OL™ Connect
Send

User Guide

Version 1.4.5.304

OL Connect Send Connect Send User Guide

2018-10-24

OBJECTIF LUNE Inc.

2030 Pie-IX, Suite 500

Montréal, QC, Canada, H1V 2C8

http://learn.objectiflune.com

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What is Connect Send?

Connect Send is an application with two components. The first is a Windows printer driver and the second includes a set of Workflow plugins. These two components work together – they cannot be used on their own.

Connect Send allows for PostScript files to be received over the internet from any Windows Desktop application. It can be used in unlicensed mode and licensed mode.

The **Unlicensed mode** (default) allows users to push documents to **Connect Send**. They will receive a pop-up message in the Notification Area confirming whether the job was received or not. **No web interaction is possible**.

The **Licensed mode** causes the **Connect Send** printer driver to request a web page which will be displayed in the user's browser in order to allow them to enter job specific information. The information from this web page can be used to tell **Connect Workflow** what to do next.

Connect Send, in licensed mode, can be used to create custom interactive workflows from a centralized location, yet has the ability to be deployed and installed very easily.

Features List

OL Connect Send:

- Allows free of charge non-interactive printing over the internet.
- Can be licensed in **User mode** so that specific users (domains/workstations) can print and receive an interactive web page during the job submission process. The number of jobs that can be printed is unlimited.
- Can be licensed in **Click Charge mode** so that <u>any</u> user can print from <u>anywhere</u> and receive an interactive web page during the job submission process. In this mode, **Connect Send** requires credits which are reduced after each job received by the server.
- General
    - Compresses PostScript files during transmission to minimize bandwidth.

- Unlicensed mode
  - Non-interactive job submission.
  - Free to use.
  - Confirms job transmission with a message in the Notification Area.
- Licensed mode
  - Interactive job submission possible.
  - Launches the user's default browser to display web content produced by a Connect server.
  - Database containing domain, workstation ID, document information and page count information.

Main steps in OL Connect Send

The main steps in the functioning of **OL Connect Send** are:

1. A user prints a document to a printer using the **OL Connect Send Printer Driver**.
2. The resulting print job is captured by the printer driver code, zipped up, and, if applicable, split into multiple chunks.
3. The chunks are transferred to the **Workflow** process and received by the **Job Processor** plugin (see "Job Processor plugin" on page 39).
4. The plugin communicates with the printer driver to ensure that all data has been received correctly.
5. The plugin combines all the chunks into a .7z file and then unpacks it to the original print job. This is a Postscript file.
6. The plugin stores the print job at a specified location with a specified name.
7. The plugin creates a **Workflow** metadata file for the print job, containing basic job information (See License Modes – Basic Mode, below).
8. The plugin (if licensed) stores all job related info in a database.
9. The plugin returns a status message to the client, indicating a successful or failed job transfer.
10. The plugin sends the license status to the **Printer Driver**.
11. The **Printer Driver** (if licensed and interactive) will launch a browser window and send an HTTP request to **Workflow**. The result of the receiving interactive process (see "Get Job

Data plugin" on page 43) will be displayed in the browser. If the plugin is not licensed, or the license is exceeded, this HTTP request is suppressed and the **Printer Driver** will not launch a browser window.

12. The **Printer Driver** will display status information using the Notification Area (also called "system tray").

Installation

Printer driver

The OL Connect Send Printer Driver must be installed on a dedicated machine and a Windows printer must be set up using this driver. Additionally several settings regarding the host for sending print jobs have to be set. All this is done with the Printer Driver installer; see "Installing OL Connect Send Printer Driver" on page 11.

Any OL Connect Send Printer Driver with a version number less than 1.0.5 should be uninstalled before installing the newest Printer Driver.

1. Open the Windows Control Panel and click **Programs and Features**.
2. Select **OL Connect Send Printer Driver** and click **Uninstall**.

Workflow Plugins

The set of plugins is installed **automatically** with Workflow 8.6 and up.
However, if you have already installed the pre-released plugins in Workflow 8.5, these plugins must first be uninstalled, before updating to Workflow 8.6 and up. Please follow these steps:

1. Make a backup of the **Connect Send** database.
   uninstalling **OLCS** plugins will also remove the database (**OLCSDB.script**) with all the job information collected until that date. The database, however, can be retained by making a copy before it is uninstalled and then copying it back after the new installation.
   a. Copy the content found in **%programdata%\objectif lune\cpd** to a safe place. Do not copy any of the other sub folders found under **%programdata%\objectif lune**.
2. Uninstall the **OLCS** plugins:
   a. Open the Windows Control Panel and click **Programs and Features**.
   b. Select **OL Connect Send plugin** and click **Uninstall**.
3. Uninstall any previously installed OL Connect Send printers.
4. Proceed with the Workflow 2018.1 update.
5. Copy the database back to **%programdata%\objectif lune\cpd**.

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Moving Workflow to another machine

When moving Workflow to a different machine, it s important to move the OL Connect Send database (OLCSDB.script) to the other machine as well. The database includes all job information collected to date.

1. Make a backup of the **Connect Send** database: copy the content found in **%programdata%\objectif lune\cpd** to a safe place. Do not copy any of the other sub folders found under **%programdata%\objectif lune**.
2. After installing Workflow on the other machine, copy the database back to **%programdata%\objectif lune\cpd**.

Prerequisites

Below is a list of components required for the use of **OL Connect Send**:

- PlanetPress or PReS Connect 1.5 and above
- Workflow 8.5 and above
- OL Connect Send:
    - OL Connect Send Printer Driver
    - OL Connect Send plugins. These are built in in Workflow as of version 8.6.1.
- An OL Connect Send license (required for interaction to take place)

System Requirements

plugin

The **Job Processor** plugin is designed to work with the Workflow module (**Workflow**) of PlanetPress Connect and PReS Connect (**Connect**) which means it will run on any operating system by those products.

Printer Driver

The **OLCS Printer Driver** can be installed and used with the following Windows versions:

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- Windows 7, 32 and 64-bit
- Windows 8.1, 32 and 64-bit
- Windows 10, 64 bit
- Windows Server 2008 R2, 64-bit
- Windows Server 2012 R2, 64-bit
- Windows Server 2016.

> **Note**
>
> For installation on a Windows Server system (2008 and higher), it is a mandatory prerequisite that at least one role is activated or installed before running the OL Connect Send Printer Driver installer.

The following Windows versions are not officially supported:

- Any Windows version prior to Windows 7
- Windows 8.0
- Windows Server 2008 32-bit as well as Windows Server 2008 prior to R2
- Windows Server 2012 32-bit as well as Windows Server 2012 prior to R2

HTTP

Communications between the **Printer Driver** and the plugin is achieved using HTTP. It is therefore necessary to ensure that HTTP interaction between all **Printer Driver** and server machines is enabled.

Browser

After print job submission, further interaction between the **OLCS Printer Driver** and **Workflow** is achieved using HTML. Browsers support and process HTML in different ways and so it is important to be aware of possible browser compatibility issues when creating interactive web pages.

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Installing OL Connect Send Printer Driver

> **Note**
>
> OL Connect Send Printer Driver can be found on Objective Lune's website at
> http://help.objectiflune.com.

Setup process – new installation

The following section describes the installation process for the **OL Connect Send (OLCS) Printer Driver**.

Starting the installation

Click the **OLCS_Printer_Driver_Setup_1.4.5.304.msi** file to start the **OL Connect Send Printer Driver** Setup.

> **Note**
>
> Do **not** run the installer from the TEMP folder. As this folder is known as a location from where malicious applications try to install themselves on a PC, it is under severe surveillance of Windows' protection systems, including SmartScreen, which will prevent the installation to protect the PC. Nevertheless, OL Connect Send is secure and it is Microsoft Certified, so it is guaranteed to be non-intrusive.

A message will be shown while the Setup program checks if all prerequisites are met and prepares the machine.
When the setup is prepared, this first screen appears, containing basic information.
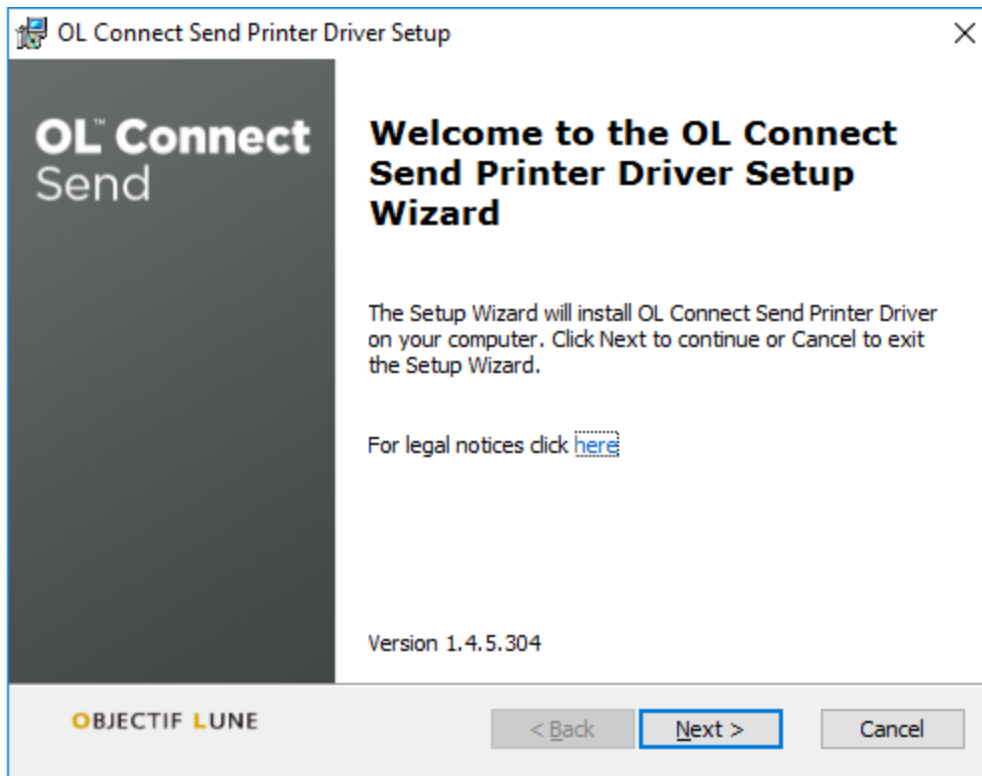
Please read the legal notices and acknowledgements.
Click **Next** to proceed.

EULA

The next screen shows the EULA. Please read and accept it to proceed further by clicking **Next**.

Communication URL settings

The URL for the data transfer is required for the HTTP connection with OL Connect Workflow (e.g. http://localhost:8080/olcs_transfer). This would be the **Workflow** process which accepts the relevant data. If the Workflow server is active, it is useful to test the connection.

For greater security, HTTPS can be selected as the connection; it is possible to set whether valid certificates only are accepted by the Workflow server in this regard. HTTPS is not configured in this solution and can therefore not be used unless modified.

If a license is valid for the local system and the interactive mode is activated, the action name has to be given for this (default: "olcs_interaction"). This would be the **Workflow** process that starts/executes the interaction.
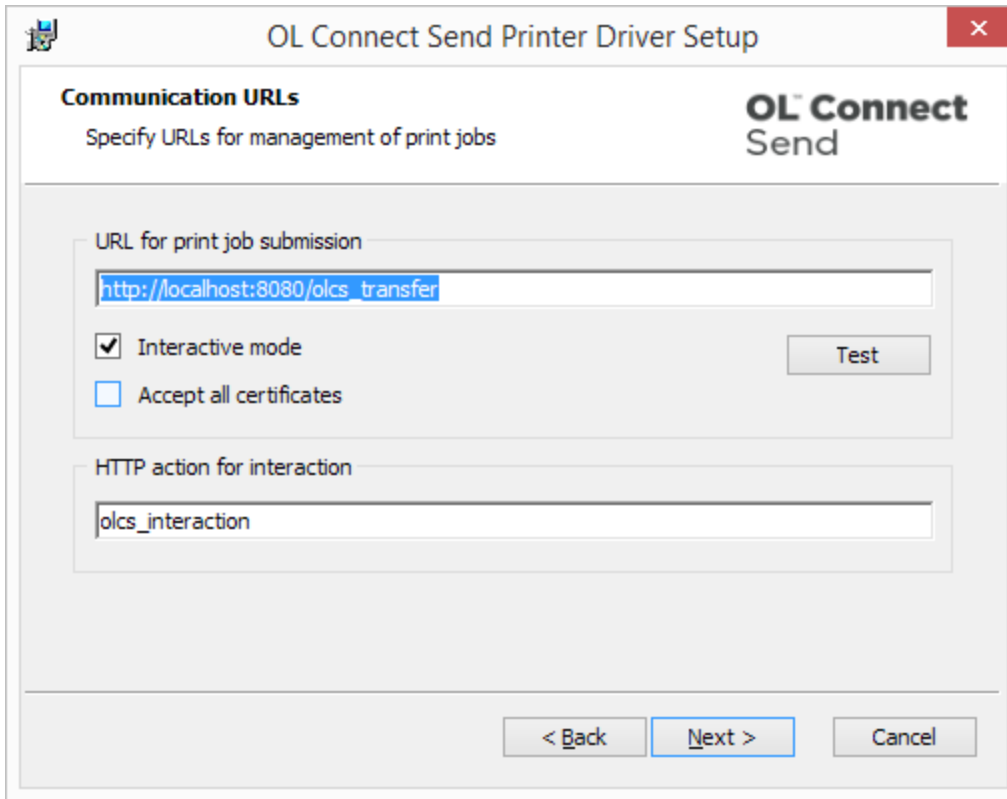
URL for print job submission

The **URL for print job submission** allows the URL for **Workflow** to be entered. This is the server that will capture and process print jobs.

It needs to be entered as a full URL, for example:

http://demo.objectiflune.com:8080/olcs_transfer

The required pattern is:

<protocol>://<host>:<port>/[<path>/]<http action>

- <protocol>: Sets the communication protocol and has to be either HTTP or HTTPS. Any other setting is invalid. As soon as HTTPS is set as protocol, the communication will

automatically run in protected mode (SSL).

> **Tip**
>
> For additional information about secure file transfer, HTTPS certificates and how to request a countersigned certificate, please see this page: [SSL HowTo](#).

- <host>: The host name or IP address of the target machine. This is either the computer where the related Connect Workflow is running or a gateway machine.
- <port>: The port entry is **mandatory**, even if the port should be one of the standard ones (80 for HTTP or 443 for HTTPS).
- <path>: Optional additional URL path components.
- <http action>: The HTTP action name as defined in the related Workflow HTTP Input plugin.

The **Test** button can be used to check if the URL is pointing to a machine with a correctly set up Connect Workflow with a HTTP Input plugin and the OLCS Job Processor plugin. If the test was successful, this will be indicated by the green text "Server is ALIVE, workflow running".

> **Note**
>
> 8080 is the default port for communications with **Workflow**, but it could be changed. Check this in the Workflow preferences under **plugin > HTTP Server Input 1 > Protocol options > Port**.

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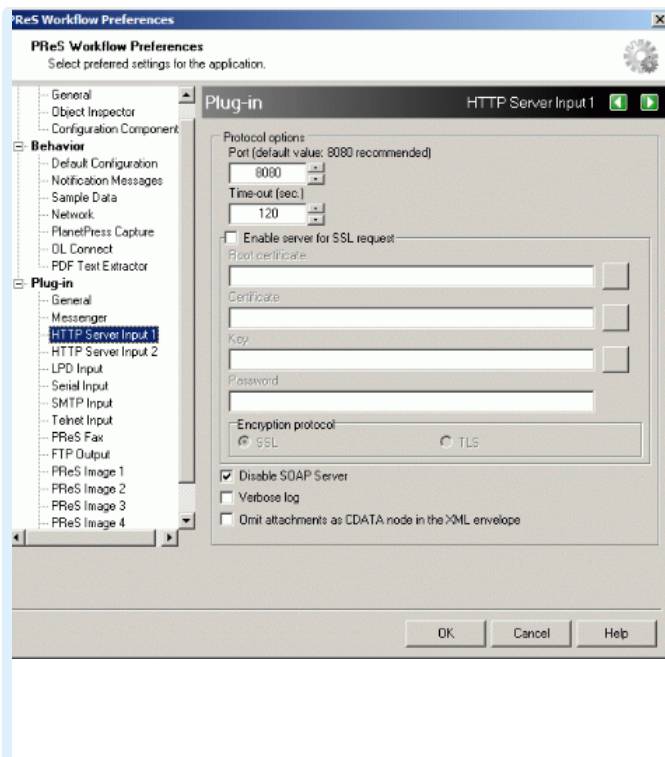
By unchecking **Interactive mode** you can set this specific printer to only send jobs to the server, without further user interaction. In that case, the printer will not pop up a browser window. Nevertheless, messages will pop up in the tray area, informing about transfer, success or failure.

When the Interactive mode is disabled, the HTTP action for interaction field also becomes disabled.

Accept all certificates: By default, if HTTPS is set as protocol (see above), the Printer Driver will only accept valid certificates on the server side for the transfer. However in some cases a self-signed certificate may be seen as sufficient for the transfer. In that case, the root validation of the certificate can be switched off by checking this option.

HTTP action for interaction

Enter the HTTP action as defined in the related Workflow HTTP Input plugin, including any path components.

The final URL for interaction is composed of the HTTP action for interaction and the protocol, host and port of the URL for print job submission, because both HTTP actions must run in the same Workflow.

> **Note**
>
> If the main URL for print job submission contains any path components, these must be added here as well.
>
> **Example**
> The URL for job submission is given as
> **http://demo.myhost.com:80/path/to/target/olcs_transfer**.
> The HTTP action for interaction must be entered as: **path/to/target/olcs_interaction**.

When done, click **Next** to continue.

Printer name and logging

In the Printer name and logging screen, you can set a name for the printer you wish to create and setup the logging level.

The printer names can be defined in the following step (default: OL Connect Send Printer #1), as can the feedback level (Debug, Info, Warn, Error).

> **Note**
>
> The printer name cannot be altered subsequently

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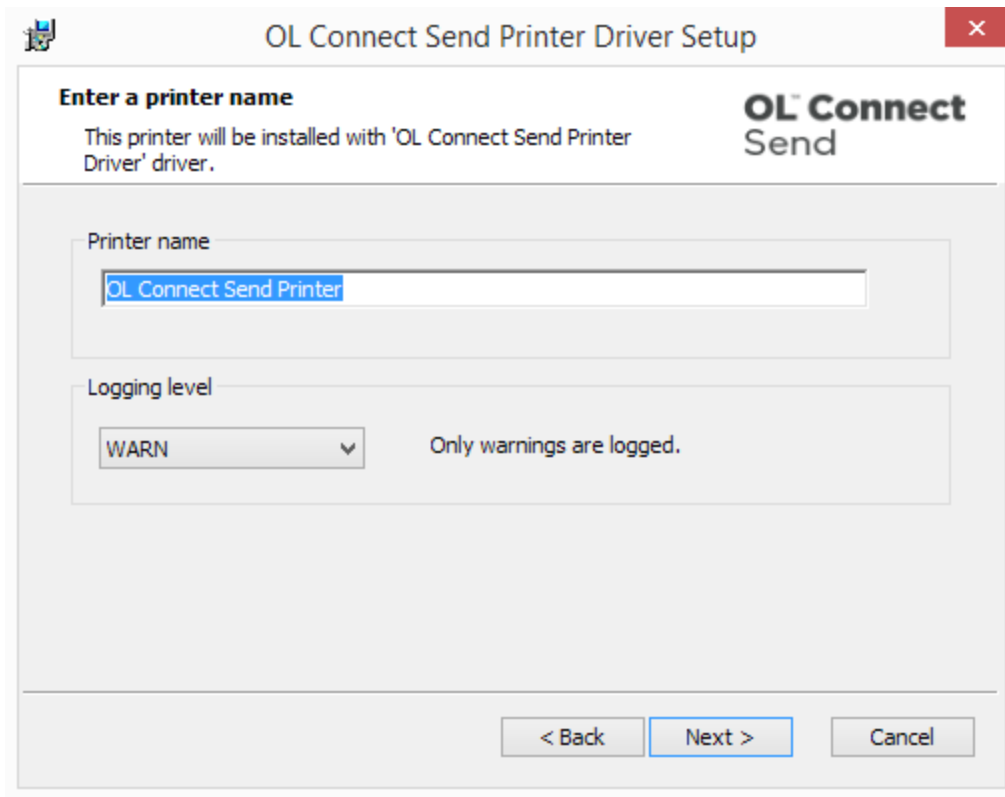
Printer name

By default the printer name is OL Connect Send Printer. If a printer with the same name already exists, a number is added and increased until no matching printer name is detected. This then becomes the proposed printer name in this dialog.

The printer name must consist of valid characters. Invalid, forbidden characters are:

- / = forward slash, 0x2F
- " = quote, 0x22
- \ = backslash, 0x5C
- * = asterisk, 0x2A
- : = colon, 0x3A
- ? = question mark, 0x3F
- < = less than sign, 0x3C
- > = greater than sign, 0x3E

- | = pipe symbol, 0x7C
- , = comma, 0x2C

> **Note**
>
> As opposed to the other settings, the printer name can't be changed after installation.

Logging

The **OL Connect Send Printer Driver** creates one log file per printer per day. (For information about all log files, see "Log files" on page 57.) The number of log messages can be set by choosing the log level. Available log levels are:

- **DEBUG**: Logs all messages and is intended to be used only for bug research. It is not recommended to have the log level set to DEBUG for a long period, as this will have an impact on the driver's processing speed. This mode will include INFO, WARN and ERROR messages too.
- **INFO**: Logs initialization messages. Administrators may choose this level for an initial installation to supervise the operation of the driver. This mode will include WARN and ERROR messages too.
- **WARN**: This is the default level and should be used for production use. In this mode log files may be empty: this is by design and indicates, that the printer and the driver work as expected. This mode will include ERROR messages too.
- **ERROR**: For users familiar to **OLCS**, this log level reduces the overhead to a minimum. It is intended for machines where **OLCS** has been working error free for several weeks.

> **Note**
>
> This setting has an impact on the number of messages shown and logged by the OLCS Notifier (see "OLCS Notifier" on page 28).

When done, click **Next** to continue.

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Finishing the installation

At this point Setup has collected the required information to install the printer driver and create it. The next screen will ask you to continue by clicking the **Install** button.

A progress bar is shown, while the installation process is running.

After a successful installation, the **Finish** dialog is shown. Click **Finish**.

> **Note**
>
> **Reboot requirement**
> Depending on what applications and Visual C++ runtimes already installed, a reboot may be required after the successful installation of the OL Connect Send Printer Driver. A respective dialog is shown to the user in this case, offering to do a restart right away or chose to do it at a later moment.
> If this message should be shown, a reboot is **mandatory** before using OL Connect Send, otherwise it may not work correctly!

Your **OLCS** printer driver is now installed:
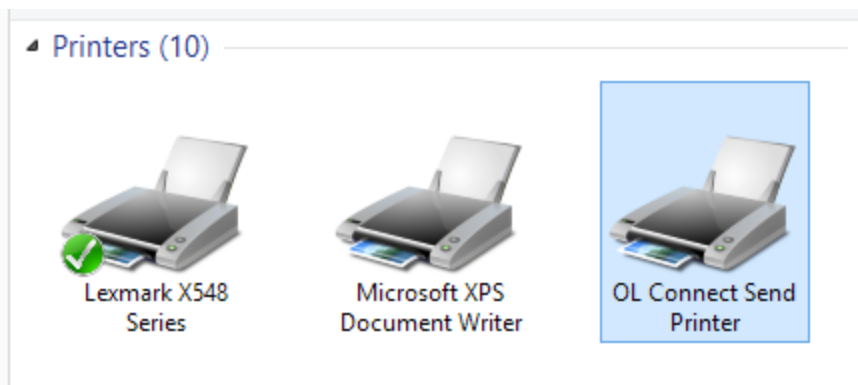
The OLCS Notifier

Once a printer driver is installed, an application called OLCS Notifier is also installed. It displays and logs information relating to the preparation and transfer of each print job. For more information see "OLCS Notifier" on page 28.

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Adding, modifying or deleting a printer

To install an additional printer, modify a printer or delete a printer, run the installer again.

The installer will detect that it's not being used for the first time and will present a different screen.
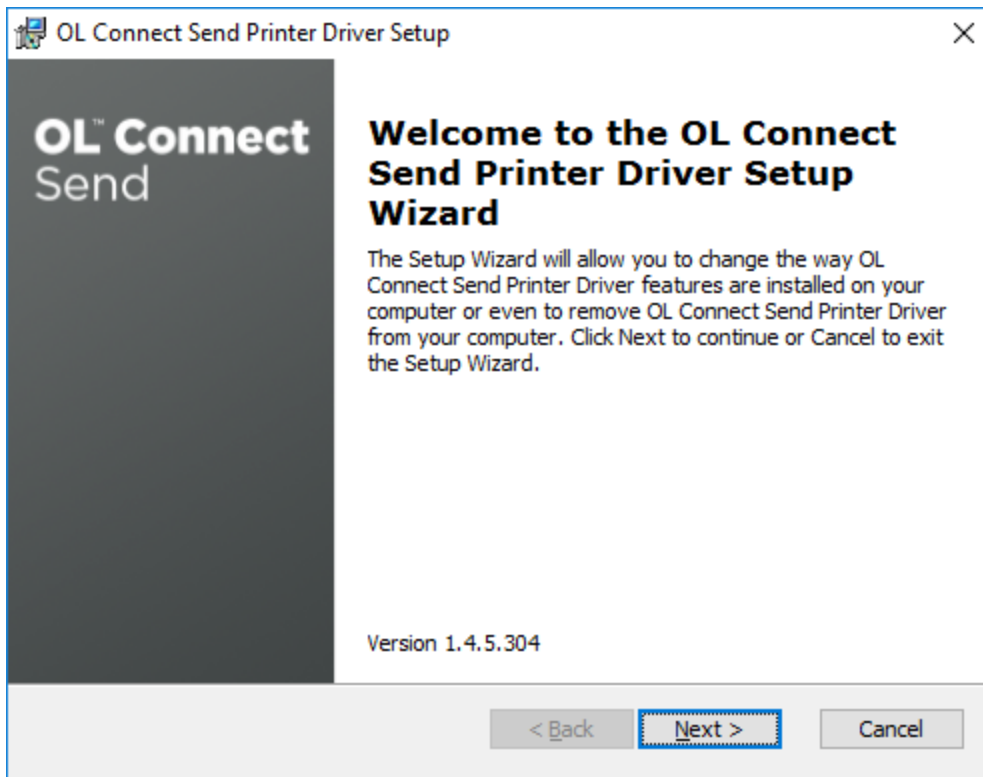
Clicking the **Next** button will bring you to the selection page where you can decide to:

- Add a printer.
- Modify the settings of an existing printer.
- Delete one or all existing printers.
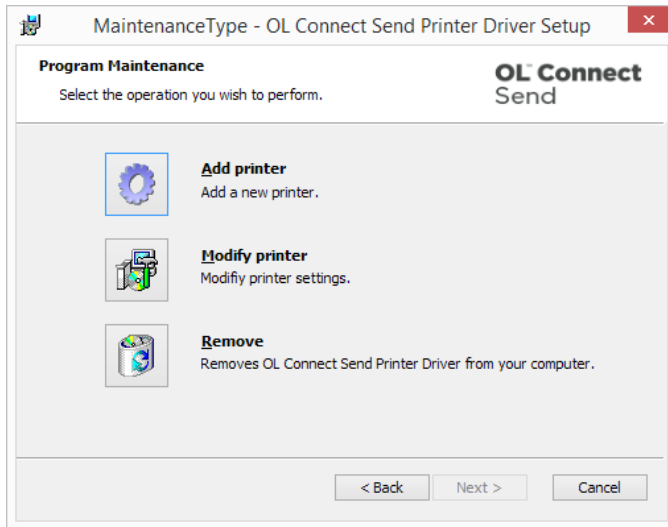
Adding a printer

The wizard pages that follow when clicking the Add printer button are the same as for a new installation. Each printer can have its own settings.

Modifying the printer settings

Depending on the number of printers already installed, you will either see the Wizard window or a dialog box from which you must select the printer you wish to modify.
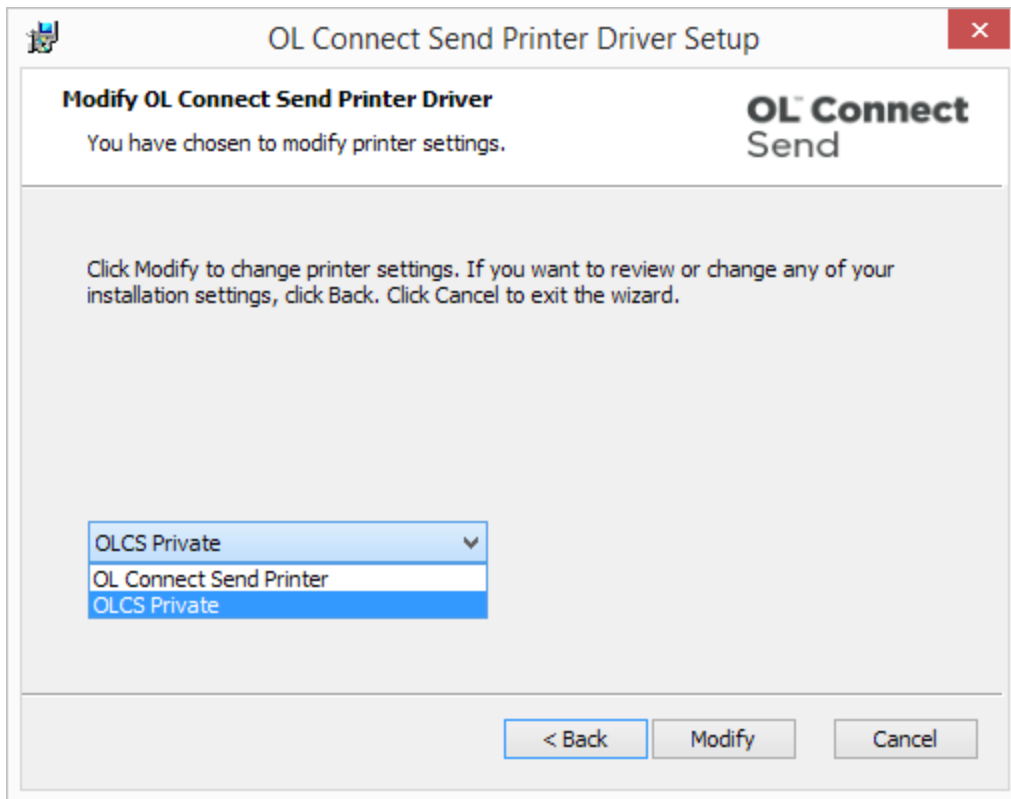
The wizard pages are the same again, so you can modify any of the values (e.g. if the host name has changed), except for the printer name which is grayed out and locked.

Removing a printer

Depending on the number of OLCS printers installed, you will either get a selection box to identify which printer to remove, or you can just delete the only one.

Updating the Printer Driver

When a newer version of the installer becomes available, the Connect Send Printer Driver can be updated by installing one new Connect Send printer with it (see "Adding a printer" on the previous page). It is not necessary to delete previously installed OL Connect Send printers: when the new driver is installed, this affects **all** existing OL Connect Send printers as well.

> **Note**
>
> Printers installed and running with the **pre-release** of Connect Send have to be removed before updating the Printer Driver (see also: "Workflow Plugins" on page 8).

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Shared Printers

The **OL Connect Send Printer Driver** is not a shareable driver. This is because the browser interaction cannot be routed through the print server to the end user's desktop. Also a shared printer would transfer the print server's machine name, user name, domain etc., thus invalidating the intended behavior.

So, **OL Connect Send Printer Driver** must be installed on each dedicated machine.

Managing multiple OLCS printers

Newer versions of Windows automatically group all printers that use the same driver under one single entry in the "Devices and Printers" dialog of the control panel. This means that if multiple printers have been set up with **OLCS**, only the first one will show up in this page. Microsoft has documented this behavior here: https://support.microsoft.com/en-us/kb/2015694.

Each printer can be managed individually however, by using the **context menu** of the printer and selecting the relevant context.
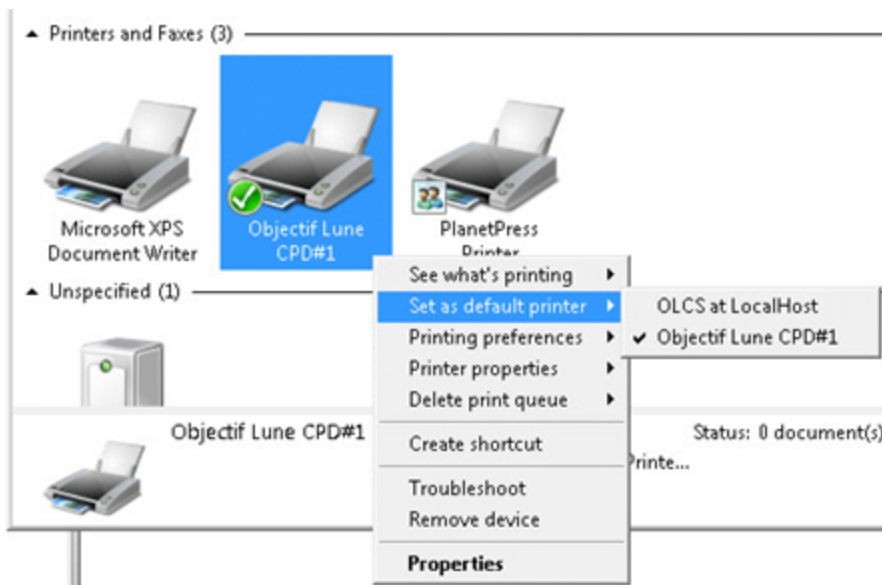
Mass deployment of the OL Connect Send Printer Driver

The OL Connect Send Printer Driver is intended to be installed on computers from which print jobs shall be sent to the respective Workflow server. Often such computers are part of specific domains on which end users are not allowed to install software on their own. Such users may not have the knowledge to install printers, and often dedicated restrictions and policies have to be taken into account.

By installing the OL Connect Send Printer Driver in a **silent, preconfigured mode** it is possible to distribute the setup to multiple end user machines without the need to visit these machines in person or via remote desktop. This topic explains how to do that.

Silent setup tool

To enable a mass deployment of OL Connect Send Printers to client machines, a tool is included in the delivery of the OL Connect Send Client installation package. This tool is named **OLCS_Printer_Driver_Silent_Setup_1.4.5.304.exe**. Whenever a non-GUI installation is required, this tool is to be used.

For unattended deployment, three files are required side by side in a dedicated folder:

- The Setup msi file (e.g. OLCS_Printer_Driver_Setup_1.4.5.304.msi)
- The Silent Setup tool OLCS_Printer_Driver_Silent_Setup_1.4.5.304.exe)
- An OLCSClient.ini with the desired settings; see "Configuration file content" on the facing page.

The deployment tool of your choice then only needs to run the Silent Setup tool and check its exit code.

> **Note**
>
> Note that the user account used to run the Silent Setup tool needs to have administrator rights for the installation of a printer, a printer port, a printer driver etc. Otherwise the installation will fail silently, but the respective log entries will be created (see "Installation errors" on page 27).

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Configuration file content

The silent installation mode will only work with a valid configuration file. The name of the file must be **OLCSClient.ini** and it must be located in the same folder as the Silent Setup tool. The content of the file must follow the rules for standard Windows .ini files (see: https://en.wikipedia.org/wiki/INI_file). If the .ini file is malformed, the installation will be terminated with an error.

Any omitted setting will be replaced by the respective built-in default value (see the table below), except for the printer name. Without a printer name setting, the silent installation will fail with the respective error.

The configuration file can contain the following values:

Section	Description	Default
[Setup]	Start with this section identifier. It must be the first entry and it is **mandatory**.	
HostName	Name or IP address of the machine where the corresponding Workflow with the OLCS plugins is running.	localhost
Port	Port number for the Workflow HTTP service.	8080
PrinterName	Name for the printer to create and configure. If a printer with that name already exists, the installer will modify the settings for that printer, following the configuration file. The installer will fail if the mentioned printer is not an OL Connect Send printer. There is NO DEFAULT printer name!	
LogLevel	Log level. Valid values are DEBUG, INFO, WARN and ERROR. For additional information about the log level, see "Logging" on page 18.	WARN

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Section	Description	Default
Interaction	Defines if the printer shall communicate with the Workflow server in interactive (setting = 1) or non-interactive (0) mode. Please be aware that interaction also relies on the presence and the possible exceedence of a license.	1
Secure	Defines if the communication shall use secure HTTPS (1) or not (0)	0
AcceptAllCertificates	Defines if the printer will accept any (1) or only validatable, officially signed certificates (0).	0
JobSubmission	Name of the HTTP action in Workflow for the initial job submission process.	olcs_ transfer
JobInteraction	Name of the HTTP action in Workflow for the interaction process.	olcs_ interaction
StartTBN	Defines if the taskbar notifier (OLCS Notifier) is started during the setup process (1) or not (0). When set to 0, the OLCS Notifier will not be started until the user logs in. **Note** **Set StartTBN to 0** for mass deployment of the Printer Driver. Starting the OLCS Notifier during setup in a silent installation will lead to issues when the user logs in. This setting is only valid with the very first installation of OL Connect Send. If the OLCS Notifier is not running and the setup is started again on a machine where at least one OL Connect Send printer is	1

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Section	Description	Default
	already installed, the OLCS Notifier will not be touched by the setup.	

Reboot requirement

Depending on what applications and Visual C++ runtimes already installed, a reboot may be required after the successful installation of the OL Connect Send Printer Driver.

In this case the silent installer will:

- Return the exit value 3010 (= "Reboot required". See e.g. Windows installer error codes).
- Log a respective message in the log file.

The administrator needs to make sure, that the respective machine is rebooted so that OL Connect Send can work as expected.

Installation errors

When the installation fails, the error level value can be evaluated to check for success (errorlevel = 0) or failure (errorlevel <> 0). It is up to the installing person to react upon this error level.

To confirm that a silent installation was successful, it is also possible to check the installation log file. The log file contains information about the installation and all possible issues. The file path and name are:

%ProgramData%\Objectif Lune\CPD\log\Installation Logs\ClientInstaller-<YYYY-MM-DD>.log

Silent update

To update the driver silently, use the Silent Setup tool to deploy an existing OL Connect Send printer. It is not necessary to delete any previously installed Connect Send printers.
When the new driver is installed, this affects all existing OL Connect Send printers as well, but the installer will only change the settings of the printer mentioned in the configuration file (see above).

The installer will fail when trying to install an older version than the one that is already installed.

OLCS Notifier

Once an OL Connect Send Printer Driver is installed, an application called OLCS Notifier is also installed. It displays information concerning the preparation and transfer of each print job.

The OLCS Notifier resides in the Windows taskbar, in the notification area (also called "system tray" or "status area"). It shows up with the OL Connect Send icon.
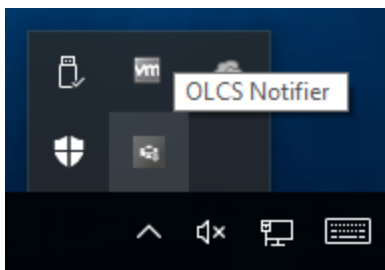
The OLCS Notifier will show each OL Connect Send printer message with a standard Windows balloon speech bubble.
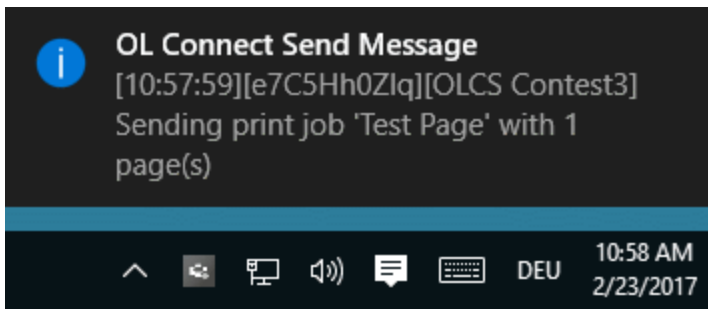
Logged messages

To view the messages logged by the OLCS Notifier, right-click the OLCS Notifier icon in the notification area and select **Show**.

This brings up the OL Connect Send Messages window with all the notifications arrived at the OLCS Notifier since installation or since the list was last cleared (using the Clear List button).

Depending on the log level of the respective printer (see "Logging" on page 18), the messages are more or less verbose and contain information about the Job ID and the printer name.
The amount of messages depends on the log level set for the printer in question.
Regardless of the log level however, any information about success or failure of a print job transfer will be shown.

When the log level is DEBUG, the messages will be formatted like this:

[<HH:MM:SS>][<JobID>][<Printer Name>] <Message>

- [<HH:MM:SS>]: The timestamp in 24 h format embedded in brackets.
- [<JobID>]: The Job ID of the print job in question.
- [<Printer Name>]: The full name of the respective printer as defined by the user and seen in the list of printers.
- <Message>: The respective message.

When the log level is higher than DEBUG, the messages will be formatted like this:

[<Printer Name>] <Message>

However in any case for any ERROR log message the message will be formatted like this:

[<JobID>][<Printer Name>] <Message>

Stopping and restarting the OLCS Notifier

To stop the OLCS Notifier, right-click the icon in the notification area and select **Exit**.

To restart it, either click **Taskbar Notifier** in the Start menu (under Objectif Lune), or run it from the folder:

%programfiles(x86)%\Objectif Lune\CPD\App

Changing the UDP communication Port

Each OL Connect Send Printer Driver sends its messages to the OLCS Notifier via UDP. By default port 8090 is used, but it can be modified by setting a different port number in the registry under:

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- HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Objectif Lune\ConnectSend\TaskbarNotify on 64bit Windows
- HKEY_LOCAL_MACHINE\SOFTWARE\Objectif Lune\ConnectSend\TaskbarNotify on 32bit Windows

The key must be named **UDPPort** and must be of type **REG_SZ**.

The OLCS Notifier will check this entry when it is (re)started and keeps it as long as it is running. The OL Connect Send Printer Driver is checking this entry on each job transfer.

> **Note**
>
> A change of the UDP port requires a restart of the OLCS Notifier to become active.

Known Issues

Installing OL Connect Send on a machine with Connect installed

When OL Connect Send plugins are installed (either via the pre-release of Connect Send or via a Workflow installation) on the same machine as Connect, an interference between OL Connect Send's internal database and that of Connect may occur, causing the browser popup to be blocked.

This issue can be fixed by applying a startup wait to the Connect Server Service. If the issue occurs during runtime, restarting the Connect Server Service will fix the issue.

OL Connect Send issues under Microsoft Edge browser

1. Issues with using the built-in Windows 10 default "Administrator" account and the OL Connect Send Client. This is due to Windows disallowing the opening an Edge browser whilst running under this account. This blocks interaction with the printer driver.
2. The Microsoft Edge browser fails to display web pages when Workflow's CORS option (in the HTTP Server Input 2 section) is set to "*". This issue will be resolved in a future release.

Printing PDF files with Adobe Acrobat Reader

It is recommended not to use Adobe Acrobat reader to print PDF files with OL Connect Send. Print the source file (e.g. the Word file) whenever available. If PDF files are to be printed with OL Connect Send, use a different PDF viewer instead.

Adobe Acrobat Reader produces its own PostScript file, rather than passing the PDF to the OLCS Printer Driver to generate a PostScript file. This doesn't hinder the transfer of the file, but Adobe Acrobat Reader's own PostScript file sometimes lacks information about the original PDF, which may cause errors in the processing of that file and in the interaction following the transfer.

One known issue is that if the PDF contains a PostScript font (Type 1 in Adobe Acrobat Reader), an "error retrieving character data" may occur in Workflow's Execute Data Mapping task during the data mapping of the received file. In that case the data will be corrupted and no preview will be shown in the web template.

Paper Size vs Printer Page Size

It is important to ensure that paper size settings match the printer driver settings. If this is not done, it's possible that the print job transferred to **Connect Send** may include some extra white space on the page. In interactive mode, this can be seen, but in non-interactive mode the job will be processed without notification.

License modes

OLCS can operate in three different modes but they cannot be mixed on a single **Connect** system. The three modes are: **Basic**, **User** and **Click Charge**.

The Basic, unlicensed mode:

- allows non-interactive job submission.
- is free to use.
- confirms job transmission with a message in the Notification Area (also called the "system tray").

The User and Click Charge modes are licensed modes in which:

- interactive job submission is possible.
- the user's default browser is launched to display web content produced by a Connect server.
- the Connect Send database is filled with domain, workstation ID, document information and page count information.

When a license is exceeded, Connect Send functions in unlicensed (Basic) mode.

> **Note**
>
> As long as **Workflow** is still running in the default trial period of 30 days, **OLCS** will behave as if it was licensed.

Basic mode

Basic mode is free to use. This is the default mode. An OL Connect Send license is NOT required.
This **Basic** or **Unlicensed mode** allows users to push documents to **Connect Send**. They will receive a pop-up message in the Notification Area confirming whether the job was received or not, but the printer driver will not request another web page, so **no web interaction is**

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possible.

Workflow will not save any information in the database (see "Job Processor plugin" on page 39).

User mode

User mode requires a license for each domain or subdomain submitting jobs. A (sub)domain license can be obtained to allow 10, 25, 50, 100, 200 or unlimited (Enterprise) users to print. Each (sub)domain needs its own domain/user license, but multiple domains/users licenses can be added to a single **Connect** system to allow job submissions from multiple domains.

The user mode license is actually bound to the world wide unique combination of (sub)domain and machine name. This means multiple users sharing a single machine will be counted as a single user by the license.

For each incoming job, the domain and machine's name (Unique User Slot Identifier or UUSI) are combined and matched against the license. The following checks are done:

1. If the **UUSI** already exists, the job is accepted.
2. If the **UUSI** does not exist then,

    - If one is available, this new **UUSI** will be added and the number of free user slots reduced. The job will be accepted.
    - If one is not free, the system will check to see if there is any **UUSI** that has not been used during the last 30 days. If found, it will be replaced by the new user and the job will be accepted.
    - If one is not available, it will still be accepted, but only in **unlicensed mode**. The end user will get a message indicating that the job was received in unlicensed mode.

No page count checking is done for this mode.

Click Charge mode

Where the domain and the number of users is unknown at the point of sales – for example a public service driven by users creating their own accounts via the web for onboarding

documents -, the Click Charge license can be used. It allows any number of domains and users to submit jobs into the Connect system, providing credits are available.

1. This mode enables the **Printer Driver** to request a web page (which could include a preview of the document) from **Connect**. For each job that is received, the Job Processor plugin records key data in the database.
2. One click equals one page (any size) of the submitted print job. The number of copies (if used) is recorded in the database, but not used for click calculations.
3. The click charge for all incoming jobs is counted upon receipt, but if a job fails for any reason, then the click count is restored as if the job was not received.
4. Each incoming job is checked to see if the number of pages will result in remaining credits. If so, the job will be accepted, otherwise it will be treated as "unlicensed" and no credits expended.
5. All jobs from any IP, user, domain or machine will be allowed, if there are credits available.
6. New Click Charge licenses are added to **Connect**. Each new Click Charge buy will be reflected by an additional entry in the license file itself, indicating the newly purchased credit amount. The license check algorithm sums up all entries.

   Example: A customer purchases a click charge license on 1st January 2016 with a credit of 100,000 pages. At the end of March, they determine that their remaining credits (20,000) won't be sufficient for some big jobs they are expecting and so they purchase another 100,000 credits. The issue date of the new credits is 1st June 2016. The new credit balance will be 120,000.

When running in licensed Click Charge mode, the number of available credits will be written to the Workflow log.

Incoming print jobs and the license

Each incoming print job is checked against the license to determine if it can be handled in licensed mode or in unlicensed mode (see "License modes " on page 32). Here are some examples to clarify this.

Scenario 1

OLCS is licensed in **Click Charge** mode with 10,000 pages. They have already used 9,870 credits, so 130 are left.

- Case 1: A job comes in with 40 pages. This job can be handled in LICENSED mode, so this is a "licensed job".
- Case 2: A job comes in with 243 pages. This is more than 130. This job is handled in UNLICENSED mode (reduced metadata and no database entries). This is an "unlicensed job".

Scenario 2

Perpetual license with domain = "some.phantasy.com" and number of licensed users = 100.

- Case 1: A job comes in from the domain "some.phantasy.com" and from a machine named "KATERKARLO". The domain is right and this is the first job, so KATERKARLO is added to the **UUSI** and handled in LICENSED mode.
- Case 2: Meanwhile many, many users have printed from that domain, so all 100 **UUSI**'s (Unique User Slot Identifiers) are full (100 different machine names are in the list). A user sends a job from a machine named "MICKEYMOUSE". This machine name is NOT in the list. Connect checks the existing **UUSI**'s to see which one has not sent a print job for the longest amount of time. Let us say, this machine has the name "DAISYDUCK".
  - Option 1: DAISYDUCK hasn't sent a print job in the last 12 days. Since this is less than 30 days the **UUSI** <u>cannot</u> be released and so the incoming job from MICKEYMOUSE is processed in UNLICENSED mode.
  - Option 2: DAISYDUCK hasn't sent a print job in the last 42 days. Since this is more than 30 days the **UUSI** <u>will</u> be released and so the incoming job from MICKEYMOUSE is processed in LICENSED mode.
- Case 3: A job comes in from domain "starship.enterprise.it". This domain is not licensed, so this job is considered an "unlicensed job" and will be processed in UNLICENSED mode.

OL Connect Send in Workflow

Just as the Printer Driver is an indispensable part of OL Connect Send, OL Connect Send cannot function without its Workflow plugins, embedded in special Workflow processes. These processes take care of the communication with the Connect Send User Guide and they handle the interaction with the user who sends a print job using the Connect Send User Guide.

The following topics explain how to configure these processes. The processes themselves are not supplied with OL Connect Send, because each OL Connect Send solution will require the Workflow processes to be configured differently.

Note

Only OL Connect Send plugins are described in this user guide. For help on the use of all the plugins that are used in the Workflow processes, please see the user guide of Workflow on help.objectiflune.com.

Tip

If you are new to Connect (Workflow and the Designer/DataMapper), or don't know how to build a Workflow process or a web page template design, please visit OL's websites learn.objectiflune.com (with introductory videos, how-tos and a forum) and help.objectiflune.com (for the user guides of Workflow and Connect).

Configuring the OL Connect Send Workflow processes

As can be seen during the installation of the OL Connect Send Printer Driver, OL Connect Send needs one Workflow process to handle the job transfer, and in licensed mode it needs at least one process to interact with the user once the server has received the job. Reports about the use of OL Connect Send might be produced in yet another Workflow process.

These Workflow processes and their related plugins are described below.

The **Ad Hoc Mail Consolidation** sample project may help you understand the Workflow processes for OL Connect Send and configure your own.

- Watch the sample in action on demo.objectiflune.com. Under **Ad Hoc Mail Consolidation**, click **Demo** and follow the instructions. (If you have already installed the printer driver, you don't have to do that again.) Add a Connect Send printer with the given settings and print the provided Word file to that printer. The printer will trigger an interactive process on demo.objectiflune.com.
- Download the sample files from OL's Resource Center: http://help.objectiflune.com/en/#csend.

Job transfer process

The Workflow process that handles the **job transfer** is small and straightforward. It starts with an **HTTP Input task**. The action name of this HTTP Input task must match the last part of the URL for print job submission, set in the printer driver installer (by default: olcs_transfer). The **Job Processor** plugin is the only other task in this Workflow process.
For more information about the configuration of this process, see "Job Processor plugin" on page 39.

Interactive process

The core business of the **interaction** process(es) is: serving web pages to the customer and handling the customer's response, which comes down to changing (the settings for) the print job that has been received from that customer. As it has to be tailored to the situation in which it is used, several Workflow processes may be needed and they may be long and complex. It is therefore impossible to give a detailed instruction on how to configure the interactive process (es).
It is however possible to name a few of the key components in such a process.

- Just as the job transfer process, the interactive process start with an **HTTP Server Input** plugin. The action name of this HTTP Input task must match the HTTP action for interaction given in the printer driver installer (by default: olcs_interaction). (For information about this plugin, see the Workflow Help: HTTP Server Input.)
- Creating interactive processes for incoming print jobs using OL Connect Send requires that the relevant information about the respective job is available and can be used in

Workflow. This is what the OL Connect Send **Get Job Data** plugin is made for. For more information, see "Get Job Data plugin" on page 43.

- Each web page served by an interaction process is generated by the **Create Web Content** plugin. It creates HTML output from a specified web template. That template needs to be created beforehand with Connect Designer and has to be sent to Workflow. (For information about this plugin, see the Workflow Help: [Create Web Content](.))

- The **Create Preview PDF** plugin generates a PDF preview for a single record as fast as possible. It is typically used for previews embedded in web pages. As such it will often be used in an interactive process. (For information about this plugin, see the Workflow Help: [Create Preview PDF](.))

Production report process

The key plugin in a Workflow process that produces reports about jobs received with OL Connect Send is the **Get Data plugin**. It allows to query the OL Connect Send database. For more information about this plugin, see "Get Data plugin" on page 48.

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Plugins

Job Processor plugin

The **Job Processor** plugin appears in the **plugin Bar** area of **Workflow** under **OL Connect Send**.

The **Job Processor** plugin is an output plugin that must be added to a **Workflow** job transfer process that starts with an **HTTP Server Input**. The **Job Processor** plugin is the only other task in that process.
The action name of the HTTP Input task must match the last part of the URL for print job submission, that has to be set in the printer driver installer (by default: olcs_transfer).
After the job is processed, the HTTP Server Input returns a reply from the **Job Processor** plugin back to the **OLCS Printer Driver** in order to notify the user that the job has been received successfully (or failed if an error occurred).

Each incoming print job is checked against the license to determine if it can be handled in licensed mode or in unlicensed mode (see "License modes " on page 32).

If OL Connect Send is **unlicensed**, the plugin stores the incoming job in the target folder using the specified file name, but it does not save any information in the database. The end user will receive a message in the Notification Area (also called "system tray") confirming the unlicensed status, and the printer driver will not request another web page.

In **licensed** mode, the plugin will store all relevant information about each job in the OL Connect Send database. This database is a HSQLDB and is installed automatically. Subsequent Workflow processes can use the information in the database for additional processing (see "Get Job Data plugin" on page 43).

One job transfer process

It is strongly recommended that a single job transfer process for all Printer drivers is created, using the domain or machine's or user information to divert to any follow-up processes.
This single transfer process can be set to "Self Replicating", so that parallelization is possible.

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Configuring the plugin

To configure the **Job Processor** plugin, right-click it after adding it to the **Workflow** process, and click **Properties**.
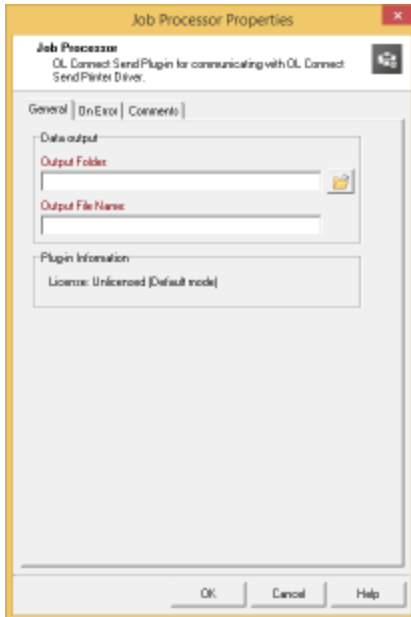
The color of the property names in the **Job Processor Properties** dialog indicates that these fields can contain variables.

Workflow variables

To facilitate using job related information for the creation of the target folder and file name/s, the **Job Processor** plugin maps job relevant information to the standard **Workflow** variables (%1 to %8). The following mappings apply:

Information	Workflow Variable	When licensed	When unlicensed
Job ID	%1	Job ID	Job ID
License status for this job	%2	"Licensed"	"Unlicensed"
Username [1]	%3	The user name	"na"

Information	Workflow Variable	When licensed	When unlicensed
IP Address [1]	%4	The IP address	The IP address
No. of Pages [1]	%5	Number of pages of the job	Number of pages of the job
No. of Copies [1]	%6	Number of copies set by the user	Number of copies set by the user
Domain Name [1]	%7	The Domain Name	"na"
Machine Name [1]	%8	The Machine Name	"na"

1) These values originate from the Printer Driver machine.

The variables can and should be used to create dynamic file and folder names for each print job. This enables separating licensed and unlicensed jobs and/or storing the files by domain, machine and even user name.

File extension

If the output file name does not include an extension, the default extension ".ps" is added automatically.

Metadata

The plugin will create a **Workflow** metadata file containing basic information about the job. The values originate from the client machine.
In unlicensed mode, the user name, machine name and domain/workgroup name will not be available through the metadata.

Security

In order to provide security when printing over the internet, **OL Connect Send** includes several protective features.

HTTPS Communication

The Printer Driver can be set to use HTTPS for any job transfer. To do this **Workflow** must also be set to use HTTPS. This topic is covered briefly in the "Server URL Setting" section in this document (new Printer Driver installation), but full details can be found in the [Workflow](#) documentation.

Job Origin

Each print job will include unique information about the machine it has been sent from. This unique machine ID is calculated with a proven method and will be transferred, encrypted and enhanced. The enhancement will result in a different encrypted machine ID per print job, so that spoofing can be detected. On the server side, if spoofing is detected a respective message will be created.

Users can set up **Workflow** processes and filters to accept only specific jobs from known machine IDs, thus enhancing security.

Database connection

The **Job Processor** plugin works with a database to store all relevant job information. This database is a HyperSQL Database (HSQLDB, see https://en.wikipedia.org/wiki/HSQL_Database_Engine). It is installed as a service with the name **OL Connect Send DBServer** (the internal service name is **OLCSServer**).

Communication between the plugin and the database occurs using port 9001 (the default port for HSQLDB). However, there may be situations where this port is already blocked by another application and may need to be changed.

Several database settings can be modified by creating an ini file. This file must be named "OLCSSvc.ini" and stored in the same folder as the executable OLCSSvc.exe, located under "**%CommonProgramFiles(x86)%\Objectif Lune\<Workflow Name>\Plugins\CPD**".

By adding the entry "DBPort = <new port number>" under [HSQLDBSETTINGS] and then restarting the service, the communication port is changed.

Note: **Workflow** has to be restarted after such a modification.

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Timeout

During a job transfer from the **Printer Driver** to **Workflow**, a timeout could occur (indicated by a log entry like "ERROR: sendBinaryContents: Could not open request. Reason: 12002"). In this case, the timeout for the HTTP service in **Workflow** needs to be increased. We recommend using a value of more than 10 minutes (>600 seconds).

Additionally, the timeout in the browser on the client side should be enhanced. Please see the help pages for your browser about how to do this.

Compatibility

The **OLCS** components communicate with each other by using a well-defined and versioned protocol. As long as these components use the same protocol version, the job transfer will work even if the plugins themselves are changed. The protocol version can be found in the third part of the version number of the Printer Driver (i.e. in version number 1.2.5.98-17, the "5" indicates protocol version 1.5, omitting the leading 1). The Job Processor plugin shows the protocol version explicitly in the related frame.

Any **Printer Driver** can communicate with any plugin, as long as this third version number part is identical.

Get Job Data plugin

Overview

Creating an interactive process for incoming print jobs using **OL Connect Send (OLCS)** requires that the relevant information about the respective job is available and can be used in **Workflow**. Job Information retrieval is made easy with the **Get Job Data** plugin.
The plugin appears in the **plugin Bar** area of **Workflow** under **OL Connect Send**.

Typically, it is used in the interaction process just after the initial **HTTP Server Input** plugin. The Get Job Data plugin gets all relevant information for the dedicated print job using the **Unique Job ID**.

Unique Job ID: Whenever an **OLCS Printer Driver** is sending a print job to the **OLCS** plugin, it creates a unique ID string composed from 10 upper- and lowercase letters and digits e.g. "ri0zZdluLp". This Job ID is used in any communication between the **Printer Driver** and the plugin and is the leading identification element for this particular job. All job related information is stored in the underlying database and linked together by this Unique Job ID.

Note

The **Get Job Data** plugin gets data from the **OLCS** database which means it only works when **Connect** is in LICENSED mode.

The plugin settings

To configure the plugin, right-click it after adding it to the **Workflow** process, and click **Properties**.

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General Tab

Three different settings affect the general behavior of the plugin:

- Where to get the **Print Job ID**.
- When to continue with the next step.
- Where to store the job information details.

Select Job ID Source

The plugin can be used in a generic way. Whenever information about a specific print job is required, it can be retrieved as long as the related job ID is known. However, the plugin has been implemented so that it can also be used in the "OLCS_Interaction" process. It can get the job ID from the incoming data of the **HTTP Server Input** plugin.

- **Read from HTTP Input Data**. When this option is selected, the plugin analyzes the incoming data and if it can find the job ID at the expected location, it uses it for further processing.

- **Read from Variable**. When selecting this option, any existing **Workflow** variable can be chosen via the drop-down field. In this case the plugin reads the Job ID from that variable.

Select Returning Type

Depending on this setting the plugin gets status information about the job before it has arrived or it gets information after the job has been completely received.

- **Immediately**. By choosing this option, the **Get Job Data** plugin will return as quickly as it can, providing it can find a matching job ID in the database. It is important to know that it will wait until information about the job is available. If no matching Job ID is found, the plugin will wait for 5 seconds and then raise an error, which can be acted upon using the **On Error** tab settings.
  When selecting this option, the **Status ID** information has to be checked. A **Status ID** value of 1 or 6 indicates a fully processed job. Any value between 2 and 5 (inclusive) means that the job is still in progress.
- **When Job Is Processed**. When this option is selected, the plugin will query the database until the **Status ID** value is 1 or 6. If the status does not become 1 or 6 within the time defined via the **Timeout (sec)** input field, the plugin will raise an error (see above).

Select Output Type

- **XML Data to Workflow**. This will result in an XML file containing all job related data becoming the new **Workflow** job file. In this case, the incoming data file of the **HTTP Server Input** plugin is overwritten and lost.
- **Write to Variables**. This allows print job information to be stored in **Workflow** variables by using a simple drop-down list. In this case, the **HTTP Server Input** data will be kept as **Workflow** job file.
  If the same **Workflow** variable is assigned more than once, the plugin will give a warning and will not close until the issue is fixed.

Returned Information

For each job received by the **OL Connect Send Job Processor** plugin the following values will be available.

Job UID: This is the 10 (ten) character long **Unique Job Identifier** string.

Date/Time stamp: This is the time when the matching job was initially created in the database. It is stored in UTC format plus time zone indicator inside the database. It will differ from the time stamp logged by the **Printer Driver** as well as by the **OLCS** main plugin.

> **Note**
>
> The **Printer Driver** machine time stamp in the **Printer Driver** log may significantly differ from this value.

Number of Copies: This is the value set by the **Printer Driver** for the number of copies (intended number of copies required for the print job). Some applications do not use the general print job information to define the number of copies. In such (rare) cases, the **Number of Copies** sent in the job can differ from what the user entered in the print dialog. For example: "IrfanView" does not use the regular **Copies** indicator, but instead sends the same job as many times as indicated by **Copies** in its print dialog.

Number of pages: This is the number of pages for one copy of the print job. This value is calculated by the Windows spooler, when processing the printing order. Please be aware that some applications do an implicit reformatting of jobs if the intended paper size does not match the paper size as selected in the print dialog. This may lead to the fact that the number of pages, as calculated by the spooler and reported by **OLCS**, can differ from that value as shown to the user in the application itself.

User name: This is the Windows user name of the user who started the application to produce the print job. It is not - in all cases - the user name of the user who is currently logged into the system.

Original file name: This is the "file name" as sent from the application to the Windows spooling system. It is taken from the name as it arrives in the spooler. Some applications add info to the name (like Notepad++) while others don't (like Adobe Reader). **OLCS** can only use what it gets from the spooler. It does not interact with the applications itself.

Original file size: The size of the print job - NOT the size of the document file.

Domain (workgroup) name: The name of the domain or workgroup the printing user belongs to. This is not necessarily the name of the domain the machine itself belongs to.

Domain / Workgroup Indicator: This domain name is the real domain name or only a workgroup name. For explanations about domains, domain names, users, user names, user domains, logged on users vs. application running users, machine names etc. please refer to the respective Windows help pages or ask your system administrator.

Machine name: The name of the machine the **OLCS** printer driver is running on as retrieved by the respective Windows API.

Machine GUID: The unique machine ID (see "Job Origin" on page 42) of the machine on which the job was produced. It can be used as an additional identification mark to validate the origin of the job.

On Error Tab

Please refer to the **Using the On Error tab** paragraph from the Workflow documentation.

Comments Tab

Please refer to the **Comments tab** paragraph from the Workflow documentation.

Get Data plugin

This plugin allows **OL Connect Send (OLCS)** users (admins, accounting personnel, print masters ...) to get information about all jobs received with **OLCS** on a dedicated machine. It allows queries of the **OLCS** Database to be made for the production of reports.

All job info that could be retrieved will be written to a temporary results file that is then passed on as the new **Workflow** job file. It can be used right after the **Get Job data** plugin in the same **Workflow** configuration. It could for example be saved using a **Send to Folder** plugin.
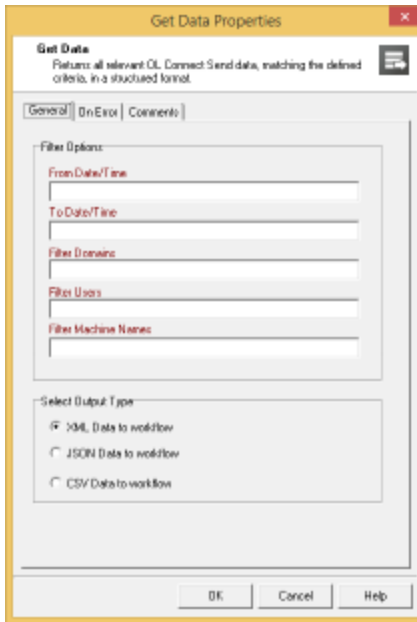
General Tab

Filter Options

Filters are required for:

- Start and end date (down to minutes).
- Domain(s)
- User(s)
- Machine name(s).

Except for start and end dates, it is possible to pass a list of multiple search criteria, separated with semicolons, containing:

- Workflow variables
- Job variables
- Names.

Note

No spaces are allowed around the listed names resp. before or after a semicolon.

<u>Example 1</u>

A valid user name search string would be:

%\{global.User};helen;%1;george napier

This would look for all entries, where the user name is:

- as currently stored in the global Workflow variable **User**
- "helen"
- as stored in the job variable number 1
- equals "george napier" (case insensitive).

The search criteria in this case is an **OR**.

If search criteria are entered in multiple input fields, all of them are combined with {{AND}}.

<u>Example 2</u>

Domain name is defined as {{objmtl.objectiflune.com}} and user name as {{rentel}}, then the result will only contain all the print job information for objmtl.objectiflune.com where the user name is "rentel".

Date and Time Definitions

Both date and time entries must be notated in UTC format. During runtime, the dates are checked and, if any other date/time notation is used, a Workflow error log entry is created.

UTC notation is described here: https://www.cl.cam.ac.uk/~mgk25/iso-time.html.

Valid date/time entries:

2016-07-12	It is possible to only define a date without a time
2016-%m-%d	Standard Workflow variables for year, month and day are allowed
2016-07-12 11:00	**From** and **To** dates may also have a time indicator (24 hour notation, separator from the date is a space character, separator between hour and minute is a colon)

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It is possible to define the same date for **From Date/Time** as for **To Date/Time**. However, entering the same info (without time information) would lead to getting no entries.

Operators

- Searches are case-insensitive.
- Searches with multiple entries in one criteria: OR.
- Searches with entries in different criteria: AND.

Results

For each job that matches the search criteria, the following information will be put in the resulting data file:

- Job UID
- Date/Time stamp
- Number of copies
- Number of pages
- User name
- Original file name
- Original file size
- Domain (workgroup) name
- Domain / Workgroup Indicator
- Machine name
- Machine GUID.

Results File Format

The following result file formats are selectable:

- XML
- JSON
- CSV (Separator = semicolon (0x3B), string indicator = quote (0x22)).

> **Note**
>
> This file is not automatically saved to disk. The retrieved job info is written to a temporary results file that will be passed on as the new **Workflow** job file. To save the results file, use a **Send to Folder** plugin and configure that appropriately.

> **Note**
>
> Please keep in mind that the **Get Job Data** plugin gets data from the **OLCS** database which means it only works when **Connect** is in LICENSED mode.

Returned Information

For each job received by the main OLCS plugin the following values will be available.

- **Job UID**: This is the 10 (ten) character long **Unique Job Identifier** string.
- **Date/Time stamp**: This is the time when the matching job was initially created in the database. It is stored in UTC format plus time zone indicator inside the database. It will differ from the time stamp logged by the **Printer Driver** as well as by the **OLCS** main plugin.

  > **Note**
  >
  > The **Printer Driver** machine time stamp in the **Printer Driver** log may significantly differ from this value.

- **Number of Copies**: This is the value set by the **Printer Driver** for the number of copies (intended number of copies required for the print job). Some applications do not use the general print job information to define the number of copies. In such (rare) cases, the **Number of Copies** sent in the job can differ from what the user entered in the print dialog. For example: "IrfanView" does not use the regular **Copies** indicator, but instead sends the same job as many times as indicated by **Copies** in its print dialog.
- **Number of pages**: This is the number of pages for one copy of the print job. This value is calculated by the Windows spooler, when processing the printing order. Please be aware

that some applications do an implicit reformatting of jobs if the intended paper size does not match the paper size as selected in the print dialog. This may lead to the fact that the number of pages, as calculated by the spooler and reported by **OLCS**, can differ from that value as shown to the user in the application itself.

- **Username**: This is the Windows user name of the user who started the application to produce the print job. It is not - in all cases - the username of the user who is currently logged into the system.

- **Original filename**: This is the "file name" as sent from the application to the Windows spooling system. It is taken from the name as it arrives in the spooler. Some applications add info to the name (like Notepad++) while others don't (like Adobe Reader). **OLCS** can only use what it gets from the spooler. It does not interact with the applications itself.

- **Original file size**: The size of the print job - NOT the size of the document file.

- **Domain (workgroup) name**: The name of the domain or workgroup the printing user belongs to. This is not necessarily the name of the domain the machine itself belongs to.

- **Domain / Workgroup Indicator**: This domain name is the real domain name or only a workgroup name. For explanations about domains, domain names, users, user names, user domains, logged on users vs. application running users, machine names etc. please refer to the respective Windows help pages or ask your system administrator.

- **Machine name**: The name of the machine the **Printer Driver** is running on as retrieved by the respective Windows API.

- **Machine GUID**: The unique machine ID (see "Job Origin" on page 42) of the machine on which the job was produced. It can be used as an additional identification mark to validate the origin of the job.

On Error Tab

Please refer to the **Using the On Error tab** paragraph from the [Workflow](#) documentation.

Comments Tab

Please refer to the **Comments tab** paragraph from the [Workflow](#) documentation.

Using the Printer Driver

The **OL Connect Printer Driver** can be used like any physical printer. Just go through the usual steps:

1. Click the **Print** button (or use the menu from the software used). The **Print** dialog appears.
2. In the **Print** dialog, select a printer that works with the OL Connect Send printer driver and click **OK**.

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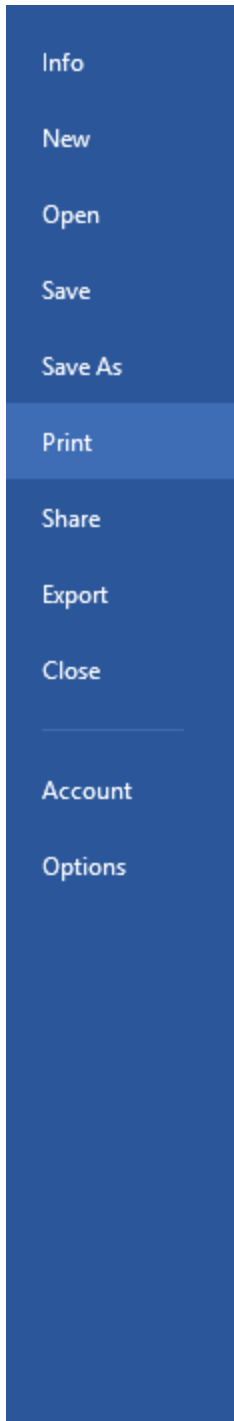
Print

Copies: 1

Print

Printer ⓘ

Lexmark C910 PS (MS)
Ready ▼

Fax
Ready

Lexmark C910 PS (MS)
Ready

Microsoft XPS Document Writer
Ready

OL Connect Send Printer #1
Ready

PlanetPress Printer
Paused

Add Printer...

Print to File

Info

New

Open

Save

Save As

Print

Share

Export

Close

Account

Options

The **OL Connect Send Printer** generates a local PostScript file. This data is zipped and sent in one or multiple chunks to the **Workflow** server. Depending how the environment has been setup, information is sent using the HTTP or HTTPS protocol. As part of the process, the license is verified and, on a successful handshake and in interactive mode, the browser on the

customer's machine is launched showing the interactive web page defined in the installation process.

> **Warning**
>
> It is recommended **not** to use **Adobe Acrobat Reader** to print PDF files with OL Connect Send. Print the source file (e.g. the Word file) whenever available. If PDF files are to be printed with OL Connect Send, use a different PDF viewer instead.
> Adobe Acrobat Reader produces its own PostScript file, rather than passing the PDF to the OLCS Printer Driver to generate the PostScript file. This doesn't hinder the transfer of the file, but the PostScript file produced by Adobe Acrobat Reader sometimes lacks information about the original PDF, which may cause errors in the processing of that file and in the interaction following the transfer.

> **Note**
>
> **Paper Size vs Printer Page Size**
>
> It is important to ensure that paper size settings match the printer driver settings. If this is not done, it's possible that the print job transferred to **Connect Send** may include some extra white space on the page. In interactive mode, this can be seen, but in non-interactive mode the job will be processed without notification.

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Log files

Workflow log files

The OL Connect Send Workflow plugins write to the Workflow log file. Its location can be found in the Workflow Help (see help.objectiflune.com).

Printer log files

Each OL Connect Send printer logs its messages in a daily log file.
The log files are located under **%ProgramData%\Objectif Lune\CPD\Log\<OLCS Printer Name>** on the machine/s on which the **Printer Driver** has been installed.

The level of the messages that must be logged can be set and changed via the installer (see "Logging" on page 18). These log files can be used for troubleshooting (see "Troubleshooting" on page 60).

History log files

In addition to the printer log files, the OL Connect Send Printer Driver creates and fills a daily **history log** file, which can be used for both troubleshooting and reporting purposes.
The history log is a generic log file, independent of the printer (name), Job ID and log level settings. Each printer adds its important job related information to this file.

> **Note**
>
> The history log will only contain information about print job transfers, but not any information about later interactions. Interactions are handled outside the printer and printer driver and are managed on Workflow. Therefore all interaction related information has to be drawn from the Workflow logs.

The name of the history log file is:
%ProgramData%\Objectif Lune\CPD\Log\OLCSHistory_<YYYYMMDD>.csv

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On the first line of this CSV file are its column headers:
{{Date;Time;Printer;Job ID;Document Path;Document Name;Pages;Chunks;Chunk No;Status;Mode;User;Target}}
The separator character is the semicolon (0x3B).
Each following line is one log entry.

The file can be loaded with e.g. Excel and filtered, ordered, sorted and modified as desired.

> **Note**
>
> When the history log file is open in another application (such as Excel), it is locked for write access, which means that OL Connect Send printers cannot add entries to it. The printer's normal log entries will be written but the related history log entries will be lost.

Logged events

Entries are written at the following events.

- The Connect Send Printer Driver has been called by the spool system and a new job must be sent. (Status = "Initialized", Job mode = Unknown)
- The Printer Driver received a reply from the server for the initial XFER request. In case of an unaccessible host, the log message will indicate the status "Unaccessible" and the Job mode will be Unknown. In case of a successful communication the status will be "Accepted" and the Job mode will be set related to the server reply.
- The Printer Driver sends a chunk. (Status = Sending)
- The job gets aborted. (Status = Aborted)
- The job transfer fails. (Status = Failed)
- The job transfer has finished successfully. (Status = Success)

Information per log entry

Log entries contain the following information.

- **Date stamp**. Date = Current local date (non-UTC) in the format of YYYY-MM-DD.
- **Time stamp** formatted as HH:MM:SS.sss. Local time including milliseconds in 24h format.

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- **Printer name**

- **Job ID**

- **Document path** as can be retrieved from the spooler information. Please be aware that some applications suppress this information.

- **Document name** as can be retrieved from the spooler information. Please be aware that some applications modify, mix up, enhance or truncate this information.

- **Number of pages**

- **Number of chunks**

- **Chunk number** = number of the currently transferred chunk

- **Job transfer status**. Can be "Initialized", "Unaccessable", "Accepted", "Sending", "Success", "Failed", "Aborted"

- **Job mode**: Licensed, Unlicensed, Unknown

- **User name**

- **Target URL** including respective HTTP action name (host name and port separated by a colon (0x3A))

Troubleshooting

There are some known issues that can be encountered when using Connect Send, depending on the way OL Connect Send is installed, configured or used; see "Known Issues" on page 30.

If another issue occurs and you find that you cannot solve the issue, there are a few things to check.

1. Switch the OL Connect Send Printer Driver **logging** to DEBUG. This can be done by modifying the OL Connect Send Printer Driver; see [Installing OL Connect Send Printer Driver](#). Then check the log files; see "Log files" on page 57.

2. Make sure that the OL Connect Send **database service** is running on the machine where you have installed **Workflow**. The service is called **OL Connect Send DBServer** (the internal service name is "OLCSServer").

3. It has been seen, in some cases, that using **two instances of the OL Connect Send Job Processor plugin** in different Workflow processes could lead to an error. Delete all the processes using the **Job Processor** plugin and redo them from scratch. Please do not use copy & paste. It is strongly recommended to use only one single process with the **Job Processor** plugin and set this to "Self Replicating". Any further processing can be managed by the follow-up processes. Using two or more **Job Processor** plugins has been known to cause an error when (re-)starting **Workflow**.

4. Sometimes, the license cannot be successfully activated due to the fact that the license file is locked, blocked or under the control of a specific user account. In this case the **Software Activation Tool** of **Connect** will show a message telling you that the license could not be activated. The **Software Activation Tool** of **Workflow** will silently take note of this error and close without displaying it. Please doublecheck if the license with the **OLCS** branch has successfully been activated by reopening the **Software Activation Tool** and clicking on the small **i** button. This will open the license overview window. A valid **OLCS** license will have a respective entry at the end of the list. If this is not the case, the activation has failed. In this case you need to activate manually by replacing the existing license file with the new one:

    a. Rename the new license file with the **OLCS** enhancement to OLConnect1.OLConnectLicense.

    b. Stop any **Connect** and **Workflow** services.

c. Remove the existing OLConnect1.OLConnectLicense from **%ProgramData%\Objectif Lune\OL Connect\licenses**.

d. Put the new license at that location.

e. Restart any **Connect** services you stopped. You may notice that removing the existing license may be forbidden and you need to allow it explicitly. It may even be that you need to log on as an administrator to delete the file.

Note

This is not an issue with **OLCS**, but with the **Connect** and/or **Workflow** version and under which user it has been installed. This issue will occur with any license activation on such machines.

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5. Check the required **permissions**. Generally no specific permissions are required on the side of the Printer Driver, except the standard ones:

- The communication port from the Driver to Workflow must be allowed to be used (firewall, user rights...).
- The Program Data subfolder for CPD must be accessible: %ProgramData%\Objectif Lune\CPD.

If none of the above mentioned should help, then collect all relevant information before contacting OL Support:

- The related log files; see "Log files" on page 57.
- Your **Workflow** configuration plus all relevant documents and externally required files.
- A step-by-step description of what was done so far and what did lead to the issue(s).

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