Ericsson Catalog Manager and Ericsson Order Care

Realize Higher Consistency for Faster Time-to-Revenue

Installation Guide

Introduction

The product contains a set of services and tools that enable your enterprise to build, deploy, and manage metadata-based solutions in your corporate environment.

This guide describes how to install the product in a target environment. It is written for individuals with technical background who are familiar with Windows or Unix operating systems. Moreover, some knowledge of related technologies such as database administration is assumed.

Since Release 5.0, installation of an application server or Web container is no longer required. However, a J2EE Application Server is required for metadata deployment, which is not considered as part of installation.

There are several steps to be followed in the proper installation of the product and each step will be described in the appropriate sections:

1. Installation Preliminary Steps - the environment setup.
2. Product Installation - the product installation wizard.
3. Product License - assigning the product license.
4. Database Configuration - the database instance setup.
5. Configuration - bootstrap and runtime database configuration.
6. Modules Installation - install module-specific DDL and library files.
7. Verifying Your Installation

Platform or Software Naming Conventions

For convenience, this manual uses the following *naming* conventions. For supported versions and certifications, please refer to certification matrix.

Term	Reference
Windows	Microsoft Windows XP Microsoft Windows Vista Microsoft Windows 7
Unix	Solaris, HP-UX, AIX, Linux
Linux	Redhat Linux
WebLogic	Oracle WebLogic Server
JBoss	JBoss Enterprise Application Platform
WebSphere	IBM WebSphere Application Server
Database	Oracle Database
JDK	Sun J2SDK
Browser	Internet Explorer, Mozilla Firefox

Installation Planning

The following section details installation requirements for the product software and includes planning exercises for installing components in a target environment.

Hardware Requirements

The following section explains both the minimum and recommended hardware requirements.

Minimum Hardware Requirements

The following specifications outline the *minimum* requirements for running the Velocity Studio software only:

- 2.4 GHz Pentium processor or faster
- 1 GB *available* RAM (for Windows 32-bit)
- 4 GB *available* RAM (for Windows 64-bit)
- 4 GB disk space

Notes:

- These specifications are only for running the product software. They do not take into account the additional hardware requirements needed for the operating system and the Java Virtual Machine™ (JVM), which are required for running the product.
- These specifications are only for the developer's personal environment. They do not reflect the hardware requirements for the shared development, testing or production environments where addition resources will be needed based on factors such as the number of orders, the number of simultaneous users, database access requirements, and so on.
- Available memory is required for larger metadata.

Recommended Hardware Requirements

The following specifications outline the *recommended* requirements for running Velocity Studio on a single machine:

- Intel Core™ i5, i7, or equivalent
- 6 GB – 8 GB *available* system RAM
- 60 GB free disk space for the metadata, database, and other application resource files.

Note: These specification are only for the developer's personal environment. They do not reflect the hardware requirements for the deployment or production environment where addition resources will be needed based on factors such as the number of orders, the number of simultaneous users, database access requirements, and so on.

Software Requirements

The following are software prerequisites:

- Database
- JDK
- Browser
- Revision Control System (optional)
- Application Server (optional)

In an isolated development environment, the database typically resides on the same machine as the product. However, the database can reside on a separate machine, provided that database privileges are granted to apply SQL scripts automatically generated by the product during installation and application development.

General Notes

The aforementioned physical memory and disk space requirements are based on product requirements only.

The installation screenshots are taken from a Windows installation. For the UNIX installation, you have to change the paths to the corresponding Unix paths. Additionally, screens where user input is required may have different options depending on operating system. These screens are noted.

The deployment commands can be executed simultaneously. As such, it is possible to perform simultaneous deployment of the product (in different database schemas, but on the same machine).

Tool and Platform Eligibility

The product installation consists of the following components:

Component	Reside as	Platform Availability	Description
Velocity Studio	Client-side application	Windows; command-line also available in UNIX	Integrated development environment for the application.
Configuration application	Web Application	UNIX and Windows	Web application to configure application settings; available as part of running AVM.
System Administration application	Web Application	UNIX and Windows	Web application to manage system administration of the application; available as part of running AVM.

Application development is expected to be in Windows environment. As a result, Velocity Studio is certified on **Windows** platform only. For packaging and deployment environments, both **UNIX** and **Windows** platforms are expected. As such, a UNIX installation of Velocity Studio is expected to be limited to the use of command-line interface of *Designer.jar*, such as to run, package, and validate metadata.

Supported Configurations

The following table specifies development environment (that is, Velocity Studio) and deployment environment configurations, and common requirements to both environments. For a deployment environment, each configuration is certified as a combination of application server, operating system, and Java™ Development Kit (JDK).

Ericsson Product Certification				
		Java Platform, Enterprise Edition (Java EE) Application Server		
		JBoss Enterprise Application Platform (EAP) 6.2	Oracle WebLogic 12.1.2	IBM WebSphere 8.5.5
Operating Systems		JDK 1.7.0_51+	JDK 1.7.0_51+	WebSphere Embedded JDK
Windows	Server 2008	☑		
AIX	7.1			☑
HP-UX	11.31 (11 v3)		☑	☑
Sun Solaris	11		☑	☑
Linux	Red Hat Enterprise Linux (RHEL) 6.4	☑	☑	☑
Database	Oracle Enterprise 11gR2			
Desktop Browsers	Internet Explorer 9.x, 10.x, and 11.x Firefox 12.x (28) Chrome 31.x			
Mobile Browser Note: Limited manual testing of mobile browsers has been performed. Automated testing is currently not possible.	iOS Safari (Webkit) Android Browser (Webkit) Blackberry Browser (Webkit 6+)			
Product Software Requirements	Operating System- Windows 7* (*32- or 64-bit)	JDK 1.7.0_51+		

- ** JRockit disabled; Sun JDK is used.*
- *(+) Plus sign indicates that this and all higher versions at the fourth digit of the JDK extensions are certified. (for example, 1.7.0_51+ means that 1.7.0.51 and any higher 1.7.0.xx versions are certified.)*

> **Notes:**
>
> - The release notes contain the latest certification matrix by clicking the Certification Matrix tab. Contact Support if you require the latest set

of release notes.
- When using Windows 7, 64-bit version, the Velocity Studio requires that the JDK be 64-bit.
- Minor versions deviations are acceptable (for example, JBoss EAP 6.1.1) and are considered certified.

For support on other platforms, contact the Support team.

Known Limitations

- Due to limitations in the Mozilla platform, the Firefox browser is subject to minor text-wrapping mishandling when dealing with large fields that contain no spaces.
- For Firefox (all versions) only one user session can be created per machine. If multiple browser sessions are created to connect to the same framework, they share the same user session (for example, login once, and the second browser session is automatically logged in). It is not recommended for these browsers to have more than one open at a time.

Licensing

All software components are authorized to run by valid license files (for example, license.lic). If you do not have a license file or if your existing license has expired, all software components will cease to run. In the event your license has expired or if you have not received a license, contact your sales representative.

Quick Install (for Experienced Users)

Note: This chapter is a quick checklist of all installation steps. **It is not intended for first-time users!** For first-time users we recommend reading in detail every chapter of this document to attain a full understanding of the installation process.

Pre-Requisites

1. Install **J2SDK**
2. Install **Oracle Database**
3. Install **Revision Control System** (optional)
4. Install **Application Server** (optional)

Product Install Wizard

1. Run the Product Install Wizard (for example, *Disk1**InstData**Windows**NoVM**install.exe*).
2. Take extra care to select the proper JDK (and not a JRE). Use **Choose Another** if you need to.

Create Database User and run (DDL) Initialization Script

1. Create a user (for example, CW) (**Note:** See Database Initialization for roles and privileges)
2. Open <*installation_folder*>\DDL\CW.sql in a text editor (for example, WordPad)
3. Edit the DEFINE statement to point to your schema user
4. Log into your schema and run the file CW.sql

Set Bootstrap Database Connection in Velocity Studio

1. Open the Velocity Studio from your start menu
2. Select **Runtime** > **Run** from the menu bar to run framework in Config mode
3. Click **New** to create a new connection
    - Name the connection with the convention: CW_SCHEMA@HOST_SID (for example, *CW@CW0016_LOCALDB*)
    - Enter the schema username as the User (for example, *CW*)
4. In the Driver area, click **New** to create a new **database driver**
    - Indicate the Database Host, Port and SID, click **OK**
5. Click **Test** to test the connection
6. Click **OK** to save the connection properties. The New Connection dialog box will close.
7. Type your password to login to that schema.

Configure Your Project in the Configuration Application

1. Browse to http://localhost:8080/cwf/config/index.html or http://localhost:8080/cwf/config for the Configuration application.
2. Login using **upadmin**/**upadmin**.
3. Setup Database Connection configuration:
    - Go to **Database** vertical-tab, then **Physical connections** horizontal-tab.
    - Right-click the table, and click **Add** at pop-up menu. Enter a name (e.g. ***CW***). Then right-click the record, and click **Edit** from the pop-up menu. Fill in the attributes, and click **Save**.
    - Go to **Logical connections** horizontal-tab. Double-click each entry and assign the newly created physical connection from drop-down listbox.
    - Click **Save** to save the cluster configuration.
4. Create Configuration Node
    - Right-click the **CLUSTER** node in navigation panel, and click the **Add node** button. Enter a name (e.g. *UI*); this is the Node ID.
    - In **System** vertical-tab, **System parameters** horizontal-tab, select **Start mode** as ***UI only***.
    - Click **Save** to save the node configuration.

Note: At this point your installation is complete. The following section is optional and is useful if you want to verify your installation.

Log into the Administration Application

1. From Velocity Studio, select **Runtime** > **Run**.
    - If you have just completed configuration with the Configuration application, system restart is necessary to reload the configuration data. Stop the run before restarting (**Runtime** > **Stop)**.
2. Login to Administration Application
    - Open a web browser and load URL http://localhost:8080/cwf/login
    - Login to the application as upadmin/upadmin
3. You will enter directly into the System Administration Application

Standard Install

Installation Preliminary Steps

Ensure the following requirements are met before installing the product:

Install JDK

Install the required JDK version on the target machine.

Install Database

Install Oracle Database on the target machine, or, as an alternative, have sysdba access to a remote database.

To use the Catalog SQL import and export features, you need Java installed on your Oracle machine (that is, install $ORACLE_HOME/javavm/install/initjvm.sql, which comes with Oracle).

Enable Unix Graphical Display

Graphical display is only required for GUI Installation.

The graphical display must be assigned to the host. This is done using the command:

```
export DISPLAY=hostname:0.0
```

Where *hostname* is the fully qualified host name or IP address. For example, *cw0010.conceptwave.com*. To test the graphical display, type *xclock* and the xclock GUI will appear.

Install Revision Control System (optional)

In typical application development, you will be required to check-in / check-out your metadata in a central repository. Install the Revision Control System, such as SVN, on the target machine.

Install Application Server (optional)

In the event the machine will mimic the deployment environment where metadata is deployed (instead of running in Velocity Studio), an application server needs to be installed.

Installation Wizard

This section describes how to install the product. The screens that follow illustrate a standard Windows installation; differences between the various certified platforms are noted where applicable.

Refer to Appendix A: Troubleshooting Installers for the troubleshooting routine if there are problems starting the installation procedure.

Install the Product

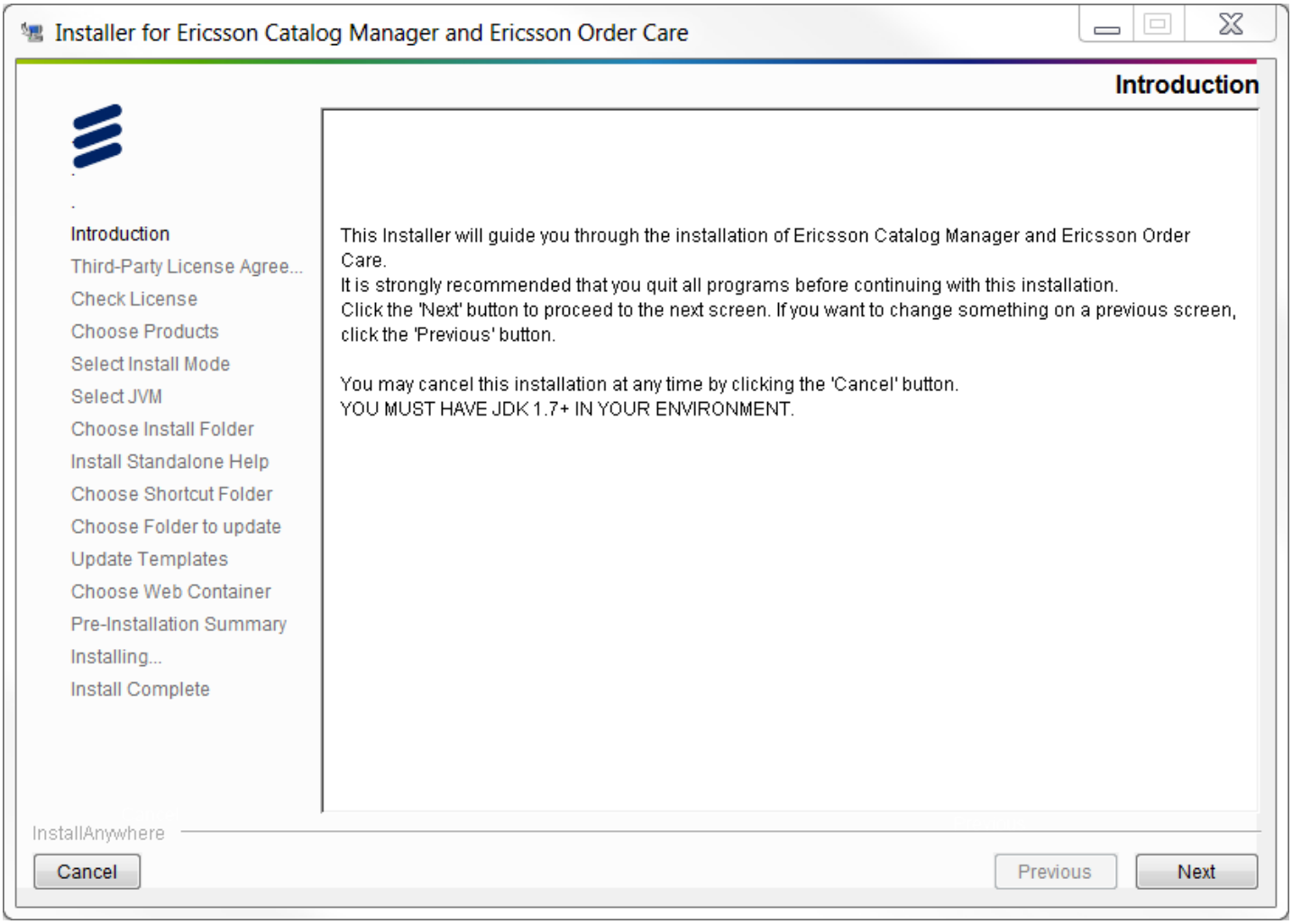
To install the product in Windows, complete these steps:

1. Insert the Product Installation CD, or copy an image of its contents into the target machine.
2. Locate the *\Disk1\InstData\Windows\NoVM\install.exe* file and run it.

To install the product in Unix or Linux, complete these steps:

1. For each target system, log in to the correct user account.
2. Insert the Installation CD into the target machine and ensure that the CD-ROM drive has been mounted. Alternatively, use FTP to copy the CD file contents to an appropriate folder.
3. Locate the *Disk1/InstData/[operating_system_name]/NoVM/install.bin* file and run it.

The installation wizard first displays a splash screen when started, followed by the **Introduction** dialog. Click the **Next** button to continue.

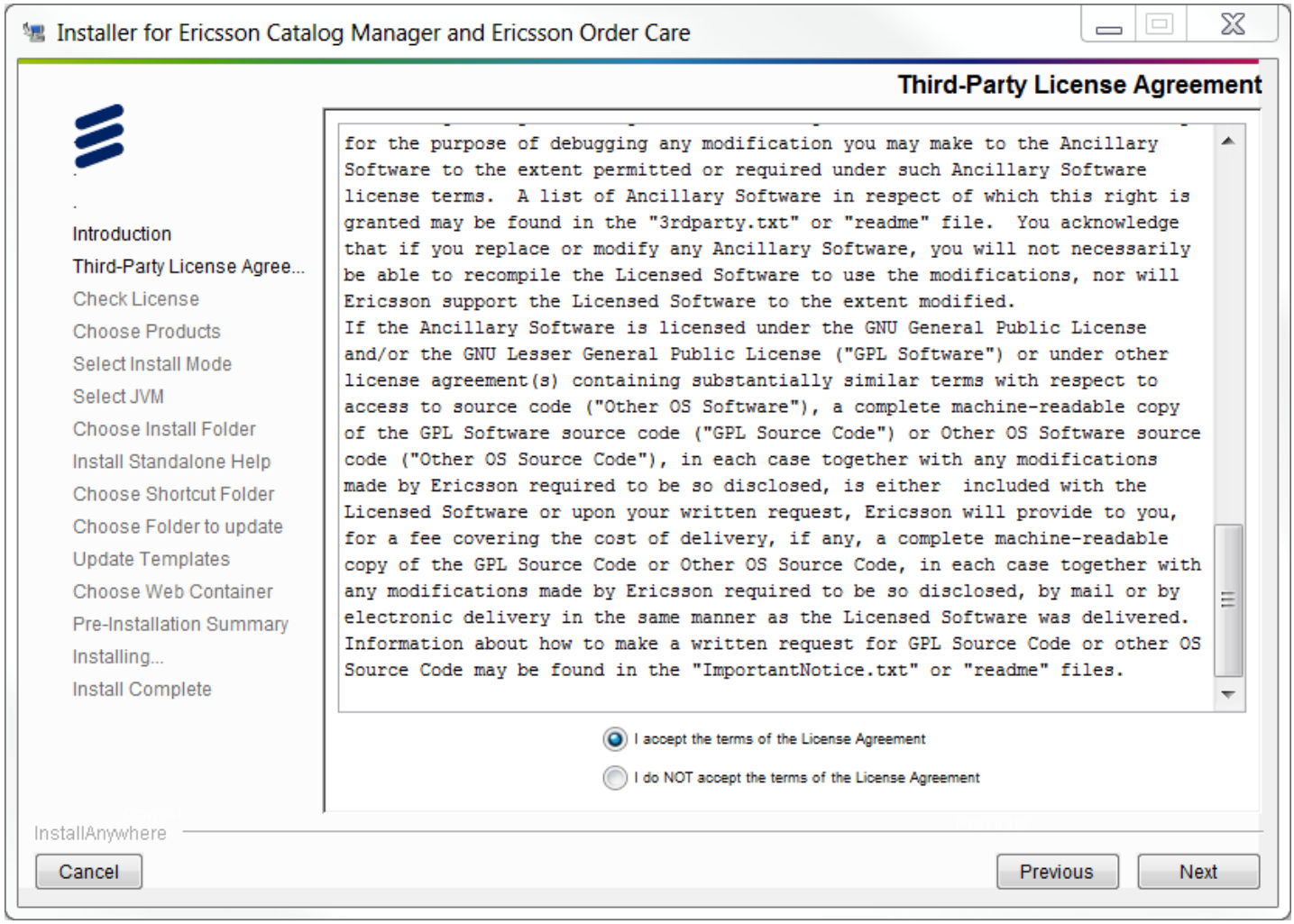


Note: You must have Java Development Kit (JDK) 1.7 or higher installed.

Third-Party License Agreement

Accept the terms of the agreement by clicking the **I accept the terms of the License Agreement** radio button. Scroll down to the end of the agreement to

activate the radio button and click the **Next** button.

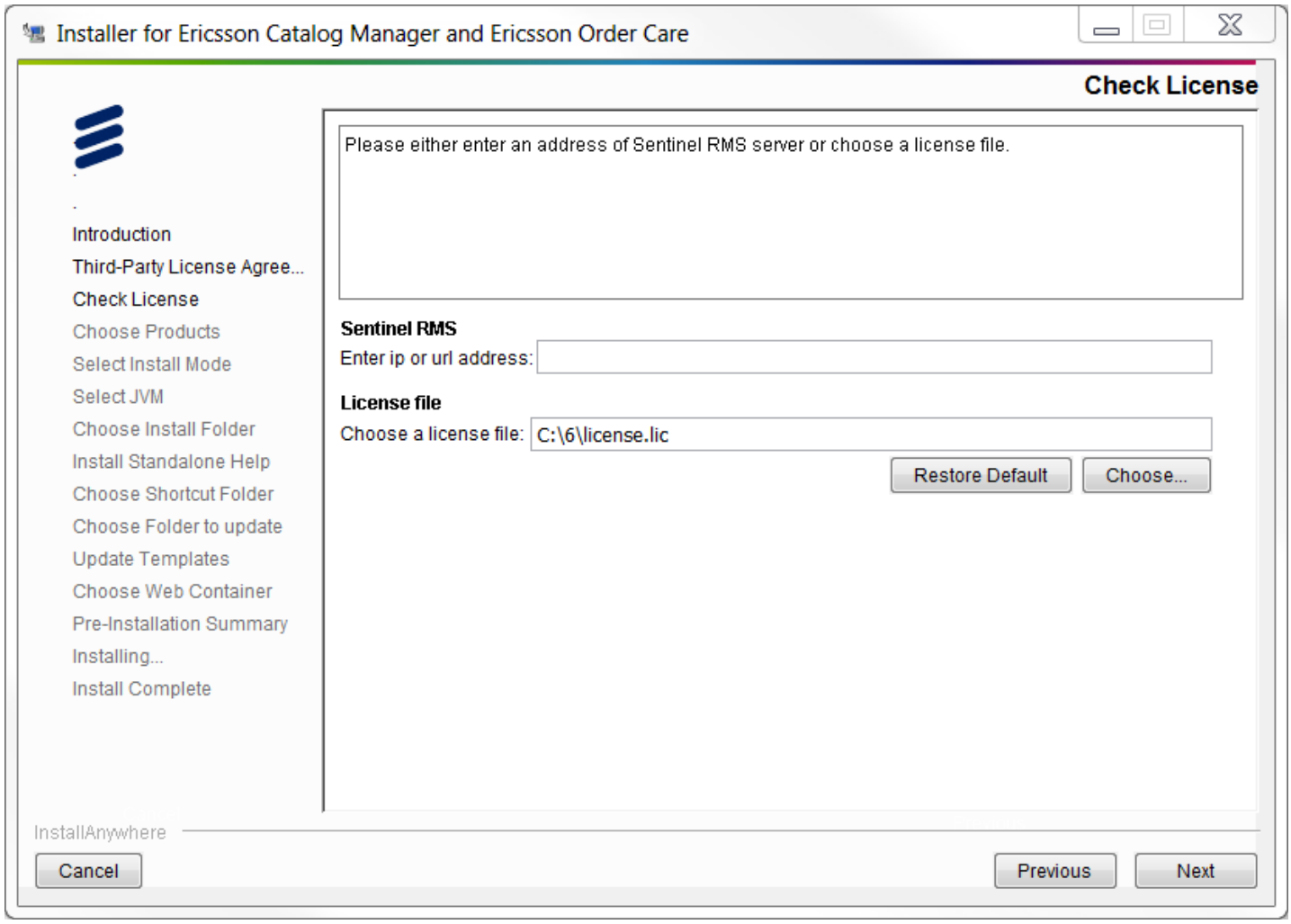


Select your license file

The installation program requires the software license file to be entered to be able to use the software. In this step, select the license file and the system copies the license file in the appropriate folder. If you are using the Sentinel RMS server, enter its address in the **Sentinel RMS** field. Click the **Next** button to continue.

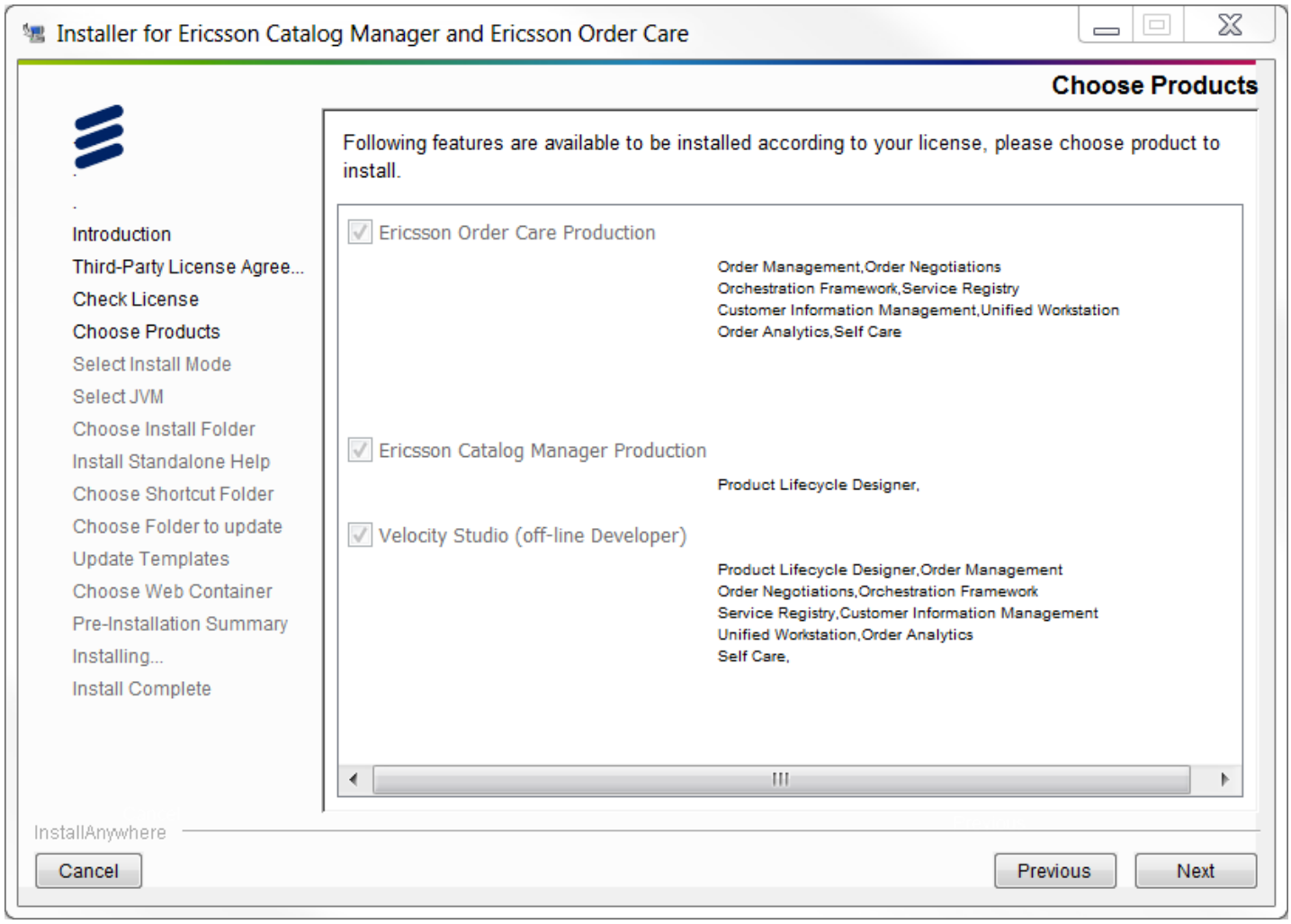
Notes:

- For more information on the license file, see Product License.
- After selecting either the license file or using the Sentinel license server address and completing the installation, you cannot change the license type afterward.
- The Sentinel server address is saved in a properties file located in the Designer folder of your installation. Velocity Studio allows for synchronizing the license on demand. You can add the server IP address and change it by clicking **Help > About Velocity Studio - License** tab from the menu bar.



Choose Products

The license file selected in the previous steps dictates which modules appear in this step for selection. These modules are the standalone software applications that have been purchased along with the product. The install wizard installs the selected modules in the Modules folder. Select the modules you want to install and then click the **Next** button to continue.

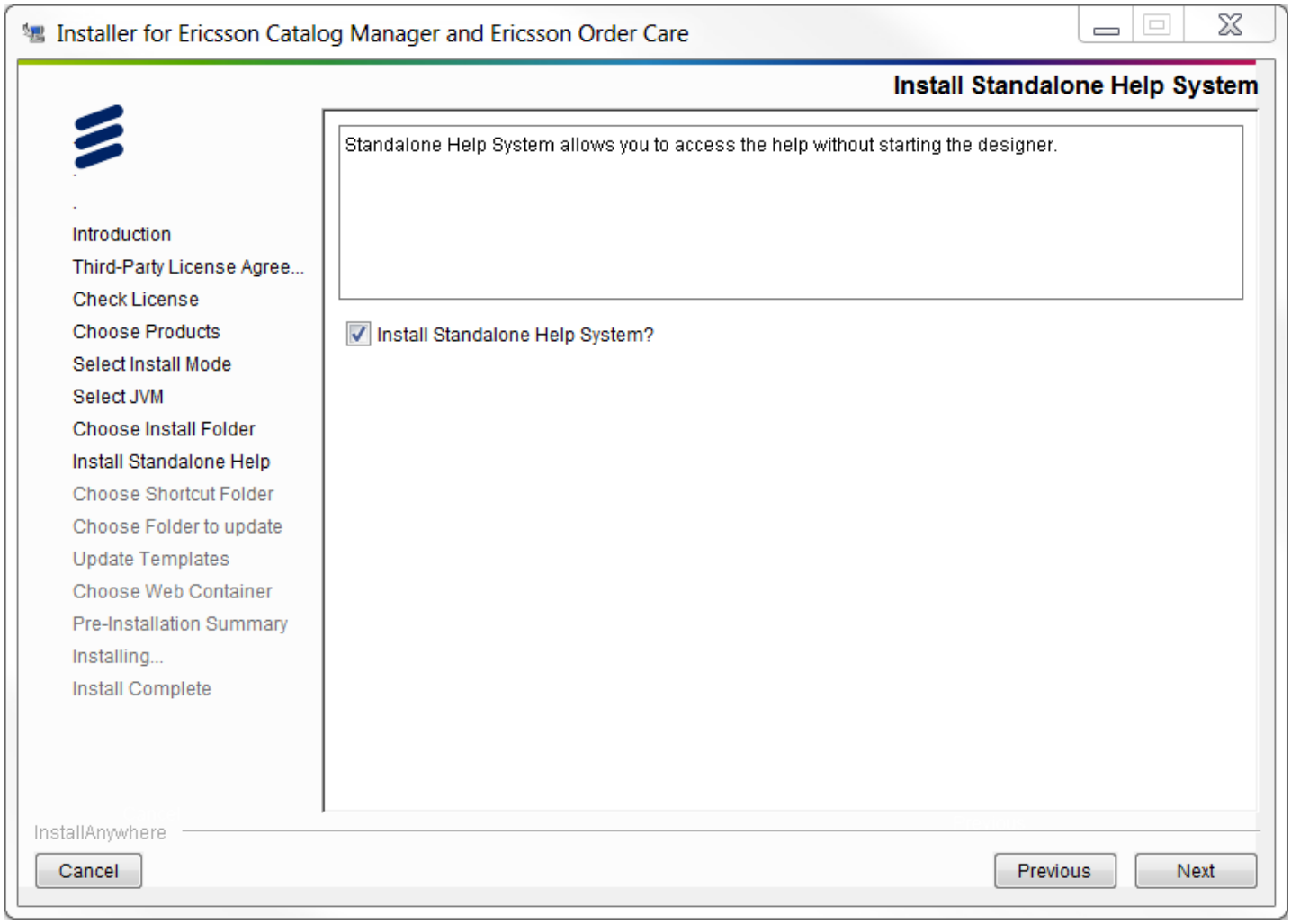


Note: All template JAR files are added to a Modules folder in the installation directory. You must add the JAR files to a project through the Library tab of root metadata. These JAR files are stored in the *templates* folder of project's root directory.

Install the Standalone Help System

This part of the installation allows you to install the Standalone Help System, which can be accessed without running the Velocity Studio. Select the **Install Standalone Help System?** option and then click the **Next** button.

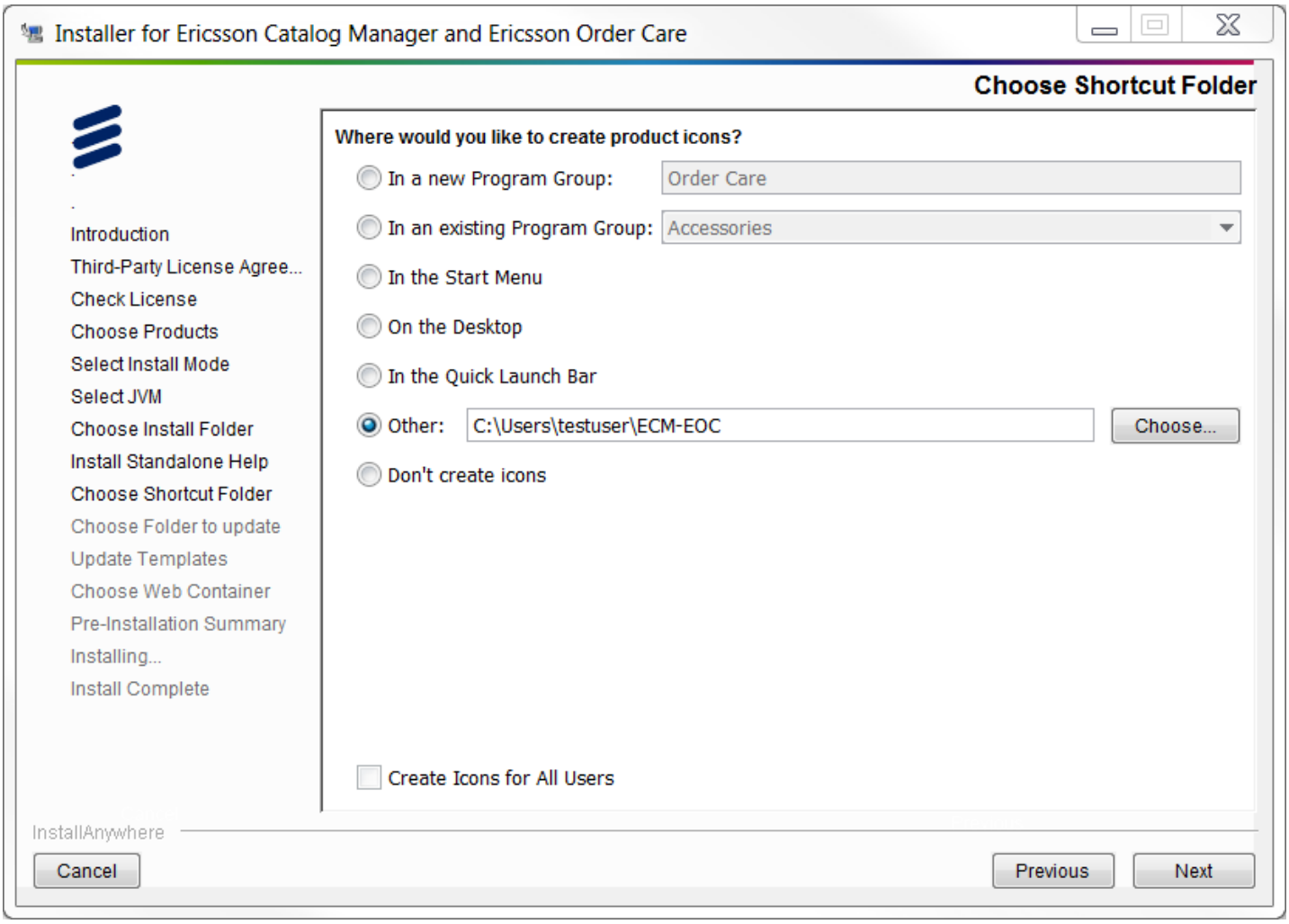
Once you have completed the installation, the standalone help documents can be accessed in the <*installation_folder*>\Help folder. Open the index.html file to enable a Web browser version of the help documentation.



Choose Shortcut/Link Folder

Within the **Choose Shortcut Folder** dialog, specify the location where the component shortcuts or links will be created and click the **Next** button.

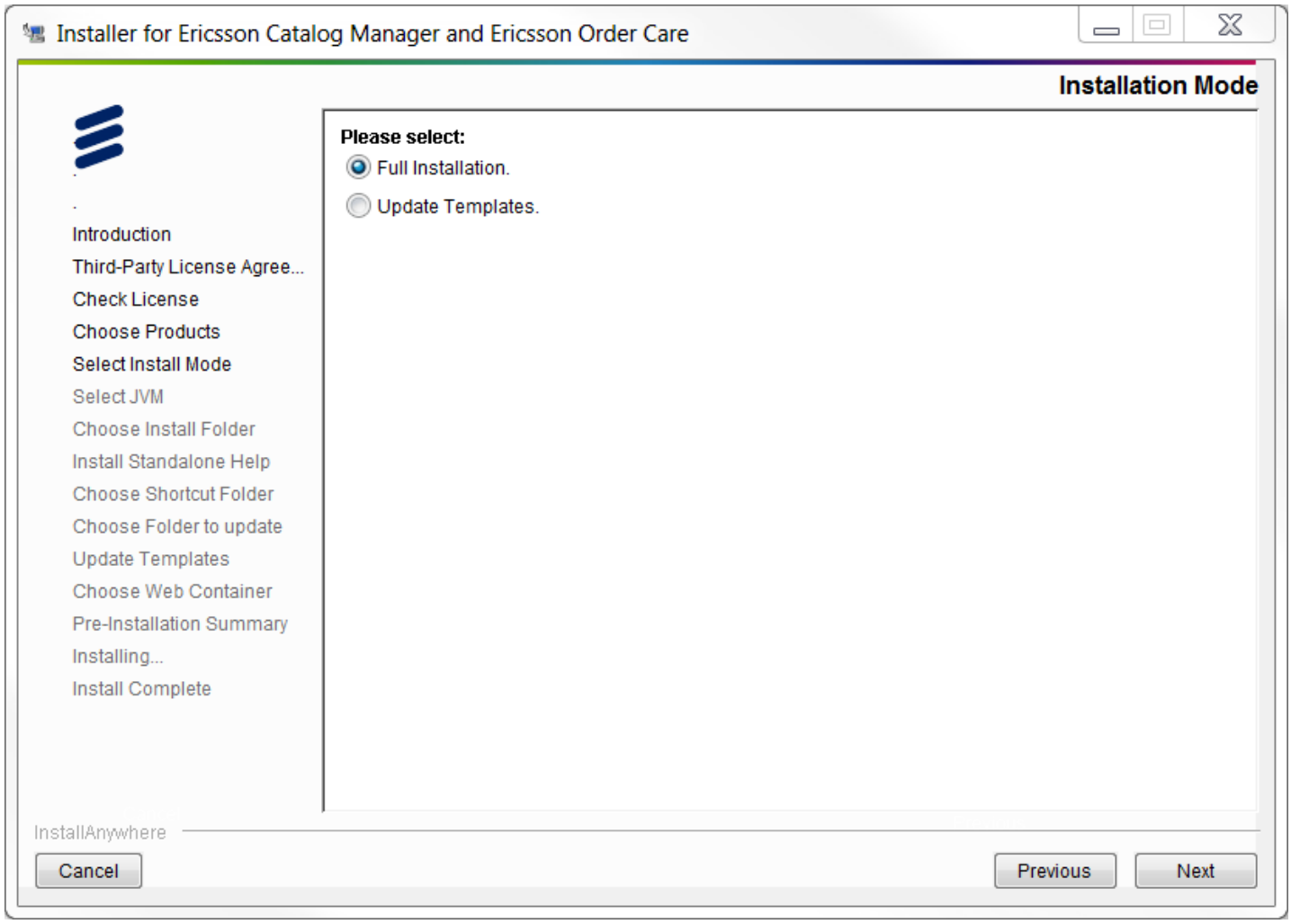
Note: The available shortcut and link options vary depending on your operating system. As an example, the shortcut icon to launch the product is **ECM-EOC Designer**.



Installation Mode

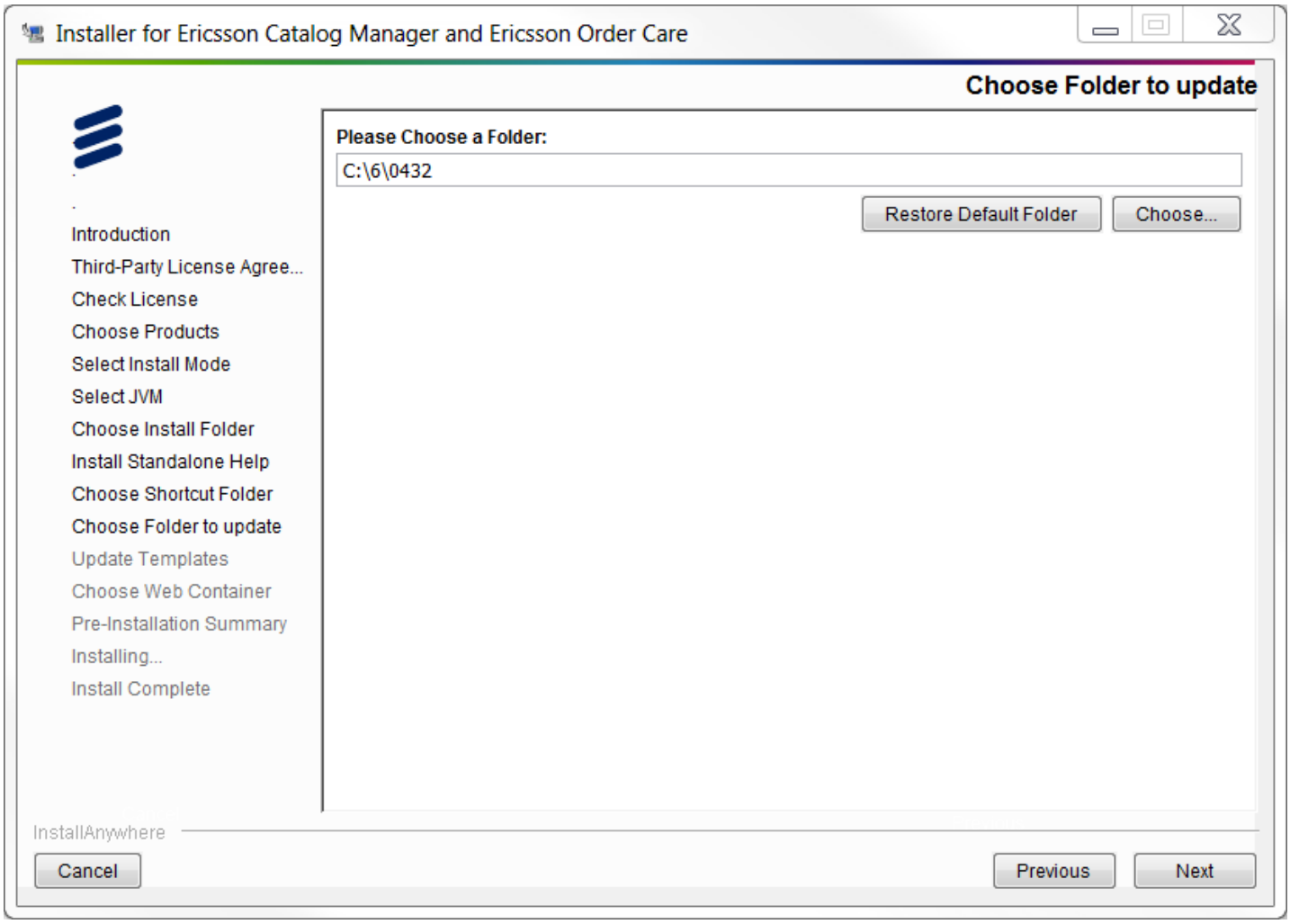
Select from one of the following options:

- **Full Installation**
  Select this option when you are performing a full installation of the product and click the **Next** button. Proceed to the Choose Java Virtual Machine section.
- **Update Templates**
  Select this option to update or delete modules (templates) in an existing product installation.

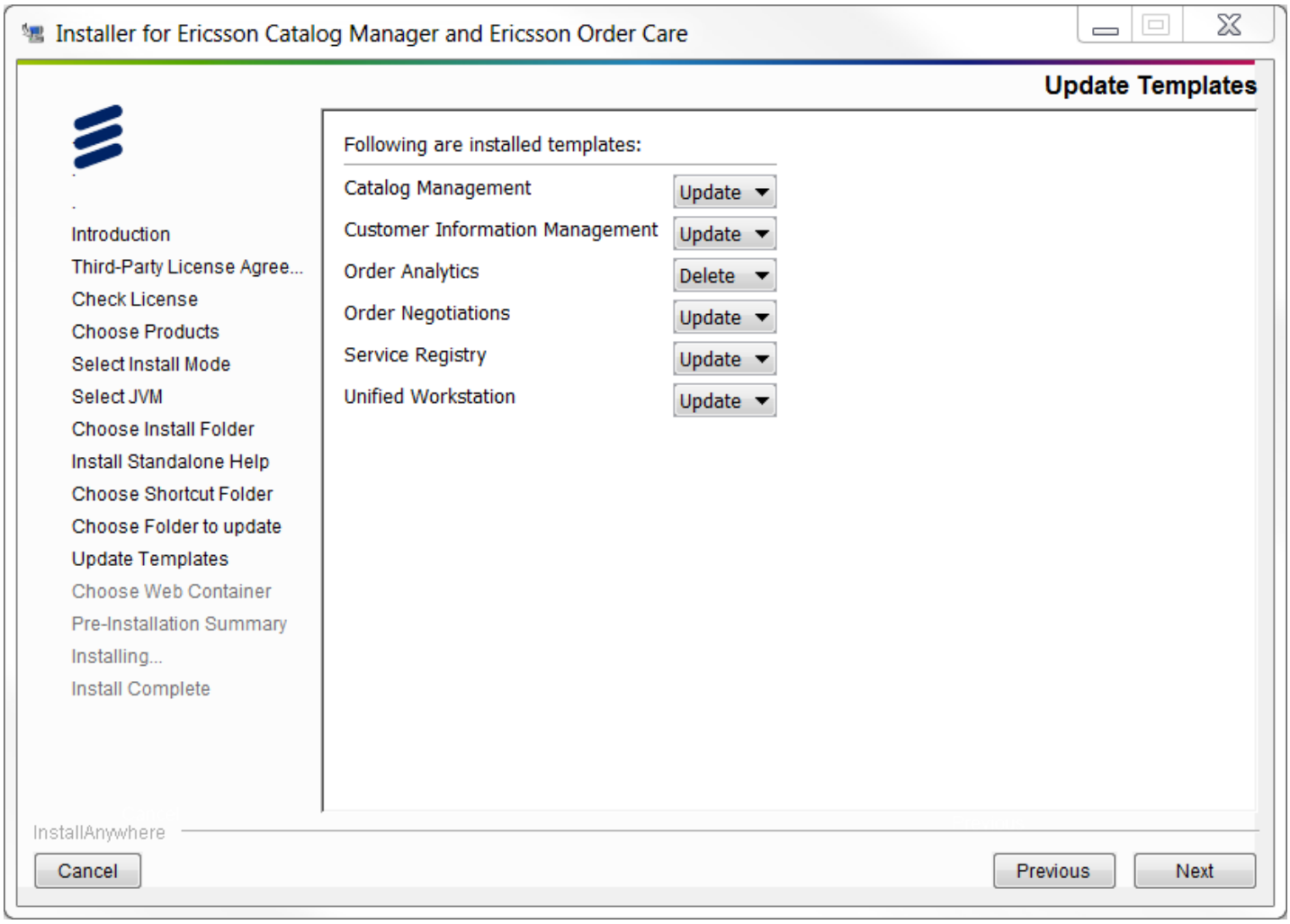


If you are updating or deleting modules, do the following:

1. Select the **Update Templates** option from the Installation Mode screen and then click the **Next** button.
2. Select the folder of your existing product installation that you want to update and then click the **Next** button.



3. The Update Templates screen allows you to **Update** or **Delete** modules by clicking the drop-down menu next to each template. You can also install new modules by selecting the **Install** option next to them. Click the **Next** button to continue, which takes you to the Pre-installation Summary screen.

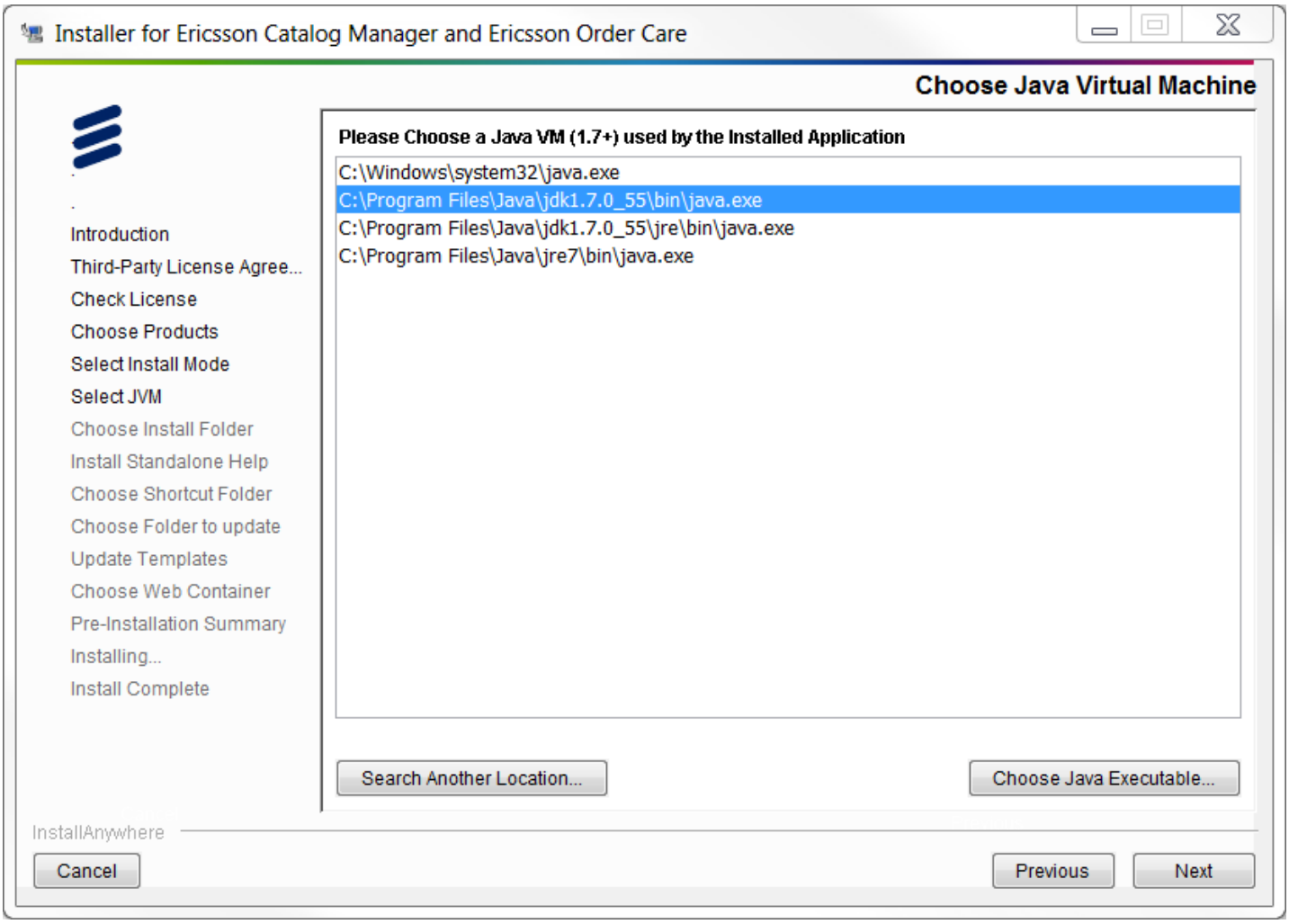


Note: There is neither a constraint, nor a dependency between templates.

Choose Java Virtual Machine

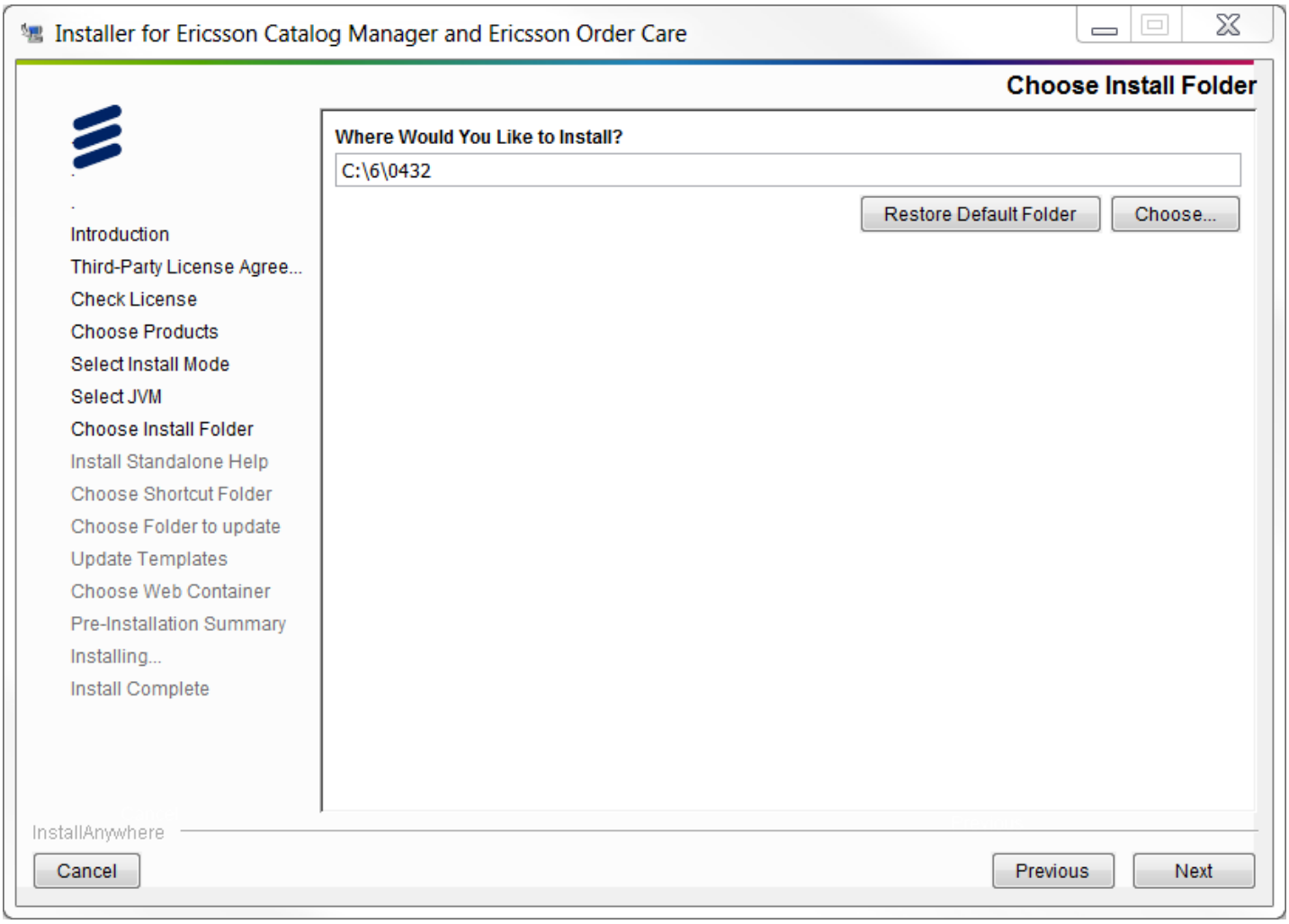
The installed product requires a Java virtual machine. The installer detects any installed JREs or JDKs on your system. Select the appropriate JVM in accordance to certified configurations and click the **Next** button.

Note: Choose the correct *JDK* file, and not a JRE file. If the correct JDK is not in this list, use either the **Choose Another** or **Search For Others** option. You must specify the file ***\bin\java.exe*** and selected the most recent supported configuration file for Velocity Studio.



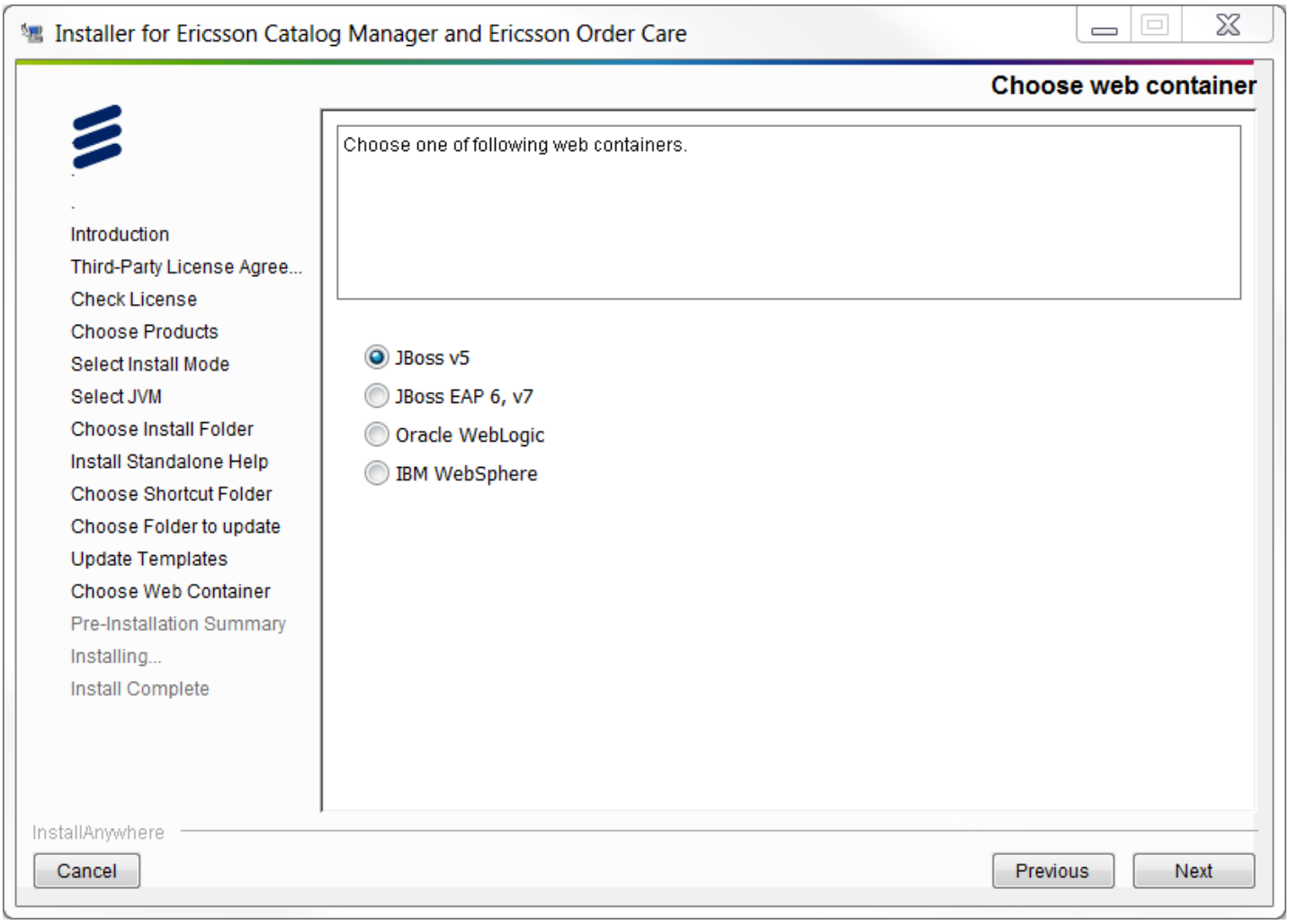
Choose Install Folder

Within the **Choose Install Folder** dialog, specify the location where you want to install the product and click the **Next** button.



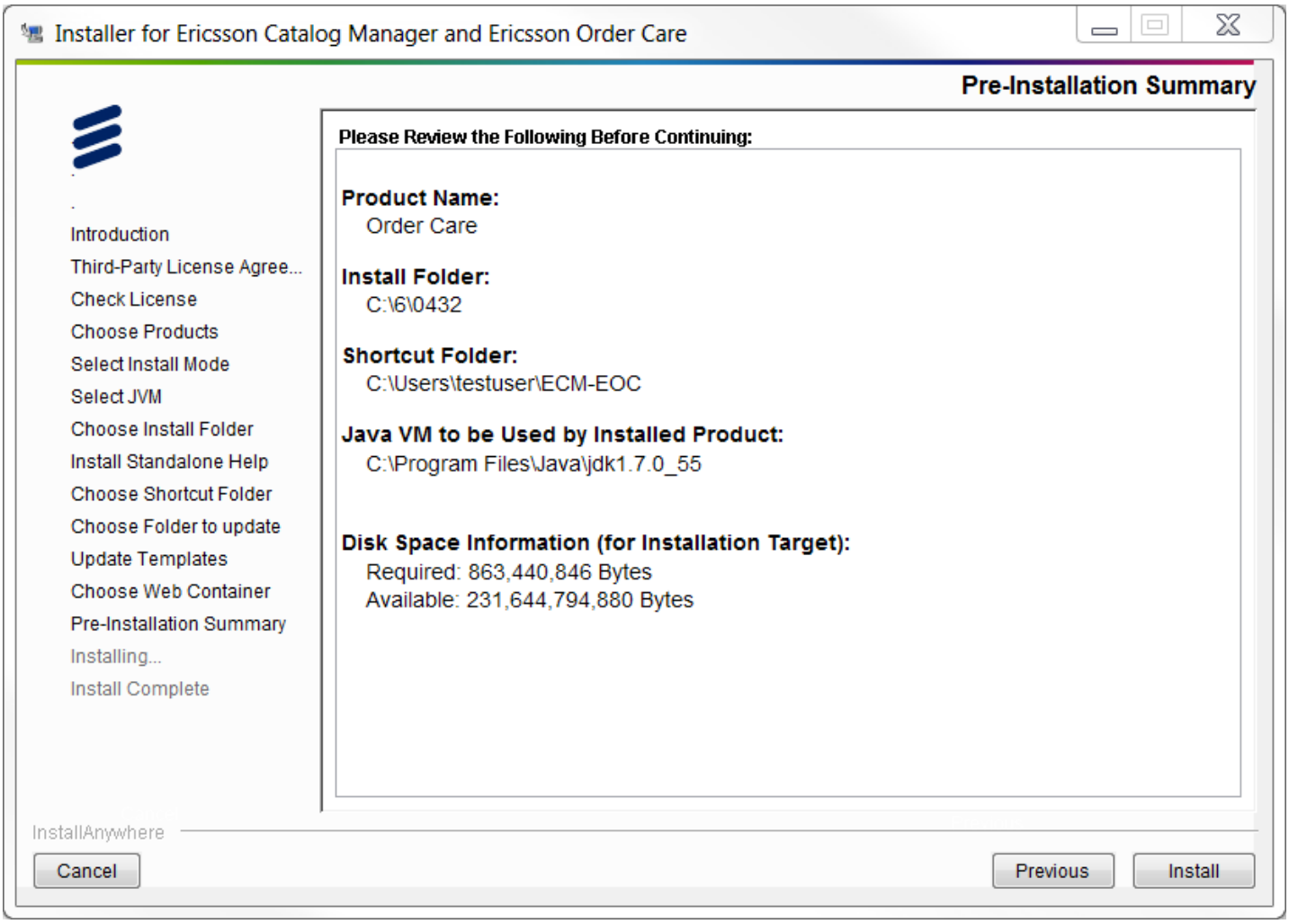
Choose Web Container

Select a Web container from the list and click the **Next** button.



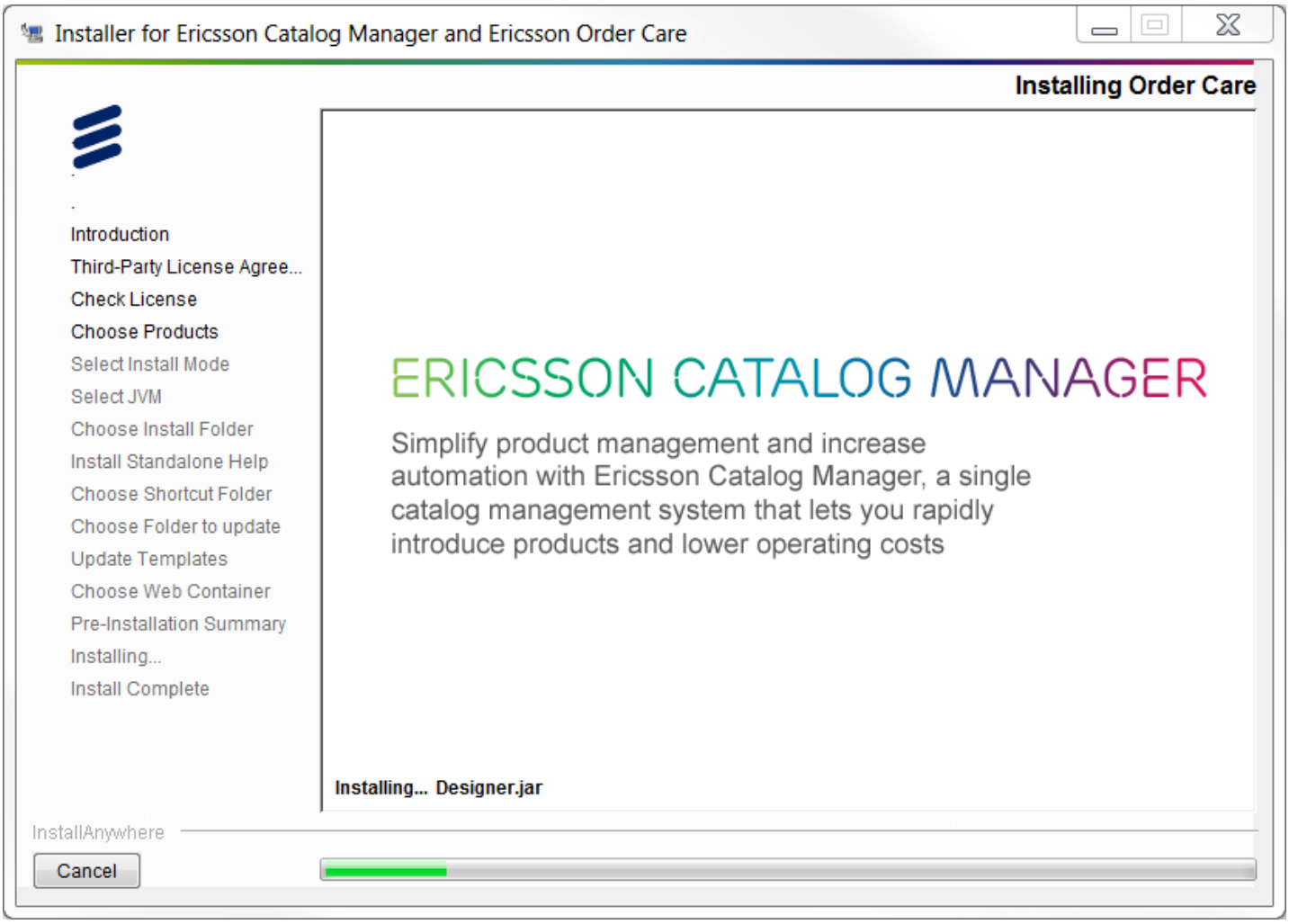
Pre-Installation Summary

Use the **Pre-Installation Summary** dialog to verify all information related to the planned installation. You may navigate to any previous window and make changes. When the installation summary appears to be satisfactory, click the **Install** button to proceed.



Installing

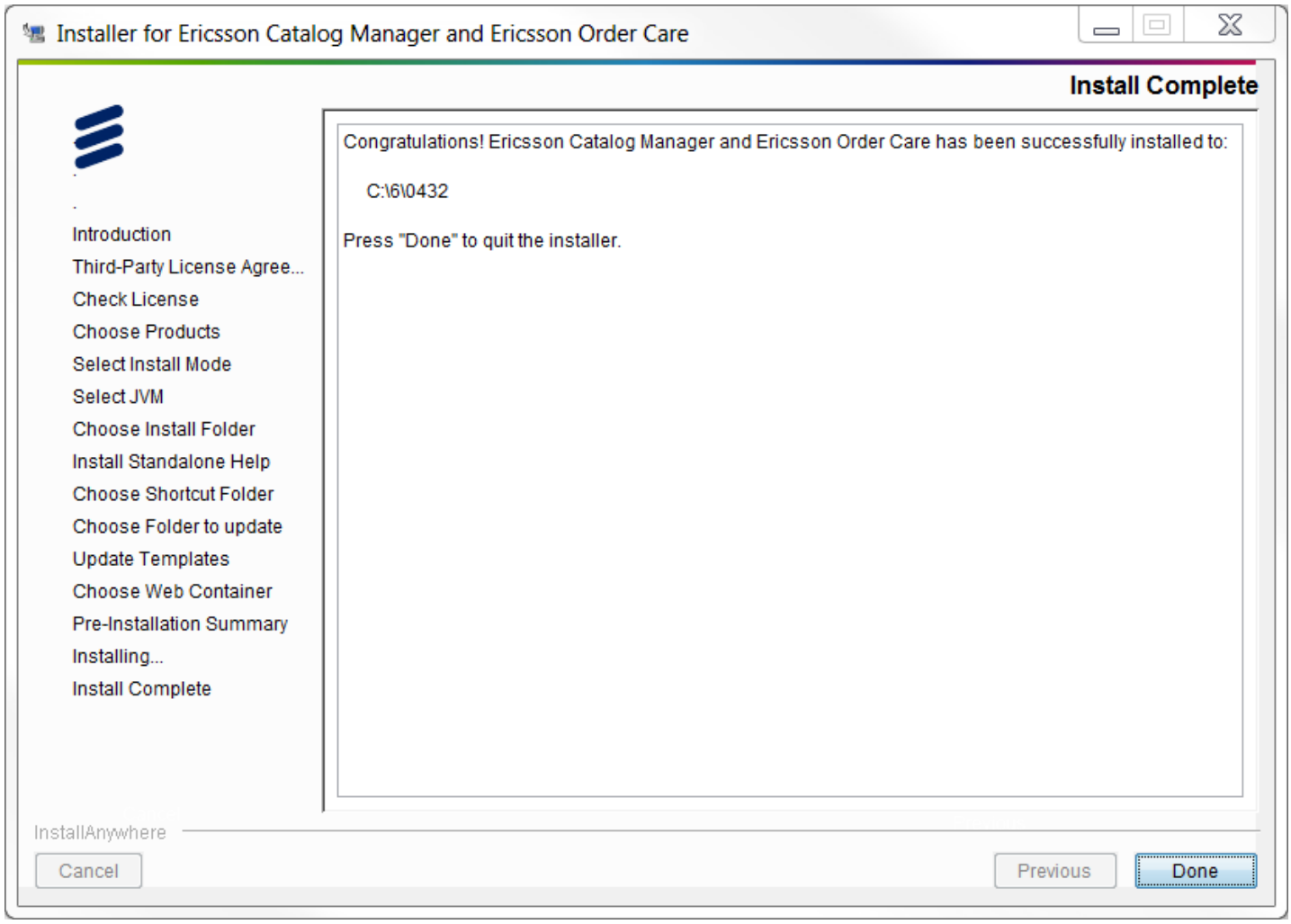
Installation proceeds with various status messages being displayed.



Note: The install program may be cancelled at virtually any screen. However, if a mistake has been made, you may navigate to the previous screen and correct the error before proceeding.

Install Complete

When the installation is complete, follow the instructions in the **Install Complete** dialog to terminate the install program.



Note: On some Unix systems, the installation procedure may leave a folder named *install.dir.** in a system temporary directory (or in the directory specified with the *IATEMPDIR* environment variable) after it finishes. You can safely remove this directory.

Product License

The install wizard copies the product license file to <*installation_folder*>\designer\env directory.

License file

Product license file is copied into **<*installation_folder*>\designer\env** directory during the installation process. If there are additional licenses such as template licenses, these license files should be copied to this location as well.

Summary

Source file	Target Location
license.lic (and other additional license files)	\ECM-EOC\designer\env

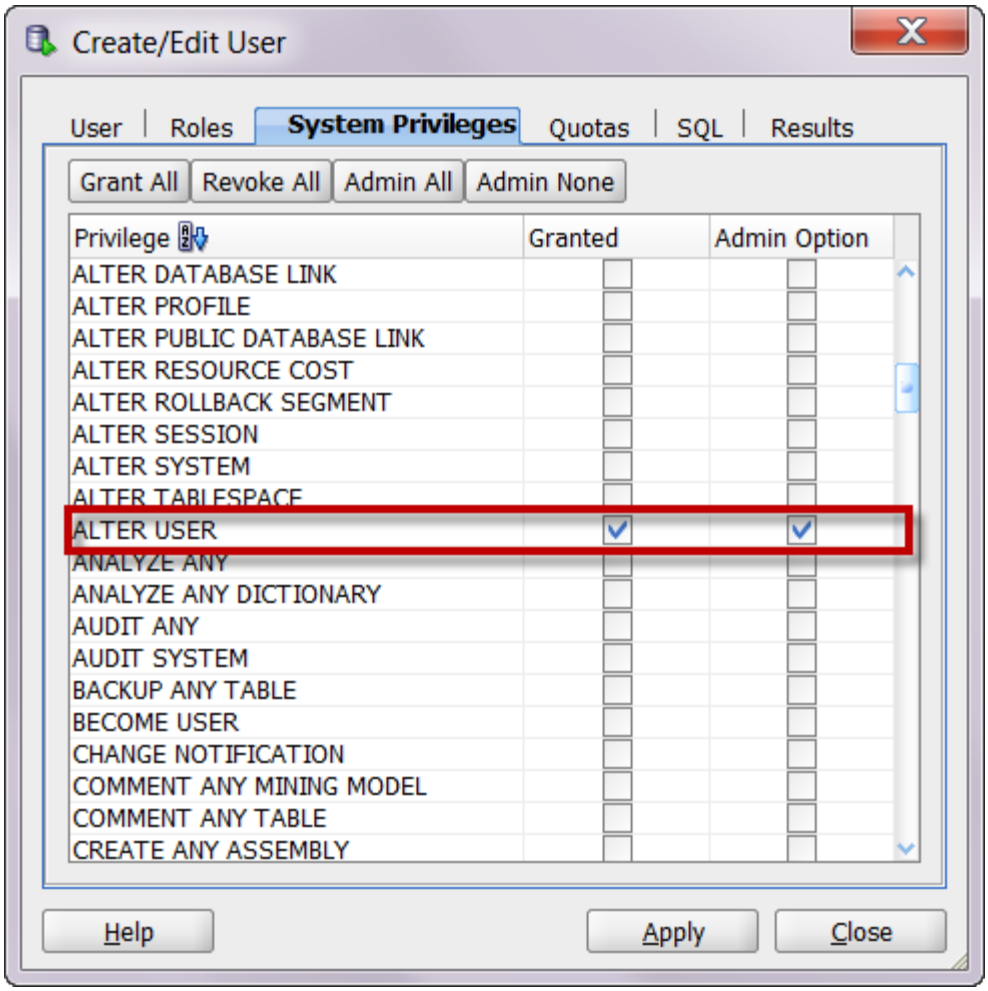
Database Initialization

Brand New Installation

This section details how to set up an Oracle database for the product. It requires Oracle DBA experience.

The system requires a database user; the DBA is required to create it, then run a script to initialize the database.

1. Create a user in Oracle SQL Developer by right-clicking **Other Users** in the left pane and selecting **Create User**.
2. Proceed to click the System Privileges tab, and select the **Grant** and **Admin Option** fields for the privileges noted in the following table.



Note: The name given in this example (*CW*) is not significant, but should correspond to the same user in all further steps. The user and password defined in this example is used in the Configuration application.

User:	CW
Password:	CW
Description:	Schema user
DB Roles:	CONNECT with ADMIN option selected
DB System Privileges:	**in Oracle 10g/11g:** ALTER USER CONNECT

	CREATE JOB CREATE PROCEDURE CREATE SEQUENCE CREATE TABLE CREATE TRIGGER CREATE TYPE CREATE USER CREATE VIEW DROP USER* UNLIMITED TABLESPACE* (This parameter sets the table size to "unlimited". To limit the table size, specify a value in the DB Quota parameter)
DB Quota	Set an appropriate limit for the Default table.

* DROP USER should be assigned if the User Profile Administrator wants to be able to delete the corresponding user from the Oracle database automatically when the user account is deleted.

* Adding the UNLIMITED TABLESPACE selection to the DB System Privileges list sets all of DB Quota to uneditable (that is, individual quotas cannot be set per table).

Note: Alternatively, you can run a SQL script to create your database user.

3. Click the **Apply** button, and then the **Close** button to save your changes.
4. Open and edit the **<*installation_folder*>\DDL\CW.sql** file (for example, *C:\Program Files\InstallationFolder\DDL\CW.sql*)
5. Edit the following line to point to your schema, if you did not use *CW* as the name. Save the changes.

```
define ORDER_SCHEMA = cw;
```

6. If you require national character support in your database, see Appendix E - National Character Support in Database and follow the steps in that procedure. When you are done, proceed to step 5.
7. Log in to the database in your schema and **run** the file **CW.sql**.

Upgrading from Previous Product Version

If you are upgrading from an existing product release that is version 5.0 or higher, you must make the existing database schema compatible with the new build. To do this upgrade, use the Velocity Studio Upgrade System command to generate a SQL script to update the database schema.

If you are upgrading from an existing product release that is older than version 5.0 (for example, version 4.2) with existing Oracle database metadata then you must follow the migration procedure to this product release.

Configuration

This section describes the database configuration setup for both bootstrap and runtime database connections, which includes:

- Obtaining database credentials
- Setting up the bootstrap database connection
- Configuring the cluster configuration application

Database Credentials

Before proceeding, ensure that you know the following database credentials listed:

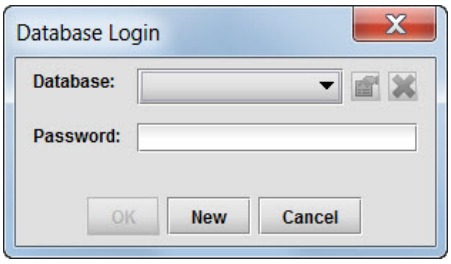
Credential	Example	Comment
Database Host (name or IP)	localhost	In the Oracle Enterprise Manager, the host information can be found under the properties of the database.
Database Port	1521	This value is the default Oracle port value defined during the installation.
Database Service ID	localdb	This value is an identifier that is used to connect the application to a particular database.
Schema user	CW	This value is the username defined when configuring the Oracle database during database initialization.

Refer to Database Initialization for instructions on creating and initializing your database schema. For example, the Oracle database credentials can be found in the Oracle Enterprise Manager Console:

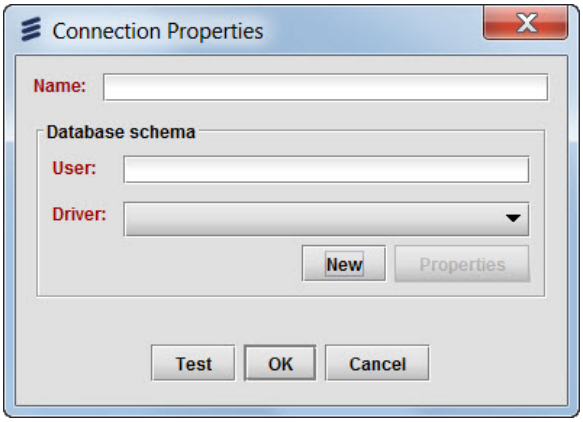
Setting up Bootstrap Database Connection in Velocity Studio

To configure Velocity Studio with the Web-based Configuration application, the framework must be connecting to the database. To set up the bootstrap database connection and start Configuration application, do the following:

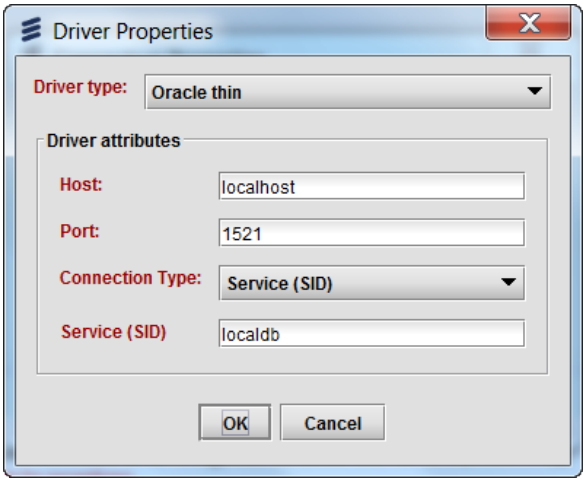
1. Run **Velocity Studio** by clicking <*installation_folder*>/Designer/env/startDesigner or by double-clicking the **Velocity Designer** icon.
2. Create a new project by clicking **File > New > New Project** from the menu, and specifying an empty project folder.
3. Select **Runtime** > **Run**. The Database Login screen appears.
4. Click the **New** button on the **Database Login** dialog.



5. The **Connection Properties** dialog appears. Click the **New** button.



6. The database **Driver Properties** dialog appears. Enter the Database Credentials as previously indicated and click the **OK** button when done. The Connection Type can either be a Service Name or Service (SID).



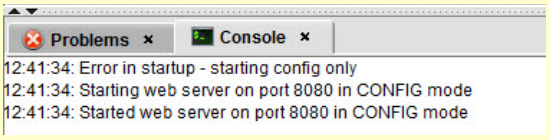
7. The **Connection Properties** dialog appears. Name your database driver properties and use the same "user" as defined in your Database Credentials (that is, **cw**). Save the connection properties.
8. In the database login dialog, enter the database password (that is, **cw** as defined in your Database Initialization.), and click the **OK** button.

The database connection setting is stored in the *.settings* file in the directory root.

The framework is now started in configuration mode. Once the configuration application is properly set up and the application metadata has been run, the framework appears in run mode.

Note: The console should provide the following messages:

- Error in startup - starting config only
- Starting web server on port 8080 in CONFIG mode
- Started web server on port 8080 in CONFIG mode.



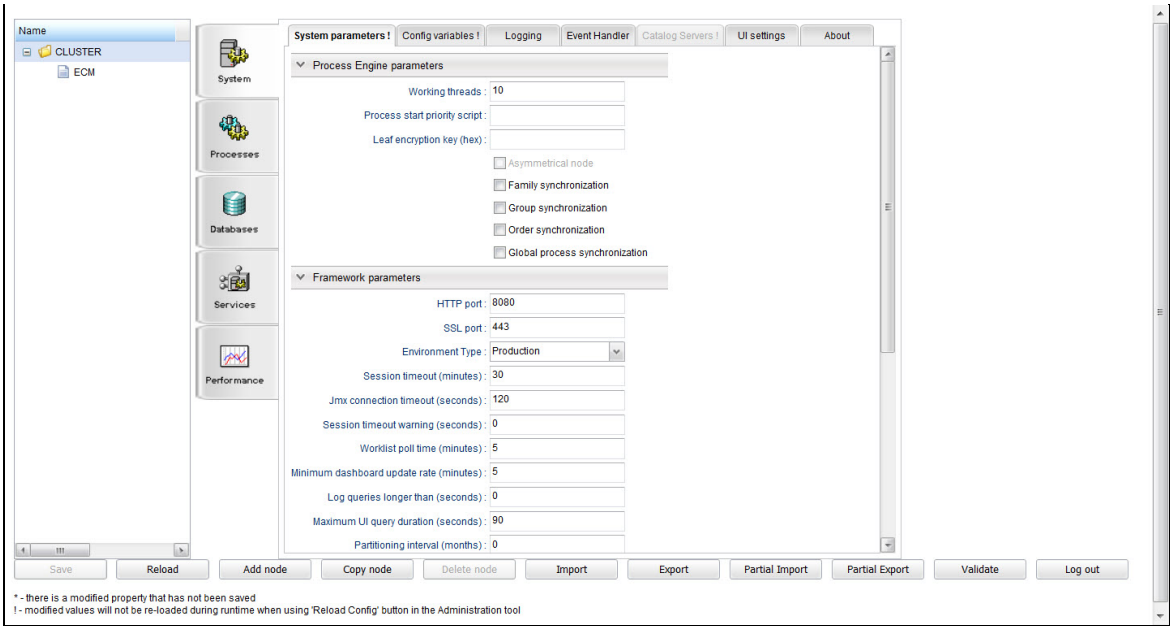
Configure the Cluster Configuration Application

The Configuration application allows you to set up the database connection, which is used during the application metadata runtime. This section describes the required steps to set up the Configuration application. For more information about the Configuration application, see the Configuration User Guide.

1. Use your browser to go to the Configuration application's default address: http://localhost:8080/cwf/config/index.html or http://localhost:8080/cwf/config

   Note: The port 8080 is defined in the Velocity Studio preferences.

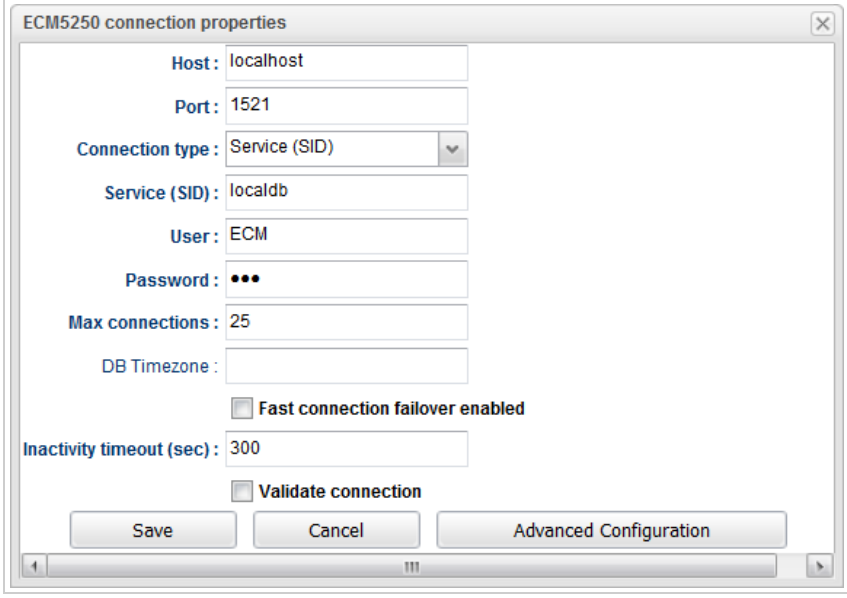
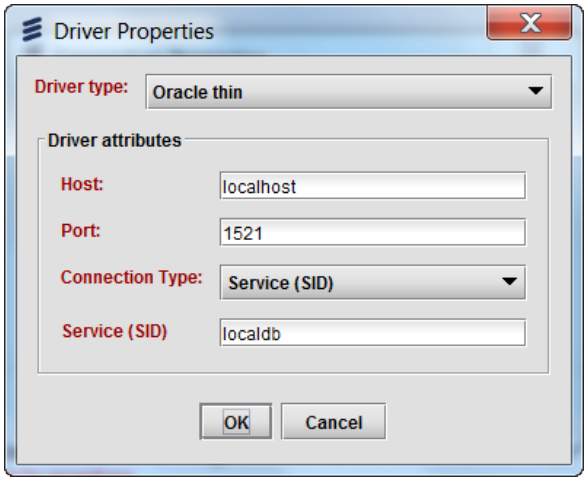
2. The Configuration application login page appears. Log in using **username**=***upadmin*** and **password**=***upadmin***, and then click the **OK** button to launch the Configuration application.



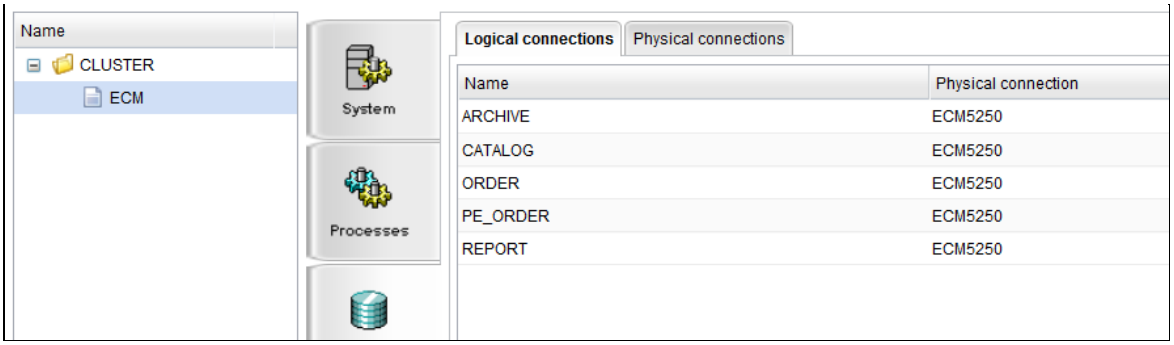
Set up Database Connection configuration

3. Once you have successfully logged into the Web-based Configuration application, navigate to the **Database** vertical tab  and then to the **Physical connections** horizontal tab.
4. You are at the Cluster level, as indicated in the navigation panel. Create a new physical connection by right-clicking the table, and selecting **Add** from the pop-up menu. Enter a name for the physical connection (for example, ***CW***).
5. Enter the settings of the physical connection by right-clicking the record, and selecting **Edit** when the pop-up menu appears. Proceed to fill in the attributes, and then click the **Save** button in the dialog.

Note: The database attributes in the Configuration application need to match the attributes in Velocity Studio as shown in the following example.

Configuration Application	Velocity Studio
	

6. Click the **Logical connections** horizontal tab. Assign all existing logical connections to the physical connection you have created by double-clicking each entry and selecting a physical connection from the drop-down menu.



7. Click the **Save** button to save the cluster configuration.

Node Configuration

The cluster configuration is the parent node in the config hierarchy and the node is the child. At least one node-level configuration must be created to run your application in Velocity Studio. This section describes the necessary steps to create a node.

8. Right-click the **CLUSTER** node in navigation panel, and select **Add node**. Enter a name (for example, *UI*), which is also the Node ID.

Process Engine Configuration

If you are building or have an existing metadata that requires the process engine, you are required to set up the node configuration for it. Settings depend on your cluster arrangement (for example, single or symmetrical/asymmetrical clustered). Refer to the Process Engine Configuration Guide for more information.

Installation Complete

Your installation is complete. You can now create your new application metadata or load an existing metadata, and then run it. You can verify that your installation is done correctly.

Installation complete does not mean that you are ready for deployment. However, in a development or engineering environment, deployment is not necessary. See the deployment guide for details on setting up for deployment environment.

Modules Installation

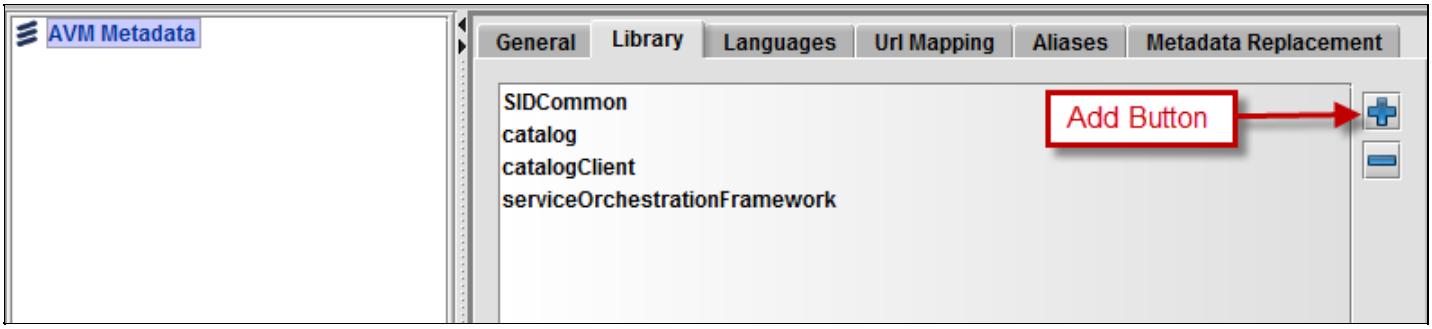
Each modules installation requires its own set of installation procedures. Refer to the module's specific configuration guide for more details. In general, each module requires the library files to be selected in Velocity Studio and the module-specific database tables be created.

Add module-specific library files

The module-specific library files contains the metadata that enables the module application to run and is located in the following JAR files that are included in the modules folder of the installation disk.

These files must be added to Velocity Studio's library. Here are the steps necessary to complete this process:

1. Open the Velocity Studio and click **File > Open Project** from the menu bar.
2. Click the metadata root node and in the right pane, click the **Library** tab, and then click the **Add** button.



3. Add the modules JAR files, which are located in the <*product_installation_folder*>\modules. For Catalog, the following JAR files are added:
   - catalog.jar
   - catalogClient.jar
   - SIDCommon.jar
   - serviceOrchestrationFramework.jar
4. Once the files are added, **Save** the project metadata, and then reload or open the project for the library files to take effect.

Once all the library files have been successfully added, the **Library** folder within Velocity Studio should contain the appropriate modules folders.

Create the modules database tables

To create the module-specific database tables, you must run the application-specific DDL file that is included on the Installation CD. Use an SQL program, such as SQL Plus, to run the file.

To run the DDL file, complete these steps:

1. Open the SQL program and log into the same user associated with your application node cluster (for example, *cw*/*cw*).
2. Select the SQL files from <installation_folder>\modules\<*module name*>\DDL folder (for example, C:\ECM-EOC\modules\catalog\DDL\catalog.sql).
3. Run these files.

Note: If you are running a non-enterprise Oracle edition and want to use Catalog, you must edit the \modules\catalog\DDL\models.sql script before running these files.

When editing the models.sql script, locate the following command:

```
define DEFAULT_ORACLE_EDITION = 'ENTERPRISE';
```

If you are running Oracle Standard Edition, change this command to the following:

```
define DEFAULT_ORACLE_EDITION = 'STANDARD';
```

Similarly, when running Oracle Express Edition, change this command to the following:

```
define DEFAULT_ORACLE_EDITION = 'EXPRESS';
```

Verifying Your Installation (Optional)

The following step is optional and may be completed if you want to verify that your installation is correct.

Log into the Administration Application

To log into the Administration application, complete these steps:

1. From Velocity Studio, select **Runtime** > **Run**.

   Note: If you have just completed configuration with the Configuration application, a system restart is necessary to reload the configuration data. Stop the run before restarting the system (select **Runtime** > **Stop)**.

2. Log into the Administration application:
   a. Open a Web browser and load enter http://localhost:8080/cwf/ as the URL.
   b. Enter **upadmin** as both the **Username** and the **Password**, and click the **OK** button to enter the System Administration application.

In a Windows environment, the standard output and error for the Velocity Studio are redirected to <*installation_folder*>*designer**env**log*. The log filename is appended with the date and time that the application was started (for example, *logFile.2009-09-15.log*). You can troubleshoot problems with these log files when using Velocity Studio.

You can also determine what software version you are using and its exact build number by locating your <*installation_folder*>*readme.txt*. The build format contains the software version (for example, 14.0.0.0) followed by the build number (for example, b1001 denotes build number 1001). This information is important should you require technical assistance to troubleshoot problems with the Support team.

You may perform directory clean-up regularly, as new log files will be created whenever the Velocity Studio is launched on a new day.

Browser Configuration

Some application features may require special browser configuration. Below are some generic cases. For full instructions, consult the User Guide for your specific application.

Mozilla Firefox - Configure Single Sign-on

To configure single sign-on to work with Firefox, complete these steps:

1. Open a Firefox browser and type **about:config** in the address bar.
2. In the **Filter** field, type **network.automatic-ntlm-auth.trusted-uris**.
3. Double-click the preference name in the previous step.
4. In the **Enter String Value** dialog, enter the site URLs that you want to pass NT LAN Manager (NTLM) authentication information to by using a comma-separated list of URLs in this format: http://localhost:8080/cwf,http://cw0086:8080/cwf
5. Click the **OK** button to save your changes.

Refer to Mozilla Firefox for specific setup instructions.

Internet Explorer

This release supports two single sign-on technologies:

- Open ID
- Kerberos

For more single sign-on options, see the *Velocity Studio User Guide* under the *Metadata Objects - Login* section.

Configure Single Sign-on for NTLM Authentication

In Windows 7, Vista, or Windows 2008, follow these steps to change the network security setting on your client machine to use NTLM single sign-on:

1. Go to the Control Panel, and double-click the **Administrative Application** > **Local Security Policy** icons.
2. On the **Local Security Settings** dialog, click **Local Policies > Security Options** in the right pane.
3. Locate **Network security: LAN Manager authentication level** and double-click this policy.
4. Click the drop-down menu and select **Send LM & NTLM responses**.
5. Proceed to click the **Apply** button, and then click the **OK** button to save your change.

Browser Cache and the Product

All static JavaScript files or resources are postfixed with an internal release number. When a new release of the product is available, there may be new versions of these files, which means that these resources would have a different URL. As long as you use a particular version of product, these resources are only loaded into your Web browser cache.

All static resources in an application are cached differently. Since every server restart may require a new version of metadata, the unique suffix appended to the URL is the server startup time. As long as the server is not restarted, your Web browser caches these resources.

As a result, JavaScript compression is not needed, as it will only benefit the initial loading of your browser cache.

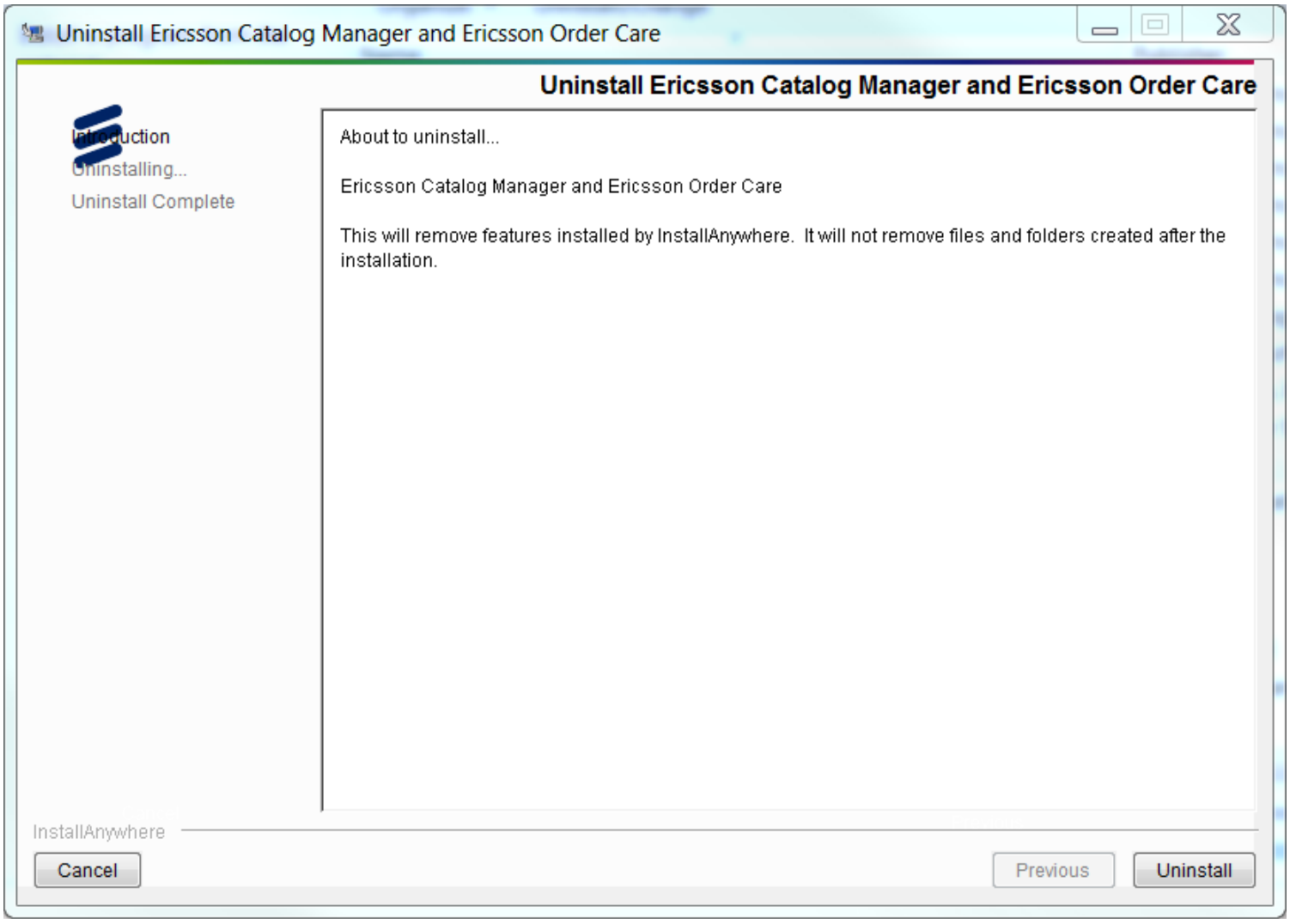
Uninstall the Product

The following section explains how to uninstall the product.

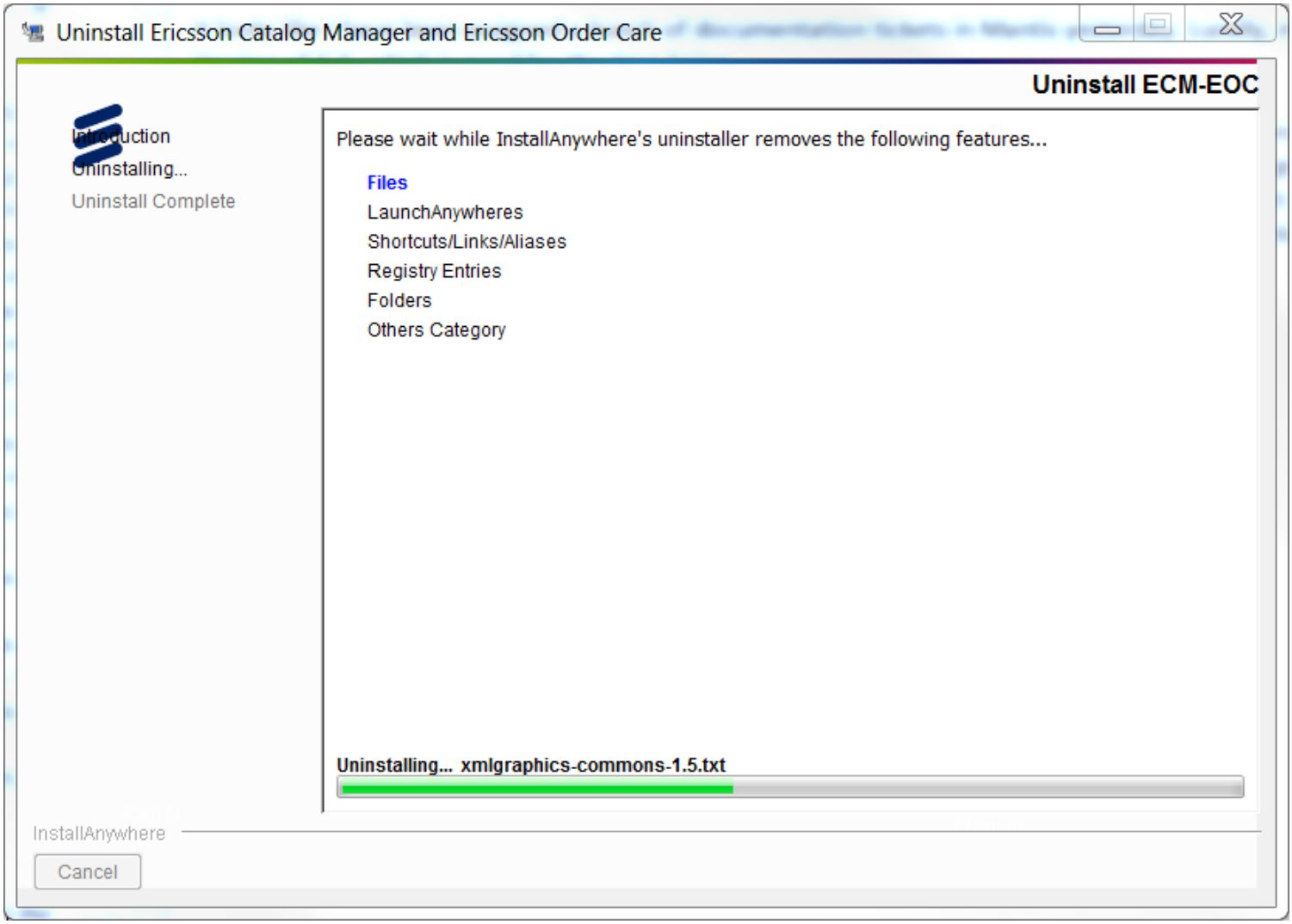
Launch Uninstall

To perform an uninstall of a previous installation, simply locate and execute the uninstall application.

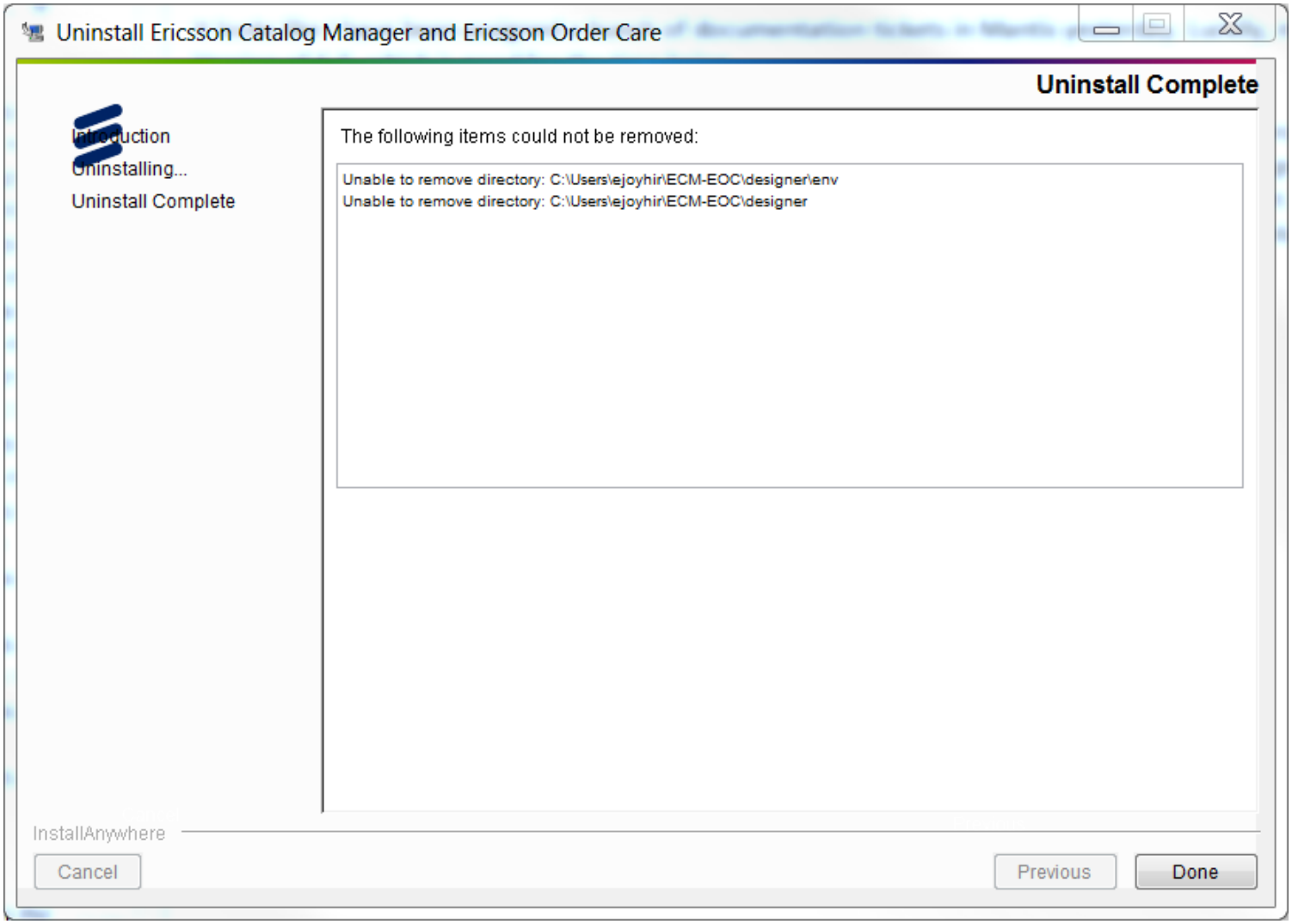
- **Windows:** Use the Start Menu icon, or launch file *uninstall.exe* from the \<*installation_folder*>*uninstall* folder.
- **Unix/Linux:** Launch *uninstall.sh* from the *uninstall* directory where the components have been installed.



The uninstaller informs you of its progress.



The uninstaller provides details of items that have not been removed and indicates that the uninstallation has completed.



Notes:

- The uninstaller removes any files or folders created by you after installation (for example, project files, license files).
- Framework components that have been deployed to either a JBoss, WebLogic, or WebSphere application server have to be undeployed using the tools provided by each respective vendor. Consult your vendor documentation.
- Any database schemas have to manually removed by an Oracle DBA, or by using the SQL Plus command *DROP USER "SCHEMA_NAME" CASCADE;*

Slim AVM

The standard AVM product requires an Oracle database connection to load and save system objects, such as configuration, database sequences, logging, processes states, user information, and so on. Slim AVM support running without an Oracle database by using other storage sources, such as the Common Interface Layer (CIL) adapter, with limited functionality.

Slim AVM allows you to run AVM-based applications that do the following:

- Use only the CIL interface for storing data
- Are Web services-oriented
- Have limited or no user interface
- Do not require a process engine
- Use the catalog client

Slim AVM supports the following features:

- Using CIL, load and store AVM configuration
- CIL scripting API
- Catalog client
- Info tables (read from server)
- Web services
- Dynamic document definitions
- Reference tables
- Single sign-on security provider
- UI that does not require database operations
- Limited version of system configuration and administration user interfaces
- JMX monitoring
- NGEE platform functionality, including tracing, logging, fault and configuration management, and auditing
- Caching

You can use Velocity Studio to start the AVM in slim mode for both **Run** and **Debug** actions.

Restrictions

The following AVM features *are not* supported in slim mode:

- Process engine
- Catalog server
- Standard security provider support (that is, database users, group, or privileges)
- Database operations (for example, read, load), orders, and documents
- Translations
- Code tables unless they are in your metadata

  Note: For catalog client, slim AVM loads code tables from the catalog server.

- Calendars
- Attachments
- Worklist
- Basket and catalog order support in the Catalog application
- User interfaces
- Multiple applications running on the same schema

The following metadata objects are *not* supported:

- Running SQL, document, or order finders
- Reference data types that use database enumeration, or document, sql, or order finders
- Processes
- Database conversion maps, including document database mapping

- Rules (rule sets are still supported)
- Dynamic documents mapped to the database
- External scripts

Notes:

- Neither Velocity Studio, nor start up validation errors display if unsupported metadata objects are present in the metadata. The objects can still compiled, although an attempt to use unsupported functionality would produce an exception.
- It is not recommended to use documents and orders in slim mode. Technically, they can be used as pure memory objects. However, no support is available for reading or saving to the database.

Configuration

The only type of physical connection supported in slim mode is the CIL connection. The configuration is stored as a blob and retrieved through CIL.

This implementation includes the following:

- Adding a new type of physical connection in which CIL includes enhancements to the Configuration application user interface and Velocity Studio
- Changing configuration-loading by using the common API
- Implementing different adapters for Oracle and CIL

Run Slim AVM

If the configuration connection (ORDER schema) is defined as a CIL connection, the AVM automatically starts in slim mode.

Note: Only the UI type node can be used to run in slim mode. An attempt to start using a PE or PE_UI node produces a startup exception.

During startup in slim mode, the following steps are skipped:

- Product checking of properties
- Database mapping checks for documents maps or finders

Metadata

Metadata and resources are stored, deployed, and loaded through CIL. Implementation requires supporting deployment through the command line interface using the CIL connection.

Object ID generation (cwf.cwDocId data type)

AVM uses Oracle sequences to get the next object ID.

Note: Sequences are implemented through the CIL interface.

Calendars

There is no calendar support. Web services and the catalog client do not require a default calendar to be defined.

Security and User Profile

Only the single sign-on security provider is supported.

Heartbeat Thread

This thread runs in slim mode, although any database operation should be disabled for slim mode.

System Templates

A limited version of the System Configuration and Administration applications are available in slim mode. The former application is required to edit the configuration. Changes need to be done in the system metadata for loading and saving the configuration blob.

Note: User Profile and Worklist Management applications are not available in slim mode.

Logging

Only file and console logging is supported. Auditing, database error, and message logs are disabled.

Cache

The following details pertain to cache:

- Reference cache must support reference data types with script finders and events when no database operations are required.
- Reload cache threads (objects) from the database are disabled.
- Resource manager (resource cache) has resources read using CIL.

Catalog Client

The Catalog client no longer uses a database connection.

The following objects are loaded from the Catalog server:

- Database enumerations
- Info tables

Notes:

- Loading the list of catalog servers takes place from the configuration file only. If the list is empty, an exception occurs.
- Upon Catalog initialization, some parameters that used to be read from the database are read from the server (for example, systemCurrentDate, systemCurrency, and systemCurrencyMarkup). These are read from the server.
- Basket and catalog orders are not supported.

Appendix A: Installation Troubleshooting

Debug output from Wizard

The installation procedure creates a log file (for example, ECM-EOC_Install_05_05_2014_17_07_49.log) in the installation folder, which contains information related to installation. If there any errors in the installation, use this file to troubleshoot.

Prior to installation, make sure there is a proper JVM installed.

Common Installation Errors

Error/Symptom	Comment	Resolution
Velocity Studio does not start	If the Velocity Studio does not start, consult the log file located in <*installation_folder*>\designer\env\log.	1. Review the log file for errors and correct issues. 2. Start Velocity Studio by Command Line to view errors.
Cannot Run metadata	The Velocity Studio Console pane will display a message indicating that it is in Design, Config, or Run mode. The metadata is executed in Run mode. If the Console does not display a Run mode message, then the metadata cannot be run due to some error.	1. If a new version has been installed, metadata may need to be upgraded. 2. Correct errors in the log file (located in <*installation_folder*>\designer\env\log) and the problems outlined in the Problems pane of Velocity Studio.
Framework does not start	If the Framework does not start, usually the console will have a stack trace of the exception. Based on the stack trace you can narrow the source of the error. It could be one of: • Database (missing/invalid tables) • Metadata (invalid) • Application Server configuration (missing libraries)	Read the stack trace to verify the source of the error.
Log File Error: Bootstrap Connection is different from Logical Connection	The Database configuration in the Configuration application must match the Database configuration in Velocity Studio.	Follow steps in the Configuration application to ensure that both database configurations match.
Log File Error: Error validating cluster configuration. Not all database connections are defined	The Configuration application is not correctly set up.	Follow steps in the Configuration application to setup the Configuration application properly.
Log File Error: DE0399: Database structure does not correspond to the metadata	System upgrade is required.	Follow steps in the Configuration application to upgrade the database.
Log File Error: DE6019: Other UI node is running "CLUSTER"	Two users are sharing the same cluster or node.	Follow steps in the Configuration application (Step 8) to to create another Cluster or Node.
Cannot login Config application with *upadmin*/*upadmin*.	Ensure that you have created an Oracle user called *upadmin*.	Reset Password in Oracle.
Cannot run multiple Velocity Studio instances on a single machine.	The default settings for Velocity Studio are configured for a single instance.	Refer to the section on configuring the startDesigner.cmd file to enable multiple Velocity Studio instances on a single machine within the Deployment Guide.

Appendix B: Installation in Silent Mode

The installation of the product can be automated by using *silent mode* installation. This feature may be useful in a sizeable project where the product is to be installed on all machines of all team members.

Note: The graphical display is only required for GUI installation.

Before silent mode installation can be executed, a installation-replay file must be created to define the installation configuration. But before the creation of the installation-replay file, the target machine should have the system variables *JDK_HOME* and *JAVA_HOME* specified. In Windows, this can be located in Windows Explorer, right-click **My Computer** and select **Properties**, go to **Advanced** tab, and click the **Environment Variables** button. Add *JDK_HOME* and *JAVA_HOME* as system variables with the path for their JDK (for example, `C:\java\jdk1.6.0_34`)

To create the replay file, Execute **\Disk1\InstData\Windows\NoVM\install.exe** (or *install.bin* for Unix) with command line using the `-r` option:

```
install -r
```

Follow the installation wizard as normal. Upon completion, the installation-replay file *installer.properties* is created at the current folder of command prompt; the content of the file is a record of your choices in the installation wizard. An example is as follows.

Note: If the installation directory is read-only (for example, installing from CD), specify the location of the installation-replay file in the command (for example, `install -r c:\installer.properties`):

```
# Replay feature output
# Replay feature output
# ---------------------
# This file was built by the Replay feature of InstallAnywhere.
# It contains variables that were set by Panels, Consoles or Custom Code.



#Choose Java Virtual Machine
#---------------------------
JDK_HOME=C:\\java\\jdk1.6.0_12
JAVA_DOT_HOME=C:\\java\\jdk1.6.0_12\\jre
JAVA_EXECUTABLE=C:\\java\\jdk1.6.0_12\\bin\\java.exe

#Choose Install Folder
#---------------------
USER_INSTALL_DIR=C:\\Program Files\\CWOrderCare

#Choose Shortcut Folder
#----------------------
USER_SHORTCUTS=C:\\Documents and Settings\\All Users\\Start Menu\\Programs\\CWOrderCare
```

Change the variables in installation-replay file as required for silent mode installation. Furthermore, add a *JAVA_HOME* variable in the **Choose Java Virtual Machine** section, with the path of their JDK. For example, the following replay file has been changed from the previous example.

```
# Replay feature output
# Replay feature output
# ---------------------
# This file was built by the Replay feature of InstallAnywhere.
# It contains variables that were set by Panels, Consoles or Custom Code.



#Choose Java Virtual Machine
#---------------------------
JDK_HOME=C:\\java\\jdk1.6.0_12
JAVA_DOT_HOME=C:\\java\\jdk1.6.0_12\\jre
JAVA_EXECUTABLE=C:\\java\\jdk1.6.0_12\\bin\\java.exe
JAVA_HOME=C:\\java\\jdk1.6.0_12

#Choose Install Folder
#---------------------
USER_INSTALL_DIR=C:\\Program Files\\CWOrderCare

#Choose Shortcut Folder
```

```
#----------------------
USER_SHORTCUTS=C:\\Documents and Settings\\All Users\\Start Menu\\Programs\\CWOrderCare
```

Add the following code into the installation.properties files for a full licence.

Notes:

- If you do not have a full licence, remove those modules for which you do not have a licence.
- These lines are case-sensitive.

```
HAS_TEMPLATES=1

SelfCare=1
OrderAnalytics=1
CustomerInformationManagement=1
OrderManagement=1
OrderNegotiations=1
CatalogManagement=1
ServiceRegistry=1
```

Then, move the file to the same directory where *install.exe* (or *install.bin* for Unix) is located for the silent installation, if it is not already so.

To run the installation in silent mode, execute *Disk1**InstData**Windows**NoVM**install.exe* (or *install.bin* for Unix) with command line using the `-i silent` option:

```
install -i silent
```

The silent installation should complete without any user prompts.

Uninstalling the Product in Silent Mode

Similarly, uninstalling the product can be automated in silent mode. There is no need to create a replay file for uninstallation. Simply use `-i silent` option on <*installation_folder*>*uninstall**uninstall.exe*:

```
"C:\Program Files\installationFolder\uninstall\uninstall.exe" -i silent
```

Note: At command prompt, do not execute uninstall.exe within ****<*installation_folder*> (that is, invoking the uninstall command when at local folder \<*installation_folder*>\uninstall). Otherwise, the uninstallation does not remove the folder where the prompt resides.

Appendix C - License Files Explained

A number of products comprise our software offerings, including Velocity Studio, Order Management, Catalog Management, and Order Analytics. To successfully install each product requires a license.

Licensing Described

License files that are provided to you by are in an XML file. The file contains a signature in one of the XML fields to protect it from file tampering. A license file is bound to an expiry date or a fixed MAC address, or a combination of both. The license becomes invalid if it goes beyond the specified expiry date, or the machine running Velocity Studio does not have the same MAC address.

Licenses are configured using namespaces which enables features for a particular product (Velocity Studio, Order Negotiations).

For example,

```
<namespaces>

   ....

   <namespace>Order Negotiations</namespace>

</namespaces>
```

Namespaces are also used to provide access for different modes of Velocity Studio, for example, copy, can save, can publish. Several license files can be used, and features are added cumulatively based on the contents of the license file.

Note: When starting a product WAR file under an application container, the path to the directory with license files must be passed through *-D* property.

Business partners can protect their namespaces using the information provided in the License protection namespace section.

The following code is an example of the license file.

```
<?xml version="1.0" encoding="UTF-8"?><license>
  <comments>Internal development license</comments>
  <expiryDate>01-01-2012</expiryDate>
  <macAddress>99-1A-99-A1-99-A1</macAddress>
  <operatingSystem>Windows</operatingSystem>
  <organization>
    <name>Test Company</name>
    <address>5000 Test Rd, Suite 1000, Mississauga, ON Canada, L4V 1W2</address>
  </organization>

  <namespaces>
    <namespace>com.conceptwave.license.SelfCare</namespace>
    <namespace>com.conceptwave.license.UnifiedWorkstation</namespace>
    <namespace>com.conceptwave.license.CustomerInformationManagement</namespace>
    <namespace>com.conceptwave.license.ServiceRegistry</namespace>
    <namespace>com.conceptwave.license.OrderNegotiations</namespace>
    <namespace>com.conceptwave.license.CatalogManagement</namespace>
    <namespace>com.conceptwave.license.ProductLifecycleManagement</namespace>
    <namespace>com.conceptwave.license.OrderManagement</namespace>
    <namespace>com.conceptwave.license.OrderAnalytics</namespace>
    <namespace>com.conceptwave.license.DesignStudio</namespace>
    <namespace>com.conceptwave.license.Velocity</namespace>
  </namespaces>
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#"><SignedInfo><CanonicalizationMethod
Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315#WithComments"/><SignatureMethod
Algorithm="http://www.w3.org/2000/09/xmldsig#dsa-sha1"/><Reference URI=""><Transforms><Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/></Transforms><DigestMethod
Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/><DigestValue>Kh53kFlB3uY4S67olZde8k3SNc8=</DigestValue></Refe
```

Parameter	Description
comments	Description on the license file.
expiryDate	If present, the license is only valid until the expiry date.

macAddress	If present, the license is only valid to machine with the specified MAC address.
gracePeriodDays	If present, the license's grace period in days.
operatingSystem	The operating system of the software to run on.
organization	The organization that issues this license.
namespaces	Each namespace listed enables a certain capability (such as copy, view) of the software products (such as Velocity Studio, Order Negotiations).
signature	Signature and Message Digest generated based on the XML content in the file and also the private key. The license file becomes void if it is hand-edited in any way because the message digest verifiable with signature no longer matches with the one hashed from the altered content.

Here are the available namespaces:

- **com.conceptwave.license.CatalogManagement**: Enable Catalog Management component.
- **com.conceptwave.license.CustomerInformationManagement**: Enable the Customer Information Management component.
- **com.conceptwave.license.DesignStudio**: Enable Velocity Studio to start.
- **com.conceptwave.license.OrderAnalytics**: Enable Order Analytics component.
- **com.conceptwave.license.OrderManagement**: Enable Order Management component.
- **com.conceptwave.license.OrderNegotiations**: Enable Order Negotiations component.
- **com.conceptwave.license.ProductLifecycleManagement**: Enable the Product Lifecycle Developer (PLD) with the Catalog module.
- **com.conceptwave.license.SelfCare:** Enable the Self-Care component.
- **com.conceptwave.license.ServiceRegistry**: Enable the Service Registry component.
- **com.conceptwave.license.Velocity**: Enable Velocity Studio mode in Velocity Studio.
- **com.conceptwave.license.UnifiedWorkstation**: Enable the Unified Workstation component.

Appendix D: Work in Console Mode

When you cannot launch a graphical user interface, you can install the product using the console mode. In console mode, you are presented with the same options as in GUI mode.

Use the following command to start the installation process in console mode:

```
install.bin -i console
```

Notes:

- In the Update Templates step of the product installation, there is neither a constraint, nor a dependency between templates.
- Full installation mode is only supported in console mode.

Appendix E: National Character Support in Database

The product supports national characters in your database by performing these steps:

1. When you create an Oracle database instance, the character set needs to be set to UTF (or UTF8, UTF16, and so on, depending on the language). The following is an example:

   ```
   CREATE DATABASE sample
   ...
   CHARACTER SET AL32UTF8
   NATIONAL CHARACTER SET AL16UTF16
   ...
   ```

   For more information about character sets, refer to the Oracle documentation on Supporting Multilingual Databases with Unicode.

   Notes:

   - Once your database has been created with a specific character set, it can only be changed to a subset of the current charset. As an example, if you created your database with the Latin charset WE8ISO8859P1, you cannot change it to UTF. You can only migrate the database.
   - When text with national characters is stored in the NVARCHAR column (even if the national charset is UTF), the text ends up being broken (that is, text is replaced with ????). This behaviour occurs because the text is being converted to the character set encoding.
     To see what the current database character set is, use the following statement:

     ```
     select * from v$nls_parameters where parameter like '%CHARACTERSET%';
     ```

2. When creating a new database schema and executing the product's DDL, add the following lines to your <*installation_folder*>\DDL\avm.sql file and save it:

   ```
   define NATIONAL_STRING = NVARCHAR2;
   define NATIONAL_LARGE_STRING = NCLOB;
   ```

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