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# **powerJobs Client**

**coolOrange s.r.l**

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# POWERJOBS CLIENT

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## INSTALLATION

### 1.1 Requirements

As powerJobs Client is an extension to *Vault Applications*, the [Vault system requirements](#) defined by Autodesk leads.

**Operating System:** 64-bit only

- Microsoft Windows 10
- Microsoft Windows 11

**Autodesk Vault Client:** 2024 / 2023 / 2022 / 2021

- Vault Professional
- Vault Workgroup

**coolOrange powerEvents:** [powerEvents](#) gets installed automatically

- Needed to automate your workflows which utilize the Job Processor, e.g. to automatically submit publishing jobs on Lifecycle State changes in a much smarter way than the standard features in Vault do.

### 1.2 Setup

The powerJobs Client setup is delivered as an executable and accepts the standard windows installer arguments documented [here](#).

To accept the products EULA when starting the setup in silent mode pass the **ACCEPT\_EULA=1** argument.

### 1.3 Install Locations

powerJobs Client is installed in the following locations on your system:

- All program libraries are placed in *C:\ProgramData\Autodesk\[Vault Version]\Extensions\powerJobs Client*

Following shared libraries are installed in *GAC*:

- coolOrange.logging.dll
- coolOrange.VaultServices\_[Vault Version].dll

Following shortcuts are added to the start menu:

- **powerJobs Client** - Opens the default web browser with the [Getting Started](#) page
- **powerJobs Client Logs** - Opens the log file location

- **powerJobs Client Information** - Opens the About dialog with product related information
- **powerJobs Client License Information** - Opens the [License Information dialog](#) to activate the product

## 1.4 Updates

To install a newer version of powerJobs Client just execute the setup file of the new version. This will automatically update the files in the existing installation.

## 1.5 Uninstall

In case you want to remove powerJobs Client from your computer you can:

- Execute the setup file again. This will give you the option to repair or remove powerJobs Client. Click on “Remove” to uninstall the program.
- Go to “Control Panel - Programs and Features”, find “coolOrange powerJobs Client for Vault” and run “Uninstall”.

## ACTIVATION AND TRIAL LIMITATIONS

### 2.1 Trial limitations

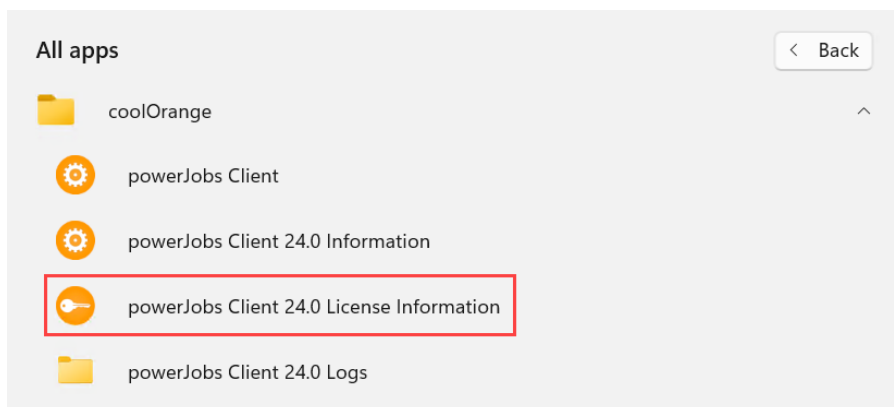
There is no difference in functionality between the trial version and the fully licensed product. After the installation the product is available as a trial version for *30 days*.

### 2.2 Activation

The product can be activated during or after successfully evaluating the product. For *manually activating* the product following Dialog can be used:

#### 2.2.1 License Information

Open the Start Menu and navigate to “All Apps → coolOrange → powerJobs Client 24.0 License Information” shortcut.



## 2.2.2 Command-line

Launch the License Information tool located in the install directory with the required [Command-line arguments](#).

**Example:** Activating a [Stand-Alone license](#) using a serial number:

```
"C:\ProgramData\Autodesk\[Vault Version]\Extensions\powerJobs Client\License.exe" --  
↪ StandAlone --Serialnumber="XXXXX-XXXXX-XXXXX-XXXXX"
```

For more information about activating the product, see [Licensing](#).

## 2.3 Licensing Options

### 2.3.1 Stand Alone Licensing

This product supports the Stand-Alone licensing model which is charged based on the time the license is valid and the number of seats the license is valid for.

For further information see the detailed description of the [Stand-Alone licensing model](#).

In the [License Information Dialog](#) the *remaining days* until the license expires can be found.

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#### License expired

When the license expires, powerJobs Client will just show a notification about the expired license and no longer show notifications about jobs.

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#### Offline activation

The serial number of the license and the [machine code](#) are required to generate an activation file.

The activation file for an [offline activation](#) can be generated and downloaded on the following site: [powerJobs Client - Activation file generator](#)

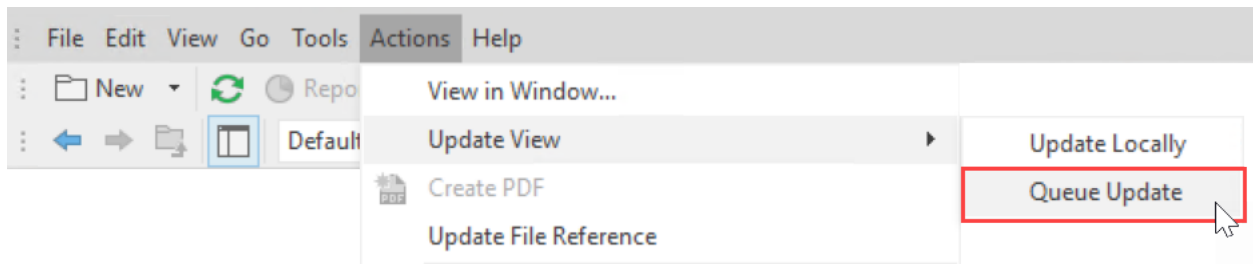


## GETTING STARTED

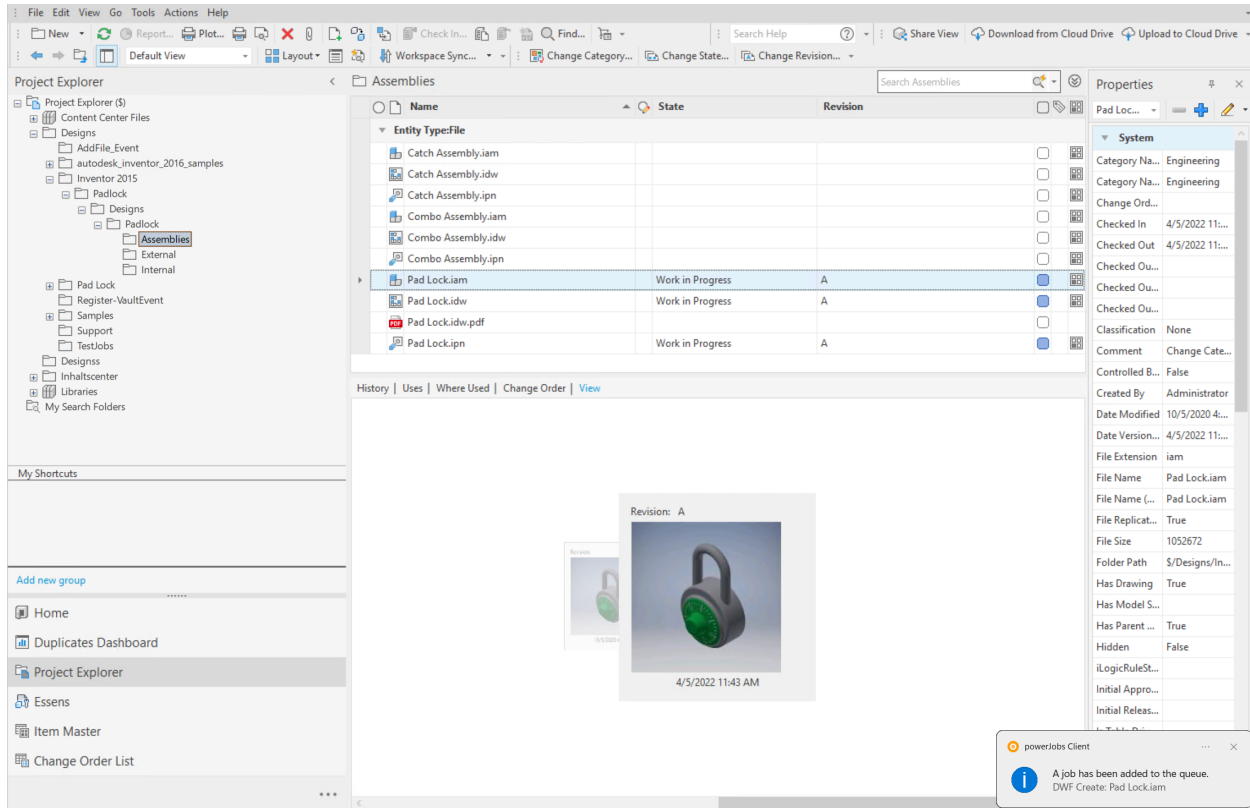
An overview of powerJobs Client, how to use, examples, and more.  
To see detailed information about the supported notifications [see here](#).

### 3.1 Trigger notifications within Vault

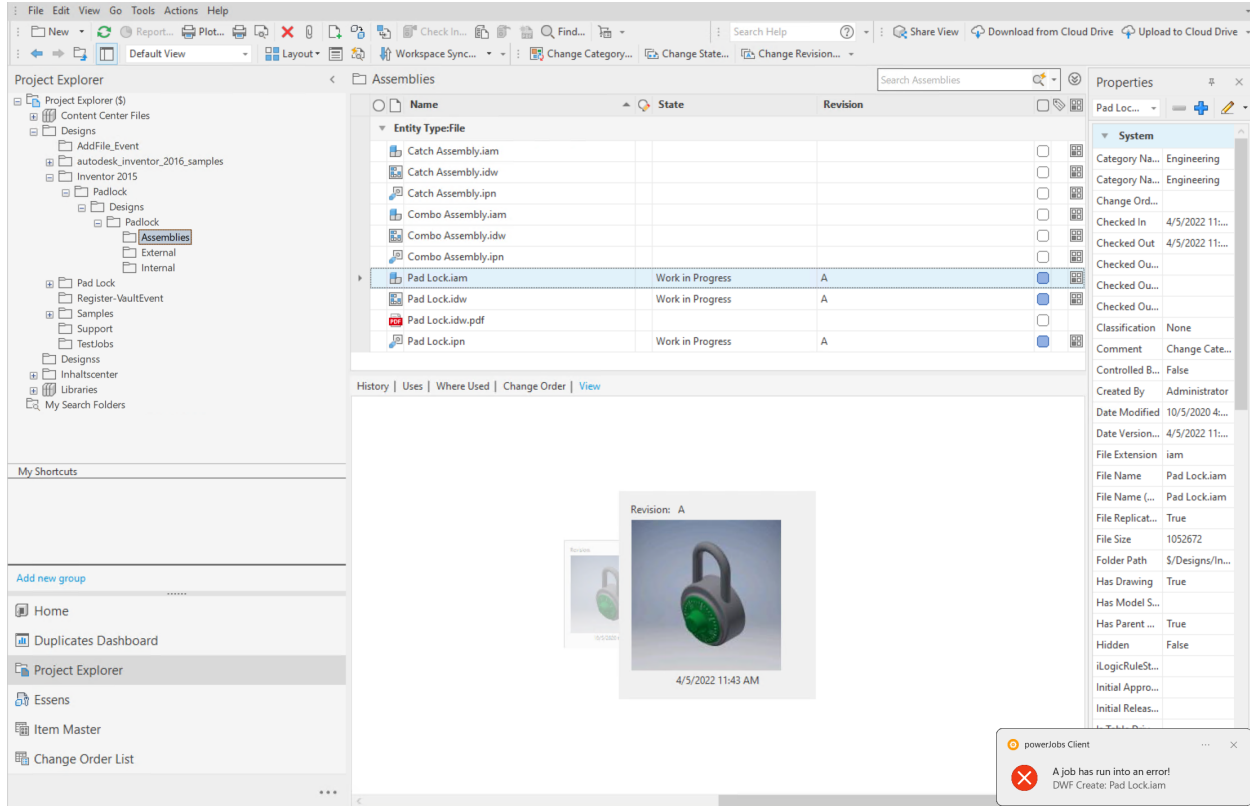
#### 3.1.1 Open the Vault Client and queue DWF job for a file



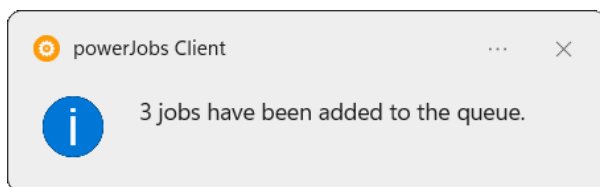
### 3.1.2 User receives notification for queued job



### 3.1.3 If the job fails, the user will receive a notification for the erroneous job



**Note:** In case *multiple jobs* are triggered at the same time in a short time period the user will not get flooded with notifications, instead he receives a single notification.



## 3.2 Good to know

powerJobs Client is primarily used to monitor jobs that are submitted directly within the Vault Client, or with the help of [powerEvents](#) and [powerVault](#) within client customizations.

However, it can also be easily *configured* to become active in other processes which use a **VDF Vault connection**, for example in:

- Inventor
- AutoCAD
- AutoLoader
- JobProcessor

- powerJobs Processor

Because powerJobs Client is a Vault *WebServiceExtension* it can be loaded in *every application* which uses the **Autodesk.Connectivity.WebServices.dll**.

## CONFIGURATION

The *powerJobs Client.config* file defines the scope of application of powerJobs Client. E.g. for which applications powerJobs Client will be loaded by using a VDF Vault connection.

The file is located under *%LOCALAPPDATA%\coolOrange\powerJobs Client\powerJobs Client.config*.

Per default powerJobs Client is configured to be loaded in the following applications: *Vault Professional*, *Vault Workgroup*, *Inventor* and *AutoCad*.

In the configuration the application name represents the actual process name.

Default configuration:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <Settings>
3     <Applications>
4         <Application name="Acad" />
5         <Application name="Inventor" />
6         <Application name="Connectivity.VaultPro" />
7         <Application name="Connectivity.VaultWkg" />
8     </Applications>
9 </Settings>
```

### 4.1 Changing the default configuration

In case you want to add or remove applications from the scope of powerJobs Client, follow these steps:

1. Open the folder *%LOCALAPPDATA%\coolOrange\powerJobs Client\*
2. If there is no *powerJobs Client.config*, create it by copying the above default configuration. Otherwise go to step 3.
3. Edit the file with an editor. We recommend XML editors like the [XML Notepad](#) from Microsoft.
4. Add a new application element with the desired *process name* of the application or change/remove an existing application element
5. **Restart** the according application

### 4.1.1 Example: Add the PowerShell ISE

If we want powerJobs Client to be loaded in an **IDE** like the PowerShell ISE while debugging powerEvents *customization scripts* or when scripting with *powerVault*, we have to extend the config file with a new application.

The process name of the PowerShell ISE is *powershell\_ise* and is added as a new entry:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <Settings>
3     <Applications>
4         <Application name="Acad" />
5         <Application name="Inventor" />
6         <Application name="Connectivity.VaultPro" />
7         <Application name="Connectivity.VaultWkg" />
8         <Application name="powershell_ise" />
9     </Applications>
10 </Settings>
```

## NOTIFICATIONS

powerJobs Client notifies the user about changes in the Vault Job Queue.

These notifications will pop up in the **Notification Center** (also known as *Action Center* or *Info Center* on Windows 10 workstations).

Afterwards the number of received notifications is displayed in the lower-right corner of the taskbar:



Missed notifications can be checked by clicking on this taskbar icon.

The following types of job notifications are displayed:

*(Their appearance may vary depending on the version of Windows you are using)*

### 5.1 Job(s) Added

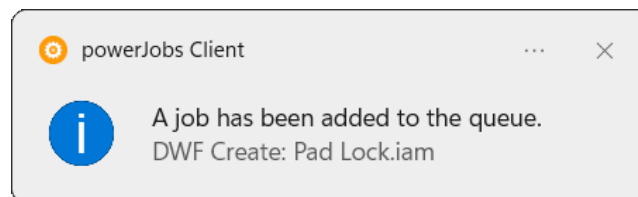


Fig. 1: *Duration: Volatile (Max. 5 seconds)*

#### 5.1.1 Submit Jobs to the Job Server

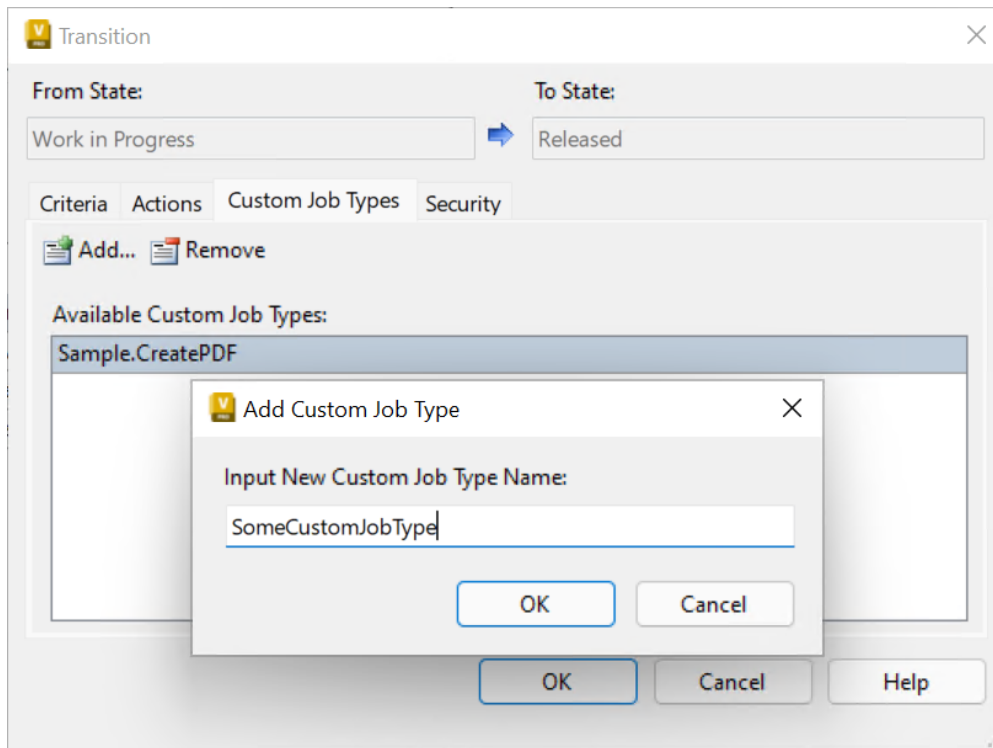
When the application (Vault, Inventor, AutoCAD) submits a new job to the Job Queue, the *Job Added* notification is displayed.

Jobs can be submitted through:

- Submit a single Visualization attachment Job with the Client
- Submit multiple Visualization attachment Jobs with the Client
- Submit a Visualization attachment Job During Check-In
- Submit a Job with the powerJobs Settings Dialog

### 5.1.2 Submit Jobs automatically based on Lifecycle State Change

When the Vault application (Vault Client, Inventor, AutoCAD) performs a lifecycle state change, and certain job types are configured to be triggered from the Vault-Server based on the lifecycle transition, the *Added* notification is displayed.



Via Vault Client it is possible to configure jobs only for *Files*, *Folders*, *Items* and *Custom Objects*. It is possible to configure jobs to be submitted to the job server automatically on lifecycle state changes through:

- Synchronize properties in a lifecycle state transition
- Custom jobs in a lifecycle state transition
- Custom jobs fired for a lifecycle state transition on ChangeOrders

### 5.1.3 Submit Jobs automatically based on custom logic

- Submit a job by registering to Vault events via powerEvents

**Note:** The user gets notified either for jobs which are submitted by *himself*, or *automatically* from the Vault-Server (e.g. on a lifecycle state change).



## 5.2 Job(s) Failed

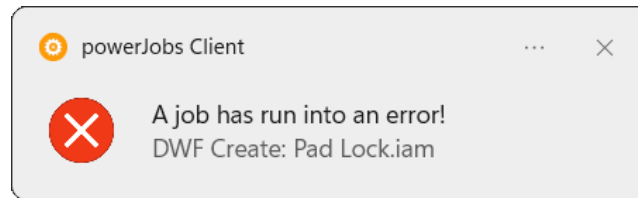


Fig. 2: *Duration: Persistent (Max. 3 days)*

In case a job that was added by the user terminates with an error, the *Job Failed* notification is displayed. If this happens during the absence of the user and the Vault application was closed, the notification will be displayed right after the next Vault login.

Users will not be informed if their failed jobs were removed from the Job Queue or re-submitted in the meantime.

## 5.3 How it works

The powerJobs Client waits until the user *submits a new job* to the Vault Job Queue.

After that, the Job Queue is **constantly checked** (every 5 seconds), in order to check the states of the desired jobs from the user.

To reduce the **Vault API calls to a minimum**, the polling mechanism runs only right after starting a Vault application and when a new job gets queued.

It retrieves only the required job information's in an intelligent way so that not every time all jobs have to be retrieved. Finally, depending on the job state, notifications will be displayed to the user and when all his jobs are done this functionality is paused.

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### Required User permissions

In order for powerJobs Client to work properly, the user requires the [permissions](#) to read and add a Job to the Vault Job Queue, e.g:

- *Document Editor (Level 1)*
  - *Document Editor (Level 2)*
- 

If **one job** changes its state multiple times within the above-mentioned polling interval, then only the notification for the **last state** will be displayed.

This means for instance if your job is submitted, processed and run on error in less than 5 seconds, you will receive only the notification of the error.

If **multiple jobs** change their state multiple times within the above-mentioned polling interval, then the *error notification* has the **highest priority** and will be displayed.

That means for example if you submit 20 jobs, all of them are processed but 10 run on failure (*all happens in less than 5 seconds*), then the notification for the failed jobs will pop up and the notification for the succeeded ones will go into the Notification Center.

Further adjustments for the displayed notifications can be configured in the Windows [System Settings](#).

Change notification settings

For example, all “powerJobs Client” notifications of all Vault applications can be easily deactivated here (the *configuration file* allows to specify for which individual applications powerJobs Client should be loaded at all).

## System > Notifications

Notifications from apps and other senders

Sort by: Most recent ▾



powerJobs Client  
Banners, Sounds

On



Privacy  
Banners, Sounds

On



Startup App Notification  
Off

Off



## LOGGING

powerJobs Client uses [Apache log4net](#) as core logging library, and additionally [PostSharp Diagnostics](#) for extended Debug logging.

By default, all the logs are stored in a logfile located in 'C:\Users\{USER}\AppData\Local\coolOrange\powerJobs Client\Logs\powerJobs Client.log' and it contains only Infos, Warnings and Errors.

The log4net settings file is located in C:\ProgramData\Autodesk\Vault {Version}\Extensions\powerJobs Client\powerJobs Client.log4net.

Further information about log4Net Configurations can be found [here](#).

### 6.1 When to change the logging behavior?

When you have issues or when you want to get a more detailed knowledge about what went wrong, you can increase the [Logging Levels](#).

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**Note:** When changing the loglevel to *DEBUG* [PostSharp Diagnostics](#) will be enabled and will log all the function calls into the log files.

This could cause performance issues.

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### 6.2 LogFile

You can see, that there is just one logging-Appender, thats the *FileAppender*:

```
<appender name="FileAppender" type="log4net.Appender.RollingFileAppender">
```

If you want to change the [Logging Levels](#) for the logfile, please visit in the configuration file in the lines:

```
<root>
  <level value="INFO" />
  <appender-ref ref="FileAppender"/>
</root>
```

In that root element, you can configure the logginglevel for all appenders. You could set the level to "DEBUG", than all the appenders will log in debug.

In the line

```
<param name="File" value="${LOCALAPPDATA}\coolOrange\powerJobs Client\Logs\powerJobs_↵  
↵Client.log" />
```

you can configure the outputpath and name of the logfile.

## CHANGE LOGS

### 7.1 powerJobs Client v24

#### 7.1.1 v24.0.9

05-03-2024

##### General

- Updated powerEvents to version: [24.0.12](#)
  - This fixes occasional issues with the standard [SubmitJobsOnVaultMenuItemClick](#) script on Vault 2021 environments, where the Vault Client may freeze on login.
  - This fixes issue that when trying to *transfer a Content Center library locally to the Vault Server* using the Library Transfer tool in Inventor, the process fails with an Error MessageBox:  
“*You must log into Vault server with Content Center Administrative rights to transfer libraries to the server.*”

#### 7.1.2 v24.0.8

23-02-2024

##### General

- Updated powerEvents to version: [24.0.11](#)

#### 7.1.3 v24.0.6

24-01-2024

##### General

- Updated powerEvents to version: [24.0.9](#)

### 7.1.4 v24.0.5

16-01-2024

#### General

- Updated powerEvents to version: 24.0.8.  
This fixes compatibility issues with LoginVault\_Post events.

### 7.1.5 v24.0.4

17-10-2023

#### General

- Updated powerEvents to version: 24.0.7

### 7.1.6 v24.0.3

01-09-2023

#### General

- Updated powerEvents to version: 24.0.6

### 7.1.7 v24.0.2

11-08-2023

#### General

- Updated powerEvents to version: 24.0.4
- Updated Licensing to version: 18.3.1

### 7.1.8 v24.0.1

24-04-2023

#### General

- Added support for Vault 2024
- Updated Licensing to version: 18.2.29
- End User License Agreement (EULA) has changed

## 7.2 powerJobs Client v23

### 7.2.1 v23.0.9

17-04-2023

#### General

- Updated powerEvents to version: 23.0.20

### 7.2.2 v23.0.8

07-03-2023

#### General

- Updated powerEvents to version: 23.0.19

#### Fixed

- Issue with *Setup* that after upgrading it was not longer possible to uninstall via Programs & Features, when the Setup file of the previous installation was renamed or removed

### 7.2.3 v23.0.7

15-12-2022

#### General

- Updated powerEvents to version: 23.0.12

### 7.2.4 v23.0.6

07-12-2022

#### General

- Updated powerEvents to version: 23.0.11

### 7.2.5 v23.0.5

30-09-2022

#### General

- Updated powerEvents to version: 23.0.7
- The setup has been extended to provide a dependency key that is required for other product setups that depend on powerJobs Client

#### Fixed

- Issue where the setup uninstalled powerEvents and powerVault after upgrading powerJobs Client to a newer version

## 7.2.6 v23.0.4

12-09-2022

### Fixed

- Issue where *Notifications* were no longer shown when running in the powerVault console

## 7.2.7 v23.0.3

23-08-2022

### General

- Updated powerEvents to version: 23.0.6

## 7.2.8 v23.0.2

02-08-2022

### General

- Updated powerEvents to version: 23.0.5

## 7.2.9 v23.0.1

21-04-2022

### Features

- Added support for Vault-, Inventor- and AutoCAD 2023

### Fixed

- Vulnerability in *Logging* configuration files by updating *log4net* to v2.0.14 (CVE-2018-1285)

## 7.3 powerJobs Client v22

### 7.3.1 v22.0.4

01-02-2022

### Features

- *powerEvents* is automatically included in the installation

### General

- Updated Licensing to version: 18.2.27



### 7.3.2 v22.0.3

10-05-2021

#### Fixed

- Issue in which no notification was displayed when jobs were created with [Add-VaultJob](#)

### 7.3.3 v22.0.1

29-04-2021

#### Features

- Added support for Vault-, Inventor- and AutoCAD 2022

#### General

- Updated Licensing to version: [18.1.24](#)
- End User License Agreement (EULA) has changed

## 7.4 powerJobs Client v21

### 7.4.1 v21.0.7

08-03-2021

#### Features

- After Vault applications are closed and later restarted, *Error notifications* inform about previously queued jobs that failed in the meantime

### 7.4.2 v21.0.6

20-01-2021

#### General

- Updated Licensing to version: [18.1.22](#)

### 7.4.3 v21.0.5

21-12-2020

#### General

- Updated Licensing to version: [18.1.21](#)
- Copyright notices have changed

### 7.4.4 v21.0.4

08-06-2020

#### Fixed

- Compatibility-Issue with other coolOrange products using an older *Logging* version

### 7.4.5 v21.0.2

04-05-2020

#### General

- Renamed *jobWatcher* to *powerJobs Client*

### Breaking Changes

#### License Registration

The *License* has to be registered again using the same *SerialNumber* or *ActivationFile*.

#### Configuration file

If the *configuration file* has been customized, it has to be renamed from '*jobWatcher.config*' to '*powerJobs Client.config*' and moved from '*%LOCALAPPDATA%\coolOrange\jobWatcher*' to '*%LOCALAPPDATA%\coolOrange\powerJobs Client*'

#### Registry Keys

Changed registry keys from '*HKEY\_LOCAL\_MACHINE\SOFTWARE\coolOrange s.r.l.\jobWatcher*' to '*HKEY\_LOCAL\_MACHINE\SOFTWARE\coolOrange s.r.l.\powerJobs Client*'

### 7.4.6 v21.0.1

29-04-2020

#### Features

- Added support for Vault, Inventor and AutoCAD 2021

#### General

- End User License Agreement (EULA) has changed
- Updated Licensing to version: 18.1.17
- Added *jobWatcher Information* shortcut to startmenu
- Removed *jobWatcher Help* shortcut from startmenu as it can be accessed via *jobWatcher Information* shortcut
- Removed Splashscreen

#### Fixed

- Issue that *License notification* was shown for disabled *Applications*

## 7.5 jobWatcher v20

### 7.5.1 v20.0.7

05-11-2019

#### General

- Updated Licensing to version: 18.0.10

### 7.5.2 v20.0.6

20-08-2019

#### General

- Updated Licensing to version: 18.0.8

### 7.5.3 v20.0.5

24-07-2019

#### Fixed

- Issue that no License notification is shown when jobWatcher is loaded

### 7.5.4 v20.0.4

29-05-2019

- Official Release

#### Features

- Added support for Token Licensing
- Added support for *Stand-Alone Licensing*

#### General

- End User License Agreement (EULA) has changed
- Updated Licensing to version: 18.0.7
- *Trial mode* expires after 30 days

### 7.5.5 v20.0.1-beta

18-01-2019

#### Features

- Added support for Vault, Inventor and AutoCAD 2020 (BETA)

## 7.6 jobWatcher v19

### 7.6.1 v19.0.5

01-10-2018

#### General

- Updated Licensing to version: 17.0.3

### 7.6.2 v19.0.4

23-04-2018

- Official Release

#### General

- replaced Log4PostSharp with [PostSharp Diagnostics](#) for extended Debug logging
- Re-enabled extended Debug [Logging](#) for Vault 2019
- Assembly *coolOrange.VaultServices\_[Vault Version]* gets installed into the GAC

### 7.6.3 v19.0.1beta

23-01-2018

#### Features

- Support for Vault, Inventor and AutoCAD 2016 - 2019 (BETA)

#### General

- User gets notifications for jobs *added* to the Queue or when a job is triggered by a *lifecycle change*
- Users gets notifications for jobs running on *error*
- Added *standard logging* with installation into GAC
- jobWatcher can be *configured* for which applications it will be loaded

<b>Warning:</b> Extended Debug <a href="#">Logging</a> is disabled for Vault 2019
---



powerJobs Client is the client component of [powerJobs Processor](#), which gets installed on all your Vault workstations. As Vault extension it notifies the user about changes in the Autodesk Job Server queue in the form of client notifications.

In addition, with the help of [powerEvents](#), all your workflows that use the Job Processor can be automated in an easy way.

For example, it is possible to automatically submit publishing jobs on Lifecycle State changes in a much smarter way than the standard features in Vault do.