Applications page, click **View details**.
3. On the **Overview** tab, click the **pencil icon**.
4. In the **Edit Application Details** dialog, edit the details, and then click **Save**.

Deleting an Application

> **Note**
>
> There are some important points to understand when you want to delete an application:
>
> - You cannot delete an application if you have outstanding billing charges.
> - You cannot delete an application that is still subscribed to consume events using the streaming API. Unsubscribe from these events first, then delete the application.
> - Deletion cannot be undone, which means you will permanently remove any historical data and the app key will no longer work. Once you delete your app, you cannot restore it.

If you want delete your application, follow these steps:

1. On the Oracle Hospitality Developer Portal, click the **Applications** tab.
2. On the Applications screen, click **View details**.
3. On the Application Details page, in the **Overview** tab, click the **Delete icon** and click **Delete** again to confirm.

   The following message appears when you click the **Delete icon**:

   “Are you sure you want to delete the [App_Name] application?

   Deleting an application will permanently remove any historical data, and the app key will no longer work. You won't be able to restore it.”

Editing an Application Subscription

To change the APIs to which an application is subscribed:

1. On the Oracle Hospitality Developer Portal, click the **Applications** tab.
2. On the Applications page, click **View details** for the application.
3. Click the **Subscriptions** tab.
4. On the **Subscriptions** tab, click the **pencil icon** to edit.
5. Make your desired edits and click **Save**.

Get a Portable Export of My Application Details

If you need a Portable Export of your Application Details, create a ticket in the Customer Support Portal.

Reissuing an Application Key

A unique application key is created for each application, which must be sent in the header of every request to Oracle Hospitality APIs. You can reissue a key for an application from its Overview page.

> **Important**
>
> When you reissue a key, requests to the Oracle Hospitality APIs that an application is subscribed to will fail until you send them the new key.

1. On the Oracle Hospitality Developer Portal, click **Applications**.
2. On the Applications screen, select the application for which you want to reissue the key.
3. Click **View Details**.
4. Click the **Show** link to see the unique application key that is created for your application.
5. Click the **Reissue** link.
6. Click **Reissue** at the confirmation message prompt.
7. The reissued application key appears instantly. Click **Hide** to hide the key.

Suspending an Application

If you wish to temporarily suspend your Application, create a ticket in the Customer Support Portal.

After the application is suspended, you can no longer make Oracle Hospitality API calls using that application.

5

Call Usage Alerts

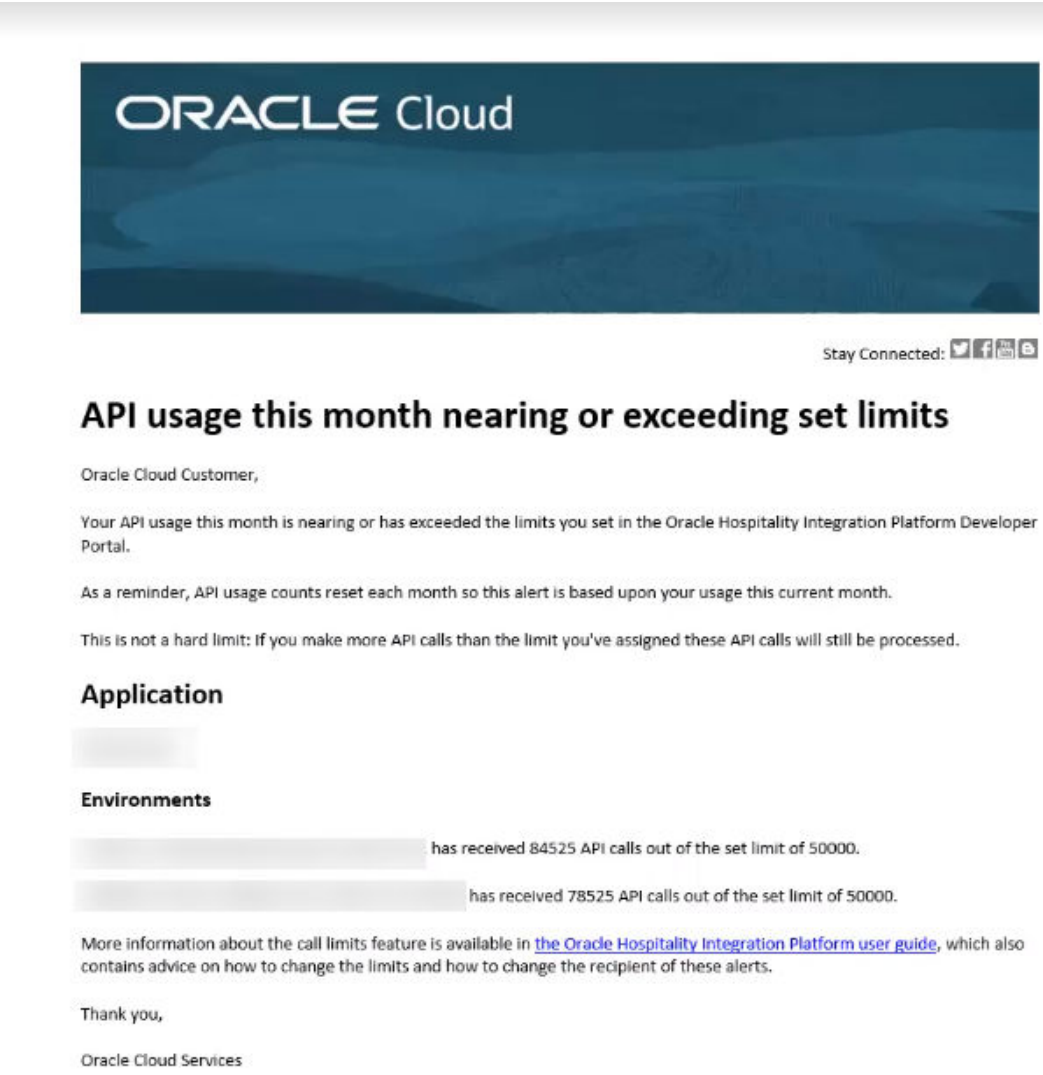
Call usage alerts trigger an email when API usage is near or exceeds the limit assigned for API calls to an environment. On the **Alerts** tab under **Applications**, you can configure the call limit for each application and its environment(s). With call usage alerts, you can do the following:

- Create a new usage alert setting
- Adjust a usage alert setting
- Remove a usage alert setting

Call usage alerts are beneficial to developer portal users concerned about unexpected spikes in usage. To avoid this potential problem you can set call limits, enabling you to better budget and monitor your API calls.

When you approach or exceed your call limit, an email is sent. Only one usage alert email is sent per day per application listing all the environments being called by the application that approach or exceed the assigned usage limit.

Figure 5-1 Usage Alert Email Example


ORACLE Cloud

Stay Connected:

API usage this month nearing or exceeding set limits

Oracle Cloud Customer,

Your API usage this month is nearing or has exceeded the limits you set in the Oracle Hospitality Integration Platform Developer Portal.

As a reminder, API usage counts reset each month so this alert is based upon your usage this current month.

This is not a hard limit: If you make more API calls than the limit you've assigned these API calls will still be processed.

Application

Environments

has received 84525 API calls out of the set limit of 50000.

has received 78525 API calls out of the set limit of 50000.

More information about the call limits feature is available in the Oracle Hospitality Integration Platform user guide, which also contains advice on how to change the limits and how to change the recipient of these alerts.

Thank you,

Oracle Cloud Services

> **Note**
>
> Usage alerts do not prevent API calls from exceeding the chosen limit and only provide information in an email about the environments and applications that are near or exceed the call limit.

If you are using multiple applications or calling multiple environments, it is recommended to set a low limit for each environment on each application. For calls to non-production environments, a default of 10,000 calls is set for the limit, but no default limit is set for calls to production environments.

You can view your current usage in the Analytics tab.

Configuring Call Usage Alerts

You set call usage limits at the application level. Since an environment can be used for multiple applications, you can set different call usage limits for the same environment.

Setting a Call Usage Limit

1. On the Developer Portal, click **Applications** and then select an application by clicking it.
2. Click the **Alerts** tab.
3. Choose an environment and click the pencil icon for it.
4. Click the up or down arrow for the **Usage Alert Setting** to increase or decrease the usage limit.

   Selecting the up arrow increases the limit and selecting the down arrow decreases it.
5. Click **Save**.

Removing a Call Usage Limit

If you no longer wish to receive usage alert emails, set the **Usage Alert Setting** to zero on each environment for each application.

1. On the Developer Portal, click **Applications** and then select an application by clicking it.
2. Click the **Alerts** tab.
3. Choose an environment and click the pencil icon for it.
4. Click the down arrow for the **Usage Alert Setting** until the call limit is zero.
5. Click **Save**.

Changing the Recipient for Usage Alerts

The email address on the Overview tab of an application is the email address to which usage alerts are sent. This can be changed at any time and takes effect within 24 hours.

1. On the Developer Portal, click **Applications** and then select an application by clicking it.
2. On the **Overview** tab, under **Contact Details**, click the **Question Mark** button.
3. Enter a valid email address for the new recipient.
4. Click **Save**.

6

Environments (Gateways and Credentials) with Resource Owner Group Authentication Scheme (SSD)

From the Environments page in the Developer Portal, partners can view the information (that is, clientId, clientSecret, and gateway URL) required for calling the partner sandbox. Partners who have purchased non-production OPERA Cloud environments can also obtain this information. Once partners are ready to call a hotel's environment, they can add a new environment and obtain the clientId, clientSecret, and gateway URL details.

Customers can also view their environment's clientId, clientSecret, and gateway URL on the Environments page.

Viewing Partner Sandbox Details

1. Open the Developer Portal and click **Environments** at the top of the page. Within the Partner Sandbox section, you can view and copy your Client ID, Client Secret, and Gateway URL.
2. Click the **Generate your integration username and password** link to create your integration user with the specified Tenant ID.

Adding an Environment

Prerequisites for Adding an Environment

- Only partners can add an environment. Customers can by default view their environments. For more information, see Viewing Environment Details.
- The hotel must be using OPERA Cloud Foundation before you can add an environment.
- Partners must create an integration user and have the user approved by the hotel before adding an environment. See Authenticating to Oracle Hospitality Property APIs for steps to create an integration user.

To Add an Environment

1. Open the Developer Portal and click **Environments** at the top of the page.
2. Click **Add Environment**.
3. Select **integration username**.
4. Enter the **Integration Username** for your integration user.
5. Select your **Region**.
6. Select whether the environment you are adding is a **Non Production** or **Production** environment.
7. Click **Add**.

Error Messages

If you encounter an error message when adding an environment, it could be for a variety of reasons, such as the environment owner not yet approving the integration user. The Add Environment page lists the environment errors and recommends the next course of action. If the recommendation is to raise a support request with Oracle Customer Support at the Customer Support Portal, include the exact error message and error code in your support request as this will shorten the resolution time.

If you add back a removed environment, you must use the same integration username that was previously used to add the environment. The error message will inform you which integration username was previously used to add the environment.

Viewing Environment Details

1. From the Developer Portal, click **Environments** at the top of the page. All your environments appear on this page.
2. Click the **View Details** link for the environment you want to view.
3. The following details appear based on the authentication scheme of the customer's environment.
    a. **Gateway URL** for the environment.
    b. **Client ID** and **Secret**. If the Client ID and Client Secret do not appear, you can create these by clicking the **Create Client Credentials** button.
    c. **Authentication scheme** supported by the environment. This would be the Resource Owner Group.
    d. Integration username of the API user.

Viewing the Client Secret

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. Click the **Show** link for the Client Secret.

If the Client ID and Client Secret do not appear, these can be created by clicking the **Create Client Credentials** button.

Changing Your Client Secret

To change/reissue your Client Secret:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment.
3. Click the **Reissue** link for the Client Secret and click **Reissue** again to confirm.

The following message appears when you click **Reissue**:

“Are you sure you want to reissue the Client Secret? This will affect the following environments: [A list of environments appears]

The current Client Secret will no longer work for the above environment(s).”

Removing an Environment

> **Note**
>
> - When you remove an environment, it will cease sending any events to which you have subscribed via the streaming API.
> - You can add back the environment, but it will be subject to the customer's approval.
> - If you add back an environment, you must use the same integration username that was previously used to add the environment.

1. From the Developer Portal, click **Environments** at the top of the page. All your environments appear on this page.
2. Click the **View Details** link for the environment you want to remove.
3. Click **Remove Environment** and click **Remove** to confirm.

   The following message appears when you click **Remove Environment**:

   “Are you sure you want to remove this [Environment_Name] environment?

   You can add the environment again, and it will be subject to customer's approval.”

Managing Partner Connections

For customer environments supporting a Resource Owner Group authentication scheme (SSD), partner connections are approved by the chain administrator. This approval grants the WSACCESS role to the integration user.

Approving Partner Connections

When a partner submits a new request to add an integration user via the vendor registration portal, the chain administrator will approve the partner request in SSD after receiving an email from SSD.

Rejecting Partner Connections

To revoke access for a partner, the chain administrator must remove the WSACCESS role from the integration user within SSD.

Suspending a Partner Connection

If a partner connection is Suspended:

- The customer developer portal displays the partner's integration as 'SUSPENDED' in both the streaming approvals and OCIM approvals sections.
- The developer portal shows a 'SUSPENDED' status label as appropriate.
- The partner is unable to call APIs or consume Business Events. Any solution the partner offered by consuming the APIs would not work.
- If you have questions about the 'SUSPENDED' status of the partner, contact your partner.

7

Environments (Gateways and Credentials) with Client Credentials Authentication Scheme (OCIM)

Partners who have purchased non-production OPERA Cloud environments can view the information (that is, clientId, clientSecret, EnterpriseID, Scope and gateway URL) required for calling the environment from the Environments page in the Developer Portal. Once partners are ready to call a hotel's environment, they can add a new environment and obtain the ClientId, ClientSecret, EnterpriseID, Scope, and gateway URL details.

Customers can also view their environment's clientId, clientSecret, EnterpriseID, Scope, and gateway URL on the Environments page.

> **Note**
>
> One environment refers to **one chain** in a single **OPERA environment** and corresponds to **one clientId**.

Sandbox Availability

Partners wanting to integrate with customer environments supporting a client credentials-based authentication scheme (OPERA Cloud Identity Management) should refer to the OCIM Sandbox details available on the Partner Developer Portal environments page.

ClientId Format

Starting with OHIP Portal version 25.3.1, newly created clients are in a human-readable format (below) rather than a GUID (e.g., 'a995b6b2-c983-11ee-8c2e-0242ac110002').

Partners: '<cloudAccountName><chain><environment>-<enterprise>-Client'

Customers: '<chain><environment><enterprise>Client' or '<chain><environment><enterprise><clientName>'

This makes it easier to see who made changes when hotels look in audit logs.

The clientName is the same as the clientId to help customers auditing records in OCIM.

Adding an Environment

> **Note**
>
> Starting with OHIP Portal version 25.3.1, newly created clients are in a human-readable format '<cloudAccountName><environment>-<enterprise>-Client' rather than a GUID (for example, 'a995b6b2-c983-11ee-8c2e-0242ac110002'). This makes it easier to see who made changes when hotels look in audit logs. The clientName is the same as the clientId to help customers auditing records in OCIM.

Prerequisites for Adding an Environment

- – Only partners and customers with OPERA Cloud Central can add an environment. Customers can by default view their environments. For more information, see Viewing Environment Details.
- The hotel must be using OPERA Cloud Foundation before you can add an environment.
- Partners and customers with OPERA Cloud Central must check if the customer can provide the Enterprise ID.
- For Enterprise ID, you can find it in the environment details of the customer in the customer's OHIP developer portal. See Viewing Environment Details for the steps.

To Add an Environment

1. Open the Developer Portal and click **Environments** at the top of the page.
2. Click **Add Environment**.
3. Enter the **Enterprise ID** and **Chain Code** (both in uppercase) provided by the customer. For customers with multiple gateways, a confirmation message appears ensuring that the access request has been sent to all gateways within the chain.
4. Select your **Region**.
5. Select whether the environment you are adding is a **Non Production** or **Production** environment.
6. Click **Add**.

The environment connection request is sent to the customer for approval within the customer developer portal, and the status of the environment is shown as "Pending Approval." Once approved, an email notification is sent to the administrators of the partner organization. To view the environment details post approval, see Viewing Environment Details.

> **Note**
>
> After receiving the approval email, wait 5 minutes before calling the environment. You may see more than one environment card appear as *Pending Approval*.

Error Messages

If you encounter an error message when adding an environment, it could be for a variety of reasons, such as the environment owner not yet approving the integration user. The Add

Environment page lists the environment errors and recommends the next course of action. If the recommendation is to raise a support request with Oracle Customer Support at the Customer Support Portal, include the exact error message and error code in your support request as this will shorten the resolution time.

If you add back a removed environment, you must use the same Enterprise ID and chain code that was previously used to add the environment. The error message informs you of the Enterprise ID previously used to add the environment.

Issuing the Client Secret

For enhanced security for environments supporting a Client Credentials-based authentication scheme (OPERA Cloud Identity Management), you can only view the client secret by issuing it. Therefore, if the client needs to be viewed, partners are required to take note of the new client secret once and advise all users of that client the details of the new client secret. In case of loss of client secret, a new secret must be issued, and all integrations must be updated with the new client secret.

To issue a new client secret:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.

   For customers:

   a. Search for the client by **Client ID** or **Client Name** in the search bar.

   b. Click the **ellipsis** button under the **Actions** column.

   c. Click **Manage**.
3. Click the **Issue** link for the Client Secret.
4. Click the **Issue** button on the confirmation message, which indicates the environments that will be affected once the new client secret is issued.
5. Click the **Copy** button to copy the new client secret.

If the Client ID and Client Secret do not appear, you can create them by clicking the **Create Client Credentials** button.

Viewing Environment Details

1. From the Developer Portal, click **Environments** at the top of the page. All your environments appear on this page.
2. Click the **View Details** link for the environment you want to view.
3. The following details appear based on the authentication scheme of the customer's environment.

   a. **Gateway URL** for the environment.

   b. **Client ID** and **Secret**. If the Client ID and Client Secret do not appear, you can create these by clicking the **Create Client Credentials** button.

   c. **Authentication scheme** supported by the environment. This would be **Client Credentials**.

   d. **EnterpriseID**: This is a unique identifier for the enterprise and must be shared with the partners along with the chain code, so they can add the customer environment for integration.

e. **Properties**: The list of properties approved by the customer appear in the **Properties** section. This is controlled only by the customers, and partners cannot modify the properties allowed for integration with a customer environment.

Changing Your Client Secret

To change/reissue your Client Secret:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment.

   For customers:

   a. Search for the client by **Client ID** or **Client Name** in the search bar.

   b. Click the **ellipsis** button under the **Actions** column.

   c. Click **Manage**.
3. Click the **Issue** link for the Client Secret.
4. Click the **Issue** button on the confirmation message, which indicates the environments affected once the new client secret is issued.
5. Click the **Copy** button to copy the new client secret.

Removing an Environment

Prerequisites for Removing an Environment

- Only partners can remove an environment. Customers can by default view their environments. For more information, see Viewing Environment Details.

> **Note**
>
> - When you remove an environment, it will cease sending any events to which you have subscribed via the streaming API.
> - You can add back the environment, but it will be subject to the customer's approval.
> - If you add back an environment, you must use the same enterprise ID and chain code that was previously used to add the environment.

1. From the Developer Portal, click **Environments** at the top of the page. All your environments appear on this page.
2. Click the **View Details** link for the environment you want to remove.
3. Click **Remove Environment** and click **Remove** to confirm.

   The following message appears when you click **Remove Environment**:

   “Are you sure you want to remove this [Environment_Name] environment?

   You can add the environment again, and it will be subject to customer's approval.”

Managing Partner Connections

> **Note**
>
> Starting with OHIP Portal version 25.3.1, newly created clients are in a human-readable format '<chain><enterprise><environment><clientName>' rather than a GUID (for example, 'a995b6b2-c983-11ee-8c2e-0242ac110002'). This makes it easier to see who made changes when hotels look in audit logs. The clientName is the same as the clientId to help customers auditing records in OCIM.

For customer environments supporting a Client Credentials authentication scheme (OCIM), the partner connection requests take place in the OHIP (Partner) Developer Portal and approvals take place within the OHIP (Customer) developer portal.

Approving Partner Connections

When a partner submits a new request to add a customer environment, an email notification is sent to all the chain administrators informing them about the new connection. Follow the below steps in the OHIP customer portal to approve the partner's connection request.

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Partner Connections**. All the partner connections appear in this section.
3. Search for the partner connection that is pending approval.
4. Search for and select the properties you wish to assign for the partner connection.

> **Note**
>
> After receiving the approval email, wait 5 minutes before calling the environment. You may see more than one environment card appear as Pending Approval.

5. Click **Next**.
6. Once you have reviewed the Summary, click **Approve** to approve the partner connection request. The status of the partner connection request should change to "Approved" in both the customer and partner portal.
7. An email notification is sent to the partners informing them about the approval of the connection request.

Rejecting Partner Connections

When a partner submits a new request to add a customer environment, follow the below steps in the OHIP customer portal to reject the partner's connection request.

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Partner Connections**. All the partner connections appear in this section.
3. Search for the partner connection that is pending approval.
4. Click **Reject** to reject the partner connection request. The status of the partner connection request should change to "Rejected" in the Environment section of both the customer and partner portal.

An email notification is sent to the partners informing them about the rejection of the connection request.

Revoking Partner Connections

To revoke access to approved partner connections:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Partner Connections**. All the partner connections appear in this section.
3. Search for the partner connection that is already approved.
4. Click **Revoke Access** to revoke the access of the partner connection. The status of the partner connection request should change to “Rejected” in the Environment section of both the customer and partner portal.

   An email notification is sent to the partners informing them that their access is revoked.

Editing Partner Connections

To edit an approved partner connection:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Partner Connections**. All the partner connections appear in this section.
3. Search for the partner connection that is already approved.
4. Click **View Details**.
5. In the Assigned Details section, click **Edit**.
6. Select the hotels the partner connection may access and then click **Update**.

The partner can see the updated list of hotels in the developer portal.

Suspending a Partner Connection

If a partner connection is Suspended:

- The customer developer portal displays the partner's integration as 'SUSPENDED' in both the streaming approvals and OCIM approvals sections.
- The developer portal shows a 'SUSPENDED' status label as appropriate.
- The partner is unable to call APIs or consume Business Events. Any solution the partner offered by consuming the APIs would not work.
- If you have questions about the 'SUSPENDED' status of the partner, contact your partner.

Managing Client Applications

> **Note**
>
> Starting with OHIP Portal version 25.3.1, newly created clients are in a human-readable format '<chain><enterprise><environment><clientName>' rather than a GUID (for example, 'a995b6b2-c983-11ee-8c2e-0242ac110002'). This makes it easier to see who made changes when hotels look in audit logs. The clientName is the same as the clientId to help customers auditing records in OCIM.

With OCIM, you can create multiple clients for different integration needs. This is aimed at providing enhanced security as each integration can have its own client based authentication. Please note this feature is available only for OCIM enabled customers. Partners will continue to have a single client application for a given customer environment. The following sections explain how to manage client applications in a customer environment.

A default client is already created and can be used for all integrations if that is the customer's preference.

Searching Client Applications

To find the client applications associated with an environment:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. This will list all the client applications that have been created for the environment.
4. Search for a given client by Client ID or Client Name in the search bar to find a client.

Adding New Client Applications

To add a new client application:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. Click the **Add Client** button.
4. Provide the name of the client. This name is unique across all the clients created with the enterprise.
5. Click **Next**.
6. Search for and select the properties you wish to assign to the client.
7. Click **Next**.
8. Review the Summary and then click **Add**.
9. Once the status of the client is in **Approved** state, the client is ready for integration

Cloning Client Applications

To clone a client applications associated with an environment:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. Search for the client by Client ID or Client Name in the search bar to find a client.
4. Click the **ellipsis** button under the Actions column.
5. Click **Clone**.
6. Enter a new name for the client.
7. Click the **Clone** button.

   This clones the configuration of the existing client into the new client.

> **Note**
>
> The Client ID and secret are regenerated and must be copied for the new client. See 'Issuing Client Secrets' above for more about managing the client secret associated with the client application.

Deleting Client Applications

To delete a client application associated with an environment:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. Search for the client by Client ID or Client Name in the search bar to find a client
4. Click on the ellipsis button under the **Actions** column
5. Click the **Delete** button.

   This will delete all the configurations for the client

> **Note**
>
> All existing integrations using the client must be updated with another valid client application.

Managing Client Applications

To change the properties a client applications may access:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click the **View Details** link for the environment you want to view.
3. Search for the client by Client ID or Client Name in the search bar.
4. Click the ellipsis button under the Actions column.
5. Click **Manage**.
6. In the Assigned Details section, click **Edit**.
7. Select the new list of hotels the client application may access and then click **Update**.

Managing Affiliated Connections

For customer environments supporting a Client Credentials authentication scheme (OCIM), the affiliated connection requests take place in the OHIP Developer Portal for customers with OPERA Cloud Central and approvals take place within the OHIP (Customer) developer portal.

Approving Affiliated Connections

When an Affiliated Customer submits a new request to add a customer environment, an email notification is sent to all the chain administrators informing them about the new connection. Follow the below steps in the OHIP customer portal to approve the connection request.

1. From the Developer Portal, click **Environments** at the top of the page.

2. Click **Affiliated Connections**. All the affiliated connections appear in this section.
3. Search for the affiliated connection that is pending approval.
4. Search for and select the properties you wish to assign for the Affiliated connection.
5. Click **Next**.
6. Once you have reviewed the Summary, click **Approve** to approve the affiliated connection request. The status of the affiliated connection request should change to "Approved" in both the customer's portal.
7. An email notification is sent to the affiliated customer informing them about the approval of the connection request.

Rejecting Affiliated Connections

When an Affiliated Customer submits a new request to add a customer environment, follow the below steps in the OHIP customer portal to reject the connection request.

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Affiliated Connections**. All the affiliated connections appear in this section.
3. Search for the affiliated connection that is pending approval.
4. Click **Reject** to reject the affiliated connection request. The status of the affiliated connection request should change to "Rejected" in the Environment section of the customers portal.

An email notification is sent to the affiliated customer informing them about the rejection of the connection request.

Revoking Affiliated Connections

To revoke access to approved affiliated connections:

1. From the Developer Portal, click Environments at the top of the page.
2. Click **Affiliated Connections**. All the affiliated connections appear in this section.
3. Search for the affiliated connection that is already approved.
4. Click **Revoke Access** to revoke the access of the affiliated connection. The status of the affiliated connection request should change to "Rejected" in the Environment section of both the customers portal.

An email notification is sent to the affiliated customer informing them that their access is revoked.

Editing Affiliated Connections

To edit an approved affiliated connection:

1. From the Developer Portal, click **Environments** at the top of the page.
2. Click **Affiliated Connections**. All the affiliated connections appear in this section.
3. Search for the affiliated connection that is already approved.
4. Click **View Details**.
5. In the Assigned Details section, click **Edit**.
6. Select the hotels the affiliated connection may access and then click **Update**.

The affiliated customer can see the updated list of hotels in the developer portal.

8

Migrating to the Client Credentials (OCIM) Authentication Scheme

Follow the below steps only for environments that are migrating from a resource owner group (Shared Security Domain - SSD) authentication scheme to a client credentials authentication scheme (OPERA Cloud Identity Management - OCIM).

What is OCIM and why is Oracle moving to it?

OCIM is a cloud-ready identity and access management service for OPERA Cloud. OCIM replaces SSD as the core identity and access management engine for OPERA Cloud, thereby, increasing security and making managing integrations easier. In OCIM, each chain belongs to an enterprise with an enterpriseId.

Migration Notification and Brief Downtime

Oracle will notify customers and their integration partners well in advance of migration dates. This ensures all stakeholders can adequately prepare for the migration.

Overview

Oracle is migrating one OPERA Cloud environment at a time to OCIM.

Customers and partners who call APIs through the Oracle Hospitality Integration Platform (OHIP) authenticate using an OAuth token. In SSD, this relies on an integration user's username and password; this is called the "resource owner" flow. In OCIM, this relies on a ClientId and ClientSecret; this is called the "client credentials" flow. This change enhances security and manageability of your integrations.

This chapter details the steps for customers and partners throughout the migration, outlining operational changes before, during, and after migration. It also covers important considerations related to integration user management and post-migration validation.

Migration Phases

Migration Phase	Customers
Before Migration	Use SSD authentication. **Developer Portal URL**: SSD URL All internal integrations use a single ClientId per environment and separate integration users. No action required.

Migration Phase	Customers
During Migration	**Developer Portal URL**: SSD URL Use the OPERA Cloud Role Manager to reissue passwords to integration users. No new partner integrations can be added. Customers with internal integrations: • **Reissue ClientId** for each chain. • Use either resource owner or client credentials to connect. • Must **switch to OCIM Client Credentials Authentication** before migration completes. • All internal integrations **use the one (reissued) ClientId** per environment. • To reissue passwords for integration users, use OPERA Cloud Role Manager (see above).
After Migration	**New Developer Portal URL**: OCIM URL Integration users are no longer required. Customers with internal integrations: • Use only OCIM client credentials. • Integration users are automatically converted to OCIM clients. • Either use a new OCIM client and provide its credentials to the relevant internal integration team, so they can update their integration to use **the new (separate) OCIM client** or create a new named OCIM client for each internal integration team. • Integration users are no longer required. • Use developer portal analytics to **validate** that integrations are not resulting in errors.

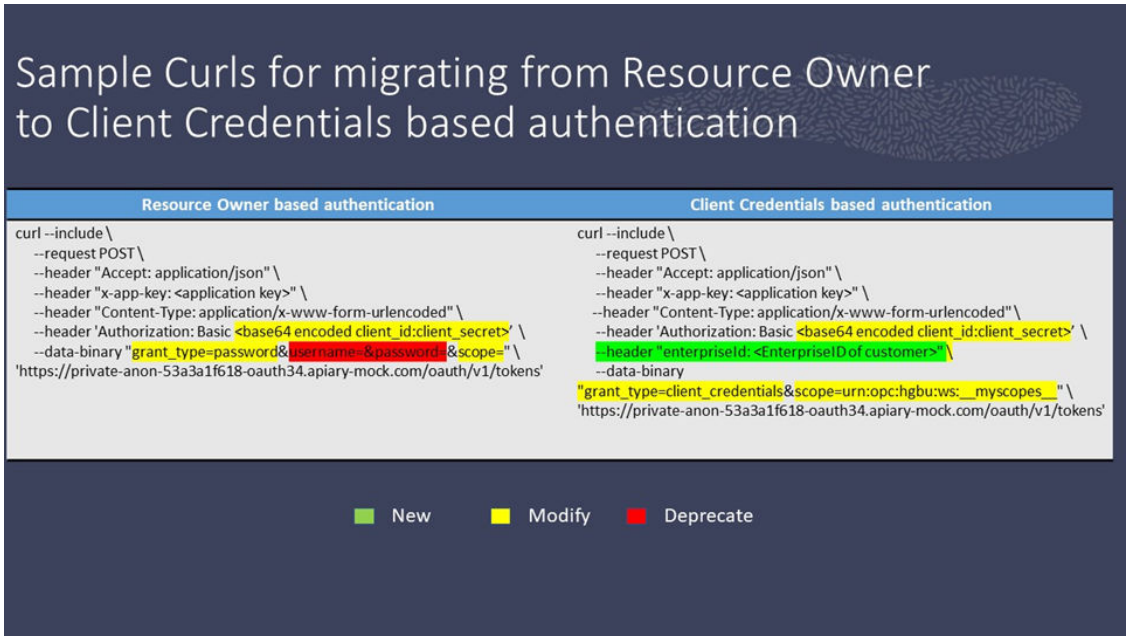
Switching from Resource Owner to Client Credentials Authentication

The image below shows the key differences between the resource owner group (SSD) authentication flow and the new OCIM client credentials flow as well as the steps to update your integration.

Code that calls the OAuth API must be changed (as shown below) to work with OCIM authentication.

Note that the scope value is always the following:

```
urn:opc:hgbu:ws:__myscopes__
```



Special Considerations During Migration

- **Advance Notification**: Customers and partners are notified well in advance by Oracle. This includes advice about the enterpriseId to which the chain belongs.
- **New Partner Integrations**: New partner integrations **cannot** be initiated with chains that are in the process of migrating. They must wait until the migration has completed.
- **Integration User Management**:
  - **Customers**: If an integration user's password must be changed during migration, customers can manage integration users using OPERA Cloud Role Manager. Refer to Managing Interface Users in the OPERA Cloud Identity Management Administrator Guide.
  - **Partners**: Cannot create or change integration users during the migration using SSD. If you need to change a user's password or create a new user, you must switch to OCIM authentication and reissue the ClientSecret. While a partner may have had more than one integration user in SSD, only one ClientId is permitted per chain for each partner in OCIM.

For Customers

Before Migration

- Access the Developer Portal using the **SSD URL**.
- If you have internal integrations:
  - Each environment (typically one per login) displays a single client ID used by all your internal integrations.
  - Authentication uses the resource owner group (SSD) method. This involves sending an integration user's username and password as well as the client ID and Client Secret as described in Authenticating to Oracle Hospitality Property APIs (SSD).
  - No action is required at this stage.

During Migration

Continue to use the SSD URL for Developer Portal access.

Customers with internal integrations:

For each chain being migrated:

1. Log in to the Developer Portal.
2. Go to the **Environments** tab.
3. Click **View Details** on your environment.
4. Use **Reissue Client ID** to convert your client to OCIM and receive new OCIM client credentials (ClientId and ClientSecret). Integrations that are using the resource owner group (SSD) authentication will continue to work as before.
5. Update all your internal integrations to use the new OCIM client credentials for authentication.

It is still possible to use the resource owner group (SSD) authentication method to obtain OAuth tokens during this period. However, all integrations must switch to client credentials (OCIM) authentication before the migration has completed.

Integration User Management:

- Customers can add or change integration users and passwords using OPERA Cloud Role Manager. See Managing Interface Users for more information.

New Partner Integrations:

- It is not possible for new partners to begin new integrations with chains that are migrating.

After OCIM Migration

Begin using the OCIM URL to access the Developer Portal. This is available from the link in OPERA Cloud and will be communicated by Oracle. This URL is in the following format:

- For **production OPERA** environments: https://<ohip-domain>/<enterpriseID>prd/ui
- For **non-production OPERA** environments: https://<ohip-domain>/<enterpriseID>uat/ui

Integration users are no longer required or supported. Authentication and access control is now exclusively managed using OCIM client credentials.

ClientIds now appear in OPERA Audit Logs and not in the integration usernames.

Customers with internal integrations:

- Any integration users previously created for internal integrations are now converted to separate OCIM clients. View these by logging in to the developer portal for a given chain and selecting **View Details** on the environment card. These are named with globally universal identifiers (GUIDs).
- Alternatively, create new OCIM clients by logging in to the developer portal for a given chain and selecting **View Details** on the environment card. You can choose part of the name of the OCIM clients you create.
- Update each internal integration to use its own (separate) ClientId instead of a shared ClientId.

Validation Required:

- Use the developer portal **Analytics** tab to check that integrations are not producing errors.

- Confirm all applications and integrations function as expected post-migration.
- Report any issues to Oracle Support – see Opening a Support Request.

Property-level authorization:

- If desired, restrict partner integrations to specific properties by Managing Partner Connections.
- If desired, restrict internal integrations to specific properties by Managing Client Applications.

For Partners

Before Migration

- Authentication uses the resource owner group (SSD) method.
- No action is required at this stage.

During Migration

For each chain that is migrating:

1. Log in to the Developer Portal. The partner Developer Portal URL does not change.
2. Select the environment for the chain being migrated. It will show a 'Migrating Soon' label.
3. Use **Reissue Client ID** to convert the client to an OCIM ClientId. This generates new OCIM client credentials.
4. Update your integration(s) to use OCIM client credentials authentication.

Authentication Method:

- It is still possible to use the resource owner group (SSD) authentication method to obtain OAuth tokens during this period.
- All integrations must be updated to use client credentials (OCIM) authentication prior to completion of the migration.

Integration User Management:

- It is not possible to access the SSD user interface during the migration.
- If a password change is required during migration, you must do the following:
  - Reissue your ClientSecret.
  - Change your integration to use OCIM client credentials authentication.

> **Note**
>
> Even if you have multiple integration users per chain, it is only possible to have one ClientId per chain and OPERA environment in the new OCIM authentication model.

New Partner Integrations:

Partners cannot initiate integrations with chains that are migrating until migration has completed.

After OCIM Migration

- You will have one OCIM client per chain and OPERA environment, and integration users are no longer required or supported.
- Authentication is exclusively managed through OCIM client credentials.
- Ensure all integrations are updated to use the OCIM client credentials authentication.

Validation Required:

1. Log in to the Developer Portal, select the **Environments** tab, and select **View Details** on environments recently migrated to check whether the customer has limited your access to specific properties. If your access is now restricted to specific properties, verify that restriction with the customer.
2. Select the developer portal's **Analytics** tab to check that integrations are not producing errors.
3. Verify all your applications and integrations are functioning correctly post-migration, and you can obtain OAuth tokens and call APIs.
4. Contact Oracle Support promptly if issues are detected. For more information, see Opening a Support Request.

To initiate an integration with a chain that has migrated to OCIM, follow this process: Adding an Environment.

After Migration: Discontinuation of Integration Users

After migration to OCIM authentication, integration users are no longer needed. All authentication and access management are handled by OCIM client credentials providing enhanced security and eliminating the need for individual integration user accounts.

Table 8-1 Troubleshooting Client Credentials Authentication

API Called	HTTP Response Code	Response Body	Troubleshooting Steps
OAuth	403	invalid_grant_type_or_scope	Ensure you include the "scope" attribute in the body with the value "urn:opc:hgbu:ws:__myscopes__".
OAuth	401	Enterprise id is required	Ensure you include the "enterpriseId" header.
OAuth	403	Enterprise does not have access to gateway	Ensure you have entered the correct enterpriseId and the correct gateway URL. These can be checked on the developer portal **Environments** tab.

Table 8-1 (Cont.) Troubleshooting Client Credentials Authentication

API Called	HTTP Response Code	Response Body	Troubleshooting Steps
OAuth	401	Failed to authenticate application	Ensure the applicationId is correct and you are using the correct authentication scheme for the environment (which can be seen on the Developer Portal's Environments tab). Also, ensure the credentials are correct.

See Common Error Messages for more information.

Terms

ClientId

A ClientId is a unique identifier issued by OPERA Cloud Identity Management system (OCIM) for a client application or integration accessing OHIP APIs. In the client credentials model, each integration or application uses its assigned ClientId (along with a secret) to authenticate and obtain access tokens for API calls.

Enterprise Id

In OCIM, each chain is part of an enterprise. Each enterprise has a globally unique identifier called the Enterprise ID. Enterprise IDs are never shared across multiple customers and are a key identifier for routing authentication and authorization requests. It is never the same as any chain code or property code within that enterprise. Refer to Enterprise IDs in the OCIM documentation for the format of Enterprise IDs.

Integration User

An integration user is a user account set up specifically to enable integrations between external systems and OHIP APIs. They are created directly in the Shared Security Domain (SSD). Integration users (along with passwords) are used in the resource owner group (SSD) authentication model. After the migration to OCIM, integration users are no longer needed or supported as authentication is handled through OCIM client credentials.

Authentication Method

An authentication method is the process or protocol used to verify the identity of a client or user for API access. In OHIP, authentication methods include the resource owner group (SSD) flow—where username, password, and ClientId are provided—and the new OCIM client credentials flow — where only ClientId and client secret are required to obtain an OAuth token.

OAuth token

An OAuth token is a secure, time-limited credential issued by the OCIM or SSD authentication systems. After a valid authentication request, the token is provided and must be included in the authorization header (**Bearer <token>**) of subsequent OHIP API calls to prove identity and access rights.

Customer Internal Integration

A customer internal integration refers to interfaces or applications built and managed by the customer for their own internal business needs. These integrations are distinct from partner or external integrations, and after full OCIM migration, each typically receives its own OCIM client credentials.

Streaming API

The Streaming API permits real-time, continuous delivery of Business Events (such as event or reservation updates) from OHIP to subscribed applications or integrations. See Streaming API (push) for more information.

9

Using the Oracle Hospitality APIs

Having created an application and obtained the gateway URL from the portal, calling APIs is a four-step process:

1. Obtain details from the hotel. In the case of the partner sandbox, the hotel code is SAND01.
2. Add an environment. See Environments Gateways and Credentials for details.
3. **Authenticate**: Obtain an oAuth token using the oAuth API in a call sent to the gateway URL.
4. **Call APIs**: Send your API calls to the gateway URL following the API documentation displayed in the portal.

Oracle Hospitality Property APIs with Resource Owner Group Authentication (SSD)

This section contains the following topics:

Obtaining Details from the Hotel

OPERA Cloud resources are available only via the Oracle Hospitality Integration Platform if the hotel company is using OPERA Cloud Foundation. You will need the following pieces of information from the hotel whose data you are accessing:

- **Production or Non Production**: Many hotels run non production OPERA Cloud environments as well as their production environment(s). Determine whether the OPERA Cloud environment you are calling is a production or non production instance.
- **Region**: The region in which the hotel's OPERA Cloud environment is running.
- **Tenant / Chain Code**: The hotel's tenant code used to target the right tenant especially in OPERA Cloud environments that host multiple tenants.
- **Hotel ID**: The OPERA internal ID of a hotel in the customer's tenant.

  For environments supporting the Resource Owner authentication scheme, the below details must be obtained:

- **SSD URL**: The URL on which to create an integration user.

Follow these steps to obtain this URL:

1. Ask the customer for their OPERA login page URL.
2. Go to this customer provided URL.
3. Click the **Register new account** button on the OPERA login page to arrive at the OPERA Shared Security Domain (SSD), which has a URL like the following:

   https://rp15-prod2-ssd-ohs.oracleindustry.com/identity/faces/register?_afrLoop=4294503438550013&_afrWindowMode=0&_afrWindowId=null&_adf.ctrl-state=segh9ko67_1

4. Change this URL to a format similar to the following example by replacing the section after the question mark with "apiuser=y". This is the URL for creating an integration user.

   https://rp15-ssd-ohs.oracleindustry.com/identity/faces/register?apiuser=y

Authenticating to Oracle Hospitality Property APIs

You can call Oracle Hospitality APIs using different authentication schemes depending on the scheme supported by your environment. The authentication scheme supported by your environment can be found on the environments card under the Environments tab. For more information, see Viewing Environment Details.

To call Oracle Hospitality APIs using the Resource Owner-based authentication scheme, you need the following pieces of information:

1. **Integration username and password**: A username and password for an integration account in Oracle Hospitality Shared Security Domain granted by a hotel administrator to permit access to their data. This is one of the pieces of information needed to obtain the oAuth token. You can request this through the Oracle Hospitality Shared Security Domain (SSD) partner self-service registration portal. Completing and submitting this form sends a partner registration request to the OPERA customer for approval.

   > **Note**
   >
   > Every partner must have a unique integration user. This integration user is unique to one OPERA Tenant/Chain. Therefore, if you are accessing multiple OPERA Tenants/Chains, you need to request multiple integration users.
   >
   > Please ensure you are signed out of the Oracle Hospitality Shared Security Domain (SSD) before requesting your integration user. If you are signed out, ‘Anonymous’ appears at the top right of the screen.

   - Go to the SSD URL you obtained from the customer. For more information, see Obtaining Details from the Hotel.
   - Specify the **Tenant** /Chain code as advised by the hotel, or else enter hotel code(s) advised by the hotel.
   - Avoid spaces in the **Vendor** name field and keep the name to a maximum of 10 characters.
   - Once the hotel approves your integration user, you will receive an email.
   - For more information on this step, refer to the *Partner Self-Registration Guide* attached to the following Customer Support Portal document:

     Oracle Hospitality Shared Security Domain (SSD) for OPERA

   > **Note**
   >
   > Please note and keep secure your generated interface ID and key. The interface ID is your integration user’s username, and the interface key is your integration user password.

2. **OAuth Client ID and Client Secret**: These grant you access to the identity servers (Oracle Hospitality Shared Security Domain). See Environments (Gateways and Credentials) for steps on how to view or add these.
3. **Application key**: A unique application key is created for each application upon registering an application in the Oracle Hospitality Developer Portal. This key must be passed in the “x-app-key” header of every request to the Oracle Hospitality APIs. To obtain your application key, refer to Viewing the Application Key.

> **Note**
>
> A new application and its corresponding application key are required when you move to Production.

Only follow the below steps if this authentication scheme appears on the **Environments** tab.

1. To obtain your oAuth token, use the above details in the ‘Authenticate with the Identity Server’ call in the oAuth API. You can find this description in the oAuth API on the APIs page of the Developer Portal.
2. Send this oAuth request to the gateway URL listed in the Developer Portal.

Renewing oAuth Tokens

oAuth tokens require periodic renewal. Consult the `exp` attribute in the JWT for the date and time the token expires. Request a new oAuth token 2 minutes before the token is due to expire.

Calling Oracle Hospitality Property APIs

All Oracle Hospitality APIs expect the following mandatory headers:

1. **Token**: A header “Authorization” that includes the oAuth token obtained through Authenticating to Oracle Hospitality APIs.
2. **x-hotelid**: Supply a hotel (or property) code from the chain to which you have access in a header "x-hotelid." This is the Hotel ID you obtained from the hotel. If you do not know your x-hotelid, contact Oracle Customer Support at https://iccp.custhelp.com.
3. **Application key**: An unique application key is created for each application upon registering an application in the Oracle Hospitality Developer Portal. This key must be passed in the “x-app-key” header of every request to the Oracle Hospitality APIs. To obtain your application key, refer to Viewing the Application Key

   .

Required Headers:

- x-app-key:<ApplicationKey>
- x-hotelid:<HotelId>
- Authorization: Bearer <oAuth Token>

Optional Headers:

- x-hubid — When you have hub-level access, you can supply the x-hubid to retrieve multiple properties.

- x-externalSystem — If you have an external system in an OPERA environment (for example, for use with streaming or polling), then specifying that external system in the header of inbound API calls will avoid echoing those changes back to the streaming and polling APIs. For the streaming APIs, the external system code is shown on the application's Events Subscribed tab.
- X-Originating-Application — A reference to the originating microservice. When using a proxy for calls from microservices, use this to determine which microservice made the request.
- X-Request-Id — This is a GUID that can help Oracle troubleshoot API issues. For more information, refer to X-Request-ID.

Example

```
curl --location }}{{'<GatewayURL>/lov/v1/listOfValues/Titles?
parameterName=LanguageCode&includeInactiveFlag=false&parameterValue=E' {{}}
--header }}{{'Content-Type: application/json' {{}}
--header }}{{'x-app-key: <ApplicationKey>' {{}}
--header }}{{'x-hotelid: <HotelId>' {{}}
--header }}{{'Authorization: Bearer <Token>' {{}}
--data }}{{''
```

The below table lists the environment variables you can add to the Postman Environment.

Table 9-1 Postman Environment Variables

Variable	Value
AppKey	This value is accessed from the Developer Portal.
ClientId	This value is accessed from the Developer Portal.
ClientSecret	This value is accessed from the Developer Portal.
HotelId	This value is supplied by the hotel.
Password	This value is accessed from the "Interface Key" in the vendor self-registration portal.
Username	This value is accessed from the "Interface Id" in the vendor self-registration portal.

Oracle Hospitality Property APIs with Client Credentials Authentication (OCIM)

This section contains the following topics:

Obtaining Details from the Hotel

OPERA Cloud resources are available only via the Oracle Hospitality Integration Platform if the hotel company is using OPERA Cloud Foundation. You will need the following pieces of information from the hotel whose data you are accessing:

- **Production or Non Production**: Many hotels run non production OPERA Cloud environments as well as their production environment(s). Determine whether the OPERA Cloud environment you are calling is a production or non production instance.
- **Region**: The region in which the hotel's OPERA Cloud environment is running.
- **Tenant / Chain Code**: The hotel's tenant code used to target the right tenant especially in OPERA Cloud environments that host multiple tenants.
- **Hotel ID**: The OPERA internal ID of a hotel in the customer's tenant.
- **Enterprise ID**: The unique identifier for the enterprise. This can be found in the environment details of the customer in the customer's OPERA Cloud Identity Management portal. For more information, see Viewing Environment Details.

Authenticating to Oracle Hospitality Property APIs

You can call Oracle Hospitality APIs using different authentication schemes depending on the scheme supported by your environment. The authentication scheme supported by your environment can be found on the environments card under the Environments tab. For more information, see Viewing Environment Details.

To call Oracle Hospitality APIs using the Client Credential based authentication scheme, you need the following pieces of information:

1. **OAuth Client ID and Client Secret**: These grant you access to the identity servers (OPERA Cloud Identity Management). See Environments (Gateways and Credentials) for steps on how to view or add these.
2. **Application Key**: A unique application key is created for each application upon registering an application in the Oracle Hospitality Developer Portal. This key must be passed in the "x-app-key" header of every request to the Oracle Hospitality APIs. To obtain your application key, refer to the Viewing the Application Key topic.

> **Note**
>
> A new application and its corresponding application key are required when you move to Production.

3. **Scope**: A static variable that represents the authorization scope and permissions granted to the client for accessing the APIs from OHIP.
4. **Enterprise ID**: A unique ID for the enterprise for which the client is created.

To obtain your oAuth token, use the above details in the 'Authenticate with the Identity Server' call in the oAuth API. You can find this description in the oAuth API on the APIs page of the Developer Portal.

Send this oAuth request to the gateway URL listed in the Developer Portal.

Renewing oAuth Tokens

oAuth tokens require periodic renewal. Consult the `exp` attribute in the JWT for the date and time the token expires. Request a new oAuth token 2 minutes before the token is due to expire.

Calling Oracle Hospitality Property APIs

All Oracle Hospitality APIs expect the following mandatory headers:

1. **Token**: A header “Authorization” that includes the oAuth token obtained through Authenticating to Oracle Hospitality APIs.
2. **x-hotelid**: Supply a hotel (or property) code from the chain to which you have access in a header "x-hotelid." This is the Hotel ID you obtained from the hotel. If you do not know your x-hotelid, contact Oracle Customer Support at https://iccp.custhelp.com.
3. **Application key**: An unique application key is created for each application upon registering an application in the Oracle Hospitality Developer Portal. This key must be passed in the “x-app-key” header of every request to the Oracle Hospitality APIs. To obtain your application key, refer to Viewing the Application Key

   .

Required Headers:

- x-app-key:<ApplicationKey>
- x-hotelid:<HotelId>
- Authorization: Bearer <oAuth Token>

Optional Headers:

- x-hubid — When you have hub-level access, you can supply the x-hubid to retrieve multiple properties.
- x-externalSystem — If you have an external system in an OPERA environment (for example, for use with streaming or polling), then specifying that external system in the header of inbound API calls will avoid echoing those changes back to the streaming and polling APIs. For the streaming APIs, the external system code is shown on the application's Events Subscribed tab.
- X-Request-Id — This is a GUID that can help Oracle troubleshoot API issues. For more information, refer to X-Request-ID.

Example

```
curl --location }}{{'<GatewayURL>/lov/v1/listOfValues/Titles?
parameterName=LanguageCode&includeInactiveFlag=false&parameterValue=E' {{}}
--header }}{{'Content-Type: application/json' {{}}
--header }}{{'x-app-key: <ApplicationKey>' {{}}
--header }}{{'x-hotelid: <HotelId>' {{}}
--header }}{{'Authorization: Bearer <Token>' {{}}
--data }}{{''
```

The below table lists the environment variables you can add to the Postman Environment.

Table 9-2 Postman Environment Variables

Variable	Value
AppKey	This value is accessed from the Developer Portal.
ClientId	This value is accessed from the Developer Portal.
ClientSecret	This value is accessed from the Developer Portal.
HotelId	This value is supplied by the hotel.

Table 9-2 (Cont.) Postman Environment Variables

Variable	Value
EnterpriseId	This value is provided by the customer so that you can add the environment. Subsequently, it can be accessed from the Developer Portal.
Scope	This value is always the following: • urn:opc:hgbu:ws:_myscopes_

Oracle Hospitality Asynchronous APIs

For long-running operations such as adding, updating, or retrieving large amounts of data, there is a series of Oracle Hospitality Property APIs called asynchronous ("async") APIs. These all work the same way with specific operation details available in the Developer Portal API documentation. Simply search for "Async" in the APIs tab.

Certain business use cases also require Asynchronous APIs, such as the Revenue Management System business use case, so refer to those specific business use cases for details.

Business Context

The adoption of Revenue Management has become more prevalent among properties aiming to optimize the value of each room. The asynchronous Property APIs offer a means to collect and update bulk data efficiently. There are two distinct approaches to retrieve data from OPERA Cloud through asynchronous Property APIs and business event-driven Property APIs. The asynchronous Property APIs are specifically designed for revenue management systems, allowing smooth updates of bulk data like inventory, restrictions, and room rates in OPERA Cloud. These APIs are fully compatible with OPERA Cloud versions 23.1.x and above.

Creating the External System

All asynchronous operations require you to create an external system. This is so Oracle Hospitality OPERA Cloud knows for whom to process the request. The external system code is in the path of every Asynchronous API.

If you already have an external system created by the OPERA environment owner, ask them to check whether step 4–d is complete. If complete, you can use this for the Asynchronous APIs.

Only the (Customer) OPERA environment owner can create an external system. They should follow this process:

1. Verify a chain-level user has the below tasks assigned. To assign these tasks, follow the steps in the Assigning Tasks to a Role topic in the OPERA Cloud User Guide.
   a. Navigate to **Interfaces Admin**, **Property Interfaces** and **External Systems**.
   b. Select **New/Edit External Systems**.
2. Log in at the Hub level (not the property level).
3. From the Administration menu, select **Interfaces**, select **Business Events**, and then select **External Systems**.
4. Click **New** and enter the following details:
   a. **Code**: Enter a code for the external system.

b. **Description**: Enter a name of the external system.

c. **Sequence**: Specify sequence in which the external system will display in the External Systems list.

d. For each property in the chain, enter or select the **Property** and click **Active** to activate it.

5. Click **Save**.

   Make sure you remember the external system code you created.

6. Communicate to the integrator the external system code created at step 4.

   If customers have any challenges with creating the external system, they should either contact Oracle Customer Support at the Customer Support Portal (in case of a technical error) or contact Oracle Hospitality Consulting Services if additional help is needed.

Prerequisites

Tools

- Postman for analyzing / testing of the APIs

Environment

- OPERA Cloud version 23.1.x and above

Configurations

All asynchronous operations require you to create an external system. This ensures that Oracle Hospitality OPERA Cloud knows the intended recipient of the request. The external system code is in the path of every Asynchronous API. For details on the how to configure external systems, refer to the Creating the External System topic.

Workflow

Using the Asynchronous APIs

The Asynchronous APIs involve a three-step data flow process, and it is imperative to execute all three steps without skipping any steps. Refer to Best Practices for additional guidelines.

1. The **POST** request is the first step from an external system to OPERA Cloud, which can do one of the following:

   - **POST Data to OPERA Cloud**: This starts a process to accept the data into OPERA Cloud.
   - **Fetch Data from OPERA Cloud**: This starts a process to retrieve data from OPERA Cloud.

   Once you have sent this post request to OPERA Cloud, you should receive an HTTP 202 Accepted response if the request is valid. The response header parameter ‘location’ provides a URL that contains a request ID. This ID is required in step 2.

> **Note**
>
> Refer to Types and Recommendations to learn more about the associated API limits. If the bulk data to be posted to or retrieved from OPERA Cloud does not align with the API specifications, a validation error is generated.

2. The **HEAD** request is the second step from an external system to OPERA Cloud to check the status of the process started with the POST request in the first step. Use the header parameter '**location**' from the POST response in this HEAD request. Once the process is completed, the HEAD response returns a header parameter 'status' with value 'COMPLETED.' Similar to step 1, the header parameter 'location' returns a URL containing a request ID that is required in step 3.
3. The **GET** request is the third step from an external system to OPERA Cloud to either collect the bulk data or confirm the post of data was successful. Use the ID in the location header URL returned by the HEAD response in step 2. The GET response provides the requested data or log specifics, particularly if you have added data, and indicates any potential failures.

Figure 9-1 Scenario 1: Customer/Partner obtains the intended result

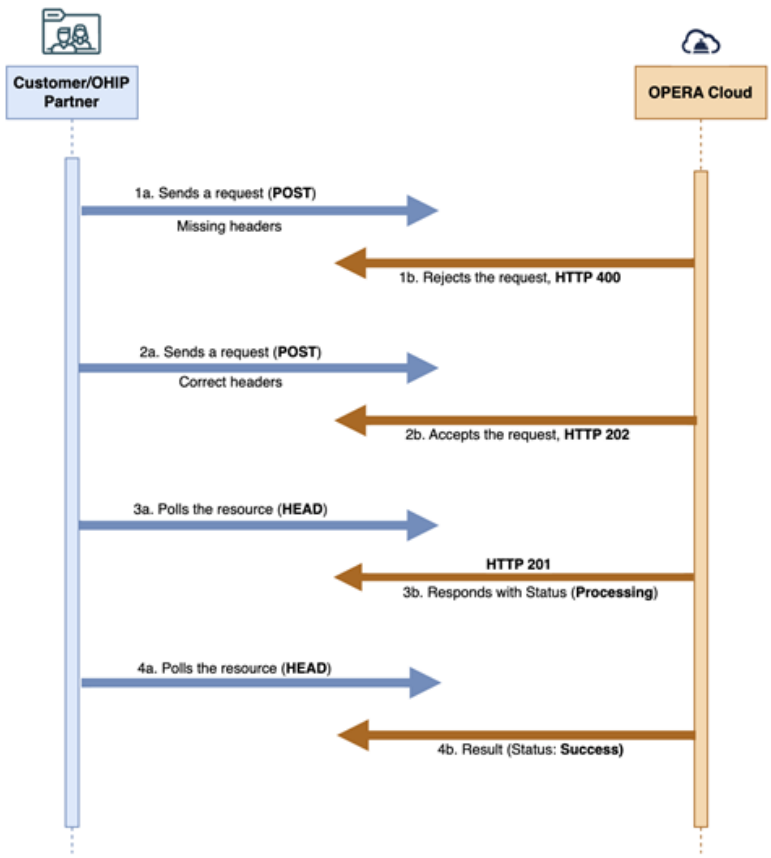
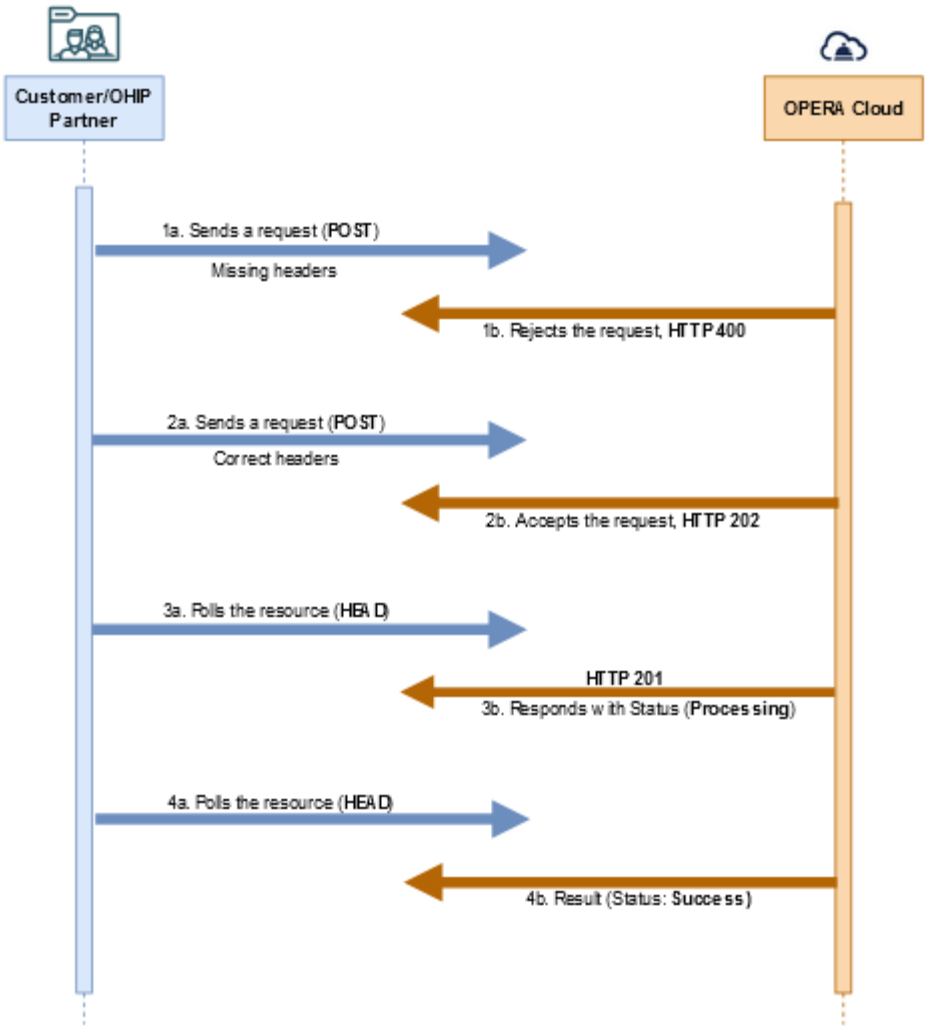


Figure 9-2 Scenario 2: Invalid request



Sample Workflow

For a sample workflow, this example uses the operation startRevenueInventoryStatistics.

1. **POST Request:** startRevenueInventoryStatisticsProcess

```
curl --location '{{HostName}}/inv/async/v1/externalSystems/
{{ExtSystemCode}}/hotels/{{HotelId}}/revenueInventoryStatistics' \
--header 'Content-Type: application/json' \
--header 'x-app-key: {{AppKey}}' \
--header 'x-hotelId: {{HotelId}}' \
--header 'Authorization: Bearer {{Token}}' \
--data '{
    "dateRangeStart": "YYYY-MM-DD",
    "dateRangeEnd": "YYYY-MM-DD",
    "roomTypes": [
        ""
```

```
    ]
}'
```

POST Response Headers:

HTTP Status: 202 Accepted

Key	Value
Date	Sat, 23 Dec 2023 03:59:40 GMT
Content-Length	0
Connection	keep-alive
X-Powered-By	Express
cache-control	no-cache, no-store
location	{{HostName}}/inv/async/v1/externalSystems/{{ExtSystemCode}}/hotels/{{HotelId}}/revenueInventoryStatistics/<**ID1**
path	startRevenueInventoryStatisticsProcess
vary	origin
Strict-Transport-Security	max-age=31536000; includeSubDomains
X-Content-Type-Options	nosniff
X-XSS-Protection	1; mode=block
X-Frame-Options	SAMEORIGIN

2. **HEAD request**: getRevenueInventoryStatisticsProcessStatus

The ID (**ID1** in Step 1) from the location URL of the POST Response Header parameter is fed to the HEAD request.

```
curl --location --head '{{HostName}}/inv/async/v1/externalSystems/
{{ExtSystemCode}}/hotels/{{HotelId}}/revenueInventoryStatistics/{{ID1}}' \
--header 'Content-Type: application/json' \
--header 'x-app-key: {{AppKey}}' \
--header 'x-hotelId: {{HotelId}}' \
--header 'Authorization: Bearer {{Token}}' \
--data ''
```

HEAD Response Headers:

HTTP Status: 201 Created

Key	Value
Date	Sat, 23 Dec 2023 03:59:40 GMT
Content-Length	0
Connection	keep-alive
X-Powered-By	Express
cache-control	no-cache, no-store
location	{{HostName}}/inv/async/v1/externalSystems/{{ExtSystemCode}}/hotels/{{HotelId}}/revenueInventoryStatistics/<**ID2**

Key	Value
path	getRevenueInventoryStatisticsProcessStatus
status	COMPLETED
vary	origin
Strict-Transport-Security	max-age=31536000; includeSubDomains
X-Content-Type-Options	nosniff
X-XSS-Protection	1; mode=block
X-Frame-Options	SAMEORIGIN
Referrer-Policy	no-referrer
Pragma	no-cache
Access-Control-Expose-Headers	Set-Cookie
Set-Cookie	operaEntId=<EntId>;Path=/;Secure;SameSite=None
Set-Cookie	tenant=<tenantId>Path=/;Secure;SameSite=None

3. GET request: getRevenueInventoryStatistics

Similar to step 1, the ID (**ID2** in step 2) from the location URL of the HEAD Response Header parameter is fed to the GET request.

```
curl --location '{{HostName}}/inv/async/v1/externalSystems/
{{ExtSystemCode}}/hotels/{{HotelId}}/revenueInventoryStatistics/{{ID2}}' \
--header 'Content-Type: application/json' \
--header 'x-app-key: {{AppKey}}' \
--header 'x-hotelId: {{HotelId}}' \
--header 'Authorization: Bearer {{Token}}' \
--data ''
```

GET Response Body:

HTTP Status: 200 OK

A sample successful response body for the operation getRevenueInventoryStatistics is shown below:

```
 "revInvStats": [
        {
            "property": "<HotelID>",
            "occupancyDate": "YYYY-MM-DD",
            "physicalRooms": "0",
            "noShowRooms": "0"
        },
        {
            "property": "<HotelID>",
            "occupancyDate": "YYYY-MM-DD",
            "physicalRooms": "0",
            "noShowRooms": "0"
        },
        {
            "property": "<HotelID>",
            "occupancyDate": "YYYY-MM-DD",
            "physicalRooms": "0"
```

```
            }
        ]
    }
```

Types and Usage Recommendations

The currently supported Async API operations are listed below.

> **Note**
>
> Ensure you are following the best practices when calling Asynchronous APIs.

The Asynchronous APIs can be classified into two types according to how they interact with OPERA Cloud:

1. Operations that fetch Data from OPERA Cloud. This is applicable to the following operations along with the limits specified below:

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
Module: Inventory (INVASYNC)				

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startRevenueInventoryStatisticsProcess (POST) getRevenueInventoryStatisticsProcessStatus (HEAD) getRevenueInventoryStatistics (GET)	• Enables you to retrieve Revenue Inventory Statistics • You can use this API to fetch revenue inventory statistics for past, present, and future reservations from OPERA Cloud. You will be able to filter using stay date (with a start and end date) to fetch inventory data.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • Current date range limit: 400 days (Refer to the **OPERA Cloud Version Dependencies** column for more details.) • Responses exceeding 2 MB are automatically truncated by the API.	• With the OPERA Cloud versions 22.1 and higher, the getRevenueInventoryStatistics API response includes values for roomSold, projected roomRevenue, roomArrival, roomDeparture, and projected totalRevenue for reservations with arrival date same as the property business date. • With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • With the OPERA Cloud versions 23.2	• This API is suitable for retrieving future inventory data and calculating net revenue. You can group the data either by Room Type, Market Code, or Guarantee Code (Reservation Type) or you can gather data per date for the entire hotel.

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			and higher, the maximum date range allowed per request is extended from 94 to 400 days. • With the OPERA Cloud versions 24.1 and higher, the getRevenueInventoryStatistics operation includes distributed revenue in its response. • With the OPERA Cloud versions 24.2.1 and higher, the cancelledRooms field in the getRevenueInventoryStatistics operation response excludes reservations with pseudo-room types, regardless of whether the reservations pertain to past, current, or future dates.	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startInventoryStatisticsProcess (POST) getInventoryStatisticsProcessStatus (HEAD) getInventoryStatisticsAsync (GET)	Enables you to retrieve hotel inventory statistics for a specified date range (up to 365 days) provided in the request.	Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	Current date range limit: 365 days.	This operation has been added with the OPERA Cloud versions 25.1 and higher.
Module: Blocks (BLKASYNC)				

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startBlockAllocationSummaryProcess (POST) getBlockAllocationSummaryProcessStatus (HEAD) getBlockAllocationSummary (GET)	• Enables you to retrieve Block Allocation Summary • You can use this API to fetch Block allocation information for a hotel and specified date range. The block allocated inventory, rates, and room type statistics, including revenue, are returned as part of the response.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • When requesting data with startDate/endDate, the maximum date range allowed per request is 94 days. • When requesting data with startLastModifiedDate/endLastModifiedDate, the maximum date range allowed per request is 3 days. • When requesting data with startLastModifiedDate/endLastModifiedDate, subsequent identical requests (with the same query	• With the OPERA Cloud versions 21.5 and higher, the getBlockAllocationSummary API response will include values for ownerCode, cutOffDays, cutOffDate, blockType, all status blocks, cancellation Date, and extraPerson values. • With the OPERA Cloud versions 22.1 and higher, the getBlockAllocationSummary API response has been enhanced to include block daily and total revenue statistics. • With the OPERA Cloud versions 22.4 and higher, a new search filter lastModifiedDate has been added to the startBlockAllocationSummaryProcess API operation to get the data modified after the previous fetch request.	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
		parameters) must be spaced 3 hours apart. Note that this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle. • Responses exceeding 2 MB are automatically truncated by the API.	• With the OPERA Cloud versions 22.4 and higher, when requesting data with startLastModifiedDate/ endLastModifiedDate, subsequent identical requests (with the same query parameters) must be spaced 3 hours apart. Note that this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle. • With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			cycle has been completed. • With OPERA Cloud versions 23.3 and higher, the getblockAllocationSummary API response will include origin code. • With OPERA Cloud versions 24.2 and higher, the getBlockAllocationSummary includes the "hotelId" field, indicating the corresponding resorts. • With OPERA Cloud versions 24.2 and higher, every identical request (employing the same query parameters) for the getBlockAllocationSummary operation when requesting data with startLastModifiedDate/endLastModifiedDate, necessitates a mandatory 30-minute interval between submissions.	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • With OPERA Cloud versions 24.2 and higher, the getBlockAllocationSummary returns the Profile Name for the Company profile and/or Travel Agent Profile on the Block in the response. • With OPERA Cloud versions 25.1 and higher, the getBlockAllocationSummary includes the currency element at the block level. • With OPERA Cloud versions 25.2 and higher, the getBlockAllocationSummary operation supports a new request body element, includeNetRates, which is false by default. Setting it to	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			true displays net room revenue for the business block directly below the standard rates in the response.	
Module: Reservations (RSVASYNC)				

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startReservationsDailySummaryProcess (POST) getReservationsProcessStatus (HEAD) getReservationsDailySummary (GET)	• Enables you to retrieve Reservation Daily Summary • This API allows external systems to retrieve a summary of reservations for a specified hotel and date range.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • When requesting data with startDate/endDate or startLastModifiedDate/endLastModifiedDate, the maximum date range allowed per request is 94 days (whether it is in the past or the future). • When requesting data with startLastModifiedDate/endLastModifiedDate, subsequent identical requests (with same query parameters) will have to be spaced 3 hours apart. Note that	• With the OPERA Cloud versions 22.4 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • With the OPERA Cloud versions 22.4 and higher, a new search filter lastModifiedDate has been added to the startReservationsDailySummaryProcess operation to get the data modified after the previous fetch request. • With the OPERA Cloud versions 22.4 and higher, when requesting data with startLastModifiedDate/	• This API is suitable to get a summary of all reservations at a hotel when onboarding a new property with your integration. • Data can be requested using either startDate/endDate or startLastModifiedDate/endLastModifiedDate. It is recommended to use the startLastModifiedDate and endLastModifiedDate parameters to retrieve incremental updates since the last call. • When requesting data with startLastModifiedDate/endLastModifiedDate, it is recommended to complete all sets of calls (POST, HEAD, and GET) before making new data requests. • Note that if there are no reservations that match the specified criteria for

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
		this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle. • Responses exceeding 2 MB are automatically truncated by the API.	endLastModifiedDate, subsequent identical requests (with same query parameters) will have to be spaced 3 hours apart. Note that this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle. • With the OPERA Cloud versions 22.4 and higher, the getReservationdailySummary API response will include a reservation's net room rate amount. • With the OPERA Cloud versions 24.1 and higher, the getReservationDailySummary async operation in the RSV Async API includes the reservation external reference in the response should a reservation have an external	the date range (fixed dates or last modified), it is possible to receive an empty response, indicating no reservations found.

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			reference on it in OPERA Cloud. • With OPERA Cloud versions 24.2 and higher, the getBlockAllocationSummary includes the "hotelId" field, indicating the corresponding resorts. • With OPERA Cloud versions 24.2 and higher, every identical request (employing the same query parameters) for the getReservationsDailySummary operation when requesting data with startLastModifiedDate/endLastModifiedDate, necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			• With OPERA Cloud versions 24.3 and higher, the getReservationsDailySummary operation has been enhanced with performance improvements to handle large volumes of reservation data more efficiently. This improvement will result in optimal retrieval of the Reservation Daily Summary for specified properties and date ranges. • With OPERA Cloud versions 24.3 and higher, the getReservationsDailySummary operation supports retrieving reservations with special characters in the profile section of the reservation payload. • Prior to OPERA Cloud version 25.1.3.0, the membership card number	

Operation ID	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			does not support special characters such as ", |, , /, [, or]. If your data includes these characters, refer to this Customer Support Portal knowledge article for resolution steps. Starting with OPERA Cloud versions 25.1.3.0 and higher, these special characters are supported in membership card numbers.	

2. Operations that POST Data to OPERA Cloud. This is applicable to the following operations along with the limits specified below:

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
Module: Rate Plan				

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startSetDailyRatePlanSchedulesProcess (POST) getDailyRatePlanSchedulesProcessStatus (HEAD) getDailyRatePlanSchedules (GET)	• Enables you to create Daily Rate Plan Schedules • You can use this API to add and/or update the rate price schedule to existing OPERA Daily Rate plans.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • While you can update multiple Daily Rate Plan schedules for a given property, you can only update rates for only one property at a time. Refer to About Rate Codes in the OPERA Cloud Services User Guide for more information on rate structures. • You can update rates up to 365 days into the future. • The primary and only limitation in this process is related to the payload	• With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • With the OPERA Cloud versions 24.3 and higher, the startSetDailyRatePlanSchedulesProcess operation supports two new elements - rateDateRangeStart and rateDateRangeEnd with date format (YYYY-MM-DD) - to define the date range for applying daily rate amounts. • With the OPERA Cloud versions 24.4 and higher, the specs of the	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
		size that the API user intends to upload. • Optimal payload size: 2 MB	operation startSetDailyRatePlanSchedulesProcess have been updated to reflect the latest limits and recommendations. • With the OPERA Cloud versions 24.4 and higher, the startSetDailyRatePlanSchedulesProcess operation supports a new request body element - rateByAgeBuckets - which is applicable when the **Child Rates by Defined Buckets** OPERA Control is enabled and child rate buckets are properly configured.	

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startSetBestAvailableRatePlansProcess (POST) getBestAvailableRatePlansProcessStatus (HEAD) getBestAvailableRatePlans (GET)	• Enables you to create Best Available Rate Plans by Length of Stay or by Day. • You can use this API to post new or update existing Best Available Rate by Length Of Stay or by DAY to OPERA Cloud.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. • Optimal payload size: 100 KB	• With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startHurdleRatesProcess (POST) getHurdleRatesProcessStatus (HEAD) getHurdleRates (GET)	• Enables you to create Hurdle Rates. • You can use this API to create Hurdle Rates in OPERA Cloud by date.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. • Optimal payload size: 100 KB	• With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.
startRatePlanRoomTypesModifyProcess (POST) headRatePlanRoomTypesModifyProcessStatus (HEAD) getRatePlanRoomTypesModifyProcessSummary (GET)	Enables you to add or remove the Room Types to or from rate codes.	Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	This operation has been introduced with OPERA Cloud versions 25.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.
Module: Availability (PARASYNC)				

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
postRestrictionsProcess (POST) getRestrictionsProcessStatus (HEAD) getRestrictions (GET)	• Enables you to create Restrictions. • A user can send various restrictions to OPERA Cloud by specifying restriction details in the request. You can set restrictions for a whole year and have multiple restrictions on a given day. However, there can be a hierarchy of restrictions. • Refer to Managing Restrictions in the OPERA Cloud Services User Guide for more information.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. • Optimal payload size: 2 MB	• With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • With the OPERA Cloud versions 24.4 and higher, an error is returned if a mandatory field is missing in the getRestrictions operation. • With OPERA Cloud versions 24.4 and higher, the postRestrictions operation will be updated to prevent the creation of house-level restrictions when invalid room types or rate codes are present	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			in the request.	
Module: Inventory (INVASYNC)				
postSellLimitsProcess (POST) getSellLimitsProcessStatus (HEAD) getSellLimits (GET)	• Enables you to create Sell Limits • You can use this API to create sell limits in OPERA Cloud by date. Refer to Sell Limits in the OPERA Cloud Services User Guide for more information.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. • Optimal payload size: 2 MB	With the OPERA Cloud versions 22.5 and higher, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.
Module: Blocks (BLKASYNC)				

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startShiftBlockProcess (POST) getShiftBlockProcessStatus (HEAD) getShiftBlockProcessInfo (GET)	Provides the ability to shift block dates for a business block with rooms inventory or events or both.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. Optimal payload size: 2 MB.	This operation has been introduced with OPERA Cloud versions 24.2 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startAllocationRangesProcess (POST) getAllocationRangesProcessStatus (HEAD) getAllocationRangesProcessInfo (GET)	Enables you to update inventory and rates across multiple dates and/or room type range combinations on the block room and rate grid.	Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. If an existing inventory or rate record is modified while the asynchronous process is running, a message will notify you that the record is currently in use. The request payload size that an API user can upload is restricted to 2 MB.	The getAllocationRangesProcessInfo operation has been added with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startRecalculateRoomForecastProcess (POST) getRecalculateRoomForecastProcessStatus (HEAD) getRecalculateRoomForecastProcessInfo (GET)	Enables recalculation of the room forecast on the room and rate grid whenever there is a change impacting forecasted revenue.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. Optimal payload size: 2 MB	The getRecalculateRoomForecastProcessInfo operation has been introduced with the OPERA Cloud versions 25.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.
Module: Reservation (RSVASYNC)				

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startRoomingListValidationProcess (POST) getRoomingListValidationProcessStatus (HEAD) getRoomingListValidationProcessResults (GET)	Enables you to validate Reservations Rooming List.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.	This operation has been introduced with the OPERA Cloud versions 23.5 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startReservationDetailsMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to update several reservation details for multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can update the reservation details (Source Code, Market Code, Expected Time of Arrival, Expected Time of Departure, Origin Code, Expected Return Time, Expected Return Time Comments, as well as Reservation UDF Character, Number and Date fields) for up to 100 reservations with a single request.	• This operation has been introduced with the OPERA Cloud versions 24.1 and higher. • With OPERA Cloud versions 24.4 and higher, the startReservationDetailsMassUpdateProcess operation supports the following new request body elements: – arrivalDate - Guest check-in date – numberNights - Total nights of stay – departureDate - Guest check-out date. – adults - Number of adults – children - Number of children – ageOfChild - Age(s) of child guests – rateCode - Rate plan code	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
			– rate - Nightly rate amount – roomType - Room type being booked – roomTypeToChange - New room type for modifications • With OPERA Cloud versions 24.5 and higher, the startReservationDetailsMassUpdateProcess operation includes a new request element, packageCodes, to enable package updates during mass reservation changes.	

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startTracesMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to add a trace to multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can add a trace by specific date, date range, arrival date, or stay dates of the selected reservations for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startPreferencesMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to add a preference to multiple reservations as well as their associated profiles.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can add a preference for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startRoutingInstructionsMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to add routing instructions to multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can add routing instructions (room and/or folio) for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startHousekeepingMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to add/update a housekeeping task schedule for multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can add a housekeeping task schedule or update Room Instructions, Priority, Turndown, and Cleaning time for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startNotesMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to add a reservation note to multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can add a reservation note for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startTransportationsMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to update Transportation for multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can update Arrival and Departure Transportation routing instructions for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startPaymentInstructionsMassUpdateProcess (POST) headMassUpdateProcessStatus (HEAD) getMassUpdateProcessSummary (GET)	Enables you to update payment instructions or add a non-credit card payment type to multiple reservations.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • You can update payment instructions (No-Post, Pre-Stay Charging, and Post Stay Charging) or add a non credit card payment type for up to 100 reservations with a single request.	This operation has been introduced with the OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startRoomingListCreationProcess (POST) getRoomingListCreationProcessStatus (HEAD) getRoomingListCreationProcessResults (GET)	Enables you to create multiple block reservations in OPERA Cloud for a specific block as well as match the associated names with existing profiles.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. Optimal payload size: 2 MB.	This operation has been introduced with OPERA Cloud versions 24.1 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.

Module: Profiles (CRMASYNC)

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
stayRecords (POST) getStayRecordsProcessStatus (HEAD) getStayRecordsProcess (GET)	Allows you to import Stay Records for a profile.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • The primary and only limitation in this process is related to the payload size that the API user intends to upload. Optimal payload size: 2 MB.	This operation has been introduced with OPERA Cloud versions 24.2 and higher.	Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines.
Module: Cashiering (CSHASYNC)				

Operation ID (RTPASYNC)	Functionality	Limit	OPERA Cloud Version Dependencies (if any)	Recommendations
startFinancialPostingsAsync (POST) getFinancialPostingsProcessStatusAsync (HEAD) getFinancialPostingsAsync (GET)	Enables you to retrieve financial postings with their detailed net VAT breakdown.	• Every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Please note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed. • This operation requires the mandatory parameters hotelId, reservationId, startDate, and endDate and supports optional parameters such as folioWindowNo, includePseudoRooms, and duration. • The maximum permissible range between the start and end dates is 15 days.	This operation has been introduced with OPERA Cloud versions 25.1 and higher.	• Operate on a first-come, first-served basis. Data submissions are processed in the order they are received, and the only constraint lies in ensuring that the payload adheres to the specified size guidelines. • The operation is recommended for detailed breakdowns of gross and net amounts for the following scenarios: • – Postings using transaction codes inclusive or exclusive of taxes. – Package Wrapper with no-allowance packages. – Package Wrapper with allowance packages and full consumption.

FAQs

How frequently should I send HEAD?

We suggest sending the HEAD request not more than once a minute, though the frequency will depend upon your use case. Refer to the Best Practices section for additional details.

Can I use this external system for polling Business Events?

Yes, if you already have an external system configured for the Asynchronous APIs, the OPERA environment owner would just need to follow steps 3 and 4 in Configuring the Polling API.

I posted a GET request and it returns an error "Not Found (HTTP Status 404)". Does it mean I can only fetch data once?

Yes, once you have sent the final GET call to obtain the results of the async processing, the data are no longer available on the same request ID. To retrieve the data again, you must restart the request sequence at step one and go through POST, HEAD, and GET again. Refer to the Sample Workflow section for additional details.

The HEAD request gives me an "HTTP Status 200 OK". What should I do?

If the HEAD request gives an **HTTP Status 200 OK** response, note that the HEAD response header parameter 'retry-after' will indicate the waiting time (in seconds) before resending the HEAD request. However, this is only available in OPERA Cloud versions 23.2 and higher. In the absence of a 'retry-after,' if the HEAD request gives an **HTTP Status 200 OK** response, allow another 1-2 minutes before resending the HEAD request. In other words, if the HEAD response has not returned a 201 Created response with a header location, it is likely the job has not finished yet. After receiving an HTTP status 201 Created, you can proceed with the GET request.

When will my API responses (POST, HEAD, GET) be available?

There is no set length of time. Different requests require varying amounts of processing, and operational use of OPERA Cloud will affect the speed of responding to the request. Refer to the Types and Usage Recommendations for additional details on the API limits and recommendations.

How can I fetch Past Revenue?

By utilizing the asynchronous reservation, inventory, and block APIs in the OPERA Cloud Property, you can access historical revenue data.

When will my API response be available?

There is no set length of time. Different requests require varying amounts of processing, and operational use of OPERA Cloud will affect the speed of responding to the request.

My GET request returns an error "Too Many Requests (HTTP Status 429)." What does this mean?

Refer to the Types and Usage Recommendations for details on the API limits and then try again after waiting the recommended length of time.

Why do the APIs have an external system in the path?

OPERA Cloud identifies who is requesting the data using this external system variable and restricts the possibility of duplicate requests in a short time period. For details on configuring the external system, refer to the Polling API (pull).

I already have an external system configured. Can I use this system for polling Business Events?

Yes, if you already have an external system configured for the Asynchronous APIs, the OPERA environment owner would just need to follow steps 3 and 4 in Configuring the Polling API.

What is the difference between synchronous getReservations vs asynchronous ReservationDailySummary? When do I use each of these APIs?

Synchronize API getReservations is designed to support the hotel's front desk, housekeeping, and guest reservation journey use cases with a vast array of filters. It does not return revenue forecast data and fetch a maximum of 1000 records from OPERA Cloud, even while using pagination. This synchronous operation returns a lot more data for each individual reservation.

The asynchronous operation returns a summary of each individual reservation. However, it provides the ability to fetch bulk amounts of reservations in just 1 request.

Can I send delta changes with rate pricing update and avoid having to send full overlay in the request body?

Certainly. The Asynchronous SetDailyRatePlanSchedules enables you to modify rates exclusively for specific dates and room types. This behavior is consistent and applicable to the restriction and hurdle asynchronous APIs as well.

What is the difference between Standard Rate and Daily Rate?

Daily rates allow you to change the price schedule for each room type on a daily basis. This allows you to work with rates on a more detailed level by raising or lowering rate schedules for future dates as needed. You can manage rates according to your daily needs, regardless of whether or not a yield management system is integrated with OPERA Cloud. You can designate up to 20 rate codes as daily rates. Daily rates can coexist with other traditional date-range based rate codes. Refer to Configuring Rate Code Type in the OPERA Cloud Services User Guide for more information on rate code types.

What are the minimum requirements to update a rate? Do I need to update rate 2 to rate 5 with SetDailyRatePlanSchedulesProcess?

There is no requirement to change rate 2 to rate 5. You can view a Sample for updating the dailyRatePlanSchedule operation.

Can OPERA Cloud notify a revenue system when the business date has rolled?

Even though you can fetch the business Date of the hotel using getBusinessDate, it would require periodic calls to know if the hotel has rolled the Business Date. Our recommendation is to utilize Business Event functionality using the ‘NIGHT AUDIT’ module and the business event called ‘ROLL BUSINESS DATE.’ This triggers an event as soon as OPERA Cloud has rolled over their business date.

Do the APIs support Foreign Currencies in Rate Plan Codes?

Yes, OPERA Cloud property APIs fetch and update any currency code that is configured and available in the OPERA property.

How long is the data available after getting a response?

The data is accessible for a period of 6 hours. After this timeframe, the data is automatically purged, and you will need to submit a new request to access it again.

Oracle Payment Interface APIs

Overview

Reservations created via third-party channels often include a credit card number to secure the booking. The OPI Token Exchange API openPaymentBulkTokenExchange allows partners to exchange credit card numbers for tokens, using the Payment Service Provider that OPERA Cloud is integrated to for payment processing. The tokens are then stored in OPERA Cloud against the reservation and can be used for subsequent payments as needed.

Prerequisites

To call the OPI Token Exchange API, the hotel must purchase and enable the Oracle Payment Interface Cloud Service.

Calling the Oracle Payment Interface APIs

Oracle Payment Interface APIs are called in the same way as Oracle Hospitality Property APIs.

If the hotel does not have the Oracle Payment Interface Cloud Service enabled, the following error is returned:

HTTP status: 404

Response body: OPICS-NOT_FOUND

Refer to the explanation of this error for resolution steps.

HTTPS status: 504 from the OPI Token Exchange API means the Payment Service Provider did not respond in a timely manner.

For more details on OPI Cloud, refer to the Oracle Payment Interface Cloud 23.1 - Get Started documentation.

Oracle Hospitality Distribution APIs

The OPERA Cloud Distribution APIs enable authorized channel partners to access property availability and pricing to create and update reservations for any active property that has enabled the specific channel in Oracle Hospitality Distribution, whether that property is using OPERA Cloud Foundation or OPERA Cloud Central.

OPERA Cloud Distribution can also serve property management systems like OPERA 5 (legacy) or other third-party property management systems as long as they are subscribed and provisioned in OPERA Cloud Central and integration exists between their system and OPERA Cloud Central.

> **Note**
>
> A single channel cannot use Shop/Book and receive ARI Push at the same time; it must operate in one mode or the other.

Channels using Shop and Book in OPERA Cloud

Main channel types: Booking engines and Global Distribution System (GDS) flows that retrieve availability and create booking directly in OPERA Cloud.

Shop APIs: Optimize price-and-availability discovery.

- **Multi-property search**: Query availability across multiple properties to quickly identify hotel matching dates, location, and basic criteria; returns high-level open/closed status and indicative rate ranges to power fast and light-weight search results.
- **Single-property availability** (Offers): Returns the property's available offers (room type + rate plan) with detailed availability, room and rate content, prices, policies, taxes, and package breakdowns to support selection on the booking path.
- **Calendar availability**: Provides day-by-day availability and price ranges for a single property over a defined period (for example, 30 days calendar for arrival for 3 nights length of stays). This is ideal for rate calendars that help guests choose which date to explore further.
- **Additional notes**: Requests can include common qualifiers (for example, occupants, view types, room types, child ages, LOS, promotion codes, negotiated access codes, block codes, rate plan type) and return responses aligned to channel use (currency, language, market) that are designed for performance and global consistency with OPERA Cloud business rules.

Book API: Simple booking interface for channels to create, modify, and cancel reservations directly in OPERA Cloud using industry-standard codes and distribution logic.

- OPERA Cloud remains the system of record. Rates, policies, inventory, and restrictions are enforced as defined by the hotel.
- Best for controlled access to predefined rates and inventory where channels must not override OPERA Cloud driven rules.
- Supports reservation essentials such as guest details, stay elements, payment/guarantee references; responses include confirmations suitable for guest display.

Channels using ARI Push from OPERA Cloud and Reservation Notification to OPERA Cloud

Main channel types: Online Travel Agencies (OTAs) and channel managers caching rates and availability in their systems with reservations created and committed to guests in their platform or upstream systems.

Availability, Rates, and Inventory (ARI) Publication (webhook-style outbound messages from OPERA Cloud): Used when a channel receives near real-time updates from OPERA Cloud.

- **Lifecycle events**: Onboarding notifications when a property enables a channel; mapping notifications when hotels, room types, rate plans, or room-rate mappings are created or updated.
- **Operational updates**: Publishes calculated rate amounts, room-type inventory by day, and restrictions as changes occur, enabling the channel to stay synchronized without polling.
- **Delivery considerations**: Designed for reliability with retry semantics and circuit breakers. Channels should validate signatures/headers, apply updates atomically, and honor effective dates/time zones based on property timezone.
- In case of errors during the processing of the message, the partner will return appropriate HTTP response codes as defined in the Oracle specifications along with synchronous meaningful error title.

- Outbound calls to partners can originate from OHIP or other OPERA Cloud components.

Reservation Notification (inbound to OPERA Cloud from push channels): For OTAs or channel managers sending guest-confirmed bookings.

- Rates and totals provided by the channel are accepted as-is; OPERA Cloud inventory and restriction checks are bypassed because the booking is already committed upstream.
- Uses industry-standard codes and supports defaults when explicit mappings are not provided, enabling seamless intake of externally owned reservations.
- Typical operations cover new, modify, and cancel flows; responses include confirmations suitable for guest display.

Requesting a Global Channel Code for Distribution APIs

As a global Distribution channel partner, you must obtain a single, global Channel Code to access Oracle Hospitality Distribution APIs. This code is issued once per partner and is used globally by any property connecting to your channel.

Request a Channel Code

To request a channel code, email hgbu_distribution_partner_rqs_grp@oracle.com and include the following details:

- Oracle Cloud Account Name
- Oracle Cloud Account ID (visible in your OHIP Partner Portal URL)
- Channel display name (as it should appear in the OPERA Cloud list of channels)
- Preferred Channel Code (used in APIs and visible to properties in channel mapping and production reporting)
- Primary contact name, email, and phone
- Level 1 support contact email (property-facing)
- Escalation/global support contact email (connection-level)
- Email for production API credential resets
- Email for non-production API credential resets

What happens next

- Oracle will acknowledge your request and provide the next steps within 5 business days.
- When channel provisioning is complete, you will receive:
  - Channel Code (global; used across all hotels)
  - Integration API credentials for non-production
- You can then use the APIs in your OHIP Partner sandbox.

When you are ready to pilot in production

- Oracle Partner Network (OPN) membership and an Oracle Cloud Marketplace listing for your integration are required to access customer production environments. For more information, see https://cloudmarketplace.oracle.com/marketplace/en_US/partnerLandingPage.
- Contact hgbu_distribution_partner_rqs_grp@oracle.com to request production API access and include your Marketplace listing URL in the email.

> **Note**
>
> - Your Channel Code is created once and reused for all properties that enable your channel.
> - Ensure the contacts provided are authorized to receive credential-related communications.

Authenticating to Oracle Hospitality Distribution APIs

Prerequisites

- A Channel Code in the Distribution platform provided by Oracle.
- A valid integration user provided by Oracle upon creation of the channel code.

Getting a Token for Distribution APIs

Use the Distribution Authorization API to obtain the access token (in the JWT format) that matches the provided credentials issued by the Oracle Hospitality Distribution administrator for a specific Distribution channel partner (see Prerequisites section).

Use this token in every call to the Distribution APIs. Once a token is generated, it can be used in subsequent calls until it expires. The expiry date is noted in the API response.

> **Note**
>
> The Distribution APIs are separate from the Oracle Hospitality Property APIs, and tokens generated by the Distribution Authorization API can only be used for Distribution APIs.

Calling Oracle Hospitality Distribution APIs

Environments and Base URLs

Use the following base URLs for Oracle Hospitality Distribution APIs. With Distribution API, one single endpoint for production and one single endpoint for non-production can be used to reach any property in the world (that has enabled your channel) using OPERA Cloud Distribution. Based on your location, you may decide to use one region to connect to all properties. If you are trying to minimize some potential latency, you may also decide to assign properties to one of the two regions based on property location.

Production Region URLs

- Production Base URL North America: https://ohd-up.hospitality-api.us-ashburn-1.ocs.oraclecloud.com
- Production Base URL Europe: https://ohd-up.hospitality-api.eu-frankfurt-1.ocs.oraclecloud.com

Non-Production Region URLs

- Non-Production Base URL North America: https://ohd-uat-up.hospitality-api.us-ashburn-1.ocs.oc-test.com

- Non-Production Base URL Europe: https://ohd-uat-up.hospitality-api.eu-frankfurt-1.ocs.oc-test.com

> **Note**
>
> Confirm your internal network allow-lists, certificates, and TLS requirements for each environment before testing.

Required Headers

Include the following headers with every request:

- Authorization: Bearer {OAuthAccessToken}
  - Obtain the OAuth access token from the Oracle Distribution Authentication API.
- x-channelCode: {ChannelCode}
  - Channel code provided by Oracle.
- x-app-key: {ApplicationKey}
  - A unique application key generated when you register your application in the Oracle Hospitality Developer Portal. See Viewing the Application Key.

Example Request

POST {BaseURL}/content/v1/hotels

Headers:

- Authorization: Bearer {OAuthAccessToken}
- x-channelCode: {ChannelCode}
- x-app-key: {ApplicationKey}
- Content-Type: application/json

Additional References

- For a complete list of Oracle Hospitality Distribution APIs, see Oracle Distribution APIs collection. https://github.com/oracle/hospitality-api-docs/tree/main/postman-collections/distribution
- For authentication details, see Oracle Distribution Authentication API.
- Ensure your use of external systems and tools aligns with Oracle security, privacy, and compliance guidelines.

Oracle Hospitality Nor1 Integrated Upsell APIs

Authenticating to Oracle Hospitality Nor1 Upgrades APIs

The Nor1 Upgrades APIs are secured the same way as the Oracle Hospitality Property APIs. For further details, refer to the following topics:

Oracle Hospitality Data APIs

Use these APIs for bulk data access where the extraction of large amounts of data is required. These APIs are called Data APIs and allow bulk data to be queried from Reporting & Analytics to avoid any performance impact on the transactional OPERA Cloud platform.

These APIs provide access to data from existing R&A Subject Areas. Each API provides access to one subject area. For more details on R&A Subject Areas, see Analysis Reports in the R&A user guide.

Prerequisites

To use these APIs, you need the following product versions:

- OPERA Reporting & Analytics (R&A) v24.4 (OAS version only)
- Oracle Hospitality Integration Platform (OHIP) v25.3
- OPERA Cloud Identity Manager as the Identity Platform (these APIs are not available for Shared Security Domain – SSD – environments)

Additionally, Hoteliers are required to purchase one of the Reporting and Analytics Data Access add-on SKUs. Please contact your Oracle Representative for further details.

For partners, the existing Oracle Hospitality Integration Cloud Service subscription can be used, which is billed on a pay per call model unless the partner's usage is included in the SKU the hotelier purchased.

We recommend registering a new application solely for Data APIs.

Calling the Oracle Hospitality Data APIs

The details of which data points can be fetched for each Subject Area can be found in the GraphQL schemas available in Github. All these APIs are available under a single endpoint – the OHIP Gateway endpoint (see details below) followed by "*/rna/v1/graphql/.*"

Table 9-3 List of Available Subject Areas

ID	Subject Area	Description	Primary View
1	Accounts Receivable	Detailed Accounts Receivable data, including Adjustments, Payments, Invoices, and Postings for AR Accounts with linked reservation data.	Account Details
2	AR-Aging	Detailed information on accounts receivable transactions including aging bucket of invoices, open transaction amounts, folio information, and the account details.	AR Aging Report Details
3	AR-Ledger	Ledger details showing activity in accounts receivables including reservation and transaction details.	AR Ledger Details
4	Activities	Provides information of Sales activities related to Accounts, Contacts, and Blocks for the selected Property.	Work Orders Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
5	Booking-Reservation-Extended	Detailed information on reservations booked in the past and future, including market code, rate code, reservation status, guest information, and associated room and revenue details.	Reservation Unified Details
6	Bookings Block	Block header and grid details, including actual and potential room and revenue statistics, catering events, and the associated profile and reservations data.	Block Details
7	Bookings-Block Production Changes	Detailed information on blocks and any changes to the number of rooms or revenue by stay date, property, and Block Owner.	Block Changes Net Details
8	Bookings-Block Status Changes	Detailed information on the status changes throughout the production period of a block, including the new and old status codes, rooms, and associated revenues by property and Block Owner.	Book Status Change Details
9	Bookings-Reservation	Detailed information on reservations booked in the past and future, including market code, rate code, reservation status, guest information, and associated room and revenue details.	Reservation Details
10	Catering-Event Forecast	Event revenue forecast details for defined periods broken down by Event Type, Revenue Group, and Revenue Type.	Event Type Forecast Details
11	Catering-Event Postings	Event posting details including revenues by property, Block, Event, and Revenue groups.	Event Posting Details
12	Catering-Events Status Changes	Detailed information on the status changes throughout the production period of an event, including the new and old status codes, change date, revenue, and attendees.	Event Status Change Details
13	Catering-Event Types	Event type definitions	Event Type Details
14	Catering-Events And Resources	Event and Block details including group profile information, menu, packages, and revenues broken down by event type.	Event Details
15	Changes Log	Provides detailed information on actions and the users who completed the action, including date, time, activity type, and description. Also providing the capability to combine with reservation, block, and profile data.	Action Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
16	Configuration - Chain	The Configuration Chain contains configuration/setting attributes for Chain from components such as Enterprise Administration, Financial Administration, Booking Administration, and Client Relations Administration in OPERA.	Chain Details
17	Configuration - Resort	The Configuration Chain contains configuration/setting attributes for Resort from components such as Enterprise Administration, Financial Administration, Booking Administration, and Client Relations Administration in OPERA.	Property Details
18	Efolio	This subject area contains data for billing folio settlements to be used for exporting to an external system for efolios.	Folio Tax Details
19	Export Mapping	Provides detailed information of all configured external codes/values (that is, general ledger codes) mapped to codes used in OPERA (that is, transaction codes, market codes). It contains a comprehensive set of data including, but not limited to, Mapping Type Code/Descriptions, Mapped To Code/Descriptions with other Mapping details such as Export Values by Property / Chain.	Export Mapping Details
20	Financial-Commissions	Detailed information on the commissions module, including Reservation and Travel Agent profile information with commission codes, amounts, payment activity, and processing status. Commission information can be reported across all properties by Travel Agent and Source profiles, bank account, guest information, and dates.	Commission Agent Details
21	Financial-Deposit Ledger	Deposit ledger details including individual transactions, folio information, calendar and financial period and the reservation details.	Deposit Ledger Details
22	Financial-Guest Ledger	Guest ledger details including individual reservations and posted transaction details with debit and credit amounts.	Financial Guest Ledger Details
23	Financial-Transaction Codes	Transaction code header details including flags, group, and sub-group details.	Transaction Code Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
24..	Financial-Transaction Details	Detailed information on all posted transactions including net and gross amounts, currency, calendar and financial period, market code, and rate code.	Financial Transaction Details
25	Financial-Transaction-Details-Extended	Detailed information on all posted transactions including net and gross amounts, currency, calendar and financial period, market code, and rate code.	Financial Unified Details
26	Financial-Transactions Summary	Summarized information on posted transactions including transaction group, sub group and codes, broken down by property and business date.	Trial Balance Details
27	Integration Configurations	Exchange Configurations data including External Systems, External Databases, Business Events, Interface Setup, Interface Controls, and Interface Mappings.	External System Properties
28	Inventory-Function Spaces	All Function Space Details and Configured Options Including Room Type, Occupancy, Function Type, Room Setup, Notes, and Physical Dimensions.	Function Space Details
29	Inventory-Housekeeping Management - Room	Providing Information on Rooms, Room Attributes and Statuses for the current date.	House Keeping Daily Task Room Details
30	Inventory-Housekeeping Management-Task Sheet	Details on Tasks, Task Sheets Attributes, and Statuses for the current date.	House Keeping Task Sheets Details
31	Inventory-Rooms	Comprehensive Information on Guest Room Details and Configuration.	Room Details
32	Inventory-Rooms Management	Provides detailed information on room maintenance and out of order/ service assignments broken down by property, time and room dimensions. Also provides reservations and profile details for service requests.	Room Details
33	Profiles-Accounts	The Profiles-Accounts subject area contains Account Room Night and Revenue statistics broken down between Group and Individual stays and can be summarized by Property, Stay Date, Business Segment, Owner, and Profile Type.	Profile Accounts Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
34	Profiles-Addresses	All associated addresses including primary and secondary addresses, and address types which can be associated with the proper profile and profile type.	Profile Address Details
35	Profiles-Communications	All associated communication details including communication types and roles, which can be associated with the proper profile and profile type.	Profile Communication Details
36	Profiles-Contacts	The Contacts subject area contains Room Night and Revenue statistics broken down between booked and stays reservations and can be summarized by Property, Stay Date, Business Segment, and Owner.	Contact Details
37	Profiles-Individuals	Guest profile data including contact information, VIP codes, memberships, and stay statistics with room and revenue details.	Profile All Information Details
38	Profiles-Loyalty	Detailed information on the Loyalty Program providing details on the Membership, Profiles, Stay Information, and the ability to track Awards and Claims.	Loyalty Profile Membership Details
39	Profiles-Loyalty - Claims	Detailed information on the Loyalty Program providing details on the Membership, Profiles, Stay Information, and the ability to track Awards and Claims.	Membership Claim Details
40	Profiles-Loyalty - Transactions	Detailed information on the Loyalty Program providing details on the Membership, Profiles, Stay Information, and the Transaction details.	Membership Transactions Details
41	Profiles-Membership Transactions	Detailed information on the Loyalty Program providing details on the Membership, Profiles, Stay Information, and the Membership Transaction details.	Membership Transactions Details
42	Profiles-Notes	Profile note types and note details, including internal and confidential flags, and the profile details they are associated with.	Profile Note Details
43	Profiles-Relationship Type	Relationship type definition	Relationship Details
44	Profiles-Relationships	The Profile - Relationships subject area contains relationship details including the relationship type, description and role and the profiles that are linked through the relationship.	Profile Relationship Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
45	Profiles-Stay Records	Provides information on Stay Records statistics of guest stay and its respective Membership Transactions details for a profile.	Stay Records
46	Promotion Coupon Codes	Promotion Coupon Codes details	Promotion Coupon Codes Detail
47	Property	Property definition with marketing, financial, and housekeeping details.	Property Details
48	Rates-Buckets	Rate bucket definition.	Rate Bucket Details
49	Rates-Categories	Rate category definition including begin and end date and rate class association.	Rate Categories Details
50	Rates-Classes	Rate class definition with begin and end date.	Rate Classes Details
51	Rates-Code Details	Rate Header information including room types, package elements, market code, source code, and associated flags.	Rate Code Details
52	Rates Codes	Rate detail information including all rate header details, room type, rate tiers and rate amounts per occupant.	Rate Code Details
53	Rates-Deposit and Cancellation Rules	Deposit and cancellation rules schedules and details by date, rate code, and days prior to arrival or after booking.	Rate Deposit Cancellation Details
54	Rates-Hurdles	Rate yielding and hurdle information including date, amount, length of stay, and room type.	Rate Hurdles Details
55	Rates-Rate Seasons	Rate season code definition	Rate Season Details
56	Rates-Restrictions	Rate restriction definition including restriction type, date applied, room and rate code with day of the week and length of the stay details.	Rate Restrictions Details
57	Rates-Tiers	Rate tier definition by length of stays.	Rate Tier Details
58	Resort Budget Forecast	This Subject Area Contains the Budget Forecast Details of the Property(s).	Property Budget Forecast Details
59	Revenue-Fixed Charges	Details on fixed charges including amount, frequency, and transaction code and the linked reservations.	Fixed Charges Details
60	Revenue-Groups and Types	Revenue group and type details.	Revenue Group Types Details
61	Revenue-Packages	Package header details including package group setup and associated flags for selling and consumption options.	Revenue Packages Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
62	Sales Manager Goals	The Sales Manager Goals subject Area enables end users to retrieve information / create reports to compare the goals set for the Sales Managers against completed activities and against statistical revenue data associated to profiles.	Sales Manager Details
63	Simple Reports Activities	The Simple Reports Subject Area simplifies creating and building adhoc reports for Activities.	Sr Activities Details
64	Simple Reports Booking Blocks	The Simple Reports Subject Area simplifies creating and building adhoc reports for Booking Blocks.	Sales Event Business Block Information Details
65	Simple Reports Bookings Reservation	The Simple Reports Subject Area simplifies creating and building adhoc reports for Bookings Reservation.	Reservation General Details
66	Simple Reports Events	The Simple Reports Subject Area simplifies creating and building adhoc reports for Events.	Sales Event Information Details
67	Simple Reports Financial Transactions	The Simple Reports Subject Area simplifies creating and building adhoc reports for Financial Transactions.	Sr Financial Transactions Details
68	Simple Reports Profile Individuals	The Simple Reports Subject Area simplifies creating and building adhoc reports for Profile Individuals.	Profile Details
69	Statistics-Forecast Summary	Future on the books information including rooms, revenue, and persons with breakdown by room types, market code, source code, and periods of time.	Forecast Summary Details
70	Statistics-History and Forecast	Detailed information on past and future reservations including occupancy and revenue figures with all profile data, broken down by Market code, Rate code, Room type, and periods of time.	History Forecast Details
71	Statistics-Managers Report	Past statistics including rooms and revenue figures, arrivals, departures, and occupancy broken out by multiple time periods.	Managers Report Details
72	Statistics-Reservation Pace	The Reservation Pace subject area contains daily rooms and revenue information on reservations on the books as of specific dates in the past (snapshot dates) summarized by Property, Market, Room Type, Channel, and Rate Code.	Reservation Pace Fact Details

Table 9-3 (Cont.) List of Available Subject Areas

ID	Subject Area	Description	Primary View
73	Statistics-Reservations Daily	Detailed information on past reservations including occupancy and revenue figures with all profile data, broken down by Market code, Rate code, room type, and periods of time.	Reservation Daily Statistics Details
74	Statistics-Reservations Daily Summary	Summarized information on past reservations including number of persons, rooms, and revenue figures, broken down by room type, market code, rate code, and periods of time.	Reservation Daily Summary Details
75	Statistics-Reservations Summary	Summarized booking data for both on the books and past stays including rooms, revenue, and occupancy details broken out by Market code, Rate code, and periods of time.	Reservation Summary Details

OAuth Token API

All Oracle Hospitality Data APIs expect the following mandatory headers:

1. **Token**: A header “Authorization” that includes the oAuth token obtained through Authenticating to Oracle Hospitality APIs.
2. **Application key**: A unique application key is created for each application upon registering an application in the Oracle Hospitality Developer Portal. This key must be passed in the “x-app-key” header of every request to the Oracle Hospitality APIs. To obtain your application key, refer to Viewing the Application Key.
3. **Accept**: This must be “multipart/mixed; deferSpec=20220824, application/json” so that data will be sent back to the consumer as chunks.

Required Headers

- **x-app-key**:<ApplicationKey>
- **Authorization**: Bearer <oAuth Token>
- **Accept**: multipart/mixed; deferSpec=20220824, application/json

Optional Headers

- **X-Request-Id**: This is a GUID that can help Oracle troubleshoot API issues. For more information, refer to X-Request-ID.

The below table lists the environment variables you can add to the Postman Environment.

Variable	Value
AppKey	This value is accessed from the Developer Portal.
ClientId	This value is accessed from the Developer Portal.
ClientSecret	This value is accessed from the Developer Portal.

Variable	Value
HotelId	Optional for the Oracle Hospitality Data APIs. This value is supplied by the hotel.
EnterpriseId	This value is provided by the customer so that you can add the environment. Subsequently, it can be accessed from the Developer Portal.
Scope	This value is always the following: • urn:opc:hgbu:ws:_myscopes_

The body of the request should be based on the corresponding API spec.

Sample curl command to request reservations:

```
curl --location '<gateway URL> /rna/v1/graphql/' \
--header 'x-app-key: <appKey>' \
--header 'Authorization: Bearer <token>' \
--header 'Accept: multipart/mixed; deferSpec=20220824, application/json' \
--header 'Content-Type: application/json' \
--header 'x-request-id: <GUID>' \
--data '{"query":"query BookingsReservation($input:
BookingsReservationQueryArgumentsType!) {\n
bookingsReservation(input: $input) {\n    reservationDetails {\n
arrivalDate\n      bookedRoomCategory\n      currencyCode\n
departureDate\n      guestprofileid\n      resvNameid\n      resvNumber\n    }
\n    reservationStatusDetails {\n      reservationStatus\n    }\n  }
\n}","variables":{"input":{"reservationDetailsResort":{"_in":
["CTESTPRO"]},"reservationDetailsTruncBeginDate":
{"_eq":"2021-07-23"},"reservationDetailsTruncEndDate":
{"_gte":"2021-07-01","_lte":"2021-12-31"},"reservationDetailsResvNameId":
{"_eq":2216837971}}}}'
```

Input Arguments Explained

Table 9-4 Date Inputs

Input Argument	Description
_eq	Equals. Accepts one date value.
_ne	Not Equal. Accepts one date value.
_in	In. Accepts a list of dates.
_nin	Not In. Accepts a list of date values.
_gt	Greater Than. Accepts one date value.
_lt	Less Than. Accepts one date value.
_gte	Greater than or equal. Accepts one date value.
_lte	Less than or equal. Accepts one date value.
_btn	Between. Accepts 2 dates – start and end dates.
_isNull	Is Null. Accepts a Boolean value.

Table 9-5 String Inputs

Input Argument	Description
_eq	Equals. Accepts one string value.
_ne	Not Equal. Accepts one string value.
_in	In. Accepts a list of strings.
_nin	Not In. Accepts a list of string values.
_gt	Greater Than. Accepts one string value.
_lt	Less Than. Accepts one string value.
_gte	Greater than or equal. Accepts one string value.
_lte	Less than or equal. Accepts one string value.
_isNull	Is Null. Accepts a Boolean value.

Table 9-6 Float Inputs

Input Argument	Description
_eq	Equals. Accepts one float value.
_ne	Not Equal. Accepts one float value.
_in	In. Accepts a list of float values.
_nin	Not In. Accepts a list of float values.
_gt	Greater Than. Accepts one float value.
_lt	Less Than. Accepts one float value.
_gte	Greater than or equal. Accepts one float value.
_lte	Less than or equal. Accepts one float value.
_btn	Between. Accepts 2 floats – start and end floats.
_isNull	Is Null. Accepts a Boolean value.

Querying Multiple Subject Areas on a Request Message

With GraphQL, it is possible to submit request messages with multiple queries for different R&A Subject Areas. To do this, just add another query on the same request.

Sample request with multiple queries:

```
curl --location '<gateway URL> /rna/v1/graphql/' \
--header 'x-app-key: <appKey>' \
--header 'Authorization: Bearer <token>' \
--header 'Accept: multipart/mixed; deferSpec=20220824, application/json' \
--header 'Content-Type: application/json' \
--header 'x-request-id: <GUID>' \
--data-raw '{"query":"query Query($inputProfile:
ProfilesIndividualsQueryArgumentsType!, $limit:
Int, $resvLimit:Int, $inputReservation:BookingsReservationQueryArgumentsType!)
 {\n    profilesIndividuals(input: $inputProfile, limit: $limit)
@stream{\n        profileAllInformationDetails{\n
guestProfileID\n            guestLastName\n            firstName\n
propertyRegistered\n        }\n        profileAddressDetails {\n
address1\n            address2\n            addressID\n
countryCode\n        }\n        profileCommunicationDetails {\n
```

```
communicationValue\n            phoneType\n        }\n     }\n
bookingsReservation(input: $inputReservation, limit: $resvLimit)
@stream{\n        reservationDetails{\n
guestFirstName\n            arrivalDate\n
departureDate\n            rateCode\n            resort\n
resvNameid\n        }\n        rateCodeDetails {\n
businessDate\n            currencyCode\n            rateCategory\n
rateClass\n            rateCodeId\n        }\n     }\n}","variables":
{"inputProfile":{"profileallDetailsResortRegistered":
{"_eq":"CTESTPRO"},"profileallDetailsNameId":
{"_eq":2209904486}},"inputReservation":{"reservationDetailsResort":{"_in":
["CTESTPRO"]},"reservationDetailsResvNameid":
{"_eq":2216837971},"reservationDetailsTruncBeginDate":
{"_eq":"2021-07-23"},"reservationDetailsTruncEndDate":
{"_gte":"2021-07-01","_lte":"2021-12-31"}}}}'
```

Changing Your Integration User Password

For environments secured by Resource Owner authentication, integration user passwords expire after 1 year and must be changed every year. To change your password:

1. Find the email you received when the hotel approved your integration user. This includes a URL for the Shared Security Domain identity server. Go to this URL.
2. Log in using your integration username and password.
3. Go to the “My Information” panel. This will show you basic information about your integration user.
4. Expand the “Change Password” section.
5. Reenter your current integration user password.
6. Enter your new integration user password twice. Please note the password policy, which can be viewed by clicking the “i” icon next to the New Password field.

API Troubleshooting

If you are experiencing issues when consuming APIs, check the following:

API

- Verify the API you are calling is visible in the APIs tab of the developer portal.
- Verify the API version in the URL matches the version v0 or v1 listed in the developer portal.
- If connecting to OPERA Cloud, verify the functionality being used is active and available for the relevant OPERA Cloud PMS version by reviewing the latest OPERA Cloud Services Release Readiness Guide and User Guide available on the Oracle Hospitality Hotels documentation page.
- Verify the input variables are relevant to the OPERA Cloud solution being called and are not a copy of Postman samples. Note that each OPERA Cloud environment is uniquely configured. You can determine the configuration specific to the hotel you are calling by reviewing the List of Values and Enterprise Configuration APIs.

Environment and Credentials

- Verify the environment (chain) card is on the Environments tab in the developer portal.
  - If you are an integration partner and the environment is not listed, then follow the steps in the Obtaining Details from the Hotel topic to gain access.
  - If you are an integration partner and this is a production environment, verify you have followed the steps in the Moving to Production topic.
- Verify the application's second tab shows the plans expected in the developer portal.
- Verify the application key being used matches the application checked in step 2 in the developer portal.
- Verify the clientId and clientSecret correspond to those on the Environment card under the Environments tab in the developer portal.
- If the environment is secured by Resource Owner authentication, verify the following for the integration user:
  1. The user is in the organization I<SSD org code>
     a. The user was created from the SSD URL ending "?apiuser=y"
  2. The username does not have spaces in it.
     a. If spaces in the current username exist, create a new integration user with a shorter username with no spaces.
  3. The user has the <SSD org code>-WSACCESS role.
     a. Log in to SSD using the link in the "Thank you" email and then go to "My Access" to see if the user has the WSACCESS role.
     b. If not, contact the environment owner and ask for approval for this role.
  4. Verify if the oAuth token is still valid by checking the "exp" attribute of the token. Obtain a new oAuth token if it has expired.

Mandatory Headers

Verify the required headers:

- Calling OPERA Cloud Property APIs — Ensure the x-hotelid header matches a hotel in the chain being called.
  - OPERA Cloud Property APIs for OPERA Cloud 22.1+ — When verifying data for the hub level, ensure you send x-hubid and not x-hotelid.
- Calling Oracle Hospitality Distribution APIs — Verify the x-channelCode header matches the header provided via email by the Oracle Hospitality Distribution team.
- Calling NOR1 Upgrade API — Ensure the providerId header matches the header provided via email by the NOR1 team.
- If sending a POST request, ensure you are sending the "accept" header as "application/json."

Errors

Verify the list of errors and follow the suggested resolution paths.

Logging an Issue

Before reporting an issue, first exhaust the self-service troubleshooting.

If you still have an issue with an API, resend the request, including the X-Request-ID header, and include the following information when logging the issue:

- X-Request-Id
- Full CURL request (with credentials redacted)
- Response code
- OPERA Cloud environment version number (via this API)
- OPERA Cloud environment name or gateway URL
- Context of what is being attempted (for example, type of integration, task being carried out, and so on).

Common HTTP Errors and Messages

Common error codes produced by Oracle Hospitality APIs are listed in the following table.

For a complete list of OPERA Cloud REST API error codes, refer to the Web Service Error Codes topic.

Table 9-7 Common HTTP Error Messages

Error Status	Error Response Body	How to Resolve
400	Response body details which fields are at fault.	Change the fields mentioned in the error response, such that they align with the specifications; referencing the swagger spec will help here. In some cases the values are determined by a (hotel specific) configured List of Values (LOV), so ensure you supply a value that is in the LOV for that hotel; the List Of Values Oracle Hospitality APIs will help here.
400	This API is not supported for the current database version.	Contact Oracle Customer Support at the Customer Support Portal stating the gateway being called and the error message received.
401	No response body	Ensure your oAuth token is valid and latest. Also, ensure your Application Key is valid. Check it by Viewing the Application Key
402	"invalid_grant", "[Wrong Password]"	Check the password of the integration user. See Changing Your Integration User Password for more information.

Table 9-7 (Cont.) Common HTTP Error Messages

Error Status	Error Response Body	How to Resolve
403	Unauthorized to access the resource	This could be caused by the integration user missing the WSACCESS role. Ensure the environment owner has approved the integration user. This could also occur if you are sending the wrong hotelId. Ensure the hotel ID being sent in the x-hotelid header matches a hotel in the environment being called. In recently migrated environments secured by Client Credentials authentication (OPERA Cloud Identity Management), ensure you are using the reissued clientId and clientSecret, not the pre-migration clientId and clientSecret.
403	No response body	Ensure your oAuth token is valid and up to date. Re-request it by using Authenticating to Oracle Hospitality Property APIs. Also ensure your integration user in OPERA Cloud Services has access to the property (hotel) you supplied in the "x-hotelid" header.

Table 9-7 (Cont.) Common HTTP Error Messages

Error Status	Error Response Body	How to Resolve
403	No Subscribed Plan or API found	This occurs when accessing an API to which you do not have access. If this is an early adopter (v0) API and you think you already have access to the Early Adopter API Program, check that the application specified in the x-app-key header has access to the Early Adopter APIs by following this process: 1. In the Developer Portal, click the **Applications** tab. 2. Choose the application whose key matches the x-app-key being sent (double check against the end of the application key that appears in the list of applications). 3. Click **View details** 4. Click the **Subscriptions** tab and verify it shows all of the following: • Early Adopter • Hospitality APIs • OAuth If you have not yet called the v0 APIs but would like to, contact us as explained in the Early Adopter API Program. If this is a Distribution API, you must register in the Developer Portal to use the API.

Table 9-7 (Cont.) Common HTTP Error Messages

Error Status	Error Response Body	How to Resolve
403	User is not authorized to access data for resort	Check that your integration user has the WSACCESS role: • Find the email you received when the hotel approved your integration user. This includes a URL for the Shared Security Domain identity server. Go to this URL. • Log in using your integration username and password. • If the login fails, click the "Can't Sign In?" link to reset your password. • Verify the hotelId supplied in the "x-hotelid" header matches the one provided by the hotel. See Obtaining Details from the Hotel for more information.
404	No response body	If you are calling an Asynchronous API: Once you have sent the final GET call to obtain the results of the async processing, the data is no longer available on the same summaryId, so you will receive a 404 error. To retrieve the data again, you must restart the request sequence at step one.
404	OPICS-NOT_FOUND	Contact the environment owner to verify that Oracle Payment Interface Cloud Service has been set up by checking for product ID 14308 and ensuring that Token Exchange Service is selected. Customers can contact Oracle Consulting or a reseller to configure Oracle Payment Interface Cloud as needed.
405	No response body	Ensure the HTTP verb you are using is supported by the Oracle Hospitality APIs by checking the Oracle Hospitality APIs documentation.
406	No response body	Set your "accept" header to "application/json" as the Oracle Hospitality APIs will produce only "application/json".

Table 9-7 (Cont.) Common HTTP Error Messages

Error Status	Error Response Body	How to Resolve
413	No response body	Ensure your request matches the documented request body schema. If your scenario requires "bulk" fetch or update then consider the jobbed Oracle Hospitality APIs.
414	No response body	Consider whether you need to specify all the query parameters being specified; there may be more efficient resources or ways to structure your query.
415	Unsupported Media Type	Ensure your request payload has a content-type of "application/json".
500	Response body details the error.	Try your request again in a few moments or contact Oracle Customer Support at the Customer Support Portal.
502	No response body	Try your request again in a few moments or contact Oracle Customer Support at the Customer Support Portal.
503	No response body	Try your request again in a few moments or contact Oracle Customer Support at the Customer Support Portal.

HTTP Methods Supported

The Oracle Hospitality APIs use the following HTTP verbs:

- **GET** to retrieve resources.
- **HEAD** to query the status of jobbed requests.
- **POST** to create resources.
- **PUT** to replace resources.
- **DELETE** to delete resources.

HTTP Response Headers

POST always returns the location of the newly created resource in a Location header.

The Oracle Hospitality APIs follow the HTTP specifications, so request and response headers are case insensitive.

Github and Postman Collections

Oracle Hospitality has a Github repository containing both Oracle Hospitality REST API specifications and accompanying Postman Collections.

You can access Github and locate the REST API specifications and Postman Collections at the following URL: https://github.com/oracle/hospitality-api-docs.

REST API Specifications

In the rest-api-specs folder in Github, you can view the published V1 APIs for OPERA Cloud and/or download the json specifications for the Oracle Hospitality APIs.

Postman Collections

In the postman-collections folder in Github, you can download and use the Postman Collection to help you get you started with our APIs and become more familiar with using them. The postman-collections folder contains the following content:

- Postman collections with many different API call samples on how to perform different functional workflows (for example, digital check-in and checkout).
- Postman Environment defining the main environment variables required to use the postman collections against our Hospitality APIs. Ensure you update this file with the relevant credentials and data for the environment to which you are connecting.
- Document describing the different workflows supported in the postman collections.

The Postman collection is also available at the following URL: https://www.postman.com/hospitalityapis/workspace/oracle-hospitality-apis/overview.

Setting Up Your Postman Collection

To start calling the APIs, proceed to set up a postman environment collection using the below information. You might want to configure one environment collection for UAT and another one for Production as the variables will differ.

Table 9-8 Information for Postman Environment Collection

Hostname	This is the API gateway URL that can be viewed by logging into the Developer portal and viewing the environments tab.
Username & Password	This is the Integration username and password. This is relevant only for environments secured by Resource Owner authentication. See Authenticating to Oracle Hospitality Property APIs for the steps to obtain these.
CLIENT_ID & CLIENT_SECRET	The Client ID obtained from the OHIP Developer portal. See Viewing the Client Secret for details.
AppKey	The application key that was previously obtained. See Viewing Application Details for the specific steps.
HotelId	The Hotel ID against which you want to perform actions (for example, obtaining reservation data).

Once you have added these values into your postman environment, you can begin to call the oAuth Token. If everything is set up correctly, OHIP will respond with a HTTP 200 OK response, including the oAuth token. Now you can proceed to try out the collections as required.

> **Note**
>
> Avoid uploading API secrets or tokens to Postman or GitHub. Public sharing may expose sensitive data.

Date Formats

Dates in the Oracle Hospitality APIs are expressed in the RFC3339 “full-date” format (that is, date-fullyear "-" date-month "-" date-mday. "T" time-hour ":" time-minute ":" time-second "Z" / ("+" / "-") time-hour ":" time-minute). The following are examples of this format:

- 2023-06-05 for 5th of June 2023
- 2023-06-05T08:43Z or 2023-06-05T09:43+01:00 for 5th of June 2023 at 8:43 AM in the UTC time zone or 9:43 in the local time zone

Most times are expressed in local time zones, not in Coordinated Universal Time (UTC).

Asynchronous APIs return times in Coordinated Universal Time (UTC).

For Profiles APIs, the time depends on where the profile was created. For example:

- If the profile was created at the hub level, then Profiles APIs return times in the hub time zone if the time zone is set. If no hub time zone is set, then for a profile created at the hub level, Profiles APIs return in Coordinated Universal Time (UTC).
- If the profile was created at the property level, then Profiles APIs return times in the property time zone if the time zone is set. If no property time zone is set, then for a profile created at the property level, Profiles APIs return in Coordinated Universal Time (UTC).

Table 9-9 Asynchronous API Times Zones

API	Where was the Profile Created?	Is the Time Zone Set?	Time Zone Returned
Asynchronous APIs	n/a	n/a	Coordinated Universal Time (UTC)
Profiles APIs	Hub	No	Coordinated Universal Time (UTC)
Profiles APIs	Hub	Yes	Hub timezone
Profiles APIs	Property	No	Coordinated Universal Time (UTC)
Profiles APIs	Property	Yes	Property timezone
All other property APIs	n/a	n/a	Property timezone

Special Characters in URLs

Query parameters for some Hospitality API operations require text to be entered, for example, a rate code name or a person's name. If the text includes special or multibyte characters, these characters must be URL encoded. For example, an asterisk URL encodes as %2A.

Forward slash characters (that is, /) or UTF-8 characters must be double URL-encoded so that, for example:

/ encodes as **%252F**

ᓚ encodes as **%25E3%2581%2597**

For encoding standards, refer to the RFC Series on the RFC Editor website. The standard that defines when to encode is RFC3986 (section 2.4, When to Encode or Decode).

10 Limits

To ensure operational efficiency of hotel customers, various limits are in effect.

Number of Applications

The maximum number of applications that can be registered in the OHIP Developer portal is 100.

Streaming

Only One Consuming Client

Only one client can be connected to consume events from a single chain in a single gateway on a single application key.

To create a scalable consuming architecture, see Streaming Best Practices.

Consuming Limits

It is expected that streaming consumers remain connected at all times. In the event of a disconnection, it is vital that the consumer connects to the WebSocket at least once every 24 hours. If not, then you must send the optional "offset" input parameter together with the value of the last offset you received.

Ensure there is a minimum of 10000ms (10 seconds) between sending the "complete" message to close one WebSocket connection and sending the next "subscribe" message to reopen a WebSocket connection.

For more information on consuming limits, see Streaming Best Practices.

Headers

The total size of all HTTP headers is 8KB. This includes the oAuth token, application key, x-request-id, and all other headers.

API Throttling

To ensure stable and reliable service for all customers, the Hospitality Integration Platform enforces limits on the rate of incoming API requests.

Current limits:

- Up to 50 requests per second are allowed.
- A short-term burst of up to 100 requests may be permitted.

If your integration exceeds the standard rate limit, additional requests within that second may be automatically delayed. Each request above the limit will experience a small, additional delay, helping to spread out the traffic and avoid overwhelming the platform.

If your system sends a very high number of requests in a short burst that exceeds the burst threshold, requests beyond this limit may be immediately rejected with an HTTP 429 ("Too Many Requests") response.

These limits are designed to protect ongoing hotel operations and to ensure all customers receive reliable service. Oracle may adjust these thresholds as needed to maintain service quality and will provide advance notification of changes whenever possible.

If you are frequently hitting the throttling limit, consider the following:

- For Shop and Book related calls, consider Distribution APIs (see Oracle Hospitality Distribution APIs for more information).
- Retrieve more coarse grained data in a single call rather than performing filtering in the client.
- Reduce the frequency of calls.
- Cache data that changes infrequently, such as Lists of Values.
- Review the API release notes for new operations that could reduce the frequency of API calls (for example, asynchronous (jobbed) operations).
- Consider the Streaming API as an alternative to the Polling API (pull).

Requests per Second

In the Integration Processor API, the following operations permit a maximum of 300 requests per minute per gateway:

- getBusinessEvents
- getBusinessEventsByExternalSystem

If a larger amount of events is required (than allowed by the limits), consider the Streaming API (push).

Asynchronous APIs allow a maximum of 100 requests per minute for POST, 300 requests per minute for HEAD, and 300 requests per minute for GET for each environment.

oAuth Token Lifetime

Our recommendation is to request a token when the current token will expire in 1 minute and implement code that caches and automatically renews the token (when the token's lifetime is down to 1 minute) and stores it securely. Code that makes API calls can then use the cached token and be assured it is always valid.

Ensure that the code looks at the "exp" attribute of the oAuth token to determine when the token will expire.

Request Body Size

The maximum request body size is 100KB.

The following endpoints allow a maximum request body size of 2MB:

- In the Property API Price Availability Rate Async, the operation:
  - postRestrictionsProcess
- In the Property API Block, the operations:
  - postRoomingList
  - postSubAllocation
  - putBlockAllocation
- In the Property API Reservation, the operations:
  - postReservation

  - postReservationByBlock
- In the Property API Rate Plan Asynchronous Service, the operation:
  - startSetDailyRatePlanSchedulesProcess
- In the Property API Inventory Asynchronous, the operation:
  - postSellLimitsProcess
- In the Property API Content Service, the operations:
  - emailFolioReport
  - setCustomizedLetter
- In the Property API OPI Token Exchange Service, the operation:
  - openPaymentTokenExchange

The following endpoints allow a maximum request body size of 14MB:

- In the Property API Content Service, the operations:
  - uploadFileAttachment
  - uploadImage

Pagination Limits

Most Property APIs are paginated, meaning they return only one page of data at a time. The maximum size of the page is defined by limits documented both in the API specifications and in Property REST API Get Query Parameter Limits.

Asynchronous APIs

Asynchronous APIs allow a maximum of 250 requests per minute for each application per environment for POST requests.

Since they process data in bulk, the Asynchronous APIs have additional restrictions. A full matrix of these are available in Types and Usage Recommendations, but these are repeated below:

Identical Requests

To avoid duplicate requests, every identical request (employing the same query parameters) necessitates a mandatory 30-minute interval between submissions. Note that this limit applies regardless of whether the POST, HEAD, and GET cycle has been completed.

Operations that allow data to be queried by date are subject to additional restrictions on how frequently the operation can be used:

- In the Property API Block Reservation Asynchronous, identical requests to the operation startBlockAllocationSummaryProcess (when used with startLastModifiedDate/ endLastModifiedDate) must be spaced 3 hours apart. Note that this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle.
- In the Property API Reservation Asynchronous, in the operation startReservationsDailySummaryProcess, identical requests to the operation startBlockAllocationSummaryProcess (when used with startLastModifiedDate/ endLastModifiedDate) must be spaced 3 hours apart. Note that this limit only applies to identical POST requests made without completing the entire POST, HEAD, and GET cycle.

Maximum Frequency

Operations that allow data to be queried by date are subject to additional restrictions on how frequently the operation can be used:

- In the Property API Block Reservation Asynchronous, the operation startBlockAllocationSummaryProcess is used with startLastModifiedDate/endLastModifiedDate.

Maximum Date Ranges

Synchronous APIs

Several Property APIs have a maximum date range. These restrictions are listed in the API specifications as well as in Property REST API Get Query Parameter Limits.

Asynchronous APIs

The maximum range of start and end dates submitted to the following Asynchronous APIs is limited:

- In the Property API Inventory Asynchronous, the operation startRevenueInventoryStatisticsProcess has a maximum date range of 400 days. For OPERA version specific restrictions, refer to Types and Usage Recommendations.
- In the Property API Block Reservation Asynchronous, the operation startBlockAllocationSummaryProcess has a maximum date range of 94 days. However, when requesting data with startLastModifiedDate/endLastModifiedDate, the maximum date range allowed per request is 3 days.
- In the Property API Reservation Asynchronous, the operation startReservationsDailySummaryProcess has a maximum date range of 94 days.
- In the Property API Rate Plan Asynchronous Service, the operation startSetDailyRatePlanSchedulesProcess allows rate plans to be defined for up to 365 days.

Length Restrictions and Multi-byte Characters

Many attributes in APIs have length restrictions, such as the below example from the operation postReservation where the "addressLine" property is limited to 80 characters.

```
"addressLine": {
"description": "When the address is unformatted (FormattedInd=\"false\")
these lines
will contain free form address details. When the address is formatted and
street number
and street name must be sent independently, the street number will be sent
using
StreetNmbr, and the street name will be sent in the first AddressLine
occurrence.",
    "type": "array",
    "maxItems": 4,
    "items": {
      "type": "string",
      "minLength": 0,
      "maxLength": 80
  }
}
```

The 80 characters of this restriction implies 80 ASCII characters. Many UTF-8 characters are multi-byte. A multi-byte character takes up more than one ASCII character, so fewer than 80 multi-byte characters will fit into the "addressLine" field.

Consumers sending multi-byte characters must ensure the ASCII equivalent length of the data does not exceed the published length restrictions.

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Versioning

All APIs are exposed by the Oracle Hospitality Integration Platform version at the URI level. This means that the URI includes /v0, /v1, /v2, and so on.

The current versioning strategy avoids versions beyond v1 by introducing non-breaking changes and only introducing major changes when necessary.

In the future, versions beyond v1 might be considered.

As any piece of software, our APIs change and mature over time. Inevitably, a given API operation is more mature in later versions of the product, regardless of the version given to the operation. For example, if an API operation has a bug fixed in vLatest, then the API call might hit that bug when calling an older version of the product. Each API producing product issues its own Release Readiness Guide (for example, the OPERA Cloud Release Readiness Guide) that outlines the API bugs fixed in each version. If the API operation being called is affected by a bug in an older version of OPERA Cloud, then the hotelier should upgrade to receive the bug fix.

> **Note**
>
> Not all major changes to the API necessarily result in an incremented version number. In some cases, significant changes can be made within the same version provided backward compatibility is maintained.

What is a non-breaking change?

Oracle Hospitality considers the following changes to be backwards-compatible:

- Adding new API operations.
- Adding new optional request parameters to existing API operations.
- Adding new properties to existing API responses.
- Adding new response headers.
- Changing the order of properties in existing API responses.
- Updating descriptions of API operations or properties.
- Adding or changing examples.
- Increasing the length of a string parameter.
- Changing from a more restrictive to a less restrictive numeric datatype for example, "number" to "integer" or "float" to "number").
- Deprecating an API operation.
- Adding items to or removing items from an ENUM.
  - If using a strongly typed language, such as Java, ensure that code is resilient to changes in ENUMs. For example, by specifying the ‘enumUnknownDefaultCase’ parameter in the Java OpenAPI Generator or the ‘READ_UNKNOWN_ENUM_VALUES_AS_NULL’ parameter in Jackson in Java.

- Adding new events.
  - Ensure your Streaming WebSocket client and your REST API event parsing code gracefully handles unfamiliar events.

What is a major change?

We consider major changes those that can break existing API integrations. For example:

- Removing an entire API operation.
- Removing or renaming a request parameter.
- Removing or renaming a response parameter.
- Adding a new required request parameter.
- Making a previously optional parameter required.
- Changing the datatype of a parameter or response field (for example, from integer to string).
- Adding a new validation rule to an existing request parameter.
- Changing authentication or authorization requirements.
- Enforcing new or lower limits on request parameters.
- Changing how resources are accessed. For example, requiring that salesManagerGoals are accessed via salesManagers.
- Request body size changes. For example, allowing a whole profile (including children) in the request body to allowing only summary profile data in the request body.
- Adding validation to allow fewer items in an array in the request body.
- Response body size changes. For example, returning a subset of a profile where previously the API returned the full profile or vice versa. Or changing the number of items that are returned when no pagination parameters are specified.
- Changing response error codes.

How can I find out about major changes?

Refer to the following Customer Support article: Oracle Hospitality Integration Platform Upcoming Major Changes. To be notified when the Upcoming Major Changes log is updated, click the **Subscribe** button on that page.

Subscribe to the Oracle Hospitality Github repository to receive updates on the major changes in new releases.

Regularly check the Upcoming Major Changes section of this user guide.

How do I know when new APIs are released?

The Oracle Hospitality Integration Platform Patch Release Notes list all new and deprecated APIs. To be notified when a new patch release note is issued, click the **Subscribe** button on that page.

Subscribe to the Oracle Hospitality Github repository to receive updates on the major changes for new releases.

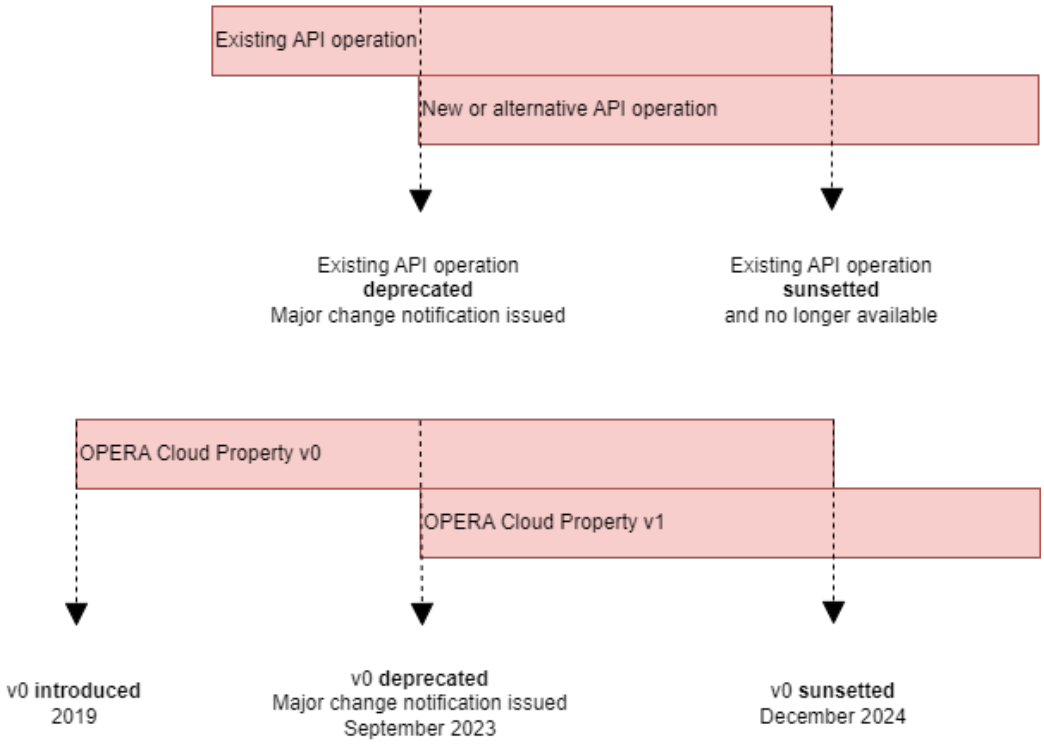
Further, each Oracle Hospitality product publishes a Release Readiness Guide that also lists changes to APIs and new APIs. For example, the OPERA Cloud 24.1 Release Readiness Guide lists the new API features included in OPERA Cloud 24.1.

Deprecation Schedules

Oracle Hospitality APIs are deprecated at the level of the operation and no lower.

A major change announcement is issued as soon as possible once an API operation will be deprecated. This major change announcement includes details of the sunset date.

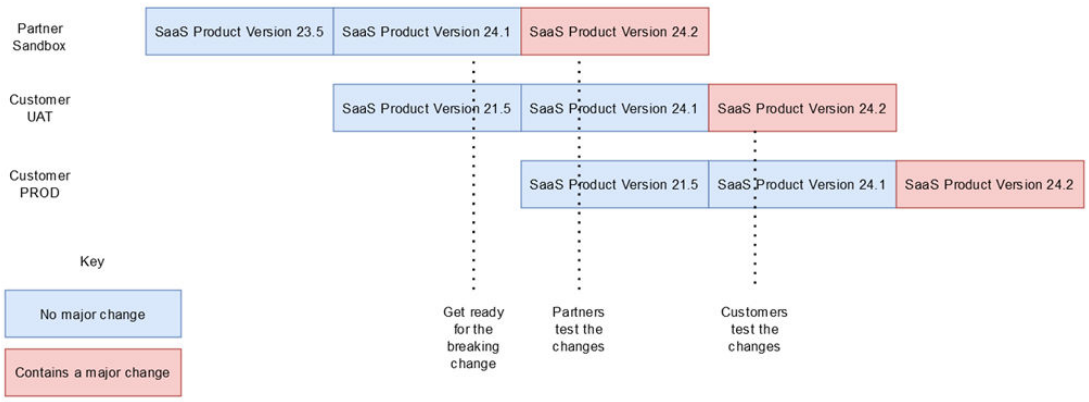
For example, the OPERA Cloud Property Early Adopter APIs (/v0) were deprecated September 2023.



The Oracle Hospitality Integration Platform exposes APIs from multiple SaaS products, and each SaaS product is versioned (for example, OPERA Cloud 23.5). This SaaS product version number can be read in the API specifications file.

When developing and listing integrations on the marketplace, it is important to be clear about which version of the SaaS product was used during the development.

Integration partners have access to the sandbox where they can test changes they made to adapt to major changes ahead of when those changes are introduced in a later version of the SaaS product. Customers also have UAT environments which are upgraded ahead of production environments. However, the time between a customer UAT environment being upgraded to a given version and the same customer's PROD environment being upgraded is short, so customers must start preparations as soon as the major change announcement is received and quickly test it in their UAT environment.



How to adapt to deprecation notices

1. Read the major change announcement and determine whether the change affects any APIs you current use or intend to use.
2. If you are affected by a major change, take immediate action in the following environments:
    a. For integration partners, a sandbox environment.
    b. For customers, a UAT environment.
3. Verify that after taking action, the integration works as needed.
4. Wait for the upgrade to the affected version of the SaaS environment.
    a. For integration partners, test this in the sandbox environment
    b. For customers, test this in a UAT environment. Note that production environments are quickly updated after UAT environments, so prioritize this testing as soon as the UAT environment is upgraded.
5. Ensure that your changes are deployed to production environments before your SaaS product is upgraded to the affected version.

Example of adapting to a deprecation notice:

In April 2024, a major change announcement was issued about API limits. Do the following in response:

1. Read the major change announcement for April 2024 and determine whether your integration is affected. Continue with the below steps if it was affected:
2. Immediately make the changes as outlined in the Call to Action, and test these changes in a sandbox or a UAT environment.
3. Test the whole integration still works even with the changes.
4. Wait for the upgrade to OPERA Cloud 24.4 in the following environments:
    a. For integration partners, a sandbox environment. Be sure to test these changes.
    b. For customers, a UAT environment. Be sure to test these changes.
5. Deploy the changed integration and make it live before OPERA Cloud 24.5 is deployed to any production environment.

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Analytics

The Analytics tab enables you to view the details of API and Streaming usage. The **Call Type** can be selected for REST and shows results such as the total number of API calls, the number of API calls that were successful, and the number of API calls that failed or produced errors. The **Call Type** can also be selected for Streaming and shows results such as messages Produced (all streaming messages), messages Waiting (not yet received), and messages Consumed (received). With Analytics, you can troubleshoot your API and Streaming calls and quickly identify any errors occurring in your application.

When paying for API usage, it is critical to know when one of your applications starts making unusual calls, so you can avoid unexpected bills and better plan your expense budget.

There are two ways to view your billing and metrics:

1. Oracle Cloud Console administrators can view their usage and invoices in the Oracle Customer Center (oracle.com).
2. Oracle Cloud Console administrators can also view this information in their monthly email invoices.

Analytics data enables you to ensure your applications are running correctly.

> **Note**
>
> Usage does not exactly equate to what you are billed as there are a number of free calls. For a list of the API calls that are not billed, see FAQs.

Analytics data applies to both inbound and outbound API calls.

Search Parameters

You can filter analytics using the following parameters:

- **Call Type**
- **Hotel ID**
- **Environment Type** — **Non Production**, **Production**, or **All**.
- **Application**
- **Organization**
- **API**
- **Date** — You can select the **Last 24 Hours**, **Last 7 Days**, **Last 31 Days**, **Last 12 Months**, **Current Billing Cycle**, or **Last Billing Cycle** for partners. You can also select **Custom** to enter a specific date range. The last 24 hours is the default date in the search.
- **Billable Type**
- **Chain Codes**

API Response Status Code

The response status code is the easiest way to understand what happened with an API request without reading and decoding the response body.

Using Analytics

You can view the details of usage analytics at a global level or at an application level. Each view includes a breakdown of error codes.

Viewing Analytics from the Main Analytics Tab

This provides a view of usage analytics at a global level.

1. Open the Developer Portal and click the **Analytics** tab.
2. Optionally choose search parameters to narrow results to specific hotel(s), environment type(s), application(s), organization(s), API(s), billable type, chain code(s), and date range:
   - **x-hotelids**: Enter the OPERA property ID of one or more hotels. This was sent in the x-hotelid header of the API request.
   - **Call Type**: Select either **REST** or **Streaming** for the call type to determine which data results are provided. **REST** for the API calls and **Streaming** for the streaming messages.
   - **Environment Type**: Select **All**, **Non Production**, or **Production** for your environment type. This selection is determined based on the environment being called, either a non production or production instance.
   - **APIs**: Select one or more **API(s)** from the list.
   - **Application**: Select one or more application(s) for which you want to view analytics.
   - **Organization**: Hoteliers can select whether to view their own analytics or those of one or more partner organization(s).
   - **API**: Select one or more **API(s)** from the list.
   - **Choose Range**: Select a date range from which to view usage analytics. You can select **Last 24 Hours**, **Last 7 Days**, **Last 31 Days**, **Last 12 Months**, **Current Billing Cycle**, or **Last Billing Cycle** for partners. You can also select **Custom** to enter a specific date range.
   - **Billable Type**: Select All, Billable, or Non-Billable from the Billable Type filter. By default, All is selected, displaying analytics that include both Billable and Non-Billable requests.
   - **Chain Codes**: Select one or more chain codes from the list to filter the analytics. Once selected, the dashboard displays analytics based on the chosen chains. Additionally, the x-hotelids section updates to show only the hotels associated with the selected chain codes.

   The Usage graph for REST appears below and shows the total request number, the number of successful API calls, and the number of errors based on the search parameters you defined.

   If there are errors, the error codes and the total number for each error code appear in a table below the graph.

   A bar graph for the Streaming query appears below with the Produced, Consumed, and Waiting results and features a grid by date range and another grid by the Event Type.

Viewing Analytics from the Applications Analytics Tab

This provides a view of usage analytics at an application level.

1. Open the Developer Portal and click the **Applications** tab.
2. Search for an application and click the **View details** link for it.
3. Click the **Analytics** tab.
4. Optionally choose search parameters to narrow results to specific hotel(s), environment type(s), organization(s), API(s), billable type, chain code(s), and date range:
    - **x-hotelids**: Enter the OPERA property ID of one or more hotels. This was sent in the x-hotelid header of the API request.
    - **Call Type**: Select either **REST** or **Streaming** for the call type to determine which data results are provided. **REST** for the API calls and **Streaming** for the streaming messages.
    - **Environment Type**: Select **All**, **Non Production**, or **Production** for your environment type. This selection is determined based on the environment being called, either a non production or production instance.
    - **APIs**: Select one or more **API(s)** from the list.
    - **Organization**: Hoteliers can select whether to view their own analytics or those of one or more partner organization(s).
    - **Choose Range**: Select a date range from which to view usage analytics. You can select **Last 24 Hours**, **Last 7 Days**, **Last 31 Days**, **Last 12 Months**, **Current Billing Cycle**, or **Last Billing Cycle** for partners. You can also select **Custom** to enter a specific date range.
    - **Billable Type**: Select All, Billable, or Non-Billable from the Billable Type filter. By default, All is selected, displaying analytics that include both Billable and Non-Billable requests.
    - **Chain Codes**: Select one or more chain codes from the list to filter the analytics. Once selected, the dashboard displays analytics based on the chosen chains. Additionally, the x-hotelids section updates to show only the hotels associated with the selected chain codes.

    The Usage graph for REST appears below and shows the total request number, the number of successful API calls, and the number of errors based on the search parameters you defined.

    If there are errors, the error codes and the total number for each error code appear in a table below the graph.

    A bar graph for the Streaming query appears below with the Produced, Consumed, and Waiting results and features a grid by date range and another grid by the Event Type.

Downloading Overall Analytics

1. Open the Developer Portal and click the **Analytics** tab.
2. Select the search parameters as required.
3. Click the **Download Report** button and click **Download** again to confirm.

Downloading Application Analytics

1. Open the Developer Portal and click the **Applications** tab.

2. Search for an application and click the **View details** link for it.
3. Click the **Analytics** tab.
4. Select the search parameters as required.
5. Click the **Download Report** button and click **Download** again to confirm.

This exports the report as a .csv file that you can open or save. The usage report also contains the breakdown by error codes for the given time period.

> **Note**
>
> - The downloaded file reflects dates and times in UTC time zone.
> - The downloaded report reflects the selected Billable Type filter.
> - Any single report can only cover a maximum period of 31 days per downloaded file.
> - If the x-hotelids search parameter is used, the report provides a total usage in the summary section and a detailed usage per x-hotelid in the detail section.
> - If no x-hotelids search parameter is used, the report provides a total usage in the summary section and an aggregated usage for all x-hotelids in the detail section.
> - To get a detailed usage for all x-hotelids, select all x-hotelids in the x-hotelids search parameter.
> - Be aware that some APIs, (for example, Nor1, Distribution, and Property OAuth token APIs), do not have x-hotelid information. Those API calls are not captured when using the x-hotelids search parameter, but only when searching without this parameter.
> - Analytics data in the Developer Portal is retained for up to 1 year. Customers and partners can only view analytics within this retention period.

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Business Events

A business event is an event (that is, an update) that happens to a resource, for example, a reservation. Rather than GETting the reservation repeatedly, subscribing to the Update Reservation event will inform you when this or other reservations are changed. Oracle Hospitality systems emit Business Events in multiple scenarios, such as creating a new resource, updating a resource, or deleting a resource. Each business event has the following pieces of information:

- Resource — This is the resource that has received the event (for example, a reservation).
- Event — The name of the event, for example, an update to a reservation.
- Old value — This is the old value for the field.
- New value — This is the new value for the field.

There are two methods for consuming events from Oracle Hospitality APIs: Polling and Streaming. Due to the many limitations of Polling, Oracle recommends Streaming.

Both streaming and polling can be used to consume events from the same environment at the same time. For example, use streaming for events, such as checkin, where real time is important and use polling for less time critical events.

For a list of business events and data elements, refer to the Configuring Business Events topic in the OPERA Cloud User Guide.

Streaming API (push)

Overview of Event Consumption via the Streaming API

When partners or customers consume business event data from OPERA Cloud, they can choose which events an application will receive. These are the events to which the application subscribes.

A partner or customer can subscribe to business events from a specific environment, but approval from the environment owner is required.

For more information on streaming, read our blog post.

The following resources can help you get started with the streaming API:

- GraphiQL — This provides a visual playground for familiarizing yourself with the streaming API. The Connecting to the Streaming API via GraphiQL topic provides instruction on how to use this tool.
- Postman collection — The Github and Postman Collections topic provides instruction on how to set up and use this tool.
- Node reference implementation in TypeScript.

Customer Approval for Partners

A customer Developer Portal user can only approve the sending of business events for hotels to which they have access.

Customers can log in to the Developer Portal and do the following:

- See a list of the partners who are requesting to consume events.
- View a list of events a partner is consuming and see from which hotels and environments the partner is consuming these events.
- Approve event consumption for one or many hotels in the requested environment.

> **Note**
>
> In the following circumstances, the event subscription will automatically be approved.
>
> - Partners consuming business events from the partner sandbox.
> - Partners consuming business events from their dedicated non production environment.
> - Customers consuming business events from their own non production environment.
> - Customers consuming business events from their own production environment.

Customer - Enabling Streaming

To get started with their first environment, customers must purchase the Oracle Hospitality Integration Platform Cloud Premium Remote Assistance SKU - 4 Hour Workshop (B93152) to engage with Oracle Professional Services and learn how to implement the Streaming API with best practices. As part of this training, Oracle Professional Services enables streaming for one UAT chain. Complete this training before raising a Technical SR to enable streaming for subsequent chains.

For subsequent environments, customers must raise a technical SR. The Technical SR must include the following details, which are found on the customer's **Environments** card in the OHIP developer portal:

- **Customer Name** — The customer's name can be found on the hotelier's **Environments** card in the OHIP developer portal and appears before the brackets on the card.
- **Customer Chain** — The customer chain to be accessed. This can be found on the hotelier's **Environments** card in the OHIP developer portal and appears after the brackets on the card.
- **Environment Name** — This can be found on the hotelier's **Environments** card in the OHIP developer portal and appears in brackets on the card.
- **Shared Security Domain** — If the environment is a Resource Owner environment, then this is the URL through which the integration user for the hotelier's environment was created.
- **EnterpriseId** — If the environment is a Client Credentials environment, then this can be found on the Environment card in the OHIP developer portal.

> **Note**
>
> Streaming is enabled at the chain level, so once enabled for a chain, you do not need to enable it at the hotel level.

Partner - Enabling Streaming

Partners can initiate their testing in the partner sandbox environment. To gain access, request this in the partner Slack community. Partners should complete a successful streaming test by confirming that their code correctly receives Business Events and does not encounter errors either from OHIP or from downstream systems. This is not an Oracle validation, but a necessary assurance for both the partner and the hotelier before the partner accesses a hotelier's environment.

Following a successful streaming test, partners must open a Technical SR if they wish to get a customer environment UAT or Production environment enabled for streaming. The Technical SR must include the following details, which are found on the customer's **Environments** card in the OHIP developer portal:

- **Customer Name** — The customer's name can be found on the hotelier's **Environments** card in the OHIP developer portal and appears before the brackets on the card.
- **Customer Chain** — The customer chain to be accessed. This can be found on the hotelier's **Environments** card in the OHIP developer portal and appears after the brackets on the card.
- **Environment Name** — This can be found on the hotelier's **Environments** card in the OHIP developer portal and appears in brackets on the card.
- **Shared Security Domain** — If the environment is a Resource Owner environment, then this is the URL through which the integration user for the hotelier's environment was created.
- **EnterpriseId** — If the environment is a Client Credentials environment, then this can be found on the Environment card in the OHIP developer portal.

> **Note**
>
> Streaming is enabled at the chain level, so once enabled for a chain, you do not need to enable it at the hotel level.

Partners must also ensure approvals have been obtained for the events they have configured on the customer environment. Customers can grant access to consume events within their developer portal.

Working with Events in the Developer Portal

Prerequisites for Consuming Events

- You must first add an OPERA environment from which to consume events before adding and subscribing to events.
- The OPERA environment must either have streaming enabled (see Streaming API) or have polling configured (see Configuring the Polling Subscription).

For information on working with business events in OPERA Cloud, refer to the Configuring Business Events topic in the OPERA Cloud User Guide. This topic also provides a list of business events and data elements.

Creating a Template of Events for an Application

The event template represents the list of events a given integration will use. When subscribing to consume events from a given OPERA environment, the template is a faster way to ensure the correct list of events is subscribed.

Before subscribing to consume events from a given OPERA environment, you must first create a template for the integration.

The template can be edited at any time. For example, your integration might change, and it now needs to consumer more events or fewer events.

> **Note**
>
> Changes made on the template do not affect existing subscriptions to OPERA environments but will take effect when subscribing to new OPERA environments.

To configure the template events, complete the following steps:

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Events** tab.
4. Click **Add Event to Template** and complete the following information:
   a. **Category**: Select a category for the event, such as Reservation.
   b. **Event**: Select an event for the category, such as Check In.
   c. Click **Add Filter**.
   d. Select one or more **Data Elements**. **IMPORTANT**: You will receive a Business Event notification only when the selected Data Elements change.
   e. Click Next to **Add Condition** (This is not mandatory, you can click **Next**.)
   f. Choose a **Data Element** and then select an **Operator** (for example, =, !=, LIKE, NOT LIKE, IN, NOT IN, BETWEEN, <=, IS NULL, IS NOT NULL). **IMPORTANT**: You will receive a Business Event notification only when the selected Data Element matches the condition specified. Note that different properties (even within the same chain) can have different values for configuration items, such as room types.
   g. Enter **Value 1** (and **Value 2** if applicable) up to 500 characters.
   h. Continue adding conditions as needed.
   i. Use operators **AND** or **OR** to combine multiple conditions.
   j. Reorder conditions using drag-and-drop.

   > **Note**
   >
   > To remove an event from the template, click the **Remove** link.

5. Click **Add** to add the event to the template.
6. Repeat these steps to add additional events to the template.

Once you have configured all the events your integration requires, click the **Subscribed** tab and choose any OPERA environment(s) from which to consume these events.

Subscribing to Events

A partner can subscribe to business events from a customer. Subscriptions to business events are specific to each application.

Use the Subscribe tab to subscribe to the list of events that you added on the Template tab.

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Events** tab.
4. Click the **Subscribed** tab.
5. Click the **Subscribe** link.
6. Select an **Environment** and click **Subscribe**.

   If one or more of the events on the template are not available for the selected environment, a warning appears. If accepted, only those events available in the selected environment are subscribed.
7. As a customer subscribing to events from your environment, select which hotels will consume the events.

The subscribed to event will be in a ‘Pending Approval’ status.

> **Note**
>
> Only OPERA environments enabled for streaming appear in the list of environments. Events will not be subscribed if they are not available in the version of OPERA Cloud run by the selected environment.

Viewing Connection Status for Subscribed Events

When viewing the **Subscribed** tab, each subscribed environment displays a status indicator showing the connection state between the application and the OHIP streaming service.

Table 13-1 Status Indicators

Status Indicator Dot	Meaning
Green	The application is actively connected to the environment.
Amber	No active connection for 30 minutes.
Red	No active connection for 1 hour.
(no dot)	The subscription is pending approval, in progress, or not connected to streaming.

Example Scenarios

- The existing subscription is inactive for more than or equal to 1 hour - A Red dot appears.
- Connect an inactive subscription - Dot changes to green.
- First-time subscription - Dot is green immediately after connecting.

- The Customer subscription is without a streaming connection - Green initially, amber after 30 minutes, and red after 1 hour.
- The Partner subscription is pending approval - No dot until approved and then green. The dot turns amber after 30 minutes inactive and then red after 1 hour.
- Error states - In Progress shows no dot; Error shows dot matching last known state.
- Resubscription - Keeps existing dot until connection changes; green when approved.
- Rejected pending approval - No dot during approval; returns to previous dot color after rejection.
- Partner sandbox subscription - Green when connected; amber after 30 minutes inactive; and red after 1 hour inactive.

Unsubscribing from Events

Once events are approved, you can unsubscribe from them as needed.

> **Note**
>
> Unsubscribing from events on the Subscribe tab does not affect the events that appear on the Template tab. Also, changes made to events on the Template tab do not affect event subscriptions.

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Events** tab.
4. Click the **Subscribed** tab.
5. Under Event Subscriptions, locate the event and click the green arrow to expand it and then click **Unsubscribe**.

Approving Events

A customer with Developer Portal access can approve the consumption of events from a specific environment. The customer can approve a partner's request to consume events before any events are sent to the partner. This enables customers to protect their data.

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Partner Applications** tab.

> **Note**
>
> Applications with pending event subscriptions appear with a red ribbon icon on the application card.

4. Click an application with a pending event to open it.
5. Click the **Events** tab.
6. Click **Next** to proceed with approval.

7. Select the properties for the event subscription and click **Next**.
8. Click **Approve**.

The event status changes to ‘In Progress’ and then to ‘Approved’ status. The partner can see this status in the Developer Portal.

Rejecting Events

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Partner Applications** tab.
4. Click an application with a pending event to open it.
5. Click the **Events** tab.
6. Click **Reject** to reject the subscription.

   The event status changes to ‘In Progress’ and then to ‘Rejected’ status. The partner can see this status in the Developer Portal.

Revoking Events

As a customer, if you no longer want a partner to consume events from your chain, deselect all hotels on the partner's application:

1. Open the Developer Portal and click the **Applications** tab.
2. Search for and click an application to open it.
3. Click the **Partner Applications** tab.
4. Click an application with a pending event to open it.
5. Click the **Events** tab.
6. Click **Edit** next to the list of hotels.
7. Deselect all the hotels.
8. Click **Save**.

Adding Events to Existing Subscription

To add events to an existing approved subscription:

1. Add the events on the Template tab (see the ‘Creating a Template of Events for an Application’ procedure above).
2. Subscribe again to consume events from the same environment (see the ‘Subscribing to Events’ procedure above).

Adding Hotels to an Existing Subscription

A customer with Developer Portal access can adjust an existing approved subscription to consume events from different hotels.

1. Open the customer or partner application.
2. Go to the **Events** tab.
3. Click **Edit** next to the list of hotels.
4. Select the hotels that can consume the events.
5. Click **Save**.

Connecting to the Streaming API

Overview

The streaming API is built on GraphQL over WebSocket protocol. This protocol defines that a given stream (identified by application key, URL, and chainCode) can only be consumed by one application/process/thread. Therefore, do not use multithreading when connecting to the Streaming API.

Prerequisites

Streaming Business Events from OPERA Cloud requires a minimum version of OPERA Cloud 22.3.0.1.

Before connecting to consume Business Events from the WebSocket, verify the following prerequisites are met:

- Onboard to OHIP by following the steps in Getting Started for Partners.
- Create an application by following the steps in Registering an Application.
- Take a note of the application key.

> **Note**
>
> It is important that you write down the application key.
>
> You can only connect to the streaming API from one application at a time using the same application key. Using a single application key to simultaneously access the API from multiple applications will stop the streaming service.

- Add an environment from which to consume events. For more information, see Environments (Gateways and Credentials). Take note of the following:
  - **ClientId and ClientSecret** — These are needed to obtain the oAuth token.
  - **Gateway URL**
- Check that the environment is streaming enabled. It will have a label "Streaming Enabled" if this is the case.
- Set up the template of events. For more information, see Working with Events and Creating a Template of Events for an Application.
- Subscribe to consume the events from an environment. For more information, see Working with Events and Subscribing to Events.

If the environment is the partner sandbox or an environment owned by your organization, the request to consume events is automatically approved. If not, environment owners (usually customers) must approve the request to consume events from their environment. To do this, follow the process in Working with Events and Approving Events.

Once the request to consume events is approved, the event is listed as "Approved" on the Developer Portal.

GraphQL

The streaming API uses GraphQL subscriptions delivered through WebSocket. To learn more about this technology, read our blog post.

WebSocket Authorization

Access to the streaming API is protected by oAuth and an application key. The application key comes from the application you created in Registering an Application.

To obtain the oAuth token, follow the processes described in Using the Oracle Hospitality APIs and in Authenticating to Oracle Hospitality Property APIs. For an example of the oAuth token, visit the Get OAuth Token page on the Postman API Platform site at https://www.postman.com/hospitalityapis/workspace/oracle-hospitality-apis/request/15729853-58d0804e-b607-4c37-bf2f-0656c254573c.

Information required to call the WebSocket

To connect to the streaming API, the following pieces of information are required:

- Application Key (Create an application by following the steps in Registering an Application.)
- Valid oAuth Token
- URL

> **Note**
>
> If the URL listed on the Environment panel in the Developer Portal is "https://www.oracle.com," the URL for the streaming API should be "wss://www.oracle.com/subscriptions." The change from "https" to "wss" is required for connection via WebSocket.

Browsing the OHIP Schema

The Documentation Explorer is located on the right-side of the screen.

1. Click the **Subscription** link to browse the schema for creating the subscription.

   The Subscription object requires you to specify a "NewEventInput" object containing the chainCode and the offset.
2. Click **NewEventInput** to view the data type and limits on these fields.
3. Click the **Subscription** arrow to go back to the definition of the Subscription object.

   Returned in the response to this subscription is the type called "EventHeader."
4. Click the **EventHeader** to view details of the fields that can be returned (if included in the query).
5. Click any of these fields to see the object definition, data types, and limits on the fields.

   One of the response fields is the "detail" array, which includes fields such as newValue, oldValue, and elementName (that is, the name of the data element that changed).
6. Compose your GraphQL query using the left-side of the screen, which includes intellisense to speed up the completion of the query.
7. Click **Start** to open the WebSocket connection. Any events meeting the subscription configured in the Developer Portal are sent and appear on the right-side of the screen, but include only those fields specified in the subscription query on the left-side of the screen.

The right-side of the screen only shows the latest event. Since many events will be sent at once, use the developer tools in the browser to view the full list of sent events.

8. Click **Stop** to disconnect the WebSocket.

> **Note**
>
> When the Auth Token expires, the connection must be severed and then reestablished with a fresh Auth Token every hour.

Connecting to the Streaming API via GraphiQL

To better visualize the streaming API, a playground application is available that uses a tool called GraphiQL. The GraphiQL tool is often utilized with GraphQL APIs. It is available as a standalone web page from our public Github repository.

> **Note**
>
> The GraphiQL page has a limitation that a single browser can only stream events from one application at a time. GraphiQL cannot be open in multiple tabs or windows consuming events from different applications.

Connecting via GraphiQL

1. Enter the **URL** (see the 'Information required to call the WebSocket' section in WebSocket Authorization).
2. Enter an **Auth Token** as described in WebSocket Authorization.
3. Enter the **API key** as it is listed in the Developer Portal.

   This is the not the sha256 hash of the API key.
4. Click the **Start** button.
   - This stores the values on your machine not on the server. Only you can view these saved values.
   - This populates the Socket Key.

   The connection is open if you see the three boxes appear below the Start button.
   - The **left-hand box** displays a navigable representation of the GraphQL schema, showcasing the fields available for inclusion in the subscription.
   - The **middle box** contains the subscription request, which by default includes a getHelp query and an example subscription.
   - The **right-hand box** shows the latest response received.

   Since the middle box holds only the latest response, you should open developer tools in your browser, usually the Network tab, so that all events sent on the stream are visible.
5. Click the **play** button to open the WebSocket connection. By default, this returns the getHelp query with useful links to this guide.
6. Comment out the getHelp query and remove the comments in front of the example subscription.

Use **CTRL + /** to comment or uncomment.

7. Optionally, add elements from the GraphQL schema into the subscription. Press **CTRL + space** to list fields from the schema.
8. Click the **play** button to open the WebSocket connection. All events that occurred after the subscription was approved are now sent with the latest event shown in the middle pane. The WebSocket connection remains open until you click the stop button. This means if any of the events chosen in the Developer Portal occur in the subscribed hotel(s), the events are immediately sent on the streaming API and appear in the middle pane.

> **Note**
>
> When the Auth Token expires, the connection must be severed by clicking the stop button and then reestablished with a fresh Auth Token every hour. As noted in the Broken Connections topic, OHIP sends any events that occurred between stopping and restarting the WebSocket connection.

Viewing Historic Events

To view historic events, use your web browser's developer tools. For example:

1. In Mozilla Firefox, press **F12** to open developer tools.
2. Click the **Network** tab.
3. Click **WS** to show only WebSocket requests.
4. After clicking the **play** button, click the last web service request sent.
5. When the details appear, click the **Response** tab.

You will see all the sent business events. You can view each business event inside the developer tools by clicking it, or you can copy it by right clicking the business event in the list of responses and clicking **Copy Message**.

Connecting to the Streaming API with Postman

Postman can be accessed online or from the Postman API Client https://www.postman.com/product/api-client/. You must be signed in to a Postman workspace to use WebSocket APIs in Postman.

> **Note**
>
> While it is possible to support WebSocket via Postman, it is not yet possible to save WebSocket requests in Postman except while signed in to a Postman workspace.
>
> You can connect to a given stream from only one application and thread at a time. Ensure the stream (identified by the application key, URL, and chainCode) is not being used by any other applications.
>
> Postman does not support the sending of a ping, so any postman connection closes after 5 minutes.

Consuming Events in Postman

To consume events in Postman, follow one of the two options below:

Option A

1. Fork this Postman collection and fork this Postman environment file.
2. Use this oAuth API example to first obtain an oAuth token.

Option B

1. Select **New** and then select **WebSocket Request**.
2. Enter the **URL** in the following format: wss://www.oracle.com/subscriptions (as described in WebSocket Authorization under 'Information required to call the WebSocket').
3. Add the **query parameter** (see the 'Query Parameters' section).
4. Add the **headers** (see the 'Headers' section).
5. Send the **Authentication message**.
6. Send the **subscription message** within 10 seconds of the Authentication message.
7. View the **events** returned.

Query Parameters

The GraphQL subscription resource has one mandatory query parameter named "key." The value is a sha256 hash of the application key obtained from Registering an Application.

If LINUX environments are running, echo-n ABC-123 | sha256sum (where "ABC-123" is the application key) will return the required hash. In Microsoft Windows environments, use a code snippet or download GitBash or Windows Subsystem for Linux. To run this command, visit the Install WSL page on the Microsoft website at https://docs.microsoft.com/en-us/windows/wsl/install. Alternatively, you can use an online sha256 hash generator.

> **Note**
>
> Ensure only lowercase hashes are used.

To add this to Postman:

1. In Postman, click the **Params** tab
2. In the first column, enter the value "key."
3. In the second column, enter the value of the 256 hash that was calculated above.

Headers

The Oracle Hospitality streaming API uses the GraphQL-WS protcol passed in headers:

1. In Postman, click the **Headers** tab.
2. In the first column. enter the value "Sec-WebSocket-Protocol."
3. In the second column, enter the value "graphql-transport-ws."

ID

All messages, except the "ping" message (see Keeping the Stream Open), require you to specify an ID in the request payload.

The ID should be a GUID to avoid collision with other consumers.

The same ID value must be used throughout a stream's life.

Authentication Message

Send the authentication "Connection Initialization" message before sending the subscription message.

1. In Postman, click the area marked **New Message** and enter the following:

```
{
  "id": "<GUID>"
  "type": "connection_init",
  "payload": {
      "Authorization": "Bearer <OAUTH TOKEN>
      "x-app-key": "<APPLICATION KEY>"
   }
}
```

Where:

- oAuth Token is the access_token returned from the oAuth request. For more information, see Web Socket Authorization.
- APPLICATION KEY is the application key from Registering an Application.

Once the authentication message is successfully received, the following "Connection Acknowledged" message is returned:

```
{
   "type": "connection_ack",
   "payload": {
         "applicationName":"<APPLICATION NAME>"
   }
}
```

Where APPLICATION NAME is the name of the application that corresponds to the application key. This validates that the correct application is being used.

In Postman, the connection will show as "CONNECTED."

Subscription Message

1. Send the subscription message within the next 10 seconds now that the connection is authenticated and connected.
2. In Postman, overwrite the Authentication message request body with the following request body:

```
{
   "id": "<GUID>",
   "type": "subscribe",
```

```
   "payload": {
       "variables": {},
       "extensions": {},
       "operationName": null,
       "query": "subscription { newEvent(input: { chainCode: \"OHIPCN\" })
{ metadata { offset } moduleName eventName detail { oldValue newValue
elementName } } }"
    }
}
```

The "query" is the GraphQL query formatted against the OHIP schema. It contains the fields to be returned along with business events.

For the full schema of what can be sent in the Subscribe request body, consult the Documentation navigator in GraphiQL.

3. For the chainCode, specify the "tenant" entered when creating the integration user. Refer to step 1 in Authenticating to Oracle Hospitality Property APIs. This is also prefixed on your integration username.
4. Click the **Send** button.

Viewing the Events Returned

In Postman, messages from the server begin with a down arrow.

To see the JSON response payload:

1. Click to expand the message.

The payload includes only those elements from the "query" specified in the Subscription message.

When multiple events are pending subscription, each event is returned in sequence.

Query the Connection Status for a Streaming Application

To query the connection status of the streaming consumer, use the following GraphQL message:

Sample Request:

```
query {
  connection {
    id
    status
  }
}
```

The Server will send back a response with related information:

```
{
  "data": {
    "connection": {
      "id": {}"[connectionId - with format* }}{*}{{context.gateway.name}}{{ +
"-" + }}{{{}context.subscriberChannel{}}}]{{{}",
      "status": {}"Active"
    }
```

```
  }
}
```

Keeping the Stream Open

To keep the connection open, you must send a "ping" request at least every 15 seconds on the WebSocket (see the below JSON example).

```
{"type":"ping"}
```

> **Note**
>
> You are not charged for this "ping" request.

An example implementation is listed on GitHub in the Recipes section under 'Client usage with ping/pong timeout and latency metrics.'

The server also sends pings to the client. It is important that as soon as it receives a "ping" from the server the client return a "pong" message to this request from the client as documented in the Protocol:

```
{"type":"pong"}
```

Updating Authentication

The streaming API is secured by an oAuth token whose life is limited to one hour (sixty minutes). To continue receiving events, you must keep the stream open by doing the following:

1. Close the WebSocket before the oAuth token expires (see Disconnecting the WebSocket for more information).
2. Request a new oAuth token from the oAuth API.
3. Reopen the websocket and specify the new "access_token" received from the oAuth API.

Disconnecting the WebSocket

WebSockets are designed to stay open for the life of the oAuth token. For this reason, it is recommended that OCIM Administrators set the lifetime of OCIM OAuth tokens to no less than 60 minutes. When planning to disconnect from a WebSocket (refer to the Broken Connections topic), be aware of the following:

- Events will queue up while disconnected, but only 7 days of events are retained. This can be a large volume of events, so before reconnecting, verify your consuming architecture can support the volume.
- Send the "Complete" message (see the example below).
- Accept and process events that are in the process of being sent.
- Wait for OHIP to close the connection.

Sending the Complete Message

Before disconnecting, ensure you send the below Complete message (see the protocol for more information):

```
{
    "id": "<GUID>",
    "type": "complete"
}
```

You must send the Complete message to connect to the stream (identified by the application key, URL, and chainCode). Failure to send the Complete message will make it impossible to connect to the stream. If a subscribe message is sent to a stream that has not yet received a complete message, a 4409 error will occur.

Reconnecting after Complete

Ensure there is a minimum of 10000ms (10 seconds) between sending the "Complete" message to close a WebSocket connection and sending the next "Subscribe" message to reopen a WebSocket connection.

Streaming Best Practices

> **Note**
>
> You must connect to the WebSocket at least once every 24 hours. If not, then you must send the optional "offset" input parameter together with the value of the last offset you received.
>
> Ensure there is a minimum of 10000ms (10 seconds) between sending the "complete" message to close one WebSocket connection and the next "subscribe" message to reopen a WebSocket connection.

The Streaming API is not throttled. As events are produced, they are immediately sent out. Potentially, this means many events will be pushed at the same time and create a backpressure.

To cope with this potential backpressure, it is essential the consuming architecture can scale, for example, by buffering before writing to back-end systems. If the backpressure exceeds the ability of the consuming architecture to scale, you can disconnect the WebSocket and then restart it later once more capacity is available in the consuming architecture. Any events that occurred since the WebSocket disconnect will be sent as soon as you reconnect.

While no option is currently available to clear the backlog of events, the "latest" parameter allows you to skip to the latest Business Event in the stream and continue processing from there.

To ensure streaming clients are resilient, redundancy in clients is key. However, only one client can be connected to consume events from a single chain on a single application key. The best practice is to create multiple consuming clients, but maintain a log of which client is connected. The consuming clients not connected should not send requests to the streaming gateway (as these will receive a 4409 response), but wait until the first connected client disconnects before the next client connects. Some partner solutions on the marketplace already implement this pattern.

For more information on best practices for the streaming API, refer to the Streaming APIs topic.

Streaming Troubleshooting

If you are experiencing issues consuming the Streaming API, check the following:

Environment

- Verify the OPERA environment from which you wish to stream events is listed on the Environments tab of the developer portal.
- Verify the OPERA environment shows as Streaming Enabled on the Environments tab of the developer portal.
- Verify you have valid credentials to obtain the oAuth token (see API Troubleshooting for more information).
- Verify the oAuth token is current by looking at the "exp" attribute of the oAuth token. If the token has expired, request a new oAuth token.

Configuration

Ensure your application streaming configuration is both requested and approved (see Working with Events in the Developer Portal for more information).

Postman

Postman cannot send "ping" on an open WebSocket, so the connection will automatically close. When it closes, you must resend the "init" message and then resend the "subscribe" message.

It is not yet possible to save WebSocket requests in Postman, except when signed in to a Postman workspace.

GraphiQL

If you receive errors from GraphiQL, ensure you have it opened only once. It cannot support streaming events from different applications in different tabs (see Connecting to the Streaming API via GraphiQL for more information).

Not Receiving the Expected Data

If you are not receiving the pieces of data you expected, check the subscribe message to ensure it includes the expected field.

The hotelId will always be null for chain-level entities, such as profiles, which tend to be shared across all hotels in the chain.

Verify this page lists the expected data values for the event(s) to which you are subscribed (see the ‘Business Events - Activity’ heading under the Configuring Business Events topic in the OPERA Cloud User Guide).

Receiving Unexpected Events

Keep in mind that a single action, such as checking a guest in, can trigger multiple business event notifications because that single action modifies multiple resources.

For integration partners developing against the sandbox, keep in mind that the actions taken by other partners in the sandbox will generate events.

Not Receiving Expected Events

If you are not receiving all new reservations, it is possible the customer has an external CRS setup. Request the customer to set up a "publisher" on your external system (the external system code is displayed on the **Application**, **Events**, **Subscribed** tab in the developer portal) following this process (see the 'Managing External System Publishers' heading under the Configuring External Systems topic in the OPERA Cloud User Guide).

If you are not receiving any events, it is possible you have not connected for greater than 24 hours. In this case, stop the WebSocket and reopen it, specifying in the subscribe message the last offset you received.

Verify you are not unexpectedly using the "hotelId" filter in the subscribe message.

Getting Overwhelmed with Events

The Streaming API sends events as soon as they are available, so it is important that consuming architecture can scale and potentially buffer events to avoid choking database connections (see Streaming Best Practices for more information).

Receiving the Same Event Twice

In a rare scenario, it is possible that the same event can be sent twice. This is identified by the primaryKey and the offset being identical. In this case, you should process the first event that arrives.

How do I see which events have been sent or enqueued?

In a troubleshooting scenario, you can open a support request to verify which events have been sent and which have been enqueued. For more information, see Opening a Support Request.

Other Errors

See the Errors topic for suggested resolutions to common errors.

If the "init" request is failing, ensure you send it within 5 seconds of the HTTP upgrade request.

If the connection keep closing:

- Ensure you send "ping" every 15 seconds (see Keeping the Stream Open for more information).
- Postman cannot send "ping," so the connection will automatically close.
- Wait at least 10000ms between closing and re-opening the WebSocket, or you will receive 4409 errors (see Disconnecting the WebSocket for more information).
- Ensure that only one process/thread/user is connected to a given stream (identified by application key, URL, and chainCode) at any one time.
- Ensure you have connected only one WebSocket per application: Connecting more than one WebSocket with the same application key will result in 4409 errors.
- If the socket closes with a 4401 error, obtain a new oAuth token before reconnecting. The socket will automatically close every one hour when the oAuth token expires (see Keeping the Stream Open for more information).
- Receiving a 4403 error:
  - Verify the chain to which you are subscribing in the subscribe message matches the chain for the integration user that was used in the oAuth request.

- Receiving a 4409 error:
  - Ensure only one client or process consumes events from a given gateway using a given application key and chain code.
  - Ensure you send the Complete message before disconnecting from the WebSocket.
  - Ensure you send the ping message to keep the stream open (see Keeping the Stream Open for more information).
  - Reconnect after 5 minutes.

Confused About Implementation?

We adhere to the GraphQL over WebSocket protocol, so ensure your implementation meets this protocol.

An example implementation is available on this GitHub page.

It is suggested that you create a second application using the GraphiQL tool to better distinguish between implementation and configuration issues.

Scaling Streaming Consumption

Only one streaming consumer can receive business events on the Streaming API at any one time. If another streaming consumer connects and sends the "subscribe" request, the consumer receives a 4409 error.

For resilience, scale out the number of streaming consumers so that each streaming consumer:

1. Connects to the Streaming API
2. Sends the "init" request
3. Sends the below request to query the connection:

```
query {
  connection {
    id
    status
  }
}
```

The streaming consumer should only send the "subscribe" request if the response indicates the "status" is Inactive.

Backpressure Mode

When large amounts of events are produced by OPERA Cloud, the streaming API begins sending events in bursts (backpressure mode), moving onto the next burst dynamically based on the line speed. OHIP determines the latency by sending a ping to the consuming client and measuring the latency between that and the pong response sent by the client.

Broken Connections

To avoid missing messages, you should keep the WebSocket connected. However, interrupted connections do occur, so OHIP retains a record of the last message sent to each connection as well as up to 7 days of messages. If the WebSocket gets disconnected, reconnect as

described in the Authentication message. OHIP will then send any messages that have occurred since the disconnection occurred. For example:

> **Note**
>
> OHIP holds the last offset for 24 hours only. If you do not reconnect within 24 hours, you must send the offset in the subscribe message that reflects the last offset you received.

Table 13-2 How the Streaming API works around broken connections

Oracle Hospitality System Emits Offset	OHIP Sends Partner Offset	Partner Receives Offset
191	191	191
192	192	192
193	193	193
194		Connection broken
195		Connection broken
196		Connection broken
	194	Connection re-established
	195	194
	196	195
		196
197	197	197

If the WebSocket remains disconnected for over 7 days, this might result in missed messages. Refer to the following table for examples.

Table 13-3 How the Streaming API stores and replays 7 days of events

Day	Oracle Hospitality System Emits Offset	OHIP Sends Partner Offset	Partner Receives Offset
1	191	191	191
1	192	192	192
1	193	193	193
2	194 to 317		Connection disconnected for day 1
3	318 to 520		Connection disconnected for day 2
4	521 to 701		Connection disconnected for day 3
5	702 to 929		Connection disconnected for day 4
6	930 to 1027		Connection disconnected for day 5
7	1028 to 1240		Connection disconnected for day 6

Table 13-3 (Cont.) How the Streaming API stores and replays 7 days of events

Day	Oracle Hospitality System Emits Offset	OHIP Sends Partner Offset	Partner Receives Offset
8	1241 to 1403		Connection disconnected for day 7
9	1404 to 1581		Connection disconnected for day 8
10	1582 to 1826		Connection disconnected for day 9
11		521 to 1826	Connection re-established 521 to 1826
11	1827	1827	1827

In this example, messages 194 to 521 are missed and it is not possible to replay them.

Replaying Messages

> **Note**
>
> If you use the ‘offsetType’ parameter in the subscribe message, then events that occurred before that parameter was used are not included in any message replay.

The OHIP schema includes the metadata attribute "offset," which is the message number.

To replay messages already received, specify the offset value following the chainCode. For example in Postman:

```
{
   "id": "1",
   "type": "subscribe",
   "payload": {
         "variables": {},
         "extensions": {},
         "operationName": null,
               "query": "subscription { newEvent(input: { chainCode: \"<CHAIN
CODE>\" offset: \"<OFFSET>\" } ) { metadata { offset } moduleName eventName
detail { oldValue newValue elementName } } }"
   }
}
```

In GraphiQL add the offset parameter after the chainCode. For example:

```
subscription{
  newEvent(input:{chainCode: \"<CHAIN CODE>\" offset: \"<OFFSET>\"}) {
    moduleName
    eventName
    detail{
```

```
      newValue
      oldValue
      elementName
    }
    metadata{
      offset
      uniqueEventId
    }
  }
}
```

OHIP sends event 193 and all events that occurred after event 193.

As noted in Broken Connections, if offset 193 was emitted more than 7 days ago, OHIP will return all messages emitted since 7 days ago. This is because OHIP retains events for only 7 days.

Retrieving the Latest Message

To retrieve only the latest message, use the "offsetType" parameter and specify the value as "highest." For example:

```
{
   "id": "1",
   "type": "subscribe",
   "payload": {
         "variables": {},
         "extensions": {},
         "operationName": null,
               "query": "subscription { newEvent(input: { chainCode: \"<CHAIN
CODE>\" offsetType: \"highest\" } ) { metadata { offset } moduleName
eventName detail { oldValue newValue elementName } } }"
   }
}
```

Streaming Scenario

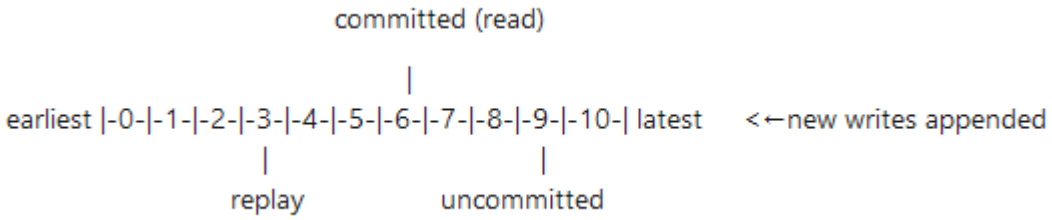
Imagine the following scenario: A stream has produced 10 events over the previous 24 hours. A consumer has connected and consumed events 0 to 6 inclusive, and then disconnected again.

While the consumer is disconnected, events 7 to 10 occur.

If the consumer connects again without specifying an offset, then events 7 to 10 are sent to the caller followed by subsequent events.

If the consumer connects again and specifies an offset of 3, then events 3 to 10 are sent to the caller followed by subsequent events.

If the consumer connects with the offsetType highest, then only event 10 is sent, followed by subsequent events.



Therefore, only use the offsetType highest if you have no interest in historic events because you will no longer receive them. Similarly, you can never maintain the sequence of events if you use offsetType highest.

A good use case for offsetType highest is when a resource is changing rapidly, and you are only interested in the last state of the resource.

> **Note**
>
> Do not use offsetType highest if you must synchronize an external system with OPERA Cloud as it would get (and remain) out of sync.

Interpreting the Event

Determining Changes

Three key fields are used to determine what has changed:

- elementName
- oldValue
- newValue

New Records

When receiving the record of a new Reservation, the payload will include the following for each field in the Reservation:

```
{
   "elementName": "First Name",
   "newValue": "NewFirstName"
   "oldValue": null
}
```

> **Note**
>
> For the polling API, the "oldValue" will not be in the payload.

Updated Records

The following scenarios reflect when a record is updated and a field is changed:

1. If a field was blank before the update,

   The polling API returns:

   ```
   {
      "dataElement": "First Name",
      "newValue": "NewFirstName",
   }
   ```

   The streaming API returns:

   ```
   {
      "elementName": "First Name",
      "newValue": "NewFirstName",
      "oldValue": ""
   }
   ```

2. If the field is updated with a blank value,

   The polling API returns:

   ```
   {
      "dataElement": "First Name",
      "oldValue": "TheOldFirstNameValue"
   }
   ```

   The streaming API returns:

   ```
   {
      "elementName": "First Name",
      "newValue": "",
      "oldValue": "OldFirstName"
   }
   ```

3. If the field was not changed during this event,

   The polling API returns:

   ```
   {
      "elementName": "First Name",
      "newValue": "MyFirstName",
      "oldValue": "MyFirstName"
   }
   ```

   By default, the streaming API returns the same fields. However, if the "delta" input variable is set to true, the streaming API returns only fields whose value has changed. In this scenario, the elementName "First Name" would not be sent by the streaming API.

Removed Fields

If a field has been removed, this is reflected as:

```
{
   "elementName": "First Name",
```

```
   "oldValue": "OldFirstNameValue"
}
```

Retrieving Unchanged Fields

As you can see in Updated records, if a field remains unchanged neither the "oldValue" nor "newValue" is sent. To retrieve the current (unchanged) value, make a GET call to the resource using the "primaryKey" field that is sent in the event payload. For example, if the event is UPDATE RESERVATION, the primaryKey will be a reservationId, so the full resource can be obtained using the getReservation API.

Comparing the Event Payload from Polling and Streaming APIs

Polling API Business Event payload

```
{
    "businessEventData": [
        {
            "businessEvent": {
                "header": {
                    "moduleName": "Reservation",
                    "actionType": "NEW RESERVATION",
                    "actionId": "1234567",
                    "primaryKey": "987654",
                    "publisherId": "15951",
                    "createdDateTime": "2021-06-03 16:45:48.0",
                    "hotelId": "ABC123"
                },
                "detail": [                    {
                        "dataElement": "FIRST NAME"
                    },
                    {
                        "dataElement": "CONFIRMATION NO",
                        "newValue": "123456789"
                    }
                ]
            },
            "businessEventId": {
                "id": "1234567"
            }
        }
    ]
}
```

Streaming API Business Event payload

```
{
  "data": {
    "newEvent": {
      "metadata": {
        "offset": 100,
        "uniqueEventId": "0ed06ced-843e-4e35-86ec-e2564cf495ee"
      },
      "moduleName": "Reservation",
```

```
      "eventName": "NEW RESERVATION",
      "primaryKey": "123456",
      "timestamp": "2021-06-03 16:45:48.000",
      "hotelId": "ABC123",
      "publisherId": "15951",
      "actionInstanceId": "222222",
      "detail": [
        {
          "newValue": "NewFirstNameValue",
          "oldValue": "",
          "elementName": "FIRST NAME",
          "scopeFrom": "",
          "scopeTo": "",
          "elementType": null,
          "elementRole": null,
          "elementSequence": null
        },
        {
          "newValue": "123456789",
          "oldValue": "",
          "elementName": "CONFIRMATION NO",
          "scopeFrom": "",
          "scopeTo": "",
          "elementType": null,
          "elementRole": null,
          "elementSequence": null
        }
      ]
    }
  }
}
```


Table 13-4 Comparing Fields in the Polling and Streaming APIs

Section	Field Name in Polling	Section	Field Name in Streaming	Use
Header	moduleName	Event Header	moduleName	Grouping of events, useful guide to which API to use if unchanged data are needed.
Header	actionType	Event Header	eventName	Name of the event that occurred.
Header	actionId			Number of the event emitted from OPERA.
		Event Header	actionInstanceId	Number of the event emitted from OPERA.

Table 13-4 (Cont.) Comparing Fields in the Polling and Streaming APIs

Section	Field Name in Polling	Section	Field Name in Streaming	Use
Header	primaryKey	Event Header	primaryKey	OPERA internal ID of the resource on which the event occurred. For example, an UPDATE RESERVATION event occurs on a reservation resource, so the primaryKey is the reservationId.
Header	parentActionId			
Header	publisherId	Event Header	publisherId	User reference Id of the user who created the transaction in OPERA.
Header	createdDateTime	Event Header	timestamp	Date and time the event occurred.
Header	hotelId	Event Header	hotelId	OPERA internal Id of the hotel in which the event occurred.
		Subscription	chainCode	OPERA Shared Security Domain organization code within which the event occurred.
		Metadata	offset	Offset number of the event emitted from OHIP.
		Metadata	uniqueEventId	Unique identifier for the event emitted from OHIP.
Detail	dataElement	Detail	elementName	Name of the field that changed.
Detail	oldValue	Detail	oldValue	Old value of the field that changed (see notes in the 'Determining Changes' section)
Detail	newValue	Detail	newValue	New value of the field that changed (see notes in the 'Determining Changes' section)

Table 13-4 (Cont.) Comparing Fields in the Polling and Streaming APIs

Section	Field Name in Polling	Section	Field Name in Streaming	Use
Detail	scopeFrom	Detail	scopeFrom	Beginning of the data range for which the business event is valid. For example, if a rate code or rate amount is different for different stay dates and the rate is updated, the scopeFrom determines the start of the stay date range that was updated.
Detail	scopeTo	Detail	scopeTo	End of the data range for which the business event is valid. For example, if a rate code or rate amount is different for different stay dates and the rate is updated, the scopeTo determines the end of the stay date range that was updated.

Errors

All errors result in the connection being broken and require the below fixes before connecting again.

Table 13-5 Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
429 Too Many Requests	Sending more than 150 requests to upgrade to WebSocket and sending the requests within 2 minutes from the same application.	Retry after 2 minutes.	HTTP

Table 13-5 (Cont.) Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
499	The client disconnected before the server was able to send a response to the initial HTTP upgrade, so the WebSocket was not opened.	Ensure your calling architecture is leaving the connection open long enough for the server to reply.	HTTP
1000 Normal Closure	The WebSocket was disconnected by the caller	Reconnect from the Authentication message.	WebSocket
1001 Going Away: Going away	Maintenance by Oracle	Reconnect from the Authentication message.	WebSocket
1006 Abnormal Closure: Abnormal Closure	Connection broken	Wait 4 seconds and then reconnect from the Authentication message.	WebSocket
Error: Unexpected server response: 400	Incorrect key or URL	• Check the sha256 hash of the application key is correct. • Check that the application key is subscribed to consume events and that the event subscription is approved. • Check the URL matches the environment listed in the Developer Portal. • Check that the environment is Streaming Enabled.	HTTP

Table 13-5 (Cont.) Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
4400 Error: Bad Request - Invalid GraphQL Subscription	Invalid field in subscription message	• Check the response body which includes details of the invalid field. For example, "Cannot query field XYZ on type ABC" or "Value for <FIELD> is invalid - Expected ABC to match pattern ZYZ." • Check that the fields in the subscription request match the OHIP schema Github link. • Reconnect from the Authentication message.	WebSocket
4401 Error: Unauthorised - Invalid credentials	Invalid credentials sent in the Authentication message	• Check you are sending the application key, not the sha256 hash of the application key. • Check that the application is subscribed to consume events and that the event subscription is approved. • Check that the oAuth token is valid and current.	WebSocket

Table 13-5 (Cont.) Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
4403 Error: Forbidden - You are not authorized to access this resource	Invalid chainCode in subscription message	• Check that the chain code in the subscription message matches the chain code being accessed. This is the value at the start of the integration that the user sent to obtain the oAuth token. • Check that streaming is enabled for the environment you are accessing • Reconnect from the Authentication message.	WebSocket
4406 Error: Subprotocol not acceptable	Failing to include the WebSocket protocol header.	Include the header "Sec-WebSocket-Protocol: graphql-transport-ws"	WebSocket
4408 Error: Disconnect	Connection initialization time out	Send the Authentication message within 5 seconds of opening the connection.	WebSocket

Table 13-5 (Cont.) Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
4409 Too Many Requests	More than one client or process is trying to consume events from the same gateway using the same application key and chain code. This often happens in the following circumstances: 1. When consuming events in code and in Postman/ GraphiQL. 2. Where multiple developers are trying to consume events from a single application. 3. Where an application has spawned additional threads all consuming events from the same gateway, application key, and chain code. 4. When disconnecting without sending the Complete message.	Retry after 2 minutes. Ensure that only one client or process consumes events from a given gateway using a given application key and chain code. Ensure that you send the Complete message before disconnecting from the WebSocket.	WebSocket
4429 Error: Too Many Requests	Resending the subscription message when the connection is already open Resending the connection_init message when the connection is already open	The WebSocket connection is already open, so it cannot be reopened. Look for the connection_ack message and do not resend connection_init if you have received a connection_ack.	WebSocket
4500 Server Error - No configuration found. If this problem persists, contact Oracle Customer Support at the Customer Support Portal.	A Subscribe message was sent but either there are no events subscribed for this application, or the subscription is not approved by the environment owner.	Check that the application is subscribed to events and shows as approved for that environment.	WebSocket

Table 13-5 (Cont.) Potential Streaming API Errors and Fixes

Error Returned	How does this Happen?	How to Fix	Error Type
4500 Unable to find configuration between Application, Chain, and Environment. Please ensure your application has access. If this problem persists, contact Oracle Customer Support at the Customer Support Portal.	A piece of internal configuration might be missing.	Ensure your application is approved to consume events and that the URL you are calling is a streaming enabled gateway. If the problem persists, contact Oracle Customer Support at the Customer Support Portal.	WebSocket
4500 Internal Server Error received 6 minutes after sending the subscribe message.	When subscribing, the consuming application should wait up to 6 minutes before receiving any events. If the subscription is valid and an internal issue has occurred, this message is received 6 minutes after sending the subscribe message.	Reconnect and send the Authentication message and then send the Subscription message.	WebSocket
4501 Socket closed with error 4501 Not Supported Environment for subscriptions	Connecting to an environment that does not support streaming Business Events.	Ensure the environment shows as "Streaming Enabled" on the Environments tab of the developer portal. Streaming Business Events from OPERA requires a minimum of OPERA Cloud version 22.3.0.1.	WebSocket
4504 Socket closed with error 4504 Service Timeout	This error occurs when the OCI Streaming Service goes down for more than 30 seconds.	Try again after 15 seconds. If this problem persists, contact Oracle Customer Support at the Customer Support Portal.	Websocket

Polling API (pull)

Due to the many limitations of Polling, Oracle recommends using the Streaming API (push) to consume Business Events.

To consume business events generated in OPERA Cloud using the polling APIs, search for the OPERA Cloud Integration Processor API on the GitHub site and follow the instructions.

Prerequisites

- The customer must be onboarded to consume Business Events via OHIP. For more information, see Getting Started.
- OPERA Cloud properties on OPERA Cloud version 21.2.1+ can configure Business Events in OPERA Cloud without impediment. If an OPERA Cloud property is below version 21.2.1, the customer can raise a Service Request to apply the OPP_BSEV license without cost, which enables them to configure Business Events.

  You can discover your OPERA Cloud version by going to the Postman Overview page and searching for your OPERA Cloud version by entering it into the search field.

Configuring the Polling Subscription

The polling API requires the owner of the OPERA Cloud environment to configure the subscription in OPERA Cloud.

There are two variations for how you can fetch Business Events:

- You can fetch business events for all hotels in the same chain by specifying the external system in the path parameter.
  - In this case, you must create one external database code per chain with all the required properties associated to it.
  - use /int/v1/externalSystem/{**extSystemCode**}/businessEvents
- You can fetch business events for a single hotel in the same chain by specifying the Hotel Id and external system in the path parameter.
  - In this case, you must create an external database code per property.
  - use /int/v1/externalSystem/{**extSystemCode**}/hotels/{**hotelId**}/businessEvents

1. Verify a chain-level user has the below tasks assigned. To assign these tasks, follow the steps in the Assigning Tasks to a Role topic in the OPERA Cloud User Guide.
   a. **Interfaces Admin** — **Property Interfaces** —**External Systems**:
      - **New/Edit External Systems**
   b. **Toolbox**:
      - **External Databases**

      > **Note**
      >
      > If you are auto configuring the external database as described in step 2, this task is not needed.

   c. **Interfaces Admin** — **Property Interfaces** —**Business Events**:
      - **New/Edit Business Events**
2. Create an external system for your organization by following the steps in Configuring External Systems topic in the OPERA Cloud User Guide.

   For OPERA Cloud 23.4+, select **Auto Configure External Databases** to skip step 3. This automatically creates an external database code with the external system code plus the chain code combination.

> **Note**
>
> Make sure you remember the external system code you created.

3. Create an external database by following the steps in the Configuring External Databases topic in the OPERA Cloud User Guide.
4. Configure the chosen events on the external system by following the Configuring Business Events steps in the OPERA Cloud User Guide. For the list of events that can be consumed, see the Business Events Data Elements guide.

> **Note**
>
> If there are challenges with this process, the owner of the OPERA Cloud environment should contact Oracle Customer Support at the Customer Support Portal, raise a Technical SR, and select Oracle Hospitality OPERA Cloud as the product.

5. Communicate or make note of the external system code created at step 2.

Consuming Business Events using the Polling API

1. Onboard to OHIP by following the steps in Getting Started for Hoteliers.
2. Create an application by following the steps in Registering an Application. Take a note of the application key.

> **Note**
>
> Make sure you remember the application key.

3. Add an environment for the environment from which you need to consume events. For more information, see Environments (Gateways and Credentials). Take note of the following:
   - **ClientId and ClientSecret** — These are needed to obtain the oAuth token.
   - **Gateway URL**
4. Determine the hotelId of the hotel from which to consume business events.
5. Call the FetchBusinessEvents API and specify the external system code as configured in the ‘Configuring the Polling Subscription’ task above.

   Do not use the external system code created by the streaming API or the events will end up out of sequence.
6. Specify the x-hotelId as the hotelId from step 4 above.

   If the following response is received from the FetchBusinessEvents API, contact Oracle Customer Support at the Customer Support Portal to raise a technical Service Request quoting this error. (This is resolved in OPERA Cloud version 21.2.1.)

```
"shortText": "Failed to initialize <your external system code>
 interface for <hotelCode> resort: <your external system code> is not
registered as an application user."
```

> **Note**
>
> A maximum of 20 events can be retrieved in one call. A maximum of 300 requests per minute per gateway can be made to the polling API. If a larger amount of events is required, than these limits allow consider the streaming API.
>
> There is a limit of 300 requests per minute for the fetchBusinessEvents API.

For information on how to interpret the event responses and for the differences between the polling and streaming APIs, see Interpreting the Event.

For more information on the polling API, watch OPERA Cloud Business Events.

14

Moving to Production for Environments with Resource Owner Group Authentication (SSD)

This chapter consists of two sections:

- **Hoteliers Moving to Production** — This section explains how a hotelier would move their own integrations to Production once the development and testing phase is complete.
- **Partners Moving to Production** — This section explains how a partner would move an application to Production once testing and development is complete (otherwise known as "activating an application with a customer chain"). In this scenario, all actions are on the Partner side within the Partner Organization Developer Portal, and the only action required by the customer is to approve the integration, either by the Chain Administrator approving the integration user submitted by the partner (for which the Chain Administrator will receive notice in their Shared Security Domain) or by approving the integration in the Oracle Hospitality Integration Platform Developer Portal.

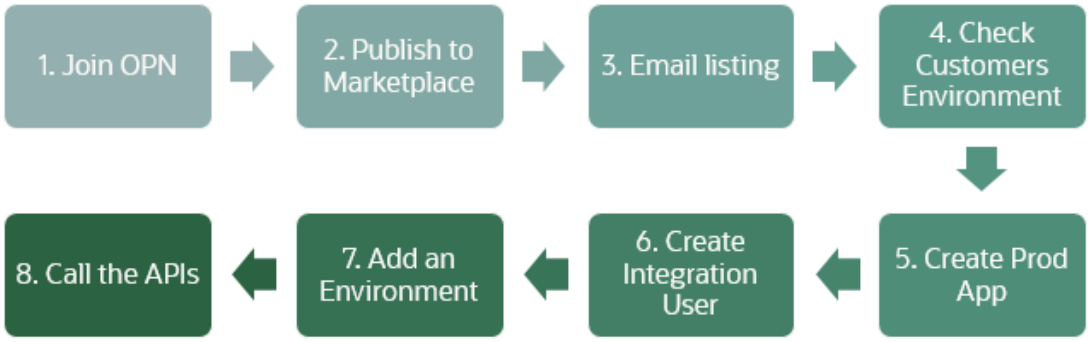
Hoteliers, note that Oracle does not perform any certification for partner integrations through the self-service Oracle Hospitality Integration Platform (OHIP). It is recommended that hoteliers first trial partner integrations in the hotelier's UAT environment, perform their own audits and assessments of the integration, and transition vendors to production only once satisfied. Hoteliers can use the Oracle Hospitality Integration Platform Developer Portal Analytics tab to assist their auditing of partner integrations. Hoteliers could consider hiring Oracle Hospitality Professional Services or another qualified system integrator to assist them in conducting a vendor review, but this is optional.

In the event of any concerns with a partner's integration, hoteliers can disconnect the partner either by revoking the WSACCESS role for Resource Owner environments behind Oracle Shared Security Domain, or by revoking access in the Oracle Hospitality Integration Platform Developer Portal for Client Credentials environments behind OPERA Cloud Identity Manager.

Hoteliers Moving to Production

1. Create and register an application. Ensure you choose “Production” as the environment.
2. Obtain credentials.
3. View environment.
4. Call the APIs.

Partners Moving to Production



> **Note**
>
> You only need to perform steps 1 to 3 on your first integration.

1. Join OPN. Please note the minimum level required for OHIP is the base member / Level 0. For more information, visit How Do I Join Modern OPN?

   Note that this level is “zero” and not the uppercase letter O.
2. Publish your app to the Marketplace. To publish your solution, visit Publish Services and Applications on the Oracle Cloud Marketplace and follow the steps on this page.
3. Contact us via Slack once your application is listed in the marketplace under the OHIP product category. If you’re not part of the OHIP Slack Community, email us at hgbu_integrations_provisioning_grp@oracle.com to request your private channel.
4. Check the customer’s environment by asking customers to verify they are running OPERA Cloud and have an active subscription for OPERA Cloud Foundation. Customers can verify this with their account manager if in doubt.

   If you are using both Early Adopter (v0) and v1 APIS, you will need to subscribe your app to both.

   If your solution involves calling Asynchronous APIs, contact Oracle Support to check if they are supported in the production environment being called. Include the OPERA Cloud URL or gateway URL in the support request.
5. Create and register an application. Ensure you choose “Production” as the environment.
6. Obtain credentials.
7. View environment.
8. Call the APIs.

FAQ

How do I know the customer has approved my integration?

You will receive an email with a subject line.

How do I know the URL for the vendor registration portal?

If you have not received this from customers, ask them for the URL with which they access OPERA Cloud.

15

Moving to Production for Environments with Client Credentials Authentication (OCIM)

This chapter consists of two sections:

- **Hoteliers Moving to Production** — This section explains how a hotelier would move their own integrations to Production once the development and testing phase is complete.
- **Partners Moving to Production** — This section explains how a partner would move an application to Production once testing and development is complete (otherwise known as "activating an application with a customer chain"). In this scenario, all actions are on the Partner side within the Partner Organization Developer Portal, and the only action required by the customer is to approve the partner connection by approving the integration in the Oracle Hospitality Integration Platform Developer Portal.

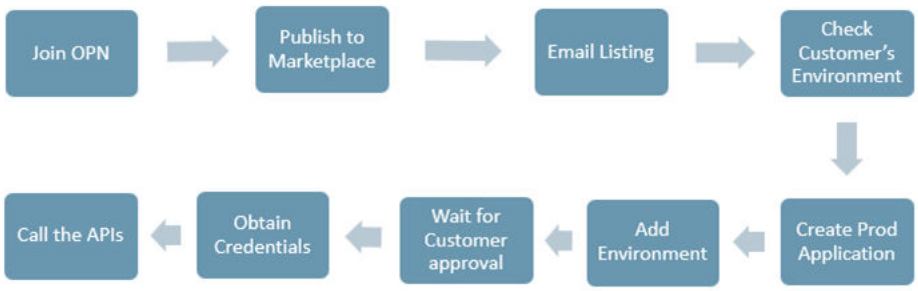
Hoteliers, note that Oracle does not perform any certification for partner integrations through the self-service Oracle Hospitality Integration Platform (OHIP). It is recommended that hoteliers first trial partner integrations in the hotelier's UAT environment, perform their own audits and assessments of the integration, and transition vendors to production only once satisfied. Hoteliers can use the Oracle Hospitality Integration Platform Developer Portal Analytics tab to assist their auditing of partner integrations. Hoteliers could consider hiring Oracle Hospitality Professional Services or another qualified system integrator to assist them in conducting a vendor review, but this is optional.

In the event of any concerns with a partner's integration, hoteliers can disconnect the partner either by revoking the WSACCESS role for Resource Owner environments behind Oracle Shared Security Domain, or by revoking access in the Oracle Hospitality Integration Platform Developer Portal for Client Credentials environments behind OPERA Cloud Identity Manager.

Hoteliers Moving to Production

1. Create and register an application. Ensure you choose “Production” as the environment.
2. Obtain credentials.
3. View environment.
4. Call the APIs.

Partners Moving to Production



> **Note**
>
> You only need to perform steps 1 to 3 on your first integration.

1. Join OPN. Please note the minimum level required for OHIP is the base member / Level 0. For more information, visit How Do I Join Modern OPN?

   Note that this level is “zero” and not the uppercase letter O.
2. Publish your app to the Marketplace. To publish your solution, visit Publish Services and Applications on the Oracle Cloud Marketplace and follow the steps on this page.
3. Contact us via Slack once your application is listed in the marketplace under the OHIP product category. If you’re not part of the OHIP Slack Community, email us at hgbu_integrations_provisioning_grp@oracle.com to request your private channel.
4. Check the customer’s environment by asking customers to verify they are running OPERA Cloud and have an active subscription for OPERA Cloud Foundation. Customers can verify this with their account manager if in doubt.

   If you are using both Early Adopter (v0) and v1 APIS, you will need to subscribe your app to both.

   If your solution involves calling Asynchronous APIs, contact Oracle Support to check if they are supported in the production environment being called. Include the OPERA Cloud URL or gateway URL in the support request.
5. Create and register an application. Ensure you choose “Production” as the environment.
6. Add the Customer Environment.
7. Wait for Customer Approval.
8. Obtain credentials.
9. View environment.
10. Call the APIs.

FAQ

How do I know the customer has approved my integration?

The status of the customer environment will change to “Approved” from “Waiting for Approval” in the OHIP Developer Portal.

16

Migrating from Legacy APIs to REST

Integrations with Oracle Hospitality products now utilize REST APIs exposed through Oracle Hospitality Integration Platform (OHIP). As there are many active integrations certified on our legacy integration products, such as OXI, OWS, ADS, HTNG, and Kiosk, this chapter will help Hoteliers and Partners understand the process to migrate an existing legacy interface to the new REST APIs.

In OHIP, we have the following Oracle Hospitality products:

- Property APIs (OPERA Cloud)
- Distribution APIs

Depending on your integration requirements, there are different scenarios for integrating with Property APIs versus Distribution APIs.

OPERA Xchange Interface (OXI)

The OXI Interface works on an asynchronous pattern which follows the below flow:

1. A message is sent from an external system to OXI.
2. The message sits in a queue.
3. The message is processed.
4. A record is inserted or updated in OPERA Cloud.

Once processed, a response message is returned to the external system, and it again sits in a queue until processed. This same pattern occurs for messages being generated from OPERA Cloud to an external system. The REST APIs work on a synchronous pattern. Conforming to REST architecture, the APIs allow for interaction with RESTful web services.

> **Note**
>
> The REST APIs use JSON formatting.

You can move your integration from OXI to REST and even enhance it as there is greater functionality available with the REST APIs.

OXI Outbound Messages

For messages sent from OPERA Cloud to an external application, the REST APIs utilize the same Business Event functionality as OXI. Therefore, the same data can be triggered from OPERA Cloud. There are two approaches available for use: polling for Business Events using getBusinessEvents operation or using streaming services. For more information on property Business Events available in OHIP, refer to the Business Events topic that explains both options in detail.

OXI Inbound Messages

Data from the external application to OPERA Cloud can be achieved using REST APIs. The below mapping table shows the OXI messages and shows the equivalent Property REST API to use.

Key Considerations

OXI can synchronize data between the two applications. For example, users could enter a date range of reservations, and a batch of resync messages are sent to the external system. This was often used when a hotel went live with a new interface, ensuring the external system had all the required data, including rates, inventory, restrictions, and so on. The REST Property APIs have Asynchronous APIs, which enable the user to send a REST request to OPERA Cloud for a significant amount of data (for example, 30 days of reservations). OPERA Cloud processes the request, collects all the data, and then allows the data to be fetched using the get request.

OXI provided the ability to map OPERA Cloud codes to external system codes, such as room type codes, rate codes, package codes, and so on. The REST APIs with OPERA Cloud no longer follow this approach, and codes must now be one to one. Alternatively, the external system would need to cater for mapping on their side and ensure that when posting a message to OPERA Cloud, the message contained the OPERA Cloud code(s).

OXI XML messages send a full object in XML format as opposed to business event messages (either pull or push approach), which send key value pairs in JSON format. You will receive a JSON message with the old value and the new value. For more information, see Interpreting the Event.

Rest APIs handle credit card data differently than OXI, which allowed tokenization of card data. With REST APIs, the consumer must perform a step to fetch the token from the Payment Service Provider (PSP) and then use that token in the reservation. This only applies to customers with OPI active.

Table 16-1 OXI to REST

Functional Module	OXI Inbound Operation (External System to OPERA Cloud)	REST API Operation	REST Module
Activity	Create Activity	postActivity	ACT
Activity	Update Activity	putActivity	ACT
Activity	Delete Activity	deleteActivity	ACT
Activity	Fetch Activity	getActivity	ACT
Profile	New Profile	postProfile	CRM
Profile	Update Profile	putProfile	CRM
Profile	Delete Profile	deleteProfile	CRM
Profile	Merge Profile	postMergeProfiles	CRM
Profile	Create Relationship	postProfileRelations	CRM
Profile	Update Relationship	putProfileRelations	CRM
Profile	Delete Relationship	deleteProfileRelations	CRM
Profile	Lookup	getExternalProfiles	CRM-OUTBOUND
Profile	Download	downloadExternalProfile	CRM-OUTBOUND
Reservations	Add Reservation	postReservation	RSV

Table 16-1 (Cont.) OXI to REST

Functional Module	OXI Inbound Operation (External System to OPERA Cloud)	REST API Operation	REST Module
Reservations	Edit Reservation	putReservation	RSV
Reservations	Cancel Reservation	postCancelReservation	RSV
Reservations	Share Reservations	postCombineShareReservations	RSV
Reservations	checkout	postCheckOut	CSH
Reservations	checkin	postCheckIn `	FOF
Reservations	Cancel Checkin(reverse check in)	deleteCheckin	FOF
Reservations	Fintrx	postDepositPayment	CSH
Reservations	Turnaway	postTurnawayReservation	RSV
Reservations	Routing	putRoutingInstructions	RSV
Reservations	Reinstate	putReinstateReservation	CSH
Reservations	No Show	putReservationStatusToNoShow	BOF
Reservations	Reservation Trace	getTracesByReservation	RSV
Reservations	Waitlist Reservation	postReservation	RSV
Reservations	Reactivate Waitlist Reservation	putReservation	RSV
Reservations	Room Move	moveInHouseGuest	FOF
Allotment (Group Blocks)	New Allotment	postBlock	BLK
Allotment (Group Blocks)	Edit Allotment	putBlock	BLK
Allotment (Group Blocks)	New Allotment - Header	postBlock	BLK
Allotment (Group Blocks)	New Allotment - Header with Detail	postBlock	BLK
Allotment (Group Blocks)	Allotment - Header - Status Change	putBlockStatus	BLK
Allotment (Group Blocks)	New Block Reservation	postReservationByBlock	RSV
Allotment (Group Blocks)	Update Block Reservation	putBlockReservations	BLK

Table 16-1 (Cont.) OXI to REST

Functional Module	OXI Inbound Operation (External System to OPERA Cloud)	REST API Operation	REST Module
Allotment (Group Blocks)	Fetch Block Reservation	getBlockReservations	BLK
Allotment (Group Blocks)	Update Block Grid Allocation	putBlockAllocation	BLK
Allotment (Group Blocks)	Block Grid Wash	putBlockAllocationWash	BLK
Allotment (Group Blocks)	Update Block Rates	putBlockRates	BLK
Allotment (Group Blocks)	Update Block Pickup	putBlockStatusToOpen	BLK
Allotment (Group Blocks)	Update Catering Status	putCateringStatus	BLK
Allotment (Group Blocks)	Cancel Block	postCancelBlock	BLK
Hurdles	Hurdle	Block Asynchronous, Inventory Asynchronous, Par Asynchronous & Reservation Asynchronous Modules	ASYNC
Inventory	Inventory - KATOVER (overbook)	changeSellLimitByDate	INV
Inventory	Inventory - OOO	postOutOfOrderRooms	HSK
Stay Records		getStayHistory	CRM
Packages	Packages - New	postPackage	RTP
Packages	Packages - Edit	putPackage	RTP
Rates	Rate - Header	postRatePlan	RTP
Rates		postNegotiatedRates	RTP
Rates		postRatePlanPackages	RTP
Rates	Rate - Detail (Rate Set)	postRatePlanSchedules	RTP
Rates	Rate Strategy	postRateStrategy	RTP
RAVL (Rate Restrictions)	Restriction - Change	postRestriction	PAR
RAVL (Rate Restrictions)	Restriction - Change	clearAllRestrictions	PAR

Table 16-1 (Cont.) OXI to REST

Functional Module	OXI Inbound Operation (External System to OPERA Cloud)	REST API Operation	REST Module
RAVR (Rate/ Room Type Restrictions)	RAVR - New	postRestriction	PAR
RTAV (Inventory Snapshot)	RTAV	getHotelInventory	INV
Configuration	Configuration - RATE_CATEGORY	createRateCategory	ENTCFG
Configuration	New Item Inventory	postInventoryItems	EVMCFG
Configuration	New Item Load	postItemPools	EVMCFG
Configuration	Update Item Inventory	putInventoryItems	EVMCFG
Configuration	New Item Inventory Class	postItemClasses	EVMCFG

HTNG

The legacy HTNG integration was most commonly used for Hoteliers and partners with activity management applications, such as spa and golf booking applications. It used the OPERA Electronic Distribution Systems (OEDS) integration and provided web services utilizing SOAP calls. The HTNG interface with OPERA used a combination of synchronous SOAP requests from the external system to OPERA as well as Business Events from OPERA to the external system. The Business Event functionality is still available when migrating to the REST APIs. Although the messages look a little different, the available data is still in REST format. For further information on Business Event functionality, refer to the Business Events topic.

The legacy HTNG interface also provided the ability for posting financial transactions to OPERA.

The below mapping table provides the suggested APIs to use when migrating from the legacy HTNG interface to the REST APIs available in OHIP.

Table 16-2 HTNG to REST

HTNG Functionality	HTNG Operation	REST API Operation	REST Module
Lookup Profile Information	ProfileLookup	getProfiles	CRM
Retrieve Profile information	FetchProfile	getProfiles	CRM
Send a Profile Update	UpdateProfile	putProfile	CRM
Establish a link between system	Subscription	putProfile	CRM
Send a New Profile	NewProfile	postProfile	CRM
Merge Profiles	MergeProfile	mergeProfiles	CRM
Send a Delete Profile	DeleteProfile	deleteProfiles	CRM

Table 16-2 (Cont.) HTNG to REST

HTNG Functionality	HTNG Operation	REST API Operation	REST Module
Lookup Reservation Information	ReservationLookup	getReservations	RSV
Retrieve Reservation Information	FetchReservation	getReservation	RSV
Send Reservation Updates	GuestStatusNotification	getBusinessEvents	INT
Send Messages for Guest	GuestMessage	postGuestMessages	RSV
Send Location information	LocationNotification	postReservationLocators	RSV
Send a New Activity	CreateActivity	postActivityBooking	LMS
Update an Activity	UpdateActivity	putActivityBooking	LMS
Cancel an Activity	CancelActivity	deleteActivityBooking	LMS
Lookup Activities	ActivityLookup	getActivityBooking	LMS
Post Charges to guest folio	PostPayment	postBillingCharges	CSH
Retrieve Extended Reservation Information	FetchReservationExt	getReservation	RSV
Send Extended Reservation Updates	GuestStatusNotificationExt	getBusinessEvents	INT
Retrieve Booked Packages from reservation	FetchBookedPackages	getReservation	RSV
Retrieve Package Details from configuration	FetchProductItems	getReservationPackagesLOV	LOV
Retrieve List of values for a field	FetchLOV	getLov	LOV
Send a check-in reservation	CheckIn	postCheckIn	FOF
Send Queue Room Information	QueueRoomBE	getBusinessEvents	INT
Send Room Status update	RoomStatusUpdateBE	getBusinessEvents	INT

Table 16-2 (Cont.) HTNG to REST

HTNG Functionality	HTNG Operation	REST API Operation	REST Module
Send Room Status update	UpdateRoomStatus	putRoomRelatedStatus	HSK
Retrieve Housekeeping Task Sheets	FetchHousekeepingTask	getHousekeepngTasks	HSK
Retrieve Room Status Information	FetchRoomStatus	getHousekeepingOverview	HSK
Activity Updates with reservation change	OutofScopeNotification	Not available in OPERA Cloud	Not available in OPERA Cloud
View Check information on guest Folio	FetchCheckDetails	Not available in OPERA Cloud	Not available in OPERA Cloud
OPERA Cloud to Retrieve Activities for Guest	FetchActivities	Not available in OPERA Cloud	Not available in OPERA Cloud

OPERA Web Services (OWS) and KIOSK

The legacy OWS and Kiosk interfaces use SOAP Web Services technologies to support data transfer from a client application to OPERA. The interface is commonly used for web booking engines and check-in applications, but it is also used for customer relationship management and membership functionality. While the legacy interfaces provide a lot of functionality, migrating to the new REST API provides even more functionality for your integration to OPERA Cloud. Furthermore, the REST APIs also have an asynchronous interface just like OWS.

The below table provides suggested APIs and operations to use when migrating from legacy OWS/KIOSK interface to the REST APIs. However, there are a few operations currently not available in REST that are available in OWS. Management of membership functionality is not yet available.

Table 16-3 OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Availability	Availability	getHotelAvailability	PAR
Availability	FetchAvailableItems	getItemInventory	INV
Availability	FetchAvailablePackages	getPackages	RTP
Availability	FetchBlockInventory	getBlock	BLK
Availability	FetchCalendar	Not available	Not available
Availability	FetchExpectedCharges	getRateInfo	RTP
Availability	FetchItemGroups	getItemInventory	INV

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Availability	RegionalAvailability	getHotels getHotelAvailability	PAR
Availability	RegionalAvailabilityExt	getHotels getHotelAvailability	PAR
GuestServices	UpdateRoomStatus	putRoomRelatedStatus	HSK
GuestServices	WakeUpCall	getWakeUpcalls	HSK
HouseKeeping	ChangeRoomMaintenance	putRoomMaintenance	HSK
HouseKeeping	CreateRoomMaintenance	postRoomMaintenance	HSK
HouseKeeping	DeleteRoomMaintenance	deleteRoomMaintenance	HSK
HouseKeeping	FetchHouseKeepingDiscrepancies	getHousekeepingDiscrepancies	HSK
HouseKeeping	FetchHouseKeepingRoomStatus	getHousekeepingOverview	HSK
HouseKeeping	FetchHouseKeepingRoomTaskStatus	getHouseKeepingTasks	HSK
HouseKeeping	FetchHouseKeepingStatistics	getFrontOfficeStatistics	FOF
HouseKeeping	FetchHouseStatus	getFrontOfficeStatistics	FOF
HouseKeeping	FetchOOSRooms	getOutOfServiceRooms	HSK
HouseKeeping	FetchRoomMaintenance	getRoomMaintenance	HSK
HouseKeeping	ResolveRoomMaintenance	putRoomMaintenance	HSK
HouseKeeping	UnResolveRoomMaintenance	putRoomMaintenance	HSK
HouseKeeping	UpdateHouseKeepingDiscrepancies	putRoomRelatedStatus	HSK
HouseKeeping	UpdateHouseKeepingRoomStatus	putRoomRelatedStatus	HSK
Information	CurrencyConverter	calculateForeignCurrency	CSH
Information	QueryAwardsSchedules	getPromotioncodes	RTP
Information	QueryChainInformation	getChain	ENTConfig
Information	QueryHotelInformation	getHotelDetails	ENTConfig
Information	QueryLov	getLov	LOV
Information	QueryPackageItems	getPackages	RTP
Information	QueryRate	getAvailabilityRatePlanInfoByMultipleRatePlans	PAR
MeetingRoom	CreateBlock	postBlocks	BLK
MeetingRoom	MeetingAvailability	getEventCalendarMultipleHotelIds	EVM
MeetingRoom	MeetingCreateEvent	postEvents	EVM

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
MeetingRoom	MeetingFetchEvent	getEvent	EVM
MeetingRoom	MeetingFetchMenu	getEventResourceByMenu	EVM
MeetingRoom	MeetingFetchMenuItem	getCateringMenuItems	EVM
MeetingRoom	MeetingFetchMiscellaneousItem	getEventResourceByMenu	EVM
MeetingRoom	MeetingFetchPackageEvent	getCateringPackages	EVM
MeetingRoom	MeetingModifyEvent	putEvents	EVM
MeetingRoom	MeetingModifyPackageEvent	putCateringPackages	EVM
MeetingRoom	MeetingMultiPropertyAvailability	getFunctionSpaceAvailability	EVM
MeetingRoom	MeetingPackageAvailability	getCateringPackages	EVM
MeetingRoom	MeetingRoomCopyBlock	putCateringCopys	EVM
MeetingRoom	MeetingRoomCreateRelationship	putEvent	EVM
MeetingRoom	MeetingRoomFetchBlock	getEvent	EVM
MeetingRoom	ModifyBlock	putBlocks	EVM
Membership	AddPromoSubscription	putProfile	CRM
Membership	CreateEnrollment	postMemberships	CRM
Membership	DeletePromoSubscription	deleteAward	CRMConfig
Membership	FetchAvailableECertificates	getMembershipIssueAwardsList	CRM
Membership	FetchBenefits	getFlexibleBenefitAwards	CRM
Membership	FetchECertificates	getAwards	RSV
Membership	FetchEnrollmentCode	fetchMembershipEnrollmentCodes	CRMConfig
Membership	FetchMemberPoints	getMembershipAwardPointsByHotel	CRM
Membership	FetchMembershipTransactions	getMembershipTransaction	CRM
Membership	FetchNextCardNumber	postMembershipNumber	CRM
Membership	FetchProductAwards	getAvailableAwardsBasedOnType	CRM
Membership	FetchPromoSubscriptions	getAwardsToGrant	CRM
Membership	FetchRateAwards	getAvailableAwardsBasedOnType	CRM
Membership	FetchTransactionAwards	getAvailableAwardsBasedOnType	CRM
Membership	FetchUpgradeAwards	getAwards	RSV

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Membership	IssueTransactionAward	postAwards	RSV
Membership	ModifyEnrollment	putMemberships	CRM
Membership	ReIssueMemberCard	postMembershipNumber	CRM
Membership	TransferPoints	transferMembershipPoints	CRM
Membership	UpdateEnrollmentCode	putMemberships	CRM
Name	DeleteAddress	putprofile	CRM
Name	DeleteComment	putprofile	CRM
Name	DeleteEmail	putprofile	CRM
Name	DeleteGuestCard	deleteMembership	CRM
Name	DeletePassport	putprofile	CRM
Name	DeletePhone	putprofile	CRM
Name	DeletePreference	deletepreferences	CRM
Name	DeletePrivacyOption	putprofile	CRM
Name	FetchAddressList	putprofile	CRM
Name	FetchClaimsStatus	getMembershipClaim	CRM
Name	FetchCommentList	getProfile	CRM
Name	FetchDocumentList	getProfile	CRM
Name	FetchEmailList	getProfile	CRM
Name	FetchGuestCardList	getProfile	CRM
Name	FetchName	getProfile	CRM
Name	FetchNameUDFs	getProfile	CRM
Name	FetchPhoneList	getProfile	CRM
Name	FetchPreferenceList	getPreferenceForProfile	CRM
Name	FetchPrivacyOption	getProfile	CRM
Name	FetchProfile	getProfile	CRM
Name	FetchProfileBenefits	getFlexibleBenefitAwards	CRM
Name	FetchSubscription	getProfile	CRM
Name	ForgetProfile	deleteProfile	CRM
Name	GetPassport	getProfile	CRM
Name	InsertAddress	postProfile	CRM
Name	InsertClaim	putProfile	CRM
Name	InsertComment	putProfile	CRM
Name	InsertEmail	putProfile	CRM
Name	InsertGuestCard	postMembership	CRM
Name	InsertPhone	putProfile	CRM
Name	InsertPreference	postPreferences	CRM

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Name	InsertUpdateNameUDFs	putProfile	CRM
Name	InsertUpdatePrivacyOption	putProfile	CRM
Name	NameLookup	getProfiles	CRM
Name	RegisterName	postProfile	CRM
Name	TravelAgentLookup	getProfiles	CRM
Name	UpdateAddress	putProfile	CRM
Name	UpdateClaim	putProfile	CRM
Name	UpdateComment	putProfile	CRM
Name	InsertUpdateDocument	uploadFileAttachment	CRM
Name	UpdateEmail	putProfile	CRM
Name	UpdateGuestCard	putMemberships	CRM
Name	UpdateName	putProfile	CRM
Name	UpdatePassport	putProfile	CRM
Name	UpdatePhone	putProfile	CRM
Name	ValidateForgetProfile	putvalidateForgetProfiles	CRM
Reservation	AddAccompanyGuest	putReservation	RSV
Reservation	AssignRoom	postRoomAssignment	FOF
Reservation	BookHoldItems	putReservation	RSV
Reservation	BreakShare	deleteShareReservation	RSV
Reservation	CancelBooking	postCancelReservations	RSV
Reservation	ClearItemHold	putItemInventoryHold	INV
Reservation	CombineShare	Postcombinesharesreservations	RSV
Reservation	ConfirmBooking	putReservation	RSV
Reservation	CreateBooking	postReservation	RSV
Reservation	CreateItemHold	postHoldItemInventory	RSV
Reservation	CreateMultipleBookings	postReservation	RSV
Reservation	DeleteAccompanyGuest	putReservation	RSV
Reservation	DeleteInventoryItem	putReservation	RSV
Reservation	DeletePackages	putReservation	RSV
Reservation	FetchAvailableOffers	getReservationUpsellInfo	RSV
Reservation	FetchBookedInventoryItems	getReservation	RSV
Reservation	FetchBookedPackages	getReservation	RSV
Reservation	FetchBooking	getReservation	RSV
Reservation	FetchBookingForPointUpdate	getReservation	RSV
Reservation	FetchHoldItems	getHoldItemsInventory	INV

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Reservation	FetchRoomUpgrades	getReservationUpsellInfo	RSV
Reservation	FetchSummary	getReservation	RSV
Reservation	FutureBookingSummary	getReservations getProfile	RSV CRM
Reservation	GetReservationStatus	getReservation	RSV
Reservation	GuestRequests	getServiceRequest	RSV
Reservation	MergeReservations	putMergeReservations	RSV
Reservation	ModifyBooking	putReservation	RSV
Reservation	ModifyItemHold	putHoldItemsInventory	INV
Reservation	PreCheckin	postPreCheckin	RSV
Reservation	ReInstateReservation	putReservations	RSV
Reservation	ReleaseRoom	putRoomAssignment	FOF
Reservation	RoomMove	putMoveInHouseGuest	FOF
Reservation	UpdateInventoryItem	putReservation	RSV
Reservation	UpdatePackages	putReservation	RSV
Reservation	UpgradeReservation	putReservation	RSV
Reservation	UpsellReservation	postUpsellReservation	RSV
ResvAdvanced	AddPayment	getCreditCardUniqueId	FOF
ResvAdvanced	AdditionalKeys	postRoomKeys	FOF
ResvAdvanced	AlternateRooms	putVerifyCheckinReservation	FOF
ResvAdvanced	AssignRoom	postRoomAssignment	FOF
ResvAdvanced	CancelCheckIn	deleteCheckin	FOF
ResvAdvanced	CheckIn	postCheckin	FOF
ResvAdvanced	CheckOut	postCheckout	CSH
ResvAdvanced	CreateFixedCharges	postFixedCharges	CSH
ResvAdvanced	CreateGuestLocator	postReservationLocators	RSV
ResvAdvanced	DeleteFixedCharges	deleteFixedCharges	CSH
ResvAdvanced	DeleteGuestLocator	deleteReservationlocators	RSV
ResvAdvanced	DeletePayRouting	deleteRoutingInstructions	RSV
ResvAdvanced	ExternalPayment	postBillingPayments	CSH
ResvAdvanced	FetchAuthorizationsHistory	getAuthorizationHistory	CSH
ResvAdvanced	FetchFixedCharges	getFixedCharges	CSH
ResvAdvanced	FetchKeyData	getRoomKey	FOF
ResvAdvanced	FetchPromotionCode	putReservation	RSV
ResvAdvanced	FetchQueueReservations	getQueuedReservations	FOF
ResvAdvanced	FetchResPromotionCode	getReservation	RSV

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
ResvAdvanced	FetchRoomSetup	gethousekeepinvoverview	HSK
ResvAdvanced	FetchRoomStatus	getHotelRooms	HSK
ResvAdvanced	FolioTransactionTransfer	putTransferTransactionToReservation	CSH
ResvAdvanced	GuestMessages	getReservation	RSV
ResvAdvanced	InsertPayRouting	postRoutingInstrucitons	RSV
ResvAdvanced	Invoice	getFolios	CSH
ResvAdvanced	KioskAvaliablity	getHotelAvailability	PAR
ResvAdvanced	MakePayment	postBillingpayments	CSH
ResvAdvanced	PayRouting	getRoutinginstructions	RSV
ResvAdvanced	PostCharge	postBiilingCharges	CSH
ResvAdvanced	PrintPreCheckOutBill	postDepositFolio	CSH
ResvAdvanced	QueueReservation	getQueuedReservation	FOF
ResvAdvanced	ReleaseRoom	putRoomAssignment	FOF
ResvAdvanced	ReservationRequestCode	getRequestCodes	V0
ResvAdvanced	SetResPromotionCode	putReservation	RSV
ResvAdvanced	ToggleTurndownFlag	postTurnawayReservation	RSV
ResvAdvanced	UpdateFixedCharges	putFixedcharges	RSV
ResvAdvanced	UpdateGuestLocator	putLocators	RSV
ResvAdvanced	UpdateMethodOfPayment	putReservation	RSV
ResvAdvanced	UpdatePayRouting	putRoutingInstrucitons	RSV
StayHistory	StayHistory	getStayhistory	CRM
HouseKeeping	DeleteRoomMaintenanceImages	Not available in OPERA Cloud	Not available in OPERA Cloud
HouseKeeping	FetchRoomMaintenanceImages	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingCreatePackageEvent	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	DeleteDocument	Not available in OPERA Cloud	Not available in OPERA Cloud
Reservation	EmailConfirmation	Not available in OPERA Cloud	Not available in OPERA Cloud
ResvAdvanced	InsertSignedRegCard	Not available in OPERA Cloud	Not available in OPERA Cloud
ResvAdvanced	GenerateRegistrationCard	Not available in OPERA Cloud	Not available in OPERA Cloud
ResvAdvanced	FetchSignedRegCard	Not available in OPERA Cloud	Not available in OPERA Cloud

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Availability	GdsAreaAvailability	Not available in OPERA Cloud	Not available in OPERA Cloud
Availability	GetCacheStatus	Not available in OPERA Cloud	Not available in OPERA Cloud
Brochure	SendBrochure	Not available in OPERA Cloud	Not available in OPERA Cloud
GuestServices	FetchOptInSetup	Not available in OPERA Cloud	Not available in OPERA Cloud
GuestServices	UpdateReservationForOptIn	Not available in OPERA Cloud	Not available in OPERA Cloud
Information	GetScreenItems	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingFetchBlockDelegates	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingFetchContract	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingFetchMyRegisteredEvents	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingRegisterEventAttendees	Not available in OPERA Cloud	Not available in OPERA Cloud
MeetingRoom	MeetingRoomFetchMyBlocks	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	AddBenefit	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	CancelConsumedPoints	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	CancelECertificate	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	ConsumeECertificate	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	ConsumePoints	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	ConsumePointsOthers	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FavoriteGuest	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FetchEcertificateTierPoints	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FetchFeeHistory	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FetchMemberTierWizard	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FetchPointsExchange	Not available in OPERA Cloud	Not available in OPERA Cloud

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
Membership	FetchStatement	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	FetchStatementRefs	Not available in OPERA Cloud	Not available in OPERA Cloud
Membership	IssueECertificate	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	AssociateBooker	Not available in OPERA Cloud	Not available in OPERA Cloud
Reservation	SetDailyPoints	Not available in OPERA Cloud	Not available in OPERA Cloud
Reservation	ConsumeVouchers	Not available in OPERA Cloud	Not available in OPERA Cloud
ResvAdvanced	SetKeyData	Not available in OPERA Cloud	Not available in OPERA Cloud
ResvAdvanced	InstantPaymentNotification	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	AddProfileToContract	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	CreateContract	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	DeleteProfileFromContract	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	FetchAuthorizedProfiles	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	FetchContract	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	FetchContractDetails	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	OwnedUnitAvailability	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	OwnerStatementDetails	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	UpdateContract	Not available in OPERA Cloud	Not available in OPERA Cloud
UnitOwners	UpdateProfileInContract	Not available in OPERA Cloud	Not available in OPERA Cloud
Reservation	IgnoreBooking	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	UpdateCreditCard	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	InsertCreditCard	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	FetchCreditCardList	Not available in OPERA Cloud	Not available in OPERA Cloud

Table 16-3 (Cont.) OWS to REST

OWS Module	OWS Operation	Property Rest API Operation	REST Module
ResvAdvanced	DCCCheck	Not available in OPERA Cloud	Not available in OPERA Cloud
Name	DeleteCreditCard	Not available in OPERA Cloud	Not available in OPERA Cloud

Property Interfaces — IFC8, FIAS and XML_POS

The Oracle OPERA Hotel Property Interface application (IFC8) is used to connect various on-premise vendor management systems with the Oracle Property Management system. It sends out room and guest data to the vendor system, such as, for example, check-in of guest and check-out of guest. The interface can also receive data (for example, charges or status changes) from the external system to be stored in OPERA using synchronous TCP/IP or serial connection exchanging messages, which are based on either Oracle's universal FIAS API, XML-POS API, or many vendor-based specifications.

Some examples of vendor systems connecting via the Property Interface IFC8 application are the following:

- Telephone Management Systems (TMS) or middleware to TMS systems
- Door Locking Systems
- HSIA Internet Access Systems
- Point of Sale Systems (Restaurant, SPA, Golf)
- Video Services Systems
- Guest Service systems
- Minibar systems
- Building Management systems
- Miscellaneous / Other systems installed at property

The typical data exchanged via the Property Interface are check-in / check-out notifications (for example, room and guest details, guest rights), charge postings received from vendor systems, make door key requests, wake up requests, credit card payment requests, guest message notifications, room maid status notifications, and many more. This data is exchanged at the time the action occurs in OPERA or on the external system and is usually exchanged without a delay in transmission.

For IFC8 actions exchanged between OPERA Cloud and an external application, the REST APIs utilize multiple ways of connection.

There are inbound actions from the external system that will be exposed through the OHIP REST APIs. Some examples of these inbound actions are sending charges to the guest's room or hotel account, inquiry requests for Guest information by a Point-Of-Sale system, sending room status changes, wake up requests, and guest bill balance requests.

Some outbound IFC8 actions will be exposed using streaming APIs. Some examples include check-in, check-out, room-move notifications, wake-up requests, and guest text messages.

Specific outbound synchronous messages will be exposed using additional outbound service connections from the PMS to the external system. Some examples are door lock key actions (for example, make key and delete key), which require related response messages.

The below table provides suggested APIs and operations to use when migrating from legacy FIAS/XML-POS IFC8 interface to the REST APIs. There are a few operations currently not available in REST that are available via IFC8.

> **Note**
>
> Posting charges via room number only (instead of reservationId) is not yet available with REST.

Table 16-4 Suggested APIs and Operations

IFC8 Module	IFC8 Operation	REST Module	OHIP REST API	OPERA Cloud Business Event (Push or Pull)
Enhanced Posting	PostInquiry - by Room number, Name, Track2	RSV	getReservations	
	Post List			
Extended Guest Data	GuestMessage-Request, GuestMessage-Text	RSV	guestMessages	
Extended Guest Data	GuestMessage Text-online	Business Event		NEW GUEST MESSAGE
	GuestMessage-retrieved			UPDATE GUEST MESSAGE
	GuestMessage-Delete			DELETE GUEST MESSAGE
Room Data	Room Equipment: Voice mail notification from vendor to PMS	RSV	guestMessages	
Simple Posting	PostSimple: Phone charge, Minibar charge, Video charge using room number only	CSH	postBillingCharges	
	PostAnswer			
Enhanced Posting	PostRequest: Point-of-Sale, SPA, Golf charges using Reservation Number	CSH	postBillingCharges	
	PostAnswer			
Room Data	RoomEquipment: send Room Maid Status from vendor to PMS	HSK	SetRoomStatus	

Table 16-4 (Cont.) Suggested APIs and Operations

IFC8 Module	IFC8 Operation	REST Module	OHIP REST API	OPERA Cloud Business Event (Push or Pull)
Room Data	RoomEquipment: send Room Maid status from PMS to vendor	Business Event		UPDATE ROOM STATUS
Room Data	RoomEquipment: send Class Of Service, TVRights, MinibarRights, Do not Disturb (Phone) from PMS to vendor	Business Event as of OPERA 23.4		UPDATE INTERFACE STATUS
Room Data	RoomEquipment: send MessageLight ON/OFF as message notification from PMS to vendor	Business Event as of OPERA 23.4		UPDATE INTERFACE STATUS
Wake-up Call	Wakeup Request Wakeup Clear Wakeup Answer from vendor to PMS	FOF	postwakeUpCalls delete wakeUpCalls put wakeUpCalls	
Wake-up Call	Wakeup Request Wakeup Clear Wakeup Answer from PMS to vendor	Business Event as of OPERA 23.4		available soon
Guest Data	GuestIn notification from PMS GuestOut notification from PMS GuestdataChange notification from PMS, Room Move notification	Business Event		CHECK IN CHECK OUT UPDATE RESERVATION
Room Data	RoomEquipment: set Guest Service Status (Make Up Room, Do Not Disturb) from vendor to PMS	HSK	serviceRequests	
Room Data	RoomEquipment: receive Guest Service Status change (Make Up Room, Do Not Disturb) from PMS to vendor	Business Event as of OPERA 23.4		GUEST SERVICE STATUS REQUEST

Table 16-4 (Cont.) Suggested APIs and Operations

IFC8 Module	IFC8 Operation	REST Module	OHIP REST API	OPERA Cloud Business Event (Push or Pull)
Guest Locator	Locator On, Locator Off, Retrieve Locator	RSV	guestLocators	
Extended Guest Data	Guest Bill Request / Guest Bill Items / Guest Bill Balance	CSH	getGuestsTransactions or getFolios	
Extended Guest Data	Remote check-out Request (Video Check-out)	CSH	postBillingPayments + postFolios + postCheckout	
Night Audit	Night Audit Start notification Night Audit End notification	Business Event		CLOSE BUSINESS DATE ROLL BUSINESS DATE
Key Services	Key Request (New Key, Duplicate Key, One Shot Key) Key Delete Key Data Change (Room move, change check out date) - Online Key card systems Key Read	FOF Outbound as of OPERA 23.4	post externalRoomKeys OPERA Cloud Outbound Syncronous	
Virtual Numbers (DID)	GuestIn notification with Virtual Number/ Equipment Number, Status, Pool Id GuestdataChange notification with Virtual Number/ Equipment Number, Status, Pool Id GuestOut notification with Virtual Number/ Equipment Number, Status, Pool Id	Feature is not available with OPERA Cloud	N/A	N/A

Sample Messages

Along with the mappings provided with legacy to REST APIs, there are a number of Postman Workflows put together to aid in the development of integrations. The Property Workflow collection navigates and suggests operations to perform for a common workflow. For example,

how to perform a check-in or the steps required to search availability and make a new Reservation. There is another collection for Property APIs by Module. This collection has over 2200 sample messages for the operations in each Property API, including Reservation, Blocks, Profiles, and Asynchronous APIs. The collection for Distribution APIs by Module contains sample messages for the Distribution APIs, such as Shop, Book, and Reservation. You can find these collections in gitHub or in Postman.com.

17

Best Practices

Best practices are proven, effective methods that have become accepted as standard procedures for using Oracle Hospitality APIs. They are the result of successful experiences and lessons learned with hundreds of integrators over time. Best practices provide a guideline for developers to create robust, efficient, and maintainable software solutions. In other words, they are the 'gold standard' for software development, representing the ideal approach to achieve optimal results. All integrations should strive to follow these best practices.

Asynchronous APIs

Table 17-1 Asynchronous APIs

Best Practice	What to avoid and why
Always consider and adhere to the recommended and optimal payload size of 200 entries within the item array when updating rates or performing other POST data in Asynchronous APIs.	Attempting to update data to OPERA Cloud immediately after its creation using asynchronous APIs without considering the payload size (assuming no restrictions on the update process). While the operations that POST data to OPERA Cloud (including rate updates) operate on a first-come, first-served basis, allowing updates right after creation, the primary limitation lies in the payload size. Ignoring this guideline may lead to an anti-pattern where updates are made without proper consideration, potentially causing performance issues and compromising the reliability of the API.
As a revenue management system, use the Asynchronous APIs for actions like fetching a year's worth of reservations. For more detailed instructions for revenue management systems, consult the Implementation Guide.	Using synchronous REST APIs to fetch bulk data or update bulk data needed for revenue management systems. This can impact performance.
Asynchronous APIs allow a maximum of 250 requests per minute for each application per environment for POST requests. For more information on limits, see Limits.	Calling Asynchronous APIs as if there were no rate limit.
When sending a POST request, allow a waiting period of at least 1-2 minutes before initiating the HEAD request.	Sending HEAD very quickly after sending POST. Given the nature of the Asynchronous APIs, it is unlikely that the request in the POST will have been processed in so short an interval. This will not speed up the Asynchronous APIs, and it will be billable (for integration partners) and will use up the rate limit on the Asynchronous APIs.

Table 17-1 (Cont.) Asynchronous APIs

Best Practice	What to avoid and why
When sending a HEAD request, wait for the **HTTP status 201 Created** response before proceeding with the GET request. If the HEAD request gives an **HTTP Status 200 OK** response, allow another 1-2 minutes before resending the HEAD request. In other words, if the HEAD response does not return a 201 Created response with a header location, the job probably has not finished yet. Allow another 1-2 minutes before sending the GET request. After receiving an HTTP status 201 Created, you can proceed with the GET request.	Calling GET immediately after HEAD or calling it repeatedly. The **201 Created** status means that the request has been processed and the results are available. Until this status is returned in the HEAD request, calling GET will simply use up the rate limit on the Asynchronous APIs.
Be prepared to call HEAD multiple times, depending on the volume of data being processed.	Calling HEAD only once and assuming the processing has finished. The Asynchronous APIs process large amounts of data, which takes time.
Ensure that code consuming responses from Oracle Hospitality Property APIs treats header keys as case insensitive.	Code that breaks if the casing of response values changes.

Property APIs

Table 17-2 Property APIs

Best Practice	What to avoid and why
For extracting bulk data such as folios and profiles, use Oracle Reporting and Analytics.	Using the REST APIs to extract bulk data can cause operational impact on the hotel.
For shopping availability across many different properties use the Oracle Hospitality Distribution Shop API, which is specially designed for this purpose and returns data from a live cache. For example, I want to create a reservation for a guest at Hotel1 and subsequently book another reservation for the same guest at Hotel2. The Shop API provides functionality that allows you to check availability across multiple properties.	Using the Property REST API to get availability at each resort, which is slower and more costly.
After obtaining an oAuth token, check the oAuth token's expiry time in the "exp" attribute of the JWT (oAuth token) and then request a new oAuth token two minutes before the "exp." Code that makes API calls can then use the cached token, ensuring it remains consistently valid.	Requesting a new oAuth token with every API call. Requesting an oAuth token is billable for integration partners. Furthermore, requesting oAuth tokens too frequently can create an operational impact on identity servers.

Table 17-2 (Cont.) Property APIs

Best Practice	What to avoid and why
When creating or modifying reservations, always use codes (such as rate, room type, source codes, market codes, address types, membership types) that are valid for the resort. Use the List of Values Management and Enterprise Configuration APIs to identify the specific configuration of the resort being accessed.	Send any values in these codes or use values that are relevant for one resort, but not for the resort being requested. OPERA Cloud is highly configurable and most of our OPERA Cloud customers leverage this to create the unique experiences offered by their resort. This means that many configuration items will differ from one resort to another.
An example is postReservation. When creating a new reservation, there are codes required as part of the request body. Prior to posting the reservation, ensure you have called the List Of Values, such as getSourceCode, getMarketCodes, getGuaranteeCodes, getMembershipTypes, and so on. The postman workflow samples provide an integrator with a recommended sequence of operations to execute before posting a new reservation and should be reviewed before starting to build your integration.	Failure to use codes valid for the property will result in reservations being created in OPERA Cloud with invalid codes. As soon as a user views the reservation, the user must update the reservation with valid codes.
Call Oracle Hospitality APIs only from back end systems. If Oracle Hospitality APIs are needed as part of a browser or mobile app-based experience, implement a "Backend for Frontend (BFF)" pattern, which creates an abstraction layer consuming OHIP APIs and provides Experience APIs that are better suited to be called from mobile apps or web browsers.	Calling Oracle Hospitality APIs directly from a web browser or mobile app. The Oracle Hospitality APIs are certified only to be called from back-end systems. This is partly a security measure and partly due to the APIs not being optimized for mobile data limitations.
Implement the "Tolerant Reader" pattern so that consuming code looks only at the fields needed by the implementation.	Tying integrations too tightly to API specifications. As business APIs, the Oracle Hospitality APIs contain a wealth of data. However, a given integration may need only some of that data. While we always support backwards compatibility for v1 APIs, it is our goal to also support this for v0 APIs. However, changes can occur, and the Tolerant Reader pattern can reduce the impact radius of these API changes.
When writing Experience APIs for consumption by mobile apps or web browsers, use "API Composition" to gather all the required information from multiple Oracle Hospitality APIs together with the "Backends for Frontends" pattern to orchestrate multiple OHIP API calls but expose them as a single Experience API.	Write Experience APIs for consumption by mobile apps or web browsers that are 1:1 copies of the Oracle Hospitality APIs. The Oracle Hospitality APIs are business APIs, which are likely to contain more data than a mobile app or web browser needs. Similarly, a specific Oracle Hospitality API might not provide sufficient data to meet the needs of a mobile app or web browser.

Table 17-2 (Cont.) Property APIs

Best Practice	What to avoid and why
Use Business Events to see when a given resource has changed. Assuming Business Events are configured, every change that occurs within our Hospitality applications triggers a Business Event. For details on consuming these events, see Business Events. For example, my integration requires housekeeping information to be kept in sync with OPERA Cloud. Rather than GETting the data using the Housekeeping APIs, configure the business events for the housekeeping module. This will ensure events are generated and sent to the external system each time a resource is changed directly in OPERA Cloud. As soon as someone changes a room to Out of Order in OPERA, a business event is generated for the external system.	Continuously calling GET on a resource or a collection of resources and parsing the data to see if anything has changed.
Place consuming architecture as close to the OHIP gateway as possible to minimize network latency. As a benchmark, fetching an OAuth token should take no longer than 100ms. For ultimate speed and low latency, consider implementing your BFF in the same region as the OHIP API Gateway and housing the OPERA Cloud instance(s) within the Oracle Cloud Infrastructure (OCI). Not only does this reduce latency, but it also increases security because the API traffic remains inside of Oracle Cloud.	Place consuming architecture in one location and consume events from all regions. Network latency can have a negative impact on users of the application connecting to OHIP. A high latency connection to the Streaming API can result in a massive backlog of events that can never be consumed.
Use the circuit breaker pattern to retry the same API call when receiving an error. This is particularly important when orchestrating multiple OHIP API calls. When the resource is very large, the retry logic must be the following: • Retry the same call 30 minutes later. • If the retry also times out, move the call to an error hospital and create a technical Service Request with all the details by following the process described in the Getting Help and Contacting Support.	Create brittle consumers that fail abruptly and propagate errors, causing unexpected results, incomplete orchestrations, and operational impact on the hotel.

Table 17-2 (Cont.) Property APIs

Best Practice	What to avoid and why
Orchestrate using the “fetchInstructions” query parameter to retrieve only the needed amount of data. Many of the Oracle Hospitality OPERA Cloud APIs by default return only a subset of a resource or only the parent resource. For example, getProfile returns only the basic information about a person. However, many APIs use a standard query parameter "fetchInstructions," which allows additional, often child, information on the resource to be returned. By tailoring the additional information returned for your use cases, you can enhance API performance and reduce the size of the response body. To achieve this, orchestrate using the "indicators" fetchInstruction that will show which child elements are filled, and then send a call listing only those child elements as fetchInstructions. For example: First call: /crm/v1/profiles?profilesIds={{profileId}}&fetchInstructions=Indicators Then based on the results: Second call: /crm/v1/profiles?{{profileId}}&fetchInstructions=Communication<additional fetchInstructions based upon the results of the first call>	Specify all fetchInstructions on a resource in every API request. This will result in slow performance.
Use the “summaryInfo” query parameter to improve API performance and reduce response body size. This returns only a summary of the resource, not all child elements. For example: /roomTypes?summaryInfo=true	Not using the “summaryInfo” parameter where the summary contains sufficient information. This will result in slow performance.

Table 17-2 (Cont.) Property APIs

Best Practice	What to avoid and why
Using OPERA Cloud as middleware to transfer yield updates sent by an external system to another external system.	Using the “publisher” feature of Business Events on external systems in OPERA that supply yield updates. Yield systems supply OPERA Cloud with updated rates to optimize price per room. This requires sending a large amount of price adjustments, each of which triggers many business events. By default, changes made by one external system are not pushed to another external system. The "publisher" feature within OPERA Cloud enables this to be overridden. However, the "publisher" feature must not be enabled on external systems in OPERA that supply yield updates because this will flood other external systems with needless rate updates and impact the timeliness of sending unrelated business events to those external systems. It will also affect the performance of both OPERA Cloud and all external systems connected to that environment.
Ensure you understand the scope of APIs before using them. Consult the API specifications, Postman samples, and Implementation Guides.	Using APIs beyond their stated scope can result in unexpected errors.
When creating external systems in the OPERA Cloud user interface, configure the Business Events, but mark the external system inactive. Activate the external system only once the consuming architecture is ready. Similarly, subscribe to business events through the streaming API only when the consuming architecture is ready.	Enabling business events for an external system in OPERA or in OHIP ahead of being ready to consume. As soon as an external system is subscribed to business events in OPERA — be it from the OPERA Cloud user interface or OHIP — the subscribed events will start to be enqueued. If not consumed, this will result in a large queue, which is challenging for consuming systems to process. Further, if the external system sends responses back to OPERA Cloud as a result of events received and is slow to process the events, then operational impact can occur as the state of the data in OPERA Cloud would differ from the state of the data perceived by an external system that is running behind.
Before calling payment APIs, first contact the environment owner and ask them to allocate a cashierId to your organization. Use only this provided cashierId when calling payment APIs.	Use any cashierId in payment APIs. The cashierId usually represents a person at the front desk, but since it is possible to make payment changes using APIs, it is important to tie back the change to the organization or user who made the change. When multiple organizations use the same cashierId, it hinders auditing payments.

Table 17-2 (Cont.) Property APIs

Best Practice	What to avoid and why
Use Oracle Hospitality Reporting and Analytics for General Ledger or other financial queries.	Using Property APIs to run General Ledger or other financial queries. Ledger balances and Trial balances are not available through Property APIs. The result of End of Day calculations is not available through Property APIs. This can cause revenue recognition dates for postings retrieved from the Property APIs to be inaccurate due to when End of Day runs. Financial postings are final only after End of Day has run and are not reflected in the Property APIs. A mapping between transaction codes and chart of accounts is not available in Property APIs. Room revenue is split based upon market segment. The Property APIs can obtain information only at the time of the API request. Since this information changes daily due to changes in rates, additional logic must be applied on top of Property API responses to apply the correct market segment to a live transaction.
Ensure that code consuming responses from Oracle Hospitality Property APIs treats header keys as case insensitive.	Code that breaks if the casing of response values changes.
Use Streaming to consume Business Events from OPERA.	The polling API has several limitations, especially in the initial setup.
Include the header X-Request-Id and specify a GUID for its value. This can help Oracle troubleshoot API queries.	You should avoid relying on dates and times because timezones and clock synchronization issues can affect the dates and times that API calls were sent.
Include the header X-Originating-Application when using a proxy for calls from multiple microservices. For example: • InternalCRMSystemv1 -> Proxy -> OHIP • InternalCRMSystemv2 -> Proxy -> OHIP Using the X-Originating-Application header will help both you and Oracle troubleshoot API queries and trace them to the source microservice (for example, InternalCRMSystemv2).	Creating separate applications for separate microservices, which needlessly inflates the number of applications.

Streaming APIs

Table 17-3 Streaming

Best Practice	What to avoid and why
Use a single-threaded application to consume events through the Streaming API, and then deploy a tool like Apache Kafka and multi-threaded clients to consume events from Apache Kafka to populate backend systems. While we recommend using our GraphiQL tool or using Postman to solidify understanding of the Streaming API, it is important to use separate applications for GraphiQL, Postman, and your client code. Similarly, your client code must be single threaded. For an example, refer to the Spring Boot documentation. Use a single WebSocketGraphQlClient instance for each server to have a single, shared connection for all requests to that server. Each client instance establishes its own connection, which is typically not the intent for a single server.	Calling the streaming API through a multi-threaded consumer. The Streaming API adheres to the graphql-ws protocol, which requires that a given stream receives a connection from only one source to preserve the ordering of events. A stream is identified as a combination of the following: gateway + the chainCode + an application key.
Implement a buffering mechanism such that events received from the streaming API are consumed from the buffer before being written to the back-end database.	Writing straight to back-end database after receiving an event from the streaming API. OPERA Cloud can generate many thousands of events in certain circumstances, and the Streaming API is not throttled. If the streaming client is coded to write straight to a back-end database, this can overwhelm the back-end database.
Stay connected to the Streaming API and only disconnect when you must refresh the oAuth token. If you leave more than 24 hours between connecting, you must send the "offset" input parameter together with the value of the last offset you received when reconnecting.	Connecting and then disconnecting frequently from the Streaming API, or connecting only intermittently. The Streaming API is built upon WebSocket, where the connection remains open. Barring network events, it is expected that the WebSocket connections will remain open and connected permanently to the Streaming API, subject to the lifetime of the oAuth token. For best practices on oAuth tokens, see Property APIs. Disconnecting and reconnecting after a period of time can lead to a significant backlog of events, making it difficult for the consuming architecture to process them efficiently.
When disconnecting from the Streaming API, it is important to follow the protocol and send the "Complete" message. You must accept and process any events in the process of being sent, but wait for OHIP to close the connection. Consuming systems must wait 10000ms before reconnecting.	Disconnecting incorrectly from the Streaming API (for example, simply closing the connection). Disconnecting and then immediately re-connecting. Both of these scenarios can cause the WebSocket not to reopen.

Table 17-3 (Cont.) Streaming

Best Practice	What to avoid and why
Ensure architecture consuming the Streaming API sends the “ping” request every 15 seconds. This is not billable. For more information, see Keeping the Stream Open.	Not sending the “ping” request to the Streaming API, or not sending it frequently enough will result in the connection automatically being closed after 30 seconds.
Use the “offset” request parameter for the Streaming API only in a replay scenario. For more information, see Replaying Messages.	Disconnecting and then reconnecting from the Streaming API, starting from a given offset, or starting from the last received offset plus one.
In every other scenario, remain connected to the Streaming API and after obtaining an oAuth token, connect without specifying an offset. OHIP will resume sending events starting from the next offset.	Each business event sent on the streaming API is given a different offset number. While these appear to increment, a linear progression is not guaranteed. The offset number also changes if the consumer has been disconnected from the stream for over 24 hours. Making assumptions about the offset can result in a failure to connect. Not remaining connected can result in a large backlog of events that may never be consumed.
Use different applications created in the OHIP Developer Portal when developing against the Streaming API.	All developers using the same application for the Streaming API. The Streaming API adheres to the graphql-ws protocol, which requires that a given stream receives a connection from only one source to preserve the ordering of events. A stream is identified as a combination of the following: gateway + the chainCode + an application key. If two developers are trying to use the same application to access the Streaming API, they will lock each other out.
Use the OHIP developer portal to subscribe to consume events through the Streaming API only when the consuming architecture is ready.	Enabling business events ahead of being ready to consume. As soon as an application is subscribed to business events in OPERA, the subscribed events will start to be enqueued. If not consumed, this will result in a large queue, which is challenging for consuming systems to process. Further, if the integration sends responses back to OPERA Cloud as a result of events received and is slow to process the events, then the operational impact can occur as the state of the data in OPERA Cloud would differ from the state of the data perceived by an integration that is running behind.

18
Accessibility

Accessibility involves making your application usable for differently abled persons such as low vision or blindness, deafness, or other physical limitations. This means creating applications that can be used without a mouse (keyboard only), used with a screen reader for blind or low-vision users, and used without reliance on sound, color, or animation and timing.

Keyboard Only Users

When you log in to the Oracle Hospitality Developer Portal and go to the APIs page, you can use the keyboard keys to bring the focus to the Early Adopter message for Early Adopter APIs.

1. On the Early Adopter APIs panel:
    a. Press the **Tab** key in any of the rows on the APIs page.
    b. Press the **Tab** key and select the highlighted text for the Early Adopter and then press **F6**. The content is highlighted.
    c. Press the **Tab** key to select the email address in the highlighted text. To send an email, press **Enter**. The selected email address opens in your default email client.
    d. Press the **Esc** key to let go of the pop-up text.
2. To copy an application key using keyboard keys:
    a. Press the **Tab** key to move to the list of applications while on the Applications page.
    b. Press the **Arrow** keys to move from one application to the next.
    c. Press **F2** to select an application.
    d. Press the **Tab** key to select **Copy** or to select **View Details**.
    e. Press **Enter** to
        - view the application details while on View Details.

          or
        - copy the application key to the clipboard while on Copy.
3. For users who can view Early Adopter APIs, tab to the early adopter API banner and use the below keyboard commands.

Table 18-1 Keyboard Commands for Early Adopter API Users

Target	Key	Action
Focus within Popup	Tab or Shift + Tab	Navigate the content of the popup. Close the open popup if there are no tab stops in the popup.

Table 18-1 (Cont.) Keyboard Commands for Early Adopter API Users

Target	Key	Action
	F6	Move focus to the launcher for a popup with modeless modality. Close the open popup if the modality is modal.
	Esc	Close the open popup.
Popup Launcher	F6	Move focus to the first tab stop within the open popup. If there is not a tab stop within the content, focus is established on the popup.
Side Filters	Press Tab once	Move focus to side filters.
Search bar	Press Tab again when focus is set on side filters	Move focus from side filters to search bar.
Category	Up and Down Arrows	When focus is set on side filters on any category, you can use the arrow keys to move up or down a category (for example, API Lifecycle, Methods).
Check boxes	F2	Press F2 to move within a category and access the check boxes.

4. Tab to the data visualization chart to navigate between the data points on the Analytics tab.

Table 18-2 Keyboard Commands for Data Visualization Chart

Key	Action
Tab	Move focus to the next element.
Shift + Tab	Move focus to the previous element.
Up Arrow	Move focus and selection to the previous data item.
Down Arrow	Move focus and selection to the next data item.
Left Arrow	Move focus and selection to the previous data item (on left).
Right Arrow	Move focus and selection to the next data item (on right).

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Additional Resources

The resources below can help you familiarize yourself with the Oracle Hospitality Integration Platform, existing integrations to OPERA Cloud, hospitality industry terminology, and the application nomenclature associated with the Oracle Hospitality APIs.

OHIP Overview, Registration, and Marketplace

- Oracle Hospitality Integration Platform Product Page
- Oracle Hospitality Integration Platform Self Service Registration
- Oracle Hospitality Cloud Marketplace
- Oracle Hospitality Integration Platform Cloud Premium Remote Assistance
- Oracle Partner Network

Blogs

- Oracle Hospitality Integration Blogs

OPERA Cloud Resources

- OPERA Cloud Services

20 FAQs

APIs

Do I need to supply the x-hotelid in the header as well as the URL?

Yes, the header parameter is used for authorization where any **hotelIds** in the URL refer to the resource being accessed.

How can I call early adopter (v0) APIs and what are the implications?

See the Early Adopter API Program topic for details.

How long after a v0 API is promoted to v1 will I have to repoint my integration to v1?

The v0 Early Adopter APIs have been officially deprecated. We recommend reviewing your integration to ensure that no endpoints reference v0 in the path URL.

Do I need to request an OAuth each time I make an API call?

No, please avoid doing this. Instead of requesting a token repeatedly, just request a token once per user and keep using that same token for the lifetime of the token. For information about managing oAuth tokens, see Property APIs. Additional calls are unnecessary and may add to your per cost calls.

Is the Oracle Hospitality product version number the same as the OHIP developer portal version?

No, the OHIP developer portal version, which is visible by clicking the **My Profile** dropdown at the top right of the Developer Portal, relates only to the OHIP version, not the version of any APIs available through OHIP.

Billing

If I am using Oracle Hospitality Integration Cloud Service, how do I view my billing and API usage?

There are two ways to view your billing and metrics:

1. Oracle Cloud Console administrators can view their usage and invoices in the Oracle Customer Center (oracle.com).
2. Oracle Cloud Console administrators can also view this information in their monthly email invoices.

Will all API calls be counted in my API charged usage for Oracle Hospitality Integration Cloud Service?

No, 429, 500, 502, 503, and 504 errors will not be charged. You can view the non-billable usage in API Analytics.

How am I charged for consuming events?

With the streaming API, partners are charged for each event consumed at a rate of $0.0001 per event. When replaying events, partners are charged the first time they replay an event. With the polling API, partners are charged for each API call made at a rate of $0.001 per API call.

For any other questions about Oracle invoicing, refer to Oracle Invoicing FAQ | Oracle United Kingdom.

Compliance

Where can I obtain Oracle Cloud PCI compliance attestations?

Refer to the Overview of Compliance Documents (oracle.com) page.

Connecting to a Customer

How can a partner connect to an OPERA Cloud property?

See the Partners Moving to Production topic for details.

How can I verify that an integration user was created correctly?

1. Find the email you received when the hotel approved your integration user. This includes a URL for the Shared Security Domain identity server. Go to this URL.
2. Log in using your integration username and password.
3. Go to the **My Access** tab.
4. Verify you have the <Tenant>-WSACCESS role.

If you have the WSACCESS role, then the integration user is correctly set up and has been approved by the environment owner.

My integration suddenly stopped working!

First, check that your credentials are correct. Integration Users can be checked by logging in to the Shared Security Domain and clicking the **My Access** tab.

If this is a production integration and there has been a major incident with your integration, Oracle Hospitality will contact you using the contact details listed on the application in the Developer Portal. If you do not respond, Oracle Hospitality will disable your integration. If you have missed this communication and your integration has stopped working, reach out to Oracle Hospitality via a Service Request to request details of what changes must be made before the integration will be reenabled. We will work with you to reenable your integration once the issue has been resolved.

If Oracle Hospitality has not contacted you about your production integration, then reach out to the environment owner and ask the owner to reset your integration user password. If the environment is an OPERA Cloud Identity Manager environment, log in to the Developer Portal and reset the clientSecret from the **Environments** tab.

Eligibility

What are the minimum requirements for a partner to call production OPERA Cloud environments?

1. Your solution must be posted in the Oracle Hospitality Cloud Marketplace (listed under the OHIP product category).

> **Note**
>
> A current Oracle Partner Network Membership (that is, base member, Level 0) is required to post a solution on the Marketplace.
>
> Note that this level is “zero” and not the uppercase letter O.

- To join the Oracle Partner Network (OPN), follow the steps here: https://www.oracle.com/middleeast/partnernetwork/program/join/
- To publish your solution, follow the steps here: https://cloudmarketplace.oracle.com/marketplace/en_US/partnerLandingPage

2. Once your application is listed in the marketplace in the OHIP product category, email your listing ID to **hgbu_integrations_provisioning_grp@oracle.com** and Oracle will grant you access to call production OPERA Cloud Environments.
3. Create a new application by selecting **Production** at step 7 in Registering an Application.
4. Create an integration user within the customer's production tenancy and ensure the customer chain administrator has approved your user.
5. Follow the procedure in Adding an Environment and enter the user name of the integration user.

How can a customer confirm if their subscription is to OPERA Cloud Foundation?

If there is a customer employee at the hotel who is familiar with the hotel's OPERA contract, they can confirm this by reviewing their active subscriptions. Alternatively, the hotel can contact their Account Manager to verify this.

What are the minimum requirements for the streaming API?

For the streaming API, a hotel must be running OPERA Cloud Foundation version 22.3.0.1 or beyond. To get started, customers must engage with Oracle Professional Services.

How do I know if a customer is eligible to use OHIP?

We recommend partners check the following to ensure a smooth production move:

- The customer must be running OPERA Cloud and have an active subscription for OPERA Cloud Foundation or OPERA Cloud Central.

> **Note**
>
> OHIP is only available for OPERA Cloud Foundation and OPERA Cloud Central customers at this point.

Events

How long will OHIP retain events?

When using the streaming API, OHIP retains messages for 7 days; therefore, messages sent in those 7 days can be replayed (see Replaying Messages for more information). Messages not consumed within 7 days are lost and cannot be replayed.

When using the polling API, events are retained forever, but events cannot be replayed via the polling API.

How frequently should I connect to consume events?

It is recommended to keep the WebSocket connected, but depending on use case, this may be neither practical nor needed. However, connecting at least every few days ensures no messages will be lost.

There is no guarantee that a subscription to consume events will remain in place if the application fails to consume the subscribed events for 2 weeks.

What do the terms WebSocket and GraphQL mean?

To learn more, read our blog posts at https://blogs.oracle.com/hospitality/post/ohip-introduces-state-of-the-art-streaming-api-and-rich-analytics and https://blogs.oracle.com/hospitality/post/ohip-streaming-api-understanding-our-strategy.

Is the polling API for fetching business events going away?

No, for some use cases it is the right fit, so it will be available alongside the streaming API.

How many events can I consume at once?

With the polling API, a maximum of 20 events can be retrieved in one API call. The streaming API makes events available as soon as they occur, so there is no maximum number of events.

Will streaming affect throttling?

Only inbound API calls to OPERA Cloud are throttled; events produced from OPERA Cloud are not.

The events tab is not appearing in the application window. What am I missing?

You must have at least one OPERA Cloud environment with streaming enabled added to your Environments tab. You can identify if streaming is enabled for an environment by looking for the Streaming Enabled flag on the environment's card (located under the Environments tab).

Is it possible to clear the backlog of events for my application?

No option is currently available to clear the backlog of events, and you must continue to process those events. Alternatively, you can create a new application and delete the old one if it is not required.

Onboarding

Do we need to sign an agreement to work with OHIP as an integration partner?

No, you must purchase Oracle Hospitality Integration Cloud Service from the Oracle Shop, but there is no further agreement required.

Is there a sandbox provided for testing?

As a customer. we recommend developing and testing in your UAT environment. For more information, see the Quick Start Guide for customers.

Integration partners have complimentary access to a sandbox environment. For more information, see the Quick Start Guide for partners.

OPN and Marketplace

Is a validation or certification needed for OHIP?

A review is optional. By default, OHIP is intended to offer a self-service experience that enables developers to bring their solutions to life without the need for a formal validation. If you would like to request an Oracle Hospitality review, please email hospitality-integrations_ww@oracle.com.

How do I add my application to the Cloud Marketplace?

Click the link below and follow the instructions on the page:

https://cloudmarketplace.oracle.com/marketplace/en_US/partnerLandingPage

Where can I find information for joining the Oracle Partner Network (OPN)?

To join the Oracle Partner Network (OPN), follow the steps here: https://www.oracle.com/middleeast/partnernetwork/program/join/

> **Note**
>
> Please note that the minimum level required for OHIP is the OPN Member Level.

21

Upcoming Major Changes

This topic applies to Customers, Partners, and Support Agents of Oracle Hospitality Integration Platform/Oracle Hospitality Integration Cloud Service.

As part of the continuous delivery model for Cloud Service, APIs, features, and technical components of a solution may be removed, changed or replaced to enhance the security, performance, and overall quality of the Cloud Service. When this occurs, the deprecation or change of an API or component will be announced in advance, allowing customers sufficient time to anticipate the change and transition to any enhanced API or replacement feature/component. After the change is announced, the API change, deprecated feature, or component will remain in the solution until the planned removal date.

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contact. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any feature described for Oracle's product remains at the sole discretion of Oracle.

Announcement Date	Link to ReadMe	Additional Information	Comments
25-Sep-2023	September 2023 ReadMe		
30-Apr-2024	April 2024 ReadMe	Property REST API Get Query Parameter Limits	
21-May-2024	May 2024 ReadMe		
15-July-2024	July 2024 ReadMe		
9-Sept-2024	September 2024 ReadMe		
17-March-2025	March 2025 ReadMe		
10-Jun-2025	June 2025 ReadMe		
27-October-2025	October 2025 ReadMe		

October 2025 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The data included in the Business Event payload of the Streaming API will be now be dictated by what triggers are configured in the OHIP Developer Portal. Previously, ALL data elements were included in the "detail" array of the Business Event payload.	New features available in OHIP 25.4 will mean that business events consumed via the streaming API must have triggers defined for them. Triggers can be defined in the OHIP Developer Portal. A trigger is a business data element such as LastName. If an UPDATE PROFILE event is subscribed and the trigger LastName is configured, then a Business Event notification will be sent only when the LastName field changes. This is the same functionality as the polling API which is configured in OPERA Cloud. With OHIP 25.4, when a Business Event is sent by the Streaming API, only the Data Elements explicitly configured as triggers for that event in the OHIP Developer Portal will be included in the "detail" array of the Business Event payload. Data elements that have not been selected will no longer be transmitted, even if they are updated within OPERA Cloud.	OHIP version 25.4	Existing subscriptions will only be affected if the event configuration is changed in the OHIP Developer Portal; until then, they will receive all data elements. New events being configured and existing events being edited in the OHIP Developer Portal must select triggers, and will receive only the data elements in the payload that match the triggers. Integrations that rely on receiving all data elements in the Streaming Business Event payloads may experience incomplete data when editing existing configuration or subscribing to a new environment in the OHIP Developer Portal.If not adjusted integrations will be affected: • Payloads will contain only the configured data elements. • External systems may not receive all the expected data elements in the payload.	Adapt Integration Logic: Ensure your integration can handle payloads with variable data elements depending on the configuration. Add Orchestration: Orchestrate such that when you receive a Business Event notification you look at the primaryKey and send an API call to obtain the latest version of that resource using the primaryKey. This has the added benefit that the API call will return the full resource and child elements, whereas the Business Event notification includes only the header of the resource. **Once the change is live** If not orchestrating and you require a small number of data elements, use the OHIP Developer Portal to ensure these are selected for all subscribed events and all subscribed environments.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
	This change is being introduced to improve performance, efficiency, and system stability by reducing unnecessary data transmission.			

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
This change applies only to Base Rate code types that have a Standard Rate linked to them. Currently, the operations **postRatePlan**, **putRatePlan**, **postRatePlanSchedules**, and **putRatePlanSchedules** are used for creating and updating rate plan headers and pricing schedules. When the parent Standard Rate code has a large number of pricing schedules (1000+), or is linked to a high number of Base Rate codes (75+), you must now use the additional ASYNC process APIs: • **startRatePlanSchedulesSyncProcess** • **headRatePlanSchedulesSyncProcessStatus** • **headRatePlanSchedulesSyncProcessStatus** These new ASYNC process APIs work alongside the existing operations to ensure proper processing and synchronization of pricing schedules in these large or complex scenarios.	1. When creating and updating Base Rate Codes for Parent Standard Rate with 1000+ Pricing Schedules: • Use **postRatePlan** and **putRatePlan** for the header • Use the asynchronous APIs below to update pricing schedules: a. **startRatePlanSchedulesSyncProcess** b. **headRatePlanSchedulesSyncProcessStatus** c. **getRatePlanSchedulesSyncProcessSummary** 2. When updating Pricing Schedules for	OPERA Cloud 25.5	If not adopted, pricing schedules will not be processed to the dependent base rates for large volumes.	**Prepare Now** • Review your current integration for Base Rate code types that have an associated Standard Rate. • Continue using the existing API operations (**postRatePlan**, **putRatePlan**, **postRatePlanSchedules**, **putRatePlanSchedules**) **Once the change is live** • If you are creating or updating a Base Rate that is linked to a Standard Rate code with 1000 or more pricing schedules, you should still use the existing APIs for updating the rate plan header, but you now need to call asynchronous (ASYNC) operations: **startRatePlanSchedulesSyncProcess**, **headRatePlanSchedulesSyncProcessStatus**, and **getRatePlanSchedulesSyncProcessSummaryAPIs** to handle the

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
	Standard Rate linked to 75+ Base Rate Codes: • Use **postRatePlanSchedules** and **putRatePlanSchedules** to create and update pricing schedules for the Standard Rate (Parent Rate code) • Then use the asynchronous APIs below to update and synchronize pricing schedules to the linked Base Rate codes: a. **startRatePlanSchedulesSyncProcess** b. **headRatePlanSchedulesSyncProcessStatus** c. **getRatePlanSchedulesSyncProcessSummary** These changes ensure pricing schedules are			pricing schedules. • If you are creating or updating pricing schedules for a Standard Rate code that is linked to more than 75 Base Rate codes, you should first update the Standard Rate using the existing POST/PUT **postRatePlanSchedulesRatePlanSchedules** APIs, and then use the new ASYNC APIs to make sure all the linked Base Rate codes get the updated pricing schedules. • Test all changes in a UAT environment or sandbox environment to address any issues proactively. • Confirm that the updated logic for processing and synchronizing pricing schedules is now active in your production environment. • Monitor integrations to ensure the new and

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
	accurately processed and synced at scale.			existing APIs work as expected and that pricing updates are applied correctly to all relevant rate codes.
The “membershipLevel” field is now mandatory in the **postMembership** operation.	To align the API with the OPERA Cloud user interface, the **postMembership** operation now requires the membershipLevel attribute to be able to create a membership.	OPERA Cloud 25.3	API calls to **postMembership** will fail if the request body does not include the membershipLevel field.	If calling the **postMembership** operation, ensure code always sends the membershipLevel attribute.

June 2025 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
In the operation “getARCreditCard Payments” the data type of the attribute "fiscalFolioNo" is changing from from number to string in the object "aRCreditCardPay mentInfoType"	In the “getARCreditCard Payments” operation the response object "aRCreditCardPay mentInfoType" has an attribute "fiscalFolioNo" which is of number type. However, the actual data may include alphabetic characters as well as numeric values. The attribute "fiscalFolioNo" is therefore converted to a string type, which can accommodate the string value.	OPERA Cloud version 25.4	Customers or Partners whose integration expects a number in the “fiscalFolioNo” field may break when they detect alphabetic characters in the field.	Review your integrations or applications that rely on the "getARCreditCard Payments" operation of ars.json schema and update them to handle fiscalFolioNo as a string data type. By doing so, you will ensure compatibility with the updated schema and avoid potential errors or data truncation. Test your integrations or applications with the updated schema to ensure compatibility and identify any potential issues before the change goes live. This will enable you to address any issues proactively and minimize downtime. **Once the Change is Live:** Update your local copies of the ars.json schema to reflect the changed data type. This will ensure that your integrations or applications remain compatible with the updated schema and can take advantage of the changes. Verify that your integrations or applications are working correctly with the updated schema. By doing so, you will be able to confirm

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
				that the changes have not introduced any issues and that your integrations or applications are functioning as expected.
Validation is being added to the operation “setRateAccessExclusion”	Invalid rateCode or sourceCode data will now trigger a HTTP 400 (Bad Request) response. The error message will indicate the invalid data.	OPERA Cloud version 25.3	Customers or Partners using the “setRateAccessExclusion” operation will start to receive 400 error if the rateCodes and sourceCodes included in the request are not valid.	**Prepare Now:** Customers or Partners using the “setRateAccessExclusion” operation should adjust their code to fetch valid rateCodes and valid sourceCodes for the property before calling the API. Test your new orchestration with these changes in a UAT or sandbox environment to address any issues proactively.
The **status** field will no longer be returned in error responses from Oracle Hospitality Property APIs.	As part of standardizing error response payloads across the platform, the Property API will remove the **status** field from all error responses. This change simplifies error handling and aligns with updated API design guidelines.	OPERA Cloud version 25.3	Integrations that look at the **status** field in the error response body to make business decisions may fail.	**Prepare Now:** Adjust your code to look at the HTTP response code, not the **status** field in the error response. Test code that determines next steps based upon the **status** code to ensure it works the same way using the HTTP response code.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The data included in the Business Event payload of the below API operations will be now be dictated by what Data Elements are configured in OPERA Cloud Business Event Configuration. Previously, ALL data elements were included in the payload, regardless of what was configured in Business Event configuration. This change applies only to polling via the getBusinessEvents and getBusinessEvents ByExternalSystem Name APIs, not to Streaming Business Events.	With this update, when a Business Event is triggered, only the Data Elements explicitly configured for that event in OPERA Cloud will be included in the API response payload. Data elements that have not been selected in Business Event Configuration will no longer be transmitted, even if they are updated within OPERA Cloud. This change is being introduced to improve performance, efficiency, and system stability by reducing unnecessary data transmission.	OPERA Cloud version 25.3	Integrations that rely on receiving all data elements in Business Event payloads may experience incomplete data if their Business Event Configuration in OPERA Cloud has not been updated accordingly. If not adjusted: • Payloads will contain only the configured data elements. • External systems may not receive all the expected data elements in the payload.	Review Configuration: Check your Business Event Configuration in OPERA Cloud and ensure all required data elements are selected. Communicate with Partners: If you're a customer, confirm with your OHIP partner if any configuration changes are needed. If you're a partner, reach out to your customers to align on configuration updates. Adapt Integration Logic: Ensure your integration can handle payloads with variable data elements depending on the configuration. Add Orchestration: Orchestrate such that when you receive a Business Event notification you look at the primaryKey and send an API call to obtain the latest version of that resource using the primaryKey. This has the added benefit that the API call will return the full resource and child elements, whereas the Business Event notification includes only the header of the resource.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The hotelIds query parameter will no longer be supported in the getHurdleRates operation.	The getHurdleRates operation (/par/v1/hotels/{hotelId}/hurdles) includes a query parameter "hotelIds" but also includes the hotelId in the URL. The hotelIds query parameter will be removed, and the operation will only return hurdle rates for the hotel specified in the URL.	OPERA Cloud version 25.4	Integrations that expect to obtain hurdle rates from multiple hotels in one API call will start receiving details from only one hotel.	**Prepare Now:** If hurdle rates are required from more hotel send separate API calls for each hotel, changing the hotelId in the URL as needed.

March 2025 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The Rate (RTP) API operations putRatePlan and postRatePlan will enforce validation for the transactionCode.	The values for transactionCode in the request body of the postRatePlan and putRatePlan operations must now be valid.	OPERA Cloud version 25.3	Customers or Partners who are using the **postRatePlan** or **putRatePlan** operations in the Rate (RTP) API and not sending valid transactionCodes.	Users must provide a valid transactionCode when using the **postRatePlan** or **purRatePlan** operation. To ensure you are using the correct values for a given property, you can call the LOV operation **getTransactionCodes**, which will return the list of transactionCodes for that property.

October 2024 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The Profiles (CRM) API will enforce validation for state and country fields in the postProfile and putProfile operations.	The values for state and country will be subject to validation. When a profile is created or updated using **postProfile** and **putProfile** operations, only valid entries for these fields will be permitted.	OPERA Cloud version 24.5	Any customers and/or Partners who are using the **postProfile** and **putProfile** operations in the Profiles (CRM) API.	Users must provide valid state and country values when using the postProfile and putProfile operations. To ensure you are using the correct values for a given property, you can call the LOV operations **FetchCountries** and **FetchStates**, which will return the country and state codes for that property.

September 2024 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
The getBusinessEvents operation in the OPERA Cloud Integration Processor API will now validate the hotelId supplied in the path.	The path parameter hotelId will now be validated. This means that only Business Events for the hotel specified in the path will be returned.	OPERA Cloud version 25.3	If a dummy value is being used, integrations will break. If a valid value is being used, then fewer Business Events will be returned as the operation will now return Business Events only for the specified hotel.	Amend integrations to use this operation only if Business Events are required for a specific hotel. If Business Events are needed from multiple hotels, use the operation getBusinessEvents ByExternalSystem.

July 2024 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Pagination being added to the operation getAllMembershipClaims	Offset and Limit query parameters will be added, and the response will include totalPages, offset, limit, hasMore, totalResults, and count parameters. The default limit - even if not supplied - will be 20.	Oracle Hospitality Integration Platform 24.4	When calling getAllMembershipClaims expect a maximum of 20 items to be returned.	Adapt calling code to paginate through the list of membership claims.

May 2024 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Event resources will enforce a minimum of zero attendees.	The following operations will enforce a minimum of zero attendees: postEvents getEvent changeEvents changeEventsResourcesByChain getEventsResources changeEventsResources getEventResourceByMenu changeEventResourceByMenu getEventItemSplitQuantity getCateringPackages changeCateringPackages getWaitlistedEvents manageWaitlistedEvents In the following properties: Expected, Guaranteed, Billed, Actual, Set, Package Expected, Package Guaranteed, Package Billed and Package Actual Attendees.	Oracle Hospitality OPERA Cloud 24.3	If a negative number of attendees is supplied, the call will fail with a 400 HTTP status error response.	Ensure that a positive number of attendees is supplied to these operations.

<table>
<tr><th>What will Change</th><th>Details of the Change</th><th>Target Product and Version</th><th>Impact</th><th>Call to Action</th></tr>
<tr><td>Enhancing error response bodies.</td><td>The error response body will be enhanced in the following operations.
Note that the HTTP response codes are not changing.
<table><tr><th>Module</th><th>OperationId</th></tr><tr><td>blk</td><td>getblock</td></tr><tr><td>blk</td><td>getblockavailability</td></tr><tr><td>blk</td><td>getblocks</td></tr><tr><td>crm</td><td>getProfile</td></tr><tr><td>crm</td><td>postProfile</td></tr><tr><td>crm</td><td>putProfile</td></tr><tr><td>csh</td><td>applyfinalpostings</td></tr><tr><td>csh</td><td>generatefolio</td></tr><tr><td>csh</td><td>getccsurchargeinfo</td></tr><tr><td>csh</td><td>getdepositfolio</td></tr><tr><td>csh</td><td>getfoliotypename</td></tr><tr><td>csh</td><td>postcheckout</td></tr><tr><td>ent</td><td>gethotel</td></tr><tr><td>fof</td><td>getroomkeyinterfacedetails</td></tr><tr><td>fof</td><td>getroomkeys</td></tr><tr><td>int</td><td>getbusinessevents</td></tr><tr><td>int</td><td>getbusinesseventsbyEx</td></tr></table></td><td>Oracle Hospitality OPERA Cloud 24.4</td><td>If the body of error responses is parsed, this could result in failures or miscounts.</td><td>Alter integrations that branch based upon the error response body to be built on the HTTP response code.
Utilize the enhanced error response bodies to guide development work.</td></tr>
</table>

What will Change	Details of the Change		Target Product and Version	Impact	Call to Action
		ternalSystem			
	inv	gethotelinventory			
	inv	getinventorystatistics			
	inv	getrevenueinventorystatistics			
	inv	getrevenueinventorystatisticsprocessstatus			
	inv	startrevenueinventorystatisticsprocess			
	lov	getlistofvalues			
	lov	getnotetypeslov			
	lov	getpaymentmethodslov			
	lov	getreservationpackageslov			
	lov	validatelistofvalues			
	rsv	gethotelreservations			
	rsv	getrateinfo			
	rsv	getreservation			
	rsv	getreservationActivityLog			
	rsv	getReservationProcessStatus			

What will Change	Details of the Change		Target Product and Version	Impact	Call to Action
	rsv	getreservations			
	rsv	getreservationsdailysummary			
	rsv	postcancelreservationByExtId			
	rsv	putreservation			
	rsv	startreservationsdailysummaryprocess			
	rtp	getRatePlan			
	rtp	getRatePlanSchedules			
Promotion of Oracle Hospitality Distribution v0 APIs to v1. Deprecation of v0 Oracle Hospitality Distribution APIs.	Oracle Hospitality Distribution APIs are currently available only as /v0. All operations will now be v1 with v0 APIs deprecated in 12 months' time. All v0 APIs will be removed.		Oracle Hospitality Integration Platform 24.2	When the v0 Oracle Hospitality Distribution APIs are removed, calls with /v0 in the URL will fail.	Change /v0 to /v1 in the URI of every API call to an Oracle Hospitality Distribution API.

April 2024 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Applying limits on query parameters	We are introducing major changes to many of our Oracle Hospitality OPERA Cloud Property APIs to enhance performance and optimize resource usage. As part of these updates, we will be implementing new limits on certain request parameters. For example, limits on date ranges and pagination. Details of the limits and which operations have been enhanced can be found attached. For now, if you continue to use the Oracle Hospitality OPERA Cloud Property APIs without applying the new limits, the operations will respond as usual. However, you will receive a warning in the response body to all operations which now have limits defined, informing you of these new limits. You will see these response warning messages from the OPERA Cloud 24.1 release. In Oracle Hospitality OPERA Cloud 24.4, we will begin enforcing these new limits. At that point, not	Oracle Hospitality OPERA Cloud 24.4	Not adhering to the new limits will result in an error.	Adapt API calls to the new limits using pagination and orchestration. **Example 1: Date range limit** Calling the **getHotelRooms** (FOF) operation specifying a 365-day date range. When the new limits are applied, the caller will have to limit the hotelRoomStartDate and hotelRoomEndDate to be a maximum of 180 days apart. This will mean making two requests. **TODAY** 1. {{HostName}}/fof/v1/hotels/{{HotelId}}/rooms?roomType=DLXK&hotelRoomStartDate=2023-01-01&hotelRoomEndDate=2023-10-30 **AFTER LIMITS ARE APPLIED** 1. {{HostName}}/fof/v1/hotels/{{HotelId}}/rooms?roomType=DLXK&hotelRoomStartDate=2023-01-01&hotelRoomEndDate=2023-05-30 2. {{HostName}}/fof/v1/hotels/{{HotelId}}/rooms?roomType=DLXK&hotelRoomStartDate=2

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
	adhering to the new limits while making API calls will result in an error.			023-06-01&hotelRoomEndDate=2023-10-30 **Example 2: Pagination limit** Calling the **getActivities** (ACT) operation without sending the "limit" query parameter. When the new pagination limits are applied, the caller will be required to send a limit of maximum 200. **TODAY** 1. {{HostName}}/act/v1/hotels/{{HotelId}}/activities **AFTER LIMITS ARE APPLIED** 1. {{HostName}}/act/v1/hotels/{{HotelId}}/activities?limit=200&offset=0 2. {{HostName}}/act/v1/hotels/{{HotelId}}/activities?limit=200&offset=201
oAuth token requests for Resource Owner environment will not allow using query parameters for username and password	The username and password are no longer supported as query parameters when requesting an oAuth token from a Resource Owner environment. The username and password must be sent as part of the request body for oAuth token requests.	Oracle Hospitality OPERA Cloud 24.3	The oAuth token request will fail.	Ensure you are passing the username and password in the body of the request.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Change of datatype for three operations	The below operations in the CRM Configuration API have a property "multipleRooms" that is an ENUMerated string with options "Two" through "Ten." This is becoming an integer datatype. • postMembershipTypes • putMembershipType • getMembershipType	Oracle Hospitality OPERA Cloud 24.2	Using the listed operations and expecting a string in the "multipleRooms" field will result in a 400 error.	Change your implementation to send the number of rooms as an integer.
Change of response code for Asynchronous APIs	When the throttling limit is reached, the Asynchronous APIs will return a 429 error not a 400 error.	Oracle Hospitality OPERA Cloud 24.4	Code that expects a 400 error in this scenario will not work.	Implement a wait when receiving a 429 error. 400 errors will reflect invalid requests.
Error when changing the "Display Key Pin" when this is disabled in OPERA controls	The putHotelInterface operation allows many controls to be changed in hotel interfaces. But where this conflicts with an OPERA Cloud control, the putHotelInterface operation will now return an error. If the OPERA interface "Display Key Pin" is enabled, then it is still possible to use putHotelInterface to enable it on a hotel interface.	Oracle Hospitality OPERA Cloud 24.2	Setting "Display Key Pin" via putHotelInterface will not work unless that is enabled as an OPERA Control.	Orchestrate code to first check the same named OPERA Cloud Control using the getApplicationSettings operation before setting "Display Key Pin" on a hotel interface via putHotelInterface.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Array query parameters limited	The Housekeeping operation getHouseKeeping Tasks has array query parameters such as "taskCodes." The number of items in each array query parameter is now limited to 40.	Oracle Hospitality OPERA Cloud 24.4	Sending too many items in the array query parameters will result in an error 400.	First, determine how many items really need to be sent in the array query parameters. Then if more than 40 items do need to be sent, split this into multiple requests where in each request the number of items in each array query parameter is no more than 40.

September 2023 ReadMe

Overview

This document contains a list of upcoming major changes to Oracle Hospitality APIs.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
Promotion of the majority of Oracle Hospitality v0 API to v1. Deprecation of v0 APIs.	Oracle Hospitality Property APIs are currently available as v0 and v1, with v0 available on request through the early adopter program. All operations will now be v1, meaning that access to the early adopter program will not need to be requested to access any Property API. All v0 APIs will be deprecated and in 12 months' time, all v0 APIs will be removed.	Oracle Hospitality Integration Platform version 23.4	When the v0 APIs are removed, calls with /v0 in the URI will fail.	Change /v0 to /v1 in the URI of every API call to an Oracle Hospitality Property API.

What will Change	Details of the Change	Target Product and Version	Impact	Call to Action
OPERA Cloud Shared Security Domain will be replaced by OPERA Cloud Identity Management.	Oracle Hospitality Property APIs are secured by the OPERA Cloud Shared Security Domain, which for hoteliers also secures their access to the Oracle Hospitality Integration Platform. Most Oracle Hospitality APIs are secured by the Resource Owner grant, which requires clientId and clientSecret as well as an integration username and password to obtain an oAuth token. Some customer environments will be moving to the OPERA Cloud Identity Management.	Oracle Hospitality Integration Platform version 23.3 OPERA Cloud Identity Management version 23.1	Hoteliers will not be able to log in to the developer portal without a user in OPERA Cloud Identity Manager. It will not be possible to obtain an oAuth token without changing the client.	Follow the steps in Migrating to Client Credentials-Based Authentication Scheme only for environments that are migrated from a resource owner-based authentication scheme to client credentials-based authentication scheme.
The OPERA Cloud Channel Configuration API is deprecated.	All operations in the OPERA Cloud Channel Configuration API are deprecated.	Oracle Hospitality Integration Platform version 23.4	Managing distribution channels through the OPERA Cloud Channel Configuration API will not work as expected.	Move to the Oracle Hospitality OPERA Cloud Distribution product and review the latest documentation.

Property REST API Get Query Parameter Limits

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
ACT	get	/hotels/{hotelId}/activities	getActivities	limit; startDate; endDate	200	startDate	endDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
ACT	get	/activities	getActivitiesByMultipleHotelIds	limit; startDate; endDate	200	startDate	endDate	NA
ACT	get	/hotels/{hotelId}/activityLog	getActivityLog	limit; fromDate; toDate	200	fromDate	toDate	90
ACT	get	/hotels/{hotelId}/activities/statistics	getActivityStatistics	reportStartDate	NA	NA	NA	NA
ACT	get	/activities/emails	getEmails	limit; startDate; endDate	200	startDate	endDate	90
ACTCFG	get	/hotels/{hotelId}/activityTypes	getActivityTypes	limit	25	NA	NA	NA
ACTCFG	get	/activityResults	getActivityResultsConfig	limit	25	NA	NA	NA
ACTCFG	get	/autoTraceCodes	getAutoTraceCodes	limit	25	NA	NA	NA
ACTCFG	get	/hotels/{hotelId}/autoTraceDefinitions	getAutoTraceDefinitions	limit	25	NA	NA	NA
ACTCFG	get	/hotels/{hotelId}/autoTraceOwnerAssignments	getAutoTraceOwnerAssignments	limit	25	NA	NA	NA
ARS	get	/accounts	getAccounts	limit	20	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
ARS	get	/accounts/{accountId}/statements	getStatements	closeDate; folioDate; postingDate; revenueDate; transferDate; transactionDate; compressedDate; expirationDate; printedDate; balanceForwardDate; filterEndDate; filterStartDate	NA	NA	NA	NA
ARS	get	/statements	getARStatements	closeDate; folioDate; postingDate; revenueDate; transferDate; transactionDate; compressedDate; expirationDate; printedDate; balanceForwardDate; filterEndDate; filterStartDate	NA	NA	NA	NA
ARS	get	/hotels/{hotelId}/profiles/{profileId}/accounts/{accountId}/statementsHistory	getStatementsHistory	dateSent	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
ARS	get	/accounts/{accountId}/remindersHistory	getRemindersHistory	dateSent	NA	NA	NA	NA
ARS	get	/invoicePayments/accounts/{accountId}	getInvoicesPayments	limit; end; start	50	start	end	NA
ARS	get	/invoicePostings	getInvoicePostings	closeDate; folioDate; postingDate; revenueDate; transferDate; transactionDate; compressedDate; expirationDate; printedDate; end; start	NA	start	end	30
ARS	get	/hotels/{hotelId}/accounts/invoicesOnHold	getInvoicesOnHold	endDate; startDate	NA	startDate	endDate	30
ARS	get	/arTransactions	getARTransactions	endDate; startDate	NA	startDate	endDate	30
ARS	get	/hotels/{hotelId}/transactions/{transactionId}/creditcard/payments	getARCreditCardPayments	endDate; startDate; limit	50	startDate	endDate	30
ARS	delete	/hotels/{hotelId}/accounts/{accountId}/traces	deleteAccountTrace	traceOn	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
BLK	get	/blocks	getBlocks	limit; blockStartEndDate; blockStartStartDate; blockEndEndDate; blockEndStartDate; reservationArrival; reservationDeparture; stayDate; blockCreatedOnEndDate; blockCreatedOnStartDate; decisionEndDate; decisionStartDate; cutOffEndDate; cutOffStartDate; additionalCriteriaStartDate; customDateUDFsValue	200	NA	NA	NA
BLK	get	/hotels/{hotelId}/blocks/{blockId}	getBlock	startDate	NA	NA	NA	365
BLK	get	/hotels/{hotelId}/externalSystems/{externalSystemCode}/blocks/{blockExternalId}	getBlockByExtId	startDate	NA	NA	NA	365

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
BLK	get	/blockActivityLog	getBlockActivityLog	limit; activityParamsFromDate; activityParamsToDate	200	activityParamsFromDate	activityParamsToDate	
BLK	get	/inventoryToBorrow	getInventoryToBorrow	startDate; endDate; borrowDate	NA	startDate	endDate	30
BLK	get	/hotels/{hotelId}/blocks/changesByDateTime	blockChangesByDateTime	startLastModifiedDate; endLastModifiedDate; limit	1000	startLastModifiedDate	endLastModifiedDate	3
BLK	get	/blocks/{blockId}/roomTypes	getBlockRoomTypes	startDate; endDate	NA	startDate	endDate	30
BLK	get	/defaultBlockCode	getDefaultBlockCode	startDate	NA	startDate	NA	1
BLK	get	/hotels/{hotelId}/blocks/{blockId}/availability	getBlockAvailability	arrivalDate	NA		NA	30
BLK	get	/blocks/{blockId}/statistics	getBlockStatistics	startDate	NA	startDate	NA	90
BLK	get	/blocks/{blockId}/restrictions	getBlockRestrictions	startDate; endDate	NA	startDate	endDate	90
BLK	delete	/blocks/{blockId}/restrictions	deleteBlockRestriction	startDate; endDate	NA	startDate	endDate	90
BLK	get	/blocks/{blockId}/statusActivityLog	getBlockStatusChanges	limit; changeEndDate; changeStartDate	200	changeStartDate	changeEndDate	30
BLK	get	/blocks/{blockId}/revenueActivityLog	getBlockRevenueChanges	limit; changeEndDate; changeStartDate	200	changeStartDate	changeEndDate	30

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
BLK	get	/blocks/dailyStatistics	getBlockDailyStatistics	limit; end; start	31	start	end	90
BLK	get	/hotels/{hotelId}/tracesByDateRange	getTracesByDateRange	beginDate; endDate	NA	beginDate	endDate	90
BLK	get	/blocks/statistics	getBlockStats	reportEndDate; reportStartDate	NA	reportStartDate	reportEndDate	90
BLK CFG	get	/hotels/{hotelId}/blockSalesAllowance	getBlockSalesAllowance	endDateRange; startDateRange	NA	startDateRange	endDateRange	90
BLK CFG	delete	/hotels/{hotelId}/blockSalesAllowanceRange	deleteBlockSalesAllowanceRange	endDate; startDate	NA	startDate	endDate	90
BLK CFG	get	/hotels/{hotelId}/salesManagers	getSalesManagers	limit	20	NA	NA	NA
BLK CFG	get	/salesManagers	getSalesManagersMultipleHotelIds	limit	20	NA	NA	NA
BLK CFG	get	/salesManagers/{salesManagerId}/salesManagerGoals	getSalesManagerGoalsMultipleHotelIds	limit	20	NA	NA	NA
BLK CFG	get	/hotels/{hotelId}/salesManagers/{salesManagerId}/salesManagerGoals	getSalesManagerGoals	limit	20	NA	NA	NA
BLK CFG	get	/hotels/{hotelId}/cutoffSchedules	getCutoffSchedules	cutoffCode StartDate; limit	20	NA	NA	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
BLKCFG	get	/hotels/{hotelId}/cutoffSchedules/{cutoffCodeId}	getCutoffSchedulesDetails	limit	365	NA	NA	NA
CMS	get	/activities/tasks	getCalendarTasks	startDate; endDate	NA	startDate	endDate	90
CMS	get	/hotels/{hotelId}/trackItems	getTrackItItems	followUpDate; createdOn	NA	NA	NA	30
CRM	get	/profiles	getProfiles	limit	200	NA	NA	NA
CRM	get	/profilesByIds	getProfilesByIds	limit	200	NA	NA	NA
CRM	get	/stagedProfiles	getStagedProfiles	limit; importDate	200	NA	NA	NA
CRM	get	/profiles/activityLog	getProfileActivityLog	limit; fromDate; toDate	200	fromDate	toDate	NA
CRM	get	/duplicateExternalSubscriptions	getDuplicateExternalSubscriptions	limit	200	NA	NA	NA
CRM	get	/duplicateOPERASubscriptions	getDuplicateOPERASubscriptions	limit	200	NA	NA	NA
CRM	get	/membershipTierProjections	getMembershipTierProjections	projectionDate	200	NA	NA	NA
CRM	get	/suspendedAddresses	getSuspendedAddresses	validateDate	200	NA	NA	NA
CRM	get	/profiles/{profileId}/stayHistory	getStayHistory	limit	200	NA	NA	NA
CRM	get	/profiles/{profileId}/hotels/{hotelId}/forecasts	getAccountForecasts	limit	200	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CRM	get	/memberships/{membershipId}/claims	getMembershipClaims	closeDateEnd; closeDateStart; claimDateEnd; claimDateStart; replyByEnd; replyByStart; arrivalEnd; arrivalStart; departureEnd; departureStart	NA	closeDateStart	closeDateEnd	90
CRM	get	/membershipClaims	getAllMembershipClaims	closeDateEnd; closeDateStart; claimDateEnd; claimDateStart; replyByEnd; replyByStart; arrivalEnd; arrivalStart; departureEnd; departureStart	NA	closeDateStart	closeDateEnd	90
CRM	get	/memberships/{membershipId}/awards	getMembershipIssueAwardsList	limit	200	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CRM	get	/availableAwardsBasedOnType	getAvailableAwardsBasedOnType	arrivalDate; departureDate; bookingDate; productCriteriaArrivalDate; productCriteriaDepartureDate; productCriteriaBookingDate; upgradeCriteriaArrivalDate; upgradeCriteriaDepartureDate; upgradeCriteriaBookingDate	NA	arrivalDate	departureDate	90
CRM	get	/memberships/{membershipId}/award	exportMembershipAward	stayDate; awardValidFrom; awardValidTo; upgradeInfoStayDate; sellBeginDate; sellEndDate; arrivalDate; departureDate; createDateTime; lastModifyDateTime; purgeDate; DateUDFsValue	NA	awardValidFrom	awardValidTo	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CRM	get	/membershipTransactions/{membershipTransactionId}/pointRejectionReasons	getMembershipTransactionPointsRejectionReasons	limit	200	NA	NA	NA
CRM	get	/membershipTransactions/{membershipTransactionId}/awardPoints	getMembershipTransactionAwardPoints	limit	200	NA	NA	NA
CRM	get	/membershipTransactions/{membershipTransactionId}/tierPoints	getMembershipTransactionTierPoints	limit	200	NA	NA	NA
CRM	get	/membershipTransactions/{membershipTransactionId}/revenue	getMembershipTransactionRevenue	limit	200	NA	NA	NA
CRM	get	/membershipTransactions/{membershipTransactionId}/rates	getMembershipTransactionRates	limit	200	NA	NA	NA
CRM	get	/profiles/{profileId}/membershipTransactionExceptions	getMembershipTransactionExceptions	end; start	NA	start	end	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CRM	get	/profiles/{profileId}/memberships/info	getMembershipDetails	startDate; endDate	NA	startDate	endDate	90
CRM	get	/airline/transactions	getAirlineTransactionsStatus	limit; importDate	200	NA	NA	NA
CRM	get	/profileStatistics	getProfileStatistics	stayFrom; stayTo	NA	stayFrom	stayTo	90
CRM	get	/profileMembershipStatistics	getProfileMembershipStatistics	startDate; endDate; transactionDate; limit	NA	startDate	endDate	90
CRM	get	/profilesMatchList/profileType/{profileType}	getProfilesMatchList	computedDate; limit	200	NA	NA	NA
CRM CFG	get	/membershipEnrollmentGroups	getMembershipEnrollmentGroups	limit	200	NA	NA	NA
CRM CFG	get	/membershipBenefitPrograms	getMembershipBenefitPrograms	end; start	NA	start	end	90
CRM CFG	get	/membershipAwards	getMembershipAwards	validForDate	200	NA	NA	NA
CRM CFG	get	/cityPostalCodes	getCityPostalCodes	limit	200	NA	NA	NA
CSH	get	/hotels/{hotelId}/transactions	getGuestsTransactions	startDate; endDate	NA	startDate	endDate	30

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CSH	get	/hotels/{hotelId}/sourceReservations/{sourceReservationId}/targetReservations/{targetReservationId}/roomRouting	getPostingsForRefresh	startDate; endDate	NA	startDate	endDate	NA
CSH	get	/hotels/{hotelId}/transactions/{transactionId}	validateTransactionCodes	folioDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/folios	getFolio	end; limit; start	NA	start	end	30
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions	getRoutingInstructions	effectiveOn	20	NA	NA	NA
CSH	delete	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions/folio	deleteFolioRoutingInstructions	startDate; endDate	NA	startDate	endDate	NA
CSH	delete	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions/room	deleteRoomRoutingInstructions	startDate; endDate	NA	startDate	endDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CSH	delete	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions/comp	deleteCompRoutingInstructions	startDate; endDate	NA	startDate	endDate	NA
CSH	delete	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions/request	deleteRequestRoutingInstructions	startDate; endDate	NA	startDate	endDate	NA
CSH	get	/hotels/{hotelId}/compRoutingInstructions	getCompRoutingInstructions	end; start	NA	start	end	30
CSH	get	/hotels/{hotelId}/transactionCodes	getTransactionCodes	folioDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/paymentMethods/creditCard/authorizeInstructions	getCCAuthorizationInstructions	expirationDate; purgeDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/profiles/{profileId}/paymentMethods/creditCard/authorizeInstructions	getCCAuthorizationInstructionsByProfile	expirationDate; purgeDate	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CSH	get	/hotels/{hotelId}/transactionsTotal	getBalanceInfo	folioDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/financialPostings	getFinancialPostings	limit; startDate; endDate; expirationDate	50	startDate	endDate	30
CSH	get	/hotels/{hotelId}/financialPostingsNetVat	getFinancialPostingsNetVat	startDate; endDate; limit	50	NA	endDate	30
CSH	get	/hotels/{hotelId}/folioHistory	getFolioHistory	folioDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/receiptHistory	getReceiptHistory	fromDate; toDate	NA	fromDate	toDate	30
CSH	get	/cashierReportPostings	getCashierReportPostings	startDate; endDate	NA	startDate	endDate	30
CSH	get	/hotels/{hotelId}/creditcardsurcharge	getCCSurchargeInfo	expirationDate; purgeDate	NA	NA	NA	NA
CSH	get	/roundingDifference	getRoundingDifference	expirationDate; purgeDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/folioTaxPayments	getFolioTaxPaymentsInfo	expirationDate; purgeDate; transactionDate; paymentDate; taxTransactionDate; taxPaymentDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/closureList	getCashierClosureInfo	closureBusinessDate	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CSH	get	/hotels/{hotelId}/folioPrinters	getFolioPrinters	associatedBillGenerationDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/reservations/cCSettlements	getBatchCCSettlements	transactionDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/advancePaymentBalance	getAdvancePaymentBalance	fromDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/bedTax	getBedTaxInfo	arrival	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/revenue	getHotelRevenue	businessDate	NA	NA	NA	NA
CSH	get	/compAccountingJournal	getCompAccountingJournal	limit; startDate; endDate	50	startDate	endDate	30
CSH	get	/hotels/{hotelId}/compAccountingJournal	getCompPostingJournal	limit; startDate; endDate	50	startDate	endDate	30
CSH	get	/hotels/{hotelId}/authorizers/credits	getAuthorizersCreditInfo	startDate; endDate	NA	startDate	endDate	NA
CSH	delete	/hotels/{hotelId}/check/{checkNumber}/charges	voidBillingCheckCharges	revenueDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/postingDates/date/postingSummary	getPostingSummary	postingDate	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
CSH	get	/hotels/{hotelId}/storedFolios/{folioId}	getStoredFolioDetails	folioDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/covers	getTransactionCovers	coversDate	NA	NA	NA	NA
CSH	get	/hotels/{hotelId}/fiscalSupportingDocuments	getFiscalSupportingDocuments	arrivalStartDate; arrivalEndDate; departureStartDate; departureEndDate; limit	20	arrivalStartDate	arrivalEndDate	NA
CSH	get	/hotels/{hotelId}/reservations/{reservationId}/postingActivities	getPostingActivityDetail	logDate	NA	NA	NA	NA
ENT CFG	get	/flexFields	getFlexFields	limit	50	-	-	-
ENT CFG	get	/chain	getChain	limit	-	-	-	-
ENT CFG	get	/calendar	getPropertyCalendar	startDate; endDate	-	startDate	endDate	-
ENT CFG	get	/hotels/{hotelId}/calendar	getHotelCalendar	startDate; endDate	-	startDate	endDate	-
ENT CFG	delete	/hotels/{hotelId}/events/{eventId}	removeHotelEvents	startDate; endDate	-	startDate	endDate	-
ENT CFG	delete	/dayTypes/{dayType}	removeDayTypes	startDate; endDate	-	startDate	endDate	-
ENT CFG	get	/configurations/activityLogs	getConfigActivityLog	limit; fromDate; toDate	20	fromDate	toDate	4
ENT CFG	get	/hotels/{hotelId}/marketingCities	getMarketingCities	limit	20	-	-	-

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
ENTCFG	get	/marketingCities	getTemplateMarketingCities	limit	-	-	-	-
ENTCFG	delete	/hotels/{hotelId}/transportations/{transportationCode}	removeTransportation	createDateTime; lastModifyDateTime; purgeDate	-	-	-	-
ENTCFG	get	/hotels/{hotelId}/airports	getAirports	limit	-	-	-	-
ENTCFG	delete	/hotels/{hotelId}/rateRanges	removeHotelRateRanges	startDate; endDate	-	startDate	endDate	-
ENTCFG	delete	/hotels/{hotelId}/amenities/{featureCode}	removeAmenities	beginDate	-	-	-	-
ENTCFG	get	/hotels/{hotelId}/countries	getCountries	limit	20	-	-	-
EVM	get	/hotels/{hotelId}/eventcalendar	getEventCalendar	eventEndDate; eventStartDate	NA	eventStartDate	eventEndDate	21
EVM	get	/eventcalendar	getEventCalendarMultipleHotelIds	eventEndDate; eventStartDate	NA	eventStartDate	eventEndDate	21
EVM	get	/events	getEventsMultipleHotels	eventStartDate; eventEndDate; limit	200	eventStartDate	eventEndDate	90
EVM	get	/hotels/{hotelId}/events	getEventsOneHotel	eventStartDate; eventEndDate; limit	200	eventStartDate	eventEndDate	90
EVM	get	/hotels/{hotelId}/cateringEventChanges	getCateringEventChanges	limit; eventDate; eventEndDate; eventStartDate	20	eventStartDate	eventEndDate	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
EVM	get	/hotels/{hotelId}/functionalSpace	getFunctionSpaceAvailability	eventEndDate; limit; eventStartDate	NA	eventStartDate	eventEndDate	21
EVM	get	/events/{eventId}/splitQuantity	getEventItemSplitQuantity	eventEndDate; eventStartDate	NA	eventStartDate	eventEndDate	1
EVM	get	/hotels/{hotelId}/functionalSpaceEvents	getSharedFunctionSpaceEvents	startDateTime; endDateTime	NA	startDateTime	endDateTime	21
EVM	get	/hotels/{hotelId}/waitListedEvents	getWaitlistedEvents	startDateTime; endDateTime	NA	startDateTime	endDateTime	21
EVM CFG	get	/hotels/{hotelId}/cateringMenuItems	getCateringMenuItems	limit	200	NA	NA	NA
EVM CFG	get	/hotels/{hotelId}/cateringMenuItemClasses	getCateringMenuItemClasses	limit	25	NA	NA	NA
EVM CFG	get	/hotels/{hotelId}/cateringMenuClasses	getCateringMenuClasses	limit	25	NA	NA	NA
EVM CFG	get	/hotels/{hotelId}/cateringMenus	getCateringMenus	limit; end; start	200	start	end	90
EVM CFG	get	/hotels/{hotelId}/eventForecasts	getEventForecasts	limit; eventDate	200	NA	NA	90
EVM CFG	get	/hotels/{hotelId}/cateringPackages	getCateringPackages	limit; sellDate; startDateTime; endDateTime	25	NA	NA	90
EVM CFG	get	/cateringPackages	getCateringPackagesMultiProperties	limit; sellDate; startDateTime; endDateTime	25	startDateTime	endDateTime	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
EVMCFG	get	/hotels/{hotelId}/dailyInventoryItems	getDailyInventoryItems	startDate; endDate	NA	startDate	endDate	7
EVMCFG	get	/functionspaces/{functionSpaceCode}	getFunctionSpace	limit	25	NA	NA	NA
EVMCFG	get	/hotels/{hotelId}/roomPools	getRoomTypePool	limit	25	NA	NA	NA
EVMCFG	delete	/hotels/{hotelId}/roomPools/{roomPoolCode}	removeRoomTypePool	activeDate	NA	NA	NA	NA
EVMCFG	get	/hotels/{hotelId}/functionSpaces	getFunctionSpaces	limit	100	NA	NA	NA
EVMCFG	get	/hotels/{hotelId}/inventoryItems	getInventoryItems	startDateTime; endDateTime	200	startDateTime	endDateTime	7
EXPCFG	get	/availableExports	getExportsAvailable	limit	NA	NA	NA	NA
EXPCFG	get	/hotels/{hotelId}/exportSchedules	getExportSchedules	startDate; endDate	NA	startDate	endDate	NA
EXPCFG	get	/hotels/{hotelId}/exportActivityLog	getExportActivityLog	fromDate; toDate; limit	25	fromDate	toDate	NA
EXPCFG	get	/{exportFileId}/generatedExports	getExportsGenerated	limit	25	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
EXPCFG	get	/hotels/{hotelId}/configTypes/{configType}/exportMappingCodesToLink	getExportMappingCodesToLink	limit	NA	NA	NA	NA
FOF	get	/hotels/{hotelId}/frontOfficeStatistics/{statisticsCode}	getFrontOfficeStatistics	date	NA	NA	NA	NA
FOF	get	/hotels/{hotelId}/frontOfficeStatisticsRange/{statisticsCode}	getFrontOfficeStatisticsWithDateRange	endDate; date	NA	date	endDate	7
FOF	get	/hotels/{hotelId}/reservationSummaries	getReservationSummaries	arrivalEnd; arrivalStart; departureEnd; departureStart; stayOnEnd; stayOnStart; createdOnEnd; createOnStart; depositDateEnd; depositDateStart; depositDueDateEnd; depositDueDateStart; expectedArrivalEndTime; expectedArrivalStartTime	NA	arrivalStart departureStart stayOnStart createOnStart depositDateStart depositDueDateStart expectedArrivalStartTime	arrivalEnd departureEnd stayOnEnd createdOnEnd depositDateEnd depositDueDateEnd expectedArrivalEndTime	30

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
FOF	get	/hotels/{hotelId}/interfaces/{interfaceId}/roomStatuses	getRoomInterfaceStatus	arrivalEnd; arrivalStart	NA	arrivalStart	arrivalEnd	90
FOF	get	/hotels/{hotelId}/reservations/{reservationId}/suggestedRooms	getSuggestedRooms	startDate	NA			NA
FOF	get	/hotels/{hotelId}/rooms	getHotelRooms	limit; hotelRoomStartDate; hotelRoomEndDate	NA	hotelRoomStartDate	hotelRoomEndDate	180
FOF	get	/hotels/{hotelId}/fulfillmentActivityLogs	getFulfillmentActivityLog	limit; fromDate; toDate	NA	fromDate	toDate	180
FOF	get	/hotels/{hotelId}/billingReservations	getReservationsForBilling	limit; arrivalEnd; arrivalStart; departureEnd; departureStart	NA	arrivalStart departureStart	arrivalEnd departureEnd	50
FOF	delete	/hotels/{hotelId}/reservations/autoRoomAssignments	autoUnAssignRoom	limit; startDate; endDate	NA	startDate	endDate	NA
FOF	get	/hotels/{hotelId}/reservations/{reservationId}/wakeUpCalls	getWakeUpCall	beginDate; endDate	NA	beginDate	endDate	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
FOF	delete	/hotels/{hotelId}/reservations/{reservationId}/wakeUpCalls	deleteWakeUpCall	startDate	NA	NA	NA	NA
FOF	get	/hotels/{hotelId}/dailyDocket	getDailyDocket	docketDate	NA	NA	NA	NA
FOF	get	/hotels/{hotelId}/serviceRequests	getServiceRequests	creationEndDate; creationStartDate; closedEndDate; closedStartDate	NA	creationStartDate closedStartDate	creationEndDate closedEndDate	30
FOF	get	/hotels/{hotelId}/bankAccounts/{bankAccountId}/agents/{agentId}/reservationsForCommissions	getReservationsForCommissions	limit	50	NA	NA	NA
FOF CFG	get	/hotels/{hotelId}/customNumbers/configuration/{configurationId}	getCustomNumberConfig	startDate; endDate	NA	startDate	endDate	NA
FOF CFG	get	/hotels/{hotelId}/customNumbers	getCustomNumbers	startDate; endDate	NA	startDate	endDate	NA
FOF CFG	get	/hotels/{hotelId}/template/customNumbers/configuration/{configurationId}	getTemplateCustomNumberConfig	startDate; endDate	NA	startDate	endDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
FOFCFG	delete	/fiscalPeriods	deleteFiscalPeriods	startDate	NA	startDate		NA
FOFCFG	get	/hotelPaymentMethods	getPaymentMethods	limit	NA	NA	NA	NA
FOFCFG	get	/cashierDetails/cashiers	getCashiers	limit	20	NA	NA	NA
FOFCFG	get	/defaultPaymentMethodRules	getDefaultPaymentMethodRule	limit	50	NA	NA	NA
FOFCFG	get	/hotels/{hotelId}/exchangeRates/{currencyCode}	getFuturePastExchangeRates	dateRangeStart; dateRangeEnd	NA	dateRangeStart	dateRangeEnd	30
FOFCFG	get	/template/customNumbers	getTemplateCustomNumbers	startDate; endDate	NA	startDate	endDate	NA
FOFCFG	get	/hotels/{hotelId}/vouchers	getVouchers	startDate; endDate	NA	startDate	endDate	NA
FOFCFG	get	/creditCardTypes/validate	validateCreditCardType	expirationDate; emailFolioInfoPurgeDate	NA	NA	NA	NA
HSK	get	/hotels/{hotelId}/housekeepingOverview	getHousekeepingOverview	limit	100	NA	NA	NA
HSK	get	/hotels/{hotelId}/housekeepingDiscrepancies	getHousekeepingDiscrepancies	housekeepingEndDate; housekeepingStartDate	NA	NA	NA	NA
HSK	get	/hotels/{hotelId}/rooms/outOfOrderRooms	getOutOfOrderRooms	startDate; endDate	NA	startDate	endDate	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
HSK	get	/hotels/{hotelId}/rooms/outOfServiceRooms	getOutOfServiceRooms	startDate; endDate	NA	startDate	endDate	90
HSK	get	/hotels/{hotelId}/houseKeepingtasks	getHouseKeepingTasks	taskDate	NA	NA	NA	NA
HSK	delete	/hotels/{hotelId}/taskSheets	deleteTaskSheet	date	NA	NA	NA	NA
HSK	delete	/hotels/{hotelId}/taskSheets/rooms	deleteTaskSheetRooms	date	NA	NA	NA	NA
HSK	get	/hotels/{hotelId}/sheets/{sheetNumber}	getTaskCompanion	taskDate	NA	NA	NA	NA
HSK	get	/hotels/{hotelId}/rooms/maintenances	getRoomMaintenance	resolvedEndDate; resolvedStartDate	NA	resolvedEndDate	resolvedStartDate	90
HSK	get	/hotels/{hotelId}/reservations/{reservationId}/houseKeepingTaskSchedules	getReservationHousekeepingSchedule	beginDate; endDate	NA	beginDate	endDate	NA
HSK	delete	/hotels/{hotelId}/reservations/{reservationId}/houseKeepingTaskSchedules	deleteReservationHousekeepingTasks	endDate; startDate; taskDate; taskStartDate; taskEndDate	NA	startDate taskStartDate	endDate taskEndDate	NA
HSK	get	/hotels/{hotelId}/forecastTaskSchedules	getFacilityForecast	startDate; endDate	NA	startDate	endDate	30

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
HSK	get	/hotels/{hotelId}/attendants/houseKeepingTasks	getHouseKeepingAttendantsSchedule	scheduleStartDate; scheduleEndDate	NA	scheduleStartDate	scheduleEndDate	30
HSK	delete	/hotels/{hotelId}/attendants/houseKeepingTasks	deleteHousekeepingAttendantSchedule	scheduleDate	NA	NA	NA	NA
INT	get	/externalSystem/{extSystemCode}/hotels/{hotelId}/businessEvents	getBusinessEvents	limit	20	NA	NA	NA
INT	get	/externalSystem/{extSystemCode}/businessEvents	getBusinessEventsByExternalSystem	limit	20	NA	NA	NA
INTCFG	get	/interfaceSchemas	getHotelInterfaceSchemas	limit	NA	NA	NA	NA
INTCFG	get	/interfaceErrors	getHotelInterfaceErrors	limit	NA	NA	NA	NA
INTCFG	get	/interfaceFailedMessages	getHotelInterfaceFailedMessages	limit	NA	NA	NA	NA
INV	get	/hotels/{hotelId}/hotelInventory	getHotelInventory	dateRangeStart; dateRangeEnd	NA	dateRangeStart	dateRangeEnd	90
INV	get	/hotels/{hotelId}/itemInventory	getItemInventory	startDate; endDate	NA	startDate	endDate	90
INV	get	/hotels/{hotelId}/inventoryStatistics	getInventoryStatistics	dateRangeEnd; dateRangeStart	NA	dateRangeStart	dateRangeEnd	62

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
INV	get	/hotels/{hotelId}/blockInventoryStatistics	getBlockInventoryStatistics	limit; endDateRange; startDateRange	100	startDateRange	endDateRange	90
INV	get	/blockInventoryStatistics	getBlockInventoryStatisticsMultipleHotelIds	limit; endDateRange; startDateRange	100	startDateRange	endDateRange	90
MEDCFG	get	/hotels/{hotelId}/reservations/{reservationId}/folioReports	getFolioReport	folioDate	NA	NA	NA	NA
OUICFG	get	/data/refresh/{hotelId}/history	getRefreshPropertyHistory	startDate; endDate	NA	startDate	endDate	NA
PAR	get	/hotels/{hotelId}/availableUpsells	getAvailableUpsells	startDate; endDate; rateDate	NA	startDate	endDate	90
PAR	get	/hotels/{hotelId}/restrictions	getRestrictionsByDateRange	end; limit; restrictionSearchCriteriaStartDate	NA	NA		90
PAR	delete	/hotels/{hotelId}/restrictions/{restrictionId}	deleteRestriction	restrictionEndDate; restrictionStartDate	NA	restrictionStartDate	restrictionEndDate	NA
PAR	get	/hotels	getHotels	limit; startDate; endDate	NA	startDate	endDate	NA
PAR	get	/hotels/{hotelId}/availability	getHotelAvailability	limit; roomStayStartDate; roomStayEndDate; fullStayTimeSpanStartDate; fullStayTimeSpanEndDate	NA	roomStayStartDate fullyStayTimeSpanStartDate	roomStayEndDate fullyStayTimeSpanEndDate	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
PAR	get	/availability	getHotelAvailabilityCRO	limit; roomStayStartDate; roomStayEndDate; fullStayTimeSpanStartDate; fullStayTimeSpanEndDate	NA	roomStayStartDate fullyStayTimeSpanStartDate	roomStayEndDate fullyStayTimeSpanEndDate	90
PAR	get	/hotels/{hotelId}/guarantees	getReservationGuarantees	arrivalDate; startDate; endDate	NA	startDate	endDate	NA
PAR	get	/hotels/{hotelId}/analyzeRateAvailability	analyzeRateAvailability	startDate; endDate	NA	startDate	endDate	90
PAR	get	/hotels/{hotelId}/availability/alternate	getAlternateAvailability	startDate; endDate	NA	startDate	endDate	90
PAR	get	/hotels/{hotelId}/guaranteeablePreferences	getGuaranteeablePreferences	startDate; endDate	NA	startDate	endDate	90
PAR	get	/hotels/{hotelId}/hurdles	getHurdleRates	hurdleDate; limit	NA	NA	NA	NA
PAR	delete	/hotels/{hotelId}/hurdles	deleteHurdleRates	hurdleDate	NA	NA	NA	NA
PAR	get	/hotels/{hotelId}/restrictionsHistory	getRestrictionHistory	date	NA	NA	NA	NA
RMCFG	get	/hotels/{hotelId}/roomTypes	getRoomTypes	limit	1000	NA	NA	NA
RMCFG	get	/roomsSummary	getRoomsSummary	limit	1000	NA	NA	NA
RMCFG	get	/hotels/{hotelId}/rooms	getRooms	limit	1000	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RMCFG	get	/hotels/{hotelId}/outOfOrderServiceReasons	getOutOfOrderServiceReasons	limit	1000	NA	NA	NA
RMCFG	get	/hotels/{hotelId}/roomMaintenanceReasons	getHotelRoomMaintenanceReasons	limit	1000	NA	NA	NA
RMCFG	get	/hotels/{hotelId}/vacantRoomStatus	getVacantRoomStatus	beginDate; endDate; limit	-	beginDate	endDate	90
RMR	get	/hotels/{hotelId}/roomRotationPoints	getRoomRotationPoints	roomRotationPointsDate; limit	100	NA	NA	NA
RMR	get	/hotels/{hotelId}/departureStartDate/{departureStartDate}/departureEndDate/{departureEndDate}/reservationRotationPoints	getReservationRotationPoints	departureStartDate; departureEndDate; limit	NA	departureStartDate	departureEndDate	30
RMR	get	/profiles/{profileId}/roomOwnerships	getRoomOwnerships	startDate; endDate	NA	startDate	endDate	NA
RMR	get	/roomOwners	getRoomOwners	startDateFrom; startDateTo; endDateFrom; endDateTo; limit	NA	startDateFrom; endDateFrom	startDateTo; endDateTo	NA
RMRCFG	get	/hotels/{hotelId}/rules	getRotationRules	limit	NA	NA	NA	NA
RSV	get	/sellMessages	getSellMessages	limit; startDate; endDate	NA	startDate	endDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSV	get	/hotels/{hotelId}/reservations/rateInfo	getRateInfo	criteriaStartDate; criteriaEndDate; detailDate; effectiveRateEnd; effectiveRateStart	NA	criteriaStartDate; effectiveRateStart	criteriaEndDate; effectiveRateEnd	21
RSV	get	/reservations	getReservations	limit; arrivalEndDate; arrivalStartDate; departureEndDate; departureStartDate; cancelledOn; stayDate; createdOn; stayOn	100	arrivalStartDate; departureStartDate	arrivalEndDate; departureEndDate	NA
RSV	get	/externalSystems/{extSystemCode}/reservations	getExternalSystemReservations	limit; arrivalEndDate; arrivalStartDate; departureEndDate; departureStartDate; cancelledOn; stayDate	NA	arrivalStartDate; departureStartDate	arrivalEndDate; departureEndDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSV	get	/hotels/{hotelId}/reservations	getHotelReservations	limit; arrivalEndDate; arrivalStartDate; departureEndDate; departureStartDate; stayOnStartDate; createdOnStartDate; depositDueEndDate; depositDueStartDate; cancelledOn; stayDate	NA	arrivalStartDate; departureStartDate; stayOnStartDate; createdOnStartDate; depositStartDate; depositDueStartDate	arrivalEndDate; departureEndDate; stayOnEndDate; createdOnEndDate; depositEndDate; depositDueEndDate	NA
RSV	get	/hotels/{hotelId}/preArrivalMembersReservations	getPreArrivalMemberReservations	end; start	NA	start	end	NA
RSV	get	/hotels/{hotelId}/upgradeEligibleReservations	getUpgradeEligibilityReservations	arrivalEndDate; arrivalStartDate	NA	arrivalStartDate	arrivalEndDate	30
RSV	get	/hotels/{hotelId}/reservations/{reservationIdtoShare}/share	getReservationsToShareByReservationId	limit	100	NA	NA	NA
RSV	get	/hotels/{hotelId}/profiles/{profileIdtoShare}/share	getReservationsToShareByProfileId	limit	100	NA	NA	NA
RSV	get	/hotels/{hotelId}/reservations/activityLog	getReservationActivityLog	limit; fromDate; toDate	NA	fromDate	toDate	90

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSV	get	/hotels/{hotelId}/confirmationLetters	getConfirmationLetters	createdOnEndDate; createdOnStartDate; arrivalEndDate; arrivalStartDate	NA	createdOnStartDate; arrivalStartDate	createdOnEndDate; arrivalEndDate	90
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/cancellationHistory	getCancellationHistory	roomStayStartDate; roomStayEndDate; lastStayDate	NA	roomStayStartDate	roomStayEndDate	30
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/packages	getPackage	reservationTimeSpanStartDate; reservationTimeSpanEndDate; packageTimeSpanStartDate; packageTimeSpanEndDate	NA	reservationTimeSpanStartDate; packageTimeSpanStartDate	reservationTimeSpanEndDate; packageTimeSpandEndDate	NA
RSV	get	/hotels/{hotelId}/guestMessages	getGuestMessages	limit	100	NA	NA	NA
RSV	get	/calls/statistics	getCallStatistics	end; start	NA	start	end	30
RSV	get	/sellMessages/config	getSellMessageConfigByChain	limit; displayDate	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/sellMessages/config	getSellMessageConfig	limit; displayDate	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/roomCalendar	getRoomCalendar	endDate; startDate	NA	startDate	endDate	366

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/routingInstructions	getRoutingInstructions	effectiveOn	NA	NA	NA	NA
RSV	delete	/hotels/{hotelId}/reservations/{reservationId}/preCheckIn	deletePreCheckInReservation	expirationDate; emailFolioPurgeDate	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/eCoupons	getECoupons	limit	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/tickets/inquiry	getTicketsInquiry	ticketIssueDate; ticketConsumptionDate	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/reservations/{reservationId}/tickets/reprint	getReprintTickets	ticketIssueDate; ticketConsumptionDate	NA	NA	NA	NA
RSV	get	/hotels/{hotelId}/awardUpgrades	getAwardUpgrades	reservationTimeSpanStartDate; reservationTimeSpanEndDate	NA	reservationTimeSpanStartDate	reservationTimeSpanEndDate	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSV	get	/hotels/{hotelId}/reservations/summary	getReservationsSummary	limit; arrivalDate; departureDate; createDateTime; cancelledOn; folioClosedOn	NA	arrivalDate, createDateTime, cancelledOn, folioClosedOn	departureDate	NA
RSV	get	/reservations/statistics	getReservationStatistics	requestedReportsTypeEndDate; fiscalDate; requestedReportsTypeStartDate	NA	requestedReportsTypeStartDate	requestedReportsTypeEndDate	90
RSV	get	/reservations/pace	getReservationPace	stayDate	NA			NA
RSV	get	/blockReservationStatisticsByDateAndRoomPool	getBlockReservationStatisticsByDateAndRoomPool	startDate; endDate	NA	startDate	endDate	90
RSVCFG	get	/hotels/{hotelId}/turnawayCodes	getHotelTurnAwayCodes	limit	100	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/upsellRules	getUpsellRules	stayDate	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/guestMessages	getGuestMessages	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/ratePlans/ratings	getRatePlanRatings	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/rooms/ratings	getRoomRatings	limit	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSVCFG	get	/hotels/{hotelId}/roomFeatures/ratings	getRoomFeatureRatings	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/roomSpecials/ratings	getRoomSpecialRatings	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/membershipLevels/ratings	getMembershipLevelRatings	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/locatorCodes	getLocatorCodes	limit	NA	NA	NA	NA
RSVCFG	get	/ecoupons	getECouponCodes	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/precheckinRules	getPreCheckInRules	date	NA	NA	NA	NA
RSVCFG	delete	/hotels/{hotelId}/precheckinRules	removePreCheckInRules	startDate; endDate; newStartDate; newEndDate	NA	startDate; newStartDate	endDate; newEndDate	NA
RSVCFG	get	/depositpolicies	getDepositPolicy	limit	NA	NA	NA	NA
RSVCFG	get	/depositpolicytemplates	getTemplateDepositPolicy	limit	NA	NA	NA	NA
RSVCFG	get	/cancelpolicies	getCancellationPolicy	limit	NA	NA	NA	NA
RSVCFG	get	/cancelpolicytemplates	getTemplateCancellationPolicy	limit	NA	NA	NA	NA
RSVCFG	get	/guaranteeCodeTemplates	getTemplateGuaranteeCodes	limit	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSVCFG	get	/guaranteeCodes	getGuaranteeCodes	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/policyschedules	getPolicySchedules	limit; startDate; endDate	NA	startDate	endDate	NA
RSVCFG	get	/hotels/{hotelId}/guaranteeCodeSchedules	getGuaranteeCodeSchedules	limit; startDate; endDate	NA	startDate	endDate	NA
RSVCFG	get	/marketCodeTemplates	getTemplateMarketCodes	limit		NA	NA	NA
RSVCFG	get	/marketCodes	getMarketCodes	limit	NA	NA	NA	NA
RSVCFG	get	/marketGroupTemplates	getTemplateMarketGroups	limit	_	NA	NA	NA
RSVCFG	get	/marketGroups	getMarketGroups	limit	NA	NA	NA	NA
RSVCFG	get	/templates/sourceCodes	getTemplateSourceCodes	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/sourceCodes/	getSourceCodes	limit	NA	NA	NA	NA
RSVCFG	get	/templates/sourceGroups	getTemplateSourceGroups	limit	NA	NA	NA	NA
RSVCFG	get	/hotels/{hotelId}/sourceGroups	getSourceGroups	limit	NA	NA	NA	NA
RSVCFG	get	/serviceRequestCodes	getServiceRequestCode	limit	NA	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RSVCFG	get	/hotels/{hotelId}/serviceRequestCodes	getServiceRequestCodes	limit	NA	NA	NA	NA
RTP	get	/hotels/{hotelId}/rates/promotionsCoupons	validateRatePromotionCoupon	startDate; endDate	NA	startDate	endDate	NA
RTP	get	/hotels/{hotelId}/bestavailablerates	getBestAvailableRates	startDay; limit; endDay	500	startDay	endDay	90
RTP	delete	/hotels/{hotelId}/bestavailablerates	deleteBestAvailableRates	end; start	NA	start	ebd	NA
RTP	get	/hotels/{hotelId}/negotiatedRates	getNegotiatedRates	limit; startDate; endDate	500	startDate	endDate	90
RTP	get	/hotels/{hotelId}/negotiatedRates/{rateCode}/profiles	getNegotiatedRatesForGivenHotelAndRate	limit; startDate; endDate	500	startDate	endDate	90
RTP	get	/profiles/{profileId}/negotiatedRates	getNegotiatedRatesForGivenProfile	limit; startDate; endDate	500		endDate	90
RTP	get	/hotels/{hotelId}/rates/activityLog	getRateActivityLog	limit; fromDate; toDate	500	fromDate	toDate	90
RTP	get	/ratePlans	getRatePlans	limit; sellDate	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/blocks/ratePlans	getRatePlansForBlock	beginDate; endDate	NA	beginDate	endDate	NA
RTP	get	/hotels/{hotelId}/ratePlans/{ratePlanCode}/schedules	getRatePlanSchedules	limit; startDate; endDate	NA	startDate	endDate	365

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RTP	delete	/hotels/{hotelId}/ratePlans/{ratePlanCode}/schedules	deleteRatePlanSchedules	start; end	NA	start	end	NA
RTP	get	/hotels/{hotelId}/ratePlan/schedule/yieldAdjustment	getRatePlanScheduleYieldAdjustments	limit		NA	NA	NA
RTP	delete	/hotels/{hotelId}/ratePlans/{ratePlanCode}/dailySchedules	deleteDailyRatePlanScheduleRange	startDate; endDate	NA	startDate	endDate	NA
RTP	get	/packages	getPackages	limit; startDate; endDate	NA	startDate	endDate	365
RTP	get	/hotels/{hotelId}/packageGroups	getPackageGroups	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/packages/{packageCode}/rates	getPackageRates	limit	1000	NA	NA	NA
RTP	get	/promotionCodes	getTemplatePromotionCodes	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/promotionCodes	getPromotionCodes	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/promotionGroups	getPromotionGroups	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/yieldAdjustments	getYieldAdjustments	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/rateStrategies	getRateStrategies	limit; restrictionDate	1000			NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
RTP	get	/hotels/{hotelId}/packageForecastGroups	getHotelPackageForecastGroups	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/rateGroups	getRateGroups	limit	NA	NA	NA	NA
RTP	delete	/hotels/{hotelId}/rateAccessExclusions	deleteRateAccessExclusions	end; start	NA	start	end	90
RTP	get	/hotels/{hotelId}/rateCategories	getRateCategory	limit	1000	NA	NA	NA
RTP	get	/templates/rateClasses	getTemplateRateClass	limit		NA	NA	NA
RTP	get	/hotels/{hotelId}/rateClasses	getRateClass	limit	1000	NA	NA	NA
RTP	get	/hotels/{hotelId}/rateSeasons	getRateSeasons	limit	1000	NA	NA	NA
SYS	get	/externalSystems/{extSystemCode}/accumulatedBusinessEvents	getBusinessEventQueues	enquiryStartDate; limit	20	NA	NA	NA

Module	HTTP Method	HTTP Path	Operation ID	Parameter Name	Limit	Start Date Parameter (if any)	End Date Parameter (if any)	Date Range (in days)
SYS	get	/availabilityRateInventoryErrorMessages	getADSErrorMessages	limit; beginDateRangeEnd; beginDateRangeStart; endDateRangeEnd; endDateRangeStart; createDateRangeEnd; createDateRangeStart; changeDateRangeEnd; changeDateRangeStart	20	beginDateRangeStart,endDateRangeStart;createDateRangeStart, changeDateRangeStart	beginDateRangeEnd, endDateRangeEnd;createDateRangeEnd, changeDateRangeEnd	NA
SYS	get	/iataExceptions	getIATAExceptions	limit; insertDate	20	NA	NA	NA

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Appendix A

Web Service Error Codes

Error codes in OPERA Cloud are standardized based on the format Message MODxxxxx. For example, the Reservation module has error RSV00001. Other than the module specific errors, there are generic error codes that apply to all modules. The error code for generic errors is GENxxxxx. For any system generated errors or unhandled exceptions, the detailed error is logged in the application log and the generic error is returned to the web service consumer.

Each web service has a response with the following common pattern:

SuccessType

Each web service response returns an element of Success type to indicate the successful processing of the This is used in conjunction with the Warning Type to report any warnings.

WarningType

After a message has been successfully processed to report warnings, this type returns the collection of warnings. Consumers can catch these warnings and take further action.

Multi-record handling operations provide warnings for partial failures. Successfully processed data changes are saved in the OPERA Cloud database.

ErrorType

Returned when the processing of a user's request generates an error. This type returns a collection of the errors, and the web service responds successfully without raising a SOAP fault

> **Note**
>
> After handling an error, OPERA Cloud never raises a web services fault for business errors or unhandled exceptions. All errors are reported by the "Errors" element.

For a complete list of error codes, refer to the following Oracle Customer Support Portal article — Web Service Error Codes.