Oracle® Hospitality Simphony

Installation Guide
Release 2.9 and Later
E69881-11

August 2018

ORACLE

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Preface

Audience

This installation guide is intended for installers, programmers, technical support teams, product specialists, and others who are responsible for setting up Oracle Hospitality Simphony version 2.9.3.

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
October 2016	• Initial publication
October 2016	• Updated post-installation instructions
January 2017	• Updated to include instruction for the Simphony 2.9.1 release
February 2017	• Corrected version number on cover page
April 2017	• Updated Unicode configuration in the Installing Oracle Database 11g or 12c section • Added a reference to the Oracle Hospitality Reporting and Analytics 9.0 Installation Guide in the Pre-Install Reporting and Analytics Installation Requirements section
May 2017	• Corrected Chapter 2 Page number formatting issues
July 2017	• Updated for the Simphony 2.9.2 release
December 2017	• Updated Chapter 3 (Install changes) and Chapter 5 (Upgrade changes) for the Simphony 2.9.3 release
February 2018	• Updated Chapter 2 Installing Microsoft IIS section and replaced Chapter 3's Figure 3-4 graphic

July 2018	• Corrected the support for Microsoft SQL Server 2012
August 2018	• Updated Chapter 2 Installing Microsoft IIS section

1 Getting Started

This guide provides instructions on how to install, upgrade, and configure Simphony version 2.9.x or later.

With this release, users must install Reporting and Analytics (R&A) first and separately from Simphony using the Back Office R&A installation application. For upgrades from previous versions, users must upgrade to Reporting and Analytics version 8.5.1 Patch 3 or install R&A version 9.0 prior to installing or upgrading to Simphony version 2.9.2.

Installation Process

1. **Select the appropriate deployment scenario**

   Prior to installation and configuration, you need to determine which deployment scenario meets your requirements. See Deployment Scenarios for more information.

2. **Install the database server application**

   You need to install one of the following database platforms prior to installing Simphony application components:

   - Oracle Database 11g
   - Oracle Database 12c
   - Microsoft SQL Server 2008 R2
   - Microsoft SQL Server 2012

3. **Upgrade or install Simphony**

   You can run the Simphony version 2.9 or later installation application to upgrade Simphony, to perform a clean installation, or to install and add application servers.

   See Upgrading from a Previous Release and List of Simphony Components and Services for more installation information.

4. **Configure post-installation settings**

   The post-installation configuration ensures that the application components and the database are configured correctly.

5. **Verify the installation**

   Perform the verification step to ensure that the Simphony application and the database applications are set correctly.

6. **Troubleshooting**

   Follow the instructions in this section to resolve common problems you might encounter when installing Simphony version 2.9 or later.

Deployment Scenarios Using R&A version 9.0 and Later

Installing Application Components and Databases on Two Servers

You can install the Simphony and R&A databases along with the Simphony components on one server and the R&A components on another server.

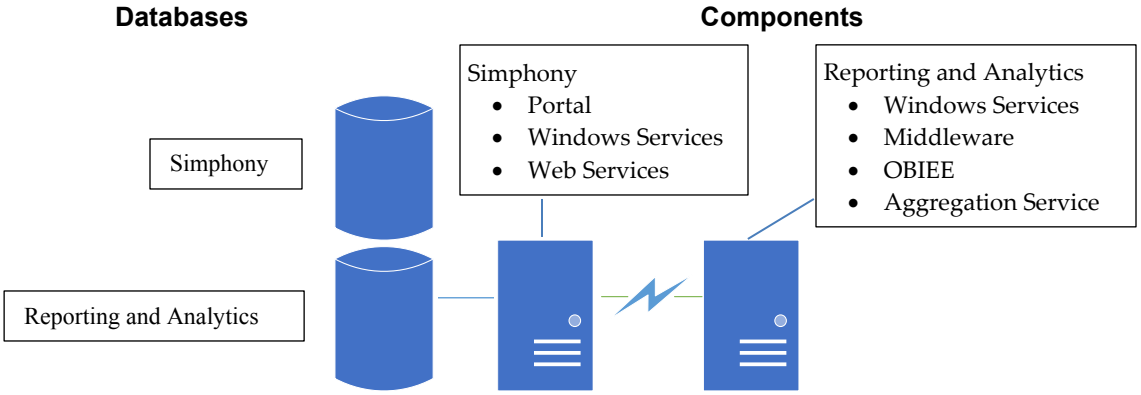

Figure 1-1 Example of Application and DB Components on Different Servers

Installing Both Application Components and Databases on Separate Servers

You can install the Simphony and R&A components and each application's database on separate servers.

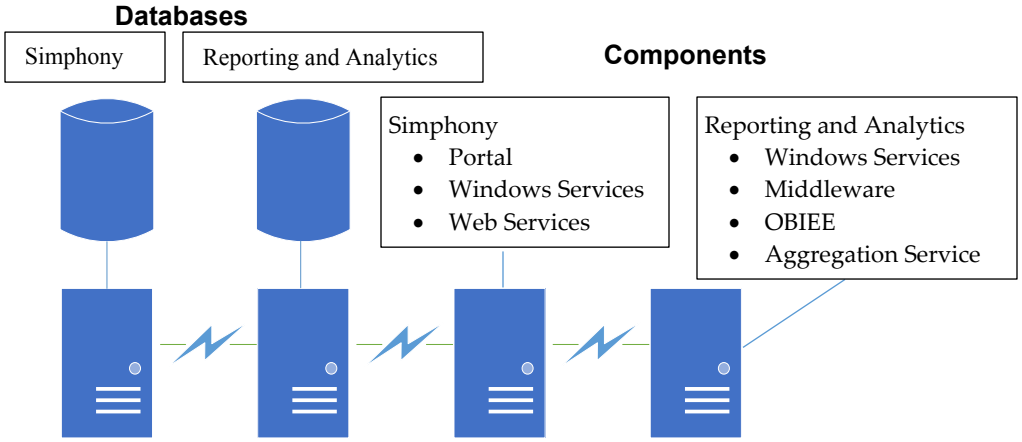

Figure 1-2 Example of Application and DB Components on Separate Servers

Deployment Scenarios Using R&A version 8.5.1

Installing All-In-One

With an all-in-one installation, you install the Simphony and Reporting and Analytics (R&A) databases and the Simphony and R&A components on one server. If using an all-in-one installation scenario, Oracle Hospitality recommends that you install the Simphony application on a separate partition from where the Microsoft Windows operating system resides.

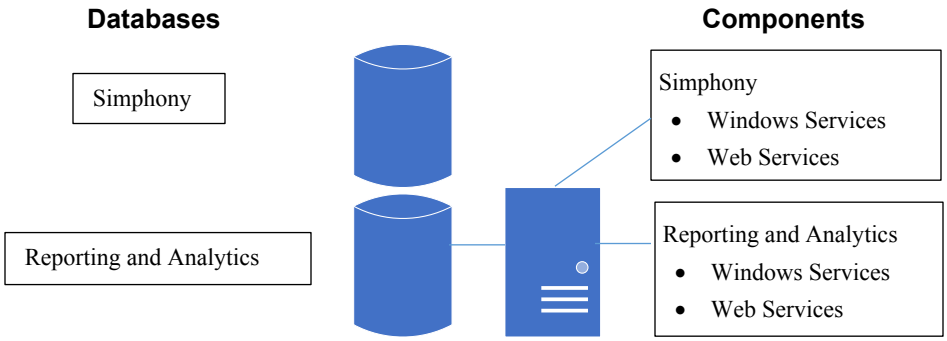

Figure 1-3 Example of an All-In-One Installation

Installing Application Components and Databases on Separate Servers

You can install the Simphony and Reporting and Analytics components on one physical or virtual server and install the databases on a separate server.

Figure 1-4 Example of Application Components and DBs on Separate Servers

Installing Application Components and Databases on Three Servers

You can install the Simphony and R&A databases along with the Simphony components on one server and the R&A components on a third server.

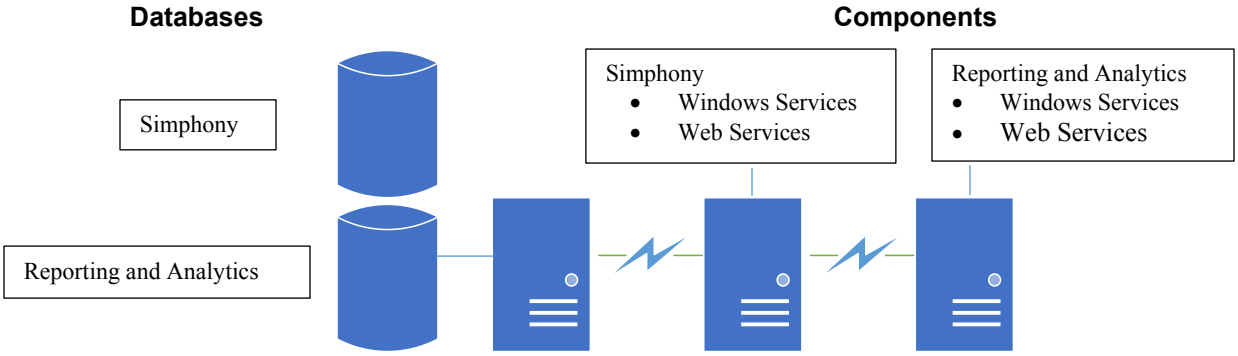

Figure 1-5 Example of Application Components and DBs on 3 Separate Servers

Installing Both Application Components and Databases on Separate Servers

You can install the Simphony and Reporting and Analytics components and each database on separate servers.

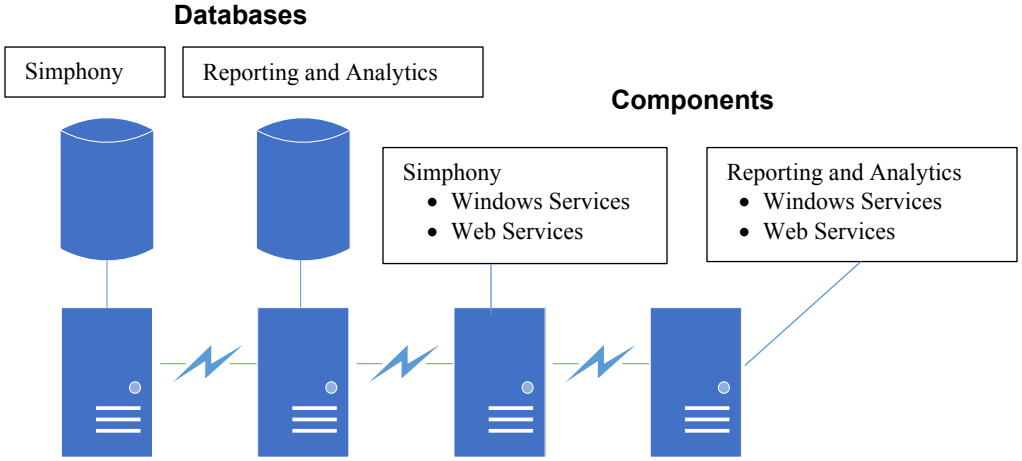

Figure 1-6 Example of Each Application and DB Component on Separate Servers

2 Pre-Installation Tasks

There are several pre-installation tasks that must be performed on the Simphony application server. After completing the steps in this chapter, see page 2-7 for database platform installation instructions.

Property Network Considerations

Prior to installing Reporting and Analytics or Simphony, property networks using Oracle RAC or Load Balancing environments must be operational.
If you are using a Load Balancing server and installing the Simphony Import/Export Service or plan to use the Simphony Engagement Cloud Service, select **LoadBalancer** for the required **CA Certificate Location** field.
If you define a Service Host Secure Port number other than the default of 443, you need to enable that port on the Load Balancing server.

Pre-install Reporting and Analytics Installation Requirements

With this release, users must install Reporting and Analytics separately from Simphony using the Back Office Reporting and Analytics installation application. Users must also install or upgrade to Reporting and Analytics version 8.5.1 Patch 3 prior to installing or upgrading to Simphony version 2.9 or later.
The *Oracle Hospitality Reporting and Analytics 8.5 Deployment Guide* provides instructions for installing Reporting and Analytics 8.5 and later.
The *Oracle Hospitality Reporting and Analytics 9.0 Installation Guide* provides instructions for installing Reporting and Analytics 9.0.

Install Microsoft Internet Information Services (IIS)

For more information about the Server Manager - Add Roles and Features Wizard, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.
On Microsoft Windows Server 2012 R2, perform the following steps:

1. Using the Server Manager – Select **2 - Add roles and features**.

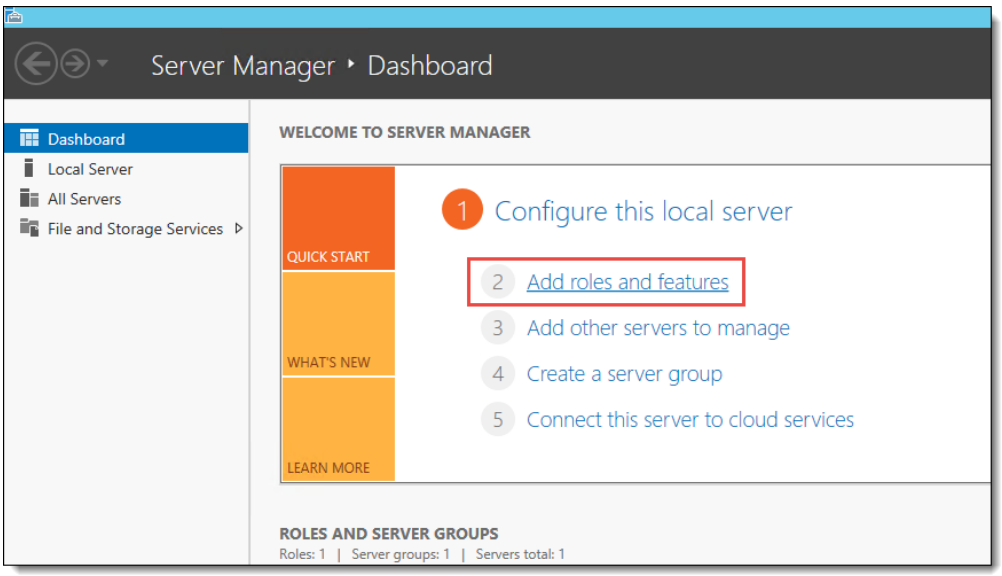

Figure 2-1 Server Manager – Adding Roles and Features

2. Select **Role-based or feature-based installation**, and then click **Next**.
3. Choose **Select a server from the server pool**.
4. Select the server you are configuring, and then click **Next**.

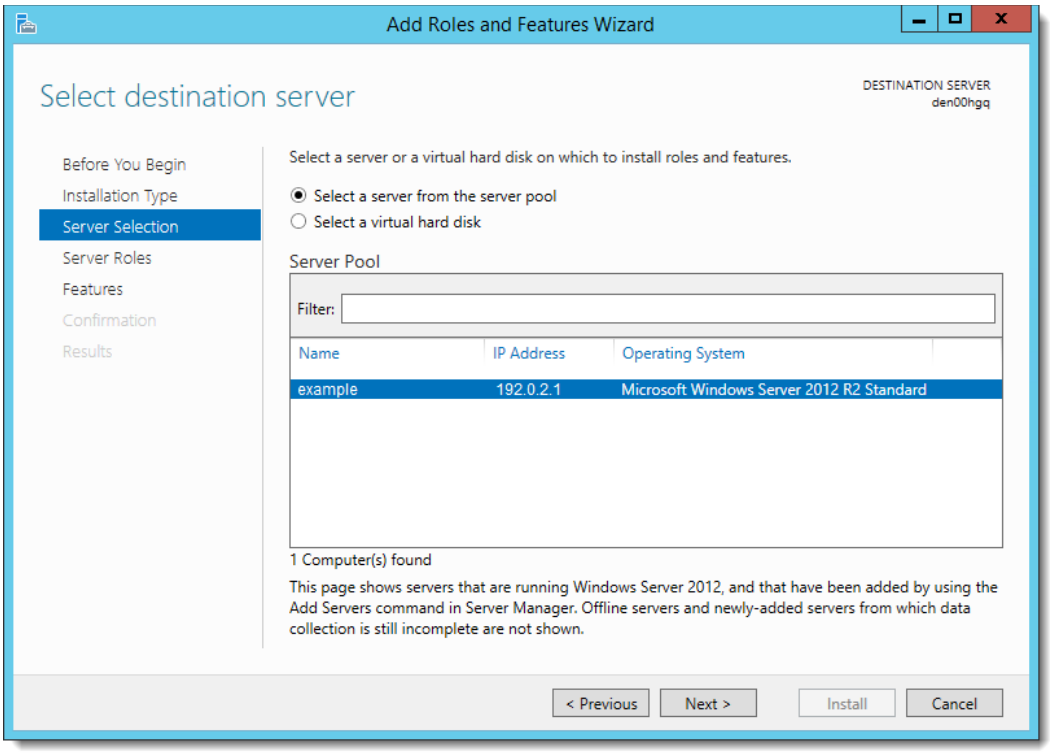

Figure 2-2 Server Manager – Select Server

5. Expand the Web Server Role (IIS).

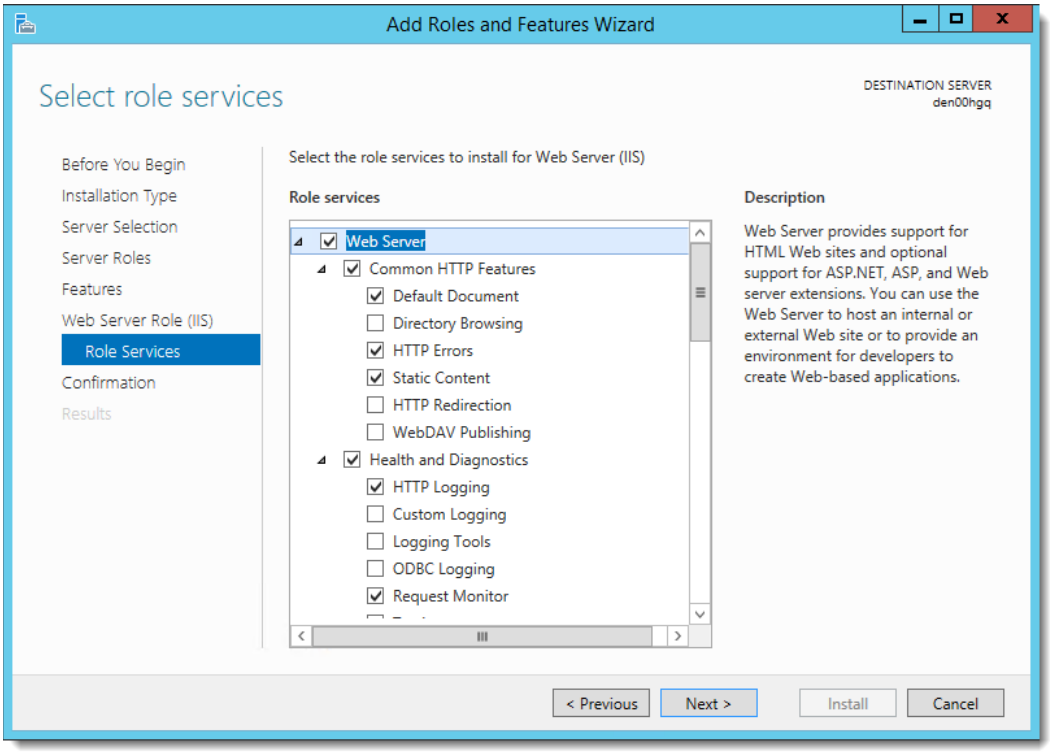

Figure 2-3 Server Manager – Web Server Role Services

6. Expand the **Web Server** options and select the following Common HTTP Features:
   - Default Document
   - HTTP Errors
   - Static Content

From a system security standpoint, the Directory Browsing role service should not be enabled.

7. Select the following Health and Diagnostics options:
   - HTTP Logging
   - Request Monitor

8. Select the **Performance** option **Static Content Compression**.
9. Select the **Security** option **Request Filtering**.

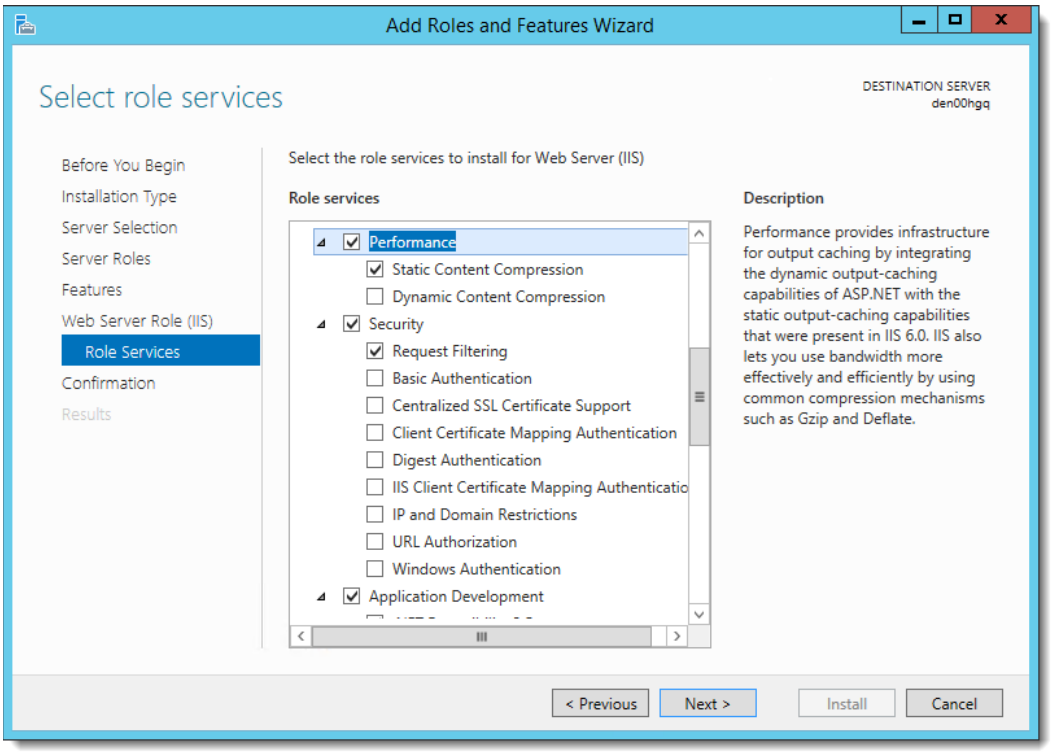

Figure 2-4 Server Manager – Performance and Security Role Services

10. Select and expand Application Development, and then select the following options:
    - .NET Extensibility 4.5
    - ASP
    - ASP .NET 4.5
    - ISAPI Extensions
    - ISAPI Filters

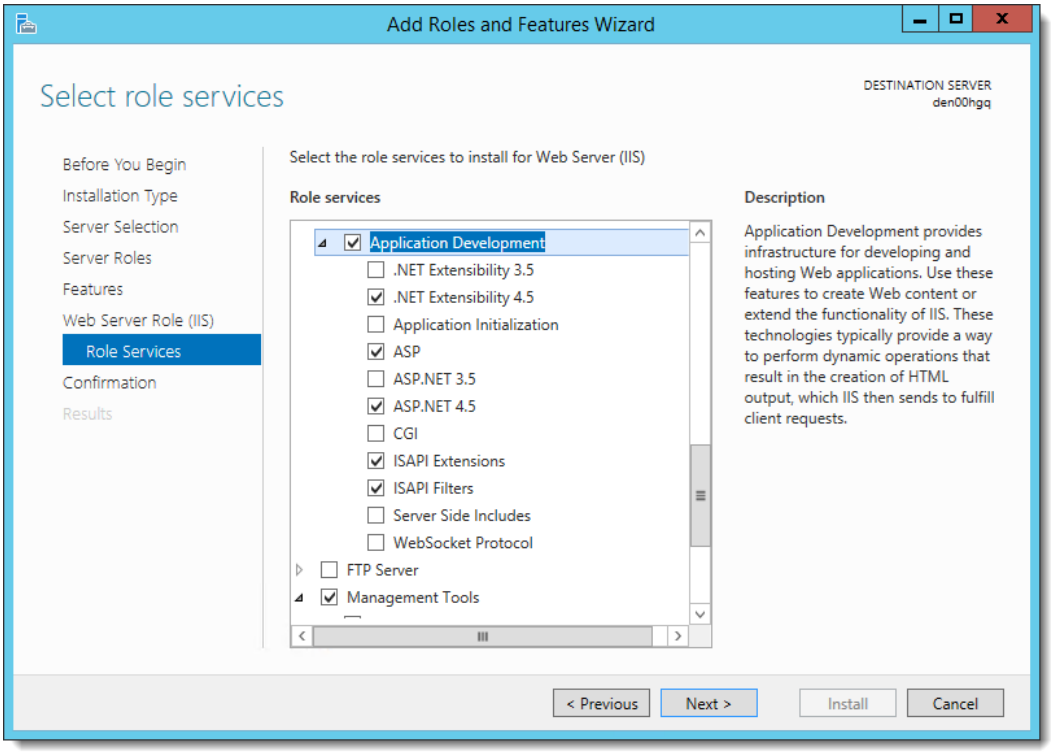

Figure 2-5 Server Manager – Application Development Role Services

11. Select and expand **Management Tools**, and then select the following options:
    - IIS Management Console
    - IIS Management Scripts and Tools
12. Select **IIS 6 Management Compatibility,** and then select the following options:
    - IIS 6 Metabase Compatibility
    - IIS 6 Management Console
    - IIS 6 Scripting Tools
    - IIS 6 WMI Compatibility

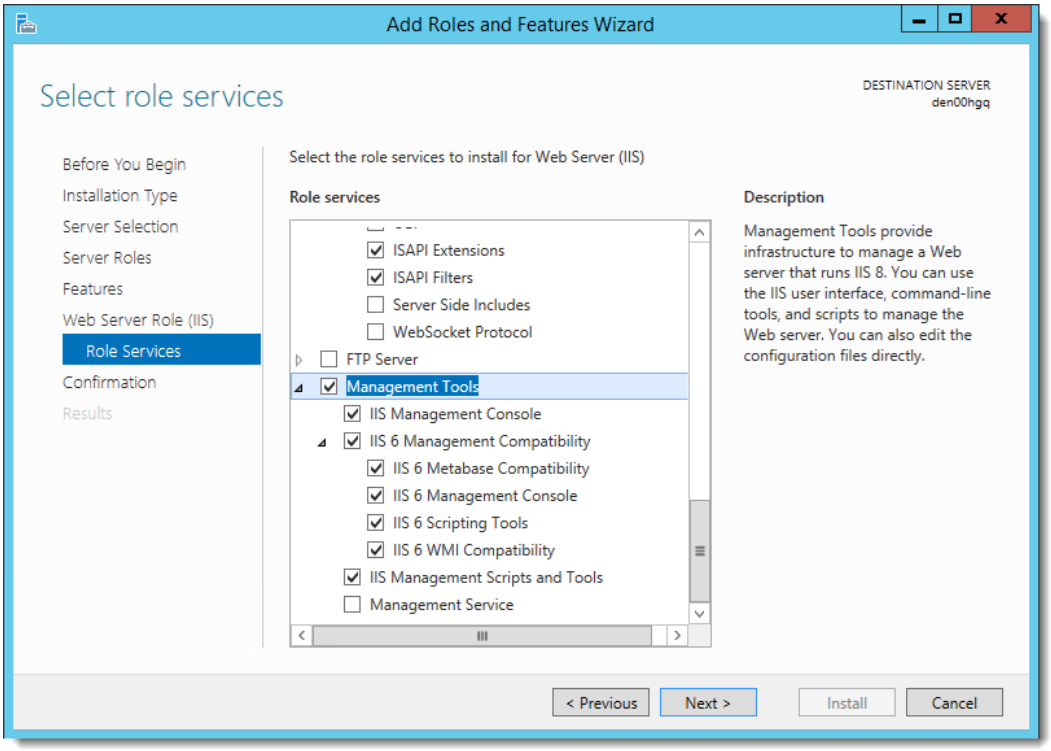

Figure 2-6 Server Manager – Management Tools

13. Click **Next** as needed, and then click **Install**.

For more information about the Server Manager - Add Roles and Features Wizard, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.

Table 2-1 Pre-Installation Tasks for Simphony Version 2.9

Pre-Installation Task	Instructions
Configure Log File rollover options (IIS)	For instructions on configuring Log file rollover options, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.
Install .NET 4.6.1 Framework	Run the .NET 4.6.1 Framework setup in the `Installation Media\Prerequisites\DotNetFramework46` folder, following the on-screen instructions.
Turn on Data Execution Prevention (DEP)	For instructions on turning on Data Execution Prevention on the server, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.
Disable Anti Denial-Of-Service (Dos) Attacks	If you are installing Simphony with Microsoft SQL Server as the database platform, you need to add the `SynAttackProtect` registry key to the computer that is running Microsoft SQL Server. For instructions on disabling DOS attacks, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.
Install a database platform on the database server	Simphony version 2.9 and later supports the following database platforms: Oracle Database 11g Enterprise Edition Oracle Database 12c Enterprise Edition Microsoft SQL Server 2008 R2 Enterprise Edition Microsoft SQL Server 2012 Enterprise Edition For instructions on installing and setting up the Oracle Database, see Installing Oracle Database 11g or 12c. For instructions on installing Microsoft SQL Server, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`. You can also install Simphony on a Microsoft SQL Server 2008 or 2012 R2 Failover Cluster. For instructions on installing a Microsoft SQL Server 2008 or 2012 R2 Failover Cluster, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.
Manually create the folders to store the Microsoft SQL Server database files	Beginning with the Simphony 2.9.2 patch release, for sites utilizing Microsoft SQL Server (and want to physically separate their Transaction (MCRSPOS) and Security (MCRSCACHE) databases), you must manually create folders on the secondary database server to point the Simphony installation program to, during the upgrade's database creation steps.

Installing Oracle Database 11g or 12c

To download and install the Oracle Database, refer to the Oracle Technology Network (OTN) website at `http://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html`.
For Oracle Database 12c users, Oracle Hospitality does not support Pluggable database options at this time.
For Oracle Database users, ensure that the Use Unicode character set option is enabled during your database installation.

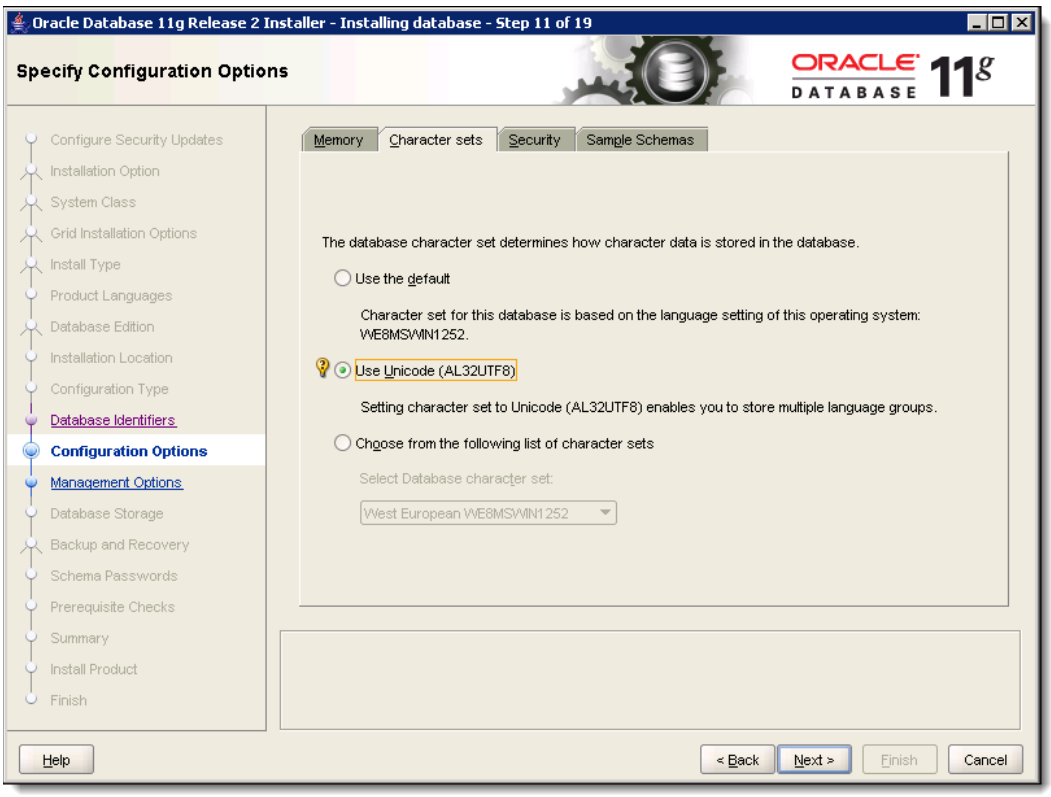

Figure 2-7 Database Configuration Options - Character sets - Use Unicode Option

Creating Oracle Database Tablespaces

If you are using an Oracle database, ensure that you have the Simphony database Tablespaces created on your sever.
Create the following Oracle database Tablespaces on the database server or servers:

- MCRSPOS
- MCRSCACHE

See Appendix A for a sample script to create the database Tablespaces. The *Platform Guide for Microsoft Windows* and the *Administrator's Reference for Linux and UNIX-Based Operating Systems* contain more information about creating database Tablespaces.

Database User Passwords

When performing a database installation, specifically Oracle Database users, passwords must adhere to the following rules:

- Cannot start with a number (for example, 1QasHello)
- Cannot start with a special character (for example, #abc)
- Must have at least 8 characters
- Must have at least one uppercase letter
- Must have at least one number
- Cannot use a dictionary word, although two dictionary words together may pass
- Must have at least one supported special character
- Can only use database supported special characters, which include the underscore (_), dollar sign ($), and pound symbol (#) characters. The following characters are not recognized and should not be used for Oracle Database user passwords: ! @ % ^ & *

For example, **Hello3&there** is not valid because **Hello** and **there** are separated dictionary words by symbols/numbers, but **Hellothere$1** is valid.

Increasing Database Process Count

Run the ALTER SYSTEM SET processes=300 SCOPE=SPFILE; command on the Oracle Database and restart the Oracle Database Service. If you are using the Oracle Linux operating system, run the shutdown immediate; command and then run the `STARTUP pfile=init.ora`; command to restart the service. The Administrator's Reference for Linux and UNIX-Based Operating Systems contains more information about restarting the Oracle Database Service.
If you are using a Microsoft Windows Server, restart the **OracleServiceSIMPHONY** service using the Windows Services dialog. The Platform Guide for Microsoft Windows contains more information about restarting the Oracle Database Service on Microsoft Windows Servers.

3 Simphony Installation Tasks

This chapter provides a list of tasks that you must perform for each of the installation scenarios.

Before Installing Simphony

If you are installing Simphony with an Oracle Database, ensure that the Simphony and SimphonyXDB instances are running. To show the status of the Simphony and SimphonyXDB instances, run the `lsnrctl STATUS` command from a command prompt on the database server.

During a fresh Simphony installation, the Sample Database should not be utilized in a production environment. Rather, users should install the Blank Database.

See If You Installed the Blank Database or If You Installed the Sample Database for initial application logon information after the Simphony installation is completed.

Changes for Simphony 2.9.1

Client Application Loader (CAL) authentication (using CAL version 139) is being implemented on Simphony 2.9.1 to enhance overall system security. Some current customers do not use CAL. CAL is now a required component of the system and is always used for authentication.
Simphony 2.9.1 requires a TLS version 1.1 (Oracle MICROS recommends to use a TLS version 1.2) link for CAL authentication. A valid security Certificate must be installed on the Simphony application server.
In Simphony 2.9.1 or later, you are now required to use an HTTPS secure connection in your Simphony Application Server URL.
When utilizing CAL 139, you must have a privilege assigned to your Role in order to successfully authenticate workstations, Android devices, and Kitchen Display Systems (KDS).
Refer to the *Simphony Configuration Guide* for more information about CAL Authentication.

Changes for Simphony 2.9.2

The Simphony 2.9.2 patch performs an upgrade to Simphony 2.9 GR and later. Fresh installations cannot be performed with this patch release.

During the upgrade process, Oracle Hospitality has added support for separating your Transaction (MCRSPOS) database from your Security (MCRSCACHE) database. The physical separation of these databases is strongly recommended by Oracle Hospitality to enhance your system's security.

Client Application Loader (CAL version 140) authentication is being implemented on Simphony 2.9.2 to allow privileged users to install CAL onto POS workstations using their EMC logon credentials.

Refer to Upgrading to Simphony 2.9.2 for more information about performing the upgrade.

Changes for Simphony 2.9.3

Client Application Loader (CAL) package version 141 is enhanced with Simphony version 2.9.3 to improve file transfer performance. CAL version 141 loads only new and changed files into the database, while files that are not changed, are skipped as part of this enhancement.

A new CAL package called Language Translation is now available during installation to download all language translation files to the workstation.

New Installation Options

There were two new fresh installation options added to the installation application for this release.

For Fresh Installations

1. **Application Components only with CAL package**

   This option installs the selected components and uploads all CAL package files to the Transaction database.

2. **Application Components only without CAL package**

   This option installs all of the selected components and does not upload any CAL package files to the Transaction database.

   This option is meant for property's that have multiple application components where their primary application component has already been installed and has uploaded the new CAL packages to the database. The rest of their application components (2nd application server, 3rd application server, etc.), can use this option to install application components and to avoid re-uploading the new CAL Packages again, since the CAL packages have already been uploaded during the primary application component's installation.

See Upgrading from a Previous Release for information about upgrading from prior releases to Simphony version 2.9.3.

Simphony Installation for an All-in-One Server

The All-in-One server installation scenario is only supported for those using Reporting and Analytics version 8.5.1.

1. Log in and download the Simphony version 2.9 installation application from the Oracle Technology Network (OTN) website at `https://edelivery.oracle.com/`.
2. Run the **Setup** file, and then click **Next** to continue the installation.
3. Select **Application and Database Components,** and then click **Next**.

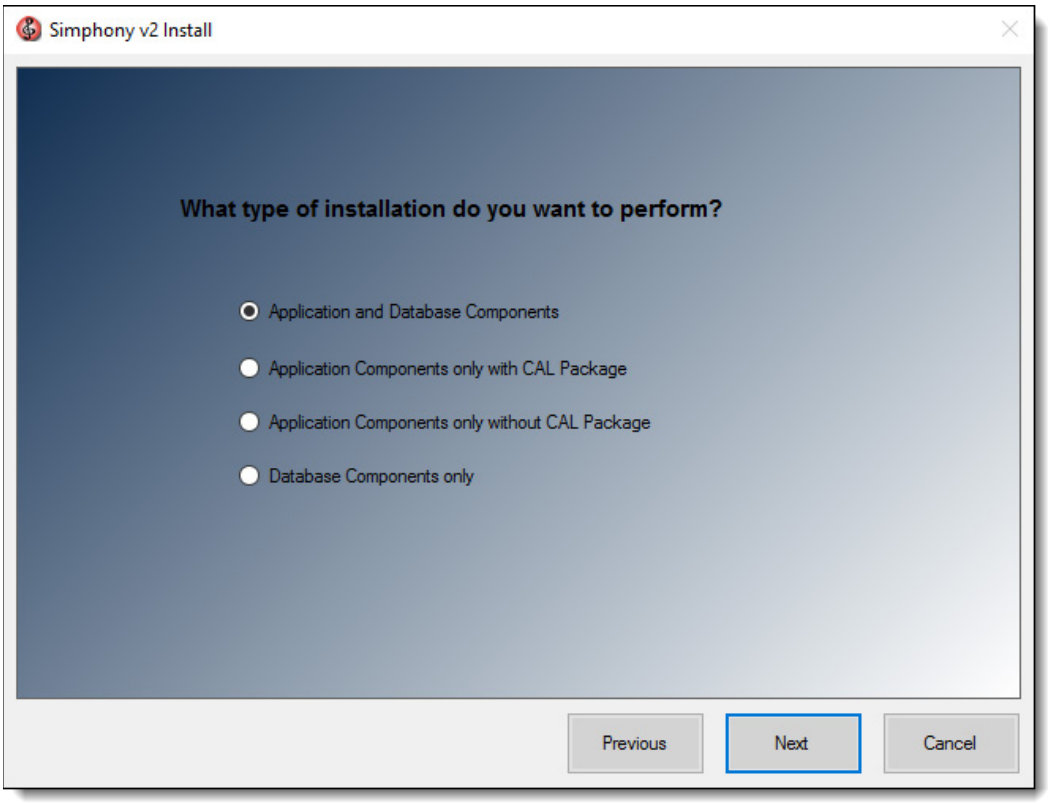

Figure 3-1 Simphony Installation Application

4. Select all application and database components, and then click **Next**. See List of Simphony Components and Services for details.

See the *Simphony Configuration Guide* for more information about the Client Application Loader (CAL).

5. Select all of the Services, and then click **Next**.

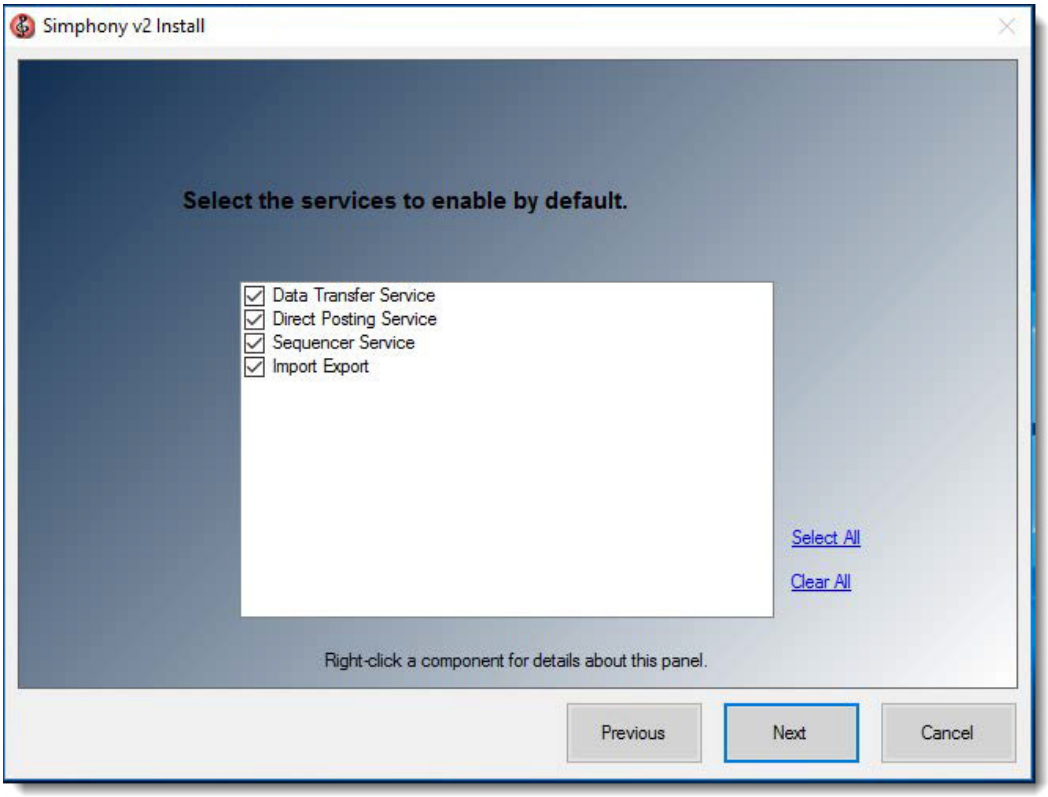

Figure 3-2 Simphony Services

6. If are not using a Load Balancing server and are installing the Import/Export Service or plan to use the Engagement Cloud Service:
    a. Select **IIS** for the **CA Certificate Location** field.
    b. To add a new certificate, select New, click Select, enter or select the certificate location, and then enter the Password for the certificate.
    c. To add an existing certificate, select Existing, and then select the certificate from the drop-down.
    d. Enter the **Service Host Secure Port** number.
    If you define a Service Host Secure Port number other than the default of 443, you need to configure the IIS Bindings of each Application Pool to the new port. For information on adding IIS Bindings, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/` for more information.
7. Click **Next**.

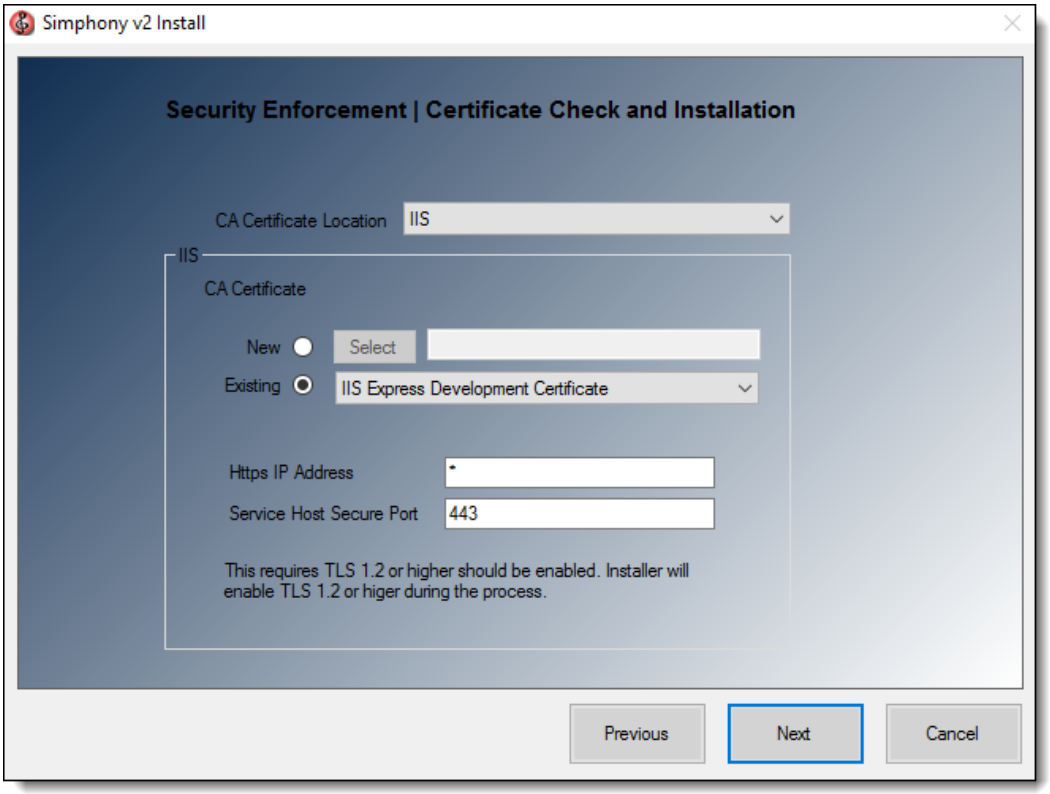

Figure 3-3 Security Enforcement | Certificate Check

8. Enter the IP address of the server for the **Service Host Name** (computer name). If the server is using a Domain Name System (DNS) or Host file mapping, you can enter the name of the server instead of the IP address. To install Simphony on a named instance of Microsoft SQL Server, enter the Server Host Name as *ServerName\InstanceName*.

9. Enter the **Service Host Port** number.
    - You can define any free port number for the Service Host Port. If you define a port number other than the default 8080, you must manually change the port number when you install subsequent services.
    - If you plan to install Reporting and Analytics on the same server as Simphony, do not assign port number 8081 for the Service Host Port. This is the default port number assigned to the Red Hat JBoss server for Back Office Reports.
10. (Optional) Enter the **Default Gateway IP** and the **Default Net Mask** of the server.
11. Click **Next**.

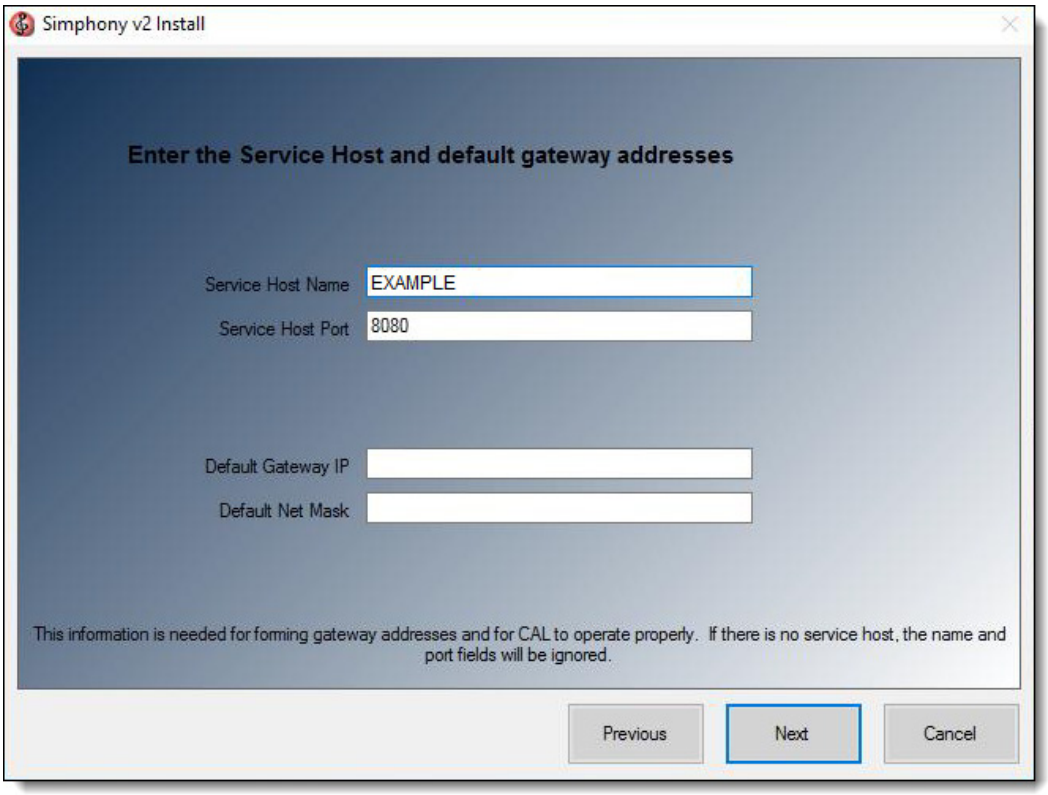

Figure 3-4 Service Host & Port Number

12. If you are using a Load Balancing server and are installing the Import/Export Service or plan to use the Oracle Hospitality Simphony Engagement Cloud Service, select **LoadBalancer** for the **CA Certificate Location** field.
    If you define a Service Host Secure Port number other than the default of 443, you need to enable that port on the Load Balancer server.

13. Select the database platform, and then click **Next**:
    a. If you are using an Oracle Database, select **Oracle**.
    b. For All-in-One installation scenarios, the installation application installs an Oracle 12c client (even if you are using Oracle Database 11g as a platform). If you are using Oracle Database 12c, the installer will not install an Oracle 12c client.
    c. Click **OK** to install the 12c client if prompted to do so.
    d. If you are using a Microsoft SQL Server database, select **MS-SQL**.
14. Enter or select the location to install Simphony, and then click **Next** twice.

    Oracle Hospitality recommends that you install the Simphony application on a separate partition from where the Microsoft Windows or Oracle Linux operating system resides.
15. To install Simphony with a blank database:
    a. Select **Blank Database**.
    b. Enter a strong **Username** and **Password** to comply with Payment Card Industry (PCI) security guidelines. The credentials that you enter here are used to create the Simphony super user to access the EMC.
    c. Confirm the password, and then click **Next**.
16. To install Simphony with a sample database, select **Sample Database**, click **Next**, and then click **Yes** to continue with the installation.

    Do not use the Sample Database for production systems.
17. If you selected Oracle as the database platform type:
    a. Enter the information to configure the transaction database, and then click **Next**. See List of Simphony Database Configuration Fields for more information on the database setup options.
    b. Enter the credentials for the default SYS user, and then click **OK**.
    c. Enter the information to configure the security database, and then click **Next**.
18. If you selected **MS-SQL** as the database platform type:
    a. Enter or select the location to create the transaction database data files, and then click **Next.** See List of Simphony Database Configuration Fields for more information on the database setup options.
    b. Enter the information to configure the transaction database, and then click **Next**.
    c. Enter the credentials for the SA user, and then click **OK**.
    d. Enter or select the location to create the security DB data files, and then click **Next**.
    e. Enter the information to configure the security database, and then click **Next**.
19. Click **Confirm**.
20. After the installation completes, click **Finish** to exit the Simphony setup.
21. Click **Yes** to restart the computer.

Proceed to the Post-Installation Tasks section to continue.

4 Installing Simphony on Multiple Servers

In a multi-server installation, you install the Simphony application and database components on one or more separate servers.

Installing Simphony on Multiple Servers

The following table outlines the process for installing Simphony on multiple servers, depending on the database platform that you are using.

Table 4-1 Overview of Installing Simphony on Multiple Servers

Database Type	Description	Instructions
Oracle Database	When installing Simphony with an Oracle database, you can install Simphony database components on separate database servers from a remote machine while installing Simphony on the application servers. For property's utilizing separate servers for the Simphony application and databases, an Oracle 12c Client should be installed on all application servers so that it can connect to the remote database server.	1. Create Simphony Database Tablespaces. See Creating Oracle Database Tablespaces. 2. Install the Simphony application components. See Installing Simphony Application Components on One or More Servers. The All-in-One installation scenario is only supported when using R&A version 8.5.1. 3. Run the Simphony installation application to install the Oracle 12c Client on all Simphony application servers.
Microsoft SQL Server	When installing Simphony (prior to the Simphony 2.9.2 patch release) with Microsoft SQL Server, you cannot install the databases from a remote machine; you must run the Simphony database setup on the local database servers and install the database components.	1. Install the Simphony database components on the database servers. See Installing Simphony Database Components on Microsoft SQL Server. 2. Install the Simphony application components. Installing Simphony Application Components on One or More Servers. The All-in-One installation scenario is supported when using R&A version 8.5.1.

Installing Simphony Database Components on Microsoft SQL Server

1. Follow all pre-installation tasks for the site. See Pre-Installation Tasks.
2. Follow the instructions in Simphony Installation Tasks.
3. Select **Database Components Only**, and then click **Next**.
4. Select **MS-SQL** as the database platform type, and then click **Next**.
5. Enter or select the location to install Simphony, and then click **Next** twice.
   Oracle recommends that you install the Simphony application on a separate partition from where the Microsoft Windows operating system resides.
6. To install Simphony with a blank database:
   a. Select **Blank Database**.
   b. Enter a strong **Username** and **Password** to comply with Payment Card Industry (PCI) security guidelines. The credentials that you enter here are used to create the Simphony super user to access the EMC.
   c. Confirm the password, and then click **Next**.
7. To install Simphony with a sample database, select **Sample Database**, click **Next**, and then click **Yes** to continue with the installation.

   Do not install the sample database to be used for an actual food and beverage or retail environment.
8. Enter or select the location to create the transaction database data files, and then click **Next**. See List of Simphony Database Configuration Fields for more information on the database setup options.
9. Enter the information to configure the transaction database, and then click **Next**.
10. Enter the credentials for the SA user, and then click **OK**.
11. Enter or select the location to create the security DB data files, and then click **Next**.
12. Enter the information to configure the security database, and then click **Next**.
13. Click **Confirm**.
14. After the installation completes, click **Finish** to exit the Simphony setup.

Installing Simphony Application Components on One or More Servers

The All-in-One installation scenario is only supported when using R&A version 8.5.1.

1. Ensure that the database server or servers are set up as described in Overview of Installing Simphony on Multiple Servers.
2. On the Simphony application server, follow the instructions in Installing Simphony on Multiple Servers.
3. Select Application Components Only, and then click Next.
4. Select all components, and then click Next. See List of Simphony Components and Services for details.
5. If you are installing all Simphony application components on a single server, select all the services, and then click Next.
6. If you are installing Simphony application components on more than one server:
    a. On the primary application server, select all services and then click **Next**.
    b. On all other application servers, deselect **Sequencer Service**, and then click **Next**.
7. If applicable, follow the instructions in Simphony Installation for an All-in-One Server to complete the installation. When configuring the databases, enter the Server Host Name or IP address, Service Host Name, and logon credentials for the Simphony database servers.

Preparing a Multi-Server Environment Using a Load Balancer for the Simphony Import/ Export Service

If you installed Simphony across multiple servers and are using a Load Balancer Server, follow these instructions to prepare the environment for the Import/Export Service:

Table 4-2 Preparing a Multi-Server Simphony Installation Using a Load balancer for the Import/ Export Service

Task	Instructions
Create a shared folder on a central location that all Simphony application servers can access to store the files that you import and export	When creating the shared folder, you must give each application server read/write permissions to the folder. For instructions on how to create a shared folder, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/library`
On each application server, create a shortcut (map network share drive) to the shared folder, and configure the servers to reconnect to the shared folder upon restarting the server	For instructions on how to map network share drives, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/library`
Configure the shared folder location in the EMC	In the EMC, select the Enterprise level, click **Setup**, and then click **Enterprise Parameters**. Click the **Import/ Export** tab, and enter the location of the shared folder in the **Root Path for Export/Import File Operations** field (for example, *HostServerName*\ImportExport). Restart the **Data Request Processing Service**.

The *Oracle Hospitality Simphony Configuration Guide* contains more information about the Simphony Import/ Export Service.

5 Upgrading from a Previous Release

Upgrading Reporting and Analytics (R&A)

R&A version 9.0

Prior to upgrading to Simphony version 2.9 or later, upgrade the R&A application server to version 9.0 using the Back Office installation application. See the *Hospitality Enterprise Back Office Installation Guide Release 9.0* for more information about upgrading Reporting and Analytics.

R&A version 8.5.1

Prior to upgrading to Simphony version 2.9 or later, upgrade the R&A application server to version 8.5.1 Patch 3 using the Back Office installation application. See the *Oracle Hospitality Reporting and Analytics Deployment Guide Release 8.5* for more information about upgrading Reporting and Analytics.

Upgrading to Simphony 2.9.2

The Simphony version 2.9.2 patch release performs an upgrade to Simphony 2.7.6. or later. To enhance your system's security, the Simphony installation application has been changed to allow you to physically separate the Transaction (MCRSPOS) database from the Security (MCRSCACHE) database (onto another database server), and then proceed with the upgrade. Oracle Hospitality strongly recommends to store these databases on separate database servers. The following sections review three possible upgrade scenarios:

- Upgrades with Separate Transaction and Security Database Servers (when adding a new database server)
- Upgrades without Separate Transaction and Security Database Servers
- Upgrades with Existing Separated Transaction and Security Database Servers

Upgrading to Simphony 2.9.3

New Upgrade Installation Options

There were two new upgrade options added to the installation application for this release.

1. **Upgrade Simphony Components on this machine with CAL package**

   This option updates the selected components and uploads all CAL package files to the Transaction database.

2. **Upgrade Simphony Components on this machine without CAL package**

   This option installs all of the selected components and does not upload any CAL package files to the Transaction database.

   This option is meant for property's that have multiple application components where their primary application component has already been upgraded and uploaded the new CAL packages to the database. The rest of their application components (2nd application server, 3rd application server, etc.), can use this option to upgrade any application components and to avoid re-uploading the new CAL Packages again, since the CAL packages have already been upgraded and uploaded during the primary application component's upgrade.

Upgrades with Separate Transaction and Security Database Servers (when adding a new database server)

This section provides upgrade instructions to enhance your site's system security. This includes adding a new physical database server to house the site's security database.

If the site uses multiple Simphony application servers, upgrade the initial application server to version 2.9.2. Then, after upgrading subsequent application servers, ensure that on each application server, that the security database server name matches the `dataSource` entry for the `CACHE` host name located in the application server's DBSettings.xml. This file is located on the initial Simphony application server that was upgraded.

For example:

```
alias="Cache"
dbType="<TYPE> "
dataSource="<SERVERNAME>"
```

To initiate this type of upgrade, perform the following steps:

1. Perform steps 1-5 as shown in Upgrading Simphony Prior to Simphony version 2.9.3.
2. **Certificate Location** - Throughout the Simphony 2.9.2 upgrade process, the Simphony installation application checks for the entry of a valid Service Host Name. The following parameters review the installation application's Service Host Name validation behavior:
    a. If Microsoft Internet Information Services (**IIS)** is selected for the **Certificate Location** field, note that the **Service Host Name** (to be entered on the next installation screen) is based on the installed secure certificate's Common Name (CN) field.
    b. **Certificate** - To add a new certificate, select **New**, click **Select**, enter or select the certificate location, and then enter the **Password** for the certificate.
    c. To utilize an existing certificate, select **Existing**, and then select the installed certificate from the drop-down.
    d. If you are using a Load Balancer server and installing the Import/Export Service or plan to use the Oracle Hospitality Simphony Engagement Cloud Service, select **LoadBalancer** for the **Certificate Location** field.

    Note that the **Service Host Name** (to be entered on the next installation screen) is based on the Full Qualified Domain Name (FQDN) of your application server.
    e. **Https IP Address -** Enter the application server's IP address.
    f. **Service Host Secure Port** - If you enter a port number other than the default of 443, you need to enable that port on the Load Balancer server and then click **Next**.
3. When using **IIS**, enter (or verify) the **Service Host Name** (for the Simphony application server).

    If the Service Host Name does not match the installed secure Certificate's CN text, a warning message dialog appears.
    a. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.
    b. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.
4. When using **LoadBalancer**, enter (or verify) the **Service Host Name** (for the Simphony application server).

    If the Service Host Name does not match the FQDN of your computer, a warning message dialog appears.
    a. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.

b. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.

5. Enter the following information that is used to connect to the security database:
   a. **Server Name** - Enter the name of the security database server.
   b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
   c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
   d. **Username** - Enter your security database access user name.
   e. **Password** - Enter your security database access password.
   f. **Database Port** - Enter the port number used to access the security database server, and then click **Next**.
6. Enter your security database administrator **Username** and **Password** logon credentials, and then click **OK** and **Next**.

   If the security database server name and logon credentials entered in step 3, matches the server name where the Transaction database is stored, the installation application prompts and affords users the opportunity to separate the databases onto different database servers. Since you want the two databases separated, click **Yes**.
7. Enter the following information that is used to connect to the secondary database server and then click **Next**:
   a. **Server Name -** Enter the name of the secondary database server. This name should match the `dataSource` entry for the `CACHE` host name located in the application server's DBSettings.xml.

      For example:

      ```
      alias="Cache"
      dbType="<TYPE>"
      dataSource="<SERVERNAME>"
      ```
   b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
   c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).

      Per the Pre-Installation Tasks for Simphony Version 2.9, for Microsoft SQL Server users, the implementation consultant must go to the secondary database server and manually create the folders specified in the **Remote Database Location** field. Alternatively, the implementation consultant can enter the location of previously existing files on the secondary database server. Click **Next**.
   d. **Username -** Enter your security database access user name.
   e. **Password -** Enter your security database access password.
   f. **Confirm Password -** Re-enter your security database access password.
   g. **Database Name** - Enter the name of the security database.
   h. **Database Port** - Enter the port number used to access the security database.
   i. **Remote Database Location** - Enter the path and folder names where the Security database is to be created.

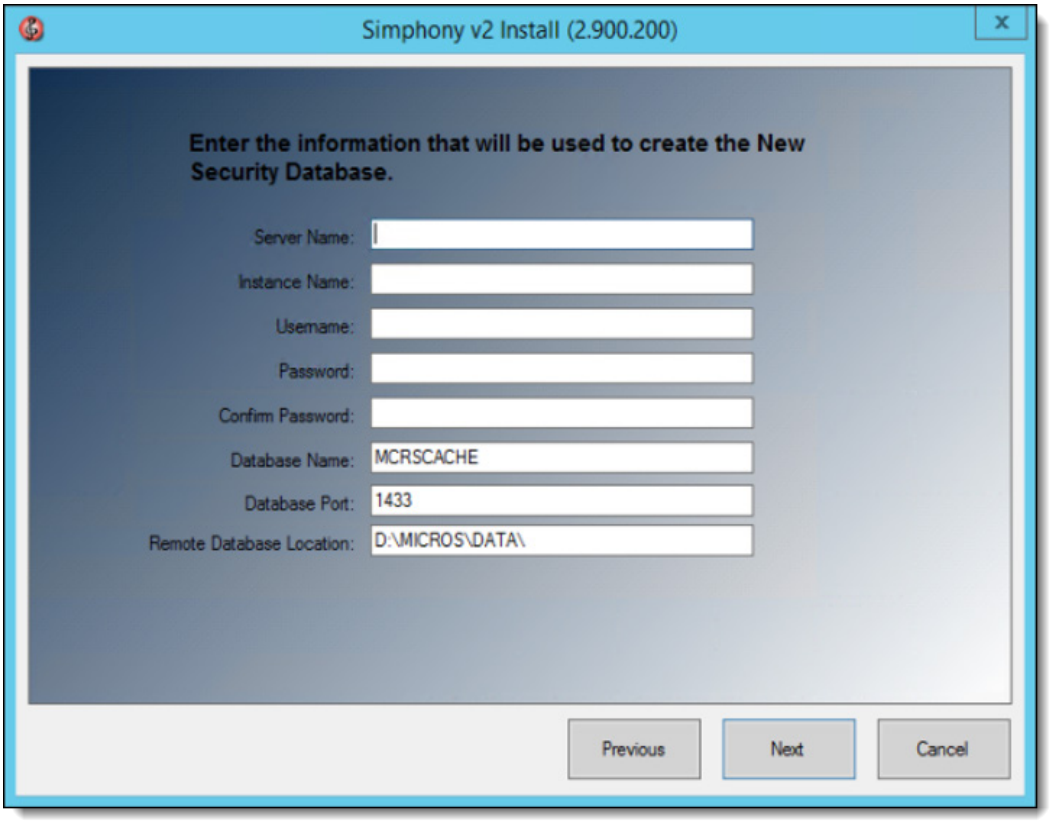

Figure 5-1 Security Database Connection for the Secondary DB Server

8. Enter the logon credentials for a database administrator, and then click **OK**.
   - If you are using an Oracle Database, enter the credentials for the SYS user.
   - If you are using a Microsoft SQL Server database, enter the credentials for the SA user.
9. Enter the following information to connect to the reporting database:
   a. **Server Name** – Enter the name of the reporting database server.
   b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
   c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
   d. **Username -** Enter (or verify) your reporting database access user name.
   e. **Password -** Enter your reporting database access password.
   f. **Database Port** - Enter the port number used to access the reporting database.
   g. **Username -** Enter (or verify) your reporting database access user name.
   h. **Password -** Enter your reporting database access password, and click **Next**.
10. Enter a database administrator's logon credentials, click **OK**, and then click **Next**.
    - If you are using an Oracle Database, enter the credentials for the SYS user.
    - If you are using a Microsoft SQL Server database, enter the credentials for the SA user.
11. Click **Confirm**. The installation application creates a new user and security database on the secondary database server and drops them from the original database server. When the upgrade is complete, click **Finish**.

Upgrades without Separate Transaction and Security Database Servers

This section provides upgrade instructions for site's that want to maintain their Transaction and Security databases on the same database server.

To initiate this type of upgrade, perform the following steps:

1. Perform steps 1-5 as shown in Upgrading Simphony Prior to Simphony version 2.9.3.
2. **Certificate Location** - Throughout the Simphony 2.9.2 upgrade process, the Simphony installation application checks for the entry of a valid Service Host Name. The following parameters review the installation application's Service Host Name validation behavior:
    a. If Microsoft Internet Information Services (**IIS)** is selected for the **Certificate Location** field, note that the **Service Host Name** (to be entered on the next installation screen) is based on the installed secure certificate's Common Name (CN) field.
    b. **Certificate** - To add a new certificate, select **New**, click **Select**, enter or select the certificate location, and then enter the **Password** for the certificate.
    c. To utilize an existing certificate, select **Existing**, and then select the installed certificate from the drop-down.
    d. If you are using a Load Balancer server and installing the Import/Export Service or plan to use the Oracle Hospitality Simphony Engagement Cloud Service, select **LoadBalancer** for the **Certificate Location** field.

    Note that the **Service Host Name** (to be entered on the next installation screen) is based on the Full Qualified Domain Name (FQDN) of your application server.
    e. **Https IP Address -** Enter the application server's IP address.
    f. **Service Host Secure Port** - If you enter a port number other than the default of 443, you need to enable that port on the Load Balancer server and then click **Next**.
3. When using **IIS**, enter (or verify) the **Service Host Name** (for the Simphony application server).

    If the Service Host Name does not match the installed secure Certificate's CN text, a warning message dialog appears.
    a. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.
    b. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.
4. When using **LoadBalancer**, enter (or verify) the **Service Host Name** (for the Simphony application server).

    If the Service Host Name does not match the FQDN of your computer, a warning message dialog appears.
    a. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.
    b. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.
5. Enter (or verify) the **Service Host Name** for the Simphony application server, **Default Gateway IP** address, and **Default Net Mask** in their corresponding fields, and then click **Next**
6. Enter the following information that is used to connect to the existing security database, and then click **Next**:
    a. **Server Name** – Enter the name of the database server.

b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
d. **Username** – Enter your security database access user name.
e. **Password** – Enter your security database access password.
f. **Database Port** – Enter the port number used to access the security database server, and click **Next**.

7. Enter the following information to connect to the reporting database:
   a. **Server Name** – Enter the name of the reporting database server.
   b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
   c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
   d. **Username -** Enter (or verify) your reporting database access user name.
   e. **Password -** Enter your reporting database access password.
   f. **Database Port** - Enter the port number used to access the reporting database.
   g. **Username -** Enter (or verify) your reporting database access user name.
   h. **Password -** Enter your reporting database access password, and click **Next**.
8. Enter a database administrator's logon credentials, click **OK**, and then click **Next**.
   - If you are using an Oracle Database, enter the credentials for the SYS user.
   - If you are using a Microsoft SQL Server database, enter the credentials for the SA user.
9. Click **Confirm**. The installation application creates a new user and security database on the secondary database server and drops them from the original database server. When the upgrade is complete, click **Finish**.

Upgrades with Existing Separated Transaction and Security Database Servers

This section provides upgrade instructions for site's that already have separate Transaction and Security database servers.

To initiate this type of upgrade, perform the following steps:

1. Perform steps 1-5 as shown in Upgrading Simphony Prior to Simphony version 2.9.3.
2. **Certificate Location** - Throughout the Simphony 2.9.2 upgrade process, the Simphony installation application checks for the entry of a valid Service Host Name. The following parameters review the installation application's Service Host Name validation behavior:
    a. If Microsoft Internet Information Services (**IIS)** is selected for the **Certificate Location** field, note that the **Service Host Name** (to be entered on the next installation screen) is based on the installed secure certificate's Common Name (CN) field.
    b. **Certificate** - To add a new certificate, select **New**, click **Select**, enter or select the certificate location, and then enter the **Password** for the certificate.
    c. To utilize an existing certificate, select **Existing**, and then select the installed certificate from the drop-down.
    d. If you are using a Load Balancer server and installing the Import/Export Service or plan to use the Oracle Hospitality Simphony Engagement Cloud Service, select **LoadBalancer** for the **Certificate Location** field.

    Note that the **Service Host Name** (to be entered on the next installation screen) is based on the Full Qualified Domain Name (FQDN) of your application server.
    e. **Https IP Address -** Enter the application server's IP address.
    f. **Service Host Secure Port** - If you enter a port number other than the default of 443, you need to enable that port on the Load Balancer server and then click **Next**.
3. When using **IIS**, enter (or verify) the **Service Host Name** (for the Simphony application server).

    If the Service Host Name does not match the installed secure Certificate's CN text, a warning message dialog appears.
    a. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.
    b. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.
4. When using **LoadBalancer**, enter (or verify) the **Service Host Name** (for the Simphony application server).
    a. If the Service Host Name does not match the FQDN of your computer, a warning message dialog appears.
    b. Do not ignore the message, select **No**, and then correct the invalid Service Host Name.
5. Enter the **Default Gateway IP** address and **Default Net Mask** in their corresponding fields, and then click **Next**.

6. Enter the following information that is used to connect to the existing security database, and then click **Next**:
    a. **Server Name** – Enter the name of the existing security database server.
    b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
    c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
    d. **Username** – Enter your security database access user name.
    e. **Password** – Enter your security database access password.
    f. **Database Port** – Enter the port number used to access the security database server, and click **Next**.
7. Enter the following information to connect to the Reporting database:
    a. **Server Name** – Enter the name of the reporting database server.
    b. **Service Name** - Oracle Database users - Enter the name of the service (TNS alias).
    c. **Instance Name** - Microsoft SQL Server users - Enter the Microsoft SQL Server's database name (usually contains the database server's name).
    d. **Username -** Enter (or verify) your reporting database access user name.
    e. **Password -** Enter your reporting database access password.
    f. **Database Port** - Enter the port number used to access the reporting database.
    g. **Username -** Enter (or verify) your reporting database access user name.
    h. **Password -** Enter your reporting database access password, and click **Next**.
8. Enter a database administrator's logon credentials, click **OK**, and then click **Next**.
    - If you are using an Oracle Database, enter the credentials for the SYS user.
    - If you are using a Microsoft SQL Server database, enter the credentials for the SA user.
9. Click **Confirm**. When the upgrade is complete, click **Finish**.

Upgrading Simphony Prior to Simphony version 2.9.3

1. Ensure that the Simphony application and database servers meet the requirements listed in Chapter 2.
2. Log in and download the Simphony version 2.9 or later installation application from the Oracle Technology Network (OTN) website at `https://edelivery.oracle.com/`.
3. Run the **Setup** and click **Next**.

   If you have the application and the database on separate servers, run the installation application on the application server.
4. Enter the logon credentials for a database administrator, and then click **OK.**
    - If you are using an Oracle Database, enter the credentials for the SYS user.
    - If you are using Microsoft SQL Server, enter the credentials for the SA user.
5. Select **Update Application Components on this machine**, and then click **Next**.
6. If you are using a Load Balancer server and installing the Import/Export Service or plan to use the Oracle Hospitality Simphony Engagement Cloud Service, select **LoadBalancer** for the **Certificate Location** field.

   If you define a **Service Host Secure Port** number other than the default of 443, you need to enable that port on the Load Balancer server.

7. If you are not using a Load Balancer server and are installing the Import/Export Service or plan to use the Engagement Cloud Service:
    a. Select **IIS** for the **Certificate Location** field.
    b. To add a new certificate, select **New**, click **Select**, enter or select the certificate location, and then enter the **Password** for the certificate.
    c. To utilize an existing certificate, select **Existing**, and then select the installed certificate from the drop-down.
    d. Enter the **Service Host Secure Port**.
    If you define a **Service Host Secure Port** number other than the default of 443, you need to configure the IIS Bindings of each Application Pool to the new port. For information on adding IIS Bindings, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/` for more information.
8. If you are connected to Reporting and Analytics, enter the passwords for the MMSQL and CEDB database users, and then click **Next**.
9. If you have Reporting and Analytics installed and want to connect to it, click **Yes** when prompted, enter the information to connect to the reporting database, and then click **Next**.
10. Click **Next**, and then click **Confirm** to begin the upgrade.

Post-Upgrade Tasks

The following table lists the tasks you must perform after upgrading to Simphony version 2.9 from an earlier release.

Table 5-1 Post-Upgrade Tasks for Simphony Version 2.9

Post-Upgrade Task	Instructions
Update the Property's Admin and Database Credentials	See Updating Property Administrator and Database Logon Credentials for details and instructions.
Update the Simphony License Counts	See Updating Simphony License Counts for instructions.
Update all Check and Posting Service (CAPS) clients prior to updating workstations with the latest CAL Packages.	See the Oracle Hospitality Simphony Configuration Guide, specifically the *Check and Posting Service (CAPS)* information.
Update or verify your CAL Packages and schedule their deployment to your workstation clients.	See *Client Application Loader (CAL)* in the Oracle Hospitality Simphony Configuration Guide for more information about configuring and deploying CAL Packages.
If you installed the Simphony Import/ Export Service on a multi-server Simphony installation, create a shared folder on a central location to store the import/export files	See Preparing a Multi-Server Environment Using a Load Balancer for the Simphony Import/ Export Service for details and instructions.

6 Post-Installation Tasks

Update the Property EMC Client

The Enterprise Management Console (EMC) is the primary configuration application in Simphony. A shortcut for accessing EMC is installed on the application server during the installation.

Self-hosted customers also need to follow these steps to configure Remote EMC clients. Remote EMC clients allow users to access the EMC from other computers on the network.

1. Open a browser and navigate to `http://ApplicationServerName:PortNumber/egateway/download/EMCClient/`, and then click **EMCSetup.exe**.
2. If you see the Unknown Publisher warning, click **Run**.
3. On the **Welcome** screen, click **Next**.
4. Set the destination folder, and then click **Next**.
5. Enter the IP address or the name of the Simphony application server with the EGateway port number (for example, `http://192.0.2.1:8080`), and then click **Next**.
6. Click **Install**.
7. Click **Finish** to exit the installer.
8. Double-click the **AppLoader** icon on the desktop to launch the remote EMC.
   The AppLoader also updates the remote EMC with the same versions of files that are on the Simphony application server.

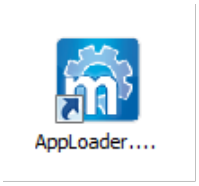

Figure 6-1 AppLoader Icon

Updating Simphony License Counts

To edit the system's license counts:

1. In the EMC, select the Enterprise level, click **Setup**, and then click **Enterprise Parameters**.
2. Click the **License Configuration** tab.
3. Click **Configure** adjacent to **Workstations Client License Count**.
4. To add a new license count, select **I would like to set the license count to X, making the new license count X**.
5. To append licenses to an existing license count, select **I would like to add X to the current license count, making the new license count X**.
6. Enter the number of client licenses purchased.
7. (Optional) Enter additional details regarding the purchased license in the **Enter Reference Information for the License Count Change**, and then click **OK**.
8. Repeat Steps 3 through 7 for **Engagement Client License Count, Transaction Service Client License Count,** and **KDS Client License Count**.
9. Click **Save,** and then click **Yes** to agree to the license.

To perform a side by side comparison of the number of purchased licenses against the number of configured clients:
Click the **Licensing Configuration** tab, and then click **View** adjacent to the Properties, Revenue Centers, Concessions Terminals, Workstation Client License Count, Engagement Client License Count, Transaction Services Client License Count, or KDS Client License Count labels.

Updating Property Administrator and Database Logon Credentials

When logging in to the EMC for the first time after installing or upgrading to Simphony version 2.9, a message indicates that the property credentials are not compliant with the Simphony standards. To keep the properties safe from security risks, you need to update the Admin and Database credentials, which Simphony uses to create and maintain the workstation databases. Simphony offers the options of configuring security credentials for each property separately or using the same credentials for all properties in the Enterprise. Simphony requires that you update the system and database administrator credentials every 90 days. If you do not update the credentials, EMC shows the Database Credentials Non-Compliance message each time you log in until you meet the compliance.

To configure credentials for each non-compliant property separately:

1. In the EMC, select the Enterprise level, click **Setup**, and then click **Properties**.
2. In table view, scroll to the right until you see the Admin Credentials and the Database Credentials columns. If a property is not compliant, the Admin Credentials and the Database Credentials columns are highlighted in red.
3. Click either the **Admin Credentials** or the **Database Credentials** column of the non-compliant property, and go to the **Property Parameters** module.
4. Click the **Security** tab.
5. Enter **User Security Credentials**. Simphony uses these credentials to authenticate the workstations.

   The **Install User Security Username** must have at least two characters and must not contain a company name, product name, common words, or Structured Query Language (SQL) keywords (for example, Micros, Oracle, abcd, 1234, and so on).

   The Install User Security Password must have a minimum of eight characters and adhere to the Oracle Database standards.
6. Enter the **Current Password** of the Admin User.
7. Enter a new strong password for the Admin User.
   See Database User Passwords for more information about password requirements.
8. Repeat Steps 6 and 7 for the Database User, and then click **Save**.
9. Repeat Steps 3 through 8 for all non-compliant properties.

To configure the same credentials for all non-compliant properties in the Enterprise:

1. In the EMC, select the Enterprise level, click **Setup**, and then click **Enterprise Parameters**.
2. Click the **Security** tab, and then select **Use Same Credentials for All Properties**.
3. Select the property whose credentials you want to use, and then enter the **New Install User Security Password**.
4. Re-enter the new security password in the **Confirm User Security Password** field, and then click **Save**.

Configuring IIS Application Pool Settings

Configure Recycle Settings for the IIS Application Pool

If you configure the application pool to recycle at a scheduled time using the IIS Manager, consider configuring the following recycle settings for the IIS Application Pools:

- Ensure that the Specific time(s) you define does not coincide with your Start-of-Day (SOD) or periods of peak sales activity
- Set the Memory Based Maximums to less than half of the available server memory
- Set the Simphony2 App Pool Pipeline mode to Classic
- Set the Disable Overlapped Recycle setting to True for the Simphony2 App Pool

In addition to the Simphony2 App Pool, the following IIS App Pools are also installed:

- ImportExportAPIPool - for the Import Export Service
- ImportExportAppPool - for the Import Export Service
- WCCPool - for the Engagement feature

These App Pool's Pipeline mode settings can remain on their default settings.

For instructions on configuring an application pool to recycle at a scheduled time, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/`.

After the Simphony Installation

If You Installed the Blank Database

1. Open the **EMC** from the shortcut on the desktop or **Start** menu.
2. Enter the **Application Server Host Name**:
   a. If you are launching EMC locally from the server, enter localhost for the Application Server Host Name.
   b. If you are accessing the EMC remotely, enter the Server Host Name or IP address of the Simphony application server.
3. Enter the logon credentials for the Simphony super user that you created in Step 15 of Simphony Installation Tasks.
4. Click **Login**.
5. Click **OK** for the EMC Database Credentials Non-Compliance message.

If you can launch and see the EMC and the Simphony Gateway is up and running, Simphony is successfully installed.

If You Installed the Sample Database

1. Open the **EMC** from the shortcut on the desktop or **Start** menu.
2. Enter the **Application Server Host Name**:
   a. If you are launching EMC locally from the server, enter localhost for the application Server Host Name.
   b. If you are accessing the EMC remotely, enter the Server Host Name or IP address of the Simphony application server.
3. Log on to the EMC with:
   - Username = micros
   - Password = micros
4. Click **OK** when prompted to update the password.
5. Enter a new strong password (per PCI DSS 8.2.3 / PA-DSS 3.1.6 standards) for the Simphony super user, and then click **Accept.** If you are using an Oracle Database, refer to the *Oracle Database Security Guide* for more information about configuring password protection.
6. Click **OK** when prompted to update the username.
7. Enter a new username for the EMC super user, and then click **Accept**.
8. Click **Login**.
9. Click **OK** for the EMC Database Credentials Non-Compliance message.

If you can see the EMC dashboard, the Simphony gateway is up and Simphony is installed successfully.

Setting the Start-Of-Day Sequencer Machine and the App Server Time Zone

1. In the EMC, select the Enterprise level, click the Setup tab, and then click **Enterprise Parameters**.
2. Click the **Miscellaneous** tab.
3. Enter the Windows machine name for SOD Sequencer Machine Name.
4. Select the **App Server Time Zone**.
5. If you are deploying Simphony on multiple servers, the date, time, and the time zone settings of each app server and database server must correspond. Additionally, the servers' time zone must correspond with the App Server Time Zone setting in the EMC.
6. You can synchronize the time settings between the servers by configuring one of the servers to be a Network Time Protocol (NTP) server and then point the rest of the servers to the NTP server. For information on setting up a Network Time Protocol server, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/` for more information.
7. Click **Save**.
8. If you installed Simphony on multiple application servers, disable the **Micros Sequencer Service** on all servers other than the SOD Sequencer Machine.
9. In the event the application server that is running the Micros Sequencer Service has performance issues, start the Micros Sequencer Service on another Simphony application server if the main application server is going to be down for multiple days.

Connecting Reporting and Analytics to Simphony

Before you connect to Reporting and Analytics, you need to have:

- At least one property in the Enterprise. The *Oracle Hospitality Simphony Configuration Guide* contains more information about adding properties to the Enterprise.
- Organizations and report locations created in Reporting and Analytics for your properties in the Enterprise. The *Oracle Hospitality Reporting and Analytics User Guide* contains more information about reporting hierarchies.

To identify the location of Reporting and Analytics on the system, perform the following steps:

1. In the EMC, select the Enterprise level, click the **Setup** tab, click **Enterprise Parameters**, and then click the **mymicros.net** tab.
2. In the **mymicros.net Machine Name** field, enter the name of the computer that is running the MICROS Portal Service.
3. Select the Enterprise level**,** click the **Setup** tab, and then click **Properties**.
4. Double-click a property to open in form view.
5. Select the **Report Location** for the property. If the Report Location is not available in the drop-down, click **New**, and then create a Report Location.
6. Complete each field (required). Here are some recommendations:
   - Use the property name as the **Name**
   - Use the Property ID as the **Location Reference** (this must be unique)
   - Select the **Time Zone** from the drop down that matches the property's time zone
   - Enter a user name in the **Simphony Labor Logon** field (this must be unique)
   - Enter a password for **Simphony Labor Password** (this must be unique)
7. Click **OK,** and then click **Save**.

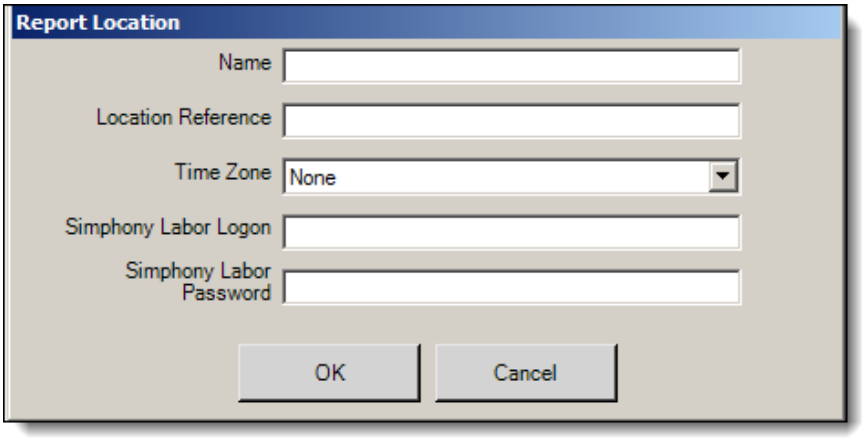

Figure 6-2 Property Report Location

8. Repeat Steps 2 through 6 for all properties in the Enterprise.

Enabling Communication Between the Enterprise and Workstations

To allow the workstations in the property to communicate with the Enterprise, you must add Firewall exceptions for the following services on your Simphony application servers using either the default ports or the ports you assign when installing Simphony version 2.9.2:

- Internet Information Services (IIS): By default uses Transmission Control Protocol (TCP) port 8080
- Client Application Loader (CAL): By default uses TCP port 7300 and User Datagram Protocol (UDP) ports 7300 through 7302
- Oracle Hospitality Labor Management: By default uses TCP port 81

You may need to open extra ports for additional Simphony features. Contact your local support representative or Oracle Hospitality Support Services for assistance.

For instructions on opening a port in Windows Firewall, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/library`.

Binding SSL Certificates to IIS

With the release of Simphony 2.9 or later, you must have a valid security Certificate installed on the Simphony application server. This is the same certificate that is identified and linked to IIS during the Simphony software installation process.

After a successful installation of the Simphony application, you must perform the following steps to Bind the SSL Certificate to the IIS website.

1. Click **Start**, and then click **Control Panel**.
2. If you are using Windows Server 2008 R2, click **System and Security**, and then click **Administrative Tools**.
3. In the Administrative Tools window, double-click **Internet Information Services (IIS) Manager**.
4. Under **Connections**, **Sites**, select the site to be secured with the SSL Certificate.
5. From the **Actions** menu (on the right), click on **Bindings...**
6. This opens the **Site Bindings** window.
7. In the Site Bindings window, click **Add...**
8. This opens the **Edit Site Binding** window.
9. From the **Type** drop-down list, select **https**.
10. Enter the IP address. It should be the IP address of the site or select **All Unassigned**.
11. From the Port field, enter the port number. The port over which traffic will be secured by SSL is usually 443. The SSL Certificate field should specify the installed certificate.
12. Click **OK**.

7 Uninstalling Simphony

Uninstalling only removes the Simphony application. To completely remove Simphony from the servers, you must manually delete the Simphony database components from the database after uninstalling the application.

1. Run the Simphony version 2.9.x installation application, and click **Next**.
2. If you have the application and the database on separate servers, run the installation application on the application server.
3. Enter the credentials for a database administrator, and then click **OK**.
4. If you are using an Oracle Database, enter the credentials for the SYS user.
5. If you are using Microsoft SQL Server, enter the credentials for the SA.
6. Select **Uninstall Simphony,** and then click **Next**.
7. Click **Confirm**.

8 Troubleshooting

This section describes common problems you might encounter when installing Simphony version 2.9 and later, and explains how to solve them.

Insufficient System Privileges

Insufficient System Privileges message appears when the prerequisite, Internet Information Services (IIS), has not been installed. See Installing Internet Information Services (IIS) for instructions on how to install IIS.

Cannot Connect to the Database Server During the Simphony Installation

The Simphony installation application may not connect to the database server due to the following reasons:

- Windows Firewall is running
- Simphony and SimphonyXDB instances are not running

Adding Simphony to the Windows Firewall Exceptions

The Windows Firewall, which is enabled by default on your operating system, could prevent the Simphony installation application from connecting to the database server. You must set up an exception rule on your firewall setting for the Simphony server and the database server to continue with the installation. For instructions on how to set up exception rules in Windows Firewall, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/library`.

Installing Simphony on Separate Servers

If you are using a separate database server, you must set up an incoming rule to allow connections from Simphony depending on your database platform using either the default port or the port you assign while installing Simphony. By default, the Oracle Database server uses port 1521 and Microsoft SQL Server uses port 1443. For instructions on how to open a port in Windows Firewall, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/library`.

Starting the Oracle Listener

If the Oracle Listener is not running, Simphony services cannot start. Make sure that the Oracle Listener is running:

- If you are using Oracle Linux, run the command $ lsnrctl status. If the listener is running, you should see the listener configuration settings and the services summary.
- If you are using Microsoft Windows, make sure that the Oracle TNS Listener service (for example, OracleOraDb11g_home1TNSListener) is set to **Started** in the Windows Services utility

If the Oracle Listener is not running, then you need to manually restart the listener using the Linux command = `lsnrctl start`. The *Platform Guide for Microsoft Windows* and the *Administrator's Reference for Linux and UNIX-Based Operating Systems* contain more information about manually starting Oracle services.

9 List of Simphony Components and Services

You can install the following components and services by running the Simphony installation application.

Table 9-1 - List of Application and Database Services

Component	Description
Data Transfer Service	Moves point of sale (POS) definitions and journal data to Reporting and Analytics. This is typically installed on each Simphony application server.
Direct Posting Service	Posts sales data to the Simphony Reports database. This is typically installed on each Simphony application server.
EMC Client	Contains all files necessary to run the Enterprise Management Console (EMC).
Open Source	This is typically installed on each Simphony application server.
Sequencer Service	Responsible for running the Start of Day Autosequences. This is typically installed on each Simphony application server, but is only enabled on one server.
Tools	Installs the tools required for import/export, encryption, etc. This is typically installed on each Simphony application server.
Import Export	Installs the Import Export Web API and the Web Application Data Request Processing Service. This is typically installed on each Simphony application server. The Web Application Data Request Processing Service processes Simphony Data Import/ Export requests and any scheduled Import/ Export requests.

10 List of Simphony Database Configuration Fields

The following table describes the fields that appear on the Simphony installation application when configuring the Simphony databases.

Table 10-1 - List of Database Configuration Fields

Field	Options
Service Name	If you are using an Oracle database, enter a service name on which to install the Simphony database.
Instance Name	If you have created a named instanced to install Simphony on Microsoft SQL Server, enter the instance name.
Username	Enter a strong username for the database.
Password	Enter a strong password for the user defined in the Username field to use to connect to the database.
Database Name	Enter a name for the database if you want to use a name other than the default. This field only appears if you select Microsoft SQL as your database type.
Database Port	Enter the port number to use to connect to the database if you want to use a port other than the default.

Appendix A

Sample Script for Creating Oracle Tablespaces

```
DECLARE

cursor mcrspos_tablespace_check is
    select tablespace_name
    from dba_tablespaces
    where tablespace_name = 'MCRSPOS';
v_tablespace varchar2(40);
v_path VARCHAR2(100);
sql_stmt VARCHAR2(10000);

BEGIN

open mcrspos_tablespace_check;
fetch mcrspos_tablespace_check into v_tablespace;
    if mcrspos_tablespace_check%NOTFOUND
    then
        SELECT substr(file_name, 1,((INSTR(file_name,'\', -1, 1))))
    into v_path
    from dba_data_files where rownum < 2;

    sql_stmt :=    'CREATE TABLESPACE MCRSPOS LOGGING DATAFILE '||''''||
v_path||'mcrspos01.dbf'||''''||' SIZE 512M AUTOEXTEND ON NEXT 128M
MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';


 execute immediate sql_stmt;

    end if;
close mcrspos_tablespace_check;
END;
/

DECLARE

cursor MCRSCACHE_tablespace_check is
    select tablespace_name
    from dba_tablespaces
    where tablespace_name = 'MCRSCACHE';
v_tablespace varchar2(40);
v_path VARCHAR2(100);
sql_stmt VARCHAR2(10000);

BEGIN

open MCRSCACHE_tablespace_check;
fetch MCRSCACHE_tablespace_check into v_tablespace;
    if MCRSCACHE_tablespace_check%NOTFOUND
    then
        SELECT substr(file_name, 1,((INSTR(file_name,'\', -1, 1))))
    into v_path
    from dba_data_files where rownum < 2;

    sql_stmt :=    'CREATE TABLESPACE MCRSCACHE LOGGING DATAFILE
'||''''|| v_path||'MCRSCACHE01.dbf'||''''||' SIZE 128M AUTOEXTEND ON NEXT
128M MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT
AUTO';

 execute immediate sql_stmt;

    end if;
close MCRSCACHE_tablespace_check;
END;
/
```

Appendix B

Post-Installation Best Practices

Creating Database Backups

Create backups of the Simphony database periodically to ensure that you do not encounter potential data loss due to any unforeseen circumstances.

The *Database Backup and Recovery User Guide* contains more information about creating database backups using the Oracle Recovery Manager.

For instructions on creating database backups in Microsoft SQL Server, refer to the Microsoft TechNet Library at `https://technet.microsoft.com/en-us/` for more information.

Changing the Application Server's Name

If you change the Server Host Name of your Simphony application server, then make sure to carry out the following updates on the application server.

1. Find and replace the default *ServerName* in the following host files with the new *ServerName*. The default *ServerName* is associated with the IP address localhost.

Table 10-2 - Host Files

Path and filename	Variable
C:\Windows\System32\drivers\etc\hosts	*HostIPAddress ServerName* The *HostIPAddress* is typically set to `localhost`.
C:\Windows\System32\drivers\etc\lmhosts	*HostIPAddress ServerName* The *HostIPAddress* is typically set to `localhost`.

2. If you are using an Oracle database, find and replace the default *ServerName* in the following Oracle files with the new *ServerName*.

Table 10-3 - Oracle Database Files

Path and filename	Variable
Drive:\Oracle\product\version\dbhome_1\NETWORK\ADMIN\listener.ora	HOST=*ServerName*
Drive:\Oracle\product\version\dbhome_1\NETWORK\ADMIN\tnsnames.ora	HOST=*ServerName*

3. If the DNS is enabled on the network, find and replace the default *ServerName* in the following Simphony and mymicros files with the new *ServerName*. If DNS is not enabled, then the server's IP address must be entered.

Table 10-4 - Simphony Services and Reporting and Analytics Files

Path and filename	Variable
Drive:\Micros\Simphony2\EgatewayService\DbSettings.xml	Set the *ServerName* for all `dataSource` entries.
Drive:\Micros\Simphony2\EgatewayService\Web.config	Set the *ServerName* in the <appsettings> element for: • SimphonyCAL DiscoveryURL • BatchServiceURL • EGatewayURL • BatchServiceURL_1x • KdsCheckAndPosting • ServiceHost
Drive:\Micros\Simphony2\DirectPostingService\DirectPostingService.exe.config	Set the *ServerName* on the EGatewayURL line.
Drive:\Micros\Simphony2\SequencerService\SequencerService.exe.config	Set the *ServerName* on the EGatewayUrl line.
Drive:\Micros\Simphony2\DataTransferService\mmserver\postingServer.properties	Set the ServerName on all URL lines.
Drive:\Micros\MyMicros\myPortal\microsConfig.properties	Set the ServerName on all db.server* lines.
Drive:\Micros\MyMicros\infoDelivery\Db.xml	Set the ServerName on all db.server* lines.

4. Restart IIS and the MyMicros Portal service (or restart the computer for new installs).
5. If you are using Windows 32 (Win32) devices, follow the steps outlined below:
    a. Find and replace the default *ServerName* in the following file:

Table 10-5 - Simphony Install

Path and filename	Variable
Drive:\Micros\Install\SimphonyInstall.xml	Set the *ServerName* on all <ServerName>, <SvcHostName>

    b. Log onto the EMC and navigate to the Enterprise level and click the **Setup** tab, click **CAL Packages**, click the **Package Content** tab, and select the appropriate Service Host.
    c. Click **Win32** under the Platforms header.
    d. Click **Reload Package From Disk** to upload the Win32 CAL package to the database.

When prompted for the CAL package location, specify the *Drive*:\Micros\Simphony2\EgatewayService\CAL\Win32\Packages\ServiceHost2.0, and click **OK**.

Changing an Oracle Database Server's Name

Refer to http://docs.oracle.com for more information about renaming your Oracle Database server.

Changing a Microsoft SQL Server's Computer Name

Refer to msdn.microsoft.com for more information about renaming your Microsoft SQL Server computer.