

**Oracle® Hospitality Cruise Shipboard
Property Management System**

Installation Guide for SPMS, SPMS Automated
WebServices Installer and Database Installer

Release 8.0

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Preface

This document provides instructions on how to install Oracle Hospitality Cruise Shipboard Property Management System (SPMS).

Audience

This document is intended for installers, programmers, technical support teams, product specialists and others who are responsible for setting up SPMS version 8.0.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL: <https://support.oracle.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
March 2017	<ul style="list-style-type: none">• Initial publication of SPMS Automated WebServices Installer, Installation Guide and Database Installer
April 2017	<ul style="list-style-type: none">• Minor change on file path on SPMS Installation• Revised template layout on SPMS Installation
July 2017	<ul style="list-style-type: none">• Revised upgrade steps on SPMS Installation
January 2018	<ul style="list-style-type: none">• Added Self-Sign Certificate requirement to SPMS Installation• Added Patch Upgrade Setup to SPMS Installation
May 2018	<ul style="list-style-type: none">• Revised Database Connection Setting screen in SPMS Installation• Prerequisite version changed and added OHCSPMSUtils.dll and OHCWebSockets.dll to SPMS Installation

Date	Description of Change
June 2018	<ul style="list-style-type: none"> Removed Oracle 11g from SPMS Installation and Automated WebServices Installer Prerequisite section
August 2018	<ul style="list-style-type: none"> Added additional troubleshooting steps to SPMS Installation
October 2018	<ul style="list-style-type: none"> Updated the Prerequisite section in SPMS Installation Updated the Software Delivery Cloud link in SPMS Installation Added additional troubleshooting steps to SPMS Installation
January 2019	<ul style="list-style-type: none"> Additional note added to Before You Begin section in SPMS Installation Added Oracle Payment Interface (OPI) Installation option to Automated WebServices Installer
March 2019	<ul style="list-style-type: none"> Removed “Transferring a database from another ship that is upgraded to version 8.0” from SPMS Installation
June 2019	<ul style="list-style-type: none"> Removed “Disable SQL Debug Log” from Performing a Secure SPMS Installation
September 2019	<ul style="list-style-type: none"> Modified the settings reference file path in web.config file
November 2019	<ul style="list-style-type: none"> Removal of Interop.XceedEncryptionLib.dll from Troubleshooting
December 2019	<ul style="list-style-type: none"> Updated data field SYS_REP_TRANSFERDIR to SYS_REPORTDIR name in Troubleshooting section
January 2020	<ul style="list-style-type: none"> Updated Regional and Language Settings
April 2020	<ul style="list-style-type: none"> OPI Tokenization Requirement Removed support for Microsoft Windows 7 and 8 from Database Installer section Removed script from SPMS Installation, Troubleshooting section
June 2020	<ul style="list-style-type: none"> Revamped and enhanced the SPMS Installation Guide
July 2020	<ul style="list-style-type: none"> Added new feature to support multiple version of SPMS Database on the same client PC

Date	Description of Change
August 2020	<ul style="list-style-type: none"> • Added Seed DB definition • Added prerequisite for SPMS Secure Server & Web Server setup • Removed the option to install with InstallSPMSApplicationsToCoexistWithSPMS7.bat. It is now a default.
January 2021	<ul style="list-style-type: none"> • Added Database Configuration Section and Setting up SPMS QCI Offline Operation. • Updated Appendices section.
April 2021	<ul style="list-style-type: none"> • Added OPI Webservices Database Access Settings • Added OPI Webservices Token Expiry Settings
October 2021	<ul style="list-style-type: none"> • Added deployment of OHCUpdater.INI file to section 6.2 - Uploading SPMS Applications or Libraries to Database • Removed OHCSPMSMobile.dll
February 2022	<ul style="list-style-type: none"> • Enhanced invalid SPMS Encryption key warning message

1 Getting Started

The following sections provide the information you should know before you install Oracle Hospitality Cruise Shipboard Property Management System (SPMS).

What You Should Know

General Knowledge

- Have an operational understanding of Personal Computers (PC).
- Understand the basic network concepts.

Operating System

- Have working knowledge of Microsoft Windows OS and its user interface (UI).
- Have working experience with Microsoft Windows Administrative privilege.
- Have working experience with Microsoft Windows Server OS, especially Windows Server 2012 R2 or Windows Server 2016.

Database Management System

- Have working experience with the Relational Database Management System (RDBMS), especially Oracle Database 12c or newer version of Oracle Database.

SPMS Installation

- You can only install SPMS to local drives. Installation of SPMS on network mapped drives is not supported.
- Before any SPMS database upgrade or SPMS software installation, you must be logged on with Windows Administrative privilege.

SPMS Integration

- Third-party software provider who integrates to SPMS WebServices must change their application to support the new login method documented in the OHCWebServices Technical Specifications. The Technical Specifications document can be downloaded from [Oracle Help Center for Oracle Hospitality Cruise Shipboard Property Management System Release 8.0](#).

What You Should Follow

Windows Operating System

- The Windows regional settings should be configured to US/UK and the language settings should be set to English. It is recommended to always keep the Windows regional settings to US/UK and the language settings to English on each PC using SPMS, for the expected SPMS functionality.

-
- Turn on Data Execution Prevention (DEP) if required. Refer to the Microsoft product documentation library at <https://technet.microsoft.com/en-us/> for instructions.
 - Turn off Autoplay if required. Refer to the Microsoft product documentation library at <https://technet.microsoft.com/en-us/> for instructions.
 - Turn off Remote Assistance if required. Refer to the Microsoft product documentation library at <https://technet.microsoft.com/en-us/> for instructions.

SPMS Installation

- If a problem occurs during the SPMS application installation, you **cannot** repair or modify SPMS installation features. You must reinstall SPMS.
- If you are performing an SPMS database upgrade to version 8.0, you must perform a database verification and backup task for the database before the upgrade process.
- Before you install SPMS software or upgrade the SPMS database, ensure that all other programs and applications are closed on the target machine. The system may detect an active program or process, and you may be notified to terminate them before you can proceed.
- During the SPMS database upgrade or SPMS installation, follow carefully the prompts and do as instructed. If the process is force canceled or terminated through any method not as shown on the prompts, the results can be unpredictable.

Database Configuration

- The Database character set can be set to Western or Unicode. However, you must ensure that SPMS and FMS Database character set are configured the same to avoid data discrepancy. For example, if the character set is set as UTF8 in SPMS Database, then it has to be the same in FMS Database.
- Similarly, the Database table column type must be configured the same in both the SPMS and FMS. For example, if the type NVARCHAR is used, then both the SPMS Database and FMS Database must be the same.
- Additionally, the data type and length of Database table columns in which data is to be transferred from/to must be the same between FMS and SPMS.

Securing SPMS

- It is very important to fully understand and follow closely the guidelines provided by the SPMS Security Guide. It is highly recommended that you read and understand the *Security Overview in Section 1 of SPMS Security Guide*. The Security Guide document can be downloaded from [Oracle Help Center for Oracle Hospitality Cruise Shipboard Property Management System Release 8.0](#).
- Security patches are frequent occurrences and quarterly patch releases are the norm these days. Therefore, it is the user's responsibility to ensure that the systems used by SPMS are still supported and updated to the latest patch. Always apply security patches in a timely manner to prevent and reduce the risk of security vulnerabilities. Do check regularly for:
 - a. Critical Security Patch of the Operating System.
 - b. Critical Security Patch of the Database Management System.

-
- The use of digital certificates is common in today's service-oriented architecture. Digital certificate is especially important in the identification of a system, like how you would use a government issued identification document to identify an individual. From the SPMS context, the digital certificate is required to identify the SPMS WebServices. This is to prevent an unscrupulous party from impersonating SPMS WebServices and stealing sensitive information from SPMS. It is recommended that the Digital Certificate used to identify our SPMS WebServices is acquired from a recognized and valid Certification Authority.
 - You must install the Secure Sockets Layer (SSL) digital certificate as this is required either on a load balancer or in IIS Web Server for HTTPS communication to web services. Secure Sockets Layer (SSL) usage on SPMS Security Server is mandatory. Self-signed certificate should be used only if the customer fails to provide a certificate from a Certificate Authority (CA). Refer to the Microsoft product documentation library at <https://support.microsoft.com/en-sg/help/324069/how-to-set-up-an-https-service-in-iis> for information about the installation of secure certificates.
 - The responsibility of acquiring a valid Digital Certificate lies solely with the user. The process will not differ much between different Certification Authorities.
 - a. You will need to identify the trusted Certification Authority (CA) that you intend to buy the Digital Certificate from.
 - b. Through the CA online purchase portal, you can easily provide the information such as the URL, the purpose of the certificate, and other necessary information to acquire a Digital Certificate.
 - c. Alternatively, you can generate a Certificate Signing Request and send it to the CA to be signed.
 - d. Regardless of the differences, the purpose remains the same, which is to acquire a Secure Sockets Layer (SSL) compliant digital certificate for the SPMS WebServices from a recognized and valid Certification Authority.
 - The act of generating a self-signed Digital Certificate to identify the SPMS WebServices is not recommended for the production environment. It increases the risk of unscrupulous party impersonating the SPMS WebServices to steal sensitive information. Having said so, it is still possible for SPMS WebServices to use a self-signed certificate albeit the increased security risk which you would have to agree to bear the consequences.
 - Adhere to the following rules or the system enforced password policy, or whichever is deemed safer when dealing with passwords, regardless of the Database user password, OS user password, or SPMS user password. The Password must be:
 - a. At least ten (10) characters long.
 - b. A combination of uppercase and lowercase letters, numeric characters, and special characters.
 - c. Must NOT be the same as the last three passwords used.
 - As for SPMS product passwords, they are configured in the SPMS User Security module. Administrators should adopt a strong password policy after the initial installation of the application and review the policy periodically. Ensure the password adheres to the following strength requirements:
 - a. The password must be at least ten (10) characters long.

- b. The password must contain letters, special characters and numbers.
 - c. Must not choose a password equal to the last three (3) passwords used.
 - d. Password change every 90 days.
 - e. Password Lockout Minutes is 30 minutes.
 - f. Max Logins is 6.
 - g. Idle Minutes is 15.
 - h. Idle Minutes on Launch Panel is 15.
- A default administrative user and password is installed with the SPMS program. You are required to change the default administrative user password in the SPMS, using the above guidelines when logging in for the first time.
 - When setting up users for the SPMS application, ensure that they are assigned with a minimum privilege level required to perform their job functions.

Where to Download SPMS

SPMS Installation File

The SPMS Installation files when run will install all libraries, dependencies, and bare minimum SPMS applications. By installing this, it does not give you access to all SPMS applications. You need to download and deploy the SPMS package. Follow the instructions below to download the SPMS Client Installer from [Oracle Software Delivery Cloud](#) Webpage.

1. Login to the Oracle Software Delivery Cloud.

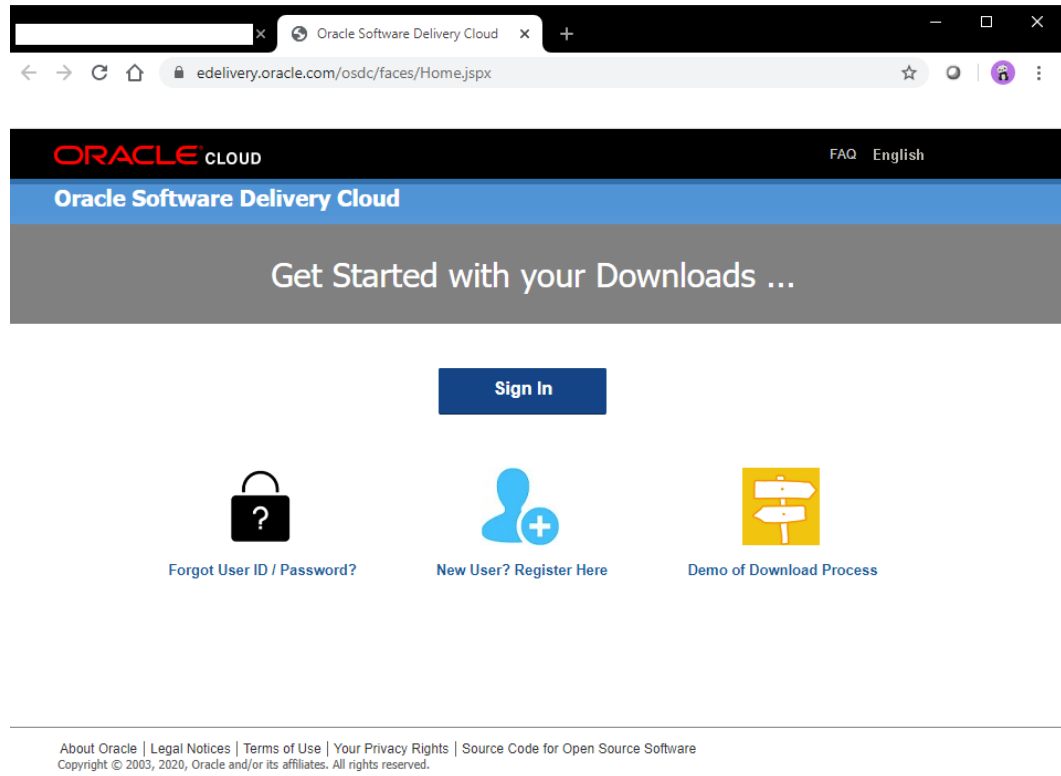


Figure 1-1 - Oracle Software Delivery Cloud Web Page

2. Search for Oracle Hospitality Cruise Shipboard Property Management System and download the SPMS Client Installer.

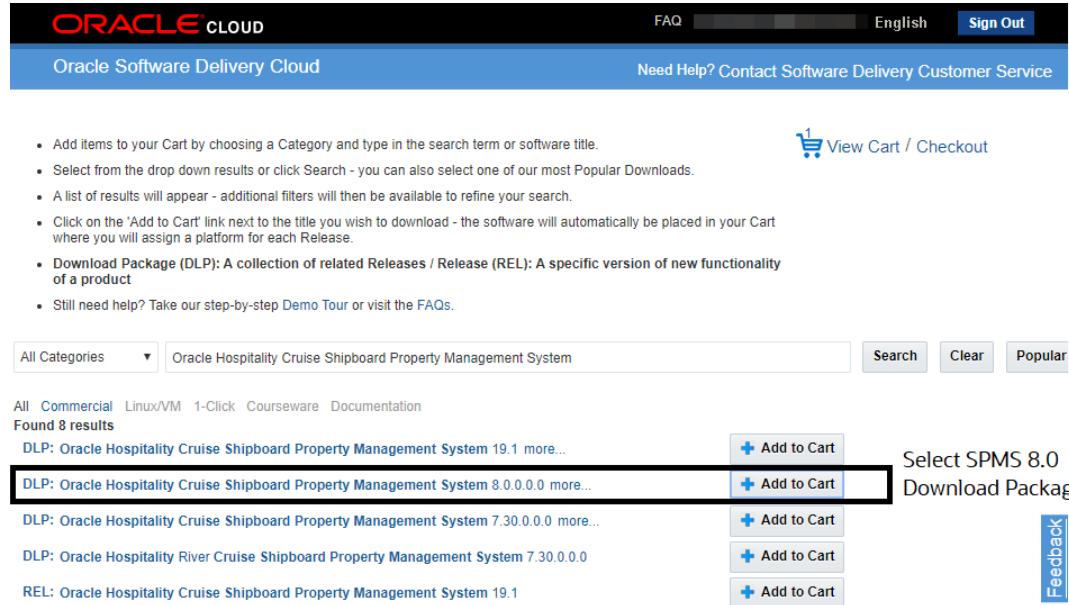


Figure 1-2 - Download Package Selection

3. The screenshot below shows the downloaded SPMS Client Installer file.

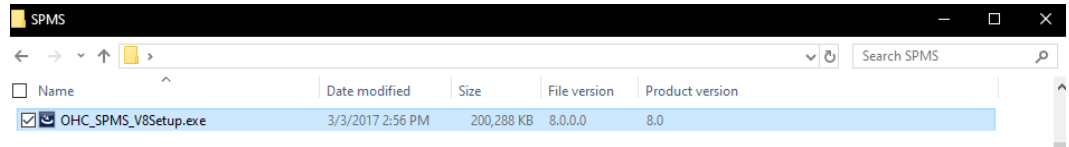


Figure 1-3 - Downloaded Package

SPMS Package

The SPMS Package file contains the executables, libraries, web services, and scripts deployed by SPMS. You can download the SPMS Package from [My Oracle Support](#) (MOS) webpage using the instructions below.

1. Login to the My Oracle Support.
2. Once you have successfully login, you will be directed to the page below.

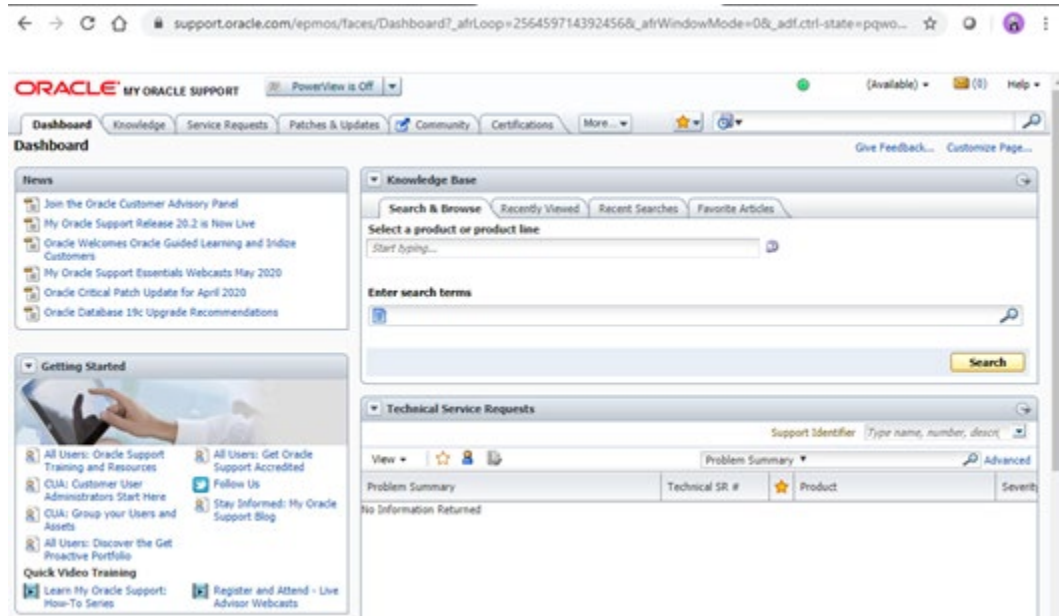


Figure 1-4 - MOS Dashboard Page

3. Go to the **Patches and Updates** tab. Search for **Oracle Hospitality Cruise Shipboard Property Management System** and select **SPMS 8.0**.

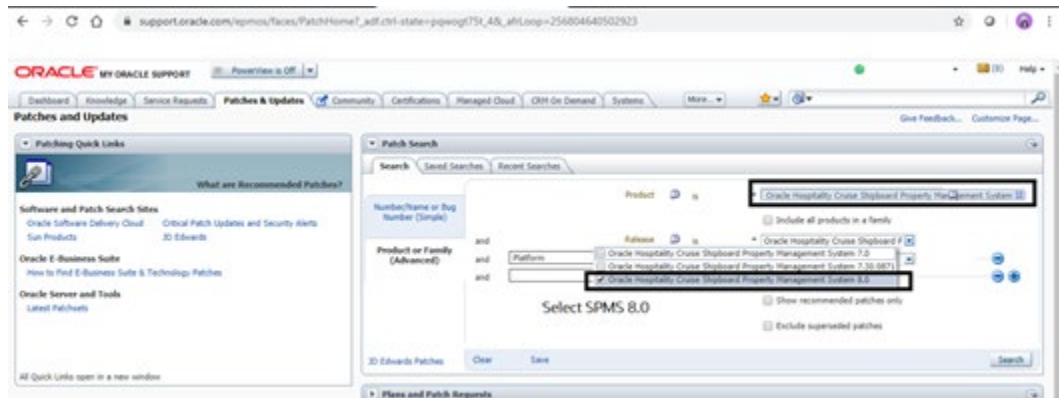


Figure 1-5 - MOS Patch & Updates Tab

4. Choose the package version and download.

Oracle My Oracle Support - Patches & Updates

Product: Oracle Hospitality Cruise Shipboard Property Management System; Release: Oracle Hospitality Cruise Shipboard Property Management System 8.0

Patch Name	Description	Release	Platform (Language)	Recommended	Classification	Product	Updated	Size	Download Access
31239037	OHC Shipboard Property Management - 3PC Security version 7.0.45 Patch installed (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	20 days ago	2.5 MB	Software
31623893	OHC Shipboard Property Management version 8.0.13 Upload Patch (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	1+ month ago	205.4 MB	Software
31683956	OHC Shipboard Property Management version 8.0.12.2 Upload Patch (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	1+ month ago	205.5 MB	Software
30967469	OHC Shipboard Property Management version 8.0.12.2 Upload Patch (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	2+ months ago	11.5 MB	Software
30962214	OHC Shipboard Property Management version 8.0.12.1 Upload Patch (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	2+ months ago	526.3 KB	Software
30892317	OHC Shipboard Property Management version 8.0.12 Upload Patches (Patched)	8.0.0	Generic Platform (American English)		General	Oracle Hospitality Cruise Shipboard Property Management System	4+ months ago	205.7 MB	Software

Figure 1-6 - SPMS Patch List

5. The screenshot below shows the downloaded SPMS Package folder.

SPMS.8.0.12

Name	Date modified	Size	File version	Product version
DLLs	3/12/2020 4:33 PM			
EXE	3/12/2020 4:34 PM			
Net Setup	12/16/2019 2:13 PM			
Scripts	12/16/2019 2:19 PM			
Setup	12/16/2019 2:13 PM			
checksum.jpg	12/23/2019 3:19 PM	293 KB		
ReadMe_OHCShipboardPMS_8_0_12.htm	12/23/2019 3:34 PM	1,594 KB		

Figure 1-7 - Downloaded SPMS Package

2 Overview of SPMS Components

To set up a full SPMS 8.0 environment, the following components are required:

1. SPMS Database Server,
2. SPMS Secure Server,
3. SPMS Web Server, and
4. SPMS Application Clients.

It is important that you know and understand that each of the component listed above is not restricted to one machine per component. You can choose to install the components all under the same machine, in each an individual machine, or whichever combination you deem appropriate, depending on your operation requirements and resource availability.

SPMS Database Server

The SPMS Database Server is the machine that hosts the database for the SPMS applications. It is the core or heart of the SPMS environment. It must be installed with database management software and configured such that it can handle database requests from multiple clients.

Minimum System Specification

- Operating System:
 - Microsoft Windows Server 2012 R2
- Memory:
 - 8 GB of RAM, and
 - 160 GB of disk space.
- Oracle Database Version:
 - Oracle Database Server 12c
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

SPMS Secure Server

The SPMS Secure Server is the machine that hosts the web service that manages the user credentials. It is akin to a password manager software. In SPMS 7.30, this is handled by one of the two database schemas. However, in SPMS 8.0, the database schema has been

replaced by a web service that is hosted on a web host that handles HTTPS requests from multiple clients.

 **NOTE:**

SPMS Secure Server installation files are bundled together under the SPMS Transactions Service when installing the SPMS Web Server. Therefore, installing the SPMS Transactions Service will also deploy a copy of the SPMS Secure Service.

Minimum System Specification

- Operating System:
 - Microsoft Windows Server 2012 R2
- Memory:
 - 8 GB of RAM, and
 - 160 GB of disk space.
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft Internet Information Services (IIS):
 - IIS v6 with Management Compatibility Services
- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

SPMS Web Server

The SPMS Web Server is a web host to the SPMS WebServices for SPMS applications and integrations. It provides SOAP based web services to access the SPMS functionality. SPMS WebServices are hosted on Microsoft IIS. Oracle recommends that the services are secured via SSL (HTTPS). The SPMS Web Server can host any of the three SPMS WebServices, or combination of the SPMS WebServices, or all of them altogether. The SPMS WebServices distributed are:

1. SPMS Transactions Service,
2. SPMS Web Services, and
3. SPMS OPI Web Services.

 **NOTE:**

You can opt to install all the SPMS WebServices in the same machine or choose to install them separately, depending on the resource availability and operational requirements.

Minimum System Specification

- Operating System:
 - Microsoft Windows Server 2012 R2
- Memory:
 - 8 GB of RAM, and
 - 160 GB of disk space.
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft Internet Information Services (IIS):
 - IIS v6 with Management Compatibility Services
- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

SPMS Application Clients

The SPMS Application Clients are service consumers that will connect to the SPMS Database Server or SPMS Web Server to perform their intended operation.

Minimum System Specification

- Operating System:
 - Microsoft Windows 10 Standard Edition
- Memory:
 - 8 GB of RAM, and
 - 160 GB of disk space.
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

Recommendation of the Installed SPMS Environment

In this section, we suggest some of the possible installed SPMS environments. You are in no way limited by the examples of the installed SPMS environment shown below.

Minimal Configuration

The below configuration shown in Figure 2-1 - Minimum SPMS Configuration, the SPMS Database Server and SPMS Web Server are installed on the same machine. The minimum system specification for this type of configuration will then be the combination of both the SPMS Database Server and SPMS Web Server.

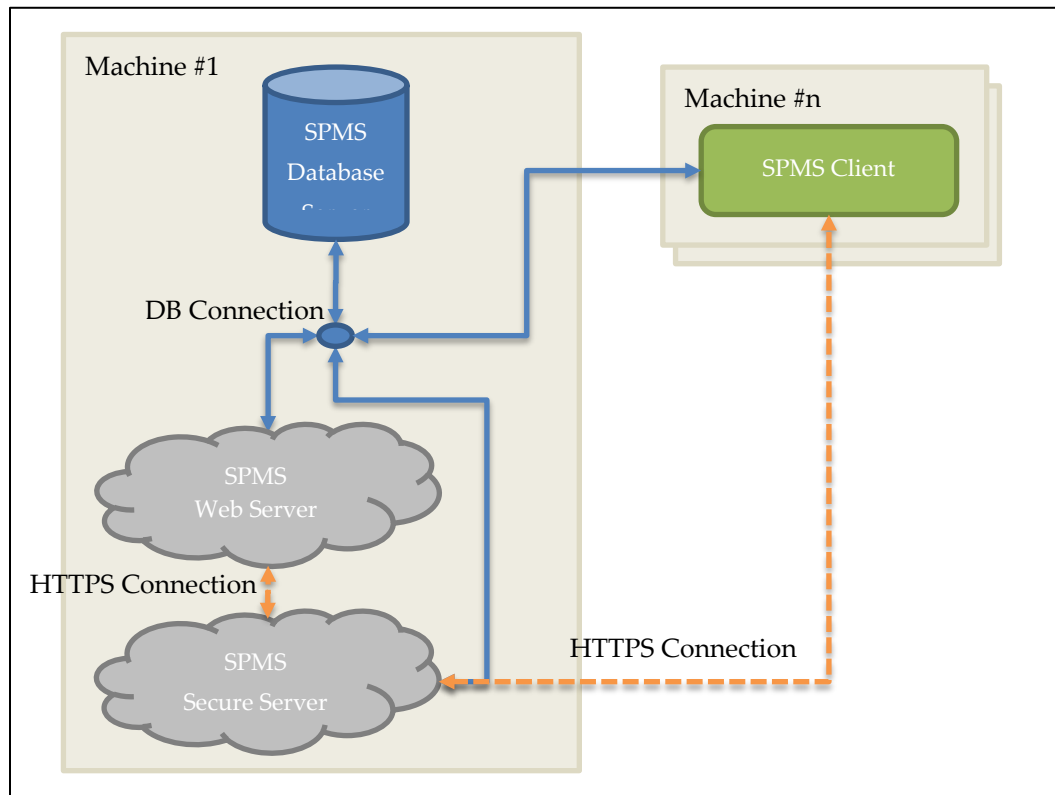


Figure 2-1 - Minimum SPMS Configuration

Minimum System Specification for Combined Web Server & Database Server

- Operating System:
 - Microsoft Windows Server 2012 R2
- Memory:
 - 16 GB of RAM, and
 - 320 GB of disk space.
- Oracle Database Version:
 - Oracle Database Server 12c
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft Internet Information Services (IIS):
 - IIS v6 with Management Compatibility Services

- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

Typical Configuration

In the below configuration illustrated in Figure 2-2 - Typical SPMS Configuration, the SPMS Database Server and SPMS Web Server are installed separately on different machines. The benefit for this configuration is that there is a clear delineation whereby all the database traffic will be directed to the machine hosting the SPMS Database, and all the web requests will then go to the SPMS Web Server. The minimum system specification for this configuration shall, therefore, remain the same as recommended in [SPMS Database Server](#), [SPMS Secure Server](#), [SPMS Web Server](#), and [SPMS Application Clients](#).

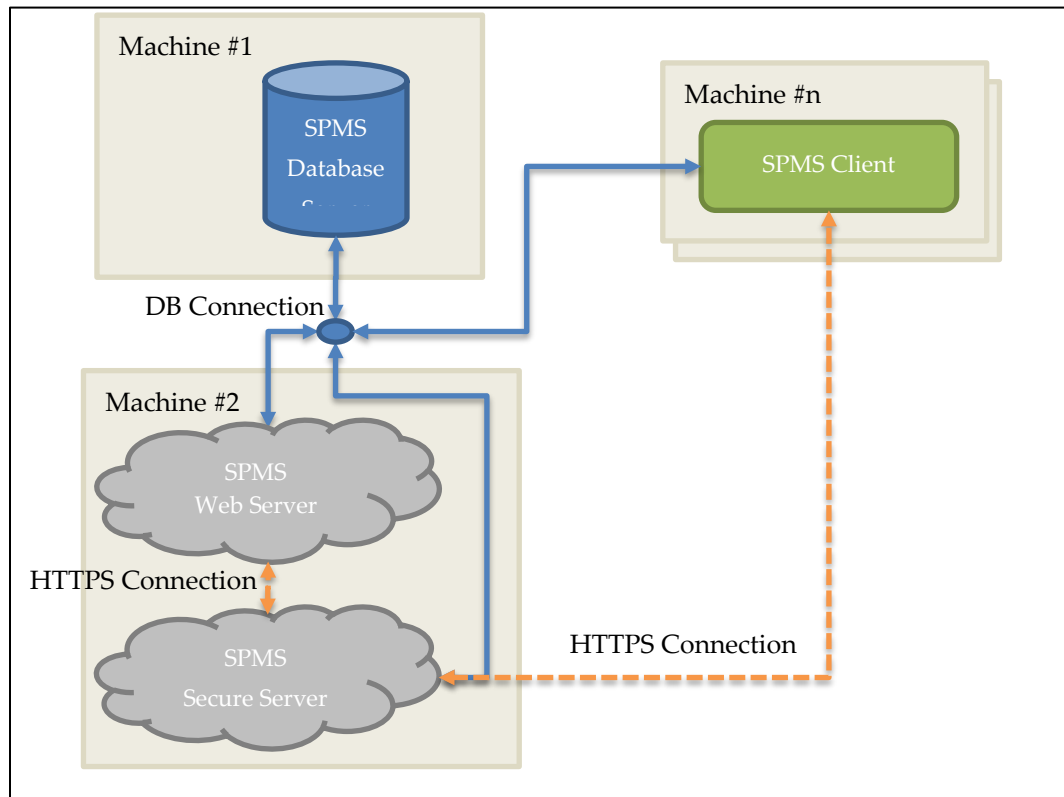


Figure 2-2 - Typical SPMS Configuration

Alternative Configuration

In the configuration shown in Figure 2-3 - Alternative SPMS Configuration, the SPMS Database Server and SPMS Web Server are installed separately on different machines. Here, the SPMS Secure Server is installed on the same machine as the SPMS Database. By setting up the SPMS Secure Server and SPMS Database on the same machine, we mirror the SPMS 7.0 / 7.30 Database Server. In the older SPMS version, the SPMS Database Server handles all database requests and also manages the secure server responsibilities through the two SPMS Database Schemas.

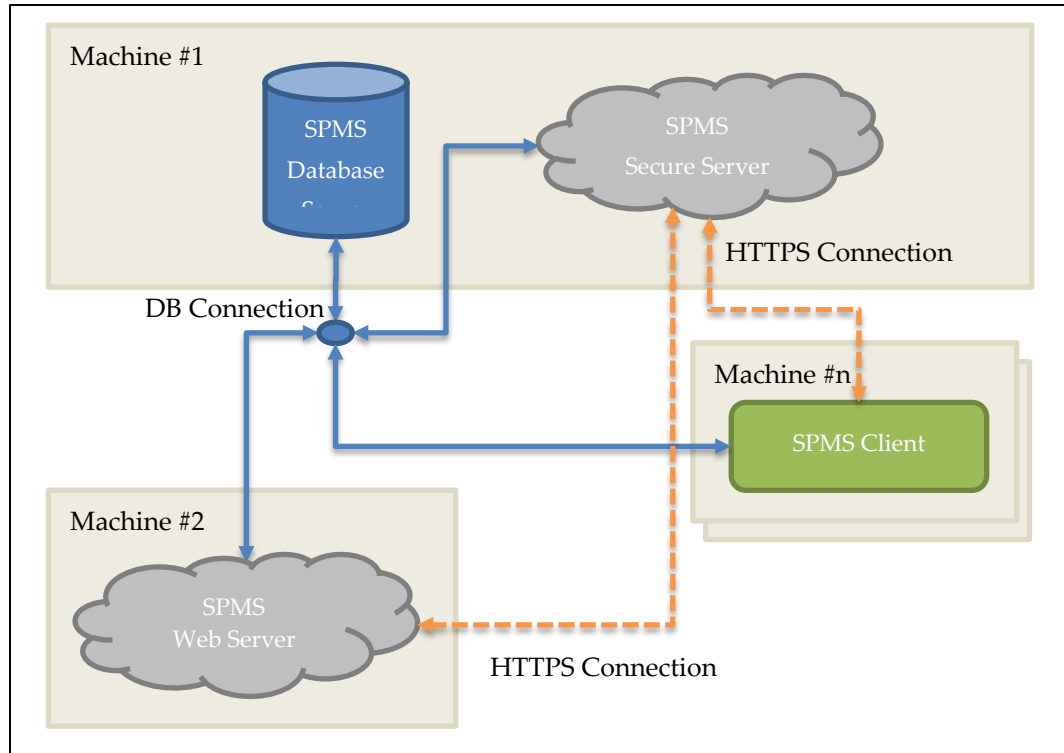


Figure 2-3 - Alternative SPMS Configuration

Minimum System Specification for Combined Secure Server & Database Server

- Operating System:
 - Microsoft Windows Server 2012 R2
- Memory:
 - 8 GB of RAM, and
 - 160 GB of disk space.
- Oracle Database Version:
 - Oracle Database Server 12c
- Oracle Database Client Version:
 - Oracle Database 32-bit Full Client for 12c including the ODAC
- Web Browser:
 - Internet Explorer 8.0
- Microsoft Internet Information Services (IIS):
 - IIS v6 with Management Compatibility Services
- Microsoft .NET Framework runtime:
 - Framework version 2 enabled,
 - Framework version 3.5 enabled, and
 - Framework version 4.5.1 enabled.

Installing SPMS Components

As shown in the [Recommendation of the Installed SPMS Environment](#), SPMS installation consists of setting up all the components listed below.

1. SPMS Database Server,
2. SPMS Secure Server,
3. SPMS Web Server, and
4. SPMS Application Clients.

The SPMS installation process steps are as summarized below.

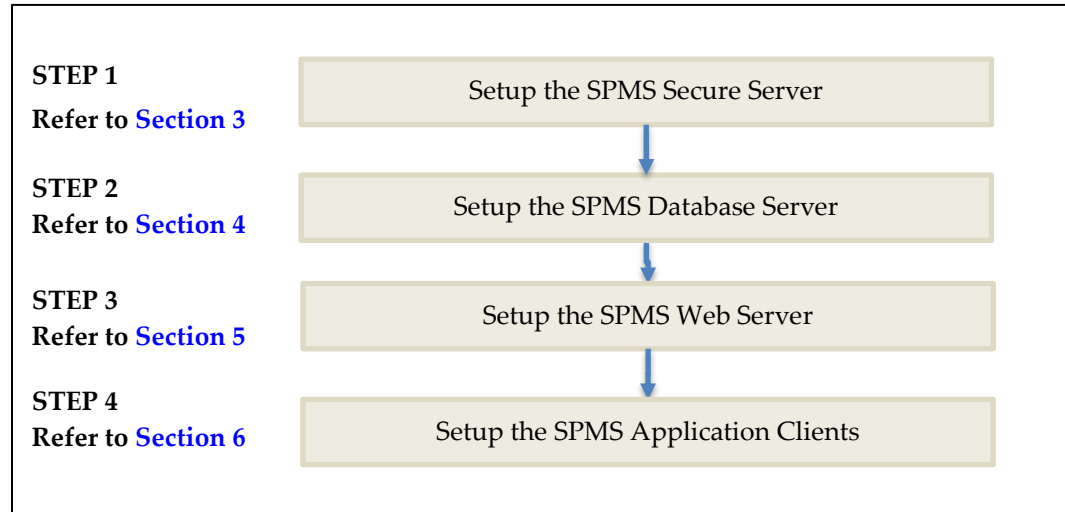


Figure 2-4 - SPMS 8.0 Summarized Installation Process Flow.

3 Setting Up SPMS Secure Server

The SPMS Secure Server is a Microsoft IIS host machine that hosts the Microsoft SOAP-based SPMS WebService, developed to manage login credentials and encryption keys. It is analogous to a password management application.

In SPMS 7.30, this responsibility is handled by one of its two SPMS Database schemas (FidelioBK). However, in SPMS 8.0, FidelioBK Database schema is now replaced by a web service (SPMS Secure Service), thus the need to set up the SPMS Secure Server.

To set up the SPMS Secure Server, you need to install the SPMS Secure Service which is one of the SPMS WebServices developed using the .NET framework and distributed as part of the SPMS Package.

Prerequisites

1. Microsoft IIS is installed on the target machine.
2. Microsoft .NET Framework 2.0, 3.5 and 4.5.1 features are enabled on the target machine.
3. Oracle 12c Database client with ODAC is installed on the target machine. Refer to [Oracle Database Client and ODAC Installation](#).
4. SPMS Package is downloaded and available in the target machine. Refer to [SPMS Package](#) for download instructions.

Reminder

Before you proceed, it is important to know where you intend to set up the SPMS Secure Server. Refer to [Recommendation of the Installed SPMS Environment](#) for some examples of SPMS Environment configurations. You can choose to install SPMS Secure Server in the same machine as in the SPMS Database Server or in a separate machine.

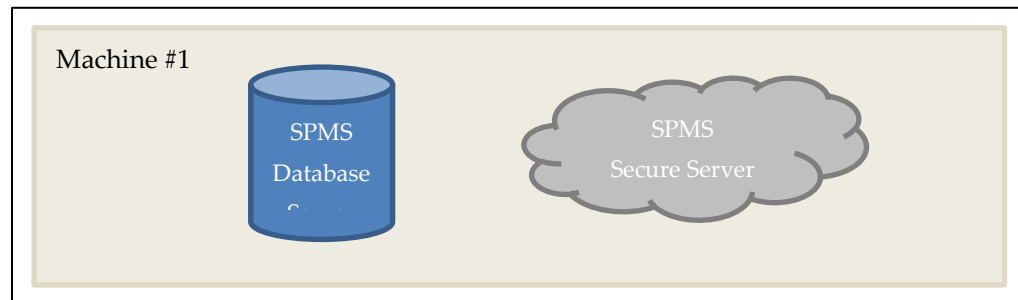


Figure 3-1 - SPMS DB Server and SPMS Secure Server in the Same Machine

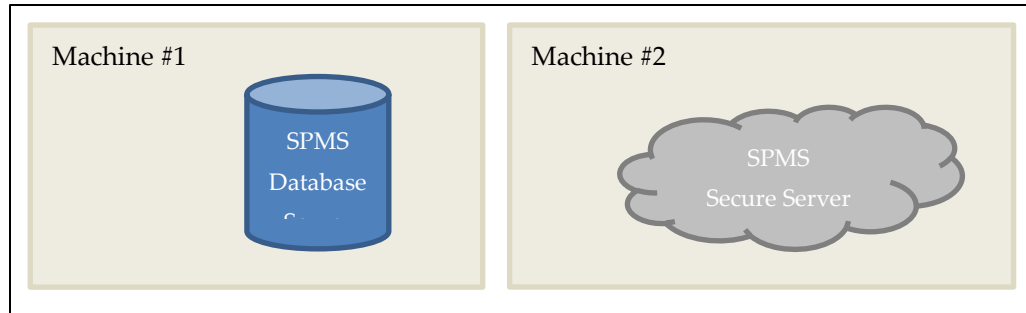


Figure 3-2 - SPMS DB Server and SPMS Secure Server In Different Machine

- The SPMS Secure Server must be reachable by all SPMS Application Clients and SPMS Web Server as it manages the Database user credential, which will require an established SPMS-Database connection.
- The SPMS Secure Server must be able to connect to the SPMS Database as it will need to verify the Database connection before it can store the Database user credentials.

Installation Steps

To setup SPMS Secure Server, follow the steps as shown below.

1. Refer to [3.1 Steps to Install SPMS Secure Service](#).
2. Refer to [3.2 Steps to Verify Hosting of SPMS Secure Service](#).
3. Refer to [3.3 Steps to Set SPMS Secure Service Database Connection](#).

3.1 Installing SPMS Secure Service

The SPMS Secure Server hosts the SPMS Secure Service. As SPMS Secure Service is distributed as part of the SPMS WebServices of the SPMS Package, the steps to install SPMS Secure Service is similar to the SPMS WebServices installation. See [Steps to Install SPMS WebServices](#) for the step by step installation instructions.

NOTE:

When installing SPMS Secure Service using the **install.bat** file provided, please select option “1 – Install OHCTransactionsService” to install the SPMS Secure Service required by SPMS Secure Server.

3.2 Verifying Hosting of SPMS Secure Service

After the successful installation of the SPMS Secure Service, verify if the SPMS Secure Service is hosted correctly. If done right, you can reach the SPMS Secure Service over the web browser using the HTTPS communication protocol.

1. From the same SPMS Secure Server machine, launch a web browser.
2. Type and browse the URL shown below.
<https://localhost/OHCTransactionsService/OHCSecurity.asmx>
3. If the SPMS Secure Service is hosted correctly, you will see the web page as shown below.



Figure 3-3 - SPMS Secure Service Web Page Hosted On The SPMS Secure Server

NOTE:

It is important to know that successful hosting of the SPMS Secure Service does not guarantee a successful SPMS Database connection, which is required for the SPMS operation. Therefore, it is important to configure the SPMS Secure Server connection to the SPMS Database.

3.3 Setting Up SPMS Secure Service Database Connection

Once you have verified that the SPMS Secure Service is hosted correctly and reachable through the web browser, you can proceed to configure the SPMS Secure Service so that it knows which Database TNS it should connect to. Like most web services, this configuration resides in the usual `web.config` file.

1. At the installed Oracle Client home folder, ensure there is a correct Database TNS entry in the Oracle `TNSName.ora` file. You will need the Database TNS Name entry created in the `TNSName.ora` file so that SPMS can locate the correct Database when it references the Database TNS.
2. The commonly installed Oracle Client folder for SPMS is `C:/Oracle/product`. You may choose to install it in a different folder.

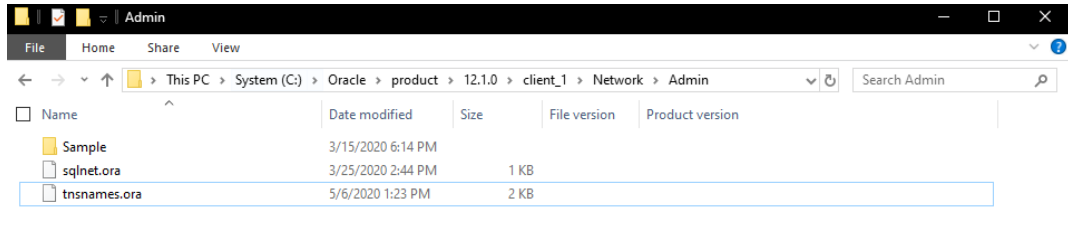


Figure 3-4 - Location of Tnsname.Ora File in Oracle Client Home Folder

3. You will need to create a Database TNS entry in the `TNSName.ora` file so that SPMS Secure Service can locate the Database TNS and subsequently, able to establish a connection to the SPMS Database.

Table 3-1 - User Defined Values Used In the Tnsname.Ora File

TNSName Value	Description
<DB_TNS_NAME>	Oracle Database TNS name. By design, SPMS applications or web services refer to Database using the TNS name.

TNSName Value	Description
<DB_ADDRESS>	Address of the Oracle Database. It can be an IP address (e.g. 127.0.0.1) or the machine name.
<DB_PORT>	Listener port of the Oracle Database. The port is used by the Database Server to listen for connection.
<DB_NAME>	Oracle Database Service name. This is the name used by the Oracle Database Server to identify the Oracle Database instance.

For example:

```

<DB_TNS_NAME> = (
  DESCRIPTION = (
    ADDRESS_LIST = (
      ADDRESS = (PROTOCOL = TCP
        (HOST = <DB_ADDRESS>)
        (PORT = <DB_PORT>)
      )
    )
  )
  (CONNECT_DATA = (SERVICE_NAME = <DB_NAME>)
)

```

- You will need to set up the SPMS Secure Service Database connection. This step is required so that the SPMS Secure Service knows which Database TNS it connects to. You can do that by editing the `web.config` file in `C:\inetpub\wwwroot\OHCTransactionsService` folder.

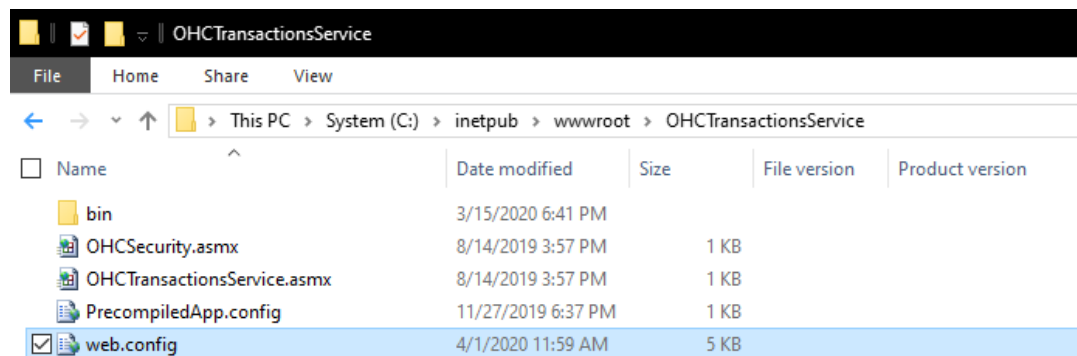


Figure 3.5: The SPMS Secure Service Installed Folder

- Under the `<appSettings>` section, set the SPMS Database TNS name.

For example:

```

<appSettings>
  <add key="Server" value="<DB_TNS_NAME>" />
</appSettings>

```

- Restart the SPMS Secure Service. You can restart the SPMS Secure Service from the IIS Manager.

 **NOTE:**

After setting up the Database TNS connection for SPMS Secure Service, the SPMS Secure Service is now able to locate the SPMS Database using the Database TNS. Do note that connection to the SPMS Database is not possible yet. It need the Database Password to be able to connect to it. To connect to the SPMS Database, the SPMS Secure Service requires the SPMS Database password, which will be stored in the local DPAPI protected OHCSecurity.par file on the SPMS Secure Server

To create the local DPAPI protected OHCSecurity.par file on the SPMS Secure Server, you are required to perform either the steps to upgrade or migrate the SPMS Database using the OHC Tools as described in [4.4.A.2 Steps to Upgrade Database from SPMS 7.30 Database](#) or [4.4.B.1 Steps to Setup Database from SPMS 8.0 Seed Database](#).

Troubleshooting

The troubleshooting guide for SPMS Secure Server is the same as for SPMS WebServices. See [Troubleshooting](#)

4 Setting Up SPMS Database Server

After the setup of the SPMS Secure Server, you can prepare the SPMS Database Server for the SPMS Secure Server to connect to the SPMS Database. Currently, there are two options to prepare the SPMS Database Server.

1. Upgrade from an existing SPMS 7.0 / 7.30 Database to SPMS 8.0 Database, or
2. Set up from a seed SPMS 8.0 Database.

Since SPMS Database Server can be prepared from an existing SPMS 7.30 Database or a seed SPMS 8.0 Database, you need to understand that:

- By upgrading from an existing SPMS 7.30 Database, there could be existing data in the Database. Therefore, you need to validate the Database to ensure that all data is valid and error free. Also, some of the data could be encrypted, and as such it would be mandatory for you to know the current SPMS Encryption Key used by the SPMS Database. Subsequently, the Database will need to undergo an upgrade process to convert it from an SPMS 7.30 Database to an SPMS 8.0 Database. This method of SPMS Database set up is akin to a live ship upgrade from SPMS 7.30 to SPMS 8.0.
- By upgrading from a seed SPMS 8.0 Database, it should **NOT** contain any data in the SPMS Database. As there is no data, there will be no current SPMS Encryption Key used by the SPMS Database yet. Subsequently, the Database will need to undergo a migration process to ensure that the SPMS 8.0 Database is now ready for SPMS installation. This method of SPMS Database set up is akin to a new ship installation with SPMS 8.0.

The diagram below summarizes the process of setting up the SPMS Database Server based on the options available to you when preparing the SPMS 8.0 Database.

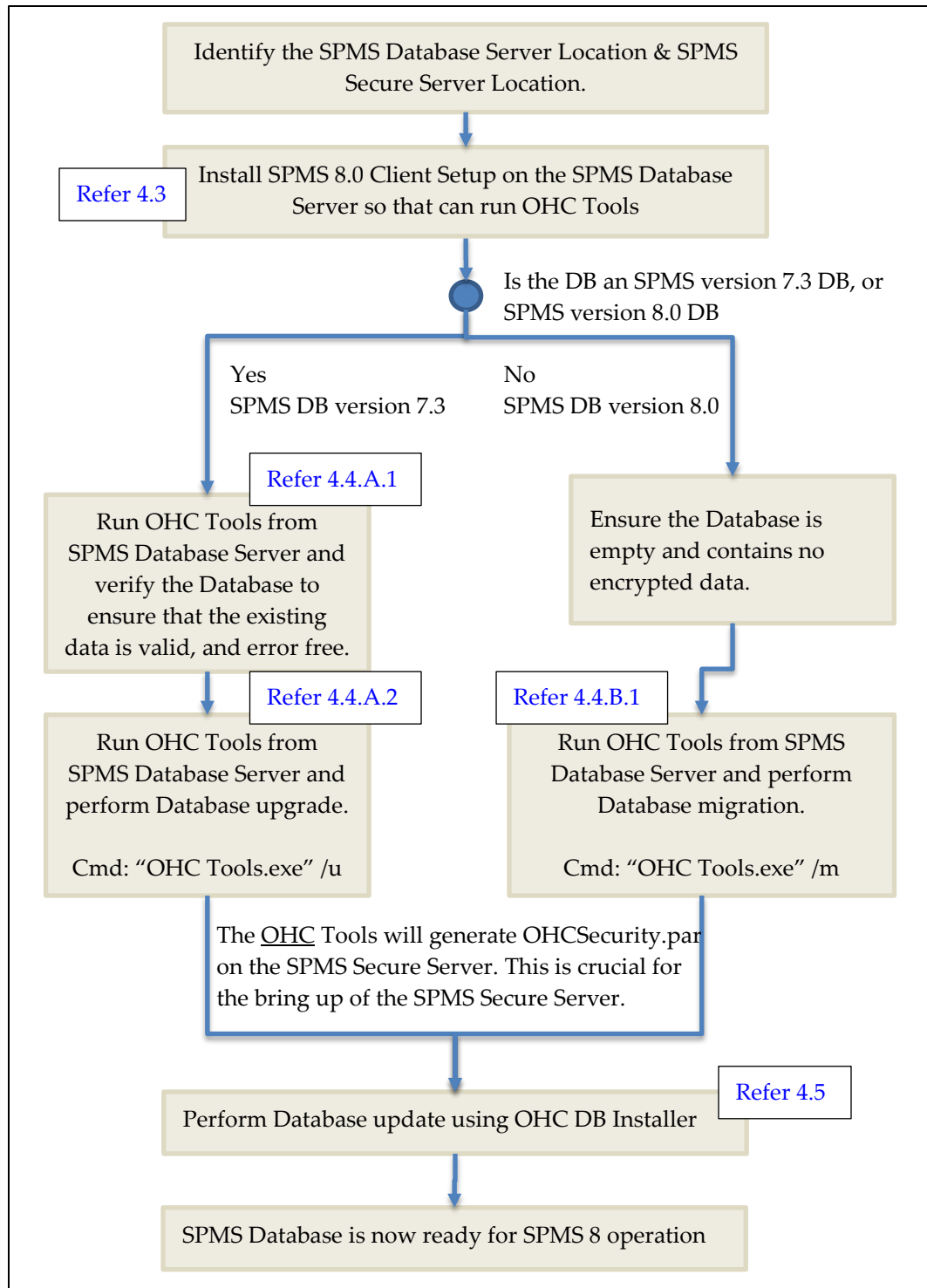


Figure 4-1 - SPMS 8.0 Database Preparation Process Flow

Prerequisites

1. Oracle 12c Database Management System installed on the target machine. It is presumed that:
 - You know where to obtain the Oracle Database Server installer.
 - You know how to install Oracle Database Server.
 - You know how to perform Oracle Database DMP import and export.
2. SPMS 8.0 Installer is downloaded and available in the target machine. Refer to [SPMS Installation File](#) for download instructions.
3. SPMS 8.0 Package is downloaded and available in the target machine. Refer to [SPMS Package](#) for download instructions.
4. Before the SPMS Database preparation, you must ensure that the DB TNS name on the client machine is the same as the DB TNS name configured on the SPMS Web Server.
5. For SPMS Database upgrade:
 - Before the SPMS Database upgrade, you must ensure that the SPMS Database version is at Version 7.30.878 or later.
 - If you are upgrading from SPMS version 7.30.X, update the SPMS Database to version 7.30.878.
 - If you are upgrading from SPMS version 7.0.X, update the SPMS Database to version 7.0.59. Then, update again the SPMS Database to version 7.30.878.
 - Before the SPMS Database upgrade, you must know the current Encryption Key of the database to be upgraded. Contact Customer Support if you do not have this information.

Reminder

- Before you proceed, it is important to know where you intend to set up the SPMS Database Server. Refer to [Recommendation of the Installed SPMS Environment](#) for some examples of SPMS Environment configurations. The SPMS Database Server is the heart of every SPMS environment. Therefore, the first thing you need to do before installing the full SPMS environment is to identify the location of the SPMS Database Server.
- The SPMS Database Server must be reachable by all SPMS Application Clients, SPMS Secure Server, and SPMS Web Server.

Installation Steps

To set up the SPMS Database Server, follow the steps as shown below.

1. Refer to [4.1 Steps to Check SPMS Database Instance](#).
2. Refer to [4.2 Steps to Verify Connection to SPMS Database](#).
3. Refer to [4.3 Steps to Install SPMS 8.0 Application Client in SPMS Database Server](#).
4. If you want to upgrade SPMS Database from version 7.0 / 7.30 to version 8.0, follow the steps below, else skip to (5).
 - a. Refer to [4.4.A.1 Steps to Verify SPMS 7.30 Database](#).

- b. Refer to [4.4.A.2 Steps to Upgrade Database from SPMS 7.30 Database](#).
- 5. If you want to setup SPMS Database version 8.0 from a seed SPMS Database version 8.0, follow the steps below, else skip to step 6.
 - a. Refer to [4.4.B.1 Steps to Setup Database from SPMS 8.0 Seed Database](#).
- 6. Refer to [4.5 Steps to Update Database to Latest SPMS 8.0.X Version](#).

4.1 Checking SPMS Database Instance

The SPMS Database Server is the machine that hosts the SPMS Database Instance. Therefore, the first step to set up the SPMS Database Server is to ensure that there is already an SPMS Database Instance running on the same machine. If not, create a new Database Instance and Database Service for SPMS first. Below are the quick steps to verify that you have an SPMS Database Instance running on the SPMS Database Server machine.

This is to verify that the SPMS Database is hosted. To check, run the Oracle Instance Manager and verify that the SPMS Database Service is running.

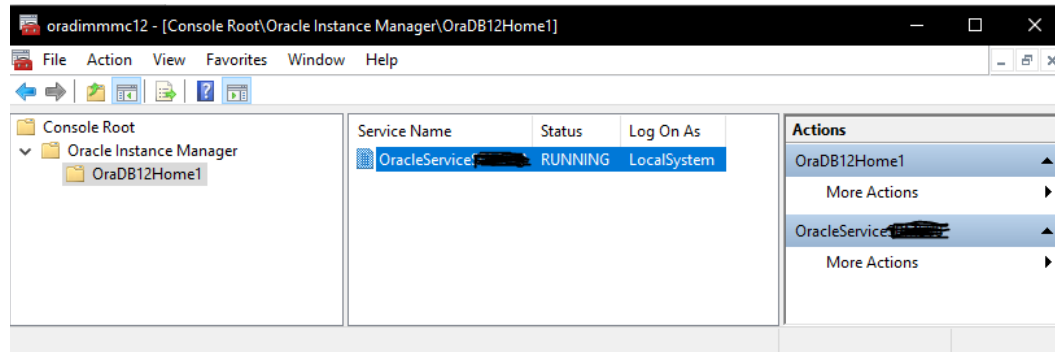


Figure 4-2 - Verifying Oracle Database Instance Hosted

4.2 Verifying Connection to SPMS Database

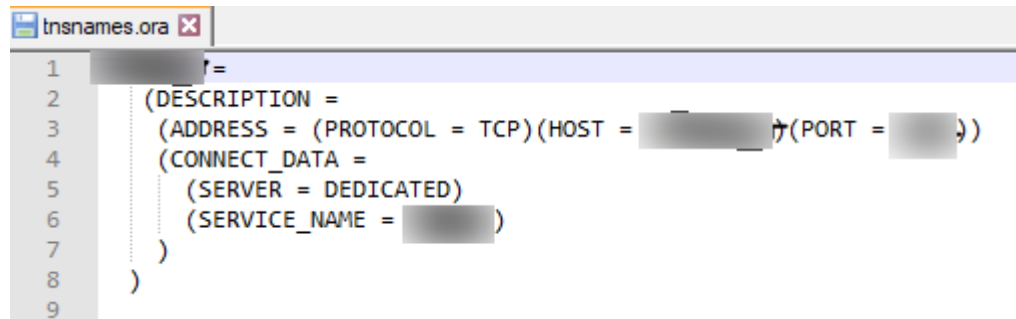
After confirming that the SPMS Database Instance is available and running, you should proceed to verify if you can connect to the SPMS Database using the SQLPlus* tool installed along with the Oracle Database Management System. This is important so that you can iron out all Database related issues.

1. All SPMS Application Clients or SPMS WebServices connect to the Oracle Database Instance using the TNS connection type. Therefore, do ensure from the installed Oracle Client home folder, there is a correct Database TNS entry in the Oracle `TNSName.ora` file. You will need the Database TNS Name entry created in the `TNSName.ora` file so that SPMS can locate the correct Database when it references the Database TNS.
2. The commonly installed Oracle Client folder for SPMS is `C:/Oracle/product`. However, you may choose to install it in a different folder. Now configure the Database TNS in the `TNSName.ora` file. See Table 3-1 - User Defined Values Used In the `Tnsname.Ora` File.

For example:

```
<DB_TNS_NAME> = (  
  DESCRIPTION = (  
    ADDRESS_LIST = (  
      ADDRESS = (PROTOCOL = TCP)  
                (HOST = <DB_ADDRESS>)  
                (PORT = <DB_PORT>)  
    )  
  )  
  (CONNECT_DATA = (SERVICE_NAME = <DB_NAME>))  
)
```

3. The screenshot below shows an example TNS entry in a `TNSNames.ora` file.

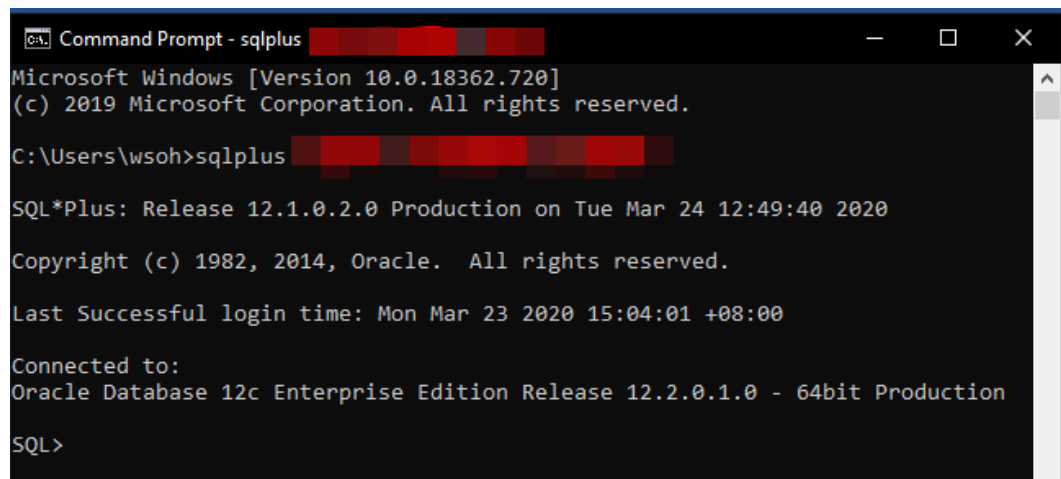


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Figure 4-3 - Example Of TNS Configuration In Tnsname.Ora

4. After setting the TNS entry in the `TNSNames.ora` file, you can now attempt to verify the Database connection using Oracle SQL*Plus. The command to connect to the Database is as shown below. Resolve all Database connection issues before you proceed to set up the SPMS Database.

```
sqlplus [DB_USER]/[DB_USER_PASSWORD]@[DB_TNS_NAME]
```



```
Microsoft Windows [Version 10.0.18362.720]  
(c) 2019 Microsoft Corporation. All rights reserved.  
C:\Users\wsoh>sqlplus  
SQL*Plus: Release 12.1.0.2.0 Production on Tue Mar 24 12:49:40 2020  
Copyright (c) 1982, 2014, Oracle. All rights reserved.  
Last Successful login time: Mon Mar 23 2020 15:04:01 +08:00  
Connected to:  
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production  
SQL>
```

Figure 4-4 - Verifying the SPMS Database Connection

4.3 Installing SPMS 8.0 Application Client in SPMS Database Server

Before you choose to upgrade an existing SPMS 7.30 Database or prepare SPMS 8.0 Database using a seed SPMS Database, you will need to first install the SPMS 8.0 Application Client on the SPMS Database Server machine. This is because you are required to run the SPMS OHC Tools module to perform either the Database upgrade or migration as described in [Installation Steps](#). To install the SPMS Application Client, see chapter [Setup SPMS Application Clients](#).

4.4.A.1 Verifying SPMS 7.30 Database

Follow the instructions below if you are preparing a database upgrade from SPMS 7.30 to SPMS 8.0. This step is similar to upgrading an existing ship database from SPMS7.3 to SPMS 8.0.

1. Before performing the SPMS Database upgrade, it is recommended that a Database data verification is performed first on the SPMS Database for Version 7.30. This is to ensure that the data is valid and error-free before you proceed to upgrade the SPMS Database.
2. Run the **IFT Tools** executable for SPMS Version 7.30.8xx.

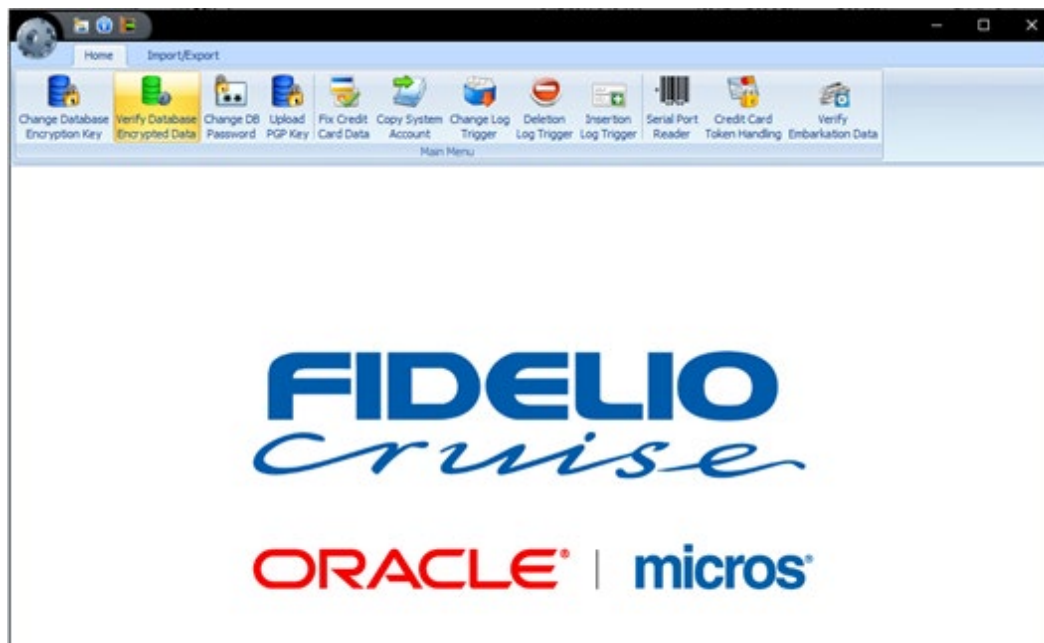


Figure 4-5 – OHC Tools - Verify Database Encryption Data

3. From the ribbon bar, select 'Verify Database Encrypted Data'.
4. Select the **Service Name** and **Schema User** for SPMS, and click on **Verify**.



Figure 4-6 - Database Instance and SPMS Schema Selection

5. Do not proceed to SPMS Database upgrade if the data verification returns failed message due to invalid data. It is advisable that you fix the data error and then repeat the process. By not doing so, you acknowledge and assume the responsibility for data losses after the SPMS Database upgrade to Version 8.0.
6. Click the **Close** button when the process completes.

4.4.A.2 Upgrading Database from SPMS 7.30 Database

After successfully verifying the data in SPMS Database for Version 7.30, you are now ready to upgrade the SPMS Database to Version 8.0. Follow the instructions below.

1. You must ensure that SPMS Secure Service is hosted correctly and is reachable. During the SPMS Database upgrade process, OHC Tools will communicate to the SPMS Secure Service so that the SPMS Secure Service will create a local OHCSecurity.par file storing the Database Password. To verify that the SPMS Secure Service is hosted and reachable, you may browse to the URL shown below from the web browser. Do not proceed if the SPMS Secure Service is not reachable. Correct the web service issue before you proceed.

https:// [SECURE_SERVER_URL] /OHCTransactionsService/OHCSecurity .asmx

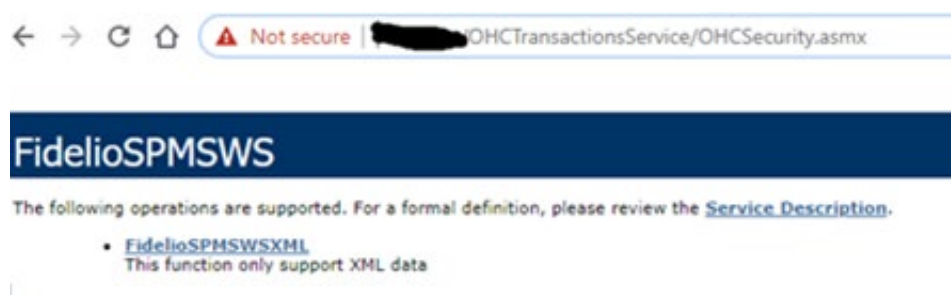


Figure 4-7 - SPMS Secure Service Is Hosted and Reachable

2. After successfully browsing to the SPMS Secure Service, navigate to the SPMS Public Folder at the folder path C:\Users\Public\Documents\Oracle Hospitality Cruise.

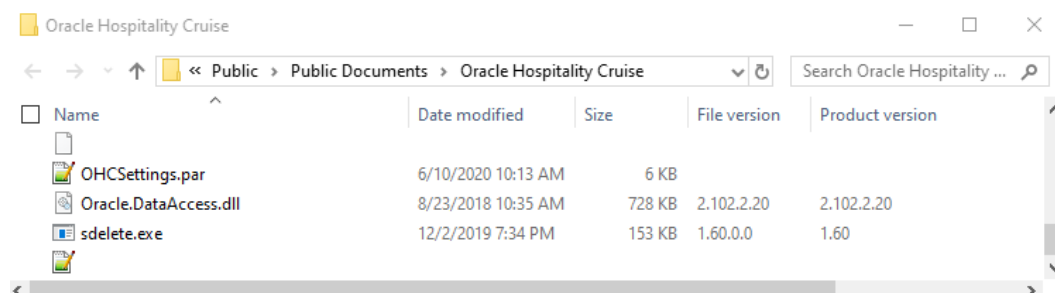


Figure 4-8 - Oracle Hospitality Cruise Public Folder

3. **For SPMS Version older than Version 8.0.14 only**, check the SPMS Local Configuration file OHCSettings.par to ensure that the entry shown below is available in the file. If not, manually copy the entry below to the same file. Prior to SPMS 8.0.14, the SPMS Database Upgrade is only able to connect to SPMS Database using the TNS Name = FIDELIO. You may skip this if you will be using OHC Tools version 8.0.14 and newer.

```
[#Fidelio Cruise.SPMS.Last Server=FIDELIO#]
```

Ensure that the [DB_TNS_NAME] set in the Oracle Client Home's TNSName.ora is the correct SPMS 7.30 Database which you intend to upgrade. You **MUST** always set this [DB_TNS_NAME] to match the [DB_TNS_NAME] set in the SPMS Secure Server (set in web.config file).

If they do not match, SPMS Secure Service will reject the HTTPS requests from the OHC Tools. This will render the user unable to create a local OHCSecurity.par file for SPMS Secure Service. Additionally, also ensure that the entry shown below is removed from the OHCSettings.par.

```
[#Fidelio Cruise.Debug.Log Sql Statement=1#]
```

4. Before the SPMS Database upgrade, extract and save a copy of these Excursion reports from the SPMS Database for Version 7.30 as they will be overwritten during the upgrade process.
 - a. EXC01TICKET01
 - b. EXC01TICKET02
 - c. EXC01TICKET03
 - d. EXC01TICKET04
5. List down all the modules, libraries and files added to the SPMS Version 7.30 Launch Panel module as they will be cleared after the SPMS Database upgrade. You will need to reconfigure this after upgrading to Version 8.0 from the Launch Panel.
6. **For SPMS Version older than Version 8.0.14 only**, copy the following files from the downloaded SPMS Package (refer to [SPMS Package](#)) to the Installed SPMS Application folder (e.g. C:\Program Files (x86)\Oracle Hospitality Cruise). They are required for a Database upgrade using the OHC Tools application. You may skip this if you are using OHC Tools version 8.0.14 and newer.
 - a. OHC Tools.exe
 - b. OHCSPMSBusiness.dll
 - c. OHCSPMSData.dll
 - d. OHCSPMSMobile.dll
 - e. OHCSPMSUI.dll
 - f. OHCSPMSUtils.dll
 - g. OHCWebSockets.dll
 - h. OHC Launch Panel
 - i. OHC Updater
 - j. OHC Updater WatchDog
7. Perform a **FULL** database backup. This is to ensure that if the unexpected happens, you can revert the changes using the Database backup image created.
8. Before the SPMS Database upgrade process, ensure that both the OHC Updater and OHC UpdaterWatchdog are not running in Windows Background tasks. If they are running, terminate the processes in the order of OHC UpdaterWatchdog followed by OHC Updater.

Name	Status	22% CPU	44% Memory	1% Disk	0% Network	5% GPU	GPU engine	Power usage	Power usage t...
Oracle Hospitality Cruise SPMS Updater (32 bit)		0%	6.8 MB	0 MB/s	0 Mbps	0%		Very low	
Oracle Hospitality Cruise SPMS Updater Watchdog (32 bit)		0%	6.3 MB	0 MB/s	0 Mbps	0%		Very low	

Figure 4-9- OHC Updater and Updater Watchdog Processes In Windows Background Task

9. You are ready to upgrade the SPMS 7.30 Database to Version 8.0.
10. Run the Windows Command Prompt as a Windows Administrator.

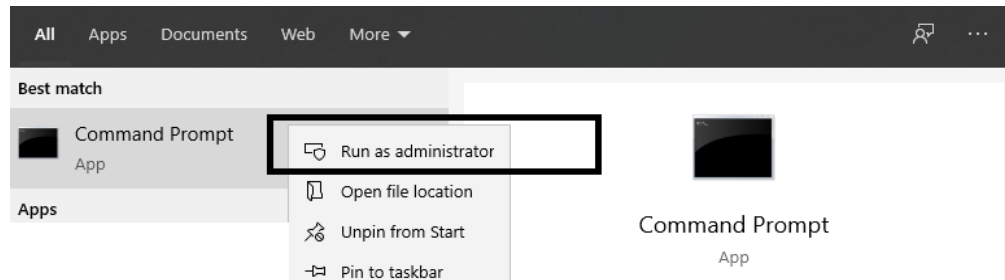


Figure 4-10 - Windows Command Prompt with Administrative Privilege

11. Navigate to the Installed SPMS Application folder (e.g. C:\Program Files (x86)\Oracle Hospitality Cruise).
12. Run the OHC Tools for Database upgrade using the following command.
`"OHC Tools.exe" /u`

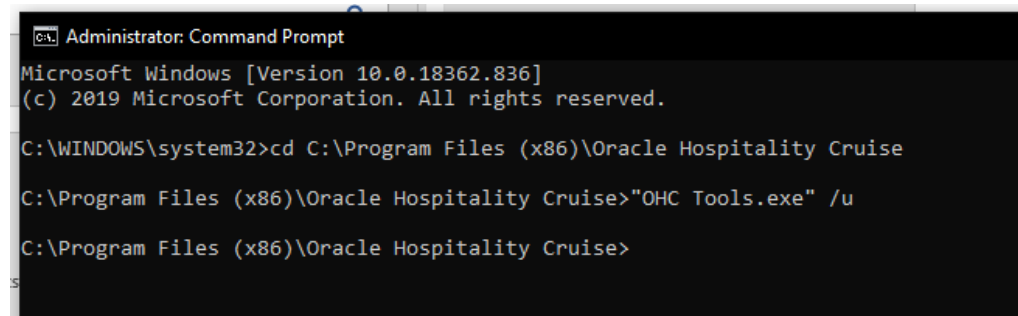


Figure 4-11 - Running OHC Tools for Database Upgrade Process

13. For SPMS Version older than Version 8.0.6 only, when running the OHC Tools.exe, the system will prompt the message: "Are you sure you want to upgrade the version to 8.0.X?". To proceed with the SPMS Database upgrade, click on the Yes button to proceed.

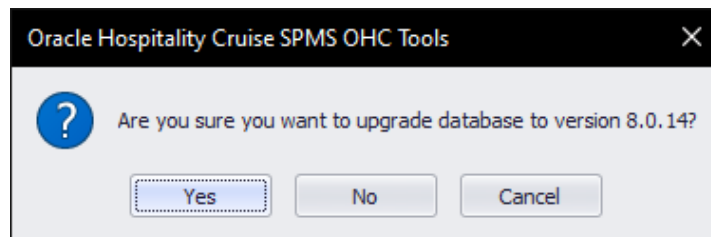


Figure 4-12 - Upgrade Acknowledgement Prompt

14. For SPMS Version older than Version 8.0.14 only, the system will prompt for the Database TNS input and also the Database password for the SPMS Schema to be upgraded.

Before this, you can only upgrade the Database using FIDELIO as the TNS name. From version 8.0.14 onwards, you are no longer limited by this restriction, thus, the prompt for user inputs.

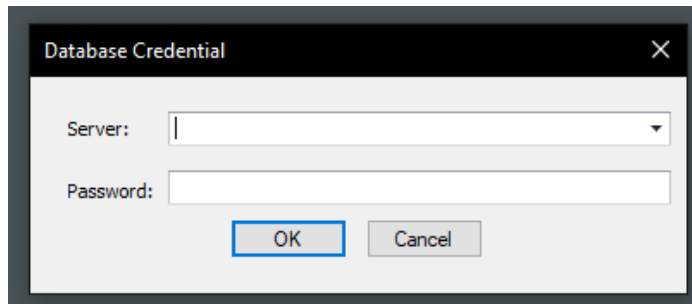


Figure 4-13 - OHC Tools Database Credential Input Window

15. At the prompt, select the Database TNS and key in the Database Password. Click **OK** to proceed.
16. The program will verify the SPMS Database to ensure that the Database to be upgraded is below Version 8.0. If your Database is already on Version 8.0 or above, the system does not permit you to upgrade and will prompt you a Login screen instead.
17. If the SPMS Database to be upgraded is below Version 8.0, the system prompts for the SPMS 7.30 Encryption Key. Enter the key in the field and click **OK** to proceed.

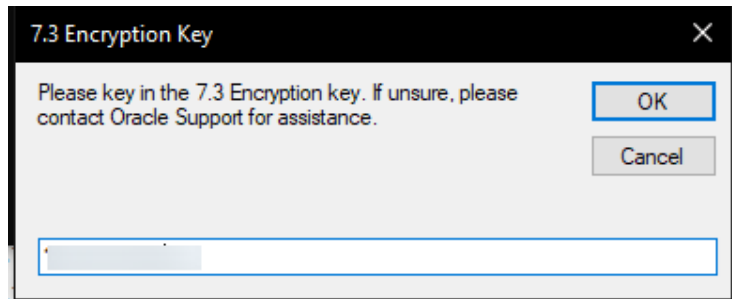


Figure 4-14 - OHC Tools SPMS Encryption Key Prompt

18. At the first launch of the OHC Tools program, at the ribbon bar, the only button available is the Upgrade DB to 8.0. Click the button to start the SPMS Database upgrade to Version 8.0.

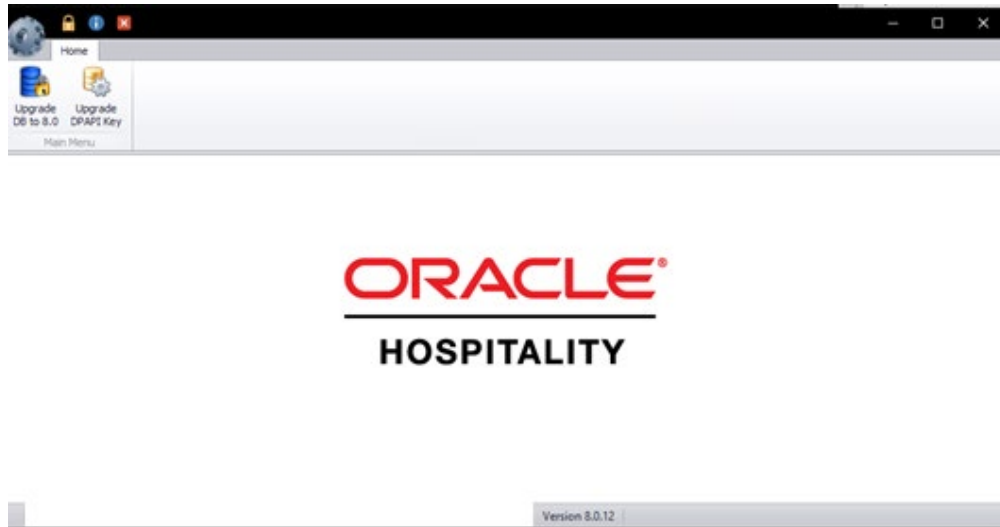


Figure 4-15 - OHC Tools Main Screen before Database Upgrade



Figure 4.15: OHC Tools Main Screen after Database Upgrade

19. After that, the **Encryption Key Manager** form will appear. You are required to enter the SPMS **passphrases**, **Old SPMS Database Password** and the **new SPMS Database Password**. Make sure the passwords entered are in the correct case as passwords are case-sensitive.

Figure 4-16 - Encryption Key Manager Form

20. Click the **Apply** button to proceed. You will also be reminded to terminate all running applications to prevent data corruption during the SPMS Database upgrade process.

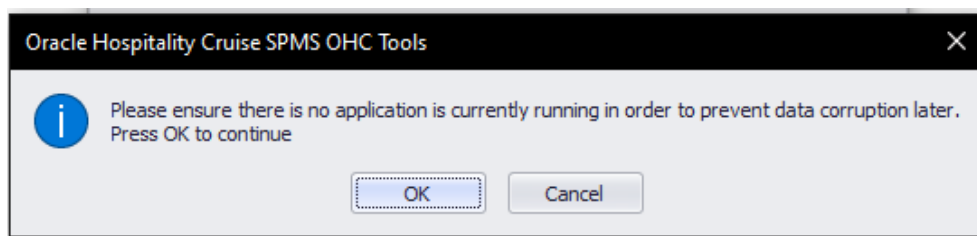


Figure 4-17 - Upgrade Confirmation Prompt

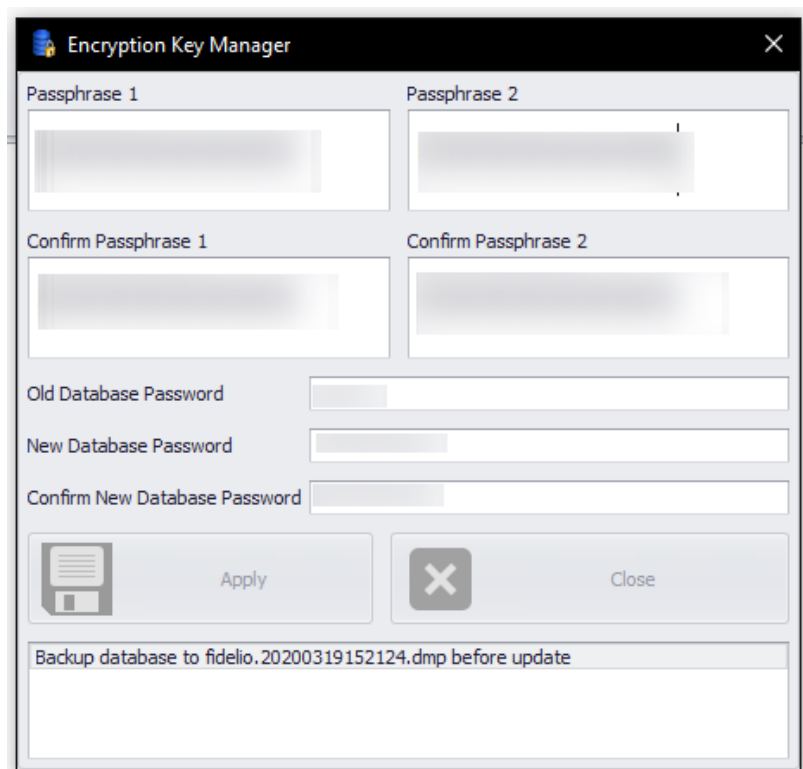


Figure 4-18 - Database Update In Progress

21. After the SPMS Database upgrade process completes, the system prompts "The new passphrase has been changed..." message to signify that the new passphrase has been enforced. The new Passphrase expiration is stored in C:\Users\Public Document\Oracle Hospitality Cruise\OHCSecurity.par file.
22. As described in step 7, all programs other than the Launch Panel and Updater will be removed from the XAPP table. You need to upload the programs back to XAPP table using the Launch Panel program.
23. On the first SPMS login after the Database Upgrade, the user will also be prompted for a password change.

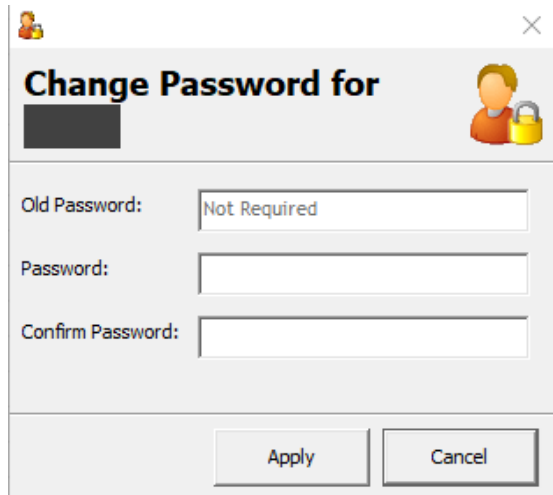


Figure 4.20: Prompt For A SPMS User Password Change For First Login

24. Re-enter all previously saved special passwords in SPMS Parameter. For example, Cabin Change Password, Overwrite Limit Password, Cabin Status Change Password, and Credit Card merchant password in Credit Card Merchant Setup.
25. Verify the following passwords are saved in the `OHCSecurity.par` file. Otherwise, manually update the password using **OHC Tools, Change Password** function.
 - a. VOIP Password
 - b. SMTP Password
 - c. MICROS Password
 - d. Credit Card merchant password

4.4.B.1 Setting Up Database from SPMS 8.0 Seed Database

Follow the instructions below if you are preparing a database upgrade from a seed SPMS 8.0 Database. This step is similar to setting up a new ship database.

1. You must ensure that SPMS Secure Service is hosted correctly and is reachable. During the SPMS Database migration process, OHC Tools will communicate to the SPMS Secure Service so that the SPMS Secure Service will create a local `OHCSecurity.par` file storing the Database Password. To verify that the SPMS Secure Service is hosted and reachable, you may browse to the URL shown below from the web browser. Do not proceed if the SPMS Secure Service is not reachable. Correct the web service issue before you proceed.

`https:// [SECURE_SERVER_URL] /OHCTransactionsService/OHCSecurity
.asmx`

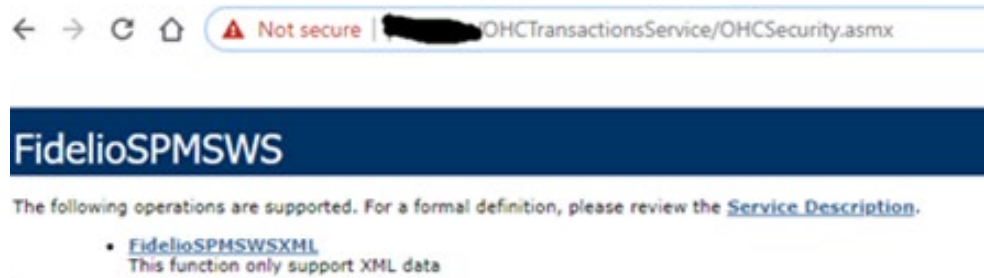


Figure 4-21 - SPMS Secure Service Is Hosted and Reachable

2. Run the Windows Command Prompt as a Windows Administrator.

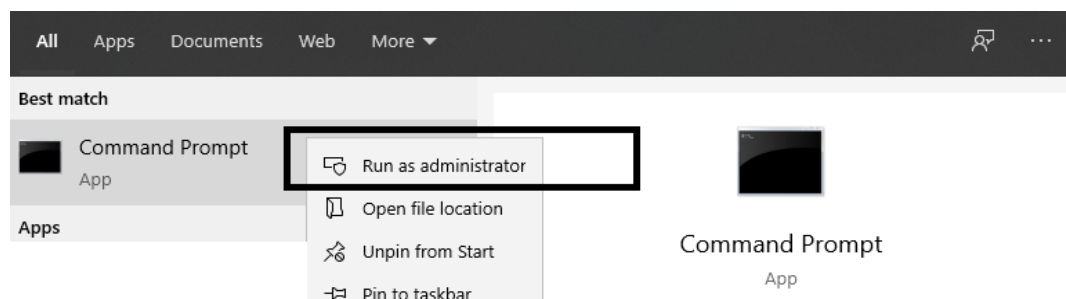


Figure 4-22 - Windows Command Prompt with Administrative Privilege

3. Navigate to the Installed SPMS Application folder (e.g. C:\Program Files (x86)\Oracle Hospitality Cruise).
4. Run the OHC Tools for Database migration using the following command.
"OHC Tools.exe" /m

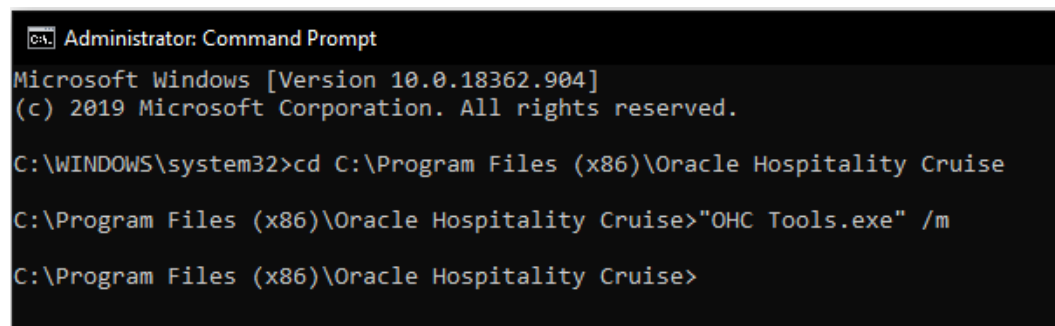


Figure 4-23 - Running OHC Tools for Database Migration Process

5. This will lead to the screen as shown below.

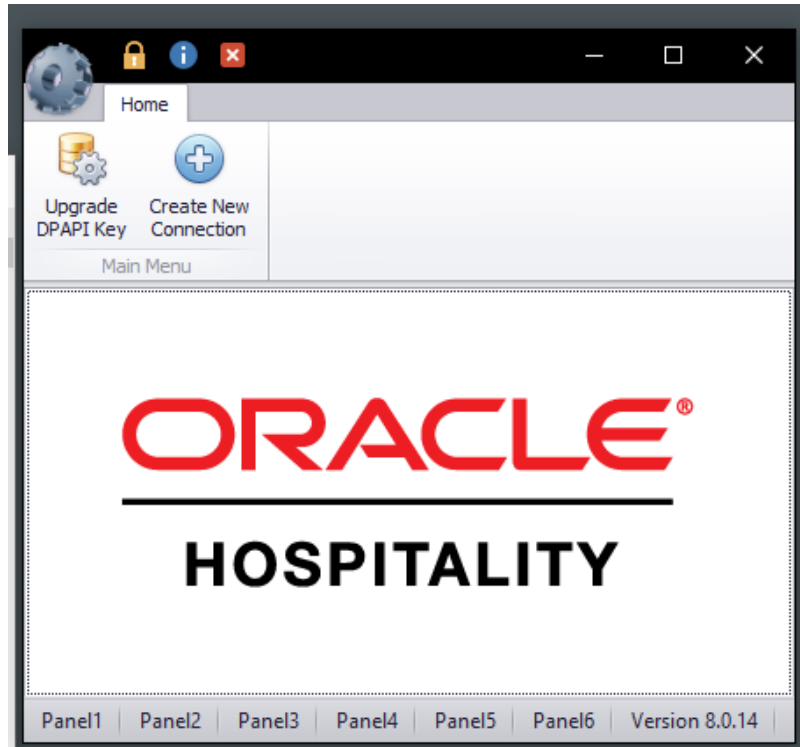


Figure 4-24 - OHC Tools /M Mode Main Screen

6. Click the “Upgrade DPAPI Key” button to create a new Database entry record to both the local OHCSecurity.par file and also at the SPMS Secure Server.
7. Choose the Database TNS and enter the Database password for authorization.

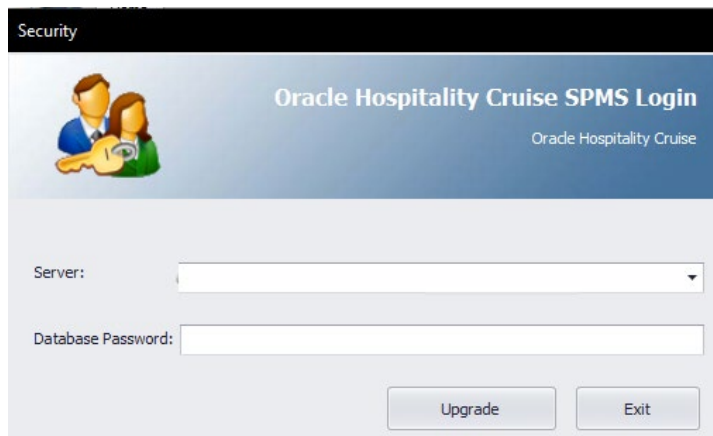


Figure 4-25 – Database authorization screen

8. Key in the passphrases and click on the Update button.

Figure 4-26 – Form to update a new encryption key for the new Database

9. Upon completion, you will find that the SPMS Database password and encryption key are safely encrypted and stored by the SPMS Secure Server.

4.5 Updating Database to Latest SPMS 8.0.X Version

After successfully setting up the SPMS Database for Version 8.0, you should proceed to ensure that the SPMS Database version is updated to the latest SPMS version. The SPMS Database Installer program is a Database updater program that upgrades the SPMS Database version to the latest. Apart from performing an SPMS Database version upgrade, the Database Installer also repairs missing or invalid Database objects required by SPMS. You can find the Database Installer program as part of the SPMS Package. Refer to [SPMS Package](#) for download instructions.

NOTE:

By running the OHC Database Installer, all existing custom changes made to the database objects, index and views will be repaired and restored to the default SPMS database requirement.

1. From the downloaded SPMS Package folder, browse to the EXE folder.
2. Copy the “OHC Database Installer.exe” file to the SPMS Installed Folder
C:\Program Files (x86)\Oracle Hospitality Cruise.
3. Open the Windows Explorer program and navigate to Oracle Hospitality Cruise folder.
4. Double-click the OHC Database Installer.exe to launch the program.

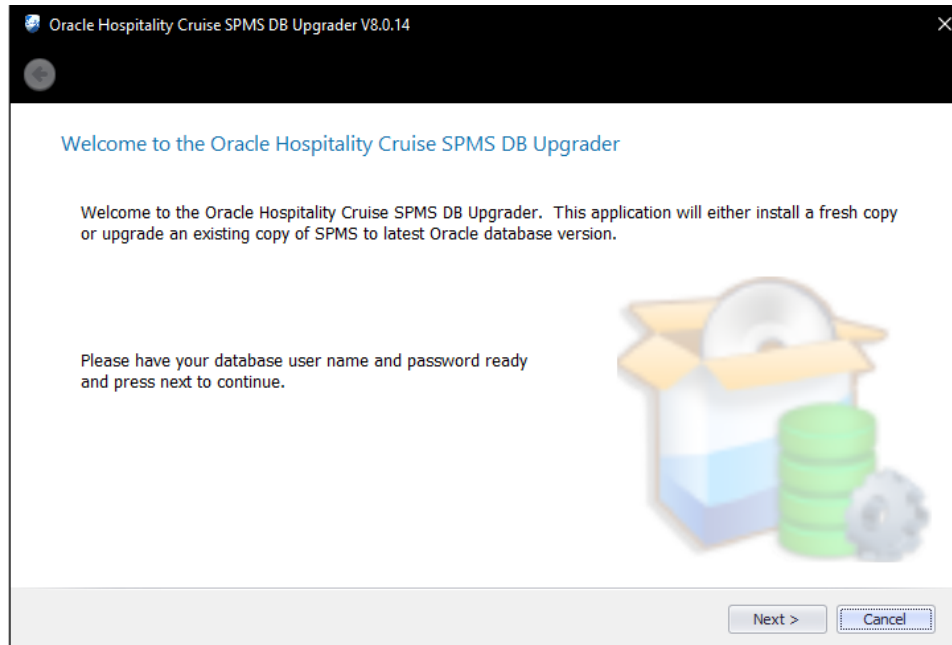


Figure 4-27 - OHC Database Installer Welcome Screen

5. Click the **Next** button to navigate to the next screen.

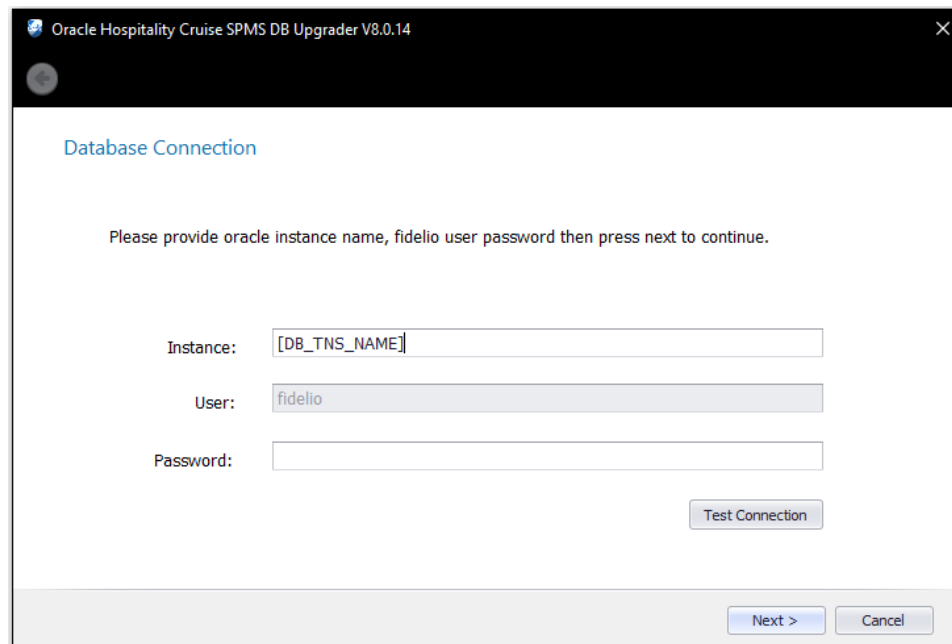


Figure 4-28 - OHC Database Connection User Authorization Screen

6. In the Database Connection screen, enter the **Database TNS name** and **Database Schema Password** for SPMS.
7. To validate the Database connection, click on the **Test Connection** button.
 - If the Database TNS name or Database Schema password is incorrect, you will receive an error message. Correct the information and retry.

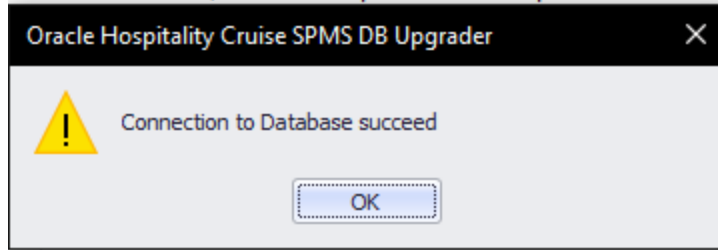


Figure 4-29 - Database Connection Test Passed Notification Prompt

8. Click the **Next** button to proceed to the Options screen, and select the desired mode.
 - **Standard** mode: Updates the SPMS Database with the required changes.
 - **Simulation** mode: Checks and generate a list of changes that the system will apply. These changes will not affect the SPMS Database until you run the standard mode.

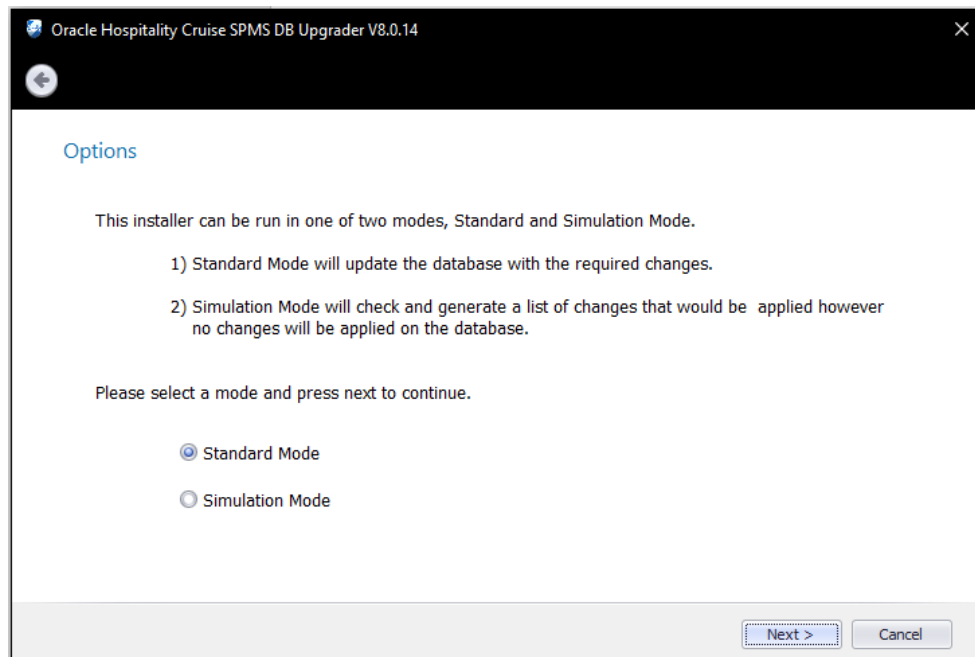


Figure 4-30 - Database Installer Options Screen

9. Click the **Next** button to proceed to the User Security Option screen. In the User Security Option screen, the radio button is defaulted to 'Backward Compatible'.
 - **Backward Compatible**: Addition user rights for new menus will be disabled. User rights that were added to existing menus will be enabled. User rights that were split in existing menus will be reset to the original assignment.
 - **Disable**: All Additional user rights for any new menu, as well as the existing menu will be disabled.

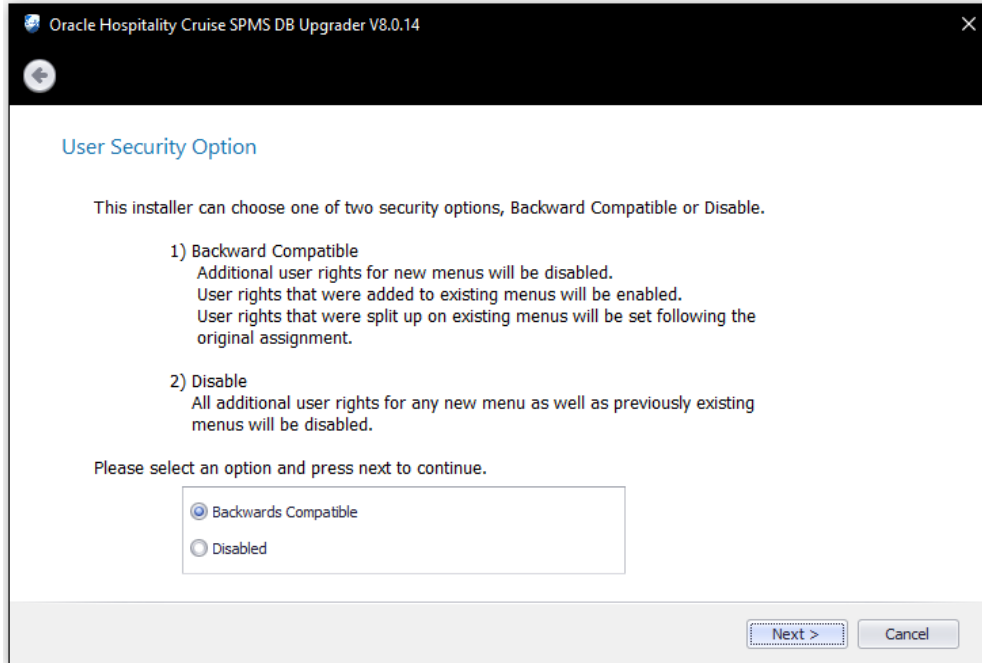


Figure 4-31 - Database Installer User Security Option Screen

10. After selecting the appropriate User Security option, click the **Next** button to continue. This will lead you to the Confirmation screen.

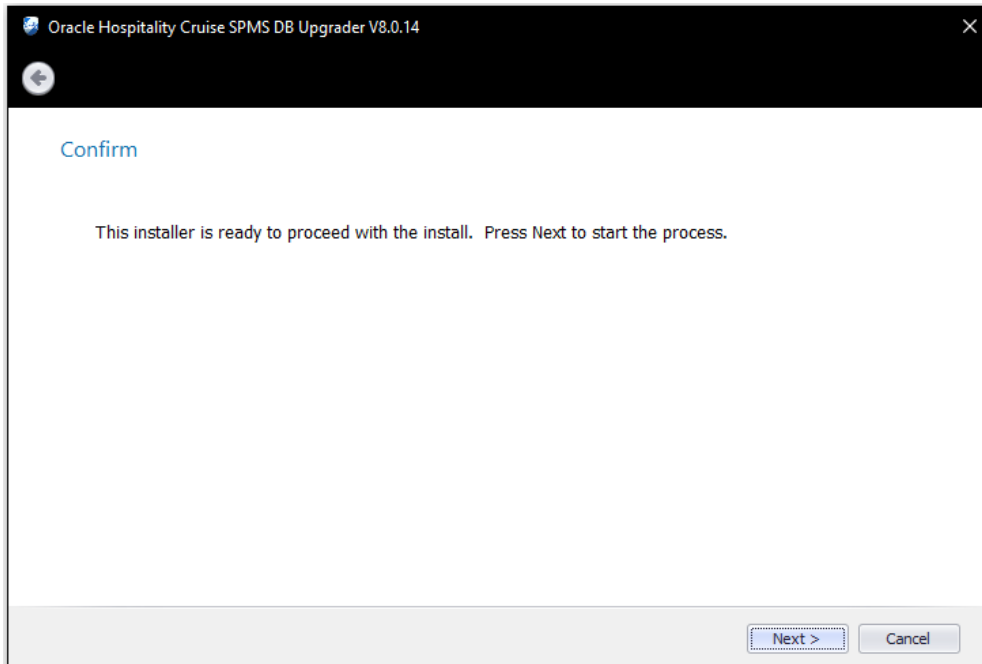


Figure 4-32 - Database Installer Confirm Screen

11. At the Confirm screen, click the **Next** button to start the SPMS Database Version update process. If there are SPMS applications connected to SPMS Database, you will receive a message to remind you to close all applications or terminate the SPMS Database connection with the application. Close all applications and click **Yes** to continue.

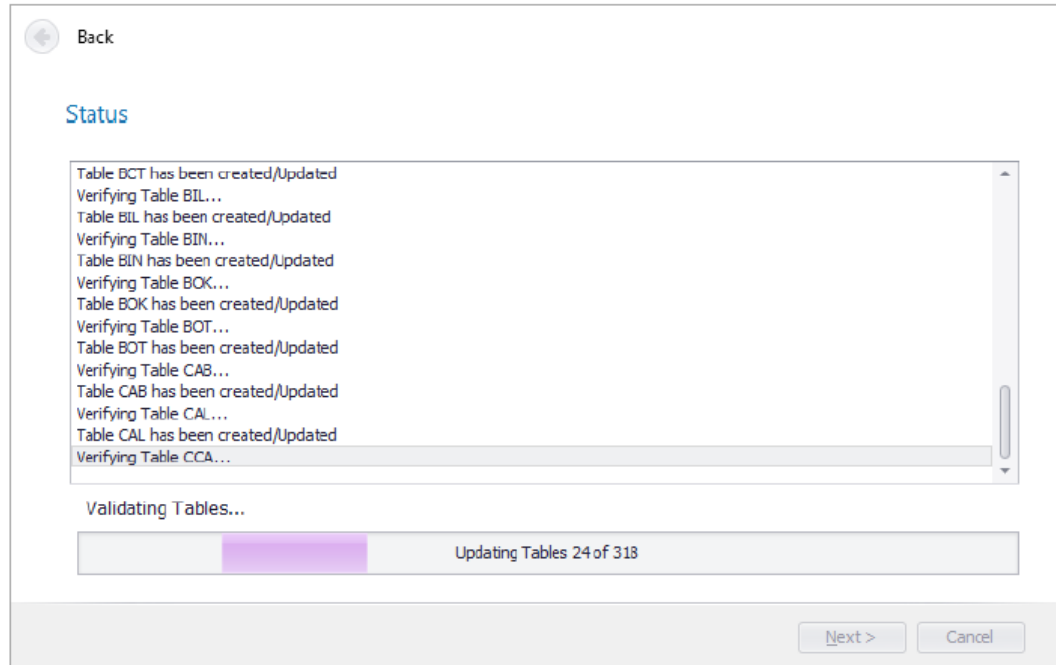


Figure 4-33 - Database Installer Version Update Status Screen

12. The SPMS Database Version Update progress is shown in the Status screen. Upon completion of the update process, click the **Next** button to proceed.
13. After the SPMS Database Version Update, you will find:
 - A process log is saved in SPMS Public Document folder
C:\Users\Public\Document\Oracle Hospitality Cruise.
Alternatively, you may click the **Copy to Clipboard** button to save the file.
 - If there are new User Security Rights added to the schema, a User Security Right file will prompt upon completion of the upgrade process.
14. Click the **Finish** button to exit the SPMS Database Installer. The SPMS Database Version will be updated automatically.
15. To verify the version, you can log in to the SPMS Administration module and navigate to **System Setup, Database Parameters**. Information is displayed in the Parameter group 'System', 'Launcher Database Structure Version'.

Troubleshooting

Shown below are some of the common errors encountered during the Database Upgrade process using the OHC Tools.

For 1st time upgrade to version 8.0 using OHC Tools, program does not directly start with Upgrade 8.0 screen. Login screen prompt an error 'Secure Server is not running at xxx'

This could be due to FIDELIOBK does not exist or the account is being locked or password is not a default password. Unlock the account or update the password manually.

Error 'Unique Constraint (FIDELIO.TYP.I1)' occur after upgrading DB to 8.0 and when running OHC Tools ver8.0x.

This is due to the database is yet to upgrade to version 8.0x. Run DB Installer version 8.0x.

Error 'Failed to connect to Updater Scheduled Task' after running DB Installer upgrade to database to version 8.0x and launching OHC Tools without bypass updater.

Ensure the latest Updater.exe, UpdaterWatchdog.exe is in the Program file folder and the task scheduler is up and running. Restart the PC to allow Updater to launch and perform the update.

Error prompt 'Cannot load assembly 'Oracle.DataAccess' when running .NET program in Windows 10.

Ensure the .NET Framework 3.5 is enabled in Microsoft Windows Features before installing Oracle Client. If an error occurs in Web Server, reinstall the Oracle Client after performing the Web Server Setup.

.NET Program failed to connect and error prompt 'Cannot load assembly 'Oracle.DataAccess' on IIS Server with ODAC 11203 installed.

Place the 'Oracle.DataAccess.dll' into c:\inetpub\OHCTransactionsService\bin folder.

Message prompt 'TNS: could not resolve the connect identifier specified' when running OHC Tools.

Ensure the DB SID <> 'Fidelio' and OHCSettings.par exist in Public Folder or DB SID <> 'Last Server' in OHCSettings.par

Message prompt 'TNS: could not resolve the connect identifier specified' when running OHC Tools, Change Encryption Key failed to store passphrase due to the above error.

Ensure the IIS Server can connect to the database. Use SQLPLUS or RESTART IIS Server to test the connection.

Message prompt 'Web Service DB Server = xxx, Client Server =xxx, cannot proceed' when running OHC Tools, Change Encryption Key.

Ensure the DB SID defined in Web.config / Tnsname.ora / OHCSettings.par are the same as IIS Server and Client PC.

Message prompt 'Invalid username/password' when the user subsequently changes the Encryption Key.

The issue is caused by connection time out during the encryption process and OHCSecurity.par were not properly created in IIS Server. Manually remove OHCSecurity.par from IIS Server and run Change Encryption Key to recreate the file.

Message prompt 'Secure Server is not running at xxx' when running OHC Tools / OHC Launch Panel for the first time and it failed to connect to IIS Server.

Ensure the IIS Server Firewall Port 443 is turned off.

Message prompt 'old password does not match' when running OHC Tools, Change Encryption Key.

The database password is case sensitive. Ensure the database password is correct. You can change the case sensitivity using an SQL statement if the error persists.

Message prompt 'The path is not of a legal form' when running OHC Tools.

The issue is caused by `SYS_REPORTDIR` being empty. The workaround is to place a value to this parameter or obtain the latest Fidelio*.dll.

Message prompt 'Unable to launch application due to invalid fideliobk, system cannot determine current db is 7.30.8xx or 8.0.xx' when running OHC Tools.

The issue may be caused by the Schema created uses the wrong password when backing up and restoring the database. Manually drop the FIDELIOBK from the schema.

5 Setting Up SPMS Web Server

After successfully bringing up the SPMS Secure Server, you can proceed to install the SPMS Web Server. The SPMS Secure Server and SPMS Web Server in reality are ASP.NET web services. As they are all ASP.NET web services, they can be installed on the same IIS web server machine. As suggested in the section [Recommendation of the Installed SPMS Environment](#), you can opt to install SPMS Secure Server in the same machine as the SPMS Web Server, or you can also install them separately in different machines.

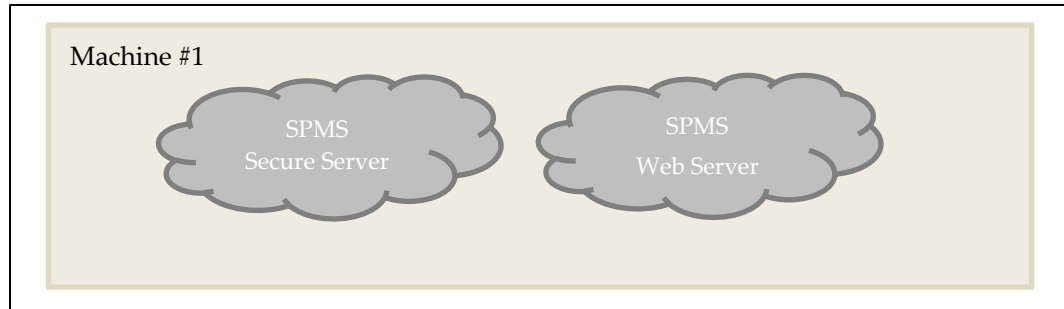


Figure 5-1 - SPMS Secure Server And SPMS Web Server In The Same Machine

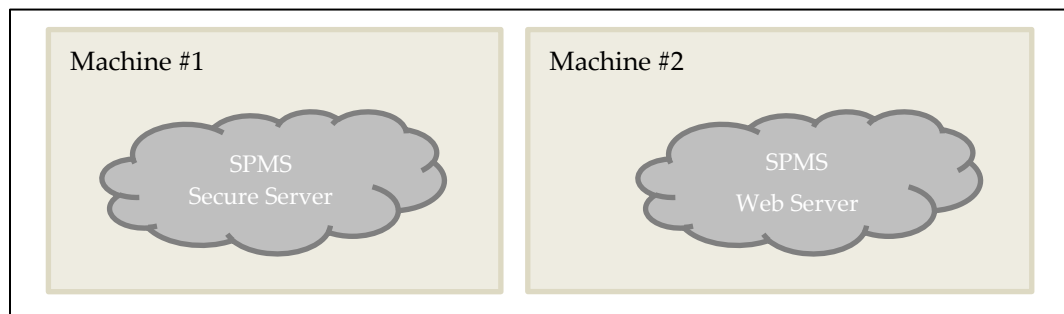


Figure 5-2 - SPMS Secure Server And SPMS Web Server In Different Machine

Prerequisites

1. Microsoft IIS is installed on the target machine.
2. Microsoft .NET Framework 2.0, 3.5 and 4.5.1 features are enabled on the target machine.
3. Oracle 12c Database client with ODAC is installed on the target machine. Refer to [Oracle Database Client and ODAC Installation](#).
4. SPMS Package is downloaded and available in the target machine. Refer to [SPMS Package](#) for download instructions.

Installation Steps

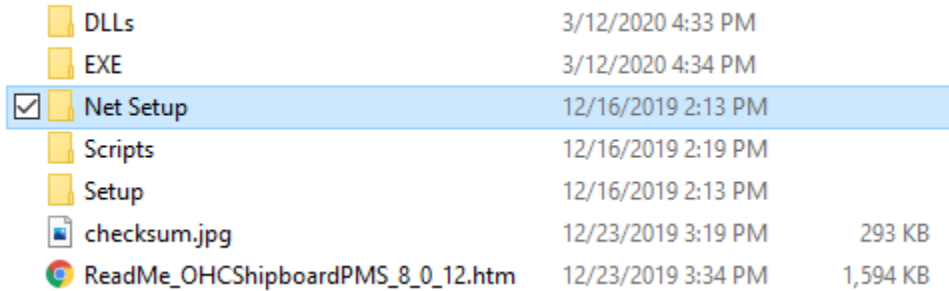
To setup SPMS Secure Server, follow the steps as shown below.

1. Refer to [5.1 Steps to Install SPMS WebServices](#).
2. Refer to [5.2 Steps to Verify Hosting of SPMS WebServices](#).
3. Refer to [5.3 Steps to Set SPMS WebServices Database Connection](#).

5.1 Installing SPMS WebServices

Follow the instructions listed below to install the SPMS WebServices.

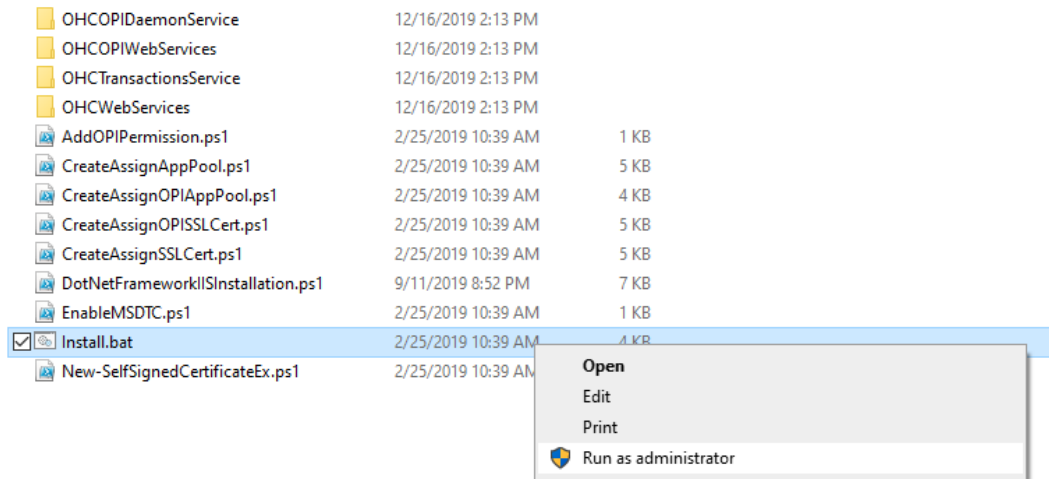
1. If a previous installation of the SPMS WebServices exists, uninstallation is required by removing the FCTransactionsService, FCWebServices, OHCTransactionsService and OHCCWebServices folders from the C:\inetpub\wwwroot folder.
2. From the downloaded SPMS Package, navigate to the Net Setup folder.



DLLs	3/12/2020 4:33 PM	
EXE	3/12/2020 4:34 PM	
<input checked="" type="checkbox"/> Net Setup	12/16/2019 2:13 PM	
Scripts	12/16/2019 2:19 PM	
Setup	12/16/2019 2:13 PM	
checksum.jpg	12/23/2019 3:19 PM	293 KB
ReadMe_OHCShipboardPMS_8_0_12.htm	12/23/2019 3:34 PM	1,594 KB

Figure 5-3 - The Net Setup Folder In SPMS Package

3. Open the folder and copy the WebServer folder to the C:\temp folder.
4. From the C:\temp\WebServer folder, right-click on the **Install.bat** and select **Run as Administrator** to launch the Microsoft Windows command screen.



OHCOPIDaemonService	12/16/2019 2:13 PM	
OHCOPISWebServices	12/16/2019 2:13 PM	
OHCTransactionsService	12/16/2019 2:13 PM	
OHCWebServices	12/16/2019 2:13 PM	
AddOPIPermission.ps1	2/25/2019 10:39 AM	1 KB
CreateAssignAppPool.ps1	2/25/2019 10:39 AM	5 KB
CreateAssignOPIAppPool.ps1	2/25/2019 10:39 AM	4 KB
CreateAssignOPISSLCert.ps1	2/25/2019 10:39 AM	5 KB
CreateAssignSSLCert.ps1	2/25/2019 10:39 AM	5 KB
DotNetFrameworkIISInstallation.ps1	9/11/2019 8:52 PM	7 KB
EnableMSDTC.ps1	2/25/2019 10:39 AM	1 KB
<input checked="" type="checkbox"/> Install.bat	2/25/2019 10:39 AM	4 KB
New-SelfSignedCertificateEx.ps1	2/25/2019 10:39 AM	

Open
Edit
Print
Run as administrator

Figure 5-4 - The Install.Bat File In SPMS Web Server Folder

```
C:\WINDOWS\System32\cmd.exe

C:\WINDOWS\system32>ECHO OFF
Administrative permissions required. Detecting permissions...
Success: Administrative permissions confirmed.

-----
PRESS 1, 2, 3, 4 OR 5 to select your installation.
-----

1 - Install OHCTransactionsService
2 - Install OHCWebServices
3 - Install OHCTransactionsService and OHCWebServices
4 - Install OHCOPiWebServices
5 - Install OHCOPIDaemonService

Type 1, 2, 3, 4, or 5 then press ENTER:
```

Figure 5-5 - Options In Install.Bat Script

5. Select:
 - a. **Option 1 – Install OHCTransactionsService**, to install the SPMS Secure Service required by SPMS Secure Server. Choosing this option will also install the SPMS TransactionsService as they are packaged together.
 - b. **Option 2 – Install OHCWebServices**, to install the SPMS WebServices.
 - c. **Option 3 – Install OHCTransactionsService and OHCWebServices**, to install both the SPMS TransactionsService and WebServices.
 - d. **Option 4 – Install OHCOPiWebServices**, to install the SPMS OPI WebServices.
 - e. **Option 5 – Install OHCOPIDaemonService**, to install the SPMS OPI Daemon Service.
6. You will be prompted to install a digital certificate for SPMS Secure Service identification.

```
Administrator: Windows PowerShell

Version: 6.3.9600.17031
Image Version: 6.3.9600.17031
Enabling feature(s)
[=====100.0%=====]
The operation completed successfully.
Finished NetFx3

Deployment Image Servicing and Management tool
Version: 6.3.9600.17031
Image Version: 6.3.9600.17031
Enabling feature(s)
[=====99.9%===== ]
The operation completed successfully.
Completed
Enabling MSDTC...
Completed
Creating app pool and assigning to website...
Configuring Website: Default Web Site
HTTPS Binding already exists on port 443
Please press 1 to list down existing certificate or press 2 to create new self signed certificate: _
```

Figure 5-6 – The Prompt For Digital Certificate Identification Required In SPMS Secure Server

- a. Key in '1' to list the existing digital certificates installed on the machine. When the digital certificates are listed, there will be a prompt message "Please key in the subject name you want to bind". Type the Subject name to bind the selected digital certificate to the SPMS Secure Service.
- b. Key in '2' to create a new self-signed digital certificate. After that, type the domain name or IP of the SPMS Secure Server to bind the new self-signed digital certificate to the SPMS Secure Service.

```

Administrator: Windows PowerShell
Version: 6.3.9600.17031
Image Version: 6.3.9600.17031
Enabling feature(s)
[=====99.9%===== ]
The operation completed successfully.
Completed
Enabling MSDTC...
Completed
Creating app pool and assigning to website....
Configuring Website: Default Web Site
HTTPS Binding already exists on port 443
Please press 1 to list down existing certificate or press 2 to create new self signed certificate: 1

Directory: Microsoft.PowerShell.Security\Certificate::LocalMachine\My

Thumbprint                               Subject
-----
E...                                     } CN=
3...                                     } CN=L...
Please key in the subject name you want bind:

```

Figure 5-7 - Digital Certificate List Available For Binding In Option 1

```

Administrator: Windows PowerShell
Image Version: 6.3.9600.17031
Enabling feature(s)
[=====100.0%=====]
The operation completed successfully.
Finished NetFx3

Deployment Image Servicing and Management tool
Version: 6.3.9600.17031
Image Version: 6.3.9600.17031
Enabling feature(s)
[=====99.9%===== ]
The operation completed successfully.
Completed
Enabling MSDTC...
Completed
Creating app pool and assigning to website....
Configuring Website: Default Web Site
HTTPS Binding already exists on port 443
Please press 1 to list down existing certificate or press 2 to create new self signed certificate: 2
Please key in your domain name or ip:

```

Figure 5-8 – The Prompt For Domain Name Or Ip Required In Option 2

7. If an older SPMS Secure Service installation exists, you will be prompted to override the files. Continue by selecting all.


```
Administrator: C:\windows\System32\cmd.exe
C:\Temp\WebServer\OHCTransactionsService\web.config
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\App_Code.compiled (Yes/No/All)? y
C:\Temp\WebServer\OHCTransactionsService\bin\App_Code.compiled
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\App_Code.dll (Yes/No/All)? y
C:\Temp\WebServer\OHCTransactionsService\bin\App_Code.dll
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\Interop.DOCAUTHLib.dll (Yes/No/All)? a
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.DOCAUTHLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.MetCardID_Control.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SCANWEXLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SCANWLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SIGNVIEWLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Newtonsoft.Json.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSBusiness.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSData.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSMobile.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSUI.dll
16 File(s) copied
Installing OHCWebServices...
Creating OHCWebServices application and app pool...
OHCWebServices Application already exists
OHCWebServicesAppPool App Pool already exists
@{caption=Microsoft Windows 10 Pro} found
OHCWebServicesAppPool assigned to OHCWebServices and configuration completed.
Completed
Overwrite C:\inetpub\wwwroot\OHCWebServices\OHCWebServices.asmx (Yes/No/All)?
```

Figure 5-9 - The Prompt To Override Older SPMS Secure Service Installation

8. When the installation completes, press any key to close the command prompt.

```
Administrator: C:\windows\System32\cmd.exe
C:\Temp\WebServer\OHCTransactionsService\web.config
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\App_Code.compiled (Yes/No/All)? y
C:\Temp\WebServer\OHCTransactionsService\bin\App_Code.compiled
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\App_Code.dll (Yes/No/All)? y
C:\Temp\WebServer\OHCTransactionsService\bin\App_Code.dll
Overwrite C:\inetpub\wwwroot\OHCTransactionsService\bin\Interop.DOCAUTHLib.dll (Yes/No/All)? a
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.DOCAUTHLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.MetCardID_Control.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SCANWEXLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SCANWLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Interop.SIGNVIEWLib.dll
C:\Temp\WebServer\OHCTransactionsService\bin\Newtonsoft.Json.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSBusiness.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSData.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSMobile.dll
C:\Temp\WebServer\OHCTransactionsService\bin\OHCSPMSUI.dll
16 File(s) copied
Installing OHCWebServices...
Creating OHCWebServices application and app pool...
OHCWebServices Application already exists
OHCWebServicesAppPool App Pool already exists
@{caption=Microsoft Windows 10 Pro} found
OHCWebServicesAppPool assigned to OHCWebServices and configuration completed.
Completed
Overwrite C:\inetpub\wwwroot\OHCWebServices\OHCWebServices.asmx (Yes/No/All)?
```

Figure 5-10 – Successful Installation Prompt

5.2 Verifying Hosting of SPMS WebServices

After the successful installation of the SPMS WebServices, you should verify if the SPMS WebServices are hosted correctly. If done right, you should be able to reach the SPMS WebServices over the web browser using the HTTPS communication protocol.

1. Launch a web browser.
2. Type the URL shown below in the browser search bar.
 - a. SPMS Secure ASP.NET Web Service

The SPMS Secure Service is the web service that manages the database user credentials. Clients that require database connection will interact with the Secure Server to obtain the database user credential. It is typically deployed at [https://\[URL\]/OHCTransactionsService/OHCSecurity.asmx](https://[URL]/OHCTransactionsService/OHCSecurity.asmx)

b. SPMS OHCTransactionsService ASP.NET Web Service

The SPMS OHCTransactionsService is the web service that serves the internal client requests. It is typically deployed at [https://\[URL\]/OHCTransactionsService/OHCTransactionsService.asmx](https://[URL]/OHCTransactionsService/OHCTransactionsService.asmx)

c. SPMS OHCWebServices ASP.NET Web Service

The SPMS OHCWebServices is the web service that serves the external client requests. It is typically deployed at [https://\[URL\]/OHCWebServices/OHCWebServices.asmx](https://[URL]/OHCWebServices/OHCWebServices.asmx)

- 3. If the SPMS WebServices are hosted successfully, you will see the web page as shown in Figure 3-3 - SPMS Secure Service Web Page Hosted On The SPMS Secure Server.**

 **NOTE:**

It is important to know that successful hosting of the SPMS WebServices does not guarantee a successful SPMS Database connection, which is required for SPMS operation. Therefore, it is important to configure the SPMS WebServices connection to the SPMS Database.

5.3 Configuring SPMS WebServices Database Connection

Once you have verified that the SPMS WebServices are hosted correctly and reachable through the web browser, you can then proceed to configure the SPMS WebServices so that it knows which Database TNS it connects to. Like most web services, this configuration resides in the usual `web.config` file.

1. From the installed Oracle Client home folder, ensure there is a correct Database TNS entry in the Oracle `TNSName.ora` file for SPMS to locate the correct Database when it references to the Database TNS.
2. If the Database TNS entry is not in the `TNSName.ora` file, you can create it using the below example. See Table 3-1 - User Defined Values Used In the Tnsname.Ora File.

For example:

```
<DB_TNS_NAME> = (  
    DESCRIPTION = (  
        ADDRESS_LIST = (  
            ADDRESS = (PROTOCOL = TCP)  
                (HOST = <DB_ADDRESS>)  
                (PORT = <DB_PORT>)  
        )  
    )  
    (CONNECT_DATA = (SERVICE_NAME = <DB_NAME>))  
)
```

3. The commonly installed Oracle Client folder for SPMS is `C:/Oracle/product`. However, a user may choose to install it in a different folder.
4. After that, you set up the SPMS WebServices Database connection. This step is required so that the SPMS WebServices knows which Database TNS it should connect to. You can do that by editing the `web.config` file.
 - a. The `web.config` file for SPMS OHCTransactionsService resides at `C:\inetpub\wwwroot\OHCTransactionsService`
 - b. The `web.config` file for SPMS OHCWebServices resides at `C:\inetpub\wwwroot\OHCWebServices` folder.

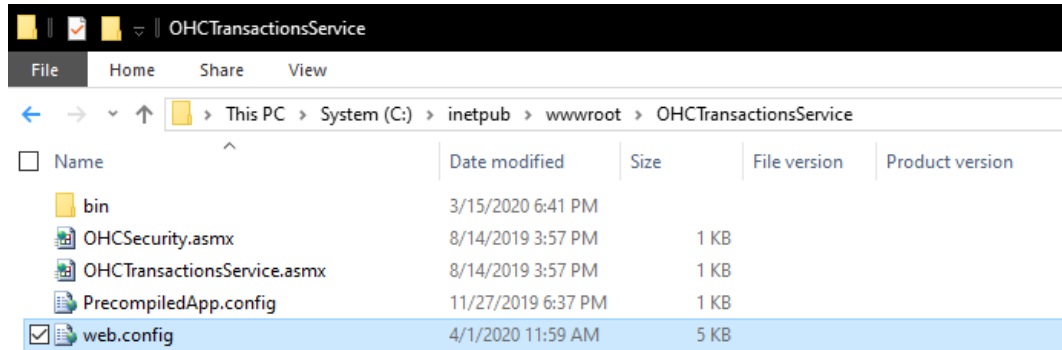


Figure 5-11 - SPMS OHCTransactionsService Installed Folder

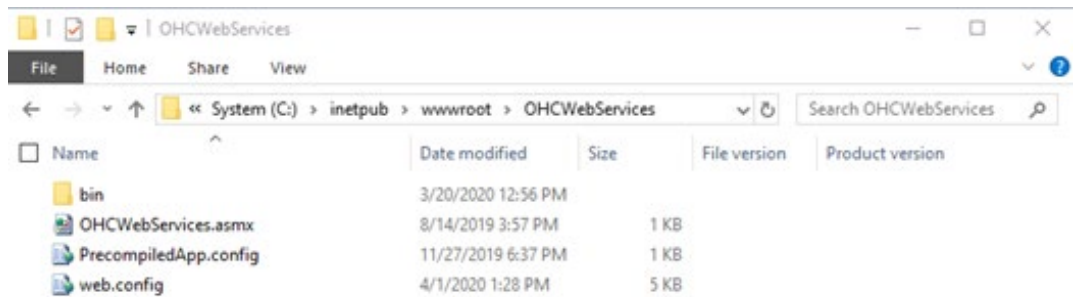


Figure 5-12 - SPMS OHCWebServices Installed Folder

5. Under the `<appSettings>` section of the `web.config` file, set the SPMS Database TNS name.

For example:

```
<appSettings>
  <add key="Server" value="<DB_TNS_NAME>" />
</appSettings>
```

NOTE:

After setting up the Database TNS connection for SPMS WebServices, the SPMS WebServices is now able to locate the SPMS Database using the Database TNS. Do note that connection to the SPMS Database is not possible yet. It needs the Database Password to be able to connect to it. To connect to the SPMS Database, the SPMS WebServices requires the SPMS Database

password, which will be stored in the local DPAPI protected OHCSecurity.par file on the SPMS Web Server.

To create the local DPAPI protected OHCSecurity.par file on the SPMS Web Server, you are required to connect to the SPMS Secure Server which can be configured from the same web.config file

6. Under the <appSettings> section of the web.config file, set the SPMS Secure Server IP address or the machine name.

Table 5-1 - User Definable Value In Web.Config File

Web.Config File Value	Description
<SECURE_SERVER_NAME>	A User defined SPMS Secure Server IP address or the machine name if it is resolvable by the DNS server.

For example:

```
<appSettings>
  <add key=" SecureLogin" value="<SECURE_SERVER_NAME>" />
</appSettings>
```

7. Restart the SPMS WebServices. You can restart the SPMS Secure Service from the IIS Manager.

5.4 Configuring SPMS OPI WebServices Database Access

SPMS OPI WebServices uses the Oracle.ManagedDataAccess.Client data provider to connect to the database. Therefore, you need to ensure that the “ODP.NET, Managed Driver” section is correctly configured in the local machine.

On the older Oracle 12c Database Client installation, the section below automatically populated at

“C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config\machine.config”. Thus, no further action is needed. However, for the newer Oracle 19c Database Client, you must uncomment the following configuration in the “web.config” file of the OPI Webservice. Additionally, ensure that the Version is set correctly to match the DLL version installed on the local machine.

```
<system.data>
  <DbProviderFactories>
    <add name="ODP.NET, Managed Driver"
invariant="Oracle.ManagedDataAccess.Client"
description="Oracle Data Provider for .NET, Managed Driver"
type="Oracle.ManagedDataAccess.Client.OracleClientFactory,
Oracle.ManagedDataAccess, Version=<DLL_VERSION>,
Culture=neutral, PublicKeyToken=89b483f429c47342" />
    <add name="ODP.NET, Unmanaged Driver"
invariant="Oracle.DataAccess.Client" description="Oracle Data
Provider for .NET, Unmanaged Driver"
type="Oracle.DataAccess.Client.OracleClientFactory,
```

```

Oracle.DataAccess, Version=<dll version>, Culture=neutral,
PublicKeyToken=89b483f429c47342" />
</DbProviderFactories>
</system.data>

```

5.5 Configuring SPMS OPI WebServices Database Connection for OPI Handling

Edit the web.config file in C:\inetpub\OHCOPIWebServices and to define the SPMS database server name <SOURCE>, password <PASSWORD> and User ID <DBUSER> under <connectionStrings>.

```

<connectionStrings>
<add name="OHCEntities" connectionString="metadata=<a
target="_blank"
href="res://*/OHModel.csdl|res://*/OHModel.ssd|res://*/O
HModel.msl;provider=Oracle.ManagedDataAccess.Client;provid
er">res://*/OHModel.csdl|res://*/OHModel.ssd|res://*/OHC
Model.msl;provider=Oracle.ManagedDataAccess.Client;provider
</a> connection string=&quot;DATA
SOURCE=[SOURCE];PASSWORD=[PASSWORD];PERSIST SECURITY
INFO=True;USER ID=<USER ID>&quot;"
providerName="System.Data.EntityClient" />
</connectionStrings>

```

If Oracle Wallet is applied,

```

<connectionStrings>
<add name="OHCEntities" connectionString="metadata=<a
target="_blank"
href="res://*/OHModel.csdl|res://*/OHModel.ssd|res://*/O
HModel.msl;provider=Oracle.ManagedDataAccess.Client;provid
er">res://*/OHModel.csdl|res://*/OHModel.ssd|res://*/OHC
Model.msl;provider=Oracle.ManagedDataAccess.Client;provider
</a> connection string=&quot;DATA SOURCE=<IP Address>:<Port
No>/<Service Name>;PASSWORD=[PASSWORD];PERSIST SECURITY
INFO=True;USER ID=<User ID>&quot;"
providerName="System.Data.

```

5.6 Configuring SPMS OPI WebServices Token Expiry for OPI Handling

By default, the OPI Webservice token expires after 1440 minutes (1 day); the refresh token expires in 2880 minutes (2 days). The value of refresh token expiry must be greater than the token.

To define the token expiry, edit the web.config file in C:\inetpub\OHCOPIWebServices and insert below keys and value

```

<add key="TokenExpiry" value="1440"/>
<add key="RefreshTokenExpiry" value="2880"/>

```

The OPI Manager and FCUI which runs on the server utilizes the refresh token functionality to ensure the connection to OPI webservice remains active.

The system triggers the token refresh 2 minutes before the token expiry.

To ensure OPI Webservice token is always valid at other SPMS client applications, the value of TokenExpiry must be greater than the parameter "Idle Minutes".

Troubleshooting

Web Server Is Corrupted

If the Webservice server is corrupted, the OHCSecurity.par is no longer valid. Setup the new IIS Server and connect to the new IIS Server using an existing client PC.

1. Ensure the OHCSecurity.par exist on the client PC.
2. Change the 'securelogin.txt' to point to the new IIS Server.
3. Run **OHC Tools, Change Password** function to generate a new key.

Login user changed or the user does not exist in OHCSecurity.par.

Run **OHC Tools, Change Password** and perform password change to copy all the entry with value in OHCSecurity.par to new IIS Server, then login to SPMS application on different client PC to download the OHCSecurity.par from IIS Server.

Message prompt 'The Operation is complete but NetFx3 feature was not enabled' when installing Web Service, Enabling Features.

Login to IIS Server with a user from an administrator group instead of the standard user group, and restart the installation.

Error prompt 'Certificate error' when browsing the TransactionsService using Internet Explorer.

A secure certificate is not present in your environment. You are required to purchase the certificate from a certificate authority and apply the said certificate. For more information on how to apply a security certificate, refer to <https://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/a2f35fcd-d3b6-4f39-ba93-041a86f7e17f.mspx?mfr=true>.

Message prompt 'TNS: listener does not currently know of service requested in connect descriptor'.

Ensure the Database is up and running.

Message prompt 'Fidelio user password for server xxx not found'.

This error is caused by OHCSecurity.par being manually deleted and the application already connects to DB, and is comparing the old password with IIS Server. Restart the IIS Server to enable the application to re-establish its connection.

Wrapper.dll not registered.

Launch the MS-DOS Command with 'Run as Administrator' and use RegAsm in C:\Windows\Microsoft.NET\Framework\v.4.0.30319 to register the Wrapper.dll file.

Message prompt in OHCDemoApp, 'The provided URL 'https' is invalid. Expected 'http'.

In OHCDemoApp.exe.config file, change the <security mode = "None"> to <security mode = "Transport">.

Message prompt: 'The Specified method not found'

The system prompts this message when the user attempts to load the .asmx file through Internet Explorer. Some of the DLL should not exist in the BIN folder, for example. SingPlusNet.dll. Remove them and retry.

Message prompt: 'Invalid Parameter'

This occurs when running OHCDemoApp.exe. The user is required to connect OHCWebServices.asmx instead of OHCTransactionsService.asmx

Error Message: 'Unhandled exception has occurred in your application. System.MissingMethodException: Method not found'

This occurs when App_Code.dll, OHCSPPMS*.dll version is wrong. Ensure these DLL's version is the same.

Error Message: 'Critical error occurred while executing Sql statement.\r\n. Please call your system administrator, application will terminate now. or

Error Message: Oracle.DataAccess.Client.OracleException ORA-06576: not a valid function or procedure name at

Oracle.DataAccess.Client.OracleException.HandleErrorHelper'

This occurs when logging to OHCDemoApp /JsonGet. Ensure both OHCSPPMS*.dll version is the same as the Database version.

Error Message: 'Critical error occurred while executing Sql statement.\r\nPlease call your system administrator, application will terminate now.\r\n\r\nSystem.Exception: Error Opening Connection to - Unable to load OraMTS...'

This occurs when performing a transaction through Oracle WebServices. Ensure the Oracle Services for Microsoft Transaction Server (MTS) is installed on the Web Server.

Error Message: 'Critical error occurred while executing SQL statement. Please call your system administrator, application will terminate now. System.Exception: Error Opening Connection to – Unable to enlist in a distributed transaction'

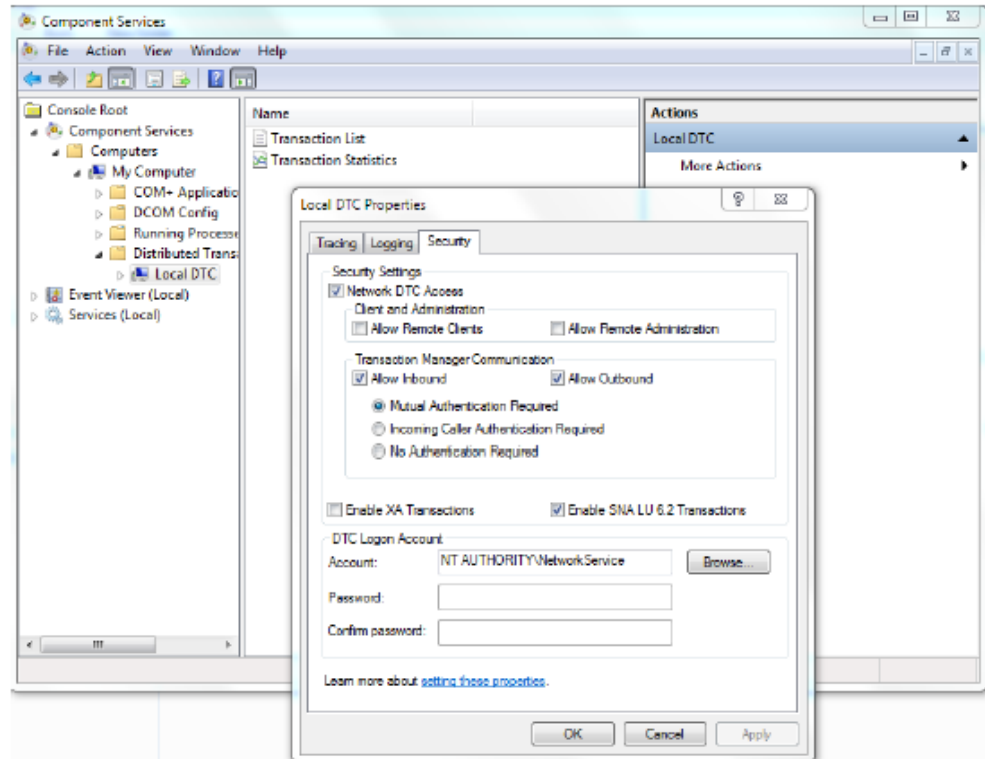
This occurs when running OHCDemoApp. or Infogenis Point-of-Sale (IGPOS). Install ODAC and ensure the MTS is enabled and running properly as well as the distributed transaction coordinator service.

Error Message: 'OHCSPPMSxxxx.DLL Version (xx.xxx) does not match with... '

The error occurs when running OHCDemoApp or IGPOS. Ensure the OHCSPPMS*.dll version in XAPP table is as the copy in BIN folder.

Error Message: 'penConnection-System.InvalidOperationException: The Promote method returned an invalid value for the distributed transaction '

This error occurs when performing a Webservice transaction like Check-In or Book Excursion. In the Component Services, Distributed Transaction, Load DTC Properties, Security tab, check both the 'Allow Inbound' and 'Allow Outbound' check box.



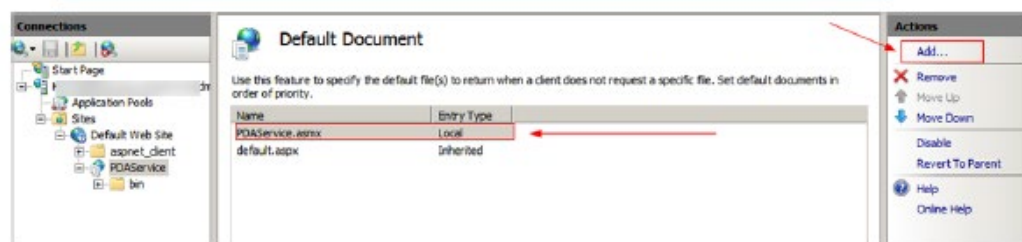
Issue with: Web Browser showing ‘Page Not Found’. Error 404 – File or Directory not found.

Ensure the IIS, WebService Extensions are set to ‘Allowed’ in Web Service Extensions.

Issue with: Web Browser showing blank page when browsing the OHCWebservices, or error ‘The Specified module could not be found’.

This error occurs when testing the Webservice through Internet Explorer and it returns a blank page.

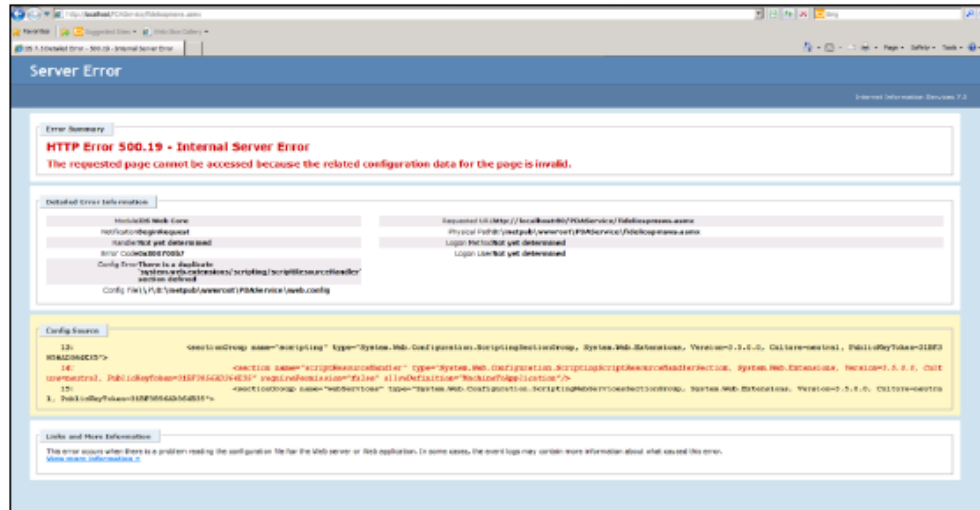
1. Navigate to IIS Manager and select OHCWebServices.
2. In Default Document, manually add the ‘OHCWebServices.asmx’ file.



Error Message: ‘This setup requires Internet Information Server 4.0 or higher and Windows NT 4.0, Windows 2000 or higher.....’.

This error occurs during OHCWebServices Setup and requires Internet Information System (IIS) 6.0 in Control Panel, Windows Features to be turned on.

Error Message: ‘Error Code 0x800700b7 Config Error. There is a duplicate ‘system.web.extensions/scripting/scriptResourceHandler’ section defined’.



This error occurs when browsing the web page. Comment of the related thread is mentioned in web.config.

Error Message: '<!--<sectionGroup name="system.web.extensions" type="System.Web.Configuration.SystemWebExtensionsSectionGroup, System.Web.Extensions, Version=3.5.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35">' or 'The type initializer for 'FideliOSPMSPMS.CShipGeneral' threw an exception.

This error occurs when browsing the web page or using OHCDemoApp test program. Ensure the .NET Framework version is .NET Framework v4.0.30319 in Application Pool, Default Pool setting.

6 Setting Up SPMS Application Clients

The SPMS Application Clients can be installed on any machines installed with the full Oracle Client including the ODAC component.

Prerequisites

1. Ensure that the Microsoft .NET Framework 2 and 3.5 are turned on in Window Features before installing Oracle Full Client and OHC_SPMS_V8SETUP.exe.
2. Oracle 12c Database client with ODAC is installed on the target machine. Refer to [Oracle Database Client and ODAC Installation](#).
3. SPMS 8.0 Installer is downloaded and available in the target machine. Refer to [SPMS Installation File](#) for download instructions.
4. SPMS 8.0 Package is downloaded and available in the target machine. Refer to [SPMS Package](#) for download instructions.
5. Ensure that on the target machine, the Windows Regional and Language Settings is configured to US/UK and the language settings should be set to English. This important to ensure that you get the expected SPMS functionality.

Installation Steps

To set up the SPMS Application Client, follow the steps as shown below.

1. If you are installing SPMS Application Client for SPMS Version 8.0.14 or newer, follow the steps below, else skip to step 2.
 - a. Refer to [6.1.A Steps to Install SPMS Application Client for SPMS Version 8.0.14 or Newer](#).
2. If you are installing SPMS Application Client for SPMS Version 8.0.13 or older, follow the steps below.
 - a. Refer to [6.1.B Steps to Install SPMS Application Client for SPMS Version 8.0.13 or Older](#).

6.1.A Installing SPMS Application Client using Single Batch File Execution (Available on SPMS Version 8.0.14 or Newer)

Starting from SPMS Version 8.0.14, SPMS Application Client can be installed with just one command execution and left unattended till the completion of the installation. Additionally, it is also possible now for the user to install both SPMS Application Client for Version 7.0 / 7.30 alongside SPMS Application Client for Version 8.0 without having to escalate the Windows User running the SPMS Application Client to have Windows Administrative privilege. Follow the instructions listed below to install the SPMS Application Client.

1. Download both the SPMS Installer (Refer to [SPMS Installation File](#)) and SPMS Package (Refer to [SPMS Package](#)) to prepare the SPMS 8.0 Application Client Installation Package.

2. To prepare the SPMS 8.0 Application Client Installation Package, copy the SPMSClientInstall folder from the SPMS Package to the C:\Temp folder.

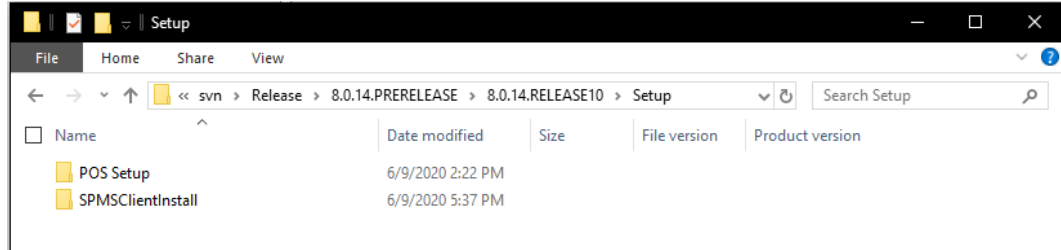


Figure 6-1 - SPMSClientInstall Folder In SPMS Package Setup Folder

3. Then, copy the SPMS Installer (OHC_SPMS_V8Setup.exe) file to the C:\Temp\SPMSClientInstall\Installers folder.

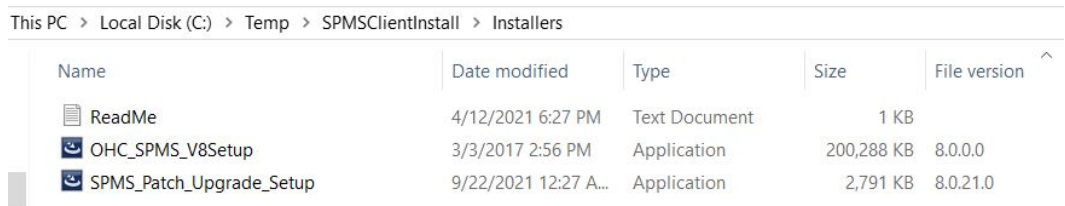


Figure 6-2 - The OHC_SPMS_V8setup.Exe

4. Now, you can copy the SPMSClientInstall folder to any other target machines in order to run the unattended one-step installation.

 **NOTE:**

You will only need to prepare the SPMS 8.0 Application Client Installation Package once. Once you have the package ready, you can remotely copy the package to any target machine and run the one-step SPMS Application Client installation remotely.

5. You can start the unattended one-step installation of the SPMS Application Client by navigating to the C:\Temp\SPMSClientInstall folder.
6. Run the **InstallSPMSApplications.bat** using the Windows Administrative privilege by right-clicking the file and select Run as Administrator.
7. Once processed, the SPMS Application Client installation for Version 8.0 run completely unattended and you will only need to wait for it to complete.

 **NOTE:**

If you intend to run both SPMS Application Client Version 7.0 / 7.30, and Version 8.0 or later on the same machine, you must disable SPMS Version 7.0/7.30 FC Updater from running. Otherwise, FC Updater will interfere with the auto-registration of the SPMS DLLs by the Windows Scheduled Tasks.

8. To disable SPMS Version 7.0 / 7.30, just navigate to the SPMS Installed Folder for Version 7.0 / 7.30 and rename the **“FC Updater.exe”** file to **“FC Updater.exe.bak”**.

9. After installing the SPMS Application Client, a pair of Windows Scheduled Task is created to handle the SPMS DLLs registration automatically.



Figure 6-3 – The scheduled tasks created

NOTE:

The Windows Scheduled Task “OHC Hospitality Cruise SPMS 7.3 Registration” will auto-register SPMS components for SPMS Version 7.30 and below.

The Windows Scheduled Task “OHC Hospitality Cruise SPMS 8.0 Registration” will auto-register SPMS components for SPMS Version 8.0 and above.

Switching between SPMS Application Client Version 7.0 / 7.30 and SPMS Application Client Version 8.0

With the release of SPMS Version 8.0.14, it is now possible to install both SPMS Application Client for Version 7.0 / 7.30 and SPMS Application Client for Version 8.0 on the same machine without having to grant Windows Administrative privilege to the user.

Before SPMS Version 8.0.14, it is only possible to run one version of SPMS and switch to another by manually registering SPMS DLLs, which require Windows Administrative privilege. Starting from SPMS Version 8.0.14, the DLLs registration is now automated. Therefore, the same Windows user no longer requires Windows Administrative privilege to switch between SPMS Versions.

- When switching from SPMS Application Client for Version 7.0 / 7.30 to SPMS Application Client Version 8.0, the Windows Scheduled Task triggers the “Oracle Hospitality Cruise SPMS 8.0 Registration”, thus, automatically registering the required SPMS DLLs, using the Windows SYSTEM privilege.
- Similarly, when switching from SPMS Application Client Version 8.0 to SPMS Application Client Version 7.0 / 7.30, the Windows Scheduled Task triggers the “Oracle Hospitality Cruise SPMS 7.3 Registration”, thereby, automatically register the required SPMS DLLs also by using the Windows SYSTEM privilege.

Switching to SPMS Application Client Version 7.0 / 7.30

1. Run the FC Launch Panel of SPMS Version 7.0 / 7.30.

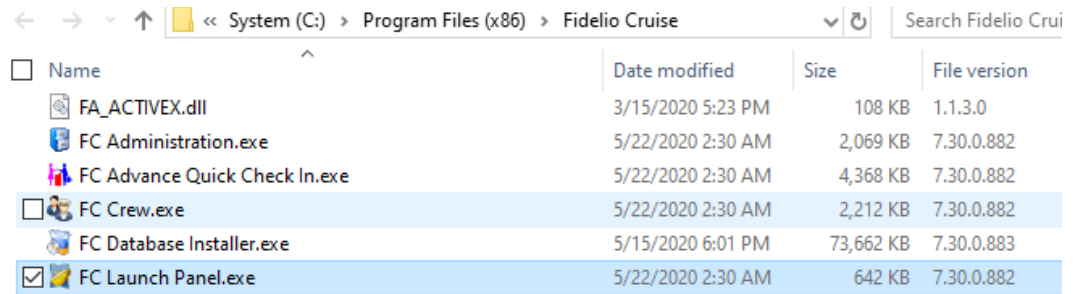


Figure 6-5 - Executing Launch Panel Of SPMS Version 7.0 / 7.30

- Once executed, there will be a prompt as shown below notifying you the process of registering the SPMS DLLs will take place. You are to wait for a next message prompt before proceeding to the next step.

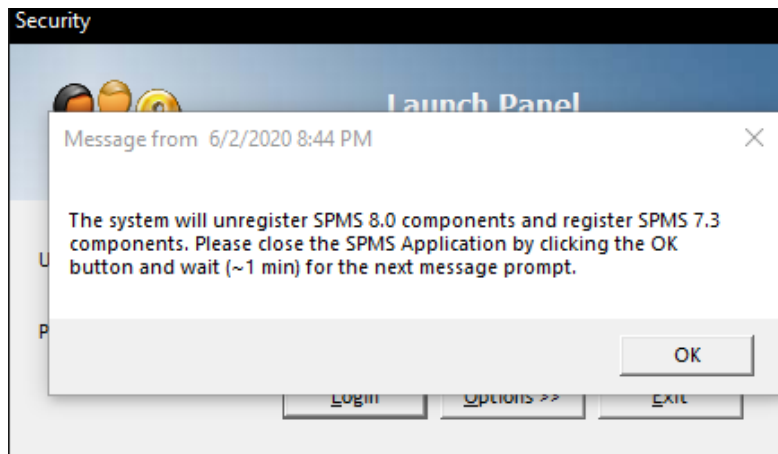


Figure 6-6 - Notification Prompt On Auto-Registration Of SPMS DLLs For Version 7.0/7.30

- Once the registration process completes, a new message prompt will appear as shown below.

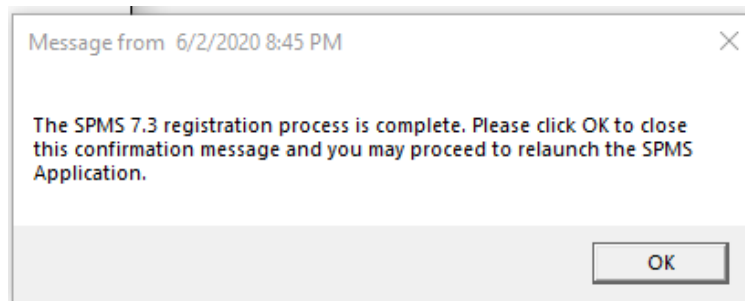


Figure 6-7 – Completion Prompt On Auto SPMS DLLs Registration Version 7.3

- Follow the instructions in the message prompt and relaunch the FC Launch Panel for SPMS Version 7.0 / 7.30.

NOTE:

In the event of non-appearance of the message prompts, we ask that you navigate to the folder `C:\tempDLL` and check if the folder `RegisteredSPMSv7_3` exist.

5. If the folder RegisteredSPMSv7_3 exists as shown below, it means that the SPMS DLLs were successfully registered, and you can relaunch the FC Launch Panel for Version 7.0 / 7.30.

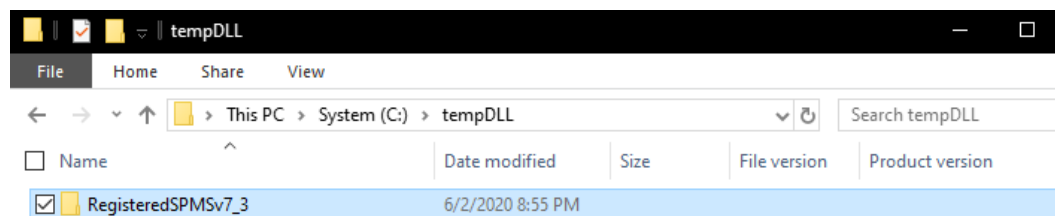


Figure 6-8 - Visibility Of Registeredspmsv7_3 Folder

Switching to SPMS Application Client Version 8.0

1. Run OHC Launch Panel of SPMS Version 8.0, from Oracle Hospitality Cruise folder.
2. Once processed, there will be a prompt as shown below notifying that the process of registering the SPMS DLLs will take place. Click **OK** and wait for a next message prompt before proceeding to the next course of action.

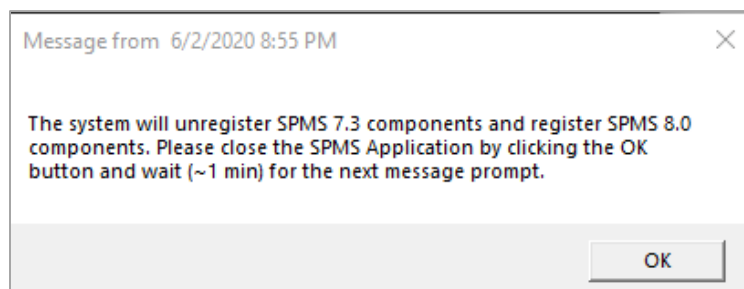


Figure 6-9 - Notification Prompt To Register SPMS DII For Version 8.0

3. Once the registration process completes, a new message prompt will appear as shown below.

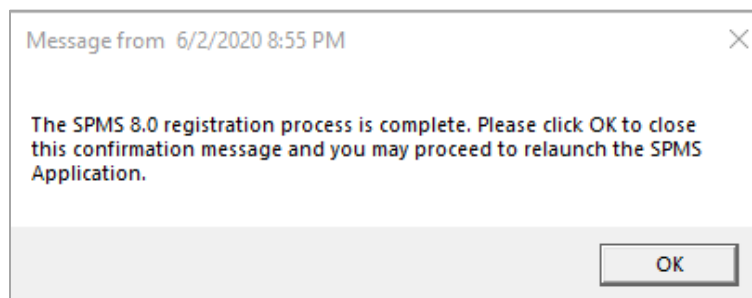


Figure 6-10 - Completion Prompt On Auto SPMS DII Registration Version 8.0

4. Follow the instruction in the message prompt and relaunch the OHC Launch Panel for SPMS Version 8.0.

NOTE:

In the event of non-appearance of the message prompts, we ask that you navigate to the folder `C:\tempDLL` and check if the folder `RegisteredSPMSv8_0` exist.

5. If the folder RegisteredSPMSv8_0 exists as shown below, this means that the SPMS DLLs were successfully registered and you can relaunch the OHC Launch Panel for Version 8.0.

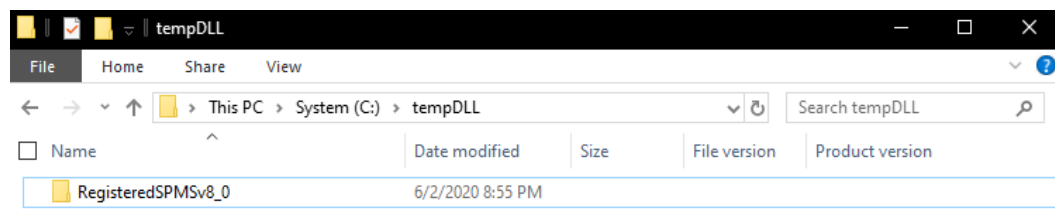


Figure 6-12 – The folder created upon successful registration of SPMS 8.0

Loading DLLs from SPMS Allowlisted Paths

This is another feature introduced by SPMS Version 8.0.14. This will prevent an unscrupulous party from performing a malicious attack on SPMS application through DLLs replacement. By default, SPMS will allow DLLs from:

1. C:\Windows,
2. C:\Program Files,
3. C:\Program Files (x86), and
4. C:\Oracle

Therefore, it is of utmost importance that you ensure the four folders above requires an Administrator level write access.

Should you intend to have an allowlist path other than the listed four, you should create an allowlist file (`path.env`) in the SPMS Installed folder (C:\Program Files (x86)\Oracle Hospitality Cruise).

The format of the allowlist entry path is shown below. Each path is delimited by a semicolon character.

`<AllowlistPath1>;<AllowlistPath2>;<AllowlistPathN>`

You can refer to the SPMSClientInstall folder in the SPMS Package for a sample `path.env` file.

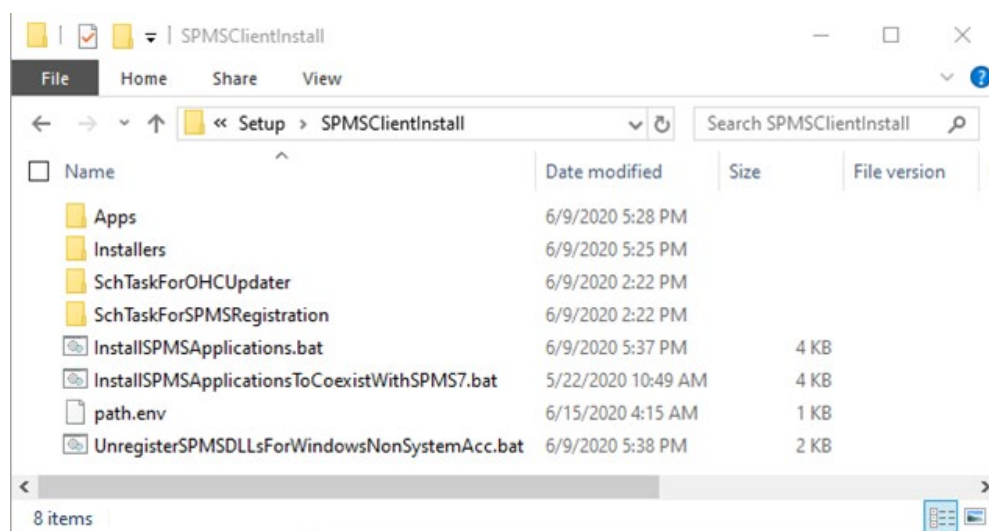


Figure 6-13 - Location Of Sample Path.Env File

Connecting to Different SPMS Databases using Different TNS

With the release of SPMS Version 8.0.14, it is now possible for SPMS Application Client to easily connect to different SPMS Databases using different Database TNS Names. Before SPMS Version 8.0.14, this is restricted by the OHC Tools Database Upgrade process which only recognizes Database TNS Name = FIDELIO. Starting from SPMS Version 8.0.14, it is now possible to perform OHC Tools Database Upgrade using different Database TNS Name.

Now, it is also possible for OHC Tools to create a new Database entry record to the local OHCSecurity.par file using a different Database TNS Name from the actual Database TNS Name used in the SPMS Database Server. With this, SPMS Application Client can connect to SPMS Database using a TNS Name different from the actual Database TNS Name used in the SPMS Database Server.

Adding New Database TNS to the Local OHCSecurity.par

1. Using Windows Administrative privilege, run the command “OHC Tools.exe” /m.
2. This will lead to the screen as shown below.

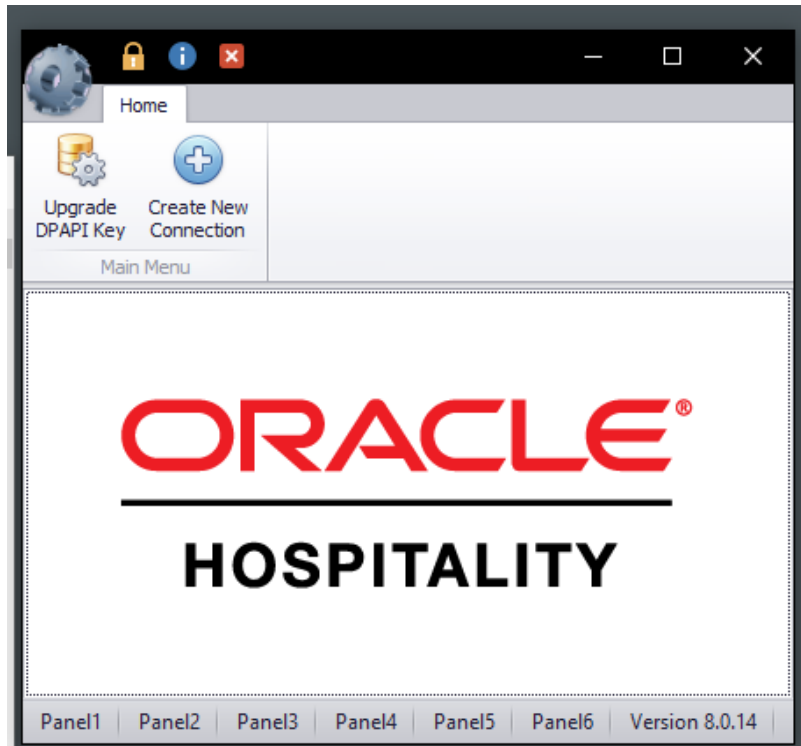


Figure 6-14 - OHC Tools /M Mode Main Screen

3. Click the “Create New Connection” button to create a new Database entry record to the local OHCSecurity.par file using a different Database TNS Name.
4. The examples shown below will create a new DB TNS Name = FIDELIOTEST entry record to the local OHCSecurity.par file for an existing DB TNS Name = FIDELIO connection.

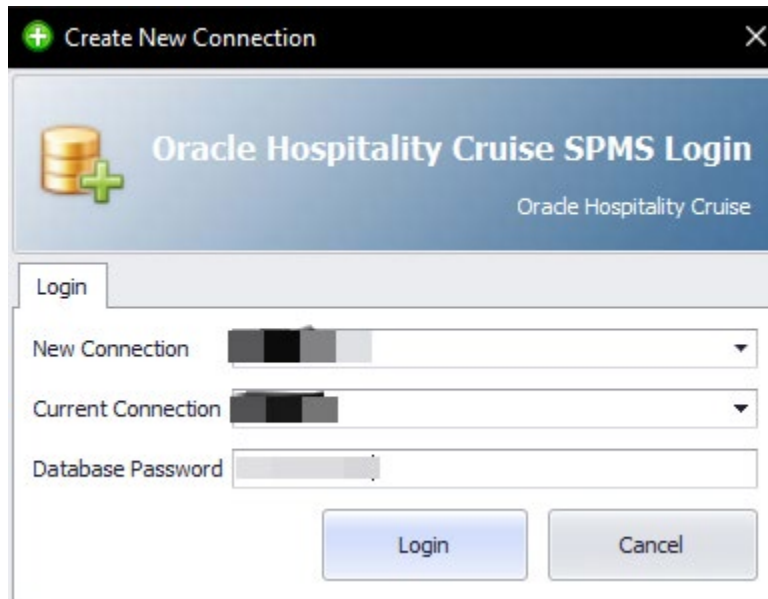


Figure 6-4 - SPMS Database TNS Creation Screen

5. After clicking on the **Login** button, the SPMS User Authorization form as shown below will be shown.

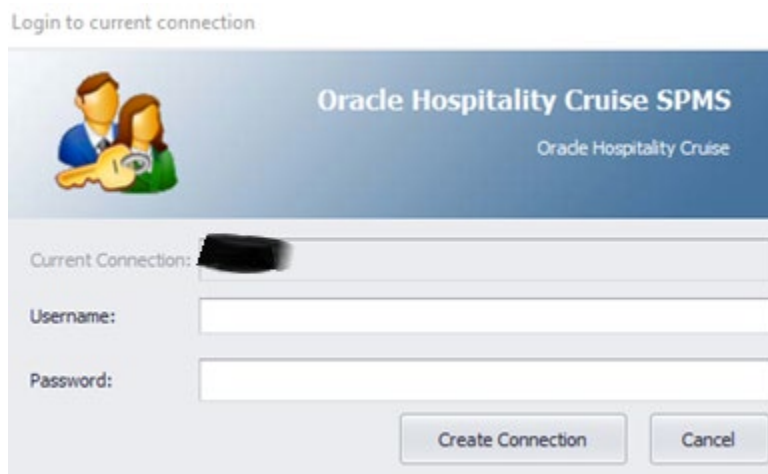


Figure 6-5 - SPMS User Authorization Screen

6. You need to authorize using the SPMS Login credential to create a new Database entry record to the local OHCSecurity.par file using a different Database TNS Name.
7. After the process completes, you can now connect to the same SPMS Database using the new Database TNS Name

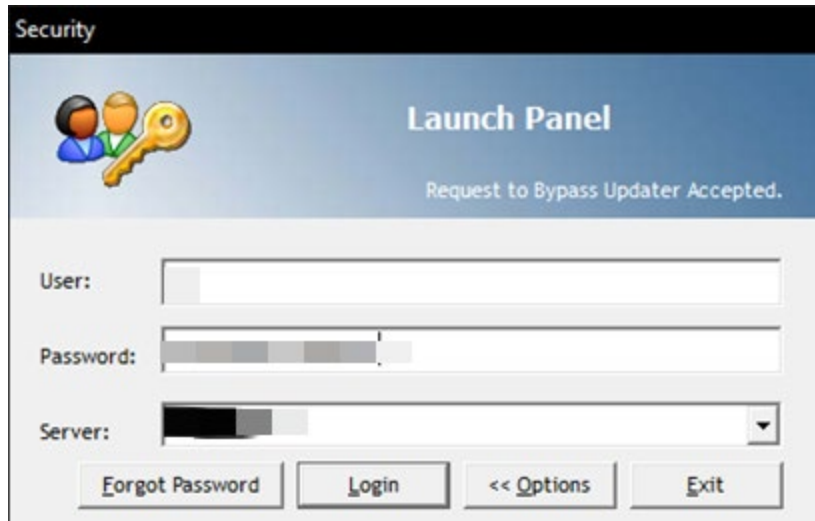


Figure 6.17: User Can Now Login To The SPMS Database Using Another TNS Name

6.1.B Installing SPMS Application Client for SPMS Version 8.0.13 or Older

You can either perform a custom installation or a typical installation. Custom installation allows you to exclude the products that you do not need. If you choose to perform a typical installation, manually remove or disable the features that you do not need after the installation. The installation requires the user performing the installation to have Windows Administrative privilege. Follow the instructions listed below to install the SPMS Application Client.

1. Login as Microsoft Windows Administrative user.
2. Close all programs and return to the Microsoft Windows desktop.
3. Depending on the requirement, you may choose to uninstall the older SPMS version from **Control Panel, Programs and Feature**, and select **FCruiseSetup730**, including the following add-ons, if they exist; **Fidelio Cruise NET2012 Add On and Fidelio Cruise NET2013 Add On**.
4. Download the SPMS Package if you have not. See chapter [Download SPMS Packages](#).
5. Download the SPMS Installer if you have not. See chapter [Download SPMS Installer](#).
6. Copy the SPMS Installer file OHC_SPMS_V8Setup.exe to the folder C:\Temp.
7. Run the SPMS Installer file using Administrator privilege.
8. At the Oracle Hospitality Cruise Shipboard Property Management System – InstallShield Wizard screen, the system prompts a list of components that are missing and install them in the next step. Click **Install** to begin the installation.

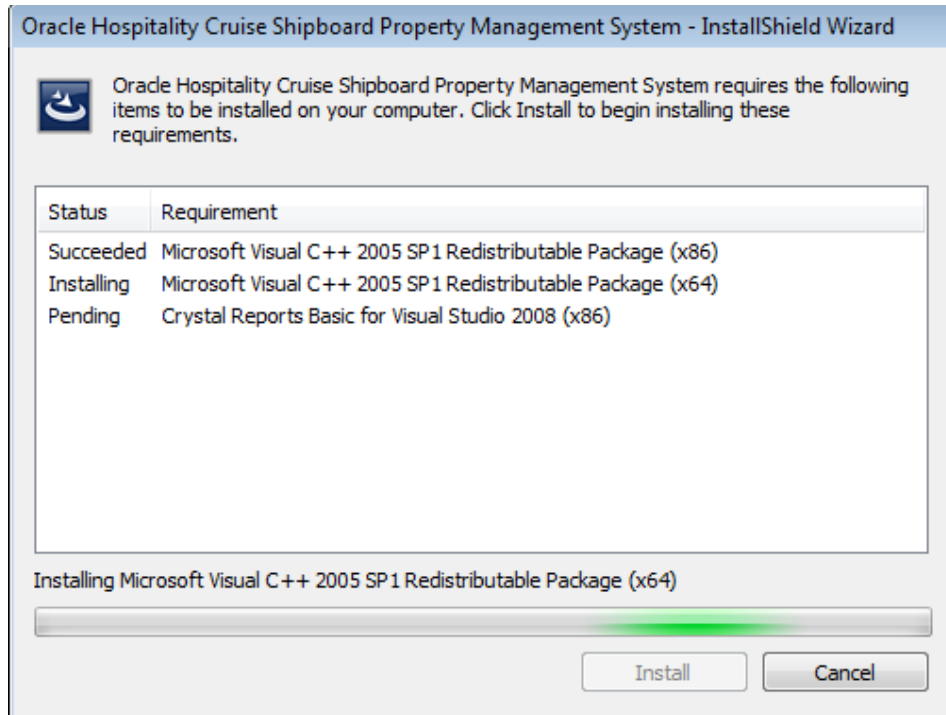


Figure 6-6 - List Of Missing Component In Installation Wizard

9. Once the required components are installed, the program runs the Oracle Hospitality Cruise Shipboard Property Management System.msi and calculates the required disk space. Click **Next** to continue.



Figure 6-7 - Installshield Computing The Required Disc Space

10. At the Destination Folder selection screen, do not change the program path. Click **Next** to proceed with the installation and continue until the install finishes.

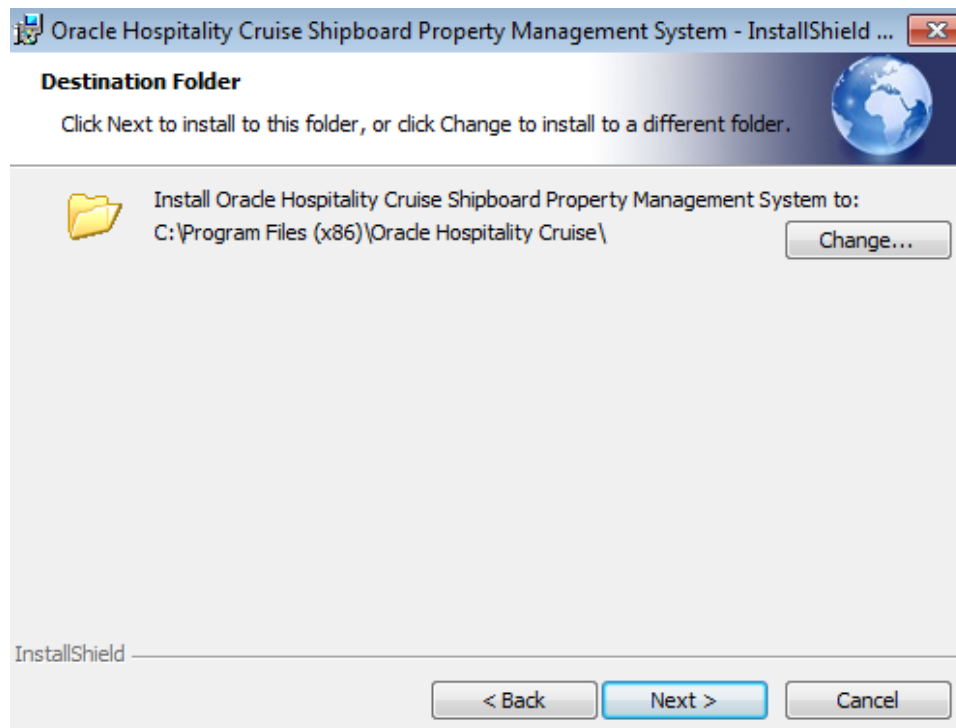


Figure 6-20 - Installshield Default Program Path

11. From the downloaded SPMS Package folder, go to the Setup folder.
12. Copy the SPMS Installer patch file SPMS_Patch_Upgrade_Setup.exe to the folder C:\Temp.
13. Run the SPMS Installer patch file using Administrator privilege.
14. This Patch Upgrade Setup distributes the latest Wrapper.dll and OHC UpdaterAgent.exe, required by the SPMS application and the file resides in OHC SPMS 8.0.x\Setup folder.
15. Right-click the **SPMS_Patch_Upgrade_Setup.exe** and select Run as Administrator.
16. At the Welcome to InstallShield Wizard for Patch_Upgrade_Setup screen, click **Next**.
17. At the Ready to Install the Program screen, click **Install** to begin the installation.
18. At the File in Use screen, the selection is default to 'Automatically Close' and attempt to restart the application, click **OK** and wait for the program to complete the process.
19. Before the InstallShield Wizard Completed screen is shown, two Command prompt screens will pop-up and closes automatically when the process completes.
20. Click **Finish** to close the installation wizard. Once the upgrade patch is applied successfully, the patch upgrade distributes the Wrapper.dll to C:\Program Files (x86)\Oracle Hospitality Cruise and OHC UpdaterAgent.exe to C:\Users\Public\Documents\Oracle Hospitality Cruise folder.
21. Launch the Task Scheduler from your PC.
22. Navigate to **Task Scheduler Local, Task Scheduler Library, Oracle Hospitality Cruise SPMS Updater**. Right-click and select **Properties** and then **Conditions** tab.

Ensure the 'Start the task only if the computer is on AC Power' is unchecked. This is to prevent the application from going into sleep mode or stop when the laptop or mobile tablet operates on battery power.

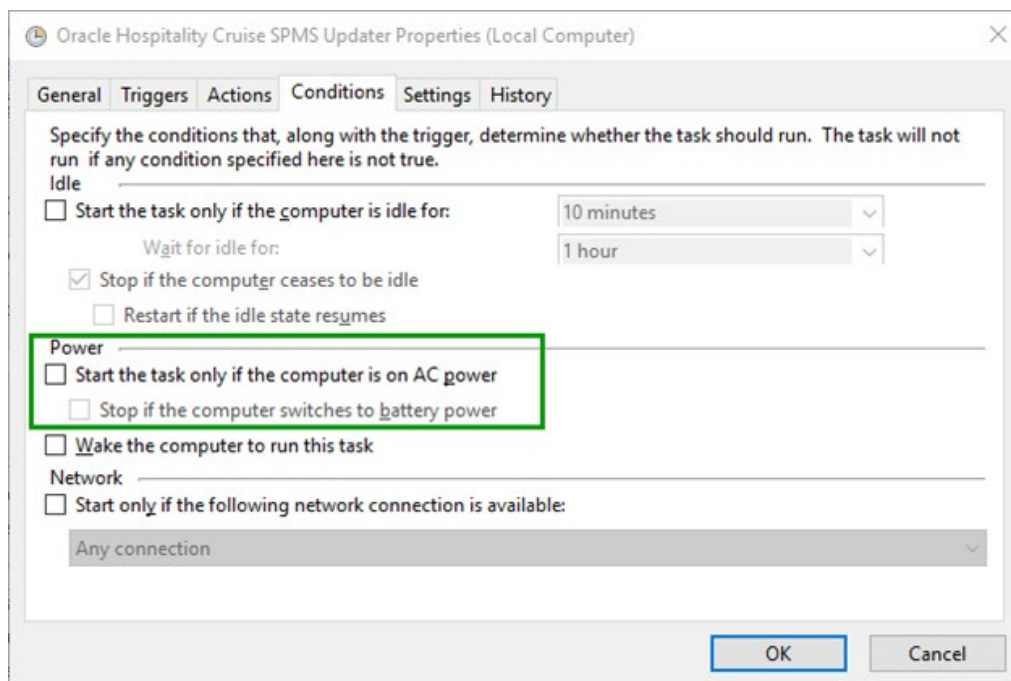


Figure 6-21 - Power Option In SPMS OHC Updater Sheduled Task

23. Navigate to \Program Files\Oracle Hospitality Cruise folder and edit the securelogin.txt by inserting either the IP Address of the IIS Server or IIS Server Name into the file and then save the file.
24. Restart the PC.
25. The system creates a folder in C:\Program Files (x86)\Oracle Hospitality Cruise at the end of the installation and moves the *.xml files to C:\Users\Public\Documents\Oracle Hospitality Cruise folder. The existing FCSettings.par will be moved to C:\Users\Public\Documents\Oracle Hospitality Cruise and renamed to OHCSettings.par.

6.2 Uploading SPMS Applications or Libraries to Database

Follow the instructions listed below to upload the binaries files to the SPMS Database, for OHC Updater to automatically download the latest binaries files on all SPMS Application Client machines. An OHC Updater.ini may be distributed in the package for a patch or hot fix release. It is required by the OHC Updater to ensure the update of the files with same File Version. Occasionally, we may have hot fix release or a patch reupload that may come with same File Version.

1. Navigate to C:\Program Files (x86)\Oracle Hospitality Cruise folder and launch the **Launch Panel** and log in using a 'Bypass Updater', using the **ALT Key + click** on the female user icon.
2. In the Launch Panel program, manually add these SPMS applications and DLL's to the respective group by pressing **F12** and select the group from the drop-down list.

-
- a. For **Utilities** group:
 - i. OHC UpdaterWatchdog.exe
 - b. For System Files group:
 - i. OHCSPMSUI.dll
 - ii. OHCWebSockets.dll
 - c. For REGASM Files group:
 - i. CRUFLFC.dll
 - ii. OHCSPMSData.dll
 - iii. OHCSPMSBusiness.dll
 - iv. OHCSPMSUtils.dll
 - d. Special Applications Files Group
 - v. OHC Updater.ini

 **NOTE:**

You need to upload the OHC Updater.ini to the Special Applications Files group if the file is distributed in the package for a patch or hot fix to be applied.

3. Additionally, at the **Launch Panel, Utilities tab**, update the **Launch Panel, Updater** and **UpdaterAgent** program to the latest executable from the patch set downloaded, by right-clicking the program and select **Properties**, then click **Update file** and **OK** to save.

6.3 Downloading SPMS Applications or Libraries from Database

Follow the instructions listed below to download the latest binaries or files from the SPMS Database to the SPMS Application Client machine.

1. On the target SPMS Application Client machine, log in to **Launch Panel without Bypass Updater** to update all the programs.
2. A program **UpdaterWatchdog** is added to monitor and ensure the **Updater** remains active in the Task Manager, enabling the latest program to be downloaded from SPMS Database. If the Standard User is not able to connect to the Updater, reinstall the SPMS Application Client (Refer to [6.1.A Steps to Install SPMS Application Client for SPMS Version 8.0.14 or Newer](#)).

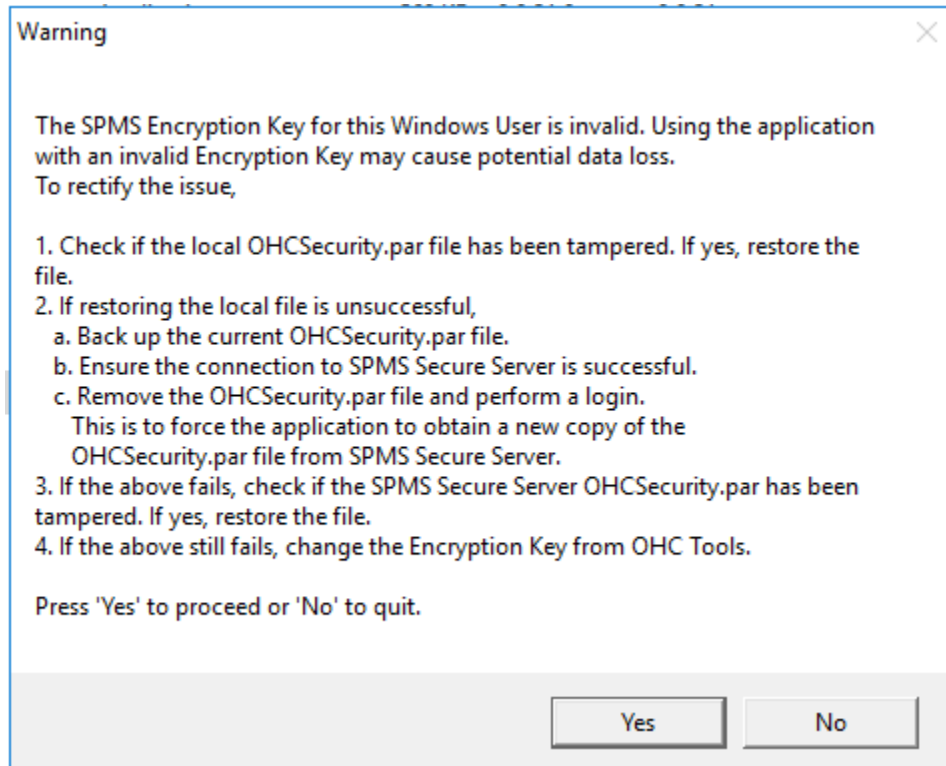
6.4 Converting Credit Card Payment Non-OPI to OPI Tokenization

1. Set up the **OPI Manager**. Refer to [OPI Shipboard Property Management System Installation Guide, Release 19.1](#) at Oracle Payment Interface 19.1.
2. Set up the OPI in SPMS. Refer to OPI Handling guide at Oracle Help Center.
3. Convert the existing credit card records to OPI Token at **Get Token** tab.
 - a. Select profile type and reservation to process.
 - b. Click the **Start** button to start the process.

-
- c. Purge all OPI log files from C:\Users\Public\Documents\Oracle Hospitality Cruise folder.

Working with Invalid SPMS Encryption Key

The SPMS Encryption Key is stored securely at the SPMS Secure Server and SPMS Database. If the system detects the SPMS Encryption Key has been tampered, the application will warn the user that the SPMS Encryption Key is now invalid. The steps to resolve the invalid key are shown on the Warning prompt.



Uninstalling SPMS Application Client

The following section describes the steps to remove the SPMS programs. If you want to completely remove SPMS from your servers, you must manually delete the SPMS database components from the database after uninstalling the application.

1. Open the **Control Panel** and select **Programs, Programs and Features**.
2. Select Oracle Hospitality Cruise SPMS from the program listed.
3. Click **Uninstall** at the menu bar.
4. Follow the instructions prompted on the screen.

Troubleshooting

Login user changed or the user does not exist in OHCSecurity.par.

Run OHC Tools, Change Password and perform password change to copy all the entry with value in OHCSecurity.par to new IIS Server, then login to SPMS application on different client PC to download the OHCSecurity.par from IIS Server.

All Credit Card number displayed is masked.

The issue may be due to the PC connecting to different DB, and that DB password is the same as previously connected DB, resulting in a mismatch encryption key in OHCSecurity.par. Delete the OHCSecurity.par and re-download the file.

Message prompt 'Secure IP Not Found, cannot continue' when running SPMS application

The issue may be caused by SPMS 8.0 application running on database version below 8.0.x, OHCSettings.par is not found in the public folder (where SID <> Fidelio) or securelogin.txt file does not exist or invalid.

Ensure the above files are in place the correct location and exits, and the database is updated, and the <endpoint address> points to the correct web server if the above message prompts in OHCDemoApp.

If the WS server is corrupted, the OHCSecurity.par is no longer valid.

Setup the new IIS Server and connect to the new IIS Server using an existing client PC. Ensure the OHCSecurity.par exists on the client PC. Change the 'securelogin.txt' to point to the new IIS Server, then run OHC Tools, Change Password function to generate a new key.

Interface or OHC Watchdog program failed to run and OHC UpdaterAgent keep initiating.

Ensure the Interface program is uploaded under Interface Files group in XAPP (XAPP_SYSTEMS_FILES =3).

Custom.dic keep downloading from XAPP when file size is 0kb in local PC.

Run Launch Panel to auto-save the Custom.dic file into the Public Documents folder.

Message prompt 'no data found' in OHC Management when performing a guest Check out.

This issue is due to the DB Installer had an issue with the conversion of Point-of-Sale (POS) table from CHAR to VARCHAR2. Ensure you do not End task the DB Installer during an upgrade process.

SPMS program prompts an error 'Due to PA-DSS Compliance...'

The issue is caused by OHCSecurity.par does not exist or does not have the security access rights to download the file. Ensure the Wrapper.dll is the latest version.

SPMS program prompts 'wrong argument' when logging to a module.

Ensure the Wrapper.dll is the correct version and is properly registered.

OHC Updater stops verifying at Wrapper.dll process.

Ensure the Launch Panel is in XAPP table with XAPP_ID=2.

Error 'Unable to initialize database connection. Please contact your System Administrator for assistance. Unable to launch application due to missing login parameters.' where Launch Panel stop at Initializing

The issue may be due to an issue with ODAC installation. Run .NET program to verify

Run VB program hit error 'Object does not support this property type'

Re-register the wrapper.dll using MS-DOS Command
C:\Windows\Microsoft.NET\Framework\v4.0.30319>regasm "C:\Program Files
(x86)\Oracle Hospitality Cruise\wrapper.dll".

Error 'Failed to connect to Updater Scheduled Task; Trying to connect to OHC Updater' when launching OHC Launch Panel without Bypass Updater

The system creates a scheduled task in Task Scheduler with Oracle Hospitality Cruise SPMS Updater. Verify that the Oracle Hospitality Cruise SPMS Updater is running in the Task Scheduler by navigating to Control Panel, Administrative Tool, Task Scheduler.

If the Task is not created, manually create the task by running the 'createtask.bat' follow by 'runtask.bat' from Oracle Hospitality Cruise program files folder.

Message prompt "The database which has been specified....This could be because the service is too busy or because no endpoint was found..."

This may be due the IIS is not available. Reset the IIS or browse the IIS Server from IE to check the availability

Ensure Port 443 is added in the Window Firewall. Try to define IP or Server Name in SecureLogin.txt.

Message prompt "Failure Open File"

This is caused by Oracle Wallet. Ensure the Net Manager is connected to DB successfully. Ensure the wallet folder has granted IIS_USER.

Error from WS - HTTP binding error

This is due to OHCSecurity.par is either missing or invalid.

Error "Session Expired. Invalid username and password when connect to database or web server"

Ensure the OHCSecurity.par is correct in both IIS and local client PC

Error "Fidelio The type initializer for 'Oracle.DataAccess.Client.OracleConnection' threw an exception' when logging into the OHC Launch Panel or OHC Tools.

Ensure checkbox "Configure ODP.NET and/or Oracle Providers for ASP.net at machine-wide level" is tick while installing ODAC.

Error "Session Expired. Error connecting to xx. Invalid username / password. logon denied."

Run the SQL statement to alter the case sensitivity.

7 Setting Up SPMS QCI Offline Operation

There is a feature in SPMS that allows the shore-side client machines to continue to operate in real-time, even in an off-line mode where there is no connection to the shipside SPMS Database Server .

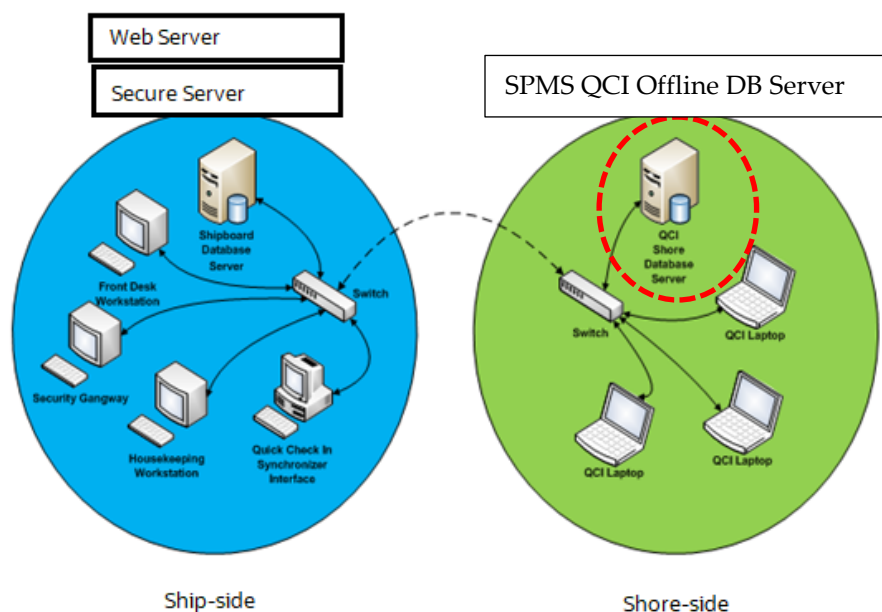


Figure 7-1 – SPMS QCI Offline Operation Diagram

To support this, you must place an additional Database Server the shore-side, as depicted in the diagram above. On the shore-side, only the Database Server is required. The SPMS Web Server and Secure Server is not needed on the shore-side.

Prerequisites

- The version of Oracle Database Edition of the QCI Shore database and Ship database must be identical. For example; if the ship is running on Oracle 12c R2 then the shore QCI database must also run on Oracle 12c R2.
- Both the Ship database and the QCI Shore database password must be identical. If a different password is used, the connection will show 'Disconnected'.
- On the Shore side, the TNS name used to reference the QCI Shore database must be identical to the TNS name used on Ship side to reference the Shipboard database.

Setting Up QCI Shore Database

To set up the QCI Shore database, refer to [Setting Up SPMS Database Server](#). The steps are similar to the set up of the ship side SPMS Database. When setting up the QCI Shore Database, the TNS name used to point to the QCI Shore Database must be the same as the TNS name used on the ship side to point to the shipboard SPMS Database. This is

important because the SPMS clients on the shore-side need to get the database password from the Secure Server hosted on the ship-side when there is network connectivity prior to going offline. This also explains why the QCI Shore database password and Ship database password have to be the same.

 **NOTE:**

When referencing to the database on the shore-side, use the same TNS name that is used by the ship application to reference the database on the ship-side. For example, if the TNS name “SPMSv8DB” is used on the ship side to reference the Ship database, then the same TNS name “SPMSv8DB” must be used on the shore side to reference the QCI Shore database.

Use the same Database user password for QCI Shore database and ship Database. With this, any QCI laptop can get the database password from the Secure Server on ship-side when there is network connectivity. This is also why the TNS Name used on ship side and shore side have to be the same.

Setting Up QCI Shore SPMS Application Client

Referring to Figure 7-1, the QCI laptops must connect to the QCI Shore Database to operate. To set up the QCI Shore SPMS Application Client, refer to [Setting Up SPMS Application Clients](#). When setting up, the TNS name used to point to the QCI Shore Database must be the same as the TNS name used on the ship side to point to the shipboard SPMS Database. On the SecureLogin.txt file, the IP of the Secure Server on ship-side must be added. With this, QCI laptop will request database password from the Secure Server of the ship if it has not got a copy of the database password stored on the local DPAPI protected OHCSecurity.par file. Prior to going offline, when there is network connectivity, the user should ensure that the database password is stored on the local DPAPI protected OHCSecurity.par file.

 **NOTE:**

SPMS Application Client on the QCI laptops are capable of connecting to multiple Databases, whether hosted on shipside or shoreside. You can setup the TNS for each of the Database by using the OHC Tools. Refer to:

[Connecting to Different SPMS Databases using Different TNS](#)

Setting Up Ship Side QCI Synchronization Interface

Referring to Figure 7-1, on the ship side, there is a machine dedicated to run QCI Synchronization Interface. To set up the QCI Synchronization Interface, refer to [Setting Up SPMS Application Clients](#). The SPMS QCI Synchronization Interface requires connection to both the Ship database and QCI Shore Database. Therefore, the TNS Name used for Ship database and QCI Shore Database must be different in this local machine.

8 Verifying SPMS Setup

After installing all the necessary SPMS components, verify that the SPMS set up to ensure every component is working as intended.

Verifying SPMS Secure Server

1. From one of the SPMS Application Client machine, navigate to its SPMS Public Document folder (C:\Users\Public\Documents\Oracle Hospitality Cruise).
2. Backup and remove the OHCSecurity.par on the SPMS Application Client machine.
3. Navigate to the SPMS Installed Folder (C:\Program Files (x86)\Oracle Hospitality Cruise).
4. Locate the file SecureLogin.txt.
5. Set the IP address or machine name of the SPMS Secure Server as the content of the SecureLogin.txt.
6. After that, attempt to login to OHC Launch Panel from the same SPMS Application Client machine. If SPMS Secure Server is working as intended, you will see a new local OHCSecurity.par file on the same SPMS Application Client machine and also the login to the OHC Launch Panel will be successful.

Verifying SPMS WebServices

1. From the SPMS Web Server, navigate to C:\inetpub\wwwroot\OHCWebServices folder.
2. Check the web.config file to ensure that the SecureLogin is pointing to the correct SPMS Secure Server.

```
<appSettings>
  <add key="Server" value="<DB_TNS_NAME>" />
  ...
  <add key="SecureLogin" value="<SECURE_SERVER_NAME>" />
</appSettings>
```

3. Test an SPMS login command by using POST method with JSON structure.

The screenshot shows a web client interface. At the top, there is a dropdown menu set to 'POST' and a text input field containing the URL 'https://localhost/OhcWebServices/OhcWebServices.asmx/FidelioSPMSWSJSONPost'. Below this, there is a section for 'Headers' with a toggle for '8 hidden'. A table below the headers shows the following configuration:

KEY	VALUE
<input checked="" type="checkbox"/> Content-Type	application/json

The screenshot shows a REST client interface with the following tabs: Params, Authorization, Headers (9), Body (selected), Pre-request Script, Tests, and Settings. Below the tabs, there are radio buttons for content types: none, form-data, x-www-form-urlencoded, raw (selected), binary, GraphQL, and JSON. The main area displays a JSON request body with the following structure:

```
1 {  
2   psFunction: 'Login',  
3   psSessionID: '',  
4   psParam: [ ' ', ' ' ]  
5 }  
6
```

4. If you can log in successfully, this means SPMS WebServices is hosted correctly and able to connect to SPMS Database.

9 Appendices

Oracle Database Client and ODAC Installation

SPMS Application Clients and SPMS Web Servers are database clients. They need to connect to the SPMS Database to operate. As such, the installation of Oracle Full Client and ODAC setup is required.

Where to Download Oracle Database Client

1. For instructions, download a copy of the installation manual from the official Oracle Help Center website at <https://docs.oracle.com/en/database/> and refer to the manual for steps to install.
2. Similarly, to install the Oracle Database Setup file, refer to the website at <https://www.oracle.com/database/technologies/instant-client/downloads.html> and download the appropriate Microsoft Windows installation file.
3. Alternatively, you could obtain a specific setup file from Oracle Support/DBA. For example, these are some of the installers made available:
 - OracleClientSetup_12102_FULL.exe and ODTwithODAC121021, or
 - OracleClientSetup_12201_FULL.exe and ODTwithODAC122011, or
 - OracleClientSetup_12201_FULL_ODAC_v1.exe

How to Register Oracle Database Client DLLs to the Local Environment

The Oracle Database Setup file downloaded officially from Oracle website will not automatically register the DLLs above to the local client. Oracle provides a tool (OraProvCfg.exe) to help user to register DLLs. Refer to the link at https://docs.oracle.com/cd/E71422_01/doc.212/E72234/index.htm?toc.htm?207666.htm for instructions to register DLLs. However, the specific Setup file from Oracle Support/DBA will normally register DLLs automatically.

For SPMS to be able to connect to the Oracle Database, the Oracle Database Client DLLs must be registered to the local client. The DLLs that must be registered are:

- Oracle.DataAccess.dll
 - Folder: ORACLE_HOME\odp.net\bin\2.x
- All DLLs under PublisherPolicy folder: Policy.X.XXX.Oracle.DataAccess.dll
 - Folder: ORACLE_HOME\odp.net\PublisherPolicy\2.x
- Oracle.ManagedDataAccess.dll
 - Folder: ORACLE_HOME\odp.net\managed\common
- All DLLs under PublisherPolicy folder: Policy.X.XXX.Oracle.ManagedDataAccess.dll
 - Folder: ORACLE_HOME\odp.net\managed\PublisherPolicy\4

 **NOTE:**

To establish a Database connection using Oracle Net Manager, follow the steps below:

1. Once the Oracle Client installation is successful, launch the Oracle Net Manager to establish the connection between the Database Client and Database Server.
2. When installing the ODAC, ensure the following components for Oracle 12c are installed:
 - Oracle Data Provider for .NET
 - Oracle Providers for ASP.NET
 - Oracle Services For Microsoft Transaction Server

Definition of SPMS Seed Database

An SPMS Seed Database is a template database imported from a suitable Database DMP file. As in SPMS 7.30 and prior, a new database setup has always been a process of importing from a suitable Database DMP by DBA and then the new database will undergo a purge process (FCSPMS_Clean_UP.SQL) to ensure the database is empty. Similarly, for SPMS 8.0 and above, a new database template will follow the same process in SPMS 7.30. A suitable Database DMP will be chosen and then the data will be purged to ensure the database is empty.