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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 2.10.

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

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Change</th>
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<tbody>
<tr>
<td>February 2018</td>
<td>• Initial publication</td>
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<tr>
<td>February 2018</td>
<td>• Updates to Chapter 6 within the Connecting Reporting and Analytics to Simphony section</td>
</tr>
<tr>
<td>May 2018</td>
<td>• Corrected the support for Microsoft SQL Server 2012</td>
</tr>
<tr>
<td>July 2018</td>
<td>• Updates to Chapter 5, specifically the post-upgrade steps for CAPS on ISS</td>
</tr>
<tr>
<td>August 2018</td>
<td>• Updates to Chapter 2’s Install Microsoft Internet Information Services (IIS) section</td>
</tr>
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1 Getting Started

This guide provides instructions on how to install, upgrade, and configure Simphony version 2.10 or later.
Beginning with Simphony version 2.9 (or later), users must install Reporting and Analytics (R&A) separately from Simphony using the Back Office R&A installation application. For upgrades from versions prior to Simphony 2.9, users must upgrade to Reporting and Analytics version 8.5.1 Patch 3 prior to installing or upgrading to Simphony version 2.9. Simphony version 2.10 is compatible with both R&A versions 8.5.1 Patch 3 and 9.0 Patch 8.

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 2.10 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 2.10.
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.

![Diagram of Application and DB Components on Different Servers](image1)

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.

![Diagram of Application and DB Components on Separate Servers](image2)
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.

![Diagram of an All-In-One Installation](image1)

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.

![Diagram of Application Components and DBs on Separate Servers](image2)
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.

![Diagram of application components and databases on three 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.

![Diagram 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

Beginning with the Simphony version 2.9 (or later) release, users must install Reporting and Analytics (R&A) separately from Simphony using the Back Office R&A installation application. For upgrades from versions prior to Simphony 2.9, users must upgrade to Reporting and Analytics version 8.5.1 Patch 3 prior to installing or upgrading to Simphony version 2.9. Simphony version 2.10 is compatible with both R&A versions 8.5.1 Patch 3 and 9.0 Patch 8.

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)


On Microsoft Windows Server 2012 R2, perform the following steps:

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

   ![Server Manager - Adding Roles and Features](image)

   **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**.

![Server Manager - Select Server](image)

*Figure 2-2 Server Manager – Select Server*
5. Expand the Web Server Role (IIS).

![Select role services](image)

**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](image)

13. Click **Next** as needed, and then click **Install**.
<table>
<thead>
<tr>
<th>Pre-Installation Task</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install .NET 4.6.1 Framework</td>
<td>Run the .NET 4.6.1 Framework setup in the INSTALLATION Media\Prerequisites\DotNetFramework46 folder, following the on-screen instructions.</td>
</tr>
<tr>
<td>Turn on Data Execution Prevention (DEP)</td>
<td>For instructions on turning on Data Execution Prevention on the server, refer to the Microsoft TechNet Library at <a href="https://technet.microsoft.com/en-us/">https://technet.microsoft.com/en-us/</a>.</td>
</tr>
</tbody>
</table>
| 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 2.10 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 R2 Enterprise Edition
For instructions on installing and setting up the Oracle Database, see Installing Oracle Database 11g or 12c.
You can also install Simphony on a Microsoft SQL Server 2008 R2 or 2012 Failover Cluster. For instructions on installing a Microsoft SQL Server 2008 R2 or 2012 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 (and later), 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


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.

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
- MCRCACHE

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.

Multi-Factor Authentication

Simphony Multi-factor Authentication (MFA) is enabled by default in order to comply with Payment Card Industry (PCI) version 3.2 standards.

You can configure MFA in Simphony to provide users a one-time password (OTP) through email in two ways. They are:

1. During the installation of the Simphony software.
2. After the installation of the Simphony software, using the Simphony EMC.

MFA Configuration Prerequisites

- For MFA implementation, you must install and make network accessible, two separate Simple Mail Transfer Protocol (SMTP) email servers (each to be designated as either a Primary or Backup server). This allows users to receive their OTP via email each time they attempt to log onto the EMC. An SMTP Backup server is required to provide EMC access redundancy in the event that the Primary SMTP server fails for any reason.
- Each employee using the EMC or SWP must have a valid email address configured in their employee record

Simphony MFA Configuration During the Installation of Simphony

When running the Simphony 2.10 installation application, you are prompted to configure MFA. Your choices are:

1. Deselect the Email One-Time Password checkbox and click Next to bypass this part of the installation until after Simphony has been installed. Bear in mind that when you deselect the Email One-Time Password checkbox, you receive a message that indicates your system is not in compliance with PCI version 3.2 standards.
2. If you choose to configure MFA at this time, the configuration instructions are the same as outlined here: Configuring the SMTP and Backup SMTP Servers in the EMC.

It is important to note that if you are performing a Simphony Standard Cloud Service installation, MFA configuration that is completed during the installation of Simphony is duplicated for each enterprise. After Simphony has been installed, you can go back and make edits in the EMC for individual enterprises (or organizations) that might have differing SMTP servers or settings from each other.
To utilize MFA on your Simphony system you need to add and register your email address. Follow the steps outlined below:

1. When first attempting to log onto the Simphony EMC, when prompted, enter your user name in the User Name field, and your email address in the Email Address field.
2. Re-enter your email address in the Confirm Email Address field and click Register. This email address is utilized to send you the OTP. Your registered email address is written to your employee record in the newly added Email field.
3. Access the email account you registered in step 1 and open the email containing the OTP.
4. Enter the password in the One-Time Password field and click Enter.

OTP passwords are only valid for five minutes, so enter your OTP password in a timely fashion. If the 5 minute threshold is exceeded, you are required to re-login to the EMC to generate another OTP. OTPs are valid for one single entry for the individual attempting to log onto the EMC at that time. After entering a valid OTP, the EMC opens.
Assigning MFA EMC Access Privileges

To access and configure MFA security for other users on your system, you need to be assigned the correct privileges in the EMC.

1. Select the **Enterprise** level, click **Configuration**, and then click **Roles**.
2. Click the **EMC Modules** tab and scroll to the Personnel section.
3. Select the checkboxes for the **Employees (Enterprise)** access privileges for each of the following columns:
   - View
   - Edit
   - Add
   - Delete
4. Click **Save**.

![Figure 3-2 MFA Access Privilege Roles Configuration](image)

5. Click the **Actions** tab, scroll through the Action column until you reach the Security section, select the **Can Change Others’ Passwords and Email Addresses and Security Questions** checkbox, and then click **Save**.
6. Ensure that all users requiring MFA configuration permissions are assigned a Role that have these access privileges enabled.

![Figure 3-3 MFA Access Privilege Roles Configuration - continued](image)

**Enrolling Users MFA Email Addresses and Passwords**

After enabling MFA, each user that accesses the EMC or Simphony Web Portal (SWP) should register their email address. The system prompts each EMC user to do so. This allows users to receive the OTP via email to complete their EMC login process.
Configuring and Resetting a User’s Email Address for MFA

To enroll a user’s email address using the EMC:

1. Select the Enterprise level, click Configuration, and then click Employee Maintenance.
2. Search for the employee record that requires editing.
3. Click the Email button and enter the user’s email address in the Email Address field. Re-enter the email address in the Confirm Email Address field and click Register.

![Figure 3-4 Employee Email Address Configuration](image)

4. If a user’s email address changes, click the Email button and enter the user’s Current Email Address (that is already registered on the system), new Email Address, and then re-enter the address in the Confirm Email Address field and click Register.
5. Depending on your Employee Role privilege settings in reference to accessing the Employee Maintenance module, you could also enter or edit the Email field for yourself or others.

Setting the Max Allowed Failed Logins for EMC Access

MFA adheres to the following EMC account lock out setting:

1. Select the Enterprise, click Setup, click Enterprise Parameters, and then click the Login tab.
2. From the Options section, set the value for the Maximum Allowed Failed Logins field.

After reaching the failed login threshold (based on entering an invalid EMC user or OTP password), users are notified that their login was rejected by the system and that their account is currently locked out.
Assigning and Resetting an EMC Password

To assign a user’s EMC password (or reset a password due to an account being locked out):

1. Select the Enterprise level, click Configuration, and then click Employee Maintenance.
2. Search for the employee record that requires editing.
3. Click the Password button and enter a new password in the New Password field. Re-enter the password in the Confirm New Password field and click Accept.

When the locked out user performs their next successful EMC login, the system prompts to enter a new password (known only to the user).

If you are locked out of the EMC, you cannot reset your own password. This is regardless if you have the necessary access privileges assigned to your account. You must notify another privileged user to assist you in resetting your EMC password.

Configuring the SMTP and Backup SMTP Servers in the EMC

SMTP and Backup SMTP server settings are configured and saved at the Enterprise level. To configure the SMTP servers, navigate the EMC as follows:

1. Select the Enterprise level, click Setup, click Enterprise Parameters, and then click the Login tab.
2. Within the Multi-Factor Authentication section, enable the Email One-Time Password option.

Figure 3-5 EMC MFA Configuration

3. From the Email Configuration section, select the Primary SMTP Server subtab and enter the required settings in the fields listed below:
   - **Server**: Enter either the IP address or the name of the Primary SMTP server. Click the Select button to choose an email provider, and then click OK. When you select an email provider, the Server field auto-populates with an SMTP server name that includes the selected email provider’s naming convention. For example, SMTP.EMAIL.COM.
   - **Port**: Enter a port number or utilize the defaults.
   - **SSL**: Select to enable a secure connection using HTTPS.
   - **User Name**: Enter a user name for access to the Primary SMTP server.
   - **Password**: Enter a password for access to the Primary SMTP server and re-enter it in the Confirm password field for verification.
- **Source Email**: Enter your source email address. This email address is used as the sender of all OTP emails.

- (Optional) **Name**: Enter an alternate (alias) name for the Source Email sender.

6. Click the **Backup SMTP Server** subtab and enter the IP address or server name of the Backup SMTP server.

7. Enter information in the fields as listed above for the SMTP Backup server.

8. Click **Save**.

9. On the **Primary SMTP Server** tab, click the **Send Test Email** button to confirm the SMTP server’s configuration and that the OTP email is received. Repeat this step on the **Backup SMTP Server** tab to confirm the functionality.

**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 2.10 installation application from the Oracle Technology Network (OTN) website at [https://edelivery.oracle.com/](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**.

4. Select all **Application and Database Components**, and then click **Next**. See List of Simphony Components and Services for details.

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

![Simphony Installation Application](image)
Select the services to enable by default.

- Data Transfer Service
- Direct Posting Service
- Sequencer Service
- Import Export

Right click a component for details about this panel.

Select All
Clear All

Previous  Next  Cancel

Figure 3-7 Simphony Services
6. If you 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 3-8 Security Enforcement | Certificate Check](image)

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 3-9 Service Host & Port Number](image)

**Figure 3-9 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

<table>
<thead>
<tr>
<th>Database Type</th>
<th>Description</th>
<th>Instructions</th>
</tr>
</thead>
</table>
| 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 2.10 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 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.

8. 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>
<thead>
<tr>
<th>Task</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a shared folder on a central location that all Simphony application servers can access to store the files that you import and export</td>
<td>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 <a href="https://technet.microsoft.com/en-us/library">https://technet.microsoft.com/en-us/library</a></td>
</tr>
<tr>
<td>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</td>
<td>For instructions on how to map network share drives, refer to the Microsoft TechNet Library at <a href="https://technet.microsoft.com/en-us/library">https://technet.microsoft.com/en-us/library</a></td>
</tr>
<tr>
<td>Configure the shared folder location in the EMC</td>
<td>In the EMC, select the Enterprise level, click <strong>Setup</strong>, and then click <strong>Enterprise Parameters</strong>. Click the <strong>Import/ Export</strong> tab, and enter the location of the shared folder in the <strong>Root Path for Export/Import File Operations</strong> field (for example, <code>\HostServerName\ImportExport</code>). Restart the <strong>Data Request Processing Service</strong>.</td>
</tr>
</tbody>
</table>

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 Patch 8 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 2.10

Simphony version 2.10 performs an upgrade to Simphony version 2.7.6.X or later. To enhance your system’s security, the Simphony installation application has been recently 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**

Beginning with this release you can now upgrade application components on servers with or without downloading CAL Packages. This flexibility helps to speed up the upgrade process on properties utilizing multiple application servers.
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 2.10. 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:

```xml
<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 2.10.
2. **Certificate Location** - Throughout the Simphony 2.10 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"
      ```
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 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 5-2 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 sites 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 2.10.
2. **Certificate Location** - Throughout the Simphony 2.10 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.
5-6 Upgrading from a Previous Release

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.
Upgrading with Existing Separated Transaction and Security Database Servers

This section provides upgrade instructions for sites 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 Symphony Prior to Symphony version 2.10.

2. **Certificate Location** - Throughout the Symphony 2.10 upgrade process, the Symphony 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 Symphony 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 Symphony 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 Symphony 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 Microsoft SQL Server, enter the credentials for the SA user.

9. Click Confirm. When the upgrade is complete, click Finish.

---

**Upgrading Simphony Prior to Simphony version 2.10**

1. Ensure that the Simphony application and database servers meet the requirements listed in Chapter 2.
2. Log in and download the Simphony version 2.10 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 or later from an earlier release.

<table>
<thead>
<tr>
<th>Post-Upgrade Task</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Update the Property’s Admin and Database Credentials</td>
<td>Updating Property Administrator and Database Logon Credentials contains more details and instructions.</td>
</tr>
<tr>
<td>Update the Simphony License Counts</td>
<td>Updating Simphony License Counts contains more details and instructions.</td>
</tr>
<tr>
<td>Update all Check and Posting Service (CAPS) clients prior to updating workstations with the latest CAL Packages.</td>
<td>Post-Upgrade Steps for CAPS on IIS for Simphony 2.9 Users and Oracle Hospitality Simphony Configuration Guide, specifically the Check and Posting Service (CAPS) contain more important details and instructions.</td>
</tr>
<tr>
<td>Update or verify your CAL Packages and schedule their deployment to your workstation clients.</td>
<td>Client Application Loader (CAL) in the Oracle Hospitality Simphony Configuration Guide for more information about configuring and deploying CAL Packages.</td>
</tr>
<tr>
<td>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</td>
<td>Preparing a Multi-Server Environment Using a Load Balancer for the Simphony Import/Export Service contains more details and instructions.</td>
</tr>
</tbody>
</table>

Post-Upgrade Steps for CAPS on IIS for Simphony 2.9 Users

This section only applies if you are upgrading from the Simphony 2.9 General Release (GR) and are using either an Oracle or Microsoft SQL Server database platform, and are upgrading to Simphony 2.10 or later.

Note: No additional post-upgrade steps are necessary for CAPS on Microsoft Internet Information Services (IIS) if you upgrade from Simphony versions later than Simphony 2.9 GR. For example, Simphony versions 2.9.3, and 2.10 or later.

Perform these steps in IIS after upgrading from Simphony 2.9 GR to the Simphony 2.10 release or later:

**Step 1- Close and Post All Transactions**

Ensure that all transactions are closed and posted to the Enterprise prior to performing the Simphony upgrade.

**Step 2- Access the IIS Manager Console**

1. From the desktop of each server running CAPS on IIS, select Start, Control Panel, Administrative Tools, and then select Internet Information Services (IIS) Manager.
2. From the IIS Connections column, expand the Sites folder and right-click on the site created for IIS CAPS and select Remove. The name of the IIS CAPS site should be the same as the ServiceHostName. For example, if your service host name is MyIISCapsSvcHost, your site name should be added using the exact same text.

![Figure 5-3 IIS CAPS Site](image)

Figure 5-3 IIS CAPS Site
3. From the IIS Connections column, click **Application Pools**.

![Figure 5-4 Simphony Application Pools](image)

**Figure 5-4 Simphony Application Pools**

4. Right-click on the application pool created for IIS CAPS and select **Remove**. The name of the IIS CAPS pool should be the `ServiceHostNamePool`. For example, if your service host name is `MyIISCapsSvcHost`, your IIS CAPS application pool name should be `MyIISCapsSvcHostPool`.

![Figure 5-5 IIS CAPS Application Pool](image)

**Figure 5-5 IIS CAPS Application Pool**
Step 3- Rename the IIS Folder

1. Rename the Simphony version 2.9 IIS CAPS folder.
   a. Verify the installed folder path by navigating to the [Drive]:\MICROS\Simphony2\Tools\CAPSConfigurator\CAPSConfigurator.exe.config file and open it with a text editor such as Microsoft Notepad.

   ![CAPSConfigurator.exe.config IIS CAPS Directory Installation Folder Path](image)

   b. Note that the default Simphony version 2.9 IIS CAPS folder location is: [Drive]:\Simphony2\IISCAPS. Rename the IISCAPS folder to IISCAP_Backup. This step ensures you maintain a backup of the old folder.

   ![Default IIS CAPS Folder Installation Path](image)
Step 4- Enable an Option and Configure CAPS

1. Access EMC and navigate to the Enterprise level, click the Configuration tab, and then click Roles.

2. Click on your assigned Role and toggle to Form view. Click on the Operations tab, and then click the Miscellaneous subtab. Under Miscellaneous Options, enable option 10065 - Download Software, Install and Authenticate Clients and Service Hosts Using CAL and Save.

3. Logon to the CAPS Configurator Tool (using the CAPSConfigurator.exe) and freshly configure CAPS with the default configuration settings by clicking the Configure CAPS button. Upon successful installation, verify the new directory created under [Drive]:\Simphony2\EgatewayService\IISCAPSServiceHost path.

![CAPS Configurator Tool](image)

Figure 5-8 CAPS Configurator Tool

Step 5- Stop IIS

Stop IIS by:

1. Run the command window with administrator privileges.

2. Enter the `iisreset /stop` command and press Enter.
Step 6- Move the DbSettings.xml to the Newly Defined IIS CAPS Path

1. Copy the **DbSettings.xml** file from the old path (review Step 3- Rename the IIS Folder above, and verify the default CAPS IIS installation path), and then using Microsoft Windows Explorer, navigate to that path. For example, *[Drive]*: \\Simphony2\IISCAP_Backup\IISCAPS\DbSettings.xml.

2. Paste the **DbSettings.xml** file to the new path: [Drive]\Simphony2\EgatewayService\IISCAPPServiceHost

3. Edit the **DbSettings.xml** file to update the CAPS database password; this means to delete the previously existing password value on epw (encrypted format) and enter the password again with pwd (ClearText). For example:

   ```xml
   <root>
     <db
       alias="CPServiceDb"
       dbType="sqlserver"
       dataSource="xxxx"
       catalog="xxxxxxx"
       uid="xxxxxxxxx"
       pwd="#CAPSDBPassword""
       port="1433" />
   </root>
   ```

Step 7- Start IIS

Start IIS by:

1. Run the command window with administrator privileges.
2. Type the `iisreset /start` command and press Enter.

Step 8- Verify Log Creation, Database Tables, and Delete the Old Directory

1. Verify that logs are created here: [Drive]\Simphony2\EgatewayService\IISCAPPServiceHost\EgatewayLog.
2. Verify that the tables are upgraded on the existing transaction database.
3. Delete the Simphony version 2.9 CAPS directory, for example the IISCAP_Backup directory (review Step 3- Rename the IIS Folder above).
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://192.168.220.224:8080), 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.

![AppLoader Icon](image)

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 and later, 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/](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

With the release of Simphony version 2.10 or later, if you utilize Reporting and Analytics (R&A) version 9.0 Patch 8, the steps outlined below are no longer required. Core Simphony reports are now available to set up by default from within the R&A application.

If you are utilizing R&A version 8.5.1, the following steps are still applicable. Before you connect to R&A, 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 R&A for your properties in the Enterprise. See the *Hospitality Enterprise Back Office Installation Guide* for more information about the prerequisite configurations that are required when creating Organizations and report locations.

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](image)

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 2.10:

- **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
  
  See Client Application Loader (CAL) in the *Simphony Configuration Guide* on the Oracle Help Center for more information about CAL Authentication for workstations.

- **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.


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 2.10 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.
This section describes common problems you might encounter when installing Simphony version 2.10 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](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](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.
# 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**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Transfer Service</td>
<td>Moves point of sale (POS) definitions and journal data to Reporting and Analytics. This is typically installed on each Simphony application server.</td>
</tr>
<tr>
<td>Direct Posting Service</td>
<td>Posts sales data to the Simphony Reports database. This is typically installed on each Simphony application server.</td>
</tr>
<tr>
<td>EMC Client</td>
<td>Contains all files necessary to run the Enterprise Management Console (EMC).</td>
</tr>
<tr>
<td>Open Source</td>
<td>This is typically installed on each Simphony application server.</td>
</tr>
<tr>
<td>Sequencer Service</td>
<td>Responsible for running the Start of Day Autosequences. This is typically installed on each Simphony application server, but is only enabled on one server.</td>
</tr>
<tr>
<td>Tools</td>
<td>Installs the tools required for import/export, encryption, etc. This is typically installed on each Simphony application server.</td>
</tr>
<tr>
<td>Import Export</td>
<td>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.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Field</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Name</td>
<td>If you are using an Oracle database, enter a service name on which to install the Simphony database.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>If you have created a named instance to install Simphony on Microsoft SQL Server, enter the instance name.</td>
</tr>
<tr>
<td>Username</td>
<td>Enter a strong username for the database.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter a strong password for the user defined in the Username field to use to connect to the database.</td>
</tr>
<tr>
<td>Database Name</td>
<td>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.</td>
</tr>
<tr>
<td>Database Port</td>
<td>Enter the port number to use to connect to the database if you want to use a port other than the default.</td>
</tr>
</tbody>
</table>
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.


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>
<thead>
<tr>
<th>Table 10-2 - Host Files</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Path and filename</strong></td>
</tr>
<tr>
<td>C:\Windows\System32\drivers\etc\hosts</td>
</tr>
<tr>
<td>C:\Windows\System32\drivers\etc\lmhosts</td>
</tr>
</tbody>
</table>

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>
<thead>
<tr>
<th>Table 10-3 - Oracle Database Files</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Path and filename</strong></td>
</tr>
<tr>
<td>Drive:\Oracle\product\version\dbhome_1\NETWORK\ADMIN\listener.ora</td>
</tr>
<tr>
<td>Drive:\Oracle\product\version\dbhome_1\NETWORK\ADMIN\tnsnames.ora</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Path and filename</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive:\Micros\Simphony2\EgatewayService\DbSettings.xml</td>
<td>Set the <code>ServerName</code> for all <code>dataSource</code> entries.</td>
</tr>
</tbody>
</table>
| 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

<table>
<thead>
<tr>
<th>Path and filename</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive:\Micros\Install\SimphonyInstall.xml</td>
<td>Set the <code>ServerName</code> on all <code>&lt;ServerName&gt;</code>, <code>&lt;SvcHostName&gt;</code></td>
</tr>
</tbody>
</table>
  
  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.