Cumulus

Cumulus Installation Guides

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Introduction

This documentation provides the online versions of all Installation and Getting Started guides of the entire Cumulus product family.

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CIG-1115-H-Z-2

This chapter lists the system requirements for various Cumulus components and options. Using any of these programs on a system that falls beneath the listed requirements may be possible, but it will most likely yield unfavorable results and is not recommended.

System Requirements

Cumulus Server

This section lists the system requirements to install and run the Cumulus Server. Cumulus Server requires a 64-bit operating system as shown below.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (and latest patches), Windows Server™ 2012 (and latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running (NOTE: IPv6 is not supported)

OS X / macOS

- macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running (NOTE: IPv6 is not supported)

Linux

- Linux x86_64
  libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later, and libldap 2.4 (for LDAP authenticator)

  Tested on: openSUSE 13.2
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running (NOTE: IPv6 is not supported)

Cumulus Desktop Clients

This section lists the system requirements to install and run Cumulus Desktop Clients under Windows and macOS. Cumulus Desktop Client is a 64-bit application.

Windows

- Windows 10 (and latest patches), Windows 8 (and latest patches), Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (and latest patches), or Windows Server™ 2012 (and latest patches)
- 1024 x 768 video display; NOTE: 4 k monitors are not supported
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP network access

OS X / macOS

- macOS 10.15 (latest patches) or
  macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)
- 1024 x 768 video display
- 4 GB MB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE

- TCP/IP network access

Cumulus Scheduler

This section lists the system requirements to install and run the Cumulus Scheduler. The Cumulus Scheduler requires a 64-bit operating system as shown below.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (and latest patches), Windows Server™ 2012 (and latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running

OS X / macOS

- macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running

Linux

- Linux x86_64
  libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later, and libldap 2.4 (for LDAP authenticator)

  Tested on: openSUSE 13.2
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running

Cumulus Web Solutions and Cumulus Integration Platform

This section lists the recommended system requirements to install and run Cumulus Web Solutions (Portals / Web Client / Web Server Console) and/or Cumulus Integration Platform. All require a 64-bit operating system as shown below.

If Cumulus is to be used with the Media Delivery on Premise option, the file system that hosts the MDO cache (mediaDeliveryCache folder) must support the use of more than 47000 sub directories on one level.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (and latest patches), Windows Server™ 2012 (and latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- TCP/IP protocol running
- Oracle Java SE 8 64-bit JRE
- Apache Tomcat 8.5.24

OS X / macOS

- macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)

- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running
- Apache Tomcat 8.5.24

Linux

- Linux x86_64
  libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later (Tested on openSUSE 13.2)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- TCP/IP protocol running
- Oracle Java SE 8 64-bit JRE
- Apache Tomcat 8.5.24

Web Browser

For user access, the most recent versions of Web browsers are recommended. The Cumulus Web Client and Cumulus Portals were tested with the following browsers:

- latest stable Mozilla Firefox release
- latest stable Google Chrome release
- Microsoft Edge and Internet Explorer 11
- latest stable Safari release on macOS

Additionally, the Cumulus Web Client was tested on an iPad with the latest iOS version.

Portals was tested both on an iPad and an iPhone with the latest iOS version.

Web Server Console was tested with the following browsers:

- latest stable Mozilla Firefox release
- latest stable Google Chrome release
- Microsoft Edge and Microsoft Internet Explorer 11
- latest stable Safari release on macOS

License Note Cumulus Integration Platform (CIP)

A Cumulus Client license is required for each authenticated user with a write access to Cumulus, being it CIP's technical user or any other user accessing Cumulus via CIP.

Cumulus FileSystem Companion

This section lists the recommended system requirements to install and run the Cumulus File System Companion.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (latest patches), or Windows Server™ 2012 (latest patches)
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running

Linux

- Linux x86_64; libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later
- 4 GB free hard disk space for installation
- 4 GB of available RAM
- Oracle Java SE 8 64-bit JRE
- TCP/IP protocol running

License Note

The FileSystem Companion consumes a Cumulus Client license when connected to the Cumulus Server because it requires full read/write access.

Cumulus Mobile App

The Cumulus Mobile App add-on module requires a Cumulus 10.x installation.

Additionally, it requires a Cumulus Integration Platform (CIP) Server component. The CIP Server component can be installed on the same computer as the Cumulus Server or on any other computer. (For details on how to install CIP, see the "Cumulus Integration Platform – Getting Started Guide".)

NOTE: The CIP Server does not require a CIP License to enable Cumulus Mobile App to function. The Cumulus Mobile App License empowers the CIP Server to provide all the functions needed by the Cumulus Mobile App.

The Cumulus Mobile App is compatible with: iPhone®, iPad ® (iOS 7 or higher).

Cumulus InDesign Client

The Cumulus InDesign Client is a plug-in for Adobe InDesign. It works with Adobe InDesign 2020, InDesign CC 2019 and InDesign CC 2018 and requires one of the following operating systems:

- Windows 10, Windows 8 (latest patches recommended in each case),
- macOS 10.15, 10.14, 10.13, 10.12 (latest patches recommended in each case)

Cumulus InDesign Server PlugIn

The Cumulus InDesign Server PlugIn enables Adobe InDesign CC Server 2019, and InDesign CC Server 2018 to resolve links to Cumulus assets embedded in InDesign documents.

Cumulus InDesign Server PlugIn supports

- Adobe InDesign CC Server 2019 on
  - Microsoft Windows Server 2016
- Adobe InDesign CC Server 2018 on
  - Microsoft Windows Server 2012, and
  - Microsoft Windows Server 2016

Being installed on the computer running the Adobe® InDesign CC Server 2019, or 2018, it has no special requirements in addition to that.

Cumulus HELIOS Companion

The system requirements for the Cumulus HELIOS Companion depend on the Cumulus Java Classes version used. Included with this version of HELIOS Companion are Cumulus Java Classes 11 for Linux x86_64 libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later.

Further requirements:

- Cumulus Workgroup or Cumulus Enterprise Server with an active HELIOS Companion Option serial number.
- Oracle Java SE 8 JDK (64-bit version, latest patches)
- HELIOS Companion requires a UTF-8 locale.

  NOTE: HELIOS Volumes containing the monitored folders have to be configured to use UTF-8 for file names..

- HELIOS EtherShare 3.1 (and optional additionally for connecting Windows computers to the server: PCShare 3.1). Follow the HELIOS recommendations for using an AFP 3.1 compatible version to support long file names.
- HELIOS ImageServer 2.5 with current updates (minimum u0313; u411 or higher recommended)
- PDF HandShake 2.1 (optional)
- 400 MB hard disk space for installation
- TCP/IP protocol running

NOTE: HELIOS Companion and Cumulus Server on the Same Machine

If you want to run HELIOS Companion on the same machine as your Cumulus Server, the installed operating system has to meet the system requirements of the Cumulus Server as well as those of the Cumulus Java Classes used by HELIOS Companion.

Cumulus Java Classes

NOTE: Updating
All functions declared as "deprecated" have been removed. If you want to update a third party solution based on Cumulus Java Classes Runtime, please ask the provider of this solution whether an update is possible or not.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (latest patches), or Windows Server™ 2012 (latest patches)

OS X / macOS

- macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)

Linux

- Linux x86_64 (libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later, tested on: openSUSE 13.2

Java

- Java SE 8 JDK (latest patches)

Canto RoboFlow

This section lists the system requirements to install and run RoboFlow on different operating systems. RoboFlow is 64-bit application and requires a 64-bit operating system.

Windows

- Windows Server™ 2019 (and latest patches), Windows Server™ 2016 (and latest patches), Windows Server™ 2012 (and latest patches), Windows 8 (and latest patches), or Windows 7 (SP1 and latest patches)
- 4 GB free hard disk space for installation
- 2 GB (1 GB for the application and + 0.5 GB per concurrent workflow recommended) of available RAM
- 1 processor (1 processor for OS + 1 processor per 2 concurrent workflows recommended)
- TCP/IP protocol running
- Oracle Java SE 8 64-bit JRE

OS X / macOS

- macOS 10.14 (latest patches) or
  macOS 10.13 (latest patches) or
  macOS 10.12 (latest patches)
- 4 GB free hard disk space for installation

- 2 GB (1 GB for the application and + 0.5 GB per concurrent workflow recommended) of available RAM
- 1 processor (1 processor for OS + 1 processor per 2 concurrent workflows recommended)
- TCP/IP protocol running
- Oracle Java SE 8 64-bit JRE

Linux

- Linux x86_64
  libc.so.2.14 or later, kernel version 2.6.27.7 or higher, libstdc++.so.6.0.15 or later, and libldap 2.4 (for LDAP authenticator)

  Tested on: openSUSE 13.2
- 4 GB free hard disk space for installation
- 2 GB (1 GB for the application and + 0.5 GB per concurrent workflow recommended) of available RAM
- 1 processor (1 processor for OS + 1 processor per 2 concurrent workflows recommended)
- TCP/IP protocol running
- Oracle Java SE 8 64-bit JRE

Cumulus

This chapter describes how to install the Cumulus Server and Cumulus Desktop Clients. It covers the installation of the Cumulus Workgroup and Cumulus Enterprise software. In it, you'll find out how to register your software and obtain your license information – a requirement for integrating Cumulus Clients into the system. This chapter also provides information on adding additional Cumulus Options, Clients or Servers.

Cumulus Server and Desktop Clients

Overview

A standard Cumulus Workgroup or Enterprise installation consists of different software components: the Cumulus Server and its Remote Admin utility and the Cumulus Desktop Client.

Installing Cumulus Workgroup or Enterprise requires several steps:

- First, you have to install the Cumulus Server application on the network computer that is to serve the Clients.
- If you have any optional add-ons purchased – such as Web Client or Portals – install them now.
- Install the Cumulus Desktop Client software together with the Server Console application on at least one computer. The Server Console is required for administering your Cumulus system, including it's activation. The Server Console application is offered as an option when installing the Cumulus Desktop Client. (You can install more Cumulus Desktop Clients later on.)
- Finally, you must activate your Cumulus installation.

You can install the Cumulus Desktop Clients on any computers which meet the system requirements (see Cumulus Desktop Clients). But there are a couple more things to keep in mind when selecting a computer for the Cumulus Server: the Server computer will also store all of your workgroup's catalogs (but not necessarily the assets). The connection between the Client and the Server is handled via TCP/IP, and every Client will be accessing the Server, possibly simultaneously.

NOTE:
If in this document the version numbers in the installer file names are referred to as "11xx" (as in **Install_Cumulus_11xx_W_Server.exe**), the **xx** stands for the most up-to-date version of the product (1100, 1102, and so on). However, some or the installer files follow a slightly different naming scheme.

Update Installation

If a Cumulus Server or Client Installer detects a previous Cumulus version (7.0 and later), it offers an update installation. When you chose this option, the current preferences (e.g. View Sets, Asset Handling Sets, and saved queries) will not be changed.

Catalogs from Previous Versions

The internal data structure of Cumulus catalogs changed with Cumulus 9. When you first open a Cumulus 7 or 8 catalog with Cumulus 10, it is made compatible with Cumulus 10, but its index structure is not updated as this might take time. You can immediately start working with it. To update its index structure, you must migrate it. (For more information, see "Migrating Catalogs" in the Cumulus Desktop Client help.)

Catalogs from versions prior to Cumulus 7 must be migrated to Cumulus 10. (For more information, see "Migrating Catalogs" in the Cumulus Desktop Client help.)

Canto recommends you to migrate all catalogs. But as migrating catalogs to the Cumulus 10 data structure takes time (the larger the catalog file, the more time required for the conversion), Canto also recommends starting with using the Cumulus 7 and 8 catalogs as they are and then migrating them one by one during work-off-hours. Once a catalog has been migrated, it can no longer be used with older versions of Cumulus Server.

Installing the Cumulus Server

When you install the Cumulus Server, several components will be installed.

Installed Components

- Cumulus Server application
- Cumulus catalog files **Users.ccf**, **Statistics.ccf**, **Vocabularies.ccf**, and **Sample.ccf**
  - The Users catalog is used for the user management. This catalog manages the users and user permissions for your Cumulus installation. It contains the users that are allowed to access the catalogs managed by the Cumulus Server.
  - The Statistics catalog is required for generating time related reports.
  - The Sample catalog is just a sample of a catalog.

  By default, the three catalogs are included in the list of catalogs managed by the Cumulus Server, while the Users and Statistics catalog are only displayed when the Cumulus Administrator logs in.

The sections that follow describe the procedures for installing the Cumulus Server under Windows, macOS X and Linux.

Cumulus provides an installer application which guides you through the installation process. With Windows and macOS, this application is a double-click installation. With Linux, it is a CONSOLE mode installation.

NOTE: Most likely, you will get the Cumulus installers packed in .zip files which are named according to a standard scheme:
<product name>_<version number>_<operating system>.zip, e.g. **EServer_1101_Win.zip or Client_1101_MacOSX.zip.** You have to unpack the .zip file in order to start the installation process.

Installing under Windows or macOS

To install the Cumulus Server under Windows or macOS:

1. Log on to the Windows server machine as the *Administrator* for the local machine.
   Log on to the macOS server machine.
2. To install a
   - Cumulus Workgroup Server:
     Double-click **Install_Cumulus_11xx_W_Server.exe**.
     Double-click **Install Cumulus 11x x W Server** and authenticate yourself as an administrator.
   - Cumulus Enterprise Server:
     Double-click **Install_Cumulus_11xx_E_Server.exe.**
     Double-click **Install Cumulus 11xx E Server** and authenticate yourself as an administrator.

NOTE: Java Required for Running Installer!
If no Java is pre-installed, macOS may ask you to install Java for running the installer. After the installation the bundled JRE will be used with all our products.

The installation resources are extracted and you are asked to select a language. This language is used for the installation process as well as the default language for the application.

3. Select a language and click **OK**. The installer is launched.

   NOTE: If you get a message that the Cumulus default port numbers are used, you may continue with the installation and then see "Different Port Numbers" in the Cumulus Desktop Client help, for a description on how to proceed after the installer has finished. Should you really want to use different port numbers, click **Proceed**.

4. When the Introduction screen is displayed, click **Next** to continue, then follow the instructions on the subsequent screens. It is recommended to adopt the given suggestions.

   The installation process will take some time.

5. When the installation is finished, the **Install Complete** window is displayed. Click **Done** to end the installation and close the window.

If you have any optional add-ons to install, do that now. Be aware that you can only install Cumulus Options available for Cumulus 10.2.x.

NOTE: Restarting the Machine after Installation!
Under macOS you have to restart the machine after installation if you were logged in as **superuser** (in most cases the superuser is called *root*) for performing the installation. Otherwise the Cumulus Server will be stopped as soon as the superuser logs out.

After installation your Cumulus system is running in demo mode (limited to 5 Clients and 2 catalogs with 100 records each). Use the Cumulus Remote Admin utility for activating Cumulus and running it in fully licensed mode. For a description on how to do this, see Activation.

Installing under Linux

With Linux versions, Cumulus provides a CONSOLE mode installation. The CONSOLE mode installation guides you through all steps necessary to install the Cumulus Server. To accept the default values [shown in square brackets] press the Enter key.

To install the Cumulus Server under Linux:

1. Open a UNIX shell and change your identity to **superuser** (enter **su** for super user and then the password; in most cases the superuser is called *root*). The CONSOLE mode installation is started manually by typing the script name at the command prompt.
2. Start the CONSOLE mode installation for a
   - Cumulus Workgroup Server by entering: **sh WServer11xx.bin**
   - Cumulus Enterprise Server by entering: **sh EServer11xx.bin**

3. When the Introduction is displayed, press the Enter key to continue. The software license agreement is displayed.
4. Read the displayed license agreement and enter **y** to accept.

   The default installation location is displayed.
5. To accept the default installation location, press the Enter key to continue. Or, if you do not want to accept the default location, enter the absolute path for the desired installation folder and press Enter to continue.

   If you are installing the Cumulus Server for the first time, you will be asked to enter a user name and password for the Cumulus Administrator.

   The Pre-Installation Summary is displayed.
6. Press Enter to start the installation.

   The installer begins copying files. When the installation is complete, the Install Complete information is displayed.
7. Press Enter to end the installation and exit.

If you have any optional add-ons to install, do that now. Be aware that you can only install Cumulus Options available for Cumulus 10.2. x.

After installation your Cumulus system is running in demo mode (limited to 5 Clients and 2 catalogs with 100 records each). Use the Cumulus Remote Admin utility for activating Cumulus and running it in fully licensed mode. For a description on how to do this, see Activation.

Installing Cumulus Desktop Clients

Cumulus provides an installer application which guides you through the installation process. With Windows and macOS, this application is a double-click installation.

NOTE: Most likely, you will get the Cumulus installers packed in .zip files which are named according to a standard scheme:
<product name>_<version number>_<operating system>.zip, e.g. **Client_1101_Win.zip** or **Client_1102_MacOSX.zip**. You have to unpack the .zip file in order to start the installation process.

The following section explains how to install Cumulus Desktop Clients for Windows and macOS.

1. Log on to the local machine as the *Administrator* for the machine.
   Log on to local machine.
2. Double-click **Install_Cumulus_11xx_Client.exe**.
   Double-click **Install Cumulus 11xx Client** and authenticate yourself as an administrator.

   NOTE: Java Required for Running Installer!
   If no Java is pre-installed, macOS may ask you to install Java for running the installer. After the installation the bundled JRE will be used with all our products.

   The installation resources are extracted and you are asked to select a language (for the installation process and for the default language of the application).
3. Select a language and click **OK**. The installer is launched.

4. When the Introduction screen is displayed, click **Next** to continue, then follow the instructions on the subsequent screens. It is recommended to adopt the given suggestions.

   NOTE: Make sure to install the Server Console along with at least one Cumulus Desktop Client! To have the Server Console module installed, you must explicitly activate this option. The Server Console is needed on workstations that are used for performing administrative tasks, e.g. Activating Cumulus.

   The installation process will take some time.
5. When the installation is finished, the **Install Complete** window is displayed. Click **Done** to end the installation and close the window.

Installing Cumulus Desktop Client in Silent Mode

The silent installation mode enables Cumulus Administrators to easily install Cumulus Desktop Clients on remote computers. No further interaction is required during the installation process.

NOTE: Silent installation mode is available for Windows Clients only!

To silently install the Cumulus Desktop Client on remote computers:

1. Put the Cumulus Desktop Client installer application into a network share, e.g. **\\server\share\cumulus\client**. Put your customized/tweaked **client.xml** and – for backup/security purposes – the original one (name it: **client_ori.xml**) into the same folder.
2. With your editor of choice, create a new file that contains the following lines:

```
INSTALLER_UI=silent
CHOSEN_INSTALL_FEATURE_LIST=Application,Help_en,ServerConsole
USER_INSTALL_DIR=C:\\Program Files\\Canto\\Cumulus Client
```

3. Save the file as **<CumulusClientInstallerName>.properties** (e.g, **Install_Cumulus_11_Client.properties**) into the same directory as the Cumulus Desktop Client installer application.
4. Create a batch file containing the following lines:

```
start /wait /high \\server\share\cumulus\client\Install_Cumulus_11_Client.exe
copy /y \\server\share\cumulus\client\client.xml C:\"Program
Files"\Canto\"Cumulus Client"\conf
copy /y \\server\share\cumulus\client\client_ori.xml C:\"Program
Files"\Canto\"Cumulus Client"\conf
```

```
@echo off
```

5. Save the file as **cumulus_client_silent_install.bat** into the same directory as the Cumulus Desktop Client installer application and the properties file.
6. Logon as local administrator to the computer on which you want to install the Cumulus Desktop Client. Connect to the share with your prepared batch file and execute it (e.g. **\\server\share\cumulus\client\cumulus_client_silent_install.bat**). –
You may as well logon to the computer on which you want to install the Cumulus Desktop Client as normal user. In this case, however, you must execute the batch file as administrator (run as administrator).

The install process will take about a minute. Once the command window closes, the Cumulus Desktop Client is installed on the remote computer.

Additional Information

Technical Note on EJaPs and Assigned Memory

Depending on the number of EJaPs you employ and the number of records or assets you perform these EJaPs on, you may need to configure the memory size assigned to the Java VM of the EJaPs. By default this is set to 512 MB.

To increase the assigned memory, you have to add a line to the **JVMConfig.xml** file (found in the **conf** folder inside the Cumulus Client installation folder).

Note that the value may not be bigger than the free physical memory. Canto recommends a value smaller than 1024.

Support for Office Formats with LibreOffice

In order to generate high-quality previews and thumbnails when cataloging RTF files or MS Office, Open Office, Open Document files and templates, Scheduler needs LibreOffice to be installed on the same machine. For details see Support for Office Formats: LibreOffice.

Activation

After the installation, Cumulus is running in demo mode. In order to have Cumulus run in a fully functional, but time-limited trial mode or, if you already have purchased it, in normal mode, Cumulus must be activated.

Activation is performed via the Remote Admin module of the Server Console (available from within a Cumulus Desktop Client, or as Web Server Console via a Web browser).

Activating Cumulus

As a customer who has purchased Cumulus, you have a Canto Community Account where the details of your contract are stored. During activation, Cumulus connects to the Canto Community and checks the Cumulus Server version you have installed against the contract information found at the Canto Community. If there is a match, your installation is activated.

To activate your Cumulus installation:

1. Start the Cumulus Desktop Client and select **File > Administration > Server Console**.
   OR
   Start he Cumulus Web Server Console via a Web browser
2. Select the server where the Cumulus Server runs (e.g. localhost, if client and server are running on the same machine), then log in with the administrator username and password that you have created during the installation.

3. In the left pane of the Server Console, select **Remote Admin > License**.
4. The current license information is displayed in the right pane. Scroll down, if necessary, and click **Activate Cumulus.** A login dialog appears.
5. Enter your Canto Community Credentials (your Canto Customer Community **Login Name**, **Password** and the **Configuration ID**) and click **OK**.

   TIP: Configuration ID
   To find out the appropriate Configuration ID, log on to the Canto Customer Community and under Configurations select the appropriate configuration. Clicking on it reveals the Configuration ID.
6. A message informs you on the activation. Click **OK**. You may now start using Cumulus.

NOTE: Manually Editing License Information
In very rare cases it may be necessary to manually edit the license information, e.g. to add an new license string or to replace the current license information with a newer one.
You may edit the license information by means of the **Edit License** window. To open this window, open the **Server Console** window and select **Remote Admin > License** in the left side pane. Then right-click on **License** and select **Edit License** (OR select **Actions > Edit License** from the menu).
Be very carefully when editing your license information in order not to corrupt your Cumulus installation!

Additional Licenses

Each copy of Cumulus Workgroup or Enterprise is limited to a certain number of concurrent users (Cumulus Clients that can access the Cumulus Server at the same time). You can view the specifics of your license with Remote Admin.

Each copy of Cumulus Workgroup is licensed to run on only one server at a time. If you want to install more servers, you must purchase additional Cumulus Workgroup server licenses. No special installation steps are required to install additional servers.

Each copy of Cumulus Enterprise is licensed to run on two servers at a time. If you want to install more servers, you must purchase additional Cumulus Enterprise server licenses. No special installation steps are required to install additional servers.

To extend the number of Cumulus Client or Server licenses, please contact your software dealer, local software distributor, or Canto (www.canto.com/cumulus).

Cumulus

canto.com/cumulus

The Cumulus Scheduler enables you to define and schedule tasks to be automatically performed by Cumulus. If you want to make use of this feature, you must install separate software.

This chapter describes how to install and configure the Cumulus Scheduler.

Cumulus Scheduler

Overview

The Cumulus Scheduler consists of the Scheduler Manager and the Scheduler Server Application.

The Scheduler Manager utility is part of the Cumulus Server Console and Web Server Console.

The Scheduler Server Application must be installed separately. Multiple instances of the Scheduler Server Application can be installed on the computer(s) that you want to perform the tasks on. These computers must have TCP/IP network access to the Cumulus Server. Each instance of the Scheduler has its own configuration file (**config.xml**), defining, among other things, the address of the Cumulus Server, and the unique name of the instance. For details, see Configuring.

The Scheduler Server Application is a Cumulus Java Classes application that communicates with the Cumulus Server just like a Cumulus Client does. The system requirements are the same as for Cumulus Java Classes.

If one of the tasks performed by the Scheduler Server Application requires certain software to be installed (e.g. a Cumulus or third-party option), this software must be installed on the computer running the Scheduler Server Application.

Installing

NOTE: Most likely, you will get the Cumulus installers packed in .zip files which are named according to a standard scheme:
<product name>_<version number>_<operating system>.zip, e.g. **Scheduler_1102_Win.zip**. You have to unpack the .zip file in order to start the installation process.

The installation differs depending on the operating system.

Installing under Windows or macOS

To install the Scheduler Server Application under Windows or macOS:

1. Log on to the local machine as the *Administrator* for the machine.
   Log on to local machine.
2. Double-click **Install_Cumulus_11xx_Scheduler.exe**.
   Double-click **Install Cumulus 11xx Scheduler** and authenticate yourself as an administrator.

   NOTE: Java Required for Running Installer!
   If no Java is pre-installed, macOS may ask you to install Java for running the installer. After the installation the bundled JRE will be used with all our products.

   The installation resources are extracted and you are asked to select a language. This language is used for the installation process as well as for the application being installed.

3. Select a language and click **OK**. The installer is launched.
4. When the Introduction screen is displayed, click **Next** to continue, then follow the instructions on the subsequent screens. It is recommended to adopt the given suggestions.

   The installation process will take some time.
5. When the installation is finished, the **Install Complete** window is displayed. Click **Done** to end the installation and close the window.

Installing under Linux

With Linux versions, Cumulus provides a CONSOLE mode installation. The CONSOLE mode installation guides you through all steps necessary to install the Scheduler Server Application. To accept the default values [shown in square brackets] press the Enter key.

To install the Scheduler Server Application under UNIX:

1. Open a UNIX shell and change your identity to **superuser** (enter **su** for super user and then the password; in most cases the superuser is called *root*). The CONSOLE mode installation is started manually by typing the script name at the command prompt.
2. Start the CONSOLE mode installation by entering:
   sh C11xxSched.bin
3. When the Introduction is displayed, press the Enter key to continue. The software license agreement is displayed.

4. Read the displayed license agreement and enter **y** to accept.

   The default installation location is displayed.

5. To accept the default installation location, press the Enter key to continue. Or, if you do not want to accept the default location, enter the absolute path for the desired installation folder and press the Enter key to continue.

   The Pre-Installation Summary is displayed.

6. Press the Enter key to start the installation.

   The installer begins copying files. When the installation is complete, the Install Complete information is displayed.

7. Press the Enter key to end the installation and exit.

TIP: Cataloging Office Documents

In order to generate high-quality previews and thumbnails when cataloging RTF files or MS Office, Open Office, Open Document files and templates, Scheduler needs LibreOffice to be installed on the same machine. For details see Support for Office Formats: LibreOffice.

Running the Scheduler Server Application as a Service

For installing the Scheduler Server Application as a service, Canto provides following scripts:

- **InstallCumulusScheduler.bat** for Windows
- **InstallCumulusSchedulerService.sh** for macOS and Linux, etc.)

These scripts can be found in the Cumulus Scheduler installation folder, e.g. **C:\Program Files\Canto\Cumulus Scheduler**

NOTE: The script has to be executed with administrator permissions. Use right-click to invoke them.

Configuring

After you have installed the Scheduler Server Application, you must configure it by editing the **config.xml** file. The Scheduler Server Application needs to know the Cumulus Server to connect to and the user account to be employed for the connection. If you employ multiple instances, a unique name is required for each one of it. The details of the configuration vary depending on the operating system. On all systems, use an UTF-8 compatible editor for editing the configuration file.

NOTE: Make sure the user you employ for the connection to the Cumulus Server has sufficient permissions for all functions necessary to fulfill the tasks. In any case, the Cumulus Administrator has all permissions that could be required.

Configuring under Windows

Register the service using **InstallCumulusScheduler.bat**, and edit the **config.xml** file, to be found in the installation folder of the Scheduler Server Application. You must specify

- the Cumulus Server the application should connect to [IP address or name of the computer running the Cumulus Server],
- the technical user that should be used when connecting to the Cumulus Server,
- the password for the technical user,
- the unique name of the current Scheduler instance (required if you employ multiple Scheduler instances; optional, if there is only one Scheduler instance).

(The **config.xml** file provides additional hints on configuration options.)

Once you have configured it, start the Cumulus 11 Scheduler service:

- Computer Management > Services

Configuring under macOS and UNIX

Edit the **config.xml** file in the installation folder of the Scheduler Server Application.

You must specify

- the Cumulus Server the application should connect to [IP address or name of the computer running the Cumulus Server],
- the technical user that should be used when connecting to the Cumulus Server,
- the password for the technical user,
- the name of the current Scheduler instance (required if you employ multiple Scheduler instances; optional, if there is only one Scheduler instance).

(The **config.xml** file provides additional hints on configuration options.)

Once you have configured it, start the Cumulus Scheduler Server Application using the **CumulusScheduler.sh** with the parameter **start**: `sh CumulusScheduler.sh start`

Other available parameters for **CumulusScheduler.sh** are:
`console, stop, restart, status, and dump`

License Issues

- The Scheduler Server Application is a Cumulus Java Classes installation that requires a Cumulus Java Classes read/write license for the computer on which it is running.
- The Scheduler Server Application occupies a Cumulus Client license when connected to the Cumulus Server because it requires full read/write access.

Cumulus

The Cumulus FileSystem Companion enables Cumulus to automatically catalog, update or delete records based on appropriate changes in the file system.

This chapter describes how to install, activate and configure it.

Cumulus FileSystem Companion

Installing

The FileSystem Companion has to be installed on each file server where you want to use it with a Cumulus Server. The installation differs depending on the operating system.

NOTE: Most likely, you will get the Cumulus installers packed in .zip files which are named according to a standard scheme: <product name>_<version number>_<operating system>.zip, e.g. FSCompanion_1100_Win.zip. You have to unpack the .zip file in order to start the installation process.

Installing under Windows

To install the FileSystem Companion under Windows:

1. Log on to the local machine as the Administrator for the machine.
2. Double-click **Install_Cumulus_11xx_FileSystem_Companion.exe**.
   The installation resources are extracted and you are asked to select a language. This language is used for the installation process as well as for the application being installed.
3. Select a language and click **OK**. The installer is launched.
4. When the Introduction screen is displayed, click **Next** to continue, then follow the instructions on the subsequent screens. It is recommended to adopt the given suggestions.
   The installation process will take some time.

5. When the installation is finished, the Install Complete window is displayed. Click **Done** to end the installation and close the window.

Installing under Linux

With Linux Cumulus provides a CONSOLE mode installation. The CONSOLE mode installation guides you through all steps necessary to install the FileSystem Companion. To accept the default values [shown in square brackets] press the Enter key.

To install the FileSystem Companion under Linux:

1. Open a Linux shell and change your identity to superuser (enter su for superuser and then the password). The CONSOLE mode installation is started manually by typing the script name at the command prompt.
2. Start the CONSOLE mode installation by entering:
   - sh C1120FSCompanion.bin
3. When the Introduction is displayed, press the Enter key to continue. The software license agreement is displayed.
4. Read the displayed license agreement and enter **y** to accept.
   The default installation location is displayed.
5. To accept the default installation location, press the Enter key to continue. Or, if you do not want to accept the default location, enter the absolute path for the desired installation folder and press the Enter key to continue.
   The Pre-Installation Summary is displayed.

6. Press the Enter key to start the installation.
   The installer begins copying files. When the installation is finished, the Install Complete information is displayed.
7. Press the Enter key to end the installation and exit.

TIP: Cataloging Office Documents

In order to generate high-quality previews and thumbnails when cataloging RTF files or MS Office, Open Office, Open Document files and templates, FileSystem Companion needs LibreOffice to be installed on the same machine. For details see Support for Office Formats: LibreOffice.

Activating

After installation the Cumulus Administrator must activate this Cumulus add-on at the Cumulus Server via the Remote Admin section of the Server Console using the Customer Community account. For detailed information see Activation.

License Information

The FileSystem Companion occupies a Cumulus Client license when connected to the Cumulus Server because it requires full read/write access.

Configuring

After you have installed the FileSystem Companion, you must configure it. The FileSystem Companion runs as a separate service, called an instance, on the respective file server machine. Each of the instances of the service has its own configuration xml file specifying the unique name of the instance, the address of the Cumulus Server and the technical user which is used to connect to that Cumulus Server. The configuration needed varies depending on the operating system. On all systems use an UTF-8 compatible editor for editing the configuration file.

NOTE: Make sure the technical user you employ for the connection to the Cumulus Server has sufficient permissions for all functions necessary to fulfill the tasks. In any case the Cumulus Administrator has all permissions that could be required.

Configuring under Windows

You can find a config.xml file in the installation folder of the FileSystem Companion. Configure this file by defining the unique name of the instance, the Cumulus Server that the application should connect to [IP address or name of the computer running the Cumulus Server], the user name that should be used when connecting to the Cumulus Server, and the password for the user name.

Configuring under Linux

You can find a config.xml file in the installation folder of the FileSystem Companion. Configure this file by defining the unique name of the instance, the Cumulus Server

that the application should connect to [IP address or name of the computer running the Cumulus Server], the user name that should be used when connecting to the Cumulus Server, and the password for the user name.

Once you have configured it, start the Cumulus FileSystem Companion using the CumulusFileSystemCompanion.sh with the parameter start:
sh CumulusFileSystemCompanion.sh start

Other available parameters for **CumulusFileSystemCompanion.sh** are:
console, stop, restart, status, and **dump**

FileSystem Companion as a Service

For installing the FileSystem Companion as a service, Canto provides following scripts:

- **InstallCumulusFileSystemCompanion.bat** for Windows
- **InstallCumulusFileSystemCompanionService.sh** for Linux

These scripts can be found in the FileSystem Companion installation folder, e.g.
C:\Program Files\Canto\Cumulus FileSystemCompanion

NOTE: The script has to be executed with administrator permissions. (Windows: Use right-click to invoke them.)

Start the Cumulus FileSystem Companion service after you have configured it via:
Computer Management > Services

Configuring Instances

Beyond the basic settings in the config.xml file, the instances of the Cumulus FileSystem Companion are configured via the FileSystem Companion Manager of the Cumu-

lus Server Console. For each instance this comprises the unique name of the instance (as defined in its config.xml file), the specification of the folder(s) to be watched as well as the catalog, Asset Handling Set and Permission Template to be used, certain time out values and a list of items to be ignored by an instance of the FileSystem Companion. Last but not least, these instances can be activated/deactivated via the FileSystem Companion Manager. For a description on how to work with the FileSystem Companion Manager see chapter “Server Console” in the Cumulus help.

Cumulus

All components of Cumulus Web Solutions are combined in one single installer in order to facilitate the process of installing the Web Solutions into one Web application server. The Cumulus Web Solutions installer offers different Installation Sets allowing the installation of selected components.

This chapter describes how to install the Cumulus Web Solutions as well as the first steps to be performed after the installation in order to get them up and running, i.e. activation, basic configuration and testing of the Cumulus Web Solutions.

Cumulus Web Solutions

Overview

Cumulus Web Solutions ~~comprise~~combines the following components in one single installer:

- Cumulus Portals~~,~~
- Cumulus Web Client~~, the~~
- Cumulus Web Server Console~~, and the~~
- Cumulus Integration Platform (CIP)
- **Cumulus SignUp**~~.~~
- Apache Tomcat Web application server

For installation, they are all combined in one single installer, together with an Apache Tomcat Web application server. Thus, installing the Web Solutions into one single Web application server – whether all of them or a selection – is made easy.

The default installation set, **Typicall**, includes all of these comonents, except **Cumulus SignUp**. To include SignUp in your in installation, just activate the check box, or select an installation set that contains SignUp. You may also add a component anytime later.

Note that there is no update installer provided for Cumulus Web Solutions. If you need to update your existing Cumulus Portals or Cumulus Web Client installation, contact Canto Professional Service or a Canto partner.

This Documentation

This section describes how to install Cumulus Web Solutions as well as the first steps to be performed after the installations (activation, basic configuration and testing of the Cumulus Web Solutions). It describes furthermore how to configure Web Applica-

tion Server Software, e.g. if you install the Web Solutions into an already existing Web application server, and how to manually configure a Tomcat environment if you prefer to use a Tomcat installation other than that provided by Canto.

Installing

Canto provides installer utilities for installing Cumulus Web Solutions on all supported platforms.

The Cumulus Web Solutions require a Web application server and Cumulus Java Classes installed on the machine running the Web solutions. For your convenience, both a Web application server (Apache Tomcat) and the Cumulus Java Classes are included in the Cumulus Web Solutions installer. However, you may install Cumulus Web Solutions into an already existing web application server, as long as this server supports Servlet API 3.1, JSP2.3, EL 3.0.

The Cumulus Web Solutions installer provides several installation sets:

- Cumulus Portals, including the respective technical documentation.
- Cumulus Web Client, including the respective technical documentation.
- Cumulus Server Console
- Cumulus Integration Platform
- Web Application Server, including Apache Tomcat and Cumulus Java Classes

Cumulus Web Solutions may be installed either on the Cumulus Server machine or on another computer in the TCP/IP network.

NOTE: All Cumulus Web Solutions are able to (and will per default) run inside the same Tomcat Web application server.

It is not possible to update an existing Cumulus Portals or Cumulus Web Client installation directly. If you need to update your existing Cumulus Portals or Cumulus Web Client installation, contact Canto Professional Service or a Canto partner.

Installing under Windows or macOS

To install Cumulus Web Solutions under Windows ( ) or macOS ( ) :

1. Log on to the Windows server machine as the *Administrator* for the local machine.

   Log on to the macOS server machine.
2. Double-click **Install_Cumulus _11xx_Web_Solutions.exe**.
   Under Windows, you may be requested to allow the start of the installer.

   Double-click **Install Cumulus 11xx Web Solutions** and authenticate yourself as an administrator.

   The installation resources are extracted and you are asked to select a language (for the installation process as well as for the language dependent files to be installed).
3. Select a language and click **OK**. The installer is launched.
4. When the Introduction screen is displayed, click **Next** to continue, then follow the instructions on the subsequent screens until you are asked to Choose Features.
5. Select the desired feature and click **Next**.
6. Enter the path to the Cumulus web applications folder where you want to install the feature (e.g. **C:\Program Files\Canto\Cumulus Web Solutions**)
7. Follow the instructions on the subsequent screens. It is recommended to adopt the given suggestions.

   The installation process will take some time.

8. When the installation is finished, the Install Complete window is displayed. Click **Done** to end the installation and close the window.

Windows: The Cumulus Web Solutions is registered as a Tomcat service and started automatically.

macOS: The Cumulus Web Solutions daemon is installed and started automatically.

If your Cumulus Web Solutions installation includes Cumulus Portals, the Web Server Console is opened in your default Web Browser in order to perform initial configuration steps. For details see Initially Configuring Cumulus Portals.

For the next steps, see the following chapter, Cumulus Web Solutions: Initial Steps.

NOTE: If you have installed Cumulus Web Solutions into an already existing Web application server, this Web application server software must be configured in order to run the Web Solutions (see Manual Tomcat Environment Configuration, for details).

Installing under UNIX

With UNIX versions of Cumulus Web Solutions, Canto provides a CONSOLE mode installation.

The CONSOLE mode installation guides you through all steps necessary to install Cumulus Web Solutions. To accept the default values [shown in square brackets] press the Enter key.

To install Cumulus Web Solutions under UNIX:

1. Open a UNIX shell as Administrator and change to the download directory.
2. Start the CONSOLE mode installation by entering:
   sh C1100WebSolution.bin
3. Select a language. The installer is launched.
4. When the Introduction is displayed, press Enter to continue. The software license agreement is displayed.
5. Read the displayed license agreement and enter **y** to accept.
6. Select the desired features and press the Enter key to continue.

   NOTE: If you want to install modules of the Cumulus Web Solutions into an already existing Web application server, use the Custom Installation set.

   If you install the Web Solutions only, i.e. without the provided Apache Tomcat, you will be prompted to enter the path of the **webapps** subdirectory of your already existing Tomcat installation directory.

   The default installation location is displayed.
7. To accept the default installation location, press Enter. If you prefer a different location, enter the absolute path for the desired installation folder and press Enter.

   You are prompted to choose the features to be installed.

   The Pre-Installation Summary is displayed.
8. Press Enter to start the installation.

   The installer begins copying files. Import information on configuration ist displayed.

9. Press Enter to proceed.

   When the installation is finished, the Install Complete information is displayed.

10. Press Enter to end the installation and exit.

The Cumulus Web Solutions server is installed but not registered. To be used, the Cumulus Web Solutions must be registered and stated as a service. For details on registering and starting/stopping, the Cumulus Web Solutions, see Linux: Registering and Starting.

For the next steps, see Cumulus Web Solutions: Initial Steps. Iff you your Cumulus Web Solutions installation includes Cumulus Portals, you must additionally perform some initial configuration steps in order to get Portals up and running. For details see Initially Configuring Cumulus Portals.

NOTE: If you have installed Cumulus Web Solutions into an already existing Web application server, this Web application server software must be configured in order to run the Web Solutions (see Manual Tomcat Environment Configuration, for details).

Activation

In order to use Cumulus Web Solutions, their respective licenses must be activated at the Cumulus Server. This applies to fully valid purchased licenses as well as to demo licenses.

Cumulus Web Solutions are activated as any other newly purchased Cumulus options via the Remote Admin module of the Cumulus (Web)Server Console. For details see Activation.

Configuring

Each Web application server has its own unique array of setup options. We won't go through the setup process of every Web application server product on the market but will cover some basic information that, along with your Web application server's documentation, should provide you with all the information you need to get your configuration up and running.

NOTE: The Cumulus Web Solutions service can only be started or stopped as a whole. It is not possible to start/stop single components of the Web Solutions service.

Apache Tomcat Web Application Server

Cumulus Web Solutions, as installed, is an Apache Tomcat web application server preconfigured for immediate operation. (For details on this configuration see Manual Tomcat Environment Configuration.)

NOTE: Documentation
The Apache Tomcat Web application server installation includes its own documentation. You can find this under: **http://localhost:8080/docs**. Most current information can be found on Apache's Website: **http://www.apache.org**

Starting/Stopping Cumulus Web Solutions

With the All Cumulus Web Solutions installation set, the Cumulus Portals or Cumulus Web Client installation sets, Cumulus Web Solutions (daemon) is installed and started automatically.

Windows

To start or stop Cumulus Web Solutions service manually:

1. Start the **Services** control panel (e.g. by typing "services" into the task bar's search field). In the **Services** panel, select the **Cumulus Web Solutions** service.
2. Click **Start** to start the Cumulus Web Solutions service
   OR
   click **Stop** to stop the Cumulus Web Solutions service

To manually register/unregister Cumulus Web Solutions as a service:

1. Call the script:
   [programfiles]\Canto\Cumulus Web Solutions\apache-tomcat-X.X.xx\bin\RegisterService.bat
   to register Cumulus Web Solutions as a service
   OR
   call the script:
   [programfiles]\Canto\Cumulus Web Solutions\apache-tomcat-X.X.xx\bin\UnregisterService.bat
   to unregister Cumulus Web Solutions as a service.

If Cumulus Web Solutions is not registered as service, you can start it as an application.

To start or stop Cumulus Web Solutions running as an application.

1. Call the script:
   [programfiles]\Canto\Cumulus Web Client\apache-tomcat\bin\startup.bat
   to start Cumulus Web Solutions as an application
   OR
   call the script
   [programfiles]\Canto\Cumulus Web Client\apache-tomcat\bin\shutdown.bat
   to stop Cumulus Web Solutions running as an application.

macOS

You can start or stop the Cumulus Web Solutions daemon under macOS manually using the delivered shell scripts.

To start or stop Cumulus Web Solutions daemon:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/start-daemon.sh
   to start the daemon
   OR
   call the script:

[/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/stop-daemon.sh
to stop the daemon.

To manually install/uninstall Cumulus Web Solutions daemon:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/install-daemon.sh
   to install the daemon
   OR
   call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/uninstall-daemon.sh
   to uninstall the daemon.

You can also configure the daemons with the macOS command line utility **launchctl**. Have a look into the man pages for usage details.

If Cumulus Web Solutions is not running as a daemon, you can start it as an application.

To start or stop Cumulus Web Solutions running as an application:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/startup.sh
   to start Cumulus Web Solutions as an application
   OR
   call the script:

[/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/shutdown.sh
to stop Cumulus Web Solutions running as an application.

Linux: Registering and Starting

With the All Cumulus Web Solutions installation set, the Cumulus Portals or Cumulus Web Client installation set, the Cumulus Web Solutions server is installed but not registered.

To register the Cumulus Web Solutions as a service:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/InstallCumulusWebSolutionsService.sh

Executing the script registers a daemon in the **/etc/init.d** folder. Now the service can be started.

To start or stop Cumulus Web Solutions daemon:

1. Run:
   sudo /etc/init.d/CumulusWebSolutions start
   to start the daemon
   OR
   run:

sudo /etc/init.d/CumulusWebSolutions stop
to stop the daemon.

If the daemon is running, it must be stopped before it can be unregistered again.

To unregister the Cumulus Web Solutions as a service:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/UninstallCumulusWebSolutionsService.sh

If Cumulus Web Solutions is not registered as a service, you can start it manually using the delivered shell scripts:

To start or stop Cumulus Web Solutions running as an application:

1. Call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/startup.sh
   to start the server
   OR
   call the script:
   [/usr/local/Cumulus_WebSolutions]/apache-tomcat_X.X.xx/bin/shutdown.sh
   to stop the server.

Other Web Application Servers

If you use Cumulus Web Solutions with another Web application server, you need to do the following:

- The path to the file **CumulusJC.jar** of your Cumulus Java Classes installation has to be added to the class path of the Java VM of your Web application server.
- For Linux Installations only
  The path to the **lib** folder of your Cumulus Java Classes installation has to be added to the environment variable **LD_LIBRARY_PATH.**
- For macOS Installations only
  The path to the **lib** folder of your Cumulus Java Classes installation has to be added to the environment variable **DYLD_LIBRARY_PATH.**

NOTE: For correct downloading of files from the Web application server, the MIME type mappings on the Web application server have to be configured for the file types which are available for download. For further details, consult your Web application server's documentation.

Storing Config Files Outside the Default Location

For all products shipped as WAR files (CIP, CWC and Portals), the configuration files are located within the WAR's WEB-INF**/conf/** folders by default.

However, these config files can be stored in any other file system path. If a config file is stored outside the default location, it will not be overwritten if a new version of the respective webapp is installed, that is, your previous configuration settings are retained.

The exact path plus the file name of a config file must be made available to the web app via an environment variable. The variable name must include the webapp's context name (e.g. cwc, cwc-branded) so that multiple instances of the same webapp under different contexts can be deployed. All config files can be stored in the same folder, e.g:

- **CUMULUS_CONFIG_cwc=/opt/cumulus_conf/cwc-config.xml**
- **CUMULUS_CONFIG_cwc-branded=/opt/cumulus_conf/cwc-branded-config.xml**

If the environment variable is not set or the config files can't be read from the specified locations, the config files embedded in the WAR's **WEB-INF/conf** directories are used instead. If no config file is available at all, the webapps can't be started.

NOTE:
Unlike the files mentioned above, the **customization.js** file is always retrieved from the root of the Portals web app and MUST NOT be stored in a different path!

Employing CWC Plugins

If custom CWC plugins are employed, they must be installed in a plugins folder in the same path as the config file, e.g.

- cwc: **/opt/cumulus_conf/plugins**
- cwc-branded: **/opt/cumulus_conf/plugins**

In this example, both Web Client instances (“cwc” and “cwc-branded”) use the same plugin(s).

In order to use different plugins with different instances, the config file and plugin folder must be stored in an individual path for each instance.

Cumulus Web Solutions: Initial Steps

NOTE: The Cumulus Web Solutions service can only be started or stopped as a whole. It is not possible to start/stop single components of the Web Solutions service.

The Cumulus Web Solutions comprise multiple components. While the Web Server Console as the central management component can be used immediately, some initial steps must be performed before you can use Cumulus Portals and the Web Client. These are described in the following sections.

Cumulus Integration Platform (CIP)

The Cumulus Integration Platform serves as a technical interface to the entire Canto Cumulus world. As such, it can be used with all kinds of clients and solutions built on top of it, from a very simple website integration to a massive integrated and workflow-based customer portal with hundreds of users connecting.

NOTE: License Issues
A Cumulus Client license is required for each authenticated user with a write access to Cumulus, being it CIP's technical user or any other user accessing Cumulus via CIP. Independent from that, Pooling licenses may be acquired in order to increase the bandwidth for the communication between CIP and the Cumulus Server (i.e the number of simultaneous connections).

Web Application

The CIP Web application can be installed on any machine with TCP/IP network access to the Cumulus Server.

After the installation, you must additionally perform the following steps before you can use CIP:

- Activate CIP via the Remote Admin section in the Cumulus Server Console. After that, you can establish a connection to a Cumulus server. (For a detailed description, see Activation.)
- If you have installed the CIP Web Application into an already existing Web application server (e.g., Tomcat), you must additionally configure that Web application server so that it can communicate with the Cumulus Integration Platform.

CIP-SDK

For developers, Canto provides a CIP-SDK which is not included in the Web Solutions installer, but can be downloaded separately as a ZIP file. The CIP-SDK consists of a number of libraries, sample code and examples for different client-side development environments, and technical documentation. Open the folder for your development environment and take a look at the sample code you find there. You may import or open the sample project that is included with the SDK and run it as is.

To test or use the CIP-SDK, you need of course TCP/IP access to the server on which CIP is running.

How to test the installation is described in the CIP Reference Documentation, which can be found in the CIP-SDK-<version>.zip archive under „cip-sdk/webservice/doc").

For a quick test to check the availability of the Web application, just enter
`[WebServer Address]:8080/CIP/system/getversion`
in any browser.

Web Server Console

As soon as the Cumulus Web Solutions service is running, the Web Server Console is ready for use.

To start the Web Server console:

1. In the address field of your browser, enter
   `[WebServer Address]:8080/serverconsole`
   Replace [WebServer Address] with your Web Servers IP address or DNS name. If the browser runs on the same computer, you may as well use `localhost`.

The login screen of the Web Server Console is displayed. Now you can log in as a Cumulus Administrator to perform administrative tasks.

Cumulus Portals

Before Cumulus Portals can be used, some basic configuration tasks must be performed.

NOTE: Cumulus Portals Requires a Running CIP Installation!
As Portals is a web solution built on the Cumulus Integration Platform (CIP), CIP must be entirely configured before you start configuring Portals.

Initially Configuring Cumulus Portals

The basic configuration and customization is done via the **customization.js** file.

You find it in the portals folder inside the webapps folder of your web server application, e.g.: **C:\Program Files\Canto\Cumulus Web Solutions\apache-tomcat-X.X.xx\webapps\portals**

Use an UTF-8 compatible editor (*e.g.* and run it as administrator) to edit the file.

NOTE: All configuration and customization tasks are optional!
Only if Portals and CIP are running on different machines than, you must explicitly specify the CIP's base URL (e.g., `'https://www.customer.com/CIP').`

Configuration

- **CIP** – The base URL of the Cumulus Integration Platform (CIP), default value (`'/CIP/'`).
- **clientConfiguration** – Name of the Portals Configuration as defined via the CIP Configurator. (For details on the CIP Configurator, see the (Web) Server Console help.)

Replace the default value with the name of the Portals configuration you want to employ.

Customization

Basic customization edits are:

- **showInternalUserLoginButton** – default: `'false'`. If set to `'true'`, an additional login button for internal users is shown. Must be enabled only if an extended SP-initiated SAML SSO is in use!
- **logoURL**
  - **logo-s** – Small logo image. Replace the default value `'img/logo-s.svg'` with the name (and relative path to) of an image of your company's logo in SVG format (40x40).
  - **logo-m** – Medium logo image. Replace the default value `'img/logo-m.svg'` with the name of (and relative path to) an image of your company's logo in SVG format (size 124x40).

    NOTE: Other Image Formats: If you want to use a logo image in another format such as PNG, JPEG or GIF, you can deactivate the SVG line and insert a corresponding line for your desired image format.

- **favicon** – The default favicon can be replaced with a customized icon of the same format. The favicon.ico contains images sized 16×16 and 32×32 pixels. Either replace the default icon with the customized one, or store the customized icon in a different location and enter the proper path here.
  To change the Apple touch icons, the default files must be replaced with the customized ones. The sizes required for the Apple touch icons are included with their file names.

- **theme** – Name of the theme that control the visual appearance of Portals. Empty initially, which means, the default theme ('dark') is used. An additional 'bright' theme is provided out-of-the-box with any Portals installation. Further themes can be created and used as required.
  To change the theme, enter it's name here, e.g.: `'theme': 'bright'`
- **company** – Replace the default value `'Portals'` with the name of your company. The string specified here is displayed as the first part of the title of each Portals browser tab, followed by a dash, e.g. "**Portals - Details for xyz**". If left empty, the dash is not displayed either.
- **cookieConsent** – default: `'false'`. If set to `'true'`, a customizable cookie consent banner will be displayed to every Portals user.
- **showPageFooters** – default: `'false'`. If set to `'true'`, a customizable footer will be displayed on every Portals page.

Some of the more advanced customization possibilities:

- **i18n** – Internationalization. The locale identifiers of the supported languages, currently `'en', 'de', 'fr'`. – JSON file containing overrides should be added in the folder `custom/i18n`.
- **defaultLocale** – The locale identifier of the default language. The default language will be used when no language file matches the language of the employed browser.
- **customHomeScreenIcons**: – default: `'false'`. If set to `'true'`, the custom home screen icons and the manifest.json in the root of the custom folder will be used.
- **website** – Name of the folder that contains the current web application.
- **categoryPage** – Values determining the appearance of thumbnails on the landing page:

- **sizeType** – `maxsize` (the image is downscaled so that its longest side matches the given number of pixel; the aspect ratio is preserved), OR
  `size` (the image is downsized so that its shortest side matches the given number of pixel; the resulting image is always a square).
- **contentScale** – `contain` (background image is resized to be fully visible) OR
  `cover` (background image is resized to cover the entire container.
  (Only takes effect in combination with "sizeType: maxsize"!)
- **size** – `auto` (available space is calculated according to the dimensions of the image panel), OR
  `integer(value)` (number of pixels preserving the aspect ratio of the image).

BACKGROUND INFO: Portals customization and the Portals SDK

Many customization tasks require the usage of the Portals SDK, which is provided as a separate download file.
For more information on how to further customize Portals, see the technical documentation provided with the Cumulus Portals SDK.

Employing the CIP Configurator

Cumulus Portals also retrieves configuration data from the CIP Configurator. The corresponding Portals configuration tasks are performed with the CIP Configurator module which is a part of the Web Server Console. For more information on configuring Portals with the CIP Configurator, see the (Web) Server Console help.

With these settings, Portals is ready for use and can be tested. However, before public use Canto recommends configuring a few more things.

Testing the Installation

Before you start testing Portals, make sure that:

- Your Cumulus Server is running
- Your Web application server (e.g., Cumulus Web Solutions service) is running
- The catalog specified in the Portals Configurator is opened at the Cumulus Server and enabled for web access

To test the installation:

1. In the address field of your browser, enter
   `[WebServer Address]:[8080]/portals`
   Replace [WebServer Address] with your Web servers IP address or DNS name. If the browser runs on the same computer, you may as well use `localhost`.

   If your Web application server software is able to find the Portals default pages, you'll see a Cumulus Portals page.

NOTE: For Portals to work properly, cookies must be enabled in your browser!

Search Engine Optimization for Cumulus Portals

Cumulus Portals supports and is well prepared for SEO.

SEO support of Portals is closely related to the customer-specific customization of a Portals installation.

Therefore it is crucial that the information provided in the customization is appropriate, accurate and uses specific terms that can help finding a customers company via a web search (e.g., "digital asset management", or terms related to the customers business).

Basic SEO settings

Any Portals installation comprises two SEO related files by default: *robots.txt* and *sitemap.xml*.

- The robots.txt file is used to control which search engine crawlers are welcome to scan the website. By default, Portals allows every crawler to access the website.

  By default, Portals allows to the whole website to be accessed (`user-agent: *`). Administrators can restrict this by editing the robots.txt file accordingly.

  Find more information on robots.txt.

- The sitemap.xml files defines, among others, which URLs of a website should be accessed by search engine crawlers, their priority and how often crawlers should access them.

  Find more Information on sitemaps.

Customer-specific settings impacting SEO

Search engine crawlers rely on the content of certain elements of an HTML page, such as

- tags in the header section (<head><meta name="Keywords">, <head><meta name="description">, and <head><meta name="title">, which is the unique title of a web page;
- tags in the content section (especially H1 headings), or static URLs.

The content of these elements can not be adapted or modified directly by an administrator, but depends on the customization settings of a Portals installation, as well as on information retrieved from any open catalog.

- Customization can be done by modifying the *customization.js* file (the Company Name), as well as via the language-specific *i18n/*.json* files (the welcome text [key "LOGIN-TITLE"], the sub title [key "LOGIN-SUB-TITLE"] , the login page title [key "LOGIN-PAGE-TITLE"]).
- Information retrieved from open catalogs includes category names and descriptions, record names and descriptions, keywords, and copyright information.

Portals takes care of writing this information properly into appropriate meta tags so that it can easily be found by search engine crawlers. The following table depicts which kind of information is currently written into which SEO relevant HTML element on different kinds of pages.

	Keywords *<head><meta name="keywords">*	***Description*** *<head><meta name="description">*	***Page title*** *<head><meta name="title">*	***Static URL***	***H1 Tag***
Login Page	*Company name* *Welcome text*	*Welcome text* *Sub title*	*Login Page Title, including company name*	*... /login*	*Sub title*
Category Overview page	*Company name* *Category names* *Category descriptions*	*Company name* *Category names* *Categories descriptions*	*Company name* *Categories*	*... /categories*	*(none)*

	Keywords *<head><meta name="keywords">*	***Description*** *<head><meta name="description">*	***Page title*** *<head><meta name="title">*	***Static URL***	***H1 Tag***
File details page	*Record name*	*Record name*	*Record name*	*... /detailpage /<id>*	*Record name*

Cumulus Web Client

Before Cumulus Web Client can be used, it should be tested.

Testing the Installation

Before you start testing Cumulus Web Client, make sure that:

- Your Cumulus Server is running
- Your Web application server (e.g., Cumulus Web Solutions service) is running
- There is a (sample) catalog which has been opened by the Cumulus Server and activated for web access

To test the installation:

1. In the address field of your browser, enter
   `[WebServer Address]:8080/cwc`
   Replace [WebServer Address] with your Web application servers IP address or DNS name. If the browser runs on the same computer, you may as well use `localhost`.

   If your Web application server software is able to find the Web Clients default JSPX pages, you'll see a login page.

NOTE: For Cumulus Web Client to work properly, cookies must be enabled in your browser!

Additional Information

This chapter outlines how to manually deploy Cumulus web applications using WAR files and how to configure an already existing Apache Tomcat Web application server not provided by Canto for Cumulus Web Solutions. Additionally, it gives some hints on trouble shooting and on support for office formats with LibreOffice.

Manual Deployment Using WAR Files

For all Cumulus web applications Canto provides WAR files for manual deployment. Cumulus web applications like Web Client or the publishing portal Cumulus Portals are provided as Java web applications. For execution, the web application must be deployed in a Java servlet container like Apache Tomcat. The servlet container needs access to the Cumulus Java Runtime in order to successfully run the web application.

If you want to manually deploy a Cumulus web application, you can just use the WAR file provided at the same location as the installer files in the Canto Customer Community.

All Cumulus web applications (except Web Server Console) contain a configuration file, by default located in **WEB-INF/conf**. Make sure to back up the configuration file before replacing the web application to be able to restore it afterwards. You do not need to backup and restore it, if you store the configuration file at another location specified via environment variable. For details see Storing Config Files Outside the Default Location.

Canto strongly recommends you not to employ hot deployment.

To manually deploy a Cumulus web application:

1. Stop the Cumulus Web Solutions service/daemon. (For a detailed description on how to stop, see Starting/Stopping Cumulus Web Solutions.)
2. If required, back up the [**web application name]-config.xml** configuration file (e.g portals-config.xml) located in **WEB-INF/conf** folder.
   If you have customized the **log4j.xml** file (located in the **WEB-INF** folder), back up this file as well.
3. Copy the web application's WAR file into the **webapps** folder.
4. Delete the web application folder (e.g. portals).
5. Start the Cumulus Web Solutions service/daemon again. (For a detailed description on how to start, see Starting/Stopping Cumulus Web Solutions.)
   The WAR file will be deployed and a new web application folder is created.
6. If required, copy the saved configuration file into the appropriate folder (by default **WEB-INF/conf**). (Note that the configuration will be read after a minute; either wait a minute or restart.)
   And if you have a saved **log4j.xml** file, copy it in the **WEB-INF** folder.

Manual Tomcat Environment Configuration

The following sections describe different configuration suites to have the Apache Tomcat Web application server running Cumulus Web Solutions. Although Cumulus Web Solutions, as installed, is pre-configured for immediate operation with the Apache Tomcat Web application server, you may want to check the configuration.

Furthermore, this section describes how to configure an already existing Apache Tomcat Web application server (not provided by Canto) in order to be used by Cumulus Web Solutions.

Windows

To configure Tomcat under Windows to work with Cumulus Web Solutions:

1. Edit/create the file **%TOMCAT_HOME%\bin\setenv.bat** and append the following line to the end:
   set CLASSPATH=%CLASSPATH%;C:\Program Files \Canto\CumulusJavaRuntime\CumulusJC.jar
   assuming that the Cumulus Java Classes are installed in:
   C:\Program Files\Canto\CumulusJavaRuntime

NOTE: Use **;** (a semicolon) as a separator.

Linux

To configure Tomcat under Linux to work with Cumulus Web Solutions you have to edit the script **setenv.sh**.

Assuming that the Cumulus Java Classes are installed in **/usr/local/CumulusJavaRuntime,** you have to modify the script as follows:

1. Edit/create the file **%TOMCAT_HOME%\bin\setenv.sh** and append the following lines:
   LD_LIBRARY_PATH=${LD_LIBARY_PATH}:/usr/local/CumulusJavaRuntime/lib
   export LD_LIBRARY_PATH
2. Insert the following line after the other settings of the CLASSPATH:
   CLASSPATH=${CLASSPATH}:/usr/local/CumulusJavaRuntime/CumulusJC.jar

NOTE: Use **:** (a colon) as a separator.

macOS

To configure Tomcat under macOS to work with Cumulus Web Solutions you have to edit the script **setenv.sh**.

Assuming that the Cumulus Java Classes are installed in **/usr/local/CumulusJavaRuntime,** you have to modify the script as follows:

1. Edit the file **$TOMCAT_HOME/bin/setenv.sh** and append the following lines:
   DYLD_LIBRARY_PATH=/usr/local/CumulusJavaRuntime/lib
   export DYLD_LIBRARY_PATH
2. Insert the following line after the other settings of the CLASSPATH:
   CLASSPATH=${CLASSPATH}:/usr/local/CumulusJavaRuntime/CumulusJC.jar

NOTE: Use **:** (a colon) as a separator.

Support for Office Formats with LibreOffice

In order to generate high-quality previews and thumbnails when cataloging RTF files or MS Office, Open Office, Open Document files and templates, Scheduler needs LibreOffice to be installed on the same machine. For details see Support for Office Formats: LibreOffice.

Troubleshooting

This section contains frequently asked questions and their possible solutions.

Performance Issues

If you experience slow performance of your Web application server, we recommend optimizing the memory for Java VM in the **catalina.sh** or **catalina.bat** (Windows) file of the Apache Tomcat Web application server. Under Linux, we also recommend checking the limits for file descriptors, as in most cases the soft limit should be increased. For more information on both topics, see the documentation of the Apache Tomcat Web application server.

Asset Download and Preview not Possible

How is the Cumulus Server able to access an asset and which settings are required?

There are two possible reasons for most problems:

- permission problem: The user under which the Cumulus Server is running might not have read permission for these assets. Check for the right permissions.
- wrong entries in the FileSharing.info file: The Cumulus Server is not able to create correct UNIX asset references due to wrong entries in the FileSharing.info file. Check the FileSharing.info file. (For details, see below.)

Use of the FileSharing.info File with UNIX or macOS Installations

What is the FileSharing.info for?

If a user wants to preview or download an asset via the Internet, Web Client or the Cumulus Server must have access to the actual asset. To do this Cumulus reads the stored asset reference and uses it to find the asset. This is also called “resolving” an asset reference.

If assets have been cataloged by macOS or Windows Clients, their asset references cannot be resolved by Cumulus under UNIX or macOS.

So Cumulus needs to create UNIX asset references based upon the macOS or Windows file system asset references. This is done by employing a special file that contains information on how a Windows or macOS asset reference should be transferred to a corresponding UNIX reference. This special file is named **FileSharing.info**. The information stored in this file must be adapted to your Cumulus configuration.

You can have a separate **FileSharing.info** file for your Web Client installation. If a **FileSharing.info** file is not available with your Web Client installation, the **FileSharing.info** file of your Cumulus Server installation is used. The **FileSharing.info** file for your Cumulus Server installation can be edited with a utility provided by the Remote Admin module of the Server Console.

If you want a separate **FileSharing.info** file for your Web Client installation, this file must be adapted manually to your Cumulus configuration.

For example:

The file picture.jpg is stored on a UNIX or macOS file server and can be accessed

- by Windows via the following path:
  \\FILESERVERWINNAME\WINVOLUMEONSERVER\images

- by macOS via the following path:
  ***:FILESERVERMACNAME:MACVOLUMEONSERVER:images:**

Under UNIX or macOS this file is stored under:

- **/shares/volume/images/**

The Filesharing. info needs the following information to create the correct UNIX asset reference based upon the given Windows asset references:

```
[Windows]
# Begin of the Windows section
Server Name = FILESERVERWINNAME
Volume Path = /shares/volume
Volume Name = WINVOLUMEONSERVER
```

The Filesharing. info needs the following information to create the correct UNIX asset reference based upon the given macOS asset references:

```
[Macintosh]
# Begin of the Macintosh section
Server Name = FILESERVERMACNAME
Volume Path = /shares/volume
Volume Name = MACVOLUMEONSERVER
```

Make sure that you enter the exact server names and volume names (case sensitive) as you see them from the appropriate platform (in the Chooser on macOS and Explorer on Windows). Never enter the UNIX server name.

HELIOS EtherShare

If HELIOS EtherShare is installed on the machine that runs the Cumulus Server, you do not need to update the Macintosh section settings of the FileSharing.info file manually. Cumulus does this automatically. If you have also installed PCShare, you do not need to update the Windows section settings manually.

Cumulus

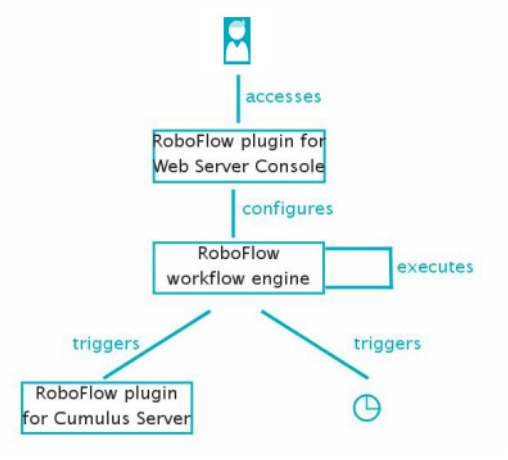
Canto RoboFlow is a Cumulus add-on that expands the functionality of a Cumulus installation.

This chapter describes how to install Canto RoboFlow. After you have installed and activated the RoboFlow Server Application, you must configure it. All RoboFlow configuration tasks are performed with the RoboFlow module of the Cumulus Web Server Console which is installed via the Cumulus Web Solutions installer. For a description on how to configure it, see the Web Server Console help.

Canto RoboFlow

Overview

Canto RoboFlow is a server-only component. By itself, Canto RoboFlow has no user visible component. However, there is an administration user interface embedded in Cumulus Web Server Console allowing the configuration of Canto RoboFlow and definition of workflows.



Cumulus WebServer Console as a part of Cumulus Web Solutions communicates with the RoboFlow back-end service ordaemon over port 8998.

If both components are installed on different servers, make sure that this port (8998) is open and permitted by both services on both servers!

RoboFlow and Cumulus

Canto RoboFlow automates the IN's and OUT's of Cumulus. It can import (catalog) files into Cumulus and it can export (converted) files out of Cumulus. It can import meta-data into Cumulus and export metadata from Cumulus.

Deployment

Canto RoboFlow can be deployed on a server without any other Cumulus compo-nents. However, if Canto RoboFlow should be able to change a catalog, it needs net-work access to the respective Cumulus Server. Canto RoboFlow uses the Cumulus Java Classes for the communication with a Cumulus installation.

A workflow is deployed on exactly one Canto RoboFlow server. A sub-sequent work-flow can only by triggered by a workflow on the same server. However, it is possible to have several servers with Canto RoboFlow executing different workflows on the same catalog.

How to Proceed

The main steps to get RoboFlow up and running are:

- Install (and where required, make run as service.) For details see Installing.
  - Additionally, configure a daily restart of the RoboFlow service or daemon by means of the respective operation system.
- If required, activate RoboFlow (via the Remote Admin module of the Cumulus Server Console or Web Server Console). For details see Activation.

- Configure global settings (via the RoboFlow module of the Web Server Console.) For details, see the Web Server Console help "Configuring RoboFlow: Defining Global Workflow Settings."
- Start working with RoboFlow and set up workflows (via the RoboFlow module of the Web Server Console.) For details, see the Web Server Console help "Configuring RoboFlow: Defining Workflows."

Installing

Canto provides an installer application which guides you through the installation process. After you have installed RoboFlow, you must activate it via the Remote Admin module of the Server Console.

Canto RoboFlow consists of the RoboFlow PlugIn for the Cumulus Web Server Console, the RoboFlow Server Application and the RoboFlow Trigger ESP.

The RoboFlow Server Application has to be installed on the computer that you want to perform the tasks on. This can be any computer with TCP/IP network access to the Cumulus Server. It is a Cumulus Java Classes application that communicates with the Cumulus Server just like a Cumulus Client does. The system requirements are the same as for Cumulus Java Classes.

If RoboFlow is expected to do a lot of cataloging or other processor intensive tasks, it is recommended not to install RoboFlow Server Application on the computer running the Cumulus Server.

If one of the tasks performed by the RoboFlow Server Application requires certain software to be installed (e.g. a Cumulus or third-party option), this software must be installed on the computer running the RoboFlow Server Application.

NOTE: The RoboFlow Trigger ESP will only be available after restarting the Cumulus Server. This means that you should restart the Cumulus Server after installing RoboFlow if you are going to set up workflows employing any trigger actions.

The installation differs depending on the operating system.

Installing under Windows or macOS

If RoboFlow is expected to do a lot of cataloging or other processor intensive tasks, it is recommended not to install it on the computer running the Cumulus Server.

To install RoboFlow Server Application under Windows or macOS:

1. Log on to the local machine as the *Administrator* for the machine.
   Log on to local machine.
2. Double-click **Install_Canto_RoboFlow_11xx.exe**.
   Double-click **Install Canto RoboFlow 11xx** and authenticate yourself as an administrator.

   NOTE: Java Required for Running Installer!
   If no Java is pre-installed, macOS may ask you to install Java for running the installer. After the installation the bundled JRE will be used with all our products.

   The installation resources are extracted and you are asked to select a language. This language is used for the installation process as well as for the application being installed.
3. Select a language and click **OK**. The installer is launched.
4. When the Introduction screen is displayed, click **Next** to continue. The software license agreement is displayed.
5. Read the displayed license agreement and activate the I accept the terms of the License Agreement option.

6. Click **Next** to continue. The Choose Install Folder dialog opens.
7. To accept the default installation location, click **Next** to continue. Or, if you do not want to accept the default location, click **Choose** to choose a different location. The Browse For Folder window opens. Select the folder of your choice and click **OK** to return to the previous window. Then click **Next** to continue.

   The Choose Install Features window opens.
8. Choose the features you want to install:
   - Canto RoboFlow – installs the RoboFlow Server Application.
   - Cumulus Server PlugIn – installs the module that enables RoboFlow to communicate with the Cumulus Server.
9. Click **Next** to continue.

   The Choose Cumulus Server window is displayed.
10. To accept the default, click **Next** to continue. Or, if you do not want the default or if the Cumulus Server is running on another machine, click **Choose** to choose a different location. The Browse For Folder window opens. Select the folder where the Cumulus Server resides and click **OK** to return to the previous window. Then click **Next** to continue.

    The Pre-Installation Summary is displayed.
11. Click **Install** to start the installation. The installer begins copying files.
12. When the installation is finished, the **Install Complete** window is displayed. Click **Done** to end the installation and close the window.

Important: Configure a Daily Restart of the Service

In order to work properly, the RoboFlow service must be restarted on a regular schedule, e.g. daily. This can be achieved by creating a Windows Scheduler tasks that executes the **RoboFlowRestartService.bat** script (located in the Canto RoboFlow installation folder) every night.

Installing under Linux

With UNIX versions, a CONSOLE mode installation is provided. It guides you through all steps necessary to install Canto RoboFlow. To accept the default values [shown in square brackets] press the Enter key.

To install the RoboFlow Server Application under Linux:

1. Open a UNIX shell and change your identity to **superuser** (enter **su** for super user and then the password.) The CONSOLE mode installation is started manually by typing the script name at the command prompt.
2. Start the CONSOLE mode installation by entering:
   sh CantoRoboFlow1100.bin
3. When the Introduction is displayed, press the Enter key to continue. The software license agreement is displayed.
4. Read the displayed license agreement and enter **y** to accept.

   The default installation location is displayed.
5. To accept the default installation location, press the Enter key to continue. Or, if you do not want to accept the default location, enter the absolute path for the desired installation folder and press Enter to continue.

   The Pre-Installation Summary is displayed.

6. Press Enter to start the installation.

   The installer begins copying files. When the installation is complete, the Install Complete information is displayed.

7. Press Enter to end the installation and exit.

Important: Configure a Daily Restart

In order to work properly, the RoboFlow daemon must be restarted on a regular schedule, e.g. daily. This can be achieved by creating e.g. a crontab that executes the **RoboFlowRestartService.sh** script (located in the Canto RoboFlow installation folder) every night.

TIP: Cataloging Office Documents

In order to generate high-quality previews and thumbnails when cataloging RTF files or MS Office, Open Office, Open Document files and templates, RoboFlow needs LibreOffice to be installed on the same machine. For details Support for Office Formats: LibreOffice

Activating

Canto RoboFlow is activated as any other newly purchased Cumulus option via the Remote Admin module of the Server Console. For details see Activation.

Running the RoboFlow Server Application as a Service

The (Domain) user running the service or daemon should have all the necessary permissions to the network and other resources such as mail, as required by the workflows.

For installing the RoboFlow Server Application as a service, Canto provides following scripts:

- For macOS and Linux: **InstallCantoRoboFlowService.sh**

NOTE: With the installation of RoboFlow the Server Application automatically registers as a service.

- For Windows: **InstallCantoRoboFlow.bat**

Scripts can be found in the Canto RoboFlow installation folder, e.g. **C:\Program Files\Canto\Canto RoboFlow**

Cumulus

The Cumulus InDesign Client offers Cumulus' powerful Digital Asset Management functionality right from within Adobe® InDesign 2020, InDesign CC 2019, and InDesign CC 2018. This module installs native InDesign panels that provide a seamless integration between Adobe InDesign and Cumulus.

This chapter describes how to install, activate and configure it.

Cumulus InDesign Client

Installing

The Cumulus InDesign Client has to be installed on each computer where you want to use it with Adobe InDesign.

To install the InDesign Client under Windows or macOS:

1. Log on to the local machine as the Administrator for the machine.
2. Double-click **Install Cumulus_11xx_ InDesign Client** and follow the on-screen instructions.

The Cumulus InDesign Client can be accessed from within InDesign via the menu **Windows > Cumulus.**

Activating

After installation the Cumulus Administrator must activate this Cumulus add-on at the Cumulus Server via the Remote Admin section of the Server Console using the Customer Portal account. For detailed information see Activation.

Cumulus

The Cumulus InDesign Server PlugIn enables an Adobe InDesign CC Server 2019 and 2018 to resolve those links to Cumulus assets in InDesign documents that InDesign cannot resolve itself. Thus, documents with such links can completely be printed or exported (e.g. as PDF) by the InDesign CC Server 2019 or 2018, and even InDesign CS6 Server.

This chapter describes how to install, activate and configure it.

Cumulus InDesign Server PlugIn

Installing

The Cumulus InDesign Server PlugIn has to be installed on the computer running your Adobe InDesign CC Server 2019 or Adobe InDesign CC Server 2018.

To install the InDesign Server PlugIn under Windows:

1. Log on to the local machine as the Administrator for the machine.
2. Double-click **Install_Cumulus_11xx_InDesign_Server.exe** and follow the on-screen instructions.

Activating

After installation the Cumulus Administrator must activate this Cumulus add-on at the Cumulus Server via the Remote Admin section of the Server Console using the Customer Portal account. For detailed information see Activation.

Configuring

After you have installed the InDesign Server PlugIn, you must configure it. The InDesign Server PlugIn needs to know the Cumulus Server to connect to and the user account to be employed for the connection. This information has to be added to the InDesign Server PlugIn preferences.xml file. Where do you get this from in the correct format? From the InDesign Client preferences.xml file! Thus, the steps you have to perform are:

- Generate the required information employing InDesign Client.
- Open the InDesign Client preferences.xml file and copy the corresponding section.
- Open the InDesign Server PlugIn preferences.xml file and paste the corresponding section.

Use an UTF-8 compatible editor (and run it as administrator) to edit the preferences files.

To configure the InDesign Server PlugIn:

1. Open InDesign on a computer where the InDesign Client is installed.
2. Open any Cumulus palette and select **Properties**.
3. Under **Automatic Login** fill in the fields
   – **Server** – IP address or name of the computer running the Cumulus Server that manages the linked assets
   – **Name** – User name of the Cumulus account employed for connecting to the Cumulus Server
   – **Password** – Password of the user

4. Click **OK**.
5. Navigate to the InDesign Client preferences.xml file in .../**Application Data/Roaming/Canto/[InDesign Client version]** and open it.
6. Copy the section under **"acon"** to your clipboard.

```
<ns:record ns:key="lcon">
  <ns:bool ns:key="arus">true</ns:bool>
  <ns:string ns:key="serv">localhost</ns:string>
  <ns:string ns:key="usrn">cumulus</ns:string>
  <ns:chars ns:key="pasw">391A1A46ED0D384A5A0B6E87260DED7E7E404D0B</ns:chars>
</ns:record>
<ns:record ns:key="acon">
  <ns:bool ns:key="arus">true</ns:bool>
  <ns:string ns:key="serv">localhost</ns:string>
  <ns:string ns:key="usrn">cumulus</ns:string>
  <ns:chars ns:key="pasw">391A1A46ED0D384A5A0B6E87260DED7E7E404D0B</ns:chars>
</ns:record>
<ns:bool ns:key="alog">true</ns:bool>
<ns:bool ns:key="rext">false</ns:bool>
```

7. Navigate to the InDesign Server PlugIn preferences.xml file in the **Plug-Ins** folder of your InDesign CC Server 2019 or 2018 installation and open it.

```
<ns:record ns:key="acon">
  <ns:bool ns:key="arus">false</ns:bool>
  <ns:string ns:key="serv"></ns:string>
  <ns:string ns:key="usrn"></ns:string>
  <ns:chars ns:key="pasw"></ns:chars>
</ns:record>
<ns:bool ns:key="alog">false</ns:bool>
<ns:string ns:key="chof"></ns:string>
```

8. Replace the section under **"acon"** with the content of your clipboard.

```
<ns:record ns:key="acon">
  <ns:bool ns:key="arus">true</ns:bool>
  <ns:string ns:key="serv">localhost</ns:string>
  <ns:string ns:key="usrn">cumulus</ns:string>
  <ns:chars ns:key="pasw">391A1A46ED0D384A5A0B6E87260DED7E7E404D0B</ns:chars>
</ns:record>
<ns:bool ns:key="alog">false</ns:bool>
```

9. Save the InDesign Server PlugIn preferences.xml file.
10. Start your InDesign CC Server CC 2019 or 2018 again.

The InDesign Server PlugIn is configured and your InDesign CC Server 2019 or 2018 can resolve any Cumulus links (e.g. to Cumulus Vault) and print as well as export them correctly.

Cumulus

Cumulus Office Connector

The Cumulus Office Connector offers Cumulus' Digital Asset Management functionality right from within Microsoft PowerPoint and Word. Technically, the Office Connector is an Add-in for PowerPoint and Word that enable users to access assets cataloged in Cumulus via the Cumulus Asset Browser, and insert them into Word documents and PowerPoint presen2020tations.

This chapter describes how to install the Cumulus Office Connector and make it available in Word and PowerPoint.

Installing

PRECONDITIONS:

- An Office Connector license must be purchased and activated via the Remote Admin module of the Cumulus (Web) Server Console.
- A SSL-enabled web server must be available (needed for the communication between the add-in and a Cumulus installation).
- Microsoft Office must be installed (Windows: Office 2013, 2016 with latest updates, macOS: Office 2016 with latest updates).

Preparing the Web Server

As an administrator, you must configure the SSL-enabled web server.

Additionally, you must prepare the manifest files that are needed to actually insert the add-ins into MS Word and PowerPoint, and distribute them to the users which shall use the Cumulus Office Connector.

To prepare the SSL-enabled web server:

1. Copy the OfficeConnector.zip file into the `webapps` folder of your web server (e.g., `\apache-tomcat-8.0.36\webapps`) and unpack it.
   A new folder, COC, is created, which contains all necessary files.

This all that must be done to configure the web server.

For your convenience, the COC folder provides the file "manifest.zip" which contains the manifest files (canto-cumulus.manifest.powerpoint.xml, and canto-cumulus.manifest.word.xml). These files are needed to actually insert the add-ins to Word and PowerPoint.

To prepare the manifest files:

1. Open each manifest file in a text editor of your choice.
2. Replace any occurrence of `sample.canto.com` with the address of your web server.

Now you can distribute the prepared manifest files to anyone who shall make use of the Cumulus Office Connector.

- In an organization with an Office 365 environment, the Cumulus Office Connector add-in can be deployed centrally to one or multiple users via the Office 365 admin center, as described here.
- Individual users, with or without Office 365, can install and activate the Cumulus Office Connector add-in manually (this procedure is called "sideloading") as described below.

Sideloading the Add-In

As an individual user who wants to make use of the Cumulus Office Connector in your MS Word or PowerPoint, you must perform several steps. There are different procedures on Windows and macOS.

As a prerequisite, you must have access to the necessary manifest files (canto-cumulus.manifest.powerpoint.xml, and canto-cumulus.manifest.word.xml), as prepared by an administrator to work with the SSL-enabled web server.

On Windows

NOTE: For Add-Ins to work properly, Protect Mode must be enabled in the MS Internet Explorer 11 security settings for both, Internet zone, and Restricted Site zone. This is typically enabled by default.

To install the Cumulus Office Connector on a Windows computer:

1. Create a new folder on your c: drive, e.g. `c:\Manifest`. Move both manifest files into this folder.
2. Share the newly created folder with yourself.

   To do so:

   - Right-click on the folder. From the context menu, choose **Properties.**
   - Open the **Sharing** tab. Click **Share**.
   - On the **Choose people ...** dialog, your user name is already listed. Add anyone else with whom you want to share your add-in.
   - Click **Share** > **Done** > **Close.**
3. Specify the shared folder as trusted catalog

   To do so:

   - Open a new document, either in Word or in PowerPoint.

- Choose the **File** tab, then **Options**.
- Choose **Trust Center**, then click **Trust Center Settings** .
- Choose **Trusted Add-in Catalogs** (**Trusted App Catalogs** in Office 2013).
- In the **Catalog Url** box, enter the full network path to the shared folder catalog (e.g., `\\[computer name]\Manifest`), and then click **Add Catalog**.
- IMPORTANT: Activate the **Show in Menu** option
- Click **OK**.
- Close the Office application, and start it again to apply your changes.

The Cumulus Office Connector add-in is now installed and can be added to the **Home** tab of the ribbon in MS Word or PowerPoint, respectively.

To add the Cumulus Office Connector add-in to the ribbon in Word and PowerPoint:

1. On the **Insert** tab of the ribbon in Word, or PowerPoint, select **My Add-ins** (or **My Apps** in Office 2013**)**:
2. In the **Office Add-ins** dialog (**Apps for Office** in Office 2013), select **Shared Folders**.

   Select **Cumulus Browser**, then click **OK** to insert the add-in.

The Cumulus Office Connector add-in is now available in the **Home** tab of the ribbon (or in the **My Apps** menu in Office 2013) in MS Word or PowerPoint, respectively.

NOTE: A sideloaded add-in must be inserted into the Home ribbon anew every time you restart Word or PowerPoint.

On macOS

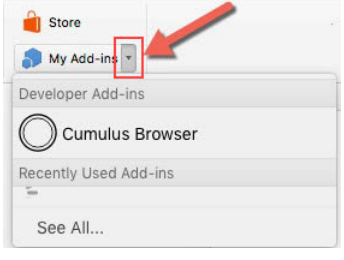
To install the Cumulus Office Connector on macOS:

1. Move the manifest files into application-specific folders:
   - MS Word: move canto-cumulus.manifest.word.xml to `~/Library/Containers/com.microsoft.Word/Data/Documents/wef/`
     (If the `wef` folder does not yet exist, create it.)
   - MS PowerPoint: move canto-cumulus.manifest.powerpoint.xml to `~/Library/Containers/com.microsoft.Powerpoint/Data/Documents/wef/`
     (If the `wef` folder does not yet exist, create it.)
   - Restart Word/PowerPoint and open a (new) document.

   The Cumulus Office Connector add-in is now installed and can be added to the **Home** tab of the ribbon in MS Word or PowerPoint, respectively.

To add the add-in to the ribbon in Word and PowerPoint

1. On the **Insert** tab of the ribbon in Word or PowerPoint, click the small arrow on the right side of **My Add-ins.**



2. Select **Cumulus Browser** from the **Developer Add-ins.**

The Cumulus Office Connector add-in is now available in the **Home** tab of the ribbon in MS Word or PowerPoint, respectively.

NOTE: A sideloaded add-in must be inserted into the Home ribbon anew every time you restart Word or PowerPoint.

Cumulus

This appendix to the Cumulus installation guide is intended to cover special topics close to the installation.

Appendix

Support for Office Formats: LibreOffice

Cumulus needs the open source application LibreOffice in order to properly create previews and thumbnails from office documents such as RTF files, MS Office Open XML files and templates, MS Office files and templates, Open Office files and templates, and Open Document files and templates.

NOTE: Cumulus was tested with LibreOffice 5. For security reasons, it is recommended to always install the latest stable release of LibreOffice 5

LibreOffice must be installed on the same machines as the Cumulus Client applications that do the cataloging and/or that generate previews. Cumulus Client applications comprise

- the Cumulus Desktop Client,
- all applications based on Cumulus Java Classes (CJC), such as
  - Cumulus Web Solutions (Cumulus Web Client and the Cumulus Integration Platform)
  - Scheduler
  - Canto RoboFlow
  - Cumulus File System Companion

On macOS and Linux machines, Cumulus will find LibreOffice automatically, if is installed in its default location. However, on Windows machines – as well as on macOS or Linux machines where LibreOffice was installed in a different location –, the path to the installation must be specified in the **client.xml** file under the key **LibreOfficePath**, e.g.:

```
<ns:LibreOfficePath>C:\Program Files (x86)\LibreOffice
5\program\soffice.exe</ns:LibreOfficePath>
```

Where to find the config.xml file for the Desktop Client

With the Cumulus Desktop Client the client.xml is initially contained in the installation folder. On the first start of the Desktop Client, this file is copied to a different folder:

- on Windows, to the user's AppData folder (**../AppData/Roaming/Canto/Cumulus Client/conf**) on Windows, or
- on OS X/macOS, to the user's Library folder (**~/Library/Application Support/Canto/Cumulus Client/conf**).

Only edit the client.xml file that is stored in the AppData folder or the Library folder!

Where to find the config.xml file for CJC based applications

With Client applications are based on Cumulus Java Classes, the **client.xml** file is located in the **conf** folder of the respective installation folder (e.g **C:/Program Files/Canto/Cumulus Web Solutions/conf**), and must be edited there.

To edit the file, you need administrator permissions on the respective machine.