

# Oracle Hospitality Cruise Shipboard Property Management System

## OPI Handling



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# Preface

This document is to guide users attempting to configure Oracle Payment Interfaces (OPI) on Shipboard Property Management System (SPMS).

## Audience

This document is intended for application specialists and users of Oracle Hospitality Cruise Shipboard Property Management System.

## 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 and any associated log files
- Screen shots 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/cruise.html>.

## Revision History

| Date         | Description of Change |
|--------------|-----------------------|
| October 2025 | Initial publication.  |

# Prerequisites, Supported Systems, and Compatibility

This section describes the minimum requirement to operate the Oracle Payment Interface (OPI) On Premise.

## **Prerequisite**

Before you begin and for a complete setup, review the *OPI Installation and Reference Guide* at [Integrations Platform](#) and *Cruise SPMS Installation Guide* at [Hospitality Cruise](#).

For customers migrating from the existing credit card handling to OPI, contact Oracle Consulting for a switch over process.

# 1

## SPMS Configuration

To enable the OPI Handling, login to the **Administration module**, go to **System Setup** menu, then **Database Parameters**, and set the Parameter value to “**OPI**” under ‘**Not Specified**’ group, **CC Transfer Format**.

### OHC OPI Web Service

See *SPMS Installation Guide Setting Up SPMS Web Server* section at [Oracle Help Center](#) for steps to install OHC OPI Web Services and OHC OPI Daemon Service.

#### ① Note

If the SPMS Webserver is installed on a different machine, you need to copy the below two parameters into your `C:\Users\Public\Documents\Oracle Hospitality CruiseOHCSettings.par`, and ensure that there is a new line at the end of the file.

```
[#OPI Interface.Parameter.OPIInterfaceURL=#]
[#OPI Interface.Parameter.ClientPort=#]
```

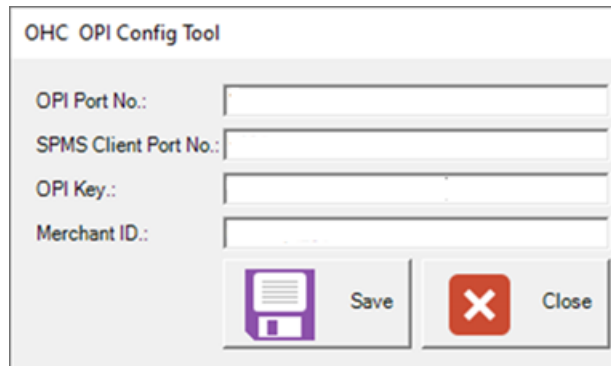
When the SPMS DB password is updated, the <connectionString> section password needs to be refreshed manually in the file:  
`C:\inetpub\OHCOPIDaemonServices\Web.config`.

### OHC OPI Daemon Service Configuration

To configure the Daemon Services, run the **OHCOPIDaemonConfigTool.exe** from `C:\OHCOPIDaemonService\` and input the require information for each field, then save the settings.

**Table 1-1 OPI Daemon Service Configuration Fields**

| Field                | Description                                         |
|----------------------|-----------------------------------------------------|
| OPI Port No.         | The OPI Port Number.                                |
| SPMS Client Port No. | The SPMS Client Port Number.                        |
| OPI Key              | The Key generated in OPI Configuration – IFC 8 Key. |
| Merchant ID          | The Merchant ID set up in OPI Configuration.        |

**Figure 1-1 OPI Configuration Wizard**


OHC OPI Config Tool

OPI Port No.:

SPMS Client Port No.:

OPI Key.:

Merchant ID.:

 Save  Close

## OHC OPI Manager

1. Run **OHC OPI Manager.exe** from C:\Program Files (x86)\Oracle Hospitality Cruise
2. Navigate to the **Configuration** tab
3. Click **Connection** under Setup pane
4. Enter the following options:

**Table 1-2 OPI Manager Connection Settings**

| Description          | Value                                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------|
| OPI Interface URL    | This is where OHC OPI Daemon is installed (in format ws://ip address:)                                      |
| SPMS Client Port No. | The same SPMS client Port Number that defined in OPI Daemon Config Tool.                                    |
| OPI Daemon Port No.  | The same OPI Daemon Port Number that defined in OPI Daemon Config Tool.                                     |
| Workstation No.      | Workstation Number of the client.                                                                           |
| Merchant ID          | Combination of OPERA Chain and Property Code values defined in OPI Configuration, for example, CHAIN PROP1. |

5. Click the **Test Connection** to confirm the connection to OHC OPI Daemon is established
6. Click on **Parameter** under Setup pane, select **OPI Web API Service URL** and insert the hostname or IP with port number where the OHC OPI Web Service is installed, for example, `https://localhost:<PortNo>/`

## SPMS Parameters

This section describes the parameters used by OPI Handling. They are accessible from **Administration module, System Setup, Parameter**, or **OPI Manager module, Configuration, Parameter**



## PAR\_GROUP General

**Table 1-3 PAR\_GROUP General**

| PAR Name                                        | PAR Value | Description                                                                                                                                                                                                                                             |
|-------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allow payment for Declined Authorization        | 1         | 0 – Do not allow payment if authorization is declined but allow when offline.<br>1 – Allow payment if authorization is declined or offline.<br>2 – Do not allow payment if authorization is declined or offline.                                        |
| Allow Settlement Voiding                        | 1         | 0 – Allow voiding, no message will be prompted.<br>1 – Allow voiding, message will be prompted.<br>2 – Do not allow voiding.                                                                                                                            |
| Disable C/Card and Posting when auth is decline |           | 0 - No credit card deactivation and no posting disabled.<br>1 - We will deactivate the credit card first if there is no more active credit cards, the guest posting will be disabled.<br>2 - There is credit card deactivation, but no posting disable. |
| Disable Posting Automatically                   |           | 0 - Posting is allowed, 1 - Posting disable.                                                                                                                                                                                                            |
| CC Negative Payment Allowed                     |           | 1 - Allowed negative cc payment, 0 - Disallow negative cc payment.                                                                                                                                                                                      |

## PAR\_GROUP OPI

**Table 1-4 PAR\_GROUP OPI**

| PAR Name                                        | PAR Value | Description                                                                                             |
|-------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------|
| Do not allow if card expire on the debark month | 0         | 1 - Do not allow /0 - Allow, If the card has an expiry on the expected debark registration month.       |
| Enable Multiple Credit Card                     | 0         | 0 - No, 1 - Yes. Allow registration of multiple credit card.                                            |
| Enable Online Settlement                        | 1         | Online Settlement Handling.<br>0 – Settlement handled by OPI Manager.<br>1 – Send to Online Settlement. |

Table 1-4 (Cont.) PAR\_GROUP OPI

| PAR Name                                         | PAR Value              | Description                                                                                                                                                                                                                                                  |
|--------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Incremental Calculation Formula                  | 1                      | 1-Total invoice amount + (Total invoice amount * Top Up Percentage),<br>2-Total invoice amount - Total authorization amount,<br>3-Total invoice amount,<br>4-Total invoice amount - Total authorization amount + (Total invoice amount * top up percentage). |
| Incremental Top Up Percentage                    | 10                     | Percentage for incremental top up. Example, insert 10 for 10%.                                                                                                                                                                                               |
| Initial Authorization Amount                     | 250                    | Default initial authorization amount for all card types swiped at the terminal in online mode.                                                                                                                                                               |
| Initial Authorization Formula                    | 1                      | 1 - Fix amount,<br>2 - Fix amount x day of stay,<br>3 - By Department setting on minimum authorization amount.                                                                                                                                               |
| No. of retry for Outstanding Incremental Process | 3                      | Number of retries on the outstanding incremental payment request.                                                                                                                                                                                            |
| Number of Transaction per batch                  | 100                    | Maximum number of transaction to process on each submitted batch.                                                                                                                                                                                            |
| OPI Daemon Timeout                               | 20                     | Response Time out from OPI Daemon (in seconds).                                                                                                                                                                                                              |
| OPI Web API Service URL                          | http://localhost:xxxx/ | URL for OPI Web API Service.                                                                                                                                                                                                                                 |
| Online Incremental Limit                         | 1                      | The limit for incremental processing by batch or immediate. If the posting amount is greater than the value in PAR, send it for processing immediately. Otherwise send by batch.                                                                             |
| Enable Online Initial Authorization              | 1                      | 0 - Initial authorization. is handled by Batch Manager.<br>1 - Send to Online initial authorization.                                                                                                                                                         |
| Credit Card Expiry Date Format                   | MMYY                   | Sets the credit card expiry date format to display in 'YYMM' or 'MMYY'.                                                                                                                                                                                      |
| Enable Auto Incremental Authorization            | 0                      | Enable/Disable incremental authorization handling. 0 - Disable, 1 - Enable.                                                                                                                                                                                  |

Table 1-4 (Cont.) PAR\_GROUP OPI

| PAR Name                                     | PAR Value | Description                                                                                                                                                                                                                                                           |
|----------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Transaction per Tokenize batch     | 50        | Maximum number of transactions to process on each submitted batch for Get Token tab.                                                                                                                                                                                  |
| Elapsed time to send for online request      | 30        | Time interval seconds to send for online request.                                                                                                                                                                                                                     |
| Credit Card Refund                           | 1         | Allow user to enable or disable Credit Card Refund handling, default parameter value = 0.<br>0 - Disable Credit Card Refund handling. Credit Card Refund button not visible.<br>1 - Enable Credit Card Refund handling. Credit Card Refund button visible.            |
| Payment Service Regulation                   |           | PSD2: Uses PSD2 legislation for authentication processes<br>Blank/ other value: Uses standard workflow without specifying any payment service regulation                                                                                                              |
| Standalone Authorization for Auto Settlement | 0         | 0 - Existing handling of Settlement process.<br>1 - Upon settlement, the system checks if the total approved authorization amount meets or exceeds the settlement amount, and to auto mark the settlement as approved without sending to payment vendor for approval. |

## Setup

This section describes the various system codes set up within the Administration module.

### Department Setup

To post a charge/payment, a debit/credit department code of a credit card type is required. The code is set up in the Administration module, Financial Setup, Department setup.

#### Credit/Debit Card Department Code Setup

1. Log in to the **Administration** module and select **Financial Setup, Department** setup from the drop-down list
2. Click the **New** button at the bottom right of the screen to create a Sub-Department code

Figure 1-2 Department Code Setup

The screenshot shows the 'Payments Setup' window with the following sections and fields:

- Main Department:** 9030 MasterCard (highlighted with a green box)
- Payment Type:** CC Credit Card
- Department Code:** 9031
- Description:** MasterCard Micros (highlighted with a green box)
- Other Description:**
- Department Grouping:**
- Payment Type Details:** (highlighted with a green box)
  - Credit Card Digits:** -51-, -52-, -53-, -54-, -55-
  - Credit Card Id:** MC
  - Credit Card Internal Id:** M Master Card
  - Credit Card Merchant No:**
  - Credit Card Minimum Len:** 0
  - Foreign Currency Code:**
  - Floor Limit:** 0.00
  - Crew Floor Limit:** 0.00
  - Minimum Authorized Value:** 75.00
  - Crew Min Authorized Value:** 0.00
  - Commission Department:** None
  - Commission Rate:** 0.00
  - Daily Limit (0=No Limit):** 0.00
  - ☐ Debit Card No Commission charge
  - ☐ Commission is fix value
  - ☐ Rewards Card
  - ☒ Auto Balance (Interfaces)
  - ☐ Gift Card
- Payment Type in POS Subsystem:**
  - POS Tender Type No:**
  - System Account No:**
  - Incentives Payout Group:** (None)
  - External Department Id:**
  - External Itemizer Id:**
  - For Micros POS Cabin Charge Only:**
    - ☐ Allow Posting to Guest Cabin
    - ☐ Allow Posting to Crew Cabin
    - ☐ Allow Posting to Gift Card
- General Ledger:**
  - G.Ledger Id:**
  - Enter proper general ledger account number. You may use special codes as below. General Ledger interface when run will replace the codes with proper values. Enter the code including greater/smaller than signs. <cruise> - SCR\_COMMENT;
- Non-Refundable:**
  - ☐ Non-Refundable
  - Eligible Departments:**
    - ☐ All
    - ☐ (pre) All Bars
    - ☐ (pre) All Beverage
    - ☐ (pre) All Champagne
    - ☐ (pre) All Food
    - ☐ (pre) All Shops
    - ☐ (pre) All Tobacco
  - Collector Department:**
  - Reset Count Period:** (None)
  - Redirection Account:**
  - Apply Count:** 1
  - Apply Value:** 0.00
- Department Security:** (highlighted with a green box)
  - Dept. Security Level:** Credit Department Level 1
- Payroll:**
  - Req. Signature During Follo Payout:** Not Specified
- Credit Card Disclaimer:**
  - Note:** Credit Card Disclaimer. Secure by Master Card
- Payment Department Type:** Both Credit and Debit Card (highlighted with a green box)
- ☒ Department for routing
- Buttons:** OK, Cancel

3. In the **Main Department** section, enter the credit/debit card information such as Payment Type, Department code, and Description
4. In the **Payment Type** details section,
  - a. Enter the two digits of the first set of the credit card number in the **Credit Card Digits** field
  - b. Enter the **Credit Card ID**. For example, MC - MasterCard, VI - Visa, and so on

**Note**

You must map the Credit Card ID to the OPI Issuer ID.

Table 1-5 OPI Issuer ID

| Issuer ID | Card Type |
|-----------|-----------|
| AB        | AliPay    |

Table 1-5 (Cont.) OPI Issuer ID

| Issuer ID | Card Type            |
|-----------|----------------------|
| AL        | Alliance             |
| AX        | American Express     |
| CU        | China UnionPay       |
| CD        | China UnionPay Debit |
| DD        | Debit                |
| DC        | Diners Club          |
| DS        | Discover             |
| GC        | Gift Card            |
| JC        | JCB                  |
| ME        | Maestro              |
| MC        | MasterCard.          |
| MD        | MasterCard Debit.    |
| PC        | PayPal               |
| VA        | Visa.                |
| VD        | Visa Debit           |
| VE        | Visa Electron        |
| VP        | V Pay                |
| WE        | WeChat Pay           |
| BC        | Giro Card            |

- c. Select the corresponding **Credit Card Internal ID** from the drop-down list
- d. Enter the **Credit Card Merchant Number** provided by the Service Provider
- e. Select the **Commission Department** from the drop-down list and update the **Commission Rate** in percentage
- f. Check the **Debit Card No Commission charge** if the commission is not applicable
- 5. Under the **Department Security** access, select the relevant security level from the drop-down box
- 6. Select the relevant **Payment Type** under Payment Department Type - either Credit and Debit cards, Credit card, or Debit card

**Note**

This field determines if the payment type is a Credit Card or Debit Card.

- 7. Click **OK** to save the form

## Receipt Setup

You can generate a payment receipt upon payment, which requires you to set up a report template. A Standard Credit Card receipt template is available in the **Administration module, System Setup, Report setup, \_Receipts group**.

Contact Oracle Support if you wish to configure a customized receipt format.

# 2

## OHC OPI Manager

The OPI Manager comprises multiple tabs: Outstanding Process, Offline Token, Batch Settlement, Cancel Request, Tokenize Existing Credit Cards, Transaction Overview, and Configuration tab.

The following section describes the field definition of each tab and usage in the OPI Manager. The function buttons for each tab vary depending on the tab you access.

### Configuration Tab

This section consists of Connection Setup, Parameter, and Schema Mapping between SPMS and OPI.

**Figure 2-1 OPI Manager Configuration Tab**

| Description                           | Value | Comment                                                                                                                                                |
|---------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Credit Card Expiry Date Format        | YYMM  | Indicates what format the credit card expiry date should be displayed. Can only be "YYMM" or "MMYY"                                                    |
| Do not allow if card expire on the... | 0     | 1 - Do not allow/0 - Allow, If the card has expiry on the expected debar registration month                                                            |
| Elapsed time to send for online re... | 30    | Time interval in seconds to send for online request                                                                                                    |
| Enable Auto Incremental Authoriz...   | 0     | Enable/Disable incremental authorization handling. 0 - Disable, 1 - Enable                                                                             |
| Enable Multiple Credit Card           | 1     | 0-No, 1-Yes. Allow registration of multiple credit card                                                                                                |
| Enable Online Initial Authorization   | 1     | Online initial authorization handling. 0 - initial auth. handled by Batch Manager, 1 - Send to Online initial auth.                                    |
| Enable Online Settlement              | 1     | Online Settlement Handling. 0 - Settlement handled by Batch Manager, 1 - Send to Online Settlement                                                     |
| Incremental Calculation Formula       | 2     | 1-Total invoice amount + (Total invoice amount * Top Up Percentage), 2-Total invoice amount - Total authorization amount, 3-Total invoice amount, 4    |
| Incremental Top Up Percentage         | 10    | Percentage for incremental top up. Example, insert 10 for 10%                                                                                          |
| Initial Authorization Amount          | 1     | Default initial authorization amount for all card types swiped at the terminal in online mode.                                                         |
| Initial Authorization Formula         | 1     | 1 - Fix amount, 2 - Fix amount x day of stay, 3 - By Department setting on minimum authorization amount                                                |
| No of retry for Outstanding Incre...  | 3     | Number of retry on outstanding incremental payment request                                                                                             |
| Number of Transaction per Token...    | 2     | Maximum number of transaction to process on each submitted batch for Get Token tab                                                                     |
| Number of Transaction per batch       | 2     | Maximum number of transaction to process on each submitted batch                                                                                       |
| OPI Daemon Timeout                    | 10    | Response Timeout from OPI Daemon (in seconds)                                                                                                          |
| OPI Web API Service URL               |       | URL for OPI Web API Service                                                                                                                            |
| Online Incremental Limit              | 0     | The limit for incremental processing by batch or immediate. If posting amount is greater than value in Par, send for processing immediately. Otherwise |

#### Connection

For connection setup, see topic [SPMS Configuration, OHC OPI Manager](#) .

### Schema Mapping

The Schema Mapping is located in the left panel of the Configuration tab. This section describes the field mapping, pre-defined conditions, and the constant value between SPMS and OPI schema for different types of requests:

**Table 2-1 Field Mapping**

| Request Type  | Description           |
|---------------|-----------------------|
| CancelRequest | Send a cancel request |

**Table 2-1 (Cont.) Field Mapping**

| Request Type                | Description                                                                |
|-----------------------------|----------------------------------------------------------------------------|
| CcCourtesy                  | Request type obtains the Gift Cards details                                |
| CcCourtesyOperationalSchema | Request type obtains the Gift Cards details for Redeem and Restore         |
| CcUsage                     | Request type obtains the Credit Card details                               |
| CpAuthor                    | Request type obtains the Get Initial Authorization and Incremental/ Top Up |
| CpPayOnly                   | Request type is use for Direct Sale only                                   |
| CpSettl                     | Payment Settlement request                                                 |
| UpdateToken                 | Request type to exchange offline token to online token                     |
| Get Token                   | Request to exchange non-OPI token to OPI token                             |

Each request type has the following table columns:

**Table 2-2 Request Type**

| Column Name     | Description                                                               |
|-----------------|---------------------------------------------------------------------------|
| Field Name      | OPI schema field name                                                     |
| SPMS Field Name | SPMS schema field name                                                    |
| Condition       | The condition for the data updating / selection                           |
| Constant Value  | The value to be updated / inserted based on the output from the Condition |
| Enabled         | Enable the field used in request type                                     |
| Mandatory       | Mandatory flag for request type                                           |
| Direction       | Request type flow. (In = response from OPI, Out = request sent to OPI)    |

**Get/Update Schema from OPI**

This function sends a request to obtain the latest schema from OPI and updates the SPMS schema.

**Refresh**

This function refreshes the Setup screen when clicked.

**Allow Offline**

This function allows the use of the CPAuthor request type to use the offline tokens.

## Outstanding Process Tab

The Outstanding Process tab lists all of the pending initial authorization/incremental records for OPI approval.

**Overview**

All pending statuses of initial authorization/incremental records appear in the grid consist of the following:

**Table 2-3 Authorization/Incremental Records Detail**

| Column Name    | Description                         |
|----------------|-------------------------------------|
| Cabin          | Account cabin number                |
| First Name     | Account First Name                  |
| Last Name      | Account Last Name                   |
| Embarked       | Account embarkation date            |
| Sequence No.   | The sequence number of the record   |
| Auth. Amount   | Authorization amount of the record  |
| Current Action | Current action taking of the record |
| Card Expiry    | Account credit card expiry date     |

### **Silent Mode**

Enabling this function allows the process to run in the background. Updated record status does not appear on the screen.

### **Start**

This function triggers the request to process pending initial authorization and incremental records.

### **Time Out (second)**

Defines the response time for the system to flag the outstanding process as a time-out in seconds.

### **Log Line**

This function lists the number of records to appear in the log overview.

### **Clear Log**

This function clears all logs from the log overview.

### **Hide Statistics**

This function hides or shows the statistics panel on the right of the screen.

## Offline Token Tab

The Offline Token tab stores the offline transaction token in exchange for an online token once the system is online.

This tab is disabled if PSD2 method is used.

### **Overview**

All offline token records appearing in the grid consist of the following:



**Table 2-4 Offline Token Records Details**

| Column Name    | Description                          |
|----------------|--------------------------------------|
| First Name     | Account First Name                   |
| Last Name      | Account Last Name                    |
| Sequence No.   | The sequence number of the record    |
| Card Status    | Status of the registered credit card |
| Current Action | Current action taking of the record  |
| Card Expiry    | Account credit card expiry date      |

**Silent Mode**

Enabling this function allows the process to run in the background. Updated record status does not appear on the screen.

**Start**

This function commences the token exchange from offline to online.

**Time Out (second)**

Defines the response time for the system to flag the outstanding process as a time-out in seconds.

**Log Line**

This function lists the number of records to appear in the log overview.

**Clear Log**

This function clears all logs from the log overview.

## Batch Settlement Tab

The Batch Settlement Tab is a placeholder for all unprocessed records. You have an option to process the settlement records by batch or online, depending on the value set in **Enable Online Settlement** parameter.

If the parameter value is:

0 = The program sends all unprocessed settlement records to OPI in batches if the number of transactions matches the selection criteria. You can preview the records with the **Preview** button and press the **Start** button to begin. The process will stop once all records are processed/cleared from the screen.

1 = The program sends all unprocessed settlement records to OPI for immediate approval. Once the **Start** button is pressed, the program continually checks for unprocessed settlement records until you press the **Stop** button.

**Overview**

All pending settlements appearing in the grid consists of the following:

**Table 2-5 Pending Settlements Details**

| Column Name    | Description                         |
|----------------|-------------------------------------|
| Cabin          | Account cabin number                |
| First Name     | Account First Name                  |
| Last Name      | Account Last Name                   |
| Embarked       | Account embarkation date            |
| Sequence No.   | The sequence number of the record   |
| Settl. Amount  | The settlement amount of the record |
| Current Action | Current action taking of the record |
| Status         | Status of the record                |
| Card Expiry    | Account credit card expiry date     |

**Account Type**

Filter for the account you wish to process. Option is disabled if parameter value is "1".

**Embark Date**

Filter the records by the selected date. Option is disabled if parameter value is "1"

**Cabin**

Filter the records by the cabin number defined. Option is disabled if parameter value is "1".

**Preview**

This function shows the records to process, and the statistic is shown on the right of the grid. Option is disabled if parameter value is "1".

**Page**

This function navigates to the next / previous page of the records shown. You can also navigate to a specific page by entering a page number. Option is disabled if parameter value is "1".

**Silent Mode**

Enabling this function allows the process to run in the background. Updated record status does not appear on the screen.

**Start / Stop**

The system only allow you to process the Batch Settlement from one client machine at a time. Records are sent to OPI for approval. Once the **Start** button is pressed, the button switches to **Stop** and vice-versa.

**Time Out (second)**

Defines the response time for the system to flag the outstanding process as a time-out in seconds.

**Log Line**

This function lists the number of records to appear in the log overview.

**Clear Log**

This function clears all logs from the log overview.

### Hide Statistics

This function hides or shows the statistics by status listed below:

- **Records Approved**  
Shows the total of records and amount for the approved records
- **Records Declined**  
Shows the total of records and amount for the declined records
- **Records Time Out**  
Shows the total of records and amount of the timed out records
- **Pending Outstanding Authorization**  
Shows the total of records and amount for the pending authorizations records that are not able to process

## Cancel Request Tab

The Cancel Request tab lists all pending statuses of the initial authorization, incremental, and settlement records sent to OPI for approval.

### Overview

All pending statuses of initial authorization/ incremental/ Settlement records appearing in the grid consist of the following:

**Table 2-6 Pending Status of Initial Authorization / Incremental / Settlement Records**

| Column Name    | Description                        |
|----------------|------------------------------------|
| Cabin          | Account cabin number               |
| First Name     | Account First Name                 |
| Last Name      | Account Last Name                  |
| Embarked       | Account embarkation date           |
| Sequence No.   | The sequence number of the record  |
| Auth. Amount   | Authorization amount of the record |
| Current Action | Current action of the record       |
| Card Expiry    | Account credit card expiry date    |

### Silent Mode

Enabling this function allows the process to run in the background. Updated record do not appear on screen.

### Start

This function commences the Cancel request.

### Time Out (second)

Defines the response time for the system to flag the outstanding process as a time-out in seconds.

**Log Line**

This function lists the number of records to appear in the log overview.

**Clear Log**

This function clears all logs from the log overview.

**Hide Statistics**

This function hides or shows the statistics of the records.

## Tokenize Existing Credit Cards Tab

The Tokenize Existing Credit Cards tab lists all cards and changes the non-OPI token to OPI token. This feature duplicates the current checked-in and future reservations cards before tokenizing the card. Before you perform this step, you must ensure all invoice balances from the previous payment provider is settled. For checked-in reservation, if the credit card has been deactivated after a settlement, the system re-activates the card based on the settlement history.

This tab is disabled if PSD2 method is used.

**Overview**

All cards appearing in the grid consist of the following:

**Table 2-7 Pending Status**

| Column Name    | Description                       |
|----------------|-----------------------------------|
| First Name     | Account First Name                |
| Last Name      | Account Last Name                 |
| Sequence No.   | The sequence number of the record |
| Card Status    | Current card status, inactive     |
| Current Action | Current action of the record      |
| Card Expiry    | Account credit card expiry date   |

**Start**

This function commences the tokenization process.

**Time Out (second)**

Defines the response time for the system to flag the outstanding process as a time-out in seconds.

**Log Line**

This function lists the number of records to appear in the log overview.

**Clear Log**

This function clears all logs from the log overview.

## Transactions Overview Tab

The Transactions Overview tab lists all records filtered by the selected Transaction Type, Transaction Status, Transaction Dates, and Account Type(s). The total number of transaction records displayed is based on the value set in the **Number of Transaction per batch** parameter.

The fields appearing in the Offline Token window are slightly different from the Initial Authorization, Incremental, and Settlement.

### Overview

All Transaction Type **Offline Tokens** appearing in the grid consist of the following:

**Table 2-8 Transaction Type Offline Token**

| Column Name      | Description                                               |
|------------------|-----------------------------------------------------------|
| Sequence No.     | The sequence number of the record                         |
| First Name       | Account First Name                                        |
| Last Name        | Account Last Name                                         |
| Expire Date      | Account credit card expiry date                           |
| Card No          | Credit Card No with a masked value                        |
| Card Status      | Current card status, inactive                             |
| Reason           | Card Non-Approval Text                                    |
| Transaction Date | Transaction Date                                          |
| Account Type     | Account Type (Crew, Staff, Guest, Group & System Account) |

### Account Type

This function filters the account type you wish to process.

### Transaction Type

This function filters the transaction type to process – Offline Token, Initial Authorization, Incremental, and Settlement.

### Transaction Status

Flag for the transaction status to process - Time out, Decline or Approved. Single selection.

### Transaction Date

Filters the transactions by the selected date.

### All Date

Retrieves all the transaction records without filtering the transaction modified date.

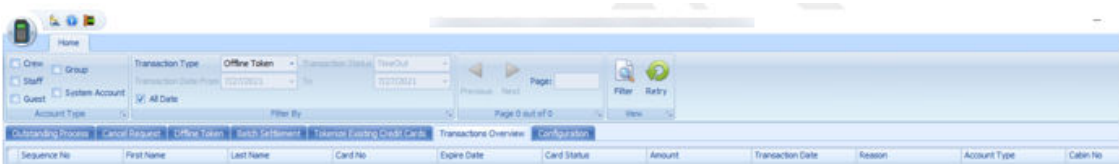
### Page

This function navigates to the next/previous page of the records. You can use the **Page** number to go to a specific page.

### Filter

This function filters and populates the selected information on the screen when clicked.

Figure 2-2 Transaction Overview



### Retry

This function sends a retry request for Initial Authorization with Time Out status for all active cards.

# 3

## OPI Handling

The following section describes the steps to register a credit card, add posting and settlement in SPMS integrating with OPI. These steps also apply to the Crew module.

### OHC Management

The steps described in this section are applicable to the OHC Crew module.

#### Registering a Credit Card

1. Log in to the **OHC Management** module and select **Guest** from the Cashier menu
2. Select a **checked-in guest** and click the **Get Credit Card** button located at the bottom of the screen
3. Swipe the credit card through the card device when prompted
4. Once the guest enters the credit card PIN, the OPI Web API checks and authenticates the initial authorization at the same time, and stores the card information in the **Guest Handling, Credit Card** tab
  - After receiving a valid credit card token from OPI, the card details are saved and the card status is set to Active mode if the initial authorization response is authorized and timed out
  - If the initial authorization response is declined or error, the credit card status is in Deactivate mode
  - The Initial Authorization to sent for an online or offline mode depending on the **Enable Online Initial Authorization** parameter. If the parameter value is set to 1, the initial authorization is sent to OPI directly. Otherwise, the initial authorization remains in Outstanding status and is processed by OPI Manager
  - The default Initial Authorization amount refers to the **Initial Authorization Amount** parameter
  - The calculation of the Initial Authorization amount also uses the value set in the **Initial Authorization Formula** parameter based on Fix amount, Fix amount x day of stay, or department setting on the minimum authorization amount

#### Adding a Posting

1. Log in to the **OHC Management** module and select **Guest** from the Cashier menu
2. Select a checked-in guest with a credit card assigned
3. click the **Add Posting** button located at the bottom of the screen
4. Select the **posting department**, enter the **posting amount**, and click the **Post** button
5. Incremental Authorization is triggered when the initial authorization amount is not enough to cover the invoice balance
  - Incremental Authorization triggered when adding a posting and this is based on the **Enable Auto Incremental Authorization** parameter. If the parameter value is set to 1,

it triggers an incremental authorization during add posting. Otherwise, this is triggered during settlement

- The Incremental Authorization to sent (an online authorization or to be processed by batch) refers to the **Online Incremental Limit** parameter. It sends an authorization to OPI immediately if the value is greater than the value in the parameter. Otherwise, this is processed by OPI Manager
- The calculation used refers to the **Incremental Calculation Formula** and **Incremental Top Up Percentage** parameter

### Viewing Authorization Amount

1. Log in to **OHC Management** module and navigate to the **Guest Handling** screen
2. In the Search Panel, browse for the guest account
3. Navigate to the Credit Card tab in the guest account. The registered card should be in *Active* mode
4. To display the authorization, select the **credit card** and click **View Authorization**

**Figure 3-1 Authorization Screen**

| Payment Type | Card Number  | Value | Status     | Type        |
|--------------|--------------|-------|------------|-------------|
| Visa OPI     | XXXXXXXXXXXX | 1.00  | Authorized | Initial     |
| Visa OPI     | XXXXXXXXXXXX | 69.00 | Authorized | Incremental |

|                   |       |
|-------------------|-------|
| Authorizations    |       |
| Number:           | 2     |
| Pending Value:    | 0.00  |
| Declined Value:   | 0.00  |
| Authorized Value: | 70.00 |

### Paying an Invoice

1. Log in to the **OHC Management** module and select **Guest** from the **Cashier** menu
2. Select a **guest** with a credit card assigned and a posting in the invoice
3. Click the **Pay Invoice** button
  - The settlement triggered by the **Pay Invoice** button whether to send in an online or offline request is based on the **Enable Online Settlement** parameter. If the parameter value is '1', it sends to OPI immediately. Otherwise, it is processed by OPI Manager.

### When vendor has no internet

For the **Enable Online Settlement** parameter = 1:

When the Settlement response with <> 0K and <> T0, the system inserts a record with -1\* POS amount into table POS to offset the credit amount. This is to ensure the invoice balance does not become 0 when the settlement failed.

On time-out (TO), you have the option to either retry the transaction at OPI Manager or terminate the transaction per the following process:

For **Number of retry for Outstanding Incremental** = 1 parameter or above:

- **Yes:** The OPI Manager processes the transaction and sets the CCT\_STATUS to 4. The number of retries is set in the **Number of retry for Outstanding Incremental Process**



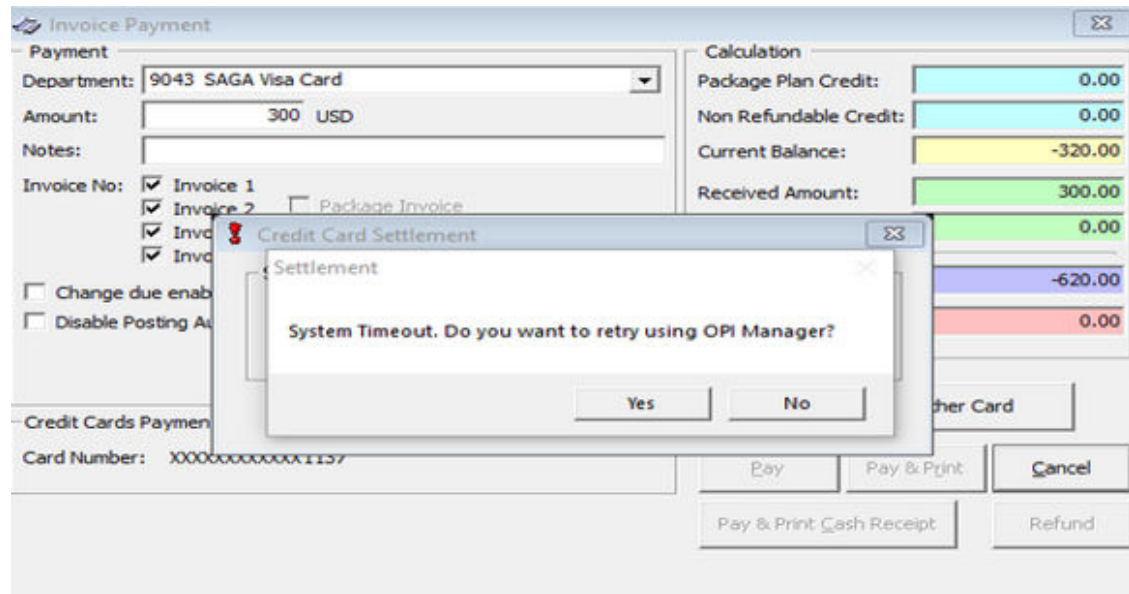
parameter. Once it reaches the maximum number of retries, the system sets the CCT\_STATUS to 5 and inserts a record with -1\* POS amount into the POS table

- **No:** The transaction is terminated and CCT\_STATUS is set to 6. The system inserts a record with -1\* POS amount into the POS table

For the **Number of retry for Outstanding Incremental = 0** parameter:

- The system sets the CCT\_STATUS to 5 and inserts a record with -1\* POS amount into table POS

**Figure 3-2 System Timeout**



For **Online Settlement** parameter = 0:

The system follows the above 'Yes' logic. When the SPMS client is not able to connect to OPI API or Daemon, the system deletes the POS record so that the invoice is not 0.

### Quick Billing

Quick Billing allows you to balance the accounts in batches using the payment method as a criteria. For payment methods using a credit card, the system integrates with OPI for credit card related transactions.

If the **Enable Online Settlement** parameter is set to 1, an incremental authorization is sent to OPI directly, otherwise OPI Manager processes it.

For Online Settlement, if the connection error occurs from the OPI Daemon or the Payment Provider, an alert message appears for each transaction. You can still click the **Stop** or **Resume** button.

### Auto Settlement Handling

If Standalone Authorization for Auto Settlement parameter is set to 1:

- When a settlement is initiated, the system checks if the total approved authorization amount is greater than or equal to the settlement amount

- If the approved authorization is sufficient, the settlement record is automatically marked as approved, without requiring another approval from payment vendor. If the approved authorization amount is insufficient or not found, the system creates a new authorization request for the required amount and sends it to the payment vendor for approval
- Once the authorization is approved and meets the settlement amount, the settlement record is automatically marked as approved

If the Standalone Authorization for Auto Settlement parameter is set to 0, the existing settlement process remains unchanged

## Advance Quick Check-In (AQCI)

The process to register a credit card in the Advance Quick Check-In (AQCI) is relatively similar to the Management module.

1. Log in to the AQCI module and select **Guest** option from the search function
2. Select a **guest** from the list, and click the **Get Credit Card** button located at ribbon menu at the top of the screen
3. Swipe the credit card through the card device when prompted
4. The system processes the registration mentioned in step 4 of [Registering a Credit Card](#)
5. Once the credit card registered successfully, the Credit Card information populates in the credit card section

## AQCI Check-In Wizard (CIW)

You can also register the credit card from the Check-In Wizard screen.

1. At the AQCI module, click the **Wizard** button at the ribbon bar
2. At the Welcome screen, search the guest from the Guest Lookup option
3. At the Onboard Account screen, click the **Credit Card** button
4. Swipe the credit card through the card device when prompted
5. Once the guest enters the credit card PIN, the OPI Web API checks and authenticates the initial authorization at the same time, and stores the card information in the Guest Handling, Credit Card tab
6. The system processes the registration mentioned in step 4 of [Registering a Credit Card](#)

## OHC DGS ResOnline

The majority of the reservations information including the credit card details are imported through OHC DGS ResOnline module. Initial authorization is triggered only when the guest checks in.

## OHC Data Import

You can also import the Credit card details through Data Import module, using a specific text file. For example, if you are importing credit card details, the text file should only contain the credit card details. Initial authorization is triggered once the guest is checked-in.

## OHC Web Service

Reservations information including the credit card details are imported through the OHCWeb Services. Initial authorization is triggered once the guest checks in. See *OHCWebServices Technical Specification* for further details.

### Deactivating a Credit Card

When a credit card is deactivated and there is no settlement history found, the system performs a reversal on the authorization and releases the authorized amount of the card.

When the initial authorization fails, the system deactivates the credit card. If the **Enable multiple cards** is enabled, the system reassigns the invoices.

Similarly, when you change the payment method to Cash in OHC Management, OHC Crew or AQCI, the system deactivates the credit card and releases the initial authorized amount.

### Settlement using Pay with Other Card

When performing a settlement in **OHC Management** or **OHC Crew**, you can choose to settle with the registered payment method, or use the **Pay With Other Card** option, also known as Direct Sales.

If you choose to settle using Direct Sales:

- You would require the guest to present a credit card
- A new credit card record is created with an inactive status
- Direct Sales is an online transaction, and it always connects to OPI Daemon to perform the full payment with OPI

In the event you have to perform a refund,

- You need to first enter a negative value
- The system prompts for a credit card to be inserted before you are allowed to settle using the **Refund** option

### Credit Card Refund

In the event where a credit card refund is necessary, you need to select the settlement record to perform the refund. This is to allow the system to send the refund with the initial authorization number it is linked to and enable the payment vendor to track from which settlement the refunded amount is linked. You can only perform the Credit Card Refund on settlements paid by credit card, and a refund on a voided credit card settlement is not allowed.

If '**Credit Card Refund**' parameter is set to:

**True:** Credit Card Refund Handling is enabled and the **Credit Card Refund** button is shown on the Invoice tab.

**False:** Credit Card Refund Handling is disabled and the **Credit Card Refund** button is not shown on the Invoice tab.

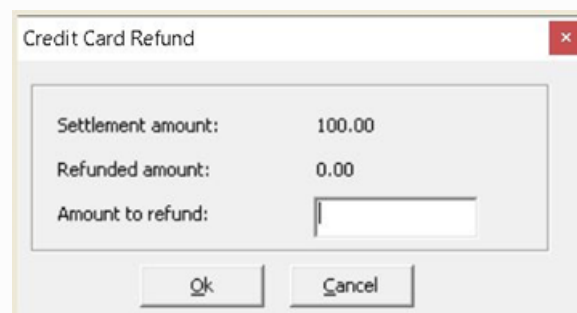
To perform the refund,

1. Login to **OHC Management / OHC Crew** module
2. In the **Cashier Menu**, select a checked-in guest that you wish to refund with a credit card payment
3. Under the Invoice tab, click the **Credit Card Refund** button. This launches the Credit Card Refund window, showing the **Settlement amount**, **Refunded amount**, and **Amount to refund**

#### Note

- Settlement Amount: The selected settlement amount
- Refunded Amount: Total refunded amount for the selected settlement
- Amount To Refund: User input amount to refund

**Figure 3-3 Credit Card Refund window**



4. Insert the value in **Amount to refund** and click **OK** button to proceed. The sum of the **Refunded amount** and **Amount to refund** must not exceed the Settlement amount
5. A success message is shown when the refund is successful
6. The refunded amount is reflected in the Invoice tab, Credit column as a negative amount

## Gift Card Handling

The Gift Card feature enables you to register, redeem, void, reload, and transfer balances of the gift card. These tasks are performed in OHC Management or OHC Crew module.

This feature is compatible with OPI version 20.3 and higher.

## Registering a Gift Card

The system allow you to register a multiple gift cards regardless of the parameter value set in **Enable Multiple Credit Card**.

1. Log in to **OHC Management** module and select **Guest** from the **Cashier Menu**
2. Select a checked-in guest and click the **Credit Card** tab
3. Under the Rewards Card Panel, click the **Get Gift Card** button. This prompts the Inquire Gift Card Points window with the message "Requesting gift card token"

4. After receiving a valid gift card balance response from OPI, the system saves the gift card details and set the card status to **Active** mode
5. Clicking the **View Card Transactions** button displays the Gift Card Authorization dialogue box. You can view the Payment Type, Card Number, Value, Status, Type, Auth Date, Auth Code, Error Code, and Comments of the selected Gift Card

**Note**

The system will not register the gift card if it is declined by the payment provider.

## Redeeming a Gift Card

The Gift Card Redeem enables you to offset your invoice balance with the gift card value.

1. Log in to the **OHC Management** module and select **Guest** from the Cashier Menu
2. Ensure the selected guest has a registered gift card
3. Under the Rewards Card Panel, click the **Redeem** button. A dialogue box opens displaying the Current card balance, Current Invoice Outstanding and Amount to redeem
4. Insert the value in **Amount to redeem** and click **OK** button to proceed
5. A success message appears when the redemption is successful. The amount redeemed is shown on the Invoice Tab as a positive value
6. Clicking the **View Card Transactions** button displays the Gift Card Authorization dialogue box where you can view the Payment Type, Card Number, Value, Status, Type, Auth Date, Auth Code, Error Code and Comments of the selected Gift Card

**Note**

The **Amount to redeem** field only accepts an amount more than 0, equal to or less than the current invoice outstanding amount, equal to or less than the current card balance amount.

## Voiding a Gift Card

The Gift Card Void allows you to reverse the redemption by posting a negative when you press the **Void** button.

1. Log in to **OHC Management** module and select **Guest** from the **Cashier Menu**
2. Ensure the selected guest has a redeemed transaction and a registered gift card
3. Under the Rewards Card Panel, click the **Void** button. A dialogue box shall prompt, displaying the **Current card balance**, **Total amount redeemed**, and the **Amount to void**
4. Insert the value in **Amount to void** and click the **OK** button to proceed for gift card void
5. A success message appears when the void is successful
6. The Void amount appearing in the Invoice tab is a negative value
7. Clicking the **View Card Transactions** button displays the Gift Card Authorization dialogue box, showing the Payment Type, Card Number, Value, Status, Type, Auth Date, Auth Code, Error Code, and Comments of the selected Gift Card

**Note**

The **Amount to void** field only accepts amounts more than 0, equal to or less than the current invoice outstanding amount, equal to or less than current card balance amount.

## Reloading a Gift Card

You can only reload the Gift Card when there is a credit amount in the invoice account.

1. From the **OHC Management** module, select the **Guest** from the Cashier Menu
2. Under Rewards Card Panel, select the **gift card** and click the **Reload** button. A dialogue box appears, displaying **Current Card Balance** and **Amount To Reload**
3. Enter the reload value in **Amount To Reload** and click **OK** to proceed
4. A message opens when the reload transaction is successful and the Reload Amount shown in the Invoice tab is a credit amount
5. Clicking the **View Card Transactions** button opens the Gift Card Authorization dialogue box, showing the Payment Type, Card Number, Value, Status, Type, Auth Date, Auth Code, Error Code, and Comments of the selected Gift Card, and the type '*Reload*' indicated in the Type column

## Transferring Gift Card Balance

The Gift Card Transfer allows you to transfer the balance from one gift card to another.

1. From the **OHC Management** module, select the **Guest** from the Cashier Menu
2. Ensure the selected guests has multiple gift cards registered
3. Under the Rewards Card Panel, select the **gift card** and click the **Transfer** button. A dialogue box opens, displaying the **From**, **To**, and **Amount To Transfer**
  - a. The **From** field displays the Gift Card Number, Owner Name, and Current Balance the gift card user selects
  - b. The **To** field consists of a drop-down list with active gift cards

**Note**

You are not allowed to partially transfer the amount.

4. The **Amount To Transfer** field is disabled and displays the same amount as the gift card balance amount
5. Click **OK** to transfer from the old gift card to the new gift card. A success message opens
6. Clicking the **View Card Transactions** button displays the Gift Card Authorization dialogue box, showing the Payment Type, Card Number, Value, Status, Type, Auth Date, Auth Code, Error Code, and Comments of the selected Gift Card, and the type '*Transfer*' indicated in the Type column

# 4

## Payment Services Directive Two (PSD2) Handling

The Payment Services Directive Two (PSD2) enforces payment services providers to implement a strong customer authentication, prohibiting Third-Party Payment Service Providers (TPP) from accessing any other data from the customer payment account beyond those explicitly authorized by the customer. Customers will have to agree on the access, use and processing of these data.

### Configuring PSD2

1. Log in to the OHC OPI Manager module
2. Select Configuration tab and go to the **Parameter** options
3. At the parameter **Payment Service Regulation**, you must set the parameter value to **PSD2**, and the value is case sensitive
  - **PSD2**: Uses PSD2 legislation for authentication processes
  - **Blank/ other value**: Uses standard workflow without specifying the payment service regulation

#### Note

To use PSD2,

- you must enable the parameter **Enable Online Initial Authorization**
- the **Offline Token** and **Tokenize Existing Credit card** tabs will be disabled.

4. In the Configuration tab, Schema Mapping, click the '**Get/ Update Schema From OPI**' to update the schema
5. Once the schema update completes, click **CpAuthor**, **CpSettl**, **CancelRequest**, and make sure the below fields are configured correctly per the below tables

**Table 4-1 CpAuthor**

| Field Name        | SPMS Field Name | Condition             | Constant Value | Enabled | Mandatory | Direction |
|-------------------|-----------------|-----------------------|----------------|---------|-----------|-----------|
| CardId            | CRD_TOKE<br>N   | ANSWERST<br>AT = 'OK' |                | True    | True      | In        |
| CreditcardN<br>um | CRD_NO          | ANSWERST<br>AT = 'OK' |                | True    | True      | In        |
| ExpyDate          | CRD_EXP         | ANSWERST<br>AT = 'OK' |                | True    | True      | In        |

Table 4-1 (Cont.) CpAuthor

| Field Name    | SPMS Field Name  | Condition          | Constant Value                          | Enabled | Mandatory | Direction |
|---------------|------------------|--------------------|-----------------------------------------|---------|-----------|-----------|
| PaymentMethod | CCA_PAYMNTMETHOD | ANSWERST AT = 'OK' |                                         | True    | True      | In        |
| PaymentMethod | CCA_PAYMNTMETHOD |                    | InitTrx:0 <br>Cit: <br>Moto:0 <br>Vcc:0 | True    | True      | Out       |

Table 4-2 CpSettl

| Field Name    | SPMS Field Name  | Condition          | Constant Value | Enabled | Mandatory | Direction |
|---------------|------------------|--------------------|----------------|---------|-----------|-----------|
| PaymentMethod | CCT_PAYMNTMETHOD | ANSWERST AT = 'OK' |                | True    | True      | In        |
| PaymentMethod | CCA_PAYMNTMETHOD |                    |                | True    | True      | Out       |

Table 4-3 CancelRequest

| Field Name    | SPMS Field Name             | Condition | Constant Value | Enabled | Mandatory | Direction |
|---------------|-----------------------------|-----------|----------------|---------|-----------|-----------|
| PaymentMethod | CANCELREQUEST_PAYMENTMETHOD |           |                | True    | True      | Out       |

Table 4-4 CpPayOnly (Optional)

| Field Name    | SPMS Field Name  | Condition | Constant Value | Enabled | Mandatory | Direction |
|---------------|------------------|-----------|----------------|---------|-----------|-----------|
| PaymentMethod | CCA_PAYMNTMETHOD |           |                | True    | True      | In        |

## OPI Daemon Tools

1. Launch the OPIDaemon Tools and to make sure the **Payment Service Regulation** is set to **PSD2**

### Note

You need to set the same at the client(s) running the OPIDaemon services

2. To complete the configuration and to be able to use the PSD2, you must
  - a. restart the **OPI Web Service** and **OPIDaemon services**
  - b. relaunch the OHC Launch Panel and other modules



# 5

## Troubleshooting

This section lists the error messages known to OPI that may help you resolve the errors with OPI Handling.

**Table 5-1 Known Error Messages**

| Error Message                                            | Resolution                                                                                                                              |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Web API: The card department : XX didn't setup properly  | Check the card type from OPI and ensure it is configured correctly in SPMS Administration module.<br>XX = the card type defined by OPI. |
| Web API: Unauthorized                                    | Invalid login or web API token, re-login the program through OHC Launch Panel.                                                          |
| Web API: The card is expired before the guest dis-embark | Payment card provided has expiry before disembarkation date.                                                                            |
| Web API: Internal server error                           | Please contact Oracle Support for assistance.                                                                                           |