
Oracle® Hospitality Symphony
Installation Guide
Release 2.8
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Contents

Tables	v
Figures	vi
Preface	vii
Audience	vii
Customer Support	vii
Documentation	vii
Revision History	vii
1 Getting Started	1-1
Before You Start	1-1
Understanding the Installation Process	1-1
Deployment Scenarios	1-2
Installing All-In-One	1-2
Installing Applications and Databases on Separate Servers	1-2
Installing Applications on Separate Servers and All Database Components on one Server	1-3
Installing Each Application and Database Component on Separate Servers	1-3
Installing on Multiple Servers	1-4
Adding an Application Server	1-4
2 Pre-Installation Tasks	2-1
Installing Oracle Database 11g or 12c	2-4
Database User Passwords	2-4
Increasing Database Process Count	2-5
Creating Oracle Database Tablespaces	2-5
3 Upgrading from a Previous Release	3-1
Upgrading Symphony	3-1
Post-Upgrade Tasks	3-2
4 Installation Tasks	4-1
Starting the Installation	4-1
Configuring Symphony Databases during Installation	4-1
5 Installing Symphony on a Single Server	5-1
6 Installing Symphony on Multiple Servers	6-1
Overview of Installing Symphony on Multiple Servers	6-1
Installing Symphony Database Components on Microsoft SQL Server	6-2
Installing the Symphony Application on a Single Server	6-2
Installing the Symphony Application Components on Multiple Servers	6-3
Installing Reporting and Analytics Advanced on a Separate Server	6-3
7 Post-Installation Tasks	7-5
Installing a Remote EMC	7-5

Verifying the Installation	7-5
Sample Database Users	7-5
Blank Database Users	7-6
Configuring the Symphony License Count	7-6
Updating the Properties Admin and Database Credentials	7-7
Setting the Start-Of-Day Sequencer Machine and the App Server Time Zone	7-7
Connecting Reporting and Analytics Advanced to Symphony	7-8
Updating postingServer.properties.config File for Reporting and Analytics Advanced Installations	7-9
Preparing a Multi-Server Environment using a Load Balancer for the Symphony Import/ Export Service	7-10
Enabling Communication between the Enterprise and Workstations	7-10
8 Uninstalling Symphony	8-1
9 Troubleshooting	9-1
Insufficient System Privileges	9-1
Cannot Connect to the Database Server during the Symphony Installation	9-1
Adding Symphony to the Windows Firewall Exceptions	9-1
Starting the Oracle Listener	9-1
EMC Fails to Launch	9-2
10 List of Symphony Components and Services.....	10-1
11 List of Symphony Database Configuration Fields	11-1
Appendix A	A-1
Sample Script for Creating Oracle Tablespaces	A-1
Appendix B.....	B-1
Post-Installation Best Practices	B-1
Creating Database Backups	B-1
Changing the Application Server's Name	B-1
Changing an Oracle Database Server's Name	B-3
Changing a Microsoft SQL Server's Computer Name.....	B-3

Tables

Table 2-1 - Pre-Installation Tasks for Symphony Version 2.8	2-1
Table 3-1 - Post-Upgrade Tasks for Symphony Version 2.8	3-2
Table 6-1 - Overview of Installing Symphony on Multiple Servers	6-1
Table 7-1 - Tasks for Preparing a Multi-Server Symphony Installation using a Load balancer for the Import/ Export Service	7-10
Table 10-1 - List of Application and Database Services	10-1
Table 11-1 - List of Database Configuration Fields	11-1
Table 7 - Host Files	B-1
Table 8 - Oracle Database Files	B-1
Table 9 - Symphony Services and mymicros.net Files	B-1
Table 10 - Symphony Install	B-2

Figures

Figure 1-1 - Example of an All-In-One Installation 1-2

Figure 1-2 - Example of Applications and Databases on Separate Servers 1-2

Figure 1-3 - Example of Applications on Separate Servers and All Database components
on One Server 1-3

Figure 1-4 - Example of Each Application and Database Component on Separate Servers
..... 1-3

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 Symphony version 2.8.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:
[https:// support.oracle.com](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/](http://docs.oracle.com/en/industries/hospitality/) .

Revision History

Date	Description of Change
October 2015	<ul style="list-style-type: none">• Initial publication
March 2016	<ul style="list-style-type: none">• .NET installation edit
April 2016	<ul style="list-style-type: none">• Added Oracle Database user password requirements
May 2016	<ul style="list-style-type: none">• .NET installation version edits, Java edits

1 Getting Started

This guide provides instructions on how to install, upgrade, and configure Symphony version 2.8 for Microsoft Windows Server 2008 R2 and Microsoft Windows Server 2012 R2 operating systems.

Before You Start

Make sure you have an operational understanding of:

- PCs and a working knowledge of the Microsoft Windows interface
- POS terminology and concepts
- Microsoft Windows administrative privileges (if installing on Oracle Linux, root privileges)
- Client Application Loader (CAL) technology

Knowing that:

- During a fresh installation and the initial linking of a property to Reporting and Analytics (formerly mymicros.net), do *not* use the DEMOTWO report location within the Sample organization.
- You cannot repair or modify installation features due to changes in the setup process. If a problem occurs, you must reinstall Symphony.
- You can only install Symphony to local drives. Symphony does not support installing to a mapped drive.

Understanding the Installation Process

1. Selecting an 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. Prerequisite steps

You need to perform these steps prior to installing or upgrading to Symphony version 2.8. Installers for prerequisite components are in the <Installation Media>\Prerequisites folder.

3. Installing the database server application

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

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

4. Upgrading or installing Symphony

You can run the Symphony version 2.8 installer to upgrade Symphony, to perform a clean installation or to install and add application servers. See [Upgrading from a Previous Release](#) and [List of Symphony Components and Services](#) for more installation information.

- **Configuring post-installation settings**

The post-installation configuration makes sure that the application components and the database are configured correctly

- **Verifying the installation**

Perform the verification step to make sure the Symphony application and the database applications are set correctly

- **Troubleshooting**

Follow the instructions in this section to resolve common problems you might encounter when installing Symphony version 2.8

Deployment Scenarios

Installing All-In-One

In the all-in-one installation, you install the Symphony database, the Reporting and Analytics Advanced (formerly mymicros.net) database, the Symphony version 2.8 application, and the Reporting and Analytics Advanced application on one server.

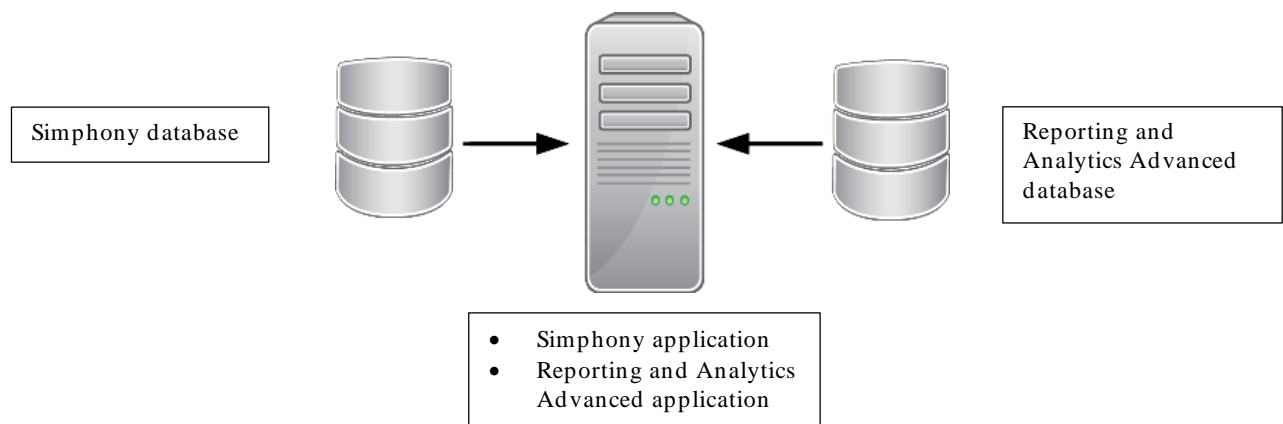


Figure 1-1 - Example of an All-In-One Installation

Installing Applications and Databases on Separate Servers

You can install the Symphony application components on one physical or virtual server and install the database components on a separate server.

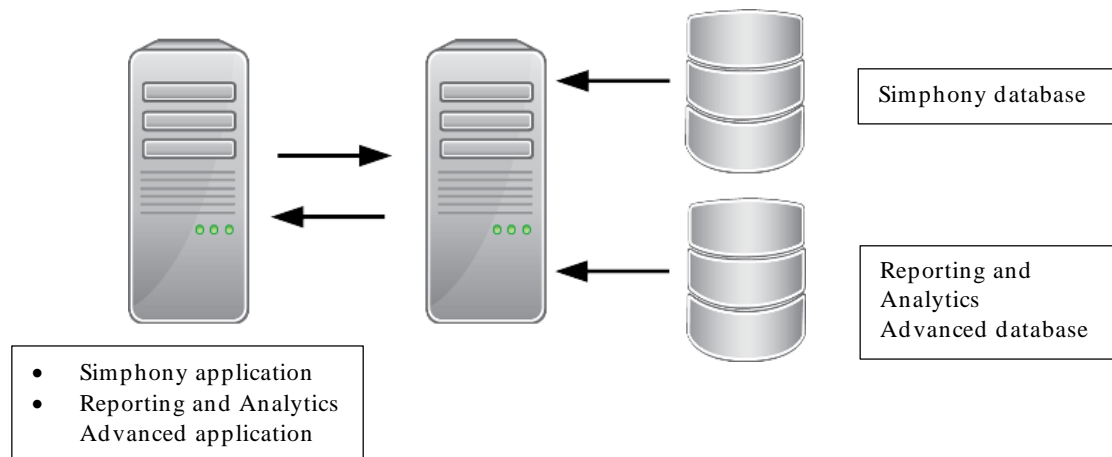


Figure 1-2 - Example of Applications and Databases on Separate Servers

Installing Applications on Separate Servers and All Database Components on one Server

You can install the Symphony application and the Reporting and Analytics Advanced application on two separate servers and install all database components on a third server.

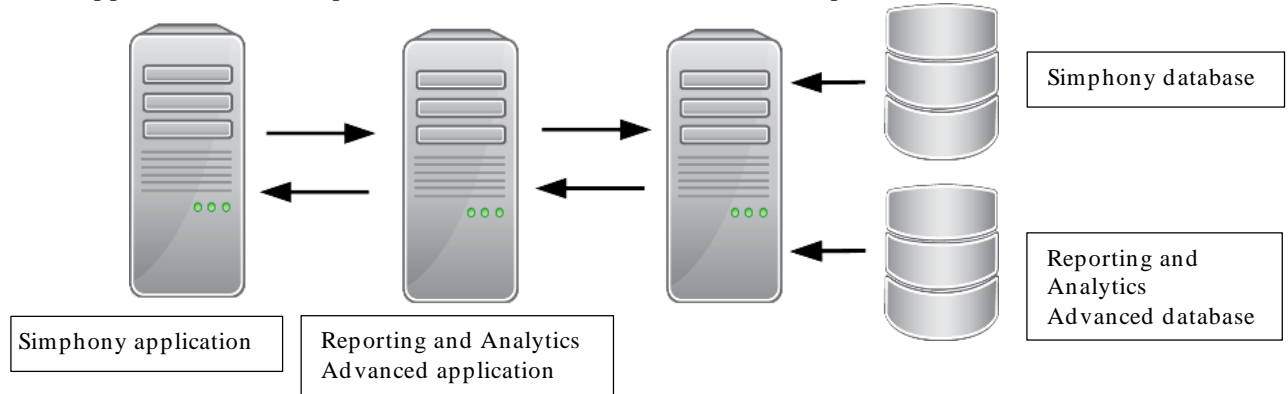


Figure 1-3 - Example of Applications on Separate Servers and All Database components on One Server

Installing Each Application and Database Component on Separate Servers

You can install the Symphony application, Reporting and Analytics Advanced, the Symphony database, and the Reporting and Analytics Advanced database on separate servers.

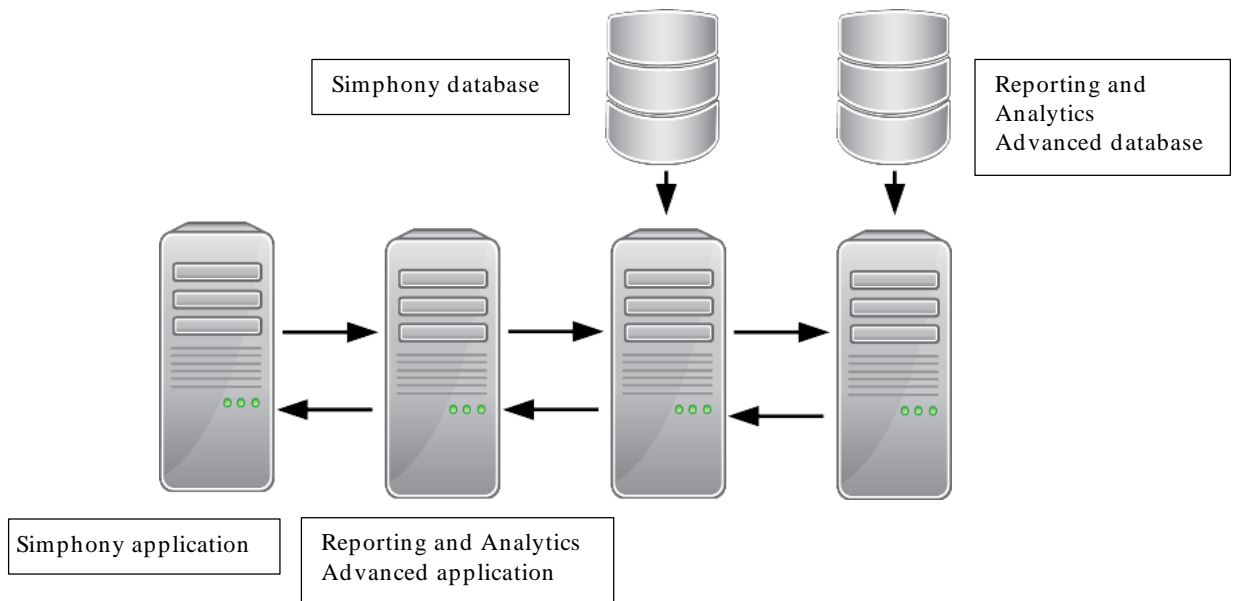


Figure 1-4 - Example of Each Application and Database Component on Separate Servers

Installing on Multiple Servers

Depending on the business requirement of the Enterprise, you can extend the Symphony installation to many server combinations. Symphony can be deployed over multiple servers to balance the load ensuring service levels are met during peaks in demand or after a server failure.

Adding an Application Server

You can run the Symphony version 2.8 installer to configure additional application servers. Run the Symphony installer to setup a POS-only server and ensure that this server points to a reporting database server.

2 Pre-Installation Tasks

Perform all pre-installation tasks to ensure that you can successfully install Symphony version 2.8. Installers for several of the prerequisite components are in the <Installation Media>\Prerequisites folder.

Table 2-1 - Pre-Installation Tasks for Symphony Version 2.8

Pre-Installation Tasks	Instructions
Install Internet Information Services (IIS)	<p>Use the Server Manager - Add Roles and Features Wizard on your sever to install IIS on your application and database servers. 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/.</p> <p>On Microsoft Windows Server 2008 R2, install IIS with the following role services:</p> <ul style="list-style-type: none">• ASP.NET• ASP• HTTP Logging• Request Monitor• IIS Management Console and IIS 6 Management compatibility <p>On Microsoft Windows Server 2012 R2, install IIS with the following role services and features:</p> <ul style="list-style-type: none">• Web Server• Common HTTP Features<ul style="list-style-type: none">o HTTP Errorso Directory Browsingo Default Documento Static Content• Health and Diagnostics<ul style="list-style-type: none">o HTTP Loggingo Request Monitor• Performance<ul style="list-style-type: none">o Static Content Compression• Security<ul style="list-style-type: none">o Request Filtering

Pre-Installation Tasks	Instructions
	<ul style="list-style-type: none"> • Management Tools <ul style="list-style-type: none"> ◦ Management Service ◦ IIS Management Scripts and Tools ◦ IIS Management Console • IIS 6 Management Compatibility Components <ul style="list-style-type: none"> ◦ IIS 6 Management Console ◦ IIS 6 Scripting Tools ◦ IIS 6 Metabase Compatibility ◦ IIS 6 WMI Compatibility • Application Development Feature <ul style="list-style-type: none"> ◦ .NET Extensibility 3.5 ◦ .NET Extensibility 4.5 ◦ ASP ◦ ASP .NET 3.5 ◦ ASP .NET 4.5 ◦ ISAPI Filters ◦ ISAPI Extensions
Configure Recycling Settings for the IIS Application Pool	<p>Optional</p> <p>If you choose to configure the application pool to recycle at a scheduled time using the IIS Manager, consider configuring the following recycle settings for the IIS Application Pool:</p> <ul style="list-style-type: none"> • Make sure that the Specific time(s) you define does not coincide with any start of day(s) (SOD) or periods of peak activity • Set the Memory Based Maximums to less than half of the available server memory • Set the Symphony2 App Pool Pipeline mode to Classic All other App Pool's Pipeline mode settings can remain on their default setting. • Set the Disable Overlapped Recycle setting to True for the Symphony2 App Pool <p>For instructions on how to configure an application pool to recycle at a scheduled time, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p>
Configure Log File Rollover Options (IIS 7)	<p>For instructions on how to configure Log file rollover options, refer to the Microsoft TechNet Library https://technet.microsoft.com/en-us/.</p>

Pre-Installation Tasks	Instructions
Install the Java Development Kit	<p>Install the Java Runtime Environment (JRE) version 1.6 in this order on the application and database servers.</p> <ol style="list-style-type: none"> 1. If you are on a 64-bit operating system, install both <code>jdk-6u24-windows-x64.exe</code> and <code>jdk-6u24-windows-i586.exe</code>. Install the <code>jdk-6u24-windows-x64.exe</code> first. 2. If you are on a 32-bit operating system, install only <code>jdk-6u24-windows-i586.exe</code>.
Install .NET Framework 3.5 SP1 and .NET Framework 4.5	<p>You must install both .NET Framework 3.5 SP1 and .NET Framework 4.5 on the Symphony application servers.</p> <ul style="list-style-type: none"> • If you are using Microsoft Windows Server 2008 R2, you can add .NET Framework 3.5 SP1 for the application server using the Server Manager. To add .NET Framework 4.5, run the .NET Framework 4.5 setup in the <Installation Media>\Prerequisites\DotNetFramework45 folder. • If you are using Microsoft Windows Server 2012 R2, you can add both .NET Framework 3.5 SP1 and .NET Framework 4.5 for the application server using the Server Manager. <ul style="list-style-type: none"> ◦ Ensure that all Features options are enabled for both .NET Framework 3.5 SP1 and .NET Framework 4.5, including all of the WCF Services options. <p>For instructions on how to add or enable .NET Framework 3.5 SP1 and .NET Framework 4.5 on your server, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p>
Turn On Data Execution Prevention (DEP)	<p>For instructions on how to turn on Data Execution Prevention on your server, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p>
Disable Anti Denial-Of-Service (Dos) Attacks	<p>If you are installing Symphony with Microsoft SQL Server as the database platform, you need to add the <code>SynAttackProtect</code> registry key to the computer that is running Microsoft SQL Server.</p> <p>For instructions on how to disable DOS attacks, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p>
Remove anti-virus software from all servers	<p>Symphony can silently fail to install because of anti-virus software. Remove any anti-virus software from all servers before installing Symphony. You can reinstall the anti-virus software after Symphony applications and databases are installed.</p>

Pre-Installation Tasks	Instructions
Install a database platform on the database server	<p>Simphony version 2.8 currently supports the following database server platforms:</p> <ul style="list-style-type: none">• Oracle Database 11g Enterprise Edition• Oracle Database 12c Enterprise Edition• Microsoft SQL Server 2012 Enterprise Edition• Microsoft SQL Server 2008 R2 Enterprise Edition <p>For instructions on how to install and set up the Oracle Database, see Installing Oracle Database 11g or 12c.</p> <p>For instructions on how to install Microsoft SQL Server, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p> <p>You can also install Simphony on a Microsoft SQL Server 2008 or 2012 R2 Failover Cluster. For instructions on how to install a Microsoft SQL Server 2008 or 2012 R2 Failover Cluster, refer to the Microsoft TechNet Library at https://technet.microsoft.com/en-us/.</p>

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>.

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 upper case 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 will not pass because Hello and there are separated dictionary words by symbols/numbers, but Hellothere\$1 would pass.

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 on an 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 on 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.

Creating Oracle Database Tablespaces

Create the following Oracle database Tablespaces on the database server or servers:

- AGGREGATE_DB
- AGGREGATE_INDEX
- CEDB
- COREDB
- LOC_INDEX
- LOCDB
- PENTHO
- PORTALDB
- RTA
- MCRSPOS
- MCRSCACHE

See [Appendix A](#) for a sample script for creating 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.

3 Upgrading from a Previous Release

Upgrading Symphony

1. Make sure that your Symphony application and database servers meet the requirements list in [Chapter 2](#).
2. Log in and download the Symphony version 2.8 installer 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 installer on the application server.
4. Enter the logon credentials for a database administrator, and 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 and click **OK**.
5. If you are using the Symphony installer to upgrade Reporting and Analytics Advanced:
 - a. Enter the passwords for all existing reporting database users and enter passwords to configure for the new database users.
 - b. Click **OK**.
6. Select **Update Application Components on this machine**, and click **Next**.
7. If there are new components, select the components to install, and click **Next**.
8. Select the services to enable by default, and click **Next**.
9. 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 CA Certificate Location.
If you define a Service Host Secure Port number other than the default 443, you need to enable that port on the Load Balancer server.
10. If are not using a Load Balancer server and installing the Import/ Export service or plan to use the Engagement Cloud Service, select **IIS** for the CA Certificate Location.
If you define a Service Host Secure Port number other than the default, you need to configure the IIS Bindings of each Application Pool to the new port. For information on how to add IIS Bindings, refer to the Microsoft TechNet Library at <https://technet.microsoft.com/en-us/> for more information.
11. Click **Next** and then click **Confirm** to begin the upgrade.

Post-Upgrade Tasks

The following table lists the tasks that you must perform after upgrading to Symphony version 2.8 from an earlier release.

Table 3-1 - Post-Upgrade Tasks for Symphony Version 2.8

Post-Upgrade Task	Instructions
Update the Properties Admin and Database Credentials	See Updating the Properties Admin and Database Credentials for further details and instructions.
Restore original <code>postingServer.properties</code> file	<p>Optional</p> <p>If a <code>postingServer.properties</code> file already exists when upgrading to Symphony version 2.8, the installer creates a back of this file and creates a new <code>postingServer.properties</code> file. You need to manually restore the backup file if:</p> <ul style="list-style-type: none">• You are using Symphony version 2.8 with Reporting and Analytics Advanced version 8.4.4 or an earlier version• The original <code>postingServer.properties</code> file had data warehouse URLs that were manually modified <p>To manually restore the file:</p> <ol style="list-style-type: none">1. Browse to and open the <code>Drive:\Micros\Symphony2\DataTransferService\mmserver</code> folder.2. Rename the <code>postingServer.properties</code> file.3. Find the backup file named <code>postingServer.propertiesDateofCreation_TimeOfCreation.bak</code>.4. Remove the <code>.bak</code> file extension and rename the file to <code>postingServer.properties</code>.5. Restart the MICROS Data Transfer Service.
If you installed the Symphony Import/Export service on a multi-server Symphony 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 Symphony Import/ Export Service for further details and instructions.

4 Installation Tasks

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

Starting the Installation

1. Log in and download the Symphony version 2.8 installer from the Oracle Technology Network (OTN) website at <https://edelivery.oracle.com/>.
2. Run the **Setup** file, and click **Next** to continue with the installation.

Configuring Symphony Databases during Installation

If you are using an Oracle Database, you need to make sure that the logon credentials adhere to the Oracle security guidelines when configuring database user passwords. Refer to the *Oracle Database Security Guide*, specifically the Guidelines for Securing Passwords section. It contains more information about configuring password protection and how your database configurations for an instance affect the case sensitivity, password reuse, and other factors in the credentials. It's located at <http://docs.oracle.com>.

1. 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.
2. Enter the **Service Host Port**, and click **OK**.
 - 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 are installing all Symphony application and database components on a single server, do not assign port number 8081 for the Service Host Port. This is the default port number assigned to the JBoss Server for Back Office Reports.
3. 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 CA Certificate Location.

If you define a Service Host Secure Port number other than the default 433, you need to enable that port on the Load Balancer server.
4. If are not using a Load Balancer server and installing the Import/ Export service or plan to use the Engagement Cloud Service, select **IIS** for the CA Certificate Location.

If you define a Service Host Secure Port number other than the default, you need to configure the IIS Bindings of each Application Pool to the new port. For information on how to add IIS Bindings, refer to the Microsoft TechNet Library at <https://technet.microsoft.com/en-us/> for more information.
5. Enter the IP addresses for the **Default Gateway** and the **Default Net Mask**, and then click **Next**.

-
6. Select your database platform:
 - a. If you are using an Oracle Database, select **Oracle**.
 - b. If you are using a Microsoft SQL Server, select **MS-SQL**.
 7. Enter or select the location to install Symphony and click **Next**. Oracle recommends that you install the Symphony application on a separate partition from where the Microsoft Windows or Oracle Linux operating system resides.
 8. Perform one of the following steps:
 - a. If you want to install both Symphony and Reporting and Analytics Advanced database components, select **Transaction Database** and **Reporting Database**, and click **Next**.
 - b. If the reporting database is already installed on a separate server and you only want to install the Symphony database components, select **Transaction Database**, and click **Next**. In a Transaction Database-only install, the reporting page is pointed to an existing Reporting and Analytics Advanced installation.
 - c. If you only want to install the Reporting and Analytics Advanced database components, select **Reporting Database**, and click **Next**.
 9. If you want to install Symphony 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 Symphony super user to access the EMC.
 - c. Confirm the password, and click **Next**.
 10. If you want to install Symphony with a sample database:
 - a. Select **Sample Database**, and click **Next**. Do not install the sample database to be used for an actual food and beverages or retail environment.
 - b. Click **Yes** to continue with the installation.
 11. If you selected **Oracle** as the database platform type:
 - a. Enter the information to configure the transaction database, and click **Next**. See [List of Symphony Database Configuration Fields](#) for more information on the database setup options.
 - b. Enter the credentials for the default SYS user, and click **OK**.
 - c. Enter the information to configure the security database, and click **Next**.
 - d. Enter the information to configure the reporting database, and click **Next**.
 12. If you selected **MS-SQL** as the database platform type:
 - a. Enter or select the location to create the transaction database data files, and click **Next**. See [List of Symphony Database Configuration Fields](#) for more information on the database setup options.
 - b. Enter the information to configure the transaction database, and click **Next**.
 - c. Enter the credentials for the SA user, and click **OK**.
 - d. Enter or select the location to create the security DB data files, and click **Next**.
 - e. Enter the information to configure the security database, and click **Next**.

-
- f. Enter or select the location to create the reporting database data files, and click **Next**.
 - g. Enter the information to configure the reporting database, and click **Next**.
 13. Perform one of the following steps:
 - a. Enter a unique password for each reporting database user, and click **OK**.
 - b. Select **Use same password for all users** and enter the password for one user, and click **OK**.
 14. Click **Confirm**.
 15. After the installation is complete, click **Finish** to exit the Symphony setup.
 16. Click **Yes** to restart the computer.

5 Installing Symphony on a Single Server

In a single-server installation, you install all Symphony application and database components on one server.

1. If you are using an Oracle Database, make sure you have the Symphony database Tablespaces created in your sever. See [Installing Oracle Database 11g or 12c](#) for more information.
2. Follow the instructions in [Starting the Installation](#).
3. Select **Application and Database Components**, and click **Next**.
4. Select all application and database components, and click **Next**. See [List of Symphony Components and Services](#) for details.
5. Select all the services, and click **Next**.
6. Follow the instructions in [Configuring Symphony Databases during Installation](#) to complete the installation.

6 Installing Symphony on Multiple Servers

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

Overview of Installing Symphony on Multiple Servers

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

Table 6-1 - Overview of Installing Symphony on Multiple Servers

Database Type	Description	Instructions
Oracle Database	When installing Symphony with an Oracle Database, you can install Symphony database components on separate database servers from a remote machine while installing Symphony on the application servers.	<ol style="list-style-type: none">1. Create Symphony Database Tablespaces. See Creating Database Tablespaces.2. Install the Symphony application components.<ul style="list-style-type: none">• If you want to install Symphony applications on a single server, see Installing Symphony Applications on a Single Server• If you want to install Symphony application components on multiple application servers, see Installing Symphony Applications on Multiple Servers• If you want to install Reporting and Analytics Advanced on a separate server, see Installing Reporting and Analytics Advanced on a Separate Server

Database Type	Description	Instructions
Microsoft SQL Server	When installing Symphony with Microsoft SQL Server, you cannot install the databases from a remote machine; you must run the Symphony database setup on the local database servers and install the database components.	<ol style="list-style-type: none">1. Install the Symphony database components on the database servers. See Installing Symphony Database Components on Microsoft SQL Server.2. Install the Symphony application components.<ul style="list-style-type: none">• If you want to install Symphony applications on a single server, see Installing Symphony Applications on a Single Server• If you want to install Symphony application components on multiple application servers, see Installing Symphony Applications on Multiple Servers• If you want to install Reporting and Analytics Advanced on a separate server, see Installing Reporting and Analytics Advanced on a Separate Server

Installing Symphony Database Components on Microsoft SQL Server

1. Follow all pre-installation tasks for your site. See [Pre-Installation Tasks](#).
2. Follow the instructions in [Starting the Installation](#).
3. Select **Database Components Only**, and click **Next**.
4. Select **MS-SQL** as the database platform type, and click **Next**.
5. Follow the instructions in [Configuring Symphony Databases during Installation](#) from Step 6 onwards to complete the installation.

Installing the Symphony Application on a Single Server

This guides you through installing all Symphony application components on a single server.

1. Make sure that your database server or servers are set up as described in [Overview of Installing Symphony on Multiple Servers](#).
2. On the Symphony application server, follow the instructions in [Starting the Installation](#).
3. Select **Application and Database Components**, and click **Next**.
4. Select all components, and click **Next**. See [List of Symphony Components and Services](#) for details.
5. Select all services to enable, and click **Next**.
6. Follow the instructions in [Configuring Symphony Databases during Installation](#) to complete the installation. When configuring the databases, enter the Server Host Name or IP address, Service Host Name, and logon credentials for the Symphony database servers.

Installing the Symphony Application Components on Multiple Servers

This guides you through installing Symphony application components across multiple servers.

1. Make sure that your database server or servers are set up as described in [Overview of Installing Symphony on Multiple Servers](#).
2. Follow the Steps 1-4 in [Installing Symphony Applications on a Single Server](#).
3. On the primary application server, select all the services and click **Next**.
4. On all other application servers, deselect **Sequencer Service**, and click **Next**.
5. Follow the instructions in [Configuring Symphony Databases during Installation](#) to complete the installation. When configuring the databases, enter the Server Host Name or IP address, Service Name, and logon credentials for the Symphony database servers.

Installing Reporting and Analytics Advanced on a Separate Server

1. Make sure that your database server or servers are set up as described in [Overview of Installing Symphony on Multiple Servers](#).
2. On the Reporting and Analytics Advanced server, follow the instructions in [Starting the Installation](#).
3. Select **Application Components Only**, and click **Next**.
4. Select **Clear All** to deselect all default selections.
5. Select **Simphony Reports**, and click **Next**.
6. Click **Next**.
7. Enter the IP address of the server for the **Service Host Name** (computer name) and enter the **Service Host Port**.
8. 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 CA Certificate Location.
If you define a Service Host Secure Port number other than the default 433, you need to enable that port on the Load Balancer server.
9. If are not using a Load Balancer server and installing the Import/ Export service or plan to use the Engagement Cloud Service, select **IIS** for the CA Certificate Location.
If you define a Service Host Secure Port number other than the default, you need to configure the IIS Bindings of each Application Pool to the new port.
10. Enter the IP addresses for the **Default Gateway** and the **Default Net Mask** and then click **Next**.
11. Select your database platform:
 - a. If you are using an Oracle Database, select **Oracle**.
 - b. If you are using a Microsoft SQL Server, select **MS-SQL**.
12. Enter or select the location to install Symphony, and click **Next**.
13. Enter the information to connect to the transaction database. [See List of Symphony Database Configuration Fields](#) for more information on the database setup options.
14. Enter the credentials for a database administrative user:

-
- a. If you are using an Oracle Database, enter the credentials for the SYS user, and click **OK**.
 - b. If you are using a Microsoft SQL server, enter the credentials for the SA user, and click **OK**.
 15. Enter the security database user and password, and click **Next**.
 16. Enter the information to connect to the reporting database, and click **Next**.
 17. Enter the reporting database users, password or passwords to connect to the reporting database, and click **OK**.
 18. Click **Confirm**.
 19. Once the installation is complete, click **Finish** to exit the Symphony setup.

7 Post-Installation Tasks

If you installed Symphony with an Oracle Database, you need to make sure that the Symphony and SymphonyXDB instances are running.

To show the status of the Symphony and SymphonyXDB instances, run the `lsnrctl STATUS` command from a command prompt on the database server.

Installing a Remote EMC

The Enterprise Management Console (EMC) is the primary configuration application in Symphony. A shortcut for accessing EMC is installed on the application server during the installation. Remote EMC enables users to access EMC remotely using other computers on the network.

1. Open your browser and navigate to:
`http://ApplicationServerName:PortNumber/egateway/download/EMCClient/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 click **Next**.
5. Enter the IP address or the name of the Symphony version 2.8 application server with the EGateway port number, and then click **Next**.
For example, `http://192.168.220.224:8080`
6. Click **Install**.
7. Click **Finish** to exit the installer.
8. Use the **AppLoader** icon on your desktop to launch the remote EMC. The AppLoader also keeps the remote EMC updated with the same versions of files that are on the Symphony application server.



Verifying the Installation

Sample Database Users

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 Symphony application server.
3. Log onto 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 Symphony super user, and 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 click **Accept**.
 8. Click **Login**.
 9. Click **OK** for the EMC Database Credentials Non-Compliance message.

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

Blank Database Users

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 Symphony application server.
3. Enter the logon credentials for the Symphony super user that you created in Step 6 of [Configuring Symphony Databases during Installation](#).
4. Click **Login**.
5. Click **OK** for the EMC Database Credentials Non-Compliance message.

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

Configuring the Symphony License Count

1. In the EMC, select the Enterprise level, and then select **Enterprise Parameters** in the **Setup** tab.
2. Click the **License Configuration** tab.
3. Click **Configure** adjacent to **Workstations Client License Count**.
4. If you want to add a new license count, select **Set new license count**.
5. If you want to append licenses to an existing license count, select **Add to the existing license count**.
6. Enter the number of client licenses that you have purchased.
7. (Optional) Enter any additional details regarding the purchased license in **Reference**.
8. Click **OK**.
9. Repeat Steps 3 through 7 for **Engagement Client License Count**, **Transaction Service Client License Count**, and **KDS Client License Count**.
10. Click **Save**, and click **Yes** to agree to the license.

Updating the Properties Admin and Database Credentials

When logging in to the EMC for the first time after installing or upgrading to Symphony version 2.8, you receive a message notifying you that your property credentials are not compliant with the Symphony standards. To keep your properties safe from any security risks, you need to update the Admin and Database credentials, which Symphony uses for creating and maintaining the workstation databases, for each property in your Enterprise.

To see which of your properties is not compliant and up to date their credentials:

1. In the EMC, select the Enterprise level, and then select **Properties** in the **Setup** tab.
2. In Table View, scroll across the window to your right until you can 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. In the Property Parameters module, click the **Security** tab.
5. Enter **User Security Credentials**. Symphony uses these credentials to authenticate the workstations.

The **Install User Security Username** must have at least two characters and must not contain any 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 PCI DSS 8.2.3 / PA-DSS 3.1.6 standards.

1. Enter the **Current Password** of the Admin User.
2. Enter a new strong password for the Admin User (per PCI DSS 8.2.3 / PA-DSS 3.1.6 standards).
3. Repeat Steps 6 through 7 for the Database User, and click **Save**.
4. Repeat Steps 3 through 8 for all non-compliant properties.

Symphony 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.

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

1. In the EMC, select the Enterprise level, and then select **Enterprise Parameters** in the **Setup** tab.
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 Symphony 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 how to set 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 have installed Symphony on multiple application servers, disable the **Micros Sequencer Service** on all servers other than the SOD Sequencer Machine. In the event the application server that is running the Micros Sequencer Service has performance issues, you should start the Micros Sequencer Service on another Symphony application server if the main application server is going to be down for multiple days.

Connecting Reporting and Analytics Advanced to Symphony

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

- At least one property in the Enterprise. The *Simphony Configuration Guide* contains more information about adding properties to the Enterprise
 - Organizations and report locations created in Reporting and Analytics Advanced for your properties in the Enterprise. The *mymicros.net System Administrator and User Guide* contains more information about reporting hierarchies.
1. In the EMC, select the Enterprise level, select **Enterprise Parameters** from the **Setup** tab, 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, and then select **Properties** from the **Setup** tab.
 4. Double-click a property and go to Form View.
 5. Select the **Report Location** for this property. If the Report Location for this property is not available in the drop-down list, click **New** and create a Report Location.
 6. Select **2 – Extensible Clients and Architecture** as the **Simphony Platform**.
 7. Repeat steps 2 through 4 for all properties in your Enterprise, and click **Save**.
 8. Click **Save**.

Updating postingServer.properties.config File for Reporting and Analytics Advanced Installations

If you installed Reporting and Analytics Advanced using the Symphony version 2.8 installer and your Symphony installation has servers other than the central Reporting and Analytics Advanced server, you need to add the following user, password, and connection strings to the **postingServer.properties** file at
Drive: \MICROS\Symphony2\DataTransferService\mmserver folder in the central Reporting and Analytics Advanced server:

```
=====
dbUserName = DatabaseUsername
dbPassword = DatabasePassword
ceDbUserName = cedb
ceDbPassword = DatabasePassword
=====
DBDriverClass=net.sourceforge.jtds.jdbc.Driver
LocActConnectURL=jdbc:jtds:sqlserver://
ServerName:1433;databaseName=LOCATION_ACTIVITY_DB
CoreConnectURL=jdbc:jtds:sqlserver://Server
Name:1433;databaseName=COREDB
RTAConnectURL=jdbc:jtds:sqlserver://
ServerName:1433;databaseName=RTA
PortalConnectURL=jdbc:jtds:sqlserver://ServerName:1433;databaseName=PORTALDB
CustActConnectURL=jdbc:jtds:sqlserver://
ServerName:1433;databaseName=CUSTOMER_ACTIVITY_DB
iCareOLTPURL=jdbc:jtds:sqlserver://
ServerName:1433;databaseName=ICARE_OLTP_DB
AggregateConnectURL=$AggregateConnectURL$
CEConnectURL=jdbc:jtds:sqlserver://
ServerName:1433;databaseName=CEDB
```

Preparing a Multi-Server Environment using a Load Balancer for the Symphony Import/ Export Service

If you installed Symphony across multiple servers and are using a Load Balancer Server, follow these instructions to prepare your environment for the import/ export service:

Table 7-1 - Tasks for Preparing a Multi-Server Symphony Installation using a Load balancer for the Import/ Export Service

Task	Instructions
Create a shared folder on a central location that all Symphony 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	<ol style="list-style-type: none">1. In the EMC, select the Enterprise level, and then click Enterprise Parameters.2. 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, <code>\\HostServerName\ImportExport</code>3. Restart the Data Request Processing Service.

The *Symphony User Guide* contains more information about the Symphony Import/ Export service.

Enabling Communication between the Enterprise and Workstations

To allow the workstations in your property to communicate with the Enterprise, you must add Firewall exceptions for the following services on your Symphony application servers using either their default ports or the ports you assign when installing Symphony version 2.8:

- 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 Symphony features, contact your local support representative or Oracle Hospitality Support Services for assistance. 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>.

8 Uninstalling Symphony

This only removes the Symphony application. If you want to remove Symphony completely from your servers, you must manually delete the Symphony database components from the database after uninstalling the application.

1. Run the Symphony version 2.8 installer, and click **Next**.
If you have the application and the database on separate servers, run the installer on the application server.
2. Enter the credentials for a database administrator, and click **OK**.
 - a. If you are using an Oracle Database, enter the credentials for the SYS user.
 - b. If you are using Microsoft SQL Server, enter the credentials for the SA user and click **OK**.
3. Enter the passwords for the reporting database users, and click **OK**.
4. Select **Uninstall Symphony**, and click **Next**.
5. Click **Confirm**.

9 Troubleshooting

This section describes common problems you might encounter when installing Symphony version 2.8 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 Symphony Installation

The Symphony installer may not connect to the database server due to the following reasons:

- [Windows Firewall is running](#)
- [Symphony and SymphonyXDB instances are not running](#)

Adding Symphony to the Windows Firewall Exceptions

The Windows Firewall, which is enabled by default on your operating system, could prevent the Symphony installer from connecting to the database server. You must set up an exception rule on your firewall setting for the Symphony 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 Symphony on Separate Servers

If you are using a separate database server, you must set up an incoming rule to allow connections from Symphony depending on your database platform using either the default port or the port you assign when [Configuring Symphony Databases during Installation](#). By default, the Oracle Database server uses port 1521 and Microsoft SQL Server uses port 1433. 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, Symphony 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.

EMC Fails to Launch

Simphony can fail to install completely because of anti-virus software. Remove any anti-virus software from all servers and reinstall Simphony. You can reinstall the anti-virus software after Simphony applications and databases are installed.

10 List of Symphony Components and Services

You can install the following components and services by running the Symphony installer.

Table 10-1 - List of Application and Database Services

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

11 List of Symphony Database Configuration Fields

The following table describes the fields that appear on the Symphony installer when configuring the Symphony databases.

Table 11-1 - List of Database Configuration Fields

Field	Options
Server Host Name	Enter the IP address or the Server Host Name of the database server. To install Symphony on a named instance of Microsoft SQL server, enter the Server Host Name as <i>ServerName\InstanceName</i> .
Service Name	If you are using an Oracle database, enter a service name on which to install the Symphony database.
Instance Name	If you have created a named instance to install Symphony 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.

Sample Script for Creating Oracle Tablespaces

Appendix A

```

DECLARE

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

BEGIN

open RTA_tablespace_check;
fetch RTA_tablespace_check into v_tablespace;
if RTA_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 RTA LOGGING DATAFILE '||''''||
v_path||'RTA01.dbf'||''''||' SIZE 128M AUTOEXTEND ON NEXT 128M MAXSIZE
UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

    execute immediate sql_stmt;

    end if;
close RTA_tablespace_check;
END;
/

DECLARE

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

BEGIN

open COREDB_tablespace_check;
fetch COREDB_tablespace_check into v_tablespace;
if COREDB_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 COREDB LOGGING DATAFILE '||''''||
v_path||'COREDB01.dbf'||''''||' SIZE 128M AUTOEXTEND ON NEXT 128M MAXSIZE
UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

    execute immediate sql_stmt;

    end if;
close COREDB_tablespace_check;
END;
/

DECLARE

cursor PORTALDB_tablespace_check is
    select tablespace_name
    from dba_tablespaces
    where tablespace_name = 'PORTALDB';
v_tablespace varchar2(40);
v_path VARCHAR2(100);

```

```

sql_stmt VARCHAR2(10000);

BEGIN

open PORTALDB_tablespace_check;
fetch PORTALDB_tablespace_check into v_tablespace;
if PORTALDB_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 PORTALDB LOGGING DATAFILE '||v_path||
v_path||'PORTALDB01.dbf'||' '||' '||' SIZE 128M AUTOEXTEND ON NEXT 128M
MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

execute immediate sql_stmt;

end if;
close PORTALDB_tablespace_check;
END;
/

DECLARE

cursor PENTAH0_tablespace_check is
select tablespace_name
from dba_tablespaces
where tablespace_name = 'PENTAH0';
v_tablespace varchar2(40);
v_path VARCHAR2(100);
sql_stmt VARCHAR2(10000);

BEGIN

open PENTAH0_tablespace_check;
fetch PENTAH0_tablespace_check into v_tablespace;
if PENTAH0_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 PENTAH0 LOGGING DATAFILE '||v_path||
v_path||'PENTAH001.dbf'||' '||' '||' SIZE 128M AUTOEXTEND ON NEXT 128M
MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

execute immediate sql_stmt;

end if;
close PENTAH0_tablespace_check;
END;
/

DECLARE

cursor LOCD0_tablespace_check is
select tablespace_name
from dba_tablespaces
where tablespace_name = 'LOCD0';
v_tablespace varchar2(40);
v_path VARCHAR2(100);
sql_stmt VARCHAR2(10000);

BEGIN

open LOCD0_tablespace_check;
fetch LOCD0_tablespace_check into v_tablespace;
if LOCD0_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 LOCDB LOGGING DATAFILE '||v_path||
        v_path||'LOCDB01.dbf'||' '||' '||' SIZE 512M AUTOEXTEND ON NEXT 128M MAXSIZE
        UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

        execute immediate sql_stmt;

        end if;
    close LOCDB_tablespace_check;
END;
/

DECLARE

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

BEGIN

open LOC_INDX_tablespace_check;
fetch LOC_INDX_tablespace_check into v_tablespace;
if LOC_INDX_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 LOC_INDX LOGGING DATAFILE '||v_path||
    v_path||'LOC_INDX01.dbf'||' '||' '||' SIZE 512M AUTOEXTEND ON NEXT 128M
    MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

    execute immediate sql_stmt;

    end if;
close LOC_INDX_tablespace_check;
END;
/

DECLARE

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

BEGIN

open AGGREGATE_DB_tablespace_check;
fetch AGGREGATE_DB_tablespace_check into v_tablespace;
if AGGREGATE_DB_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 AGGREGATE_DB LOGGING DATAFILE
    '||v_path||'AGGREGATE_DB01.dbf'||' '||' '||' SIZE 128M AUTOEXTEND ON
    NEXT 128M MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE
    MANAGEMENT AUTO';

```

```

        execute immediate sql_stmt;

    end if;
close AGGREGATE_DB_tablespace_check;
END;
/

DECLARE

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

BEGIN

open AGGREGATE_DX_tablespace_check;
fetch AGGREGATE_DX_tablespace_check into v_tablespace;
    if AGGREGATE_DX_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 AGGREGATE_INDX LOGGING DATAFILE
'||''''|| v_path || 'AGGREGATE_INDX01.dbf' || ''''|| ' SIZE 128M AUTOEXTEND ON
NEXT 128M MAXSIZE UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE
MANAGEMENT AUTO';

        execute immediate sql_stmt;

    end if;
close AGGREGATE_DX_tablespace_check;
END;
/

DECLARE

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

BEGIN

open CEDB_tablespace_check;
fetch CEDB_tablespace_check into v_tablespace;
    if CEDB_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 CEDB LOGGING DATAFILE '||''''||
v_path || 'CEDB01.dbf' || ''''|| ' SIZE 128M AUTOEXTEND ON NEXT 128M MAXSIZE
UNLIMITED EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO';

        execute immediate sql_stmt;

    end if;
close CEDB_tablespace_check;
END;
/

```

Appendix B

Post-Installation Best Practices

Creating Database Backups

Create backups of the Symphony 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 Symphony 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 2 - Host Files

Path and filename	Variable
C:\ Windows\ System32\ drivers\ etc\ hosts	<i>HostIP Address ServerName</i> The <i>HostIP Address</i> is typically set to <code>localhost</code> .
C:\ Windows\ System32\ drivers\ etc\ lmhosts	<i>HostIP Address ServerName</i> The <i>HostIP Address</i> is typically set to <code>localhost</code> .

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

Table 3 - Oracle Database Files

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

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

Table 4 - Symphony Services and mymicros.net Files

Path and filename	Variable
<i>Drive:\</i> Micros\ Symphony2\ EgatewayService\ DbSettings.xml	Set the <i>ServerName</i> for all dataSource entries.
<i>Drive:\</i> Micros\ Symphony2\ EgatewayService\ Web.config	Set the <i>ServerName</i> in the <appsettings> element for: <ul style="list-style-type: none"> • SymphonyCAL DiscoveryURL • BatchServiceURL • EGatewayURL • BatchServiceURL_1x • KdsCheckAndPosting • ServiceHost
<i>Drive:\</i> Micros\ Symphony2\ DirectPostingService\ DirectPostingService.exe.config	Set the <i>ServerName</i> on the EGatewayURL line.
<i>Drive:\</i> Micros\ Symphony2\ SequencerService\ SequencerService.exe.config	Set the <i>ServerName</i> on the EGatewayUrl line.
<i>Drive:\</i> Micros\ Symphony2\ DataTransferService\ mmserver\ postingServer.properties	Set the <i>ServerName</i> on all URL lines.
<i>Drive:\</i> Micros\ MyMicros\ myPortal\ microsConfig.properties	Set the <i>ServerName</i> on all db.server* lines.
<i>Drive:\</i> Micros\ MyMicros\ infoDelivery\ Db.xml	Set the <i>ServerName</i> 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 5 - Symphony Install

Path and filename	Variable
<i>Drive:\</i> Micros\ Install\ SymphonyInstall.xml	Set the <i>ServerName</i> 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

Drive: Micros\ Symphony2\ 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.