Oracle® Secure Payment Gateway for HIS Profit Series

SQL Server Upgrade Procedures

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ORACLE

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Preface

This document contains instructions to upgrade the Microsoft SQL Server 2005 Express instance utilized by the Secure Payment Gateway (SPG) to Microsoft SQL Server 2008 Express.

Audience

This document is intended for customers upgrading from SQL Server 2005 Express to SQL Server 2008 Express.

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/

Revision History

Date	Description of Change
November 2015	• Initial publication
February 2016	• Updated
May 2016	• Updated process using the 32-bit procedure

1 Upgrade Overview

The upgrade instructions in this document are based upon a standard installation of the SPG where a single Manager (SPGM) and multiple Agents (SPGA and ESPGA) are installed. The upgrade of the high availability server instance (HA_SPGM) is not supported.

The following procedure is using the 32-bit procedure & applications and is approved for both 32-bit & 64-bit Operating Systems. The instructions are based upon the upgrade of the SPGM on a Microsoft Windows 7 32bit machine. The steps may vary depending on the local operating system.

2 Prerequisite Steps

Before starting the upgrade process, the local environment must be operating the following software application versions:

- Profit Series 8.12
- Secure Payment Gateway 1.2.0.3b

The following applications may be needed to complete this task. It is recommended that you save these files first to save time. Ensure that you obtain the correct installation file to support your 32-bit or 64-bit operating system.

- **Windows Installer 4.5**
  https://www.microsoft.com/en-us/download/details.aspx?id=8483
- **.NET Framework 3.5 SP1 (Full)***
  - It's recommended that you download this even though it should be packaged with SQL 2008
  - This package is also included in any version of Windows Server 2008 R2 and needs to be activated in Computer management.

  https://www.microsoft.com/en-us/download/details.aspx?id=22
- **SQL Server Express 2008 with tools (Full)**
  https://www.microsoft.com/en-us/download/details.aspx?id=22973
- **SQL Server 2008 Management Studio Express**
  https://www.microsoft.com/en-us/download/details.aspx?id=7593
- SQL Server 2008 Service Pack 1
  https://www.microsoft.com/en-us/download/details.aspx?id=20302
- **SPG 1.2.0.3 Key Rotation Files**
  A copy of the key rotation files is included with the upgrade package. Please contact your Oracle representative for assistance.

3 Pre-Upgrade Steps

Prevent Transaction Activities

Oracle Hospitality recommends that no one uses the system during the upgrade procedure including testing the upgrade to ensure the system is functional.

Stop Services

1. From the POS/SPG machine, open the **Control Panel**
2. Select **Administrative Tools**
3. Select **Services**
4. From the Services form, complete the following on each of the Services listed:
    - CCardInt: Stop the service
    - HSI ExternalSPGAgent: Stop the service & set the Service Startup Type to **Disabled**
    - HSI SPGManager: Stop the service & set the Service Startup Type to **Disabled**
    - PMS Gateway (if applicable): Stop the service
    - POS Terminal Manager: Stop the service

Prepare Data

Complete the following data preparation activities before proceeding.

Virtual Environments

If you are running a Virtual Environment, it's recommended that you take a Snapshot before continuing. This is not required but a good safety step for quick recovery if needed.

DB Backup

A full backup of the SPGManager_v1.2.0 database is required. On the server, create a new folder titled SPG_Backup on a drive with space available. This folder will contain the backup of the database and log files for the SPG.

1. Open SQL Server Management Studio.
2. Expand **Databases**.
3. Right-click the **SPGManager_v1.2.0** database, select **Tasks** and **Backup**.
4. Change the backup destination to the SPG_Backup folder, and then name the backup "*HSI_SPG_DB_Backup.bak*"
5. On the Options tab, enable **Verify backup when finished**.
6. Click **OK** to back up the DB.

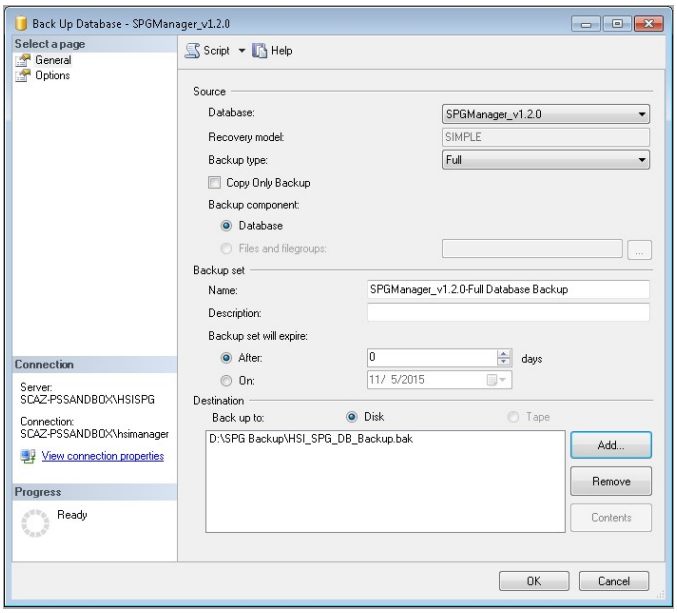

Figure 1 - Back Up Database Window

Back Up SPG

A backup of the SPG Manager is needed in case of recovery. Copy the following folder, subfolders, and files to the backup folder:

- C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\SPGPrimaryManager\SPGM0

Clean Up Log Files

Delete all existing log files in the following directories to provide a fresh set of logs for review after the upgrade is complete:

- C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\SPGPrimaryManager\SPGM0\Log
- C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\SPGExternalAgent\ESPGA[nnnn]\Log
- C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\SPGAgent\SPGA[nnnn]\Log

Prerequisite Installation

You must install the following prerequisites and ensure that they are operational before proceeding with the upgrade.

- Windows Installer 4.5
- Windows Installer is required to execute the installation of the SQL Server Express 2008 installation file. Follow the installation wizard steps for this application. The installer may find that the same or a more current version of Windows Installer exists on the local machine. If so, cancel the installation and move to the next step.
- .NET Framework 3.5 SP1

- .NET Framework 3.5 SP1 or greater is required to properly execute the installation of the SQL Server Express 2008 installation file. Follow the installation wizard steps for this application. The installer may find that the same or a more current version of .NET Framework exists on the local machine. If so, cancel the installation and move to the next step.

4 Upgrade Steps

SQL Server Upgrade

The following steps define the process of upgrading SQL Server Express 2005 to SQL Server Express 2008. Verify that you have the correct Install file for your Operating system, otherwise the install will fail.

Launch Installer

1. Locate and execute the SQL Server Express 2008 Setup executable file as an administrator on the local machine.
2. On the Installer form, select **Installation** and **Upgrade from SQL Server 2005**.
3. When the Installer is launched, you should see the following:
   - On the Setup Support Rules page, confirm there are no failed rule validations:
   - If an issue was found, correct the issue before proceeding.
   - If no issues were found, click **Next** to continue.

Install Setup Files

A window opens and prompts you to set up the support files required to upgrade SQL Server.

1. On the Product Key page, click **Next**.
2. Select **I accept the license terms** and click **Next**.
3. On the Setup Support Files page, click **Install**.

Upgrade

After the support files are installed, define the items that will be upgraded.

1. On the Setup Support Rules page, confirm there are no failed rule validations:
   a. If an issue was found, correct the issue before proceeding.
   b. If no issues were found, click **Next** to continue.
2. On the Select Instance page, select the **HSISPG** instance and click **Next**.
3. When prompted for user, Default SA user or SPG user works fine.
4. On the Select Features page, click **Next**.
5. On the Instance Configuration page, click **Next**.
6. On the Disk Space Requirements page, confirm there are no failed rule validations:
7. If a disk space issue was found, correct the issue before proceeding,
   a. If no disk space issues were found, click **Next** to continue.
8. On the Error and Usage Reporting page, ensure that all options are disabled and click **Next**.
9. On the Upgrade Rules page, click **Next**.
10. On the Ready to Upgrade page, click **Upgrade**.

11. On the Upgrade Progress page, click **Next** after the upgrade is complete.
12. On the Complete page, click **Close**.

SQL Server Management Studio Installation

The SQL Server Management Studio cannot be upgraded from 2005 to 2008 and must be installed.

Uninstall 2005 Management Studio

You must uninstall the SQL Server Express 2005 Management Studio before you can install the SQL Server Express 2008 Management Studio.

1. Open the Control Panel.
2. Open the Uninstall a Program module.
3. Select **Microsoft SQL Server 2005 Management Studio (v.9)**, and click **Uninstall**.
4. Follow the instructions to uninstall, if prompted.

Restart Server

Restart the server before proceeding.

Launch Installer

1. Launch the installation by opening the downloaded Management Studio Express installation file.
2. On the Installer form, select **Installation** and click **New SQL Server stand-alone installation or add features to an existing installation**.

Install Setup Files

A window opens and prompts you for the setup support files required to install the SQL Server Express 2008 Management Studio. On the Setup Support Files page, click **OK** and **Install**.

Install 2008 Management Studio

After the support files are installed, define the items to install.

1. On the Setup Support Rules page, confirm there are no failed rule validations:
   - If an issue was found, correct the issue before proceeding.
   - If no issues were found, click **Next** to continue.
2. On the Installation Type page, select **Perform a new installation of SQL Server 2008**, and click **Next**.
3. On the Product Key page, click **Next**.
4. Select **I accept the license terms** and click **Next**.
5. On the Feature Selection page, select **Management Tools – Basic** and click **Next**.
6. On the Disk Space Requirements page, confirm there are no failed rule validations:
   - If a disk space issue was found, correct the issue before proceeding.
   - If no disk space issues were found, click **Next** to continue.

7. On the Error and Usage Reporting page, ensure that all options are disabled and click **Next**.
8. On the Installation Rules page, click **Next**.
9. On the Ready to Install page, click **Install**.
10. On the From the Installation Progress page, click **Next** after the installation completes.
11. On the Complete page, click **Close**.

NOTE: SQL Management Studio may require SQL Server 2008 Service Pack 1 to function. This may be dependent on Operating System. If required, apply SQL Server 2008 Service Pack 1.

5 Post-Upgrade Steps

Update SPG

The following steps explain the process of updating and restarting the SPG after the SQL Server upgrade.

Update Manager Service

To update the HSI SPGManager service:

1. From the POS/SPG machine, open the Control Panel.
2. Select **Administrative Tools**, and then select **Services**.
3. On the Services form, locate the **HSI SPGManager** service.
4. Change the startup type of the service to **Automatic** and click **Save**.
5. Start the service.
6. Verify that the service has started and the SPGM is operational:
    - Navigate to C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\SPGPrimaryManager\SPGM0\Log. If an error occurred during startup of the manager, an error log appears in this folder.
    - Review the log for information about what issues might be preventing the manager from starting.
    - If you need assistance, please contact Oracle Support.

Update External Agent Service

To update the HSI SPGExternalAgent service:

1. From the POS/SPG machine, open the Control Panel.
2. Select **Administrative Tools**, and then select **Services**.
3. On the Services form, locate the **HSI SPGExternalAgent** service.
4. Change the startup type of the service to **Automatic** and click **Save**.

Rotate Keys

To rotate the data and master keys utilized by the SPG:

1. Copy the SPG 1.2.0.3 Key Rotation folder that was provided as part of the upgrade package to the C:\Program Files\HSI\Secure Payment Gateway\v1.2.0.3\ directory on your machine.
2. Open the SPG 1.2.0.3 Key Rotation\Bin folder.
3. Run the **SPG 1.2.0.3 Key Rotation – Data** shortcut as an administrator.
4. Open the C:\Program Files\Secure Payment
5. Gateway\v1.2.0.3\SPGPrimaryManager\SPGM 0\Log\System Log file and look for confirmation that the Data key was successfully rotated.

```
MESSAGE: KEY ROTATION: SUCCESSFULLY ROTATED DATA KEY
SECUREPAYMENT.
```

1. Return to the SPG 1.2.0.3 Key Rotation\Bin folder.
2. Run the **SPG 1.2.0.3 Key Rotation – Master** shortcut as an administrator.

3. Open the C:\Program Files\Secure Payment Gateway\v1.2.0.3\SPGPrimaryManager\SPGM 0\Log\System Log file and look for confirmation that the Master key was successfully rotated.

```
MESSAGE: KEY ROTATION: SUCCESSFULLY ROTATED MASTER KEY.
```

4. Restart the server machine

Restart Applications

After the SQL Server has been upgraded and the SPG updated, restart the application and confirm that all applications are functional.

Power Up Workstations

Power up all workstations that are utilized by the POS application. The SPG Agent on the workstation automatically updates with the new encryption keys.

Verify Agent Connectivity

There are two ways to confirm that the SPG Agent successfully connected with the SPG Manager:

1. Access an area of the POS that requires you to swipe a card (log on). If you can access the area, the card swipe was successfully processed by the SPG Agent.
    - This is only valid for properties that have enabled the use of card swipe access.
2. Authorize a credit card and manually enter the number 4444333322221111 with an expiration date in the future. If you receive an error indicating an authorization failure or invalid card, the local agent properly communicated the information to the manager.

- You can see issues that arise on the local workstation in the C:\Program Files\Secure Payment Gateway\v1.2.0.3\SPGAgent\SPGA{nnnn]\Log\System Log or Error file located on the file server. You can find a local copy of the log in the same path on the workstation.