

# MCMS - Java OpenWebStart

## Installation manual

<b>MC Management System</b>	<b>&gt;= 4.9.0</b>
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## 1 About this Manual

This manual describes how the new deployment of the MCMS (Monocard Management System) user interface works. MCMS versions  $\geq 4.9.0$  will use Karakun AGs "OpenWebStart" (OWS) instead of Oracle™s "Java Web Start" (JWS).

## 2 Overview

The MCMS user interface is a Java™ application. Starting from MCMS version 4.9.0 it is necessary that OpenWebStart, an open source solution to replace JWS, is installed locally on any workstation in order to run the MCMS user interface which is a Java application.

## 3 Why?

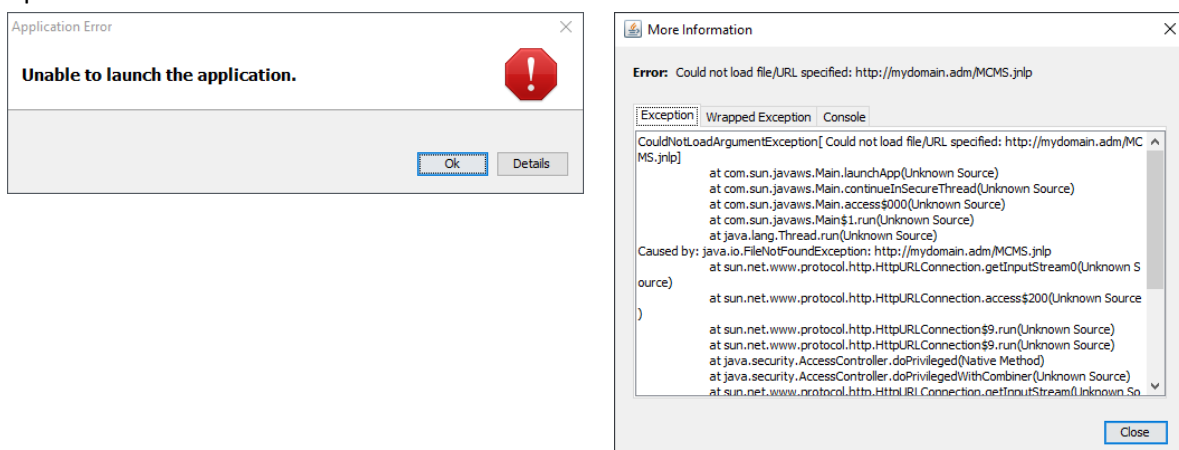
A Java application needs a runtime environment in order to run, which in the past was supplied by Oracle. The Java runtime environment (JRE) provided by Oracle included JWS. Through JWS it was possible to start a Java application directly from the web browser. In 2017 Oracle decided to drop the support for JWS in Java 11. This means, that clients that have the latest version of Oracle 11 JRE installed, can no longer launch applications through JWS.

Therefore Digitalparking AG decided to replace the usage of JWS with the new open source solution OpenWebStart by Karakun AG.

## 4 OpenWebStart

After the installation of MCMS  $\geq 4.9.0$ , the old Desktop-Shortcuts to start the MCMS user interface will not work anymore, until OpenWebStart is installed.

The following is the messages being shown if you try to use an old JWS shortcut before OpenWebStart is installed:

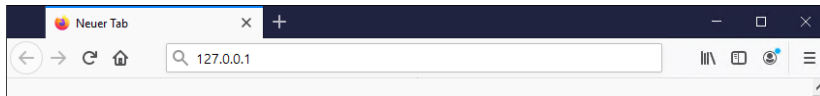


### 4.1 Installation of OpenWebStart

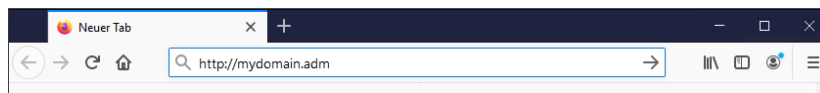
The following explains how to install OpenWebStart.

#### 4.1.1 Open the MCMS start-page in a Browser

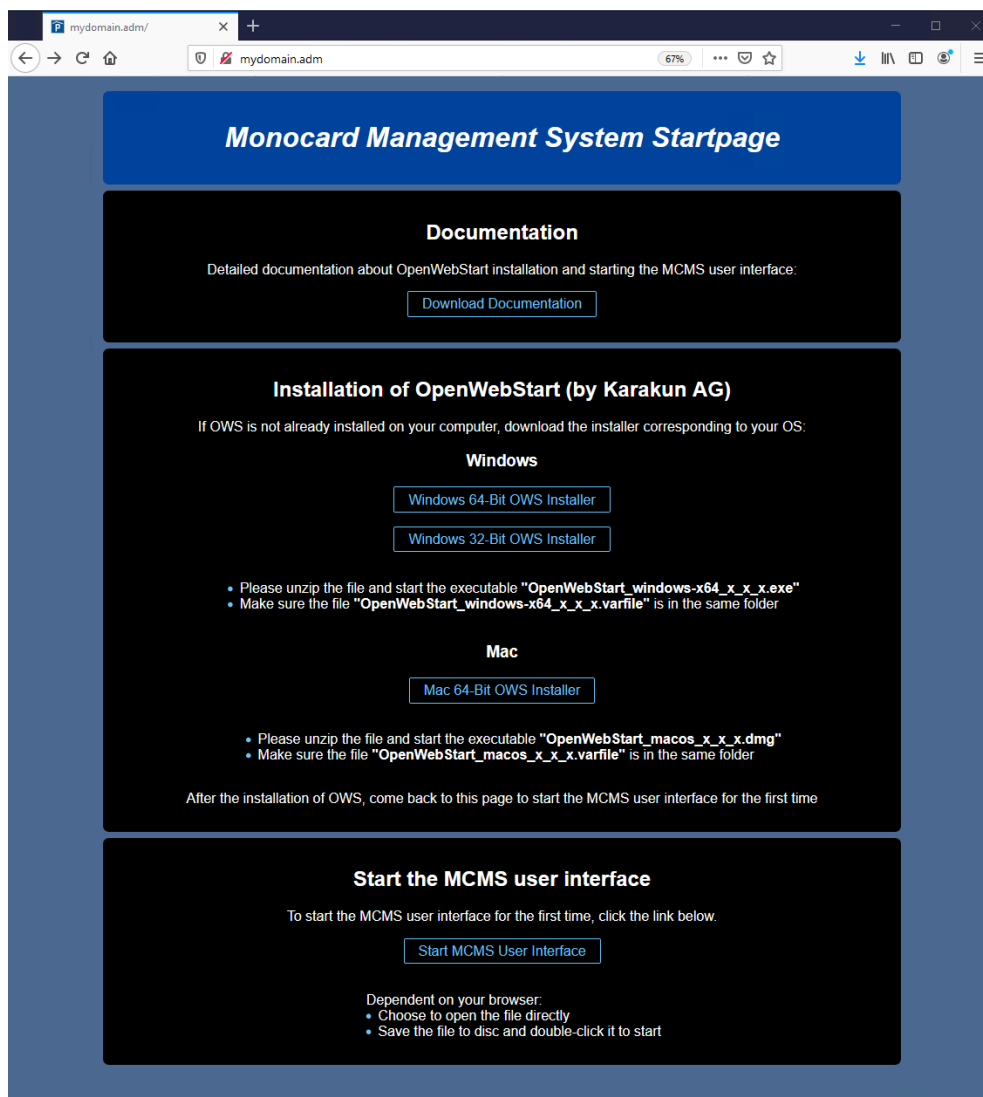
Open a browser (Firefox, Chrome, Internet-Explorer/Edge,...) and enter either the **IP-address** to the MCMS webserver, which is usually assigned by the network administrator:



Or if a special setup was necessary because of NAT (Network Address Translation) being used, enter the domain-name to the MCMS server. In this example the domain-name was set to **http://mydomain.adm** by the network administrator:



The browser now shows you the start-page:



### 4.1.2 Download the OpenWebStart Installer from the start-page

To download the OWS installer:

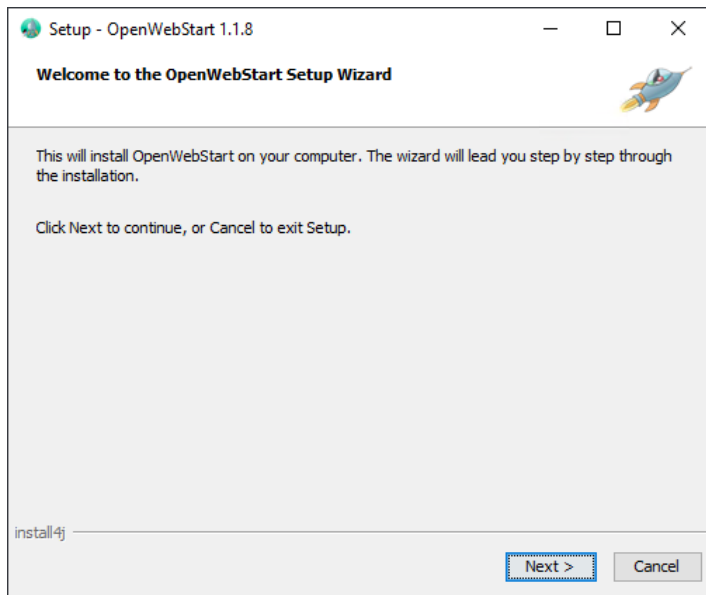
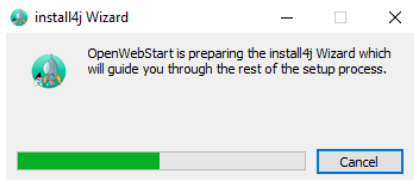
- Click the link corresponding to your OS and architecture
- Choose to save the zip file to disc
- Open the folder where the zip was stored and unpack it
- Change into the newly created folder (the name depends on your OS and architecture choice)

Both files need to be in the same folder for the installation, so if you copy the installer to a new folder, make sure to also copy the .varfile file.

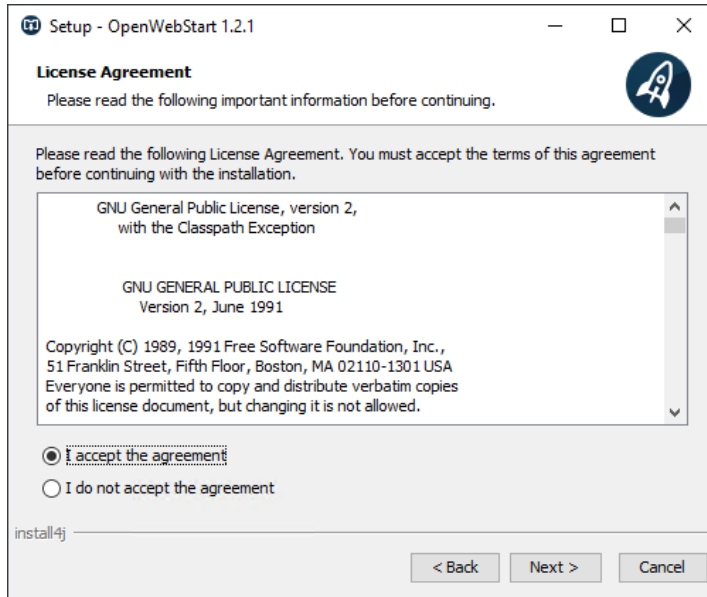
The next chapter explains how to install OWS.

### 4.1.3 Running the OpenWebStart installer

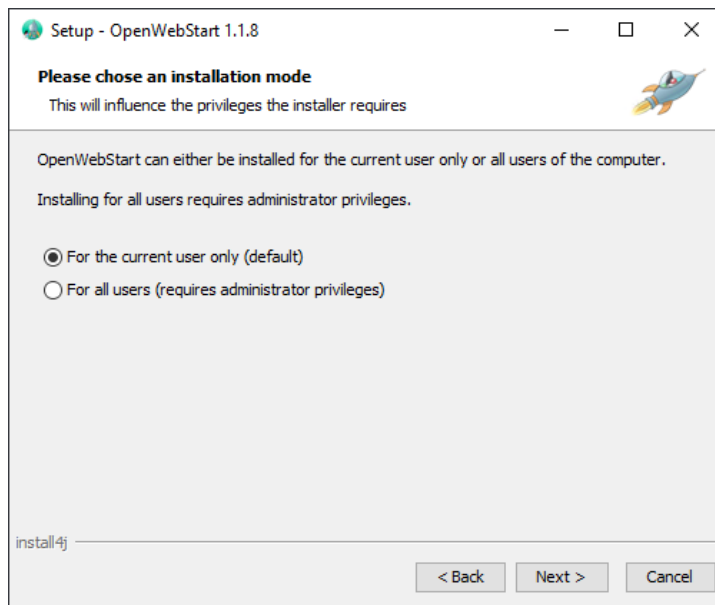
To run the installation, double-click the executable (.exe for windows and .dmg for mac) file to start the OpenWebStart installer:



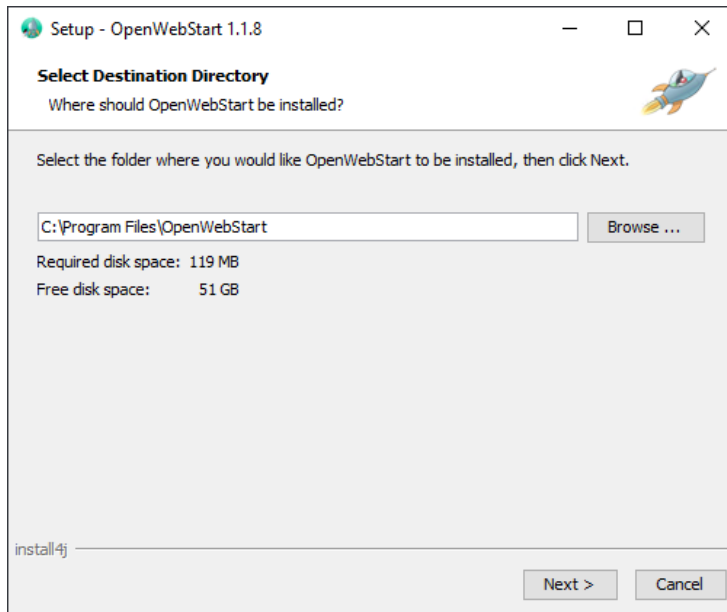
On this first mask, click “**Next>**”.



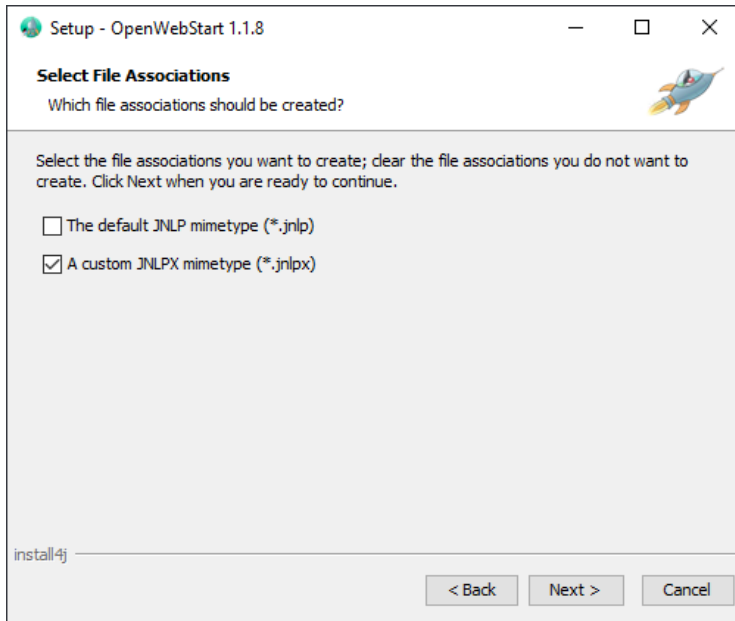
Choose **“I accept the agreement”** and click **“Next>”**.



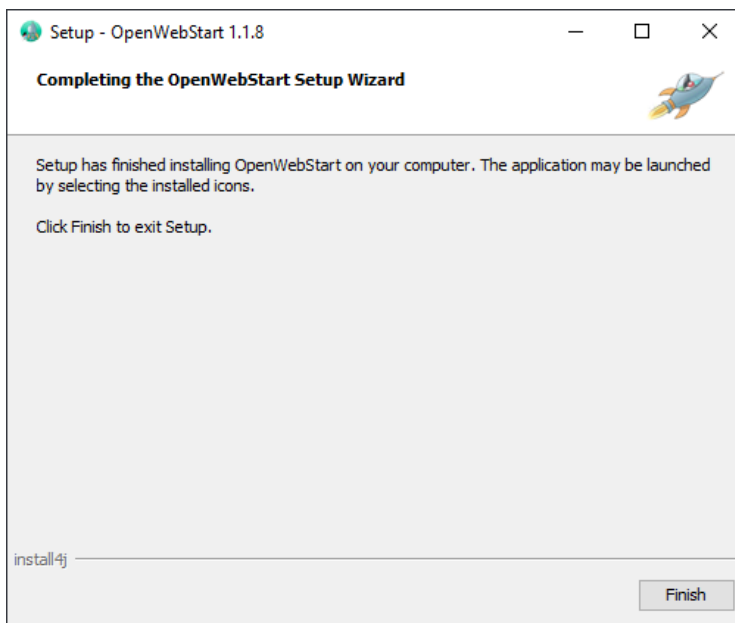
Usually installing for the current user is sufficient. If you need other users to also have access on that computer, choose the second option (which needs administrator privileges). Then click **“Next>”**.



The default path is fine. Click **“Next>”**.

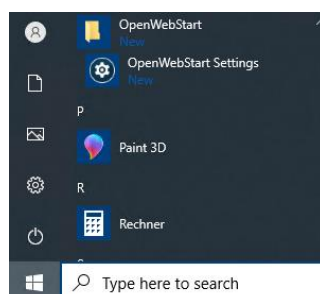


Click **"Next>"** (leave the first option unchecked). Only using the second option here makes sure that other JWS based deployments can still use the .jnlp file ending to start applications.



Click **"Finish"**.

The installation is now complete. You have now a new entry in the windows start menu to start the OpenWebStart Setting Dialog:





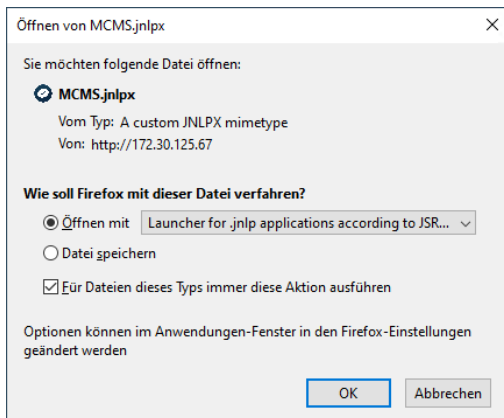
#### 4.1.4 Starting the MCMS user interface for the first time

To start the MCMS user interface for the first time after installing OpenWebStart, open the start-page again (see Chapter 4.1.1).

On the start-page click the link “**Start MCMS User Interface**”. When the browser asks what to do with the **MCMS.jnlp** file, choose to open it. If the browser in question does not start files directly, save the file and start it by double-clicking it.

In the following are some examples on how to start the MCMS.jnlp file in different browsers, after clicking the “Start MCMS User Interface” link:

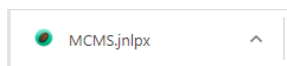
##### Firefox



The “**Open with**” option should already be active and show “Launcher for .jnlp applications according to JSR-56”. This is the name under which OWS is registered as an application. Check the option to always automatically do this action when opening files of this type and click “**OK**”.

##### Chrome

Chrome does not ask what to do with the file and saves it to disk. Just click on the download in the bar at the bottom to start the MCMS user interface:



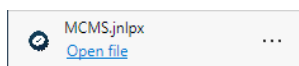
##### Internet Explorer

Click “**Open**” to start the MCMS user interface.



##### Edge Browser

The Edge Browser does not ask what to do with the file and saves it to disk. Just click on the “**Open File**” link in the bar at the bottom to start the MCMS user interface:



After starting the application, you will shortly see a splash screen from Karakun:



Next, OWS will download the JVM necessary to start the application as also the application from the local webserver.

On the following dialog, you can choose if you like to have a Start-Menu entry and/or a desktop shortcut. You can always remove the application either through the shortcuts in the Start-Menu or in the OpenWebStart Settings by clearing the cache, if no shortcuts were created on the last install (see Chapter 6.1.2). To reinstall after clearing the cache, go to the start-page and click "Start MCMS User Interface" again.

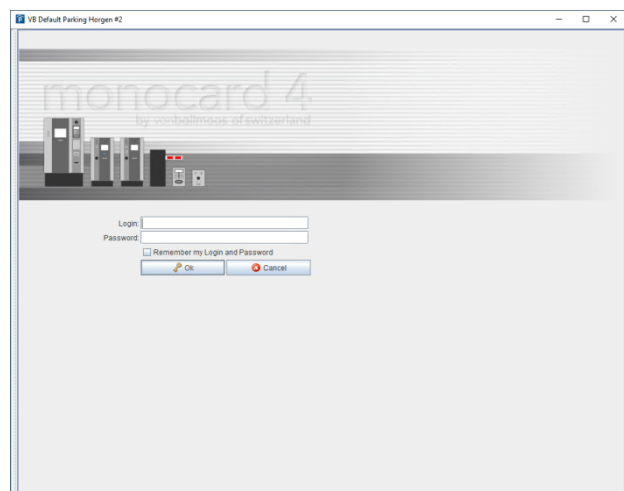


To finish, press "OK".

The MCMS user interface now opens.

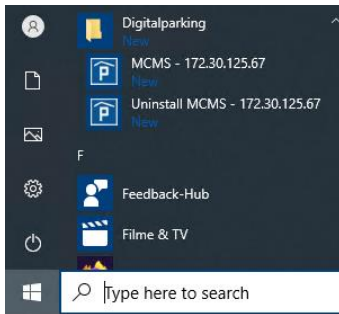
The first time the MCMS user interface is started through OpenWebStart, the credentials have to be entered again.

If you like to store the credentials, set the tick on "Remember my Login and Password".



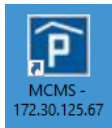
#### 4.1.5 Starting the MCMS user interface after first start

If you did not change the options during the first start, you have a shortcut on the desktop as also a menu entry in the Windows Start-Menu. Both will directly start the application:



Windows Start-Menu:

Shortcut on Desktop:



It is also always possible to just visit the MCMS start-page to start the application.

## 4.2 Removing OpenWebStart

OpenWebStart can be uninstalled like any other Windows program.

## 4.3 Managing several parkings from the same computer

The webstart shortcut and the menu entries have the IP or the domain of the webserver in its name. This makes it possible to have several instances of the MCMS for different webserver (parkings) on the same computer.

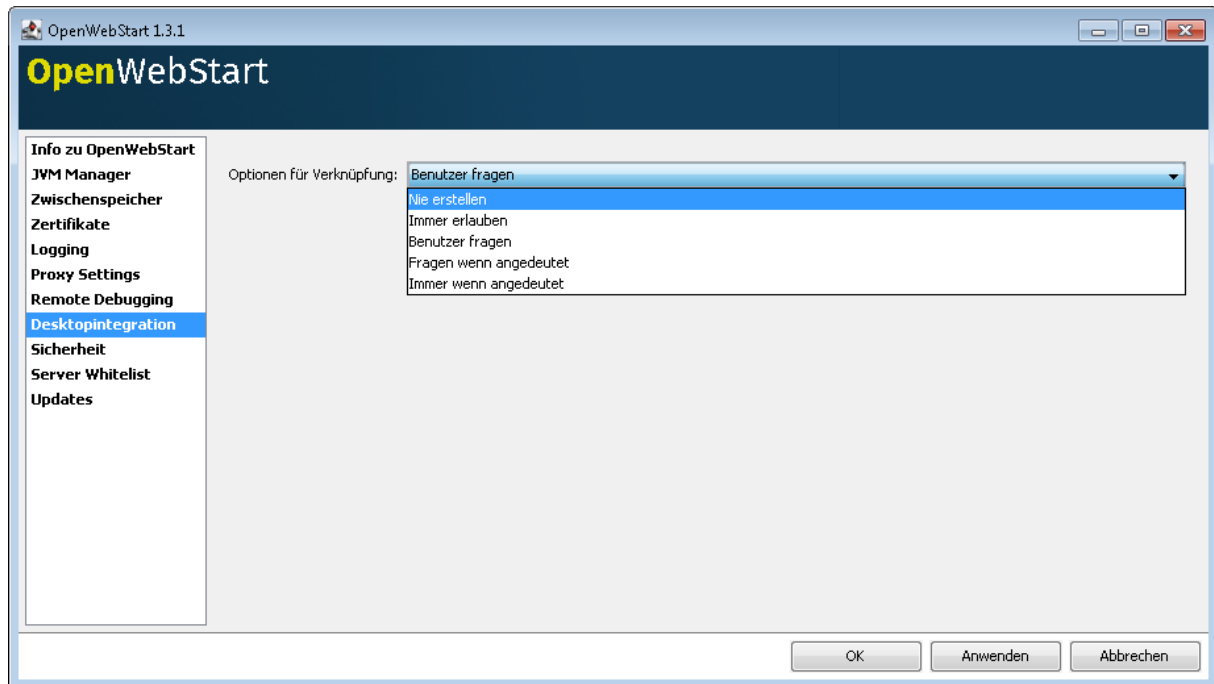
There is nothing special to be done in order to have several MCMS user interfaces for the different parkings. Just start the MCMS user interface as described in chapter 4.1.4 for all the different parkings, which will create shortcuts and menu entries as needed.

### 4.3.1 Set custom names for the shortcuts (enable/disable shortcut creation)

The automatically created shortcut name contains the IP address of the parking. If a shortcut is renamed, OWS will ask on the next start of that shortcut, if it should be re-created (as it could not find it by the name it had assigned).



When clicking "Ok", the shortcut containing the IP in the name will be recreated. To prevent this behavior, the following setting can be disabled in OWS:



When the option for shortcuts is set to the first entry “**Nie erstellen**”, no new shortcuts will be created. This can be reset to “**Benutzer fragen**” at any time, if new shortcuts should be created again.

## 4.4 OWS and third-party applications (running other OWS applications)

If OWS is installed from the webserver startpage, we do lock some of the configuration-properties available in OWS (by providing a “\*.varfile” for the installation). This makes sure that setting which is required by our deployment are not accidentally changed.

The locked properties do not prevent any other third-party application from running. So it should not be necessary to unlock any of the properties. In any case, below is described which properties are locked and the reason for locking them.

### 4.4.1 Local OWS settings/Unlock a property (deployment.properties)

The settings which are predefined in the “\*.varfile” are written to the file **deployment.properties**. After installation this file can be modified manually if necessary (the “\*.varfile” is only used at installation time).

For Windows the file is located at:

**`${USER_HOME}\.config\icedtea-web\deployment.properties`**

For MacOS and Linux the file is located at

**`${USER_HOME}/.config/icedtea-web/deployment.properties`**

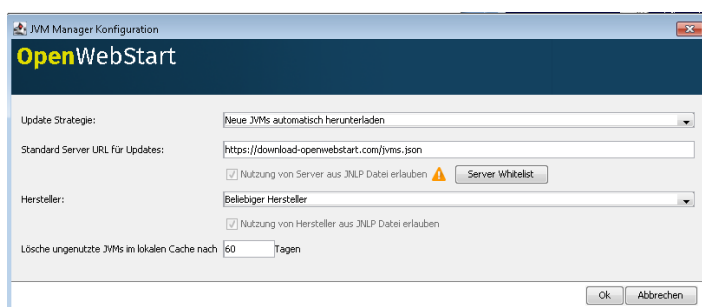
So if already locked properties should be unlocked, either OWS has to be reinstalled (without the “\*.varfile”) or the lock-property must be removed from the deployment.properties file.

### 4.4.2 JVM Manager

Locked properties (both set to true):

- ows.jvm.manager.server.allowFromJnlp
- ows.jvm.manager.vendor.allowFromJnlp

**In order for third-party applications to run, these two options do not need to be changed.** If they must be disabled (unticked), it is for enhanced security reasons. When disabled, the jnlp file is not allowed to provide these values.



These two options (active but grayed out options in Image) make sure, that the JVM is downloaded from our webserver. This guarantees fast download speeds for the JVM as also stability by providing only tested JVMs.

If the property “ows.jvm.manager.server.allowFromJnlp” is disabled, it must be ensured that the JVM repository at the given URL can provide a JVM with **Version >= 11**. If the property “ows.jvm.manager.vendor.allowFromJnlp” is enabled at the same time, the available JDK must be from the vendor “**AdoptOpenJDK**”.

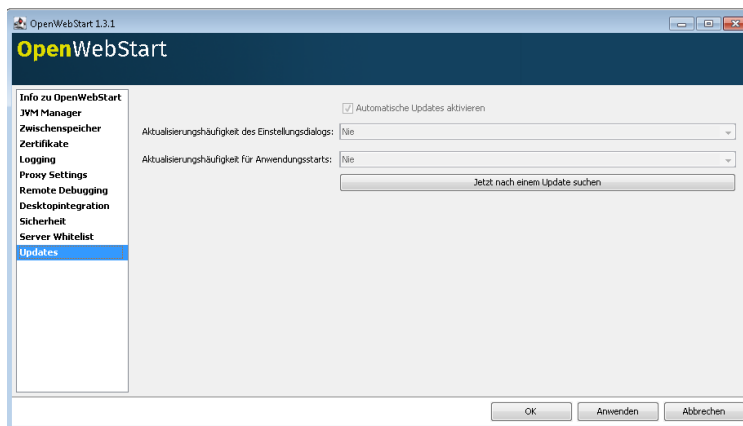
If the property “ows.jvm.manager.server.allowFromJnlp” is enabled and “ows.jvm.manager.vendor.allowFromJnlp” is disabled, either all vendors must be allowed or “AdoptOpenJDK” must be chosen.

If **both** properties are disabled, it must be ensured that the JVM repository at the given URL can provide a JVM with **Version >= 11**

#### 4.4.3 Updates

Locked properties (both set to false):

- ows.update.strategy.settings
- ows.update.strategy.launch



This configuration prevents OWS from updating itself automatically. This is done for stability and makes sure that in case an update from OWS would break something, it is not automatically downloaded and installed. It is still possible to update OWS manually by clicking the button.

## 5 Configuration if the webserver is only reachable through NAT

The following is targeted at system administrators. It explains the necessary setup for using a domain-name instead of working with IP addresses due to NAT (Network Address Translation).

If NAT is used, Digitalparking AG has to be informed and will set up the webserver so it uses the domain-name assigned to it.

### 5.1 Firewall ports to forward

The firewall protecting the webserver needs to forward port **80** and **4080** to the webserver.

### 5.2 Hosts file or DNS server entry

It must be guaranteed, that the webserver can be reached through its domain-name from each client computer which attempts to run an MCMS user interface. This can be achieved by using the hosts file or adding DNS entries to the DNS server used by the client.

## 6 Troubleshooting

### 6.1 Re-installing the MCMS user interface in OpenWebStart

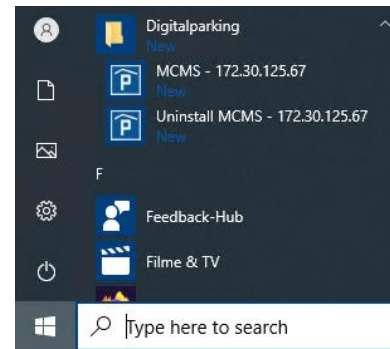
Sometimes it can be necessary, to re-install the MCMS user interface in OpenWebStart. For example, if you chose not to create a menu entry or desktop-shortcut when starting the MCMS user interface for the first time (see chapter 4.1.4), but you would like to have them now. In that case, just uninstall the MCMS user interface and start it again through the start-page, which will re-install it.

#### 6.1.1 Uninstalling the MCMS user interface from OpenWebStart

If you did not change the options during install, you have a windows start-menu entry to uninstall the application from OpenWebStart.

After choosing “Uninstall MCMS - 172.30.125.67” the application is removed from the start-menu as also from the OpenWebStart cache.

If you have no Windows start menu entry, remove the application through the cache (see next chapter).



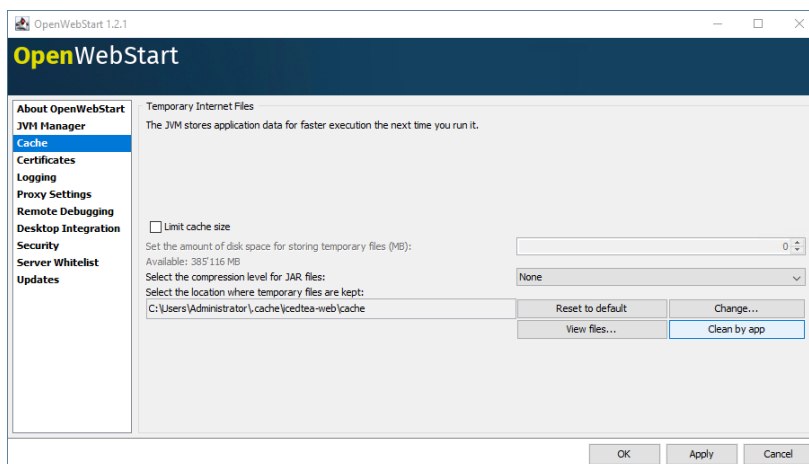
#### 6.1.2 Clearing the cached files for the MCMS user interface in OpenWebStart

To remove an application from OWS, the following is necessary:

- Removing the application from the OWS cache
- Removing the shortcuts

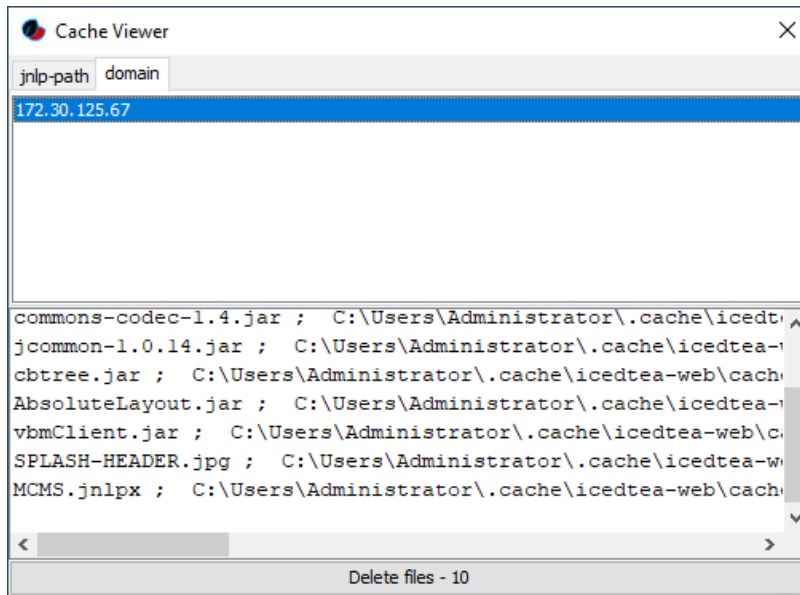
Uninstalling as described in 6.1.1 will do both. If the application was never installed with shortcuts, clearing the cache will uninstall it.

To remove the MCMS application from the OpenWebStart cache, open the OpenWebStart Settings and chose “Cache”:



Click “Clean by app” which opens a mask with two tabs. Select the second tab “domain” and click on the entry corresponding to the IP or Domain used to reach the webserver.

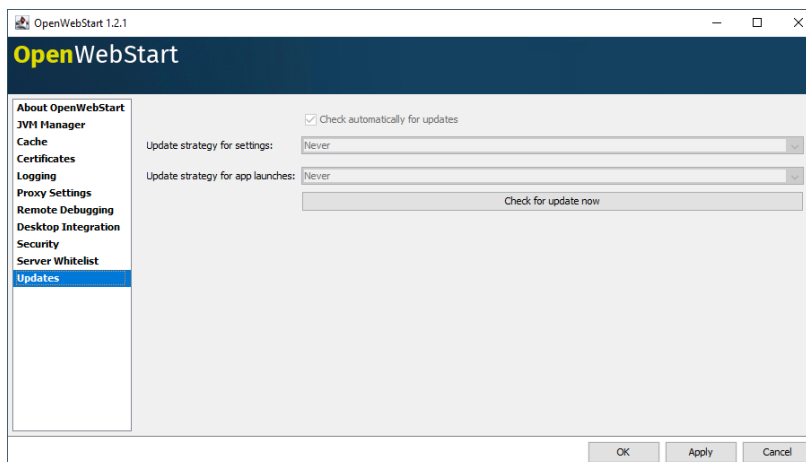




Now you can click “**Delete files - xx**” at the bottom to delete the cached files.

## 6.2 Updating OpenWebStart

If there is a problem with OpenWebStart, Digitalparking could ask the client to update OpenWebStart to the latest version. In order to do that, open the **OpenWebStart Settings** through the Windows start menu and click on “**Updates**”.



There you can click on “**Check for update now**” and install it, if a newer version is available.

It is also possible, that the installer already knows about a new version. In this case, the button will show a different message and a click on the button will update to that version.