Oracle® Hospitality OPERA Cloud Gaming Integration

User Guide

Release 24.1
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ORACLE

Oracle Hospitality OPERA Cloud Gaming Integration User Guide, Release 24.1

F92997-02

Contents

Preface

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

- Oracle Hospitality OPERA Cloud Gaming Integration

Purpose

This guide describes the required prerequisites and configurations that enable OPERA Cloud to communicate with your PTS.

Audience

This guide is intended for customers and partners who use Oracle Hospitality OPERA Cloud Gaming Integration.

Customer Support

To contact Oracle Customer Support, access the Customer Support Portal at the following URL:

https://iccp.custhelp.com

When contacting Customer Support, please provide the following:

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

Documentation

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

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc=docacc.

Revision History

Date	Description of Change
April 2024	Initial publication

1 Overview

The OPERA Cloud Service Casino and Gaming Management component or Gaming Integration is an add-on to OPERA Cloud Services to enable integration with your Patron Tracking System (PTS).

The supported operations depend on your Patron Tracking System (PTS), but generally there are two types of operations supported:

CRM Operations

Customer Relationship Management (CRM) enables you to query or push the available player information in your PTS directly from OPERA Cloud and consists of the following operations:

- Player Lookup to search for a player in the PTS. This can be done using the first and/or last name.
- Player Download to save specific player information in OPERA Cloud.
- Player Statistics to see (in OPERA Cloud) the statistics of the player saved in the PTS.
- Player Enrollment to enroll the guest in the PTS system as a player.
- Player Offers to validate if an offer in the PTS is valid for that player for a specific reservation.

Cashier Operations

Cashier operations enables you to post comps to your PTS from OPERA Cloud and consists of the following:

- Comp Redemption — Enables you to send redemptions to one of the pre-configured buckets (or account types) in your PTS. The current balance of the pre-configured buckets will appear in OPERA Cloud. You can also reverse a redemption that has been redeemed.
- Comp Posting — Enables you to post discretionary comp transactions to the PTS from the guest's OPERA Cloud folio. You can reverse these postings if needed.

This guide describes the required prerequisites and configurations you must follow to enable communication between OPERA Cloud and your PTS.

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Summary of the Operations

Table 2-1 Summary of Operations

Operation	IGT ADI	Aristocrat Oasis
Player Enrollment		
Player Lookup		
Player Download		
Player Statistics		
Player Offers		
Profile Update to PTS		
Reservation Notifications		

Table 2-1 (Cont.) Summary of Operations

Operation	IGT ADI	Aristocrat Oasis
Comp Posting (with reverse)		
Comp Posting (with reverse and generates)		
Async Comp Posting		
Comp Redemption (with reverse)		

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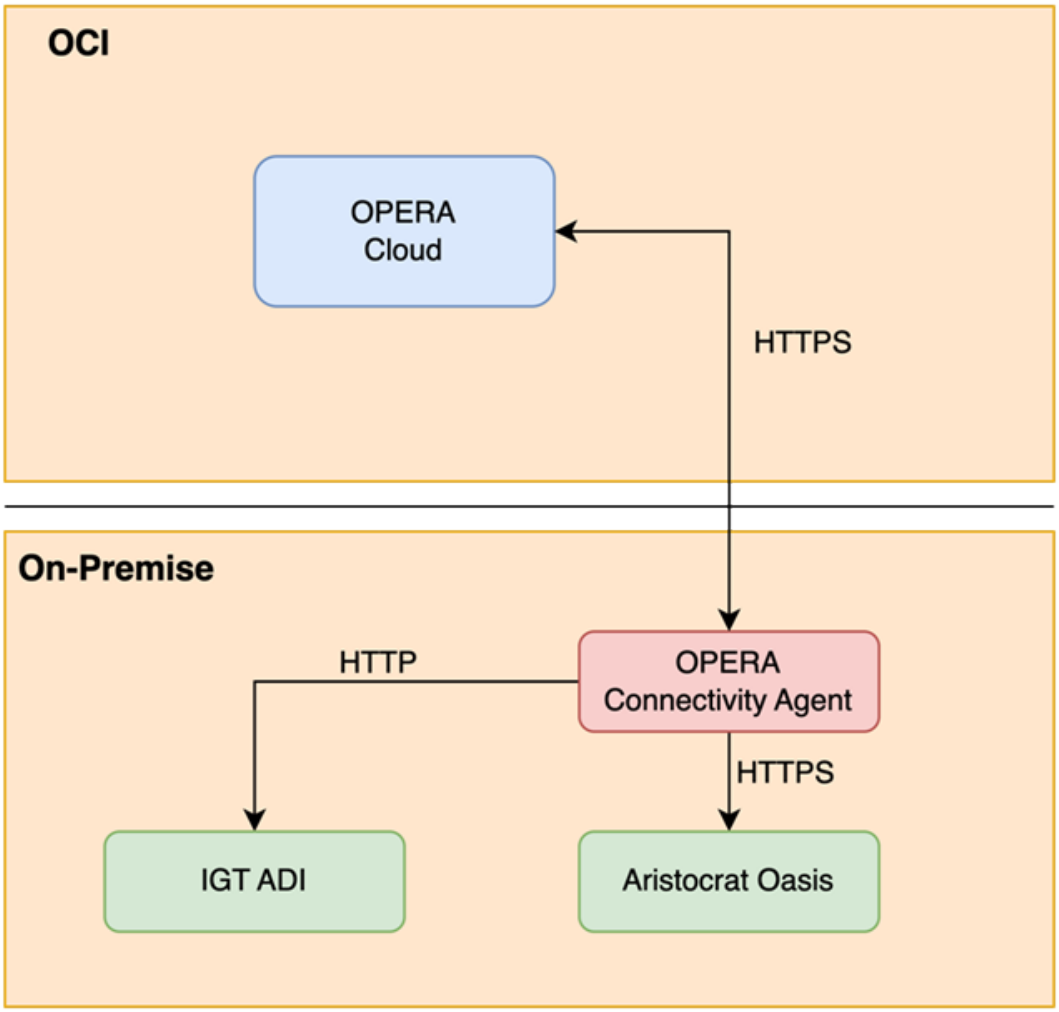
High Level Architecture

This diagram depicts the integration between OPERA Cloud Services and on-premise Patron Tracking Systems (PTS) that are connected by the OPERA Connectivity Agent.



4 Prerequisites

Application Versions

To use the Gaming Integration component, you must comply with the minimum required versions indicated in the table below:

Table 4-1 Application Versions

Application	Minimum Version	Comments
OPERA Cloud	22.5	This is the minimum version supported for gaming integration.
nConnect	1.8.4	Only applicable if your PTS is provided by Aristocrat.
ADI	8.X	Only applicable if your PTS is provided IGT.

System Requirements

When integrating two different applications where one application runs in the cloud and the another runs on-premise, there are some infrastructure and networking requirements that must be met to allow enable this cloud to on-premise integration.

Because OPERA Cloud runs in OCI (Oracle Cloud Infrastructure) and your PTS is predominantly running in your datacenter (either directly or via a hosting agreement), you must have your datacenter configured to enable OPERA Cloud to invoke APIs from your PTS that are unavailable through the internet.

The Oracle Hospitality Connectivity Agent for Gaming Integration is software developed by Oracle to run on your infrastructure. It is responsible for the integration between OPERA Cloud and your on-premise Gaming PTS. This Connectivity Agent for Gaming Integration is software developed by Oracle to run on your infrastructure.

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OPERA Cloud Connectivity Agent

The Oracle Hospitality Connectivity Agent for Gaming Integration is software developed by Oracle to run on your infrastructure. It is responsible for the integration between OPERA Cloud and your on-premise Gaming PTS.

If your gaming vendor APIs do not have a publicly available endpoint, you must install the OPERA Cloud Connectivity Agent on an environment with access to these APIs to make a connection between OPERA Cloud and your gaming vendor. Considering the supported gaming vendors, if your gaming vendor is IGT, Aristocrat Oasis, or Konami, you must install this agent.

System Requirements

When integrating two different applications where one runs in the cloud and another runs on-premise, there are some infrastructure and networking requirements that must be met to run a software component that will allow this Cloud to On-Premise integration to happen.

Because OPERA Cloud runs in OCI (Oracle Cloud Infrastructure) and, predominantly, your PTS is running in your datacenter (whether directly or via a hosting agreement), you will need to have some configuration done within your datacenter in order to allow OPERA Cloud to invoke APIs from your PTS that aren't available through the internet.

The Oracle Hospitality Connectivity Agent for Gaming Integration is software developed by Oracle to run on your infrastructure. It is responsible for the integration between OPERA Cloud and your on-premise Gaming PTS. This Connectivity Agent for Gaming Integration is software developed by Oracle to run on your infrastructure.

JDK Version, Operation System, and Heap Size Requirements

Install and use JDK version 17. To install this version, go to the JDK Development Kit 17.0.9 downloads page.

The JDK installation can be shared with other products installed on the same host. However, ensure the JDK installation is not modified for use with these other products. Also, to avoid having JDK v17 updated to another version, ensure your host does not have automatic updates for JDK.

Use one of the following operating systems:

- Oracle Linux 6.x
- Oracle Linux 7.x
- Oracle Linux 8.x
- Red Hat Enterprise Linux 6.6
- Red Hat Enterprise Linux 7.x
- Red Hat Enterprise Linux 8.x
- Suse Linux Enterprise Edition 12 SP2

- Microsoft Windows Standard Edition 2016
- Microsoft Windows 2019

> **Note:**
>
> IBM or Open JDK are not supported.

Provide a minimum of 8 GB memory with 4 GB of heap size dedicated for the agent JVM. If you want to include any additional processes on that host besides the on-premises agent, it is strongly recommended that you increase physical memory to a value greater than 8 GB.

Networking Requirements

Since this agent is (from a networking perspective) connected to both your on-premise Gaming PTS and OPERA Cloud, the machine on which this agent is deployed must have internet outbound connectivity and connectivity to your Gaming PTS. There is no need for internet inbound connection as all interactions between this agent and OPERA Cloud are always from the agent to Oracle's cloud. Never the other way around.

In regards to the on-premise Gaming PTS system, there must be network connectivity between this agent and the PTS system. This does not mean both must reside on the same subnet, but only requires network connectivity between the two.

This connectivity agent should not be deployed on your DMZ.

Depending on your Gaming PTS vendor, the agent either uses port 80 or port 443 and all traffic is done using HTTPS protocol. Contact your Oracle team for further information.

Backup and Antivirus Information

Oracle does not provide support for customer backups or antivirus. If this agent must be included as part of a backup strategy, the entire agent folder must be considered for that purpose. It is not required for agent folders to be excluded from antivirus configurations.

Patching and Updates

There is no need for you to do any patching or updates for this agent. OPERA Cloud installs patches and updates for the agent in a fully automated manner.

High Availability Mode

To ensure that connectivity between OPERA Cloud and your PTS is not disrupted, it is highly recommended that you install the agent in 'High Availability' mode. High Availability mode means having two agents with the same configuration on two different (virtual) machines.

Installation Steps

You must have the connectivity agent file (this is normally named oic_connectivity_agent.zip) and install it in your on-premise environment. The connectivity agent is also associated with what is called “agent group identifier” and OIC URL. The connectivity agent must also authenticate itself, which requires you to have the agent’s credentials. Reach out to your Oracle contact to get the connectivity agent file, your agent group identifier, your OIC URL, and your agent's respective credentials. You can install the agent on up to two separate environments for redundancy. To do this, repeat the same steps in both environments.

1. Create a directory for the connectivity agent installation on your on-premises host. Consider this folder as the %AGENT_ROOT%.
2. Unzip the connectivity agent file (that is, oic_connectivity_agent.zip) in this folder.
3. Modify InstallerProfile.cfg to include the following information:

```
# Required Parameters
# oic_URL format should be https://hostname:sslPort
oic_URL=https://oic_host:ssl_port
agent_GROUP_IDENTIFIER=my_agent_group

oic_USER=my_user
oic_PASSWORD=my_password

#Proxy Parameters
proxy_HOST=
proxy_PORT=
proxy_USER=
proxy_PASSWORD=
proxy_NON_PROXY_HOSTS=
```

   a. **oic_URL**: This parameter is required. This is the HTTPS URL for the Oracle Integration host. The port is 443.

   b. **agent_GROUP_IDENTIFIER**: This parameter is required. This is the identifier for the connectivity agent group created in Oracle Integration. The identifier name is case-sensitive.

   c. **oic_USER**: This parameter provides the Oracle Integration user name. When the agent runs for the first time, this field will be encrypted in the properties file for secure persistence. The connectivity agent supports basic authentication. You cannot use the Oracle Cloud Infrastructure API key or OAuth parameters.

   d. **oic_PASSWORD**: This parameter provides the Oracle Integration password. When the agent runs for the first time, this field will be encrypted in the properties file for secure persistence.

   e. **Proxy Parameters**: These parameters are only required if the connectivity agent is used behind a proxy in the on-premises environment. If you have multiple hosts that need configured in a nonproxy host environment, you must separate each IP address or host with a pipe symbol (|) in the proxy_NON_PROXY_HOSTS parameter. For example: proxy_NON_PROXY_HOSTS=localhost|127.0.0.1|*.myorg.com.

      If your proxy user is part of a domain, the user name must include the MS domain name in front of the user name, along with double backslashes before the user name

(for example, MS_domain\\username). If you do not specify the double backslashes, you receive a 407 Proxy Authentication Required error.

4. Open a command line and run the following command to confirm that your default active Java version is 17.

> **Note:**
>
> To comply with Oracle security standards, JDK 8 and JDK 11 are being deprecated for use with the on-premises connectivity agent. You must upgrade to JDK 17 as soon as possible following the instructions in this guide.

```
java --version
```

If you can not set Java 17 as your default active version because you have legacy applications running old Java versions, please navigate to the bin folder under the JDK 17 installation folder before running the following commands.

```
# The standdar folder in Windows
cd "C:\Program Files\Java\jdk-17\bin"
# The standard folder in Linux
cd "/usr/java/jdk-17.*"
```

5. Run the connectivity agent installer from the command prompt. Ensure that it does not have any special characters.

```
java -jar connectivityagent.jar
```

6. Wait for a successful installation message to appear. For example:

   “Done with Agent installation & configuration... Starting agent for message processing. Agent started successfully... listening for new messages...”

Run the Agent as a Service

You can now run the agent as a service. This is the preferable way of running the agent because if you run it as a normal process, every time the environment is restarted, the command prompt window is closed or the process is terminated. If this occurs, you must repeat steps 4 and 5 of the Installation Steps.

Linux Installation

This step explains how to run the connectivity agent as a Linux service using systemd.

1. After you followed successfully the Installation steps, make sure you stop the running agent by pressing **Ctrl+C** in the command line. Consider that the agent root folder is named <AGENT_ROOT>.

2. Create a Linux script named agentstartup.sh that triggers the agent startup (see script below). Place this script in <AGENT_ROOT>.

```
#!/bin/bash

java -version

cd <AGENT_ROOT>

java -jar connectivityagent.jar
```

3. Replace <AGENT_ROOT> with your path. For example, /home/myuser/connectivity_agent.
4. After saving the above script, make sure to add the execution permission:

```
sudo chmod +x agentstartup.sh
```

5. Create a new .service file (connectivity_agent.service) under **/etc/systemd/system/** to associate the script created with the Linux startup daemon process. You must have root access to create this file

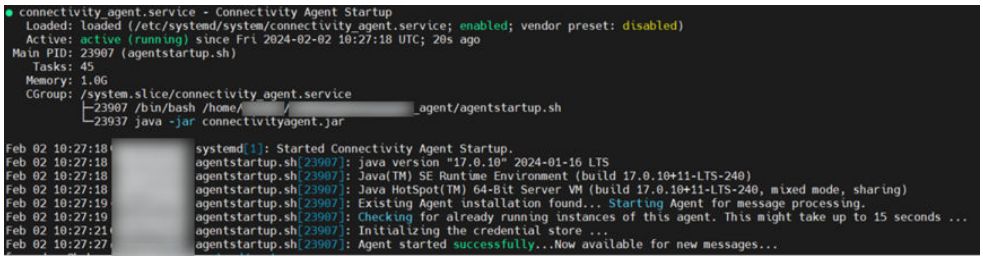
```
[Unit]
Description=Connectivity Agent
After=network.target

[Service]
Type=simple
ExecStart=<AGENT_ROOT>/agentstartup.sh
User=<myUser>
Group=<myGroup>

[Install]
WantedBy=multi-user.target
```

6. Replace **<AGENT_ROOT>** with your path (for example, /home/myuser/connectivity_agent), <myUser> and <myGroup> with your user and user group.
7. Execute the below commands to enable/start the connectivity_agent.service process:

```
sudo systemctl daemon-reload
sudo systemctl enable connectivity_agent.service
sudo systemctl start connectivity_agent.service
```

8. To check the status of execution for the connectivity_agent.service, execute the below command. Make sure the status is **active (running)**, and the last msg log is "Agent started successfully... Now available for new messages..."

```
sudo systemctl status connectivity_agent.service
```



Microsoft Windows Installation

This series of steps explains how to run the connectivity agent as a Microsoft Windows service using the Apache Commons Daemon. If you need more information on Apache Commons Daemon/ Procrun, visit the Apache Commons website at: https://commons.apache.org/proper/commons-daemon/procrun.html.

1. Download Procrun
   a. Go to the download page for Microsoft Windows at https://downloads.apache.org/commons/daemon/binaries/windows/.

      Download the latest version of the zip file. For example: commons-daemon-1.3.4-bin-windows.zip.

   b. Unzip the zip content into a dedicated folder, such as "C:\Apache Commons Daemon."
2. Install the service.
   a. Open a command prompt in the **C:\Apache Commons Daemon** folder with Administrator privileges. You can do that by opening the "Command Prompt" and then typing the following:

      ```
      cd "C:\Apache Commons Daemon"
      ```

   b. To make it easier later, create a local variable named ‘AGENT_ROOT’ with the folder path where you installed your OIC Agent. This is the folder containing the file "connectivityagent.jar." For example: C:\oic_agent. Note that this is set without quotation marks.

      ```
      set AGENT_ROOT=C:\oic_agent
      ```

   c. Create the folder ‘serviceLogFiles’ under AGENT_ROOT.

      ```
      mkdir "%AGENT_ROOT%\serviceLogs"
      ```

   d. Make sure that you have the Java executable in the correct place by querying its version.

      ```
      "C:\Progra~1\Common Files\Oracle\Java\javapath\java.exe" --
      version
      ```

      This should return something like the following:

      ```
      C:\Apache Commons Daemon>"C:\Progra~1\Common
      Files\Oracle\Java\javapath\java.exe" --version
      java 17.0.9 2023-10-17 LTS
      ```

```
Java(TM) SE Runtime Environment (build 17.0.9+11-LTS-201)
Java HotSpot(TM) 64-Bit Server VM (build 17.0.9+11-LTS-201, mixed
mode, sharing)
```

e. Run the command to install the service.

```
prunsrv.exe //IS//oic_agent --DisplayName "Oracle OIC Agent" --
Startup "auto" ^
 --StartMode "exe" --StartImage "C:\Progra~1\Common
Files\Oracle\Java\javapath\java.exe" --StartPath "%AGENT_ROOT%" --
StartParams "-jar#%AGENT_ROOT%\connectivityagent.jar" ^
 --StopMode "exe" --StopImage "cmd.exe" --StopParams "/c#FOR /F %A IN
('type "%AGENT_ROOT%\pid"') DO (taskkill /F /PID %~A && del
"%AGENT_ROOT%\pid")" --StopTimeout 10 ^
 --LogPath "%AGENT_ROOT%\serviceLogs" --LogPrefix "commons-daemon" --
LogLevel "Info" --StdError "auto" --StdOutput "auto"
```

This should return something like the following:

```
C:\Apache Commons Daemon>prunsrv.exe //IS//oic_agent --DisplayName
"Oracle OIC Agent" ^
More?  --StartMode "exe" --StartImage "C:\Progra~1\Common
Files\Oracle\Java\javapath\java.exe" --StartPath "%AGENT_ROOT%" --
StartParams "-jar#%AGENT_ROOT%\connectivityagent.jar" ^
More?  --StopMode "exe" --StopImage "cmd.exe" --StopParams "/c#FOR /F
%A IN ('type "%AGENT_ROOT%\pid"') DO (taskkill /F /PID %~A && del
"%AGENT_ROOT%\pid")" --StopTimeout 10 ^
More?  --LogPath "%AGENT_ROOT%\serviceLogs" --LogPrefix "commons-
daemon" --LogLevel "Info" --StdError "auto" --StdOutput "auto"
[2023-12-22 01:53:14] [info]  [ 9080] Apache Commons Daemon procrun
(1.3.4.0 32-bit) started.
[2023-12-22 01:53:14] [info]  [ 9080] Installing service
'oic_agent_qa' name 'Oracle OIC Agent QA'.
[2023-12-22 01:53:14] [info]  [ 9080] Service 'oic_agent_qa'
installed.
[2023-12-22 01:53:14] [info]  [ 9080] Apache Commons Daemon procrun
finished.
```

3. Start the service.

a. Open the command prompt where the connectivity agent is being run and stop it by pressing **Ctrl+C**. If you cannot find that command prompt, run the command where <agentPid> is the agent process ID. You can find that in the %AGENT_ROOT%\pid file.

b. Delete all the content under %AGENT_ROOT%\agenthome\logs. Since the service will run as LocalService and the log files were created by another user, you will see "access denied" errors and the agent og will not be properly produced.

The same will also happen with the PID file, so also remove this file to avoid issues.

```
del "%AGENT_ROOT%\agenthome\logs\*"
del "%AGENT_ROOT%\pid"
```

c. Run the following command to run the service:

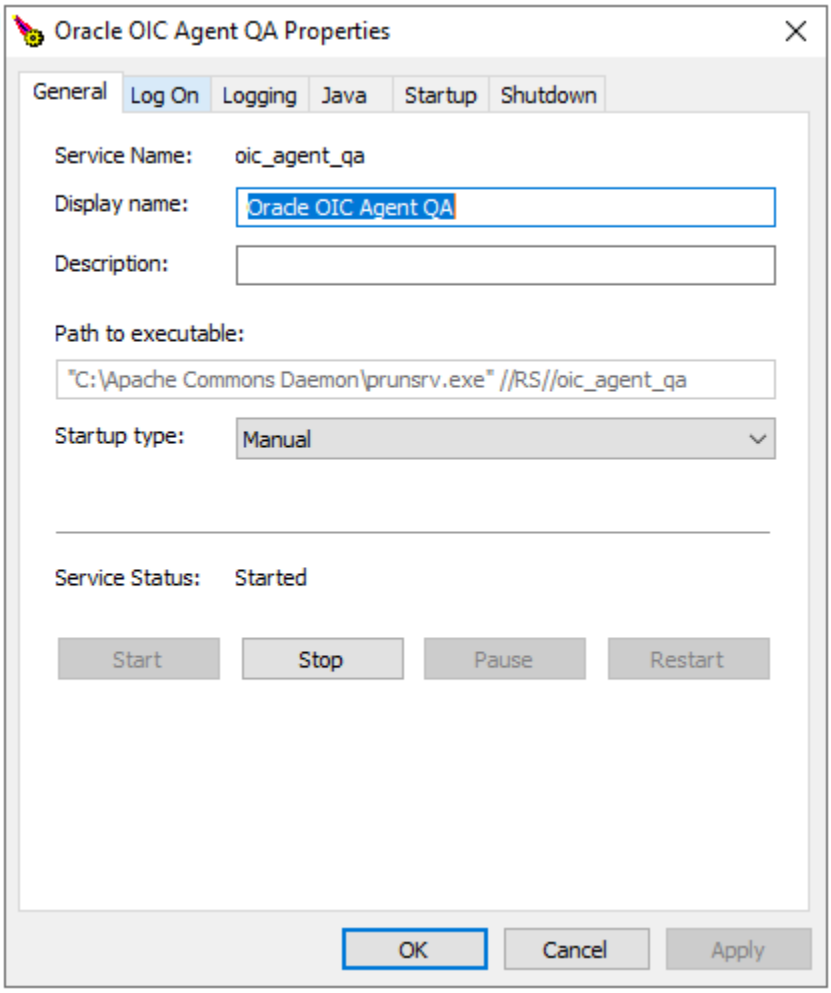
```
prunmgr //MR//oic_agent
```

d. Open the latest file %AGENT_ROOT%\serviceLogs\oic_agent-stdout.YYYY-MM-dd.log and make sure you have the last log "Agent started successfully... Now available for new messages...". It should look like the following:

```
2023-12-22 02:17:23 Apache Commons Daemon procrun stdout
initialized.
Existing Agent installation found... Starting Agent for message
processing.

Checking for already running instances of this agent. This might
take up to 15 seconds ...

Initializing the credential store ...

Agent started successfully...Now available for new messages...
```

e. You will also find it on the system tray with this  icon. There you can manage the service (that is, start, stop, and configure the service).

f. In the service logs folder %AGENT_ROOT%\serviceLogs, you will find these files.



- commons-daemon.YYYY-MM-dd.log - The Procrun logs.
- oic_agent_qa-stderr.YYYY-MM-dd.log - The standard error of the java connectivity agent.
- oic_agent_qa-stdout.YYYY-MM-dd.log - The standard out of the java connectivity agent.

Troubleshooting Tips

This section provides some tips on how to troubleshoot the common problems you might find when using an agent such as a Microsoft Windows service.

Start by looking at the service logs to understand what is the main cause of the problem:

- Go to **%AGENT_ROOT%\serviceLogs** where you will see several files. Take the most recent ones:
  - oic_agent_dev-stdout.*.log - The standard out of the agent. You will find the generic progression of the status of the agent.
  - commons-daemon.2024-01-23.log - The logs of the agent service. You will find the start/stop commands.

  - oic_agent_dev-stderr.2024-01-23.log - The standard error of the agent. You will find exceptions trace logs and specific information about any issue about the agent.

- Before solving this issue, you may want to stop the service and agent (see the next tip on how to do this). Some common issues can be wrong/experienced credentials or locked/access denied on log files (see below).

To force the service and agent to stop, you can do the following:

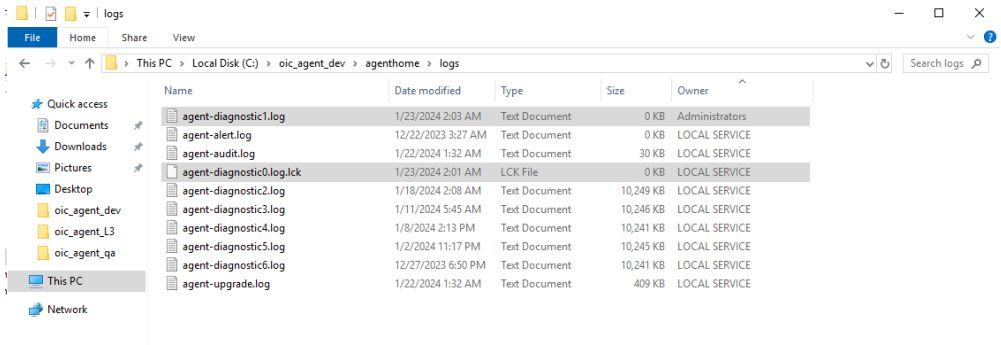
- Open the file %AGENT_ROOT%\pid and make note of the PID number.
- Run the command as "Run as administrator" on a command line console. This terminates the Java process running the agent.

```
taskkill /F /PID <agentPid>
```

- Run the Task Manager app as "Run as administrator":
  1. Open the **Services** tab.
  2. Select the service of your agent.
  3. Right click and select **Stop**.

One common issue is the locked/access denied on the log files of the agent. You will get this issue if you try to run the agent from the command line with a user different than the user used by the service.

1. Stop the service and agent as before.
2. Open Microsoft Windows File Explorer on the folder **%AGENT_ROOT%\agenthome\logs**.
3. Delete all files that end in .lck and that are not owned by LOCAL SERVICE. For example, see the files in the below image:



Start the service:

- Run the Task Manager app as "Run as administrator":
  1. Open the **Services** tab.
  2. Select the service of your agent.
  3. Right click and select **Start**.

Install/Update Certificates on the Agent

Installing dedicated certificates enables you to access hosts with self-signed certificates. You would normally need to import the certificate in the agent keystore in the following two scenarios:

- The connectivity agent is used with an SSL proxy.
- The connectivity agent is used to invoke secure (SSL) on-premises endpoints.

> **Note:**
>
> These tasks require you to briefly stop and restart the connectivity agent, so choose a time when the connectivity agent is not being used.

1. If you need to add a certificate on the agent keystore, use the keytool command to import the certificate into the keystore.p12. Make sure it is installed.
2. Stop the connectivity agent (if it is already running). The agent can be stopped in the two following ways:
   - If the agent is running as a normal process, press **Ctrl+C** on the command terminal window on which the agent is running, or search for the connectivity agent process and terminate it.
   - If the agent is running as an OS service, open the task manager and stop the oic_agent service.
3. Open a command line and navigate to the **%AGENT_ROOT%/agent/cert/ directory**. (The keystore.p12 file is available there.)
4. Run the following command:

   ```
   keytool -importcert -keystore keystore.p12 -storepass
   <agent_keystore_password> -alias <alias_name> -noprompt -file
   <certificate_file_path>
   ```

   Where:

   - **storepass password**: The default, initial password for the agent keystore. Refer to your keytool documentation for the default storepass password. For more information, see the keytool Command.
   - **alias alias_name**: Any name to uniquely identify the imported certificate in the keystore.
   - **file certificate_file**: Absolute path of the certificate file.
5. Restart the connectivity agent following Step 3 in Restart.

Restart

You can restart the connectivity agent if required.

1. Stop the agent in either of the following ways:

- If the agent is running as a normal process, press **Ctrl+C** on the command terminal window on which the agent is running, or search for the connectivity agent process and terminate it.
- If the agent is running as an OS service, open the task manager and stop the oic_agent service.

2. Wait at least 45 seconds before restarting the agent. This is because the agent monitoring framework waits for 45 seconds before marking the agent status as being down. If you start the agent before 45 seconds have completed, the agent restart fails with the following error message:

```
Agent is already running for this particular instance.
```

3. Restart the agent based on your environment and production load size.

Environment	Enter the Following Command

Production environments	To troubleshoot issues, it is recommended that you restart the agent with the -XX:+HeapDumpOnOutOfMemoryError parameter:
	
	`java -XX:+HeapDumpOnOutOfMemoryError -jar connectivityagent.jar`
	
	If the connectivity agent runs out of memory, this parameter by default ensures that the heap dump is stored in a java_pidpid.hprof file in the directory where the agent application is run.
	Based on production loads, it may sometimes be necessary to allocate a larger amount of heap size for the agent process. If you determine that the process must be allocated a larger heap size, tune the -Xms and-Xmx parameters accordingly.
	• Xms<Heap_minimum_size>G
	• Xmx<Heap_maximum_size>G
	For example, assume you want to assign a minimum of 2 GB and a maximum of 8 GB to the agent JVM.
	
	`java -Xms2G -Xmx8G -jar connectivityagent.jar`
	
	The -XX, -Xms, and -Xmxparameters can all be specified at the same time if needed.

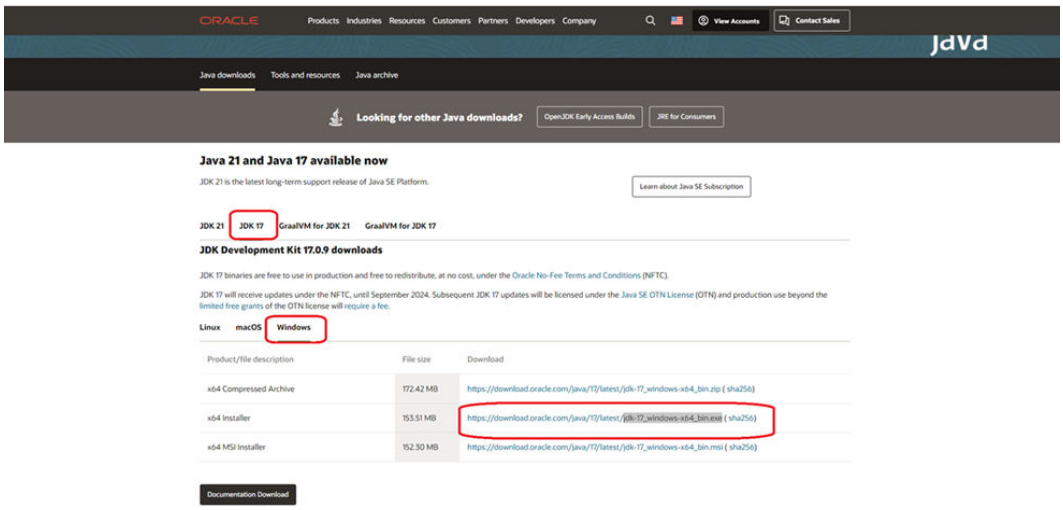
Nonproduction environments	`java -jar connectivityagent.jar`

JDK Upgrade and Keystore Migration

To use the agent, you must have JDK version 17. If you are using an older version, follow the steps below to upgrade the JDK version and keystore. For the official JDK installation for Microsoft Windows with executable, see JDK Installation Instructions for Microsoft Windows in the JDK Installation Guide.

Download JDK17 for Microsoft Windows

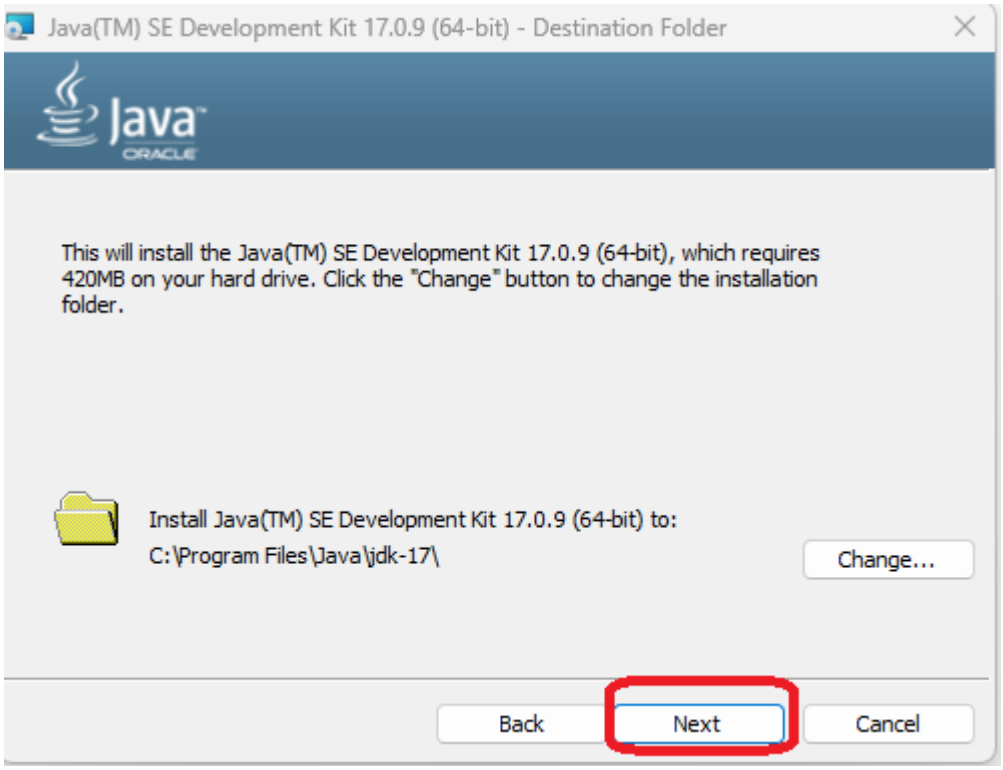
1. Go to JDK Development Kit 17.0.10 downloads.
2. Select **JDK17** and **Windows** tabs.
3. Click the **x64 Installer** link to download the jdk-17_windows-x64_bin.exe.



Install Java for Microsoft Windows

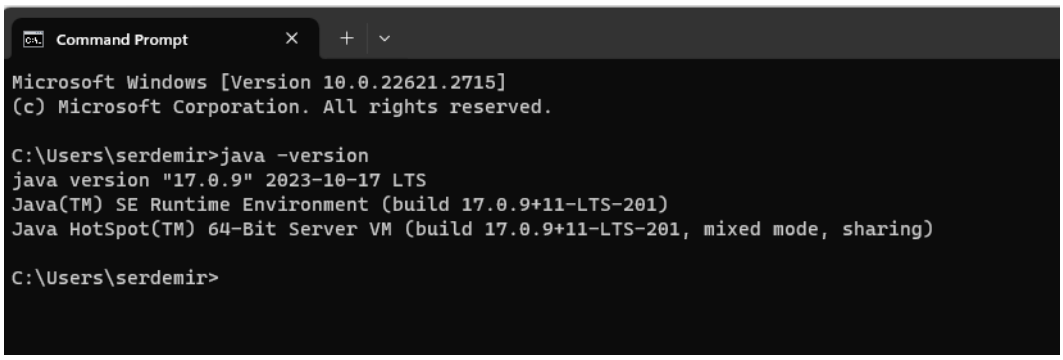
1. Click the downloaded **jdk-17_windows-x64_bin.exe** to start the installation.
2. If prompted, click **Yes** to allow Java to make changes in your system.
3. Click **Next** to start the installation.

4. Accept the default install location and click **Next**.



5. Verify the installation completed successfully and click **Close** to finish the installation process.

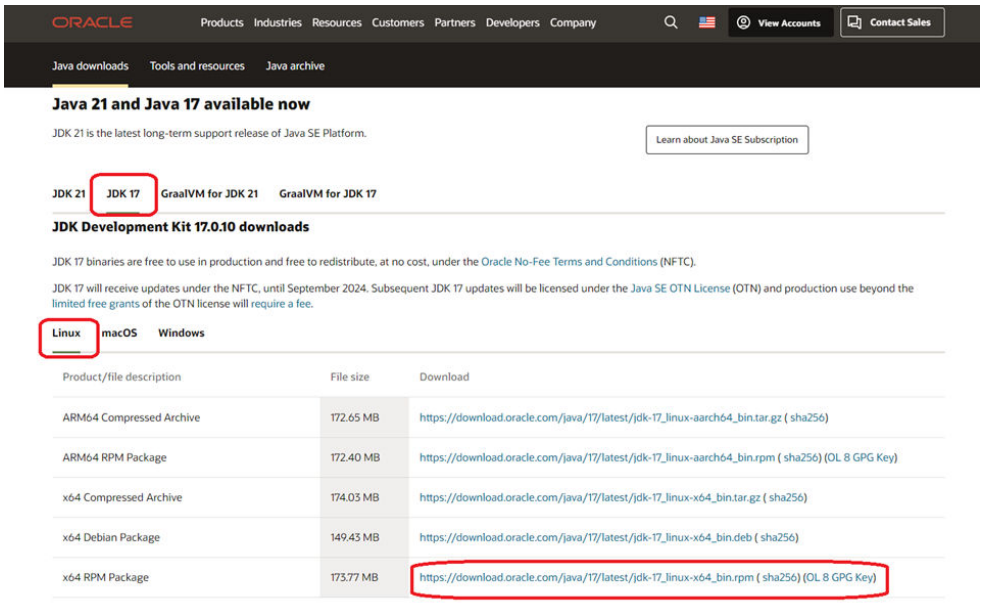
6. Open a command prompt and verify that you have JDK17 installed as the default version for Java.



Download JDK17 for Linux

There are three ways to install JDK on Linux. This guide describes the installation on RPM Based Linux. For more information, see Installation of the JDK on Linux Platforms in the JDK Installation Guide.

1. Go to JDK Development Kit 17.0.10 downloads.
2. Select **JDK17** and then select the **Linux** tab.
3. Click the **x64 RPM Package** link to download **jdk-17_linux-x64_bin.rpm**.



Install Java for Linux

Ensure you have the root user access. You can do this by running the command “su” and entering the **superuser password**.

1. Switch to the root user.
2. From a command prompt, navigate to the directory from which you downloaded the RPM file.
3. Install the required package using the following command:

```
rpm -ivh jdk-17_linux-x64_bin.rpm
```

```
[root@wfivm03546 java]# rpm -ivh jdk-17_linux-x64_bin.rpm
warning: jdk-17_linux-x64_bin.rpm: Header V3 RSA/SHA256 Signature, key ID ad986da3: NOKEY
Preparing...                          ################################# [100%]
Updating / installing...
   1:jdk-17-2000:17.0.10-11           ################################# [100%]
[root@wfivm03546 java]#
[root@wfivm03546 java]#
```

4. Verify you have JDK17 as the default version for Java.

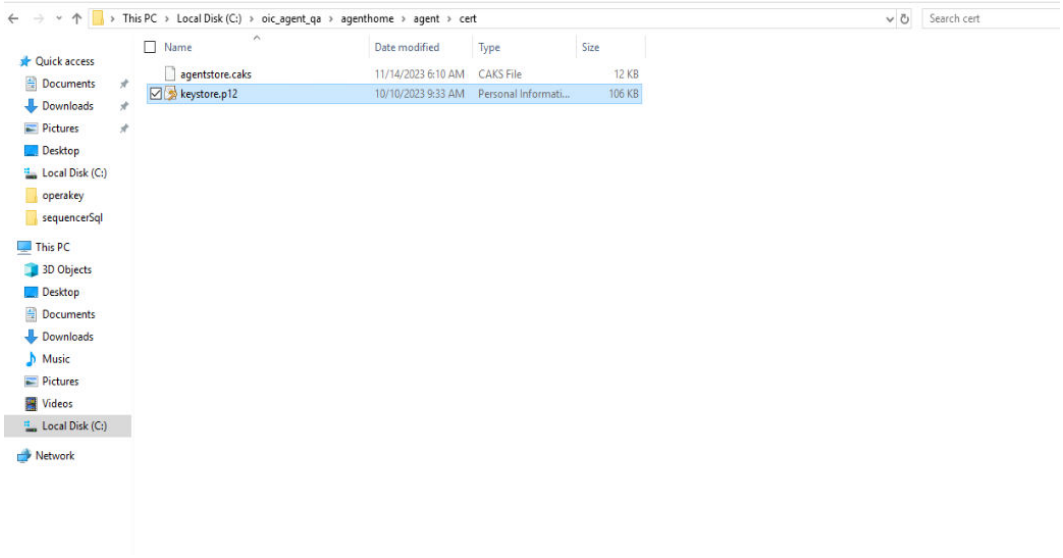
```
[root@wfivm03546 java]# java -version
java version "17.0.10" 2024-01-16 LTS
Java(TM) SE Runtime Environment (build 17.0.10+11-LTS-240)
Java HotSpot(TM) 64-Bit Server VM (build 17.0.10+11-LTS-240, mixed mode, sharing)
[root@wfivm03546 java]#
```

5. Delete the .rpm file if you need to save disk space.

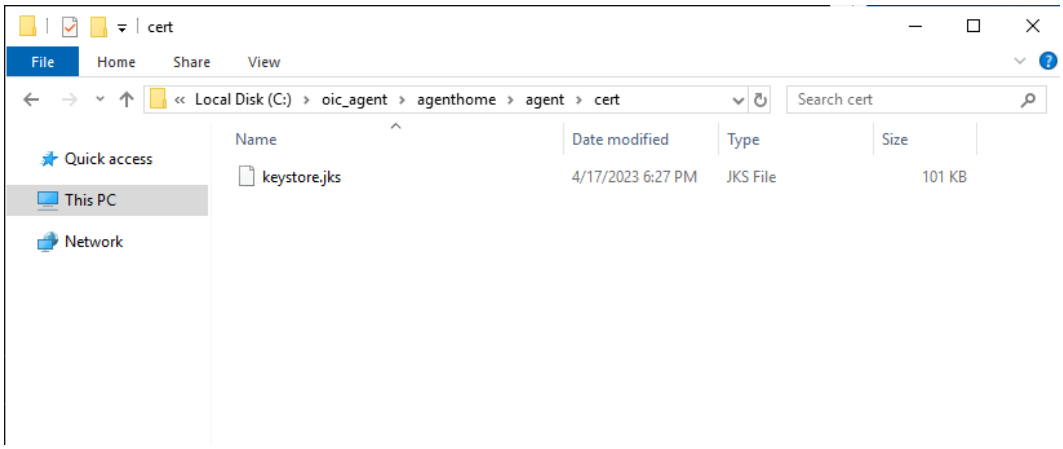
Convert the JKS KeyStore and Restart the Agent

1. Go to your agent installation directory and navigate to **Agent_Install_Location>/agenthome/agent/cert**.

> **Note:**
>
> If you already have the PKCS12 KeyStore (as shown in the image below), you do not need to complete these steps. You can restart the agent with steps 4 and 6 .



If you still have the JKS KeyStore on the "keystore.jks" file (as shown in the image below), complete the following steps. These tasks require you to briefly stop and then restart the connectivity agent, so choose a time when the connectivity agent is not being used.



2. On the server that hosts the connectivity agent, create a backup of the keystore.jks file for safety by copy-pasting and naming it "keystore_backup.jks." Move this backup file to a safe folder.

3. Convert the JKS KeyStore to the PKCS12 KeyStore by running the following commands from the command line where <Agent_Install_Location> is your agent root folder location.

   ```
   cd <Agent_Install_Location> /agenthome/agent/cert
   ```

   ```
   keytool -importkeystore -srckeystore keystore.jks -destkeystore
   keystore.p12 -srcstoretype JKS -deststoretype PKCS12 -deststorepass
   changeit -srcstorepass changeit
   ```

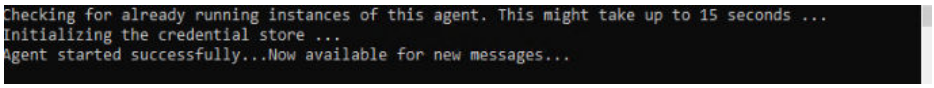
   The below image shows an example of these commands:

4. Stop the agent by sending a **CTRL+C signal** or closing the command prompt window that runs the agent.
5. Delete the keystore.jks file if you just converted to the PKCS12 KeyStore.
6. Start the agent by doing the following:
   a. Go to the installation directory.
   b. Run the following command on a command line prompt:

      ```
      java –jar connectivityagent.jar
      ```

   c. Verify the agent is running successfully.

7. If everything is working correctly, delete the backup **keystore_backup.jks**. If not, you can roll back using the JKS keystore backup.

6
Gaming Integration Configurations

Complete these configurations to enable gaming operations between OPERA Cloud and your PTS.

OPERA Cloud Controls

For gaming system operations to work with the external PTS system, the following OPERA Cloud modules must be active:

OPERA Membership

- Function Enrollment with system **GAMING** added to it (other systems can also exist).
- Setting **Default Membership Type** to the membership type you created as described in Membership Management.

OPERA Comp Accounting

- Function **Comp Request** must be active.
- Function **Comp Types** must be active.
- Parameter **Comp Accounting Integration Service** must be active.
- Parameter **Comp Redemption** must be active (only if using Aristocrat Oasis).
- Parameter **Generic Comp Membership Number** must be active.
- Parameter **PTS Membership Type based Comp Routing** must be active.
- Parameter **Player Statistics** must be active.
- Setting **Default PTS Membership Type** to the membership type you created as described in Membership Management.

OPERA Profile

- Functions **Profile Lookup → Default External System for Lookup** set to **External System** with the same name as the Outbound Configuration you created as described in the OPERA Cloud Outbound Configuration topics. For more information, see Outbound Configuration for Aristocrat Oasis and Outbound Configuration for IGT. This External System must be flagged for Loyalty.
- Functions **Profile Lookup → External Lookup Behavior** set to **FORCE**.
- Functions **Profile Lookup → Profile Types for Lookup** set to **Company**, **Individual**, **Group**, **Source**, and **Travel Agent**.

For details on how to access and configure OPERA Controls, refer to OPERA Controls in the OPERA Cloud Services documentation.

Membership Management

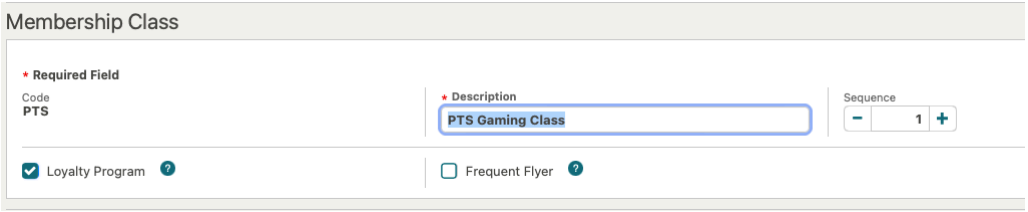
For details on completing the following configurations, refer to Guest Loyalty Programs in the OPERA Cloud Services documentation.

Membership Class

To properly use these gaming operations, you must have a membership class flagged as "Loyalty Program." For details on creating membership classes, refer to Configuring Membership Classes in the OPERA Cloud Services documentation.

> **Note:**
>
> Only one membership class can be flagged as “Loyalty Program.”

Figure 6-1 Membership Class Screen



Membership Type

To execute gaming operations with the IGT system, you must create a PTS membership type with the name "PTS."

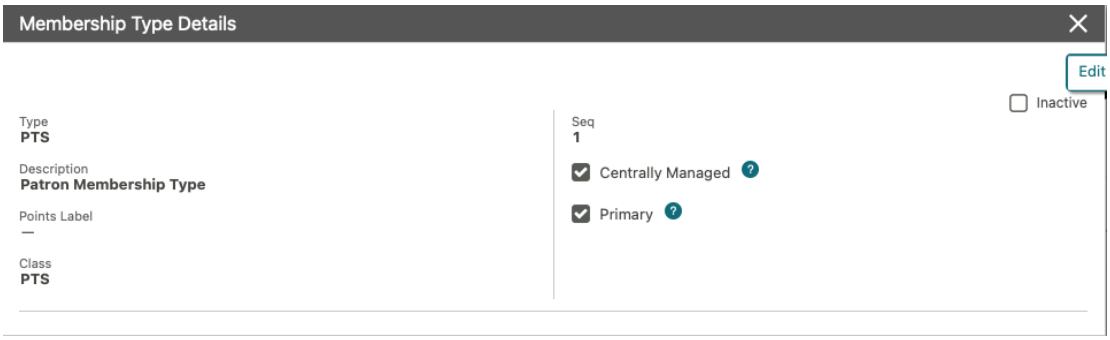
> **Note:**
>
> The name of this Membership Type must be entered exactly as "PTS."

For details on how to create a membership type, refer to Configuring Membership Types in the OPERA Cloud Services documentation.

For the membership type details:

1. Mark the membership as **Primary**.
2. Mark the membership as **Centrally Managed**. Only one membership type can be centrally managed.
3. Select the membership class you previously created.

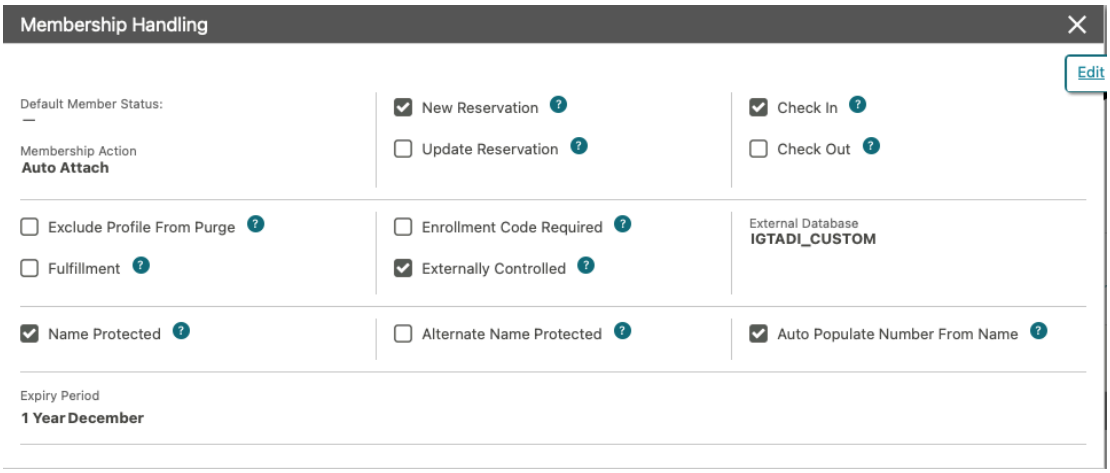
Figure 6-2 Membership Type Details Screen



For the Membership Handling:

1. Set the External Database to the one with the same name as the outbound configuration that you previously created.
2. Set Membership Action to **Auto Attach** and select **New Reservation**.

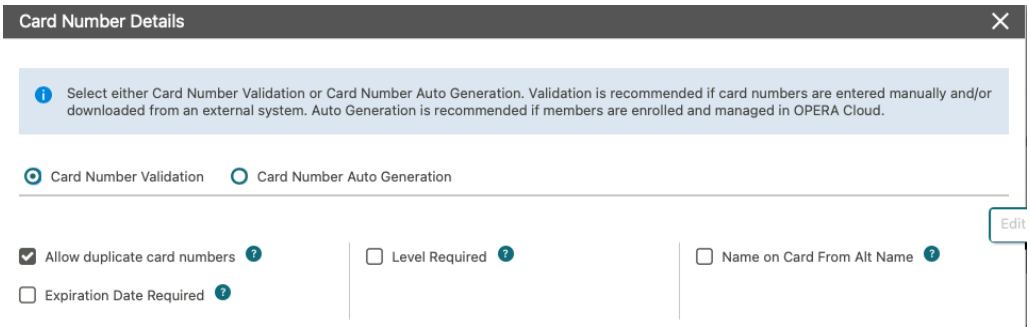
Figure 6-3 Membership Handling Screen



For Card Number Details:

1. Deselect **Expiration Date Required**.

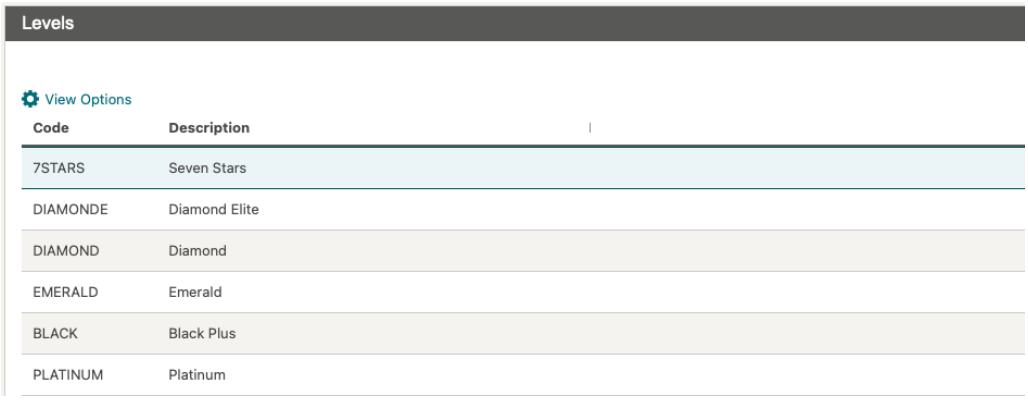
Figure 6-4 Card Number Details Screen



Membership Levels

Once the membership type is configured, add your Membership Levels to this Membership Type. The values on the below image is just for illustration purposes. Your Hotel/Casino will have its own Membership Levels already defined by the business.

Figure 6-5 Membership Levels Screen



Rate Management

Promotion Codes

To fetch offers from a PTS system while creating reservations, you must create promotion codes in OPERA Cloud. These promotions must have the same information (code, start and end dates) as the existing offers in the corresponding gaming system.

These promotions will later be redeemed in your PTS system at guest check-out via the Comp Posting operation. The promotion will automatically route from the guest's folio to a comp window when the reservation is created.

For details on creating promotion codes in OPERA Cloud, refer to Configuring Promotion Codes in the OPERA Cloud Services documentation.

Gaming Vendor Specific Configurations

Aristocrat Oasis

The following operations are supported as part of this gaming integration product. Only the operations listed below are currently supported.

- Profile Lookup (by first and last name and membership ID)
- Profile Download
- Player Enrollment
- Player Offers Search
- Player Statistics
- Comp Posting (including reverse)
- Comp Redemption (including reverse)

Required Information

To invoke the nConnect APIs from OPERA Cloud, you must provide the following nConnect OAuth credentials:

- URL for Identity Server
- Client ID
- Client Secret
- URL for nConnect Server
- Username and Password
- Scope

The integration between OPERA Cloud and nConnect uses the following APIs with their required permissions. nConnect requires these permissions to successfully execute the operations (see list of operations above).

Table 6-1 APIs

API	Method	Permission
/api/v1/PlayerInfo/	POST	AddPlayerPermission
/api/v1/PlayerInfo/	GET	GetPlayerPermission
/api/v1/PlayerInfo/{PlayerID}/Statistics	GET	GetPlayerStatisticsPermission

Table 6-1 (Cont.) APIs

API	Method	Permission
/api/v1/PlayerInfo/{playerId}/MarketingCouponsWithPlayerID	GET	GetPlayerMarketingCouponsPermission
/api/v1/PlayerInfo/{playerId}/Accounts/AccountType/{accountType}	GET	GetPlayerAccountBalanceByAccountTypeIdPermission
/api/v1/PlayerInfo/{playerId}/Transactions	POST	AddPlayerTransactionPermission
/api/v1/PlayerInfo/{{playerId}}/Accounts	GET	GetPlayerAccountBalancePermission

For further details on nConnect (or Aristocrat Oasis) configurations, email your Aristocrat point of contact or your Oracle Hospitality point of contact.

Comp Accounting

Comp Redemption Codes

Comp Redemption Codes are required to execute the cashier operations in Comp Redemption. These codes correspond to the account types in Aristocrat Oasis.

Create the following codes in OPERA Cloud to redeem transactions in all available account types in Oasis.

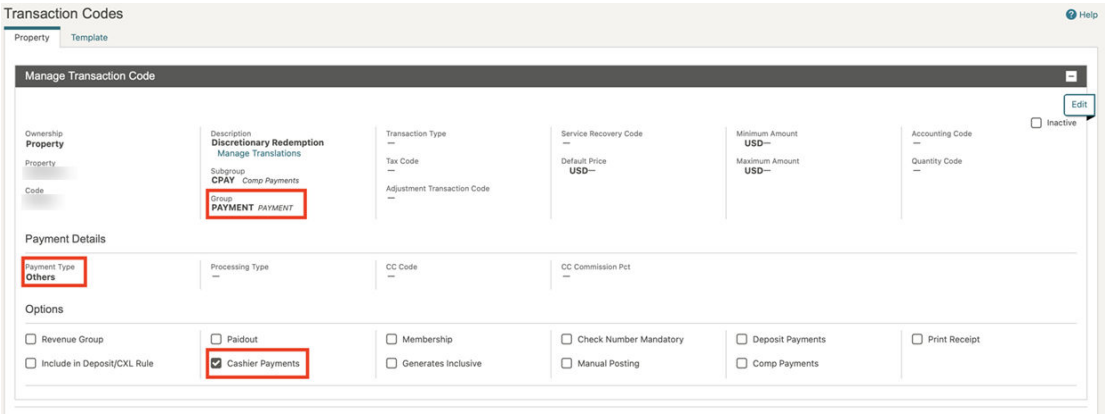
Table 6-2 Comp Redemption Codes

Code	Description	Transaction Code
2	Comps	55903
3	Cash	55904
4	Promo	99500
5	Discretionary	99502

You can configure any transaction codes in OPERA Cloud and associate them to these Comp Redemption Codes if the following conditions are met:

- Transaction Code group is ‘PAYMENT’
- Transaction Code payment type is ‘Others’
- Transaction Code is marked for ‘Cashier Payments’

Figure 6-6 Manage Transaction Code Screen

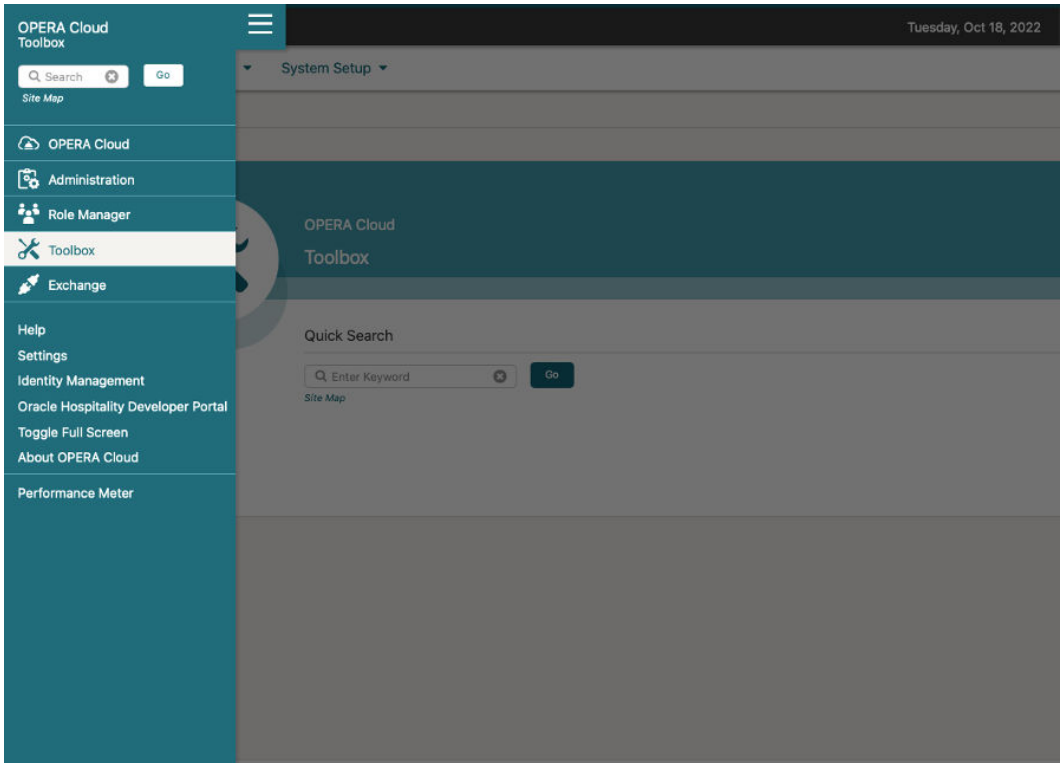


OPERA Cloud Outbound Configuration for Aristocrat Oasis

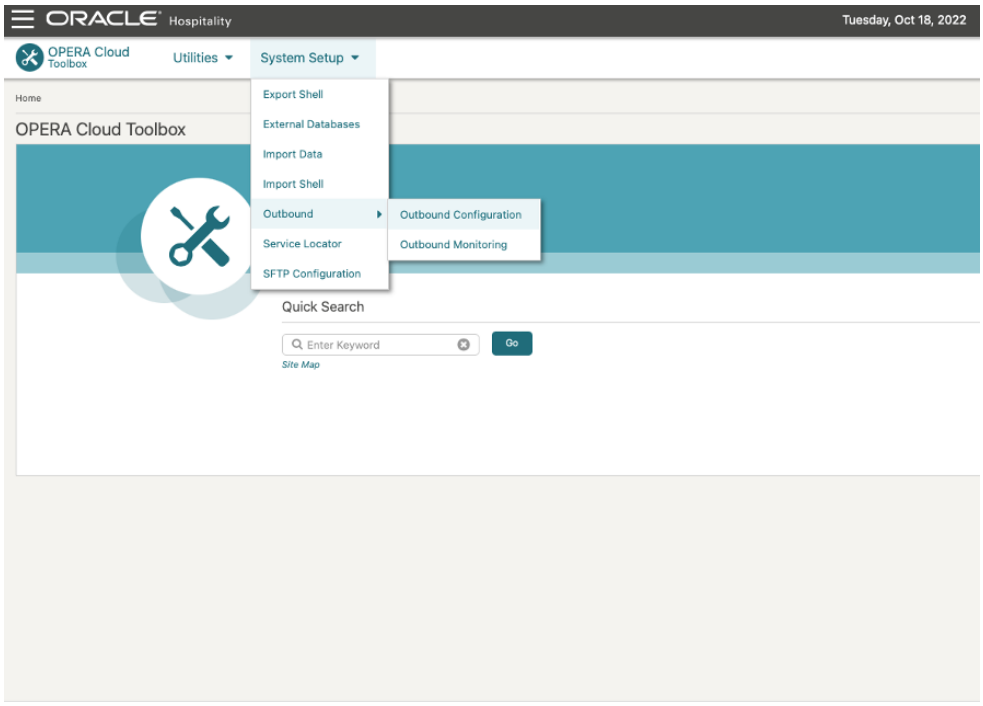
A new outbound system configuration is required for OPERA Cloud to connect to nConnect.

Follow the below steps to set up the Outbound Configuration in OPERA Cloud. For additional details on creating an outbound configuration, refer to Configuring Outbound Systems in the OPERA Cloud Services documentation.

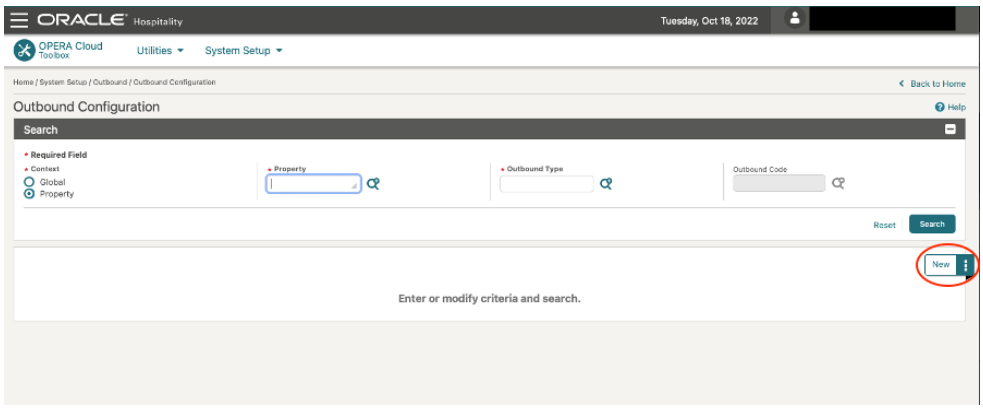
1. Log in to OPERA Cloud and click the **vertical ellipsis** and select **Toolbox**.

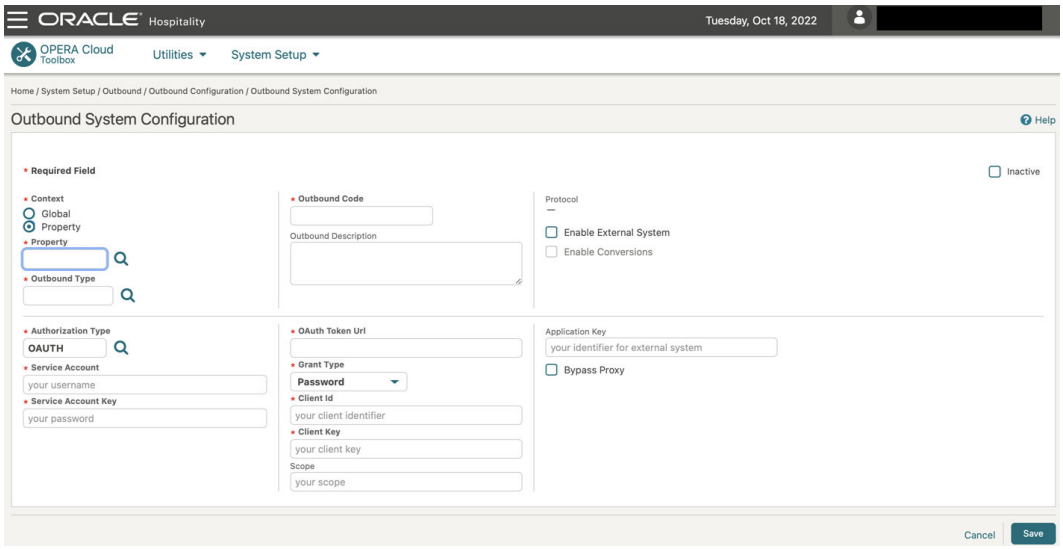


2. Select **System Setup**, select **Outbound**, and then select **Outbound Configuration**.



3. Select the **Property** and then click **New** to set up the new Outbound Configuration.





4. Complete the following fields and click **Save**. For the specific details on each field and how to create an Outbound Configuration, see Managing Outbound System Configuration in the OPERA Cloud Services documentation.

   a. **Context**: Select the **Property** option.

   b. **Property**: Select the property for which this configuration is being set up.

   c. **Outbound Type**: Select **GAMING_CUSTOM** from the list of options.

   d. **Outbound Code**: Provide the unique identifier (for example: ATI_{Property_Name}).

   e. **Outbound Description**: Provide the description (optional).

   f. **Authorization Type**: Select **OAUTH** from the list of options. When you select OAUTH, all related Authorization fields appear.

   g. **Service Account**: Enter your **Client ID**.

   h. **Service Account Key**: Enter your **Client Secret**.

   i. **OAuth Token URL**: Type the URL of the identity provider from where the token will be fetched.

   j. **Grant Type**: Select **Password** from the drop down list.

   k. **Client Id**: Enter your **Username**.

   l. **Client Key**: Enter your **Password**.

   m. **Scope**: Enter your **Scope**.

   n. **Enable External System**: Select this option.

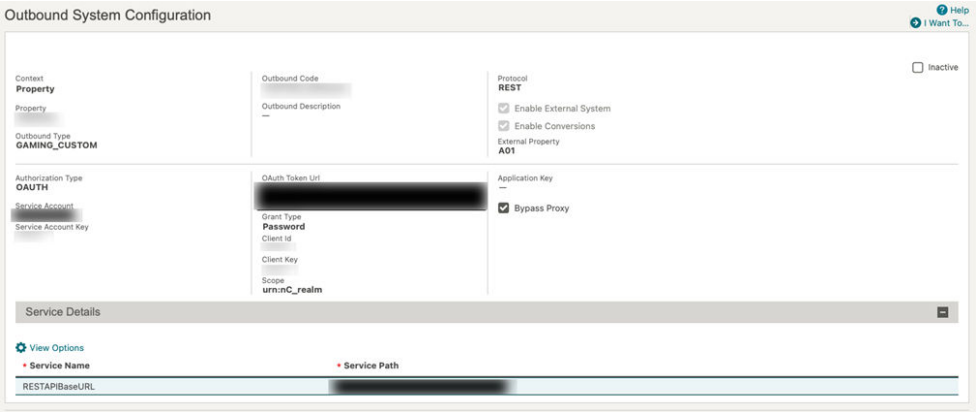
   o. **Enable Conversions**: Select this option.

   p. **External Property**: Enter the **Site ID** or **Hotel Code** provided by ATI.

   q. **Bypass Proxy**: Select this option.

   r. **RESTAPIBaseURL**: Enter the base URL of the nConnect server where the APIs are running. This URL can be something like the following: https://<hostname or ip address>:<port>

Once the configuration is saved, the final configuration should look like the page below:



Once the above fields are completed, save the outbound configuration and proceed to Data Value Mappings (DVM). No Custom Headers are required.

DVMs for Aristocrat Oasis

The following Data Value Mappings (DVMs) must be set up for the Aristocrat Oasis system. For details on how to create DVMs within OPERA Cloud, see Data Value Mappings in the OPERA Cloud Services documentation.

The below DVM values are for reference only and can vary by property.

Country Codes

This DVM will convert the Country Code used in OPERA Cloud with the Country Code used in Aristocrat Oasis for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

> **Note:**
>
> This list follows the ISO 3166.

- **OPERA Cloud Code**: This is the Country Code used in OPERA Cloud.
- **External Value**: This is the Country Code in Aristocrat Oasis that corresponds to the OPERA Cloud Country Code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-3 Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Afghanistan	AF		
Albania	AL		
Algeria	DZ		
American Samoa	AS		
Andorra	AD		
Angola	AO		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Anguilla	AI		
Antarctica	AQ		
Antigua and Barbuda	AG		
Argentina	AR		
Armenia	AM		
Aruba	AW		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Australia	AU		
Austria	AT		
Azerbaijan	AZ		
Bahamas (the)	BS		
Bahrain	BH		
Bangladesh	BD		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Barbados	BB		
Belarus	BY		
Belgium	BE		
Belize	BZ		
Benin	BJ		
Bermuda	BM		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Bhutan	BT		
Bolivia (Plurinational State of)	BO		
Bonaire, Sint Eustatius and Saba	BQ		
Bosnia and Herzegovina	BA		
Botswana	BW		
Bouvet Island	BV		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Brazil	BR	✓	✓
British Indian Ocean Territory (the)	IO	✓	✓
Brunei Darussalam	BN	✓	✓
Bulgaria	BG	✓	✓
Burkina Faso	BF	✓	✓
Burundi	BI	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Cabo Verde	CV	✓	✓
Cambodia	KH	✓	✓
Cameroon	CM	✓	✓
Canada	CA	✓	✓
Cayman Islands (the)	KY	✓	✓
Central African Republic (the)	CF	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Chad	TD	✓	✓
Chile	CL	✓	✓
China	CN	✓	✓
Christmas Island	CX	✓	✓
Cocos (Keeling) Islands (the)	CC	✓	✓
Colombia	CO	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Comoros (the)	KM	✓	✓
Congo (the Democratic Republic of the)	CD	✓	✓
Congo (the)	CG	✓	✓
Cook Islands (the)	CK	✓	✓
Costa Rica	CR	✓	✓
Croatia	HR	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Cuba	CU	✓	✓
Curaao	CW	✓	✓
Cyprus	CY	✓	✓
Czechia	CZ	✓	✓
Cte d'Ivoire	CI	✓	✓
Denmark	DK	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Djibouti	DJ	✓	✓
Dominica	DM	✓	✓
Dominican Republic (the)	DO	✓	✓
Ecuador	EC	✓	✓
Egypt	EG	✓	✓
El Salvador	SV	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Equatorial Guinea	GQ		
Eritrea	ER		
Estonia	EE		
Eswatini	SZ		
Ethiopia	ET		
Falkland Islands (the) [Malvinas]	FK		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Faroe Islands (the)	FO		
Fiji	FJ		
Finland	FI		
France	FR		
French Guiana	GF		
French Polynesia	PF		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
French Southern Territories (the)	TF		
Gabon	GA		
Gambia (the)	GM		
Georgia	GE		
Germany	DE		
Ghana	GH		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Gibraltar	GI	✓	✓
Greece	GR	✓	✓
Greenland	GL	✓	✓
Grenada	GD	✓	✓
Guadeloupe	GP	✓	✓
Guam	GU	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Guatemala	GT	✓	✓
Guernsey	GG	✓	✓
Guinea	GN	✓	✓
Guinea-Bissau	GW	✓	✓
Guyana	GY	✓	✓
Haiti	HT	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Heard Island and McDonald Islands	HM	✓	✓
Holy See (the)	VA	✓	✓
Honduras	HN	✓	✓
Hong Kong	HK	✓	✓
Hungary	HU	✓	✓
Iceland	IS	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
India	IN		
Indonesia	ID		
Iran (Islamic Republic of)	IR		
Iraq	IQ		
Ireland	IE		
Isle of Man	IM		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Israel	IL		
Italy	IT		
Jamaica	JM		
Japan	JP		
Jersey	JE		
Jordan	JO		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Kazakhstan	KZ	✓	✓
Kenya	KE	✓	✓
Kiribati	KI	✓	✓
Korea (the Democratic People's Republic of)	KP	✓	✓
Korea (the Republic of)	KR	✓	✓
Kuwait	KW	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Kyrgyzstan	KG		
Lao People's Democratic Republic (the)	LA		
Latvia	LV		
Lebanon	LB		
Lesotho	LS		
Liberia	LR		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Libya	LY		
Liechtenstein	LI		
Lithuania	LT		
Luxembourg	LU		
Macao	MO		
Madagascar	MG		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Malawi	MW		
Malaysia	MY		
Maldives	MV		
Mali	ML		
Malta	MT		
Marshall Islands (the)	MH		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Martinique	MQ		
Mauritania	MR		
Mauritius	MU		
Mayotte	YT		
Mexico	MX		
Micronesia (Federated States of)	FM		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Moldova (the Republic of)	MD	✓	✓
Monaco	MC	✓	✓
Mongolia	MN	✓	✓
Montenegro	ME	✓	✓
Montserrat	MS	✓	✓
Morocco	MA	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Mozambique	MZ		
Myanmar	MM		
Namibia	NA		
Nauru	NR		
Nepal	NP		
Netherlands (the)	NL		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
New Caledonia	NC		
New Zealand	NZ		
Nicaragua	NI		
Niger (the)	NE		
Nigeria	NG		
Niue	NU		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Norfolk Island	NF		
North Macedonia	MK		
Northern Mariana Islands (the)	MP		
Norway	NO		
Oman	OM		
Pakistan	PK		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Palau	PW		
Palestine, State of	PS		
Panama	PA		
Papua New Guinea	PG		
Paraguay	PY		
Peru	PE		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Philippines (the)	PH	✓	✓
Pitcairn	PN	✓	✓
Poland	PL	✓	✓
Portugal	PT	✓	✓
Puerto Rico	PR	✓	✓
Qatar	QA	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Romania	RO		
Russian Federation (the)	RU		
Rwanda	RW		
Runion	RE		
Saint Barthlemy	BL		
Saint Helena, Ascension and Tristan da Cunha	SH		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Saint Kitts and Nevis	KN		
Saint Lucia	LC		
Saint Martin (French part)	MF		
Saint Pierre and Miquelon	PM		
Saint Vincent and the Grenadines	VC		
Samoa	WS		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
San Marino	SM		
Sao Tome and Principe	ST		
Saudi Arabia	SA		
Senegal	SN		
Serbia	RS		
Seychelles	SC		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Sierra Leone	SL		
Singapore	SG		
Sint Maarten (Dutch part)	SX		
Slovakia	SK		
Slovenia	SI		
Solomon Islands	SB		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Somalia	SO		
South Africa	ZA		
South Georgia and the South Sandwich Islands	GS		
South Sudan	SS		
Spain	ES		
Sri Lanka	LK		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Sudan (the)	SD		
Suriname	SR		
Svalbard and Jan Mayen	SJ		
Sweden	SE		
Switzerland	CH		
Syrian Arab Republic (the)	SY		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Taiwan (Province of China)	TW		
Tajikistan	TJ		
Tanzania, the United Republic of	TZ		
Thailand	TH		
Timor-Leste	TL		
Togo	TG		

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Tokelau	TK	✓	✓
Tonga	TO	✓	✓
Trinidad and Tobago	TT	✓	✓
Tunisia	TN	✓	✓
Turkey	TM	✓	✓
Turkmenistan	TC	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Turks and Caicos Islands (the)	TV	✓	✓
Tuvalu	TR	✓	✓
Uganda	UG	✓	✓
Ukraine	UA	✓	✓
United Arab Emirates (the)	AE	✓	✓
United Kingdom of Great Britain and Northern Ireland (the)	GB	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
United States Minor Outlying Islands (the)	UM	✓	✓
United States of America (the)	US	✓	✓
Uruguay	UY	✓	✓
Uzbekistan	UZ	✓	✓
Vanuatu	VU	✓	✓
Venezuela (Bolivarian Republic of)	VE	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Viet Nam	VN	✓	✓
Virgin Islands (British)	VG	✓	✓
Virgin Islands (U.S.)	VI	✓	✓
Wallis and Futuna	WF	✓	✓
Western Sahara*	EH	✓	✓
Yemen	YE	✓	✓

Table 6-3 (Cont.) Country Codes

OPERA Cloud Value	External Value	External > OPERA Cloud	OPERA Cloud > External
Zambia	ZM	✓	✓
Zimbabwe	ZW	✓	✓
land Islands	AX	✓	✓

Membership Level

This DVM will convert the Membership Levels codes previously created into the Aristocrat Oasis Player Ranking Levels (and vice-versa).

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Membership Level code that you previously created.
- **External Value**: This is the Player Ranking in Aristocrat Oasis that corresponds to the OPERA Cloud Membership Level code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-4 Membership Level

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
BRONZE	0		
DIAMOND	1		
PLATINUM	2		

Address Type

This DVM will convert the Address Type used in OPERA Cloud with the Address Type used in Aristocrat Oasis for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Address Type that exists in OPERA Cloud.
- **External Value**: This is the Address Type in Aristocrat Oasis that corresponds to the OPERA Cloud Address Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-5 Address Type

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
HOME	1		
BUSINESS	2		
MAILING	4		

Document Type

This DVM will convert the Document Type used in OPERA Cloud with the Identification Type used in Aristocrat Oasis for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Document Type that exists in OPERA Cloud.
- **External Value**: This is the Identification Type in Aristocrat Oasis that corresponds to the OPERA Cloud Document Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-6 Document Type

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External Cloud
Drivers License	D		
SSN Card	N		
Passport	P		
Alien Registration	A		
Military ID	M		
State ID	S		

Table 6-6 (Cont.) Document Type

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External Cloud
Voter ID	V		
Other	O		

Phone Type

This DVM converts the Phone Type used in OPERA Cloud with the Phone Type used in Aristocrat Oasis for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Phone Type that exists in OPERA Cloud.
- **External Value**: This is the Phone Type in Aristocrat Oasis that corresponds to the OPERA Cloud Phone Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Aristocrat Oasis uses the following nomenclature for phone types and e-mail types:

- Phone Type 1 is for Home.
- Phone Type 2 is for Work.
- Phone Type 3 is for Cell.
- E-mail Type 1 is for Home.
- E-mail Type 2 is for Work.

OPERA Cloud uses the Phone Type DVM to translate all profile communication types (home, e-mail, mobile, fax, and so on), which means some logic must exist in the background to match. For example, a Home e-mail type in OPERA Cloud to that same Home e-mail type in Aristocrat Oasis. You are unable to configure OPERA Cloud to translate Oasis type 1 to HOME (phone) and (home) EMAIL at the same time for the inbound messages. Therefore, the Home Email should be configured to translate to '1' on the OPERACloud > External direction and should be configured to translate to 'E_1' on the External > OPERA Cloud directions. The system translates '1' to 'E_1' from the

Aristocrat response to do this logic on the OPERA Cloud DVM. This also applies to the Home Phone as well.

Table 6-7 Phone Type

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External Cloud
HOME	1		✓
HOME	H_1	✓	
MOBILE	3		✓
MOBILE	M_3	✓	
EMAIL	1		✓
EMAIL	E_1	✓	

Table 6-7 (Cont.) Phone Type

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External Cloud
BUSINESS	2		
BUSINESS	B_2		

State Codes

This DVM will convert the State Code used in OPERA Cloud with the State Province Code used in Aristocrat Oasis for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the State Code that exists in OPERA Cloud.
- **External Value**: This is the State Province Code in Aristocrat Oasis that corresponds to the OPERA Code Phone Type.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-8 States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
AB	AB		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
BC	BC		
MB	MB		
NB	NB		
NL	NL		
NS	NS		
NT	NT		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
NU	NU		
ON	ON		
PE	PE		
QC	QC		
SK	SK		
YT	YT		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
AK	AK		
AL	AL		
AR	AR		
AZ	AZ		
CA	CA		
CO	CO		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
CT	CT		
DC	DC		
DE	DE		
FL	FL		
GA	GA		
HI	HI		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
IA	IA		
ID	ID		
IL	IL		
IN	IN		
KS	KS		
KY	KY		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
LA	LA		
MA	MA		
MD	MD		
ME	ME		
MI	MI		
MN	MN		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
MO	MO		
MS	MS		
MT	MT		
NC	NC		
ND	ND		
NE	NE		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
NH	NH		
NJ	NJ		
NM	NM		
NV	NV		
NY	NY		
OH	OH		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
OK	OK	✓	✓
OR	OR	✓	✓
PA	PA	✓	✓
RI	RI	✓	✓
SC	SC	✓	✓
SD	SD	✓	✓

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
TN	TN		
TX	TX		
UT	UT		
VA	VA		
VT	VT		
WA	WA		

Table 6-8 (Cont.) States Codes

OPERA Cloud Code	External Value	External > OPERA Cloud	OPERA Cloud > External
WI	WI	✓	✓
WV	WV	✓	✓
WY	WY	✓	✓

IGT

The following operations are supported as part of this gaming integration product. Only the operations listed below are currently supported.

Table 6-9 Operations

Operation	How Does it Work?	Direction
Player Enrollment	• OPERA Cloud sends the name and address information for a new player profile or an existing OPERA Cloud profile to IGT. • IGT creates a player profile and responds to OPERA Cloud with the player ID.	OPERA Cloud -> IGT-Acres

Table 6-9 (Cont.) Operations

Operation	How Does it Work?	Direction
Profile Lookup (by first and last name and membership ID)	• OPERA Cloud users can search IGT-Acres for profile(s) based on Player ID or Last and/or First Name. • IGT-Acres returns a list of profiles matching the criteria requested, which the OPERA Cloud user views on-screen.	OPERA Cloud -> IGT-Acres
Profile Fetch (Profile Download)	• The OPERA Cloud user selects a profile from a list provided during the Lookup operation. • IGT-Acres returns the patron's name, addresses, birth date, and email address; OPERA Cloud will either insert a new profile record or merge the data into an existing record.	OPERA Cloud -> IGT-Acres
Profile Update	• OPERA Cloud notifies IGT of any changes made to the name and/or address, telephone, and email on any OPERA Cloud profile that has an associated IGT player ID.	OPERA Cloud -> IGT-Acres
Reservation Notification	• When a reservation is created/changed or cancelled, OPERA Cloud sends a notification message (including reservation status) to IGT for the associated player.	OPERA Cloud -> IGT-Acres

Table 6-9 (Cont.) Operations

Operation	How Does it Work?	Direction
Comp Postings (including reverse)	• OPERA Cloud sends a comp request to IGT-Acres when a charge is posted to a comp window (101-108). A comp posting is any charge that was moved to a comp window, regardless of whether it was originally posted manually, through the End of Day sequence, or by POS interface to OPERA Cloud. • To void a comp transaction, you must move back to a cash window (1-8). A Void is then sent to IGT-Acres. • IGT-Acres will either approve or decline the comp posting. Approval status appears on the OPERA Cloud Comp Journal screen. • OPERA Cloud sends comp postings to IGT-Acres in dollar values only. **Note:** Do not move transactions between comp windows (101-1	OPERA Cloud -> IGT-Acres

Table 6-9 (Cont.) Operations

Operation	How Does it Work?	Direction
	08) .	
Player Snapshot/ PTS Inquiry (Player Statistics) (view only)	• OPERA Cloud users can view basic, real-time balances and account information by sending a Player Statistics request from OPERA Cloud to IGT. This information is never stored in OPERA Cloud. • IGT responds with values that appear on the screen with OPERA Cloud. For example, comp dollar or points balance. • The scope of data sent is not configured in OPERA Cloud.	OPERA Cloud -> IGT-Acres
Player Promotions/Offers (view only)	• Promotion/Offer codes must be created for both OPERA Cloud and IGT. • OPERA Cloud users can click **Fetch Offer** from the Look to Book screen to view promotions/offers available for the player.	OPERA Cloud -> IGT-Acres

The following Comp Types are supported in this product:

Table 6-10 Comp Types

Item Name	Item Number	Value
Buffet Comp	5	$39.99
Dollar Comp	2	$1.00
Penny Comp_Auto	6	$0.01
Gift Comp	4	$9.99
Room Comp	3	$49.99

The following Bucket Types are supported in this product:

Table 6-11 Bucket Types

Folio Numbers	Bucket Type
101	Other
102	Point

Table 6-11 (Cont.) Bucket Types

Folio Numbers	Bucket Type
103	Primary Comp
104	Rewards
105	Secondary Comp
106	Non-Gaming
107	Coupon
108	Promotional

Required Information

The integration with your IGT system is done using ADI. For OPERA Cloud to connect to ADI, the following information is required:

- ADICRMHTTP server endpoints

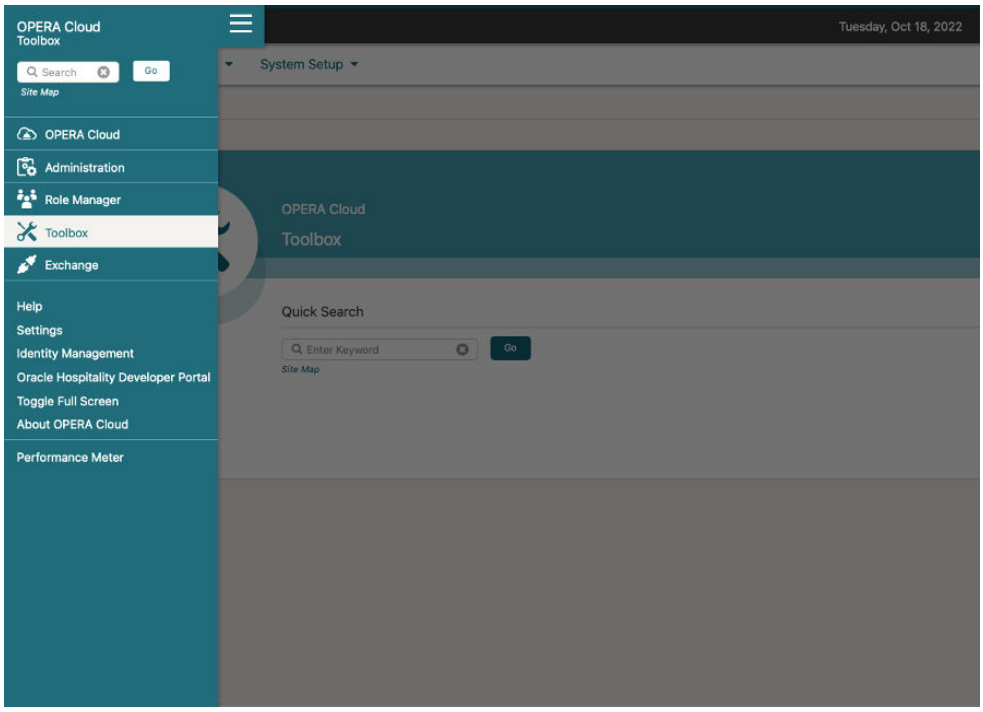
  If your postings run on a different server or port, the following details are also required:
- ORACLEUSER: This is a generic user created to perform postings.
- Site ID details

OPERA Cloud Outbound Configuration for IGT

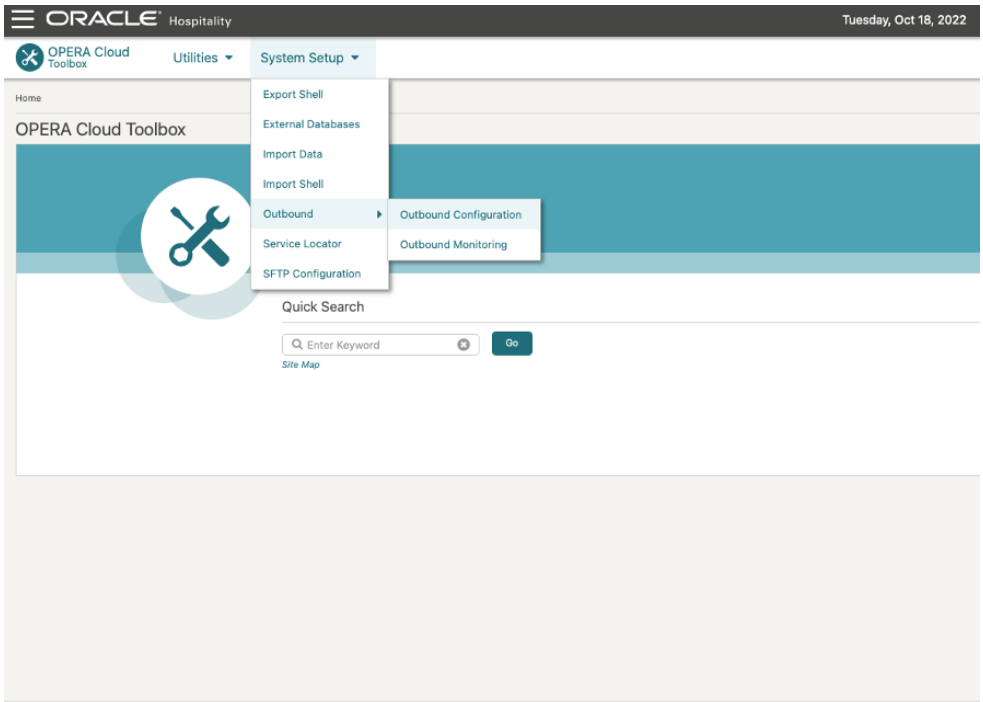
A new outbound system configuration is required for OPERA Cloud to connect to IGT.

Follow the below steps to set up the Outbound Configuration in OPERA Cloud. For additional details on creating an outbound configuration, refer to Configuring Outbound Systems in the OPERA Cloud Services documentation.

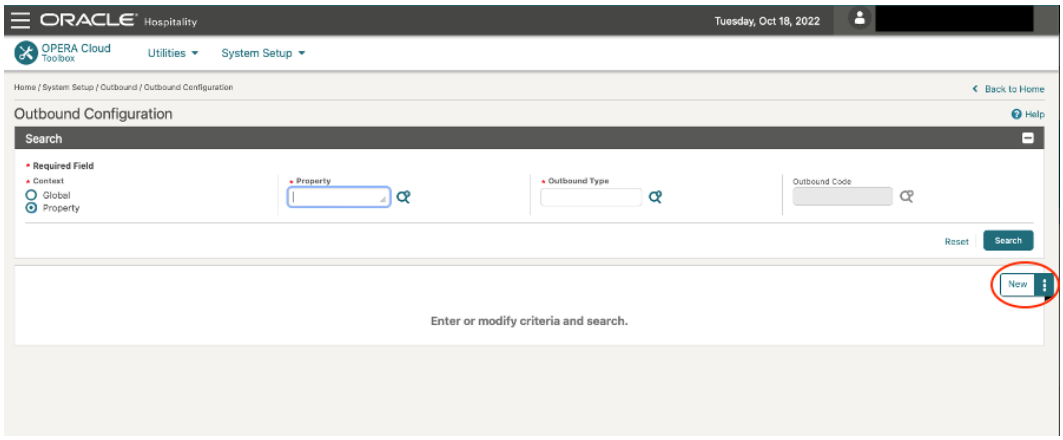
1. Log in to OPERA Cloud and click the **vertical ellipsis** and select **Toolbox**.

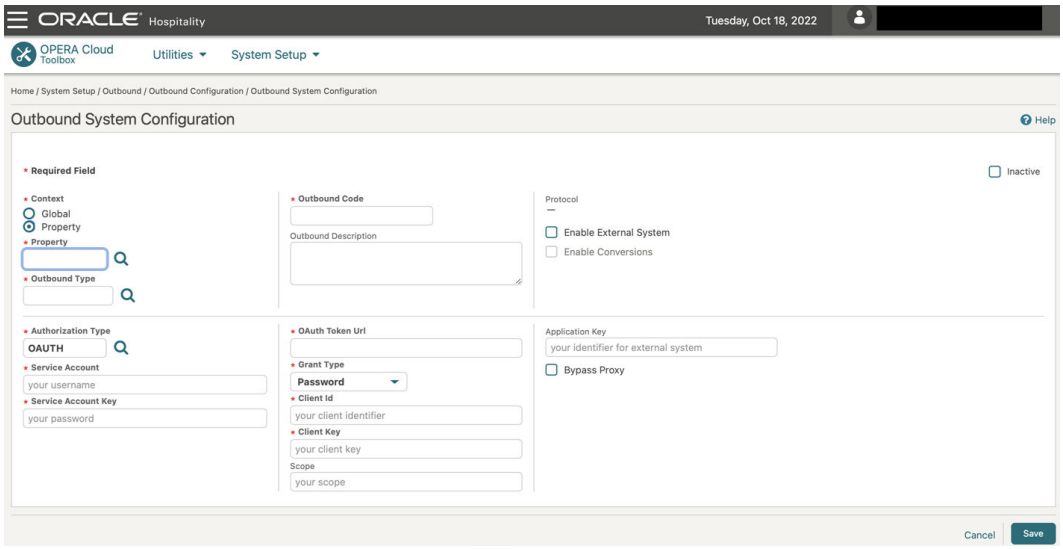


2. Select **System Setup**, select **Outbound**, and then select **Outbound Configuration**.



3. Select the **Property** and then click **New** to set up the new Outbound Configuration.





4. Complete the following fields and click **Save**. For the specific details on each field and how to create an Outbound Configuration, see Managing Outbound System Configuration in the OPERA Cloud Services documentation.

   a. **Context**: Select the **Property** option.

   b. **Property**: Select the property for which this configuration is being set up.

   c. **Outbound Type**: Select **GAMING_CUSTOM** from the list of options.

   d. **Outbound Code**: Provide the unique identifier (for example: IGT_{Property_Name}).

   e. **Outbound Description**: Provide the description (optional).

   f. **Authorization Type**: Select **NONE** from the list of options. By selecting this option, all other Authorization related fields no longer appear.

   g. **Application Key**: Leave this field blank.

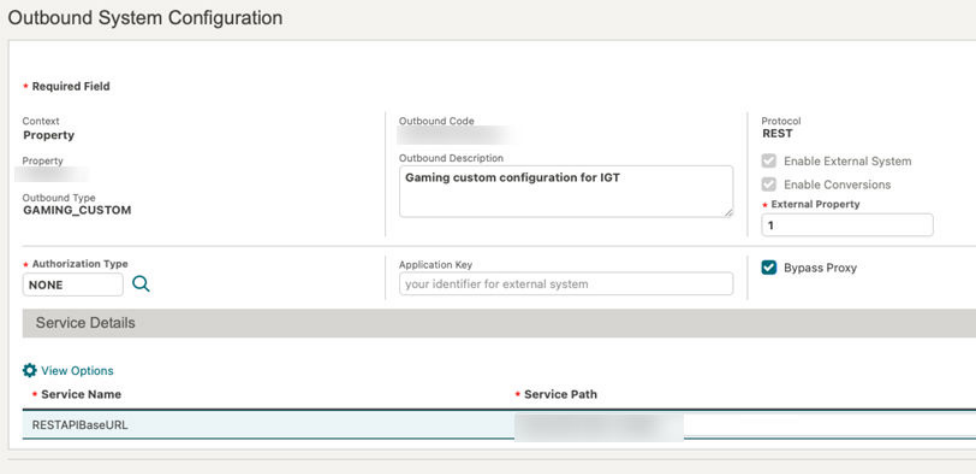
   h. **Enable External System**: Select this option.

   i. **Enable Conversions**: Select this option.

   j. **External Property**: Enter the **Site ID** provided by IGT.

   k. **Bypass Proxy**: Select this option.

Once the configuration is saved, the final configuration should look like the page below:



5. Add the following Custom Headers for this outbound configuration:

Header Name	Header Value
CompPostingURL	This is the URL that is going to be used for the Comp Posting operations.
HotelID	The Site ID from IGT.
UserID	The UserID used in CRM operations.
CompPostingUserID	The MicrosUserId.

Once the above fields are completed, save the outbound configuration and proceed to Data Value Mappings (DVM).

DVMs for IGT

The following Data Value Mappings (DVMs) must be set up for the IGT system to correctly integrate with OPERA Cloud. For details on how to create DVMs within OPERA Cloud, see Data Value Mappings in the OPERA Cloud Services documentation.

The below DVM values are for reference only and can vary by property.

Country Codes

This DVM will convert the Country Code used in OPERA Cloud with the Country Code used in IGT for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

> **Note:**
>
> This list follows the ISO 3166.

- **OPERA Cloud Code**: This is the Country Code used in OPERA Cloud.

- **External Value**: This is the Country Code in IGT that corresponds to the OPERA Cloud Country Code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-12 Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Afghanistan	4		
Albania	8		
Algeria	12		
American Samoa	16		
Andorra	20		

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Angola	24	✓	✓
Anguilla	660	✓	✓
Antarctica	10	✓	✓
Antigua and Barbuda	28	✓	✓
Argentina	32	✓	✓
Armenia	51	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Aruba	533	✓	✓
Australia	36	✓	✓
Austria	40	✓	✓
Azerbaijan	31	✓	✓
Bahamas (the)	44	✓	✓
Bahrain	48	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Bangladesh	50	✓	✓
Barbados	52	✓	✓
Belarus	112	✓	✓
Belgium	56	✓	✓
Belize	84	✓	✓
Benin	204	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Bermuda	60	✓	✓
Bhutan	64	✓	✓
Bolivia (Plurinational State of)	68	✓	✓
Bonaire, Sint Eustatius and Saba	535	✓	✓
Bosnia and Herzegovina	70	✓	✓
Botswana	72	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Bouvet Island	74	✓	✓
Brazil	76	✓	✓
British Indian Ocean Territory (the)	86	✓	✓
Brunei Darussalam	96	✓	✓
Bulgaria	100	✓	✓
Burkina Faso	854	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Burundi	108	✓	✓
Cabo Verde	132	✓	✓
Cambodia	116	✓	✓
Cameroon	120	✓	✓
Canada	124	✓	✓
Cayman Islands (the)	136	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Central African Republic (the)	140	✓	✓
Chad	148	✓	✓
Chile	152	✓	✓
China	156	✓	✓
Christmas Island	162	✓	✓
Cocos (Keeling) Islands (the)	166	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Colombia	170	✓	✓
Comoros (the)	174	✓	✓
Congo (the Democratic Republic of the)	180	✓	✓
Congo (the)	178	✓	✓
Cook Islands (the)	184	✓	✓
Costa Rica	188	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Croatia	191	✓	✓
Cuba	192	✓	✓
Curaao	531	✓	✓
Cyprus	196	✓	✓
Czechia	203	✓	✓
Cte d'Ivoire	384	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Denmark	208		
Djibouti	262		
Dominica	212		
Dominican Republic (the)	214		
Ecuador	218		
Egypt	818		

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
El Salvador	222	✓	✓
Equatorial Guinea	226	✓	✓
Eritrea	232	✓	✓
Estonia	233	✓	✓
Eswatini	748	✓	✓
Ethiopia	231	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Falkland Islands (the) [Malvinas]	238	✓	✓
Faroe Islands (the)	234	✓	✓
Fiji	242	✓	✓
Finland	246	✓	✓
France	250	✓	✓
French Guiana	254	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
French Polynesia	258	✓	✓
French Southern Territories (the)	260	✓	✓
Gabon	266	✓	✓
Gambia (the)	270	✓	✓
Georgia	268	✓	✓
Germany	276	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Ghana	288	✓	✓
Gibraltar	292	✓	✓
Greece	300	✓	✓
Greenland	304	✓	✓
Grenada	308	✓	✓
Guadeloupe	312	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Guam	316	✓	✓
Guatemala	320	✓	✓
Guernsey	831	✓	✓
Guinea	324	✓	✓
Guinea-Bissau	624	✓	✓
Guyana	328	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Haiti	332	✓	✓
Heard Island and McDonald Islands	334	✓	✓
Holy See (the)	336	✓	✓
Honduras	340	✓	✓
Hong Kong	344	✓	✓
Hungary	348	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Iceland	352	✓	✓
India	356	✓	✓
Indonesia	360	✓	✓
Iran (Islamic Republic of)	364	✓	✓
Iraq	368	✓	✓
Ireland	372	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Isle of Man	833		
Israel	376		
Italy	380		
Jamaica	388		
Japan	392		
Jersey	832		

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Jordan	400	✓	✓
Kazakhstan	398	✓	✓
Kenya	404	✓	✓
Kiribati	296	✓	✓
Korea (the Democratic People's Republic of)	408	✓	✓
Korea (the Republic of)	410	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Kuwait	414	✓	✓
Kyrgyzstan	417	✓	✓
Lao People's Democratic Republic (the)	418	✓	✓
Latvia	428	✓	✓
Lebanon	422	✓	✓
Lesotho	426	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Liberia	430	✓	✓
Libya	434	✓	✓
Liechtenstein	438	✓	✓
Lithuania	440	✓	✓
Luxembourg	442	✓	✓
Macao	446	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Madagascar	450	✓	✓
Malawi	454	✓	✓
Malaysia	458	✓	✓
Maldives	462	✓	✓
Mali	466	✓	✓
Malta	470	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Marshall Islands (the)	584	✓	✓
Martinique	474	✓	✓
Mauritania	478	✓	✓
Mauritius	480	✓	✓
Mayotte	175	✓	✓
Mexico	484	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Micronesia (Federated States of)	583	✓	✓
Moldova (the Republic of)	498	✓	✓
Monaco	492	✓	✓
Mongolia	496	✓	✓
Montenegro	499	✓	✓
Montserrat	500	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Morocco	504	✓	✓
Mozambique	508	✓	✓
Myanmar	104	✓	✓
Namibia	516	✓	✓
Nauru	520	✓	✓
Nepal	524	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Netherlands (the)	528	✓	✓
New Caledonia	540	✓	✓
New Zealand	554	✓	✓
Nicaragua	558	✓	✓
Niger (the)	562	✓	✓
Nigeria	566	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Niue	570	✓	✓
Norfolk Island	574	✓	✓
North Macedonia	807	✓	✓
Northern Mariana Islands (the)	580	✓	✓
Norway	578	✓	✓
Oman	512	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Pakistan	586	✓	✓
Palau	585	✓	✓
Palestine, State of	275	✓	✓
Panama	591	✓	✓
Papua New Guinea	598	✓	✓
Paraguay	600	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Peru	604	✓	✓
Philippines (the)	608	✓	✓
Pitcairn	612	✓	✓
Poland	616	✓	✓
Portugal	620	✓	✓
Puerto Rico	630	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Qatar	634	✓	✓
Romania	642	✓	✓
Russian Federation (the)	643	✓	✓
Rwanda	646	✓	✓
Runion	638	✓	✓
Saint Barthlemy	652	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Saint Helena, Ascension and Tristan da Cunha	654	✓	✓
Saint Kitts and Nevis	659	✓	✓
Saint Lucia	662	✓	✓
Saint Martin (French part)	663	✓	✓
Saint Pierre and Miquelon	666	✓	✓
Saint Vincent and the Grenadines	670	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Samoa	882	✓	✓
San Marino	674	✓	✓
Sao Tome and Principe	678	✓	✓
Saudi Arabia	682	✓	✓
Senegal	686	✓	✓
Serbia	688	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Seychelles	690	✓	✓
Sierra Leone	694	✓	✓
Singapore	702	✓	✓
Sint Maarten (Dutch part)	534	✓	✓
Slovakia	703	✓	✓
Slovenia	705	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Solomon Islands	90	✓	✓
Somalia	706	✓	✓
South Africa	710	✓	✓
South Georgia and the South Sandwich Islands	239	✓	✓
South Sudan	728	✓	✓
Spain	724	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Sri Lanka	144	✓	✓
Sudan (the)	729	✓	✓
Suriname	740	✓	✓
Svalbard and Jan Mayen	744	✓	✓
Sweden	752	✓	✓
Switzerland	756	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Syrian Arab Republic (the)	760	✓	✓
Taiwan (Province of China)	158	✓	✓
Tajikistan	762	✓	✓
Tanzania, the United Republic of	834	✓	✓
Thailand	764	✓	✓
Timor-Leste	626	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Togo	768	✓	✓
Tokelau	772	✓	✓
Tonga	776	✓	✓
Trinidad and Tobago	780	✓	✓
Tunisia	788	✓	✓
Turkey	792	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Turkmenistan	795	✓	✓
Turks and Caicos Islands (the)	796	✓	✓
Tuvalu	798	✓	✓
Uganda	800	✓	✓
Ukraine	804	✓	✓
United Arab Emirates (the)	784	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
United Kingdom of Great Britain and Northern Ireland (the)	826	✓	✓
United States Minor Outlying Islands (the)	581	✓	✓
United States of America (the)	840	✓	✓
Uruguay	858	✓	✓
Uzbekistan	860	✓	✓
Vanuatu	548	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Venezuela (Bolivarian Republic of)	862	✓	✓
Viet Nam	704	✓	✓
Virgin Islands (British)	92	✓	✓
Virgin Islands (U.S.)	850	✓	✓
Wallis and Futuna	876	✓	✓
Western Sahara*	732	✓	✓

Table 6-12 (Cont.) Country Codes

OPERA Cloud Value	External Code	External > OPERA Cloud	OPERA Cloud > External
Yemen	887	✓	✓
Zambia	894	✓	✓
Zimbabwe	716	✓	✓
land Islands	248	✓	✓

Membership Level

This DVM will convert the Membership Levels codes previously created into the IGT Ranking Levels (and vice-versa).

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Membership Level code that you previously created.
- **External Value**: This is the Ranking Code in IGT that corresponds to the OPERA Cloud Membership Level code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-13 Membership Level

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External
BRONZE	1		
DIAMOND	2		
PLATINUM	3		

Membership Type

This DVM will convert the Membership Type codes used in OPERA Cloud Membership Types into IGT codes (and vice-versa).

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Membership Type code that you previously created.
- **External Value**: This is the IGT Membership Type code that corresponds to the OPERA Cloud Membership Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-14 Membership Type

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External
PTS	PTS		

Address Type

This DVM will convert the Address Type used in OPERA Cloud with the Location used in IGT for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Address Type that exists in OPERA Cloud.
- **External Value**: This is the Location in IGT that corresponds to the OPERA Cloud Address Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-15 Address Type

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External
HOME	Home		
WORK	Work		

Document Type

This DVM will convert the Document Type used in OPERA Cloud with the Identification Type used in IGT for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Document Type that exists in OPERA Cloud.
- **External Value**: This is the Identification Type in IGT that corresponds to the OPERA Cloud Document Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-16 Document Type

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External Cloud
DL	Drivers License		
SC	SSN		

Phone Type

This DVM converts the Phone Type used in OPERA Cloud with the Phone Location used in IGT for both messages being sent and received from/to OPERA Cloud.

The values in the table below are just for illustration purposes. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Phone Type that exists in OPERA Cloud.
- **External Value**: This is the Phone Location in IGT that corresponds to the OPERA Phone Type code.
- **External > OPERA Cloud**: Select this option to translate these values for messages received in OPERA Cloud.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA Cloud.

Table 6-17 Phone Type

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External Cloud
HOME	Home	✓	✓
MOBILE	Mobile	✓	✓
EMAIL	Main Email	✓	✓
BUSINESS	Business	✓	✓

Transaction Codes

This DVM converts the Transaction Codes used in OPERA Cloud with the Comp Type Reference Code used in IGT for messages being sent from OPERA Cloud (mainly for the Comp Posting operation).

The values in the table below are just for illustration purposes. All transactions (including generates transactions) comped with PTS must be included. To complete this DVM, you need the following:

- **OPERA Cloud Code**: This is the Transaction Code that exists in OPERA Cloud.
- **External Value**: This is the Comp Type Reference Code in IGT that corresponds to the OPERA Cloud Transaction code.
- **External > OPERA Cloud**: Deselect this option as inbound messages are not translated in OPERA Cloud for Transaction Codes.
- **OPERA Cloud > External**: Select this option to translate these values for messages being sent by OPERA10001.

Table 6-18 Transaction Codes

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External Cloud
10001	ROM	✓	✓
10002	DOL	✓	✓
10009	DOL	✓	✓
100123	BUF	✓	✓
102511	DOL	✓	✓
55904	PEN	✓	✓

Table 6-18 (Cont.) Transaction Codes

OPERA Cloud Code	External Code	External > OPERA Cloud	OPERA Cloud > External Cloud
99502	GIF		

Business Events

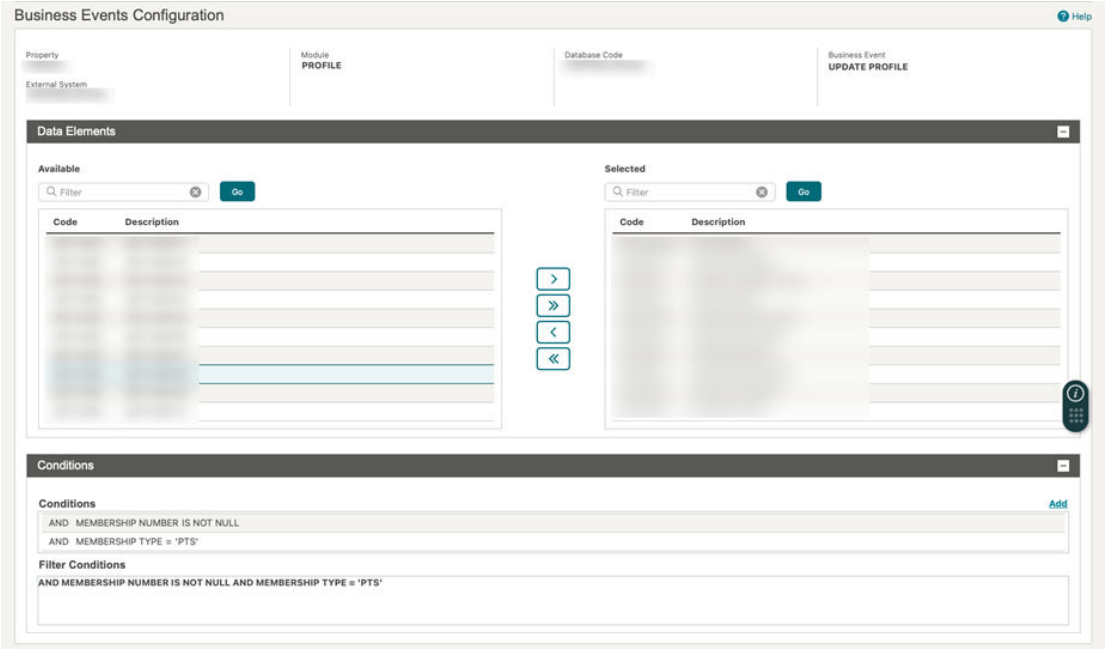
In the context of Gaming Integration with IGT, business events are used to send both profile updates and reservation notifications to IGT.

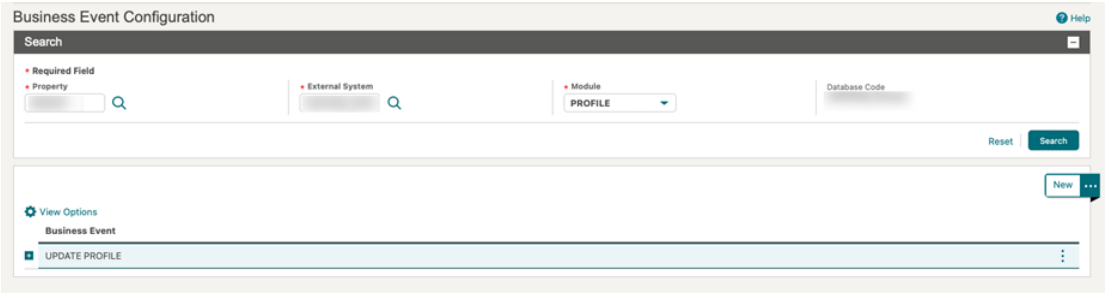
For these operations to work, you must configure the below business events in OPERA Cloud. For details on configuring business events, refer to Configuring Business Events in the OPERA Cloud services documentation.

Profiles

Use the below details to create business events for OPERA Cloud Profiles.

- **Property**: Select your OPERA Cloud property.
- **External System**: Select the external system with the same name as the Outbound Configuration you previously created.
- **Module**: Select PROFILE.
- **Business Event**: Select UPDATE PROFILE.
- **Data Elements**: Select all available data elements.
- **Conditions**:
  - MEMBERSHIP NUMBER IS NOT NULL
  - MEMBERSHIP TYPE = 'PTS'
  - Ensure these conditions are used as ‘AND’ (do not use ‘OR’)

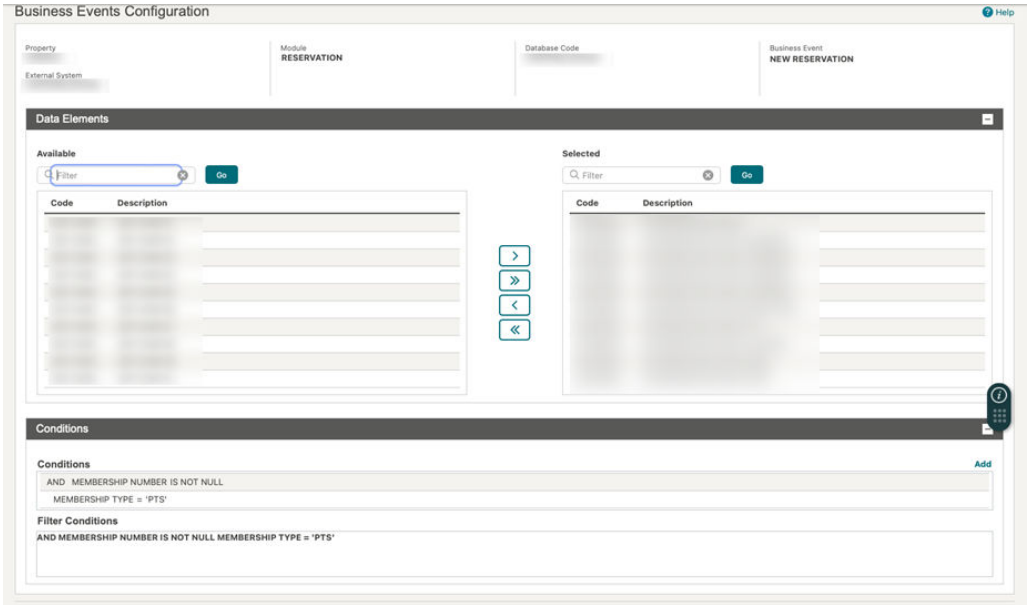




Reservations

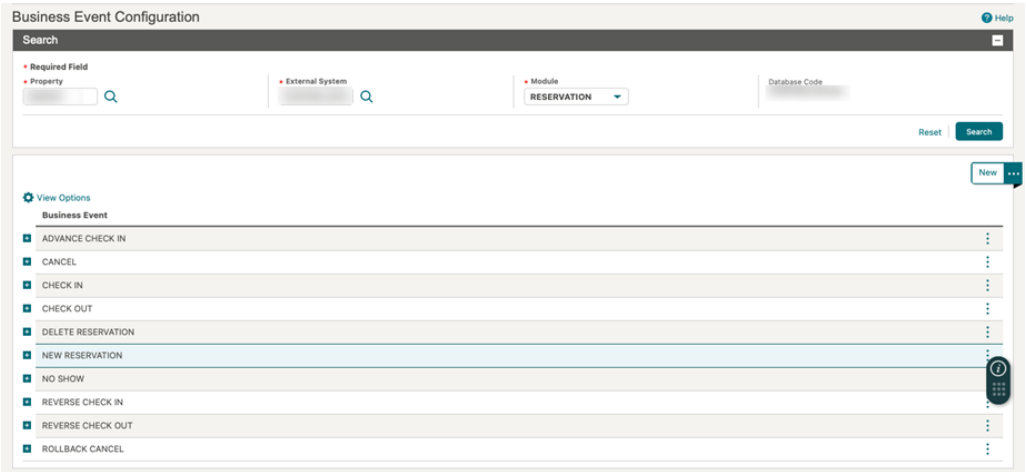
Use the below details to create business events for OPERA Cloud Reservations.

- **Property**: Select your OPERA Cloud property.
- **External System**: Select the external system with the same name as the Outbound Configuration you previously created.
- **Module**: Select RESERVATION.
- **Business Event**: Select NEW RESERVATION.
- **Data Elements**: Select all available data elements.
- **Conditions**:
  - MEMBERSHIP NUMBER IS NOT NULL
  - MEMBERSHIP TYPE = 'PTS'
  - Ensure these conditions are used as ‘AND’ (do not use ‘OR’)



Repeat the above steps to create business events for the following Reservation Modules:

- ADVANCE CHECK IN
- CANCEL
- CHECK IN
- CHECK OUT
- NEW RESERVATION
- NO SHOW
- REVERSE CHECK IN
- REVERSE CHECK OUT
- ROLLBACK CANCEL
- UPDATE RESERVATION



OPERA Cloud Flex Fields

This integration solution makes use of some flex fields for specific use cases. If you also use flex fields as part of you OPERA Cloud configuration, review these flex fields to ensure there are no conflicts between them.

- **Profile Preferred Name**: Flex field UDFC40 is used to store the guest preferred name and this information is being integrated to IGT.
- **Player Credit Account**: Flex field UDFN40 is used to store the player credit account flag from IGT. This information is received from IGT to indicate if the guest has a credit account in IGT.