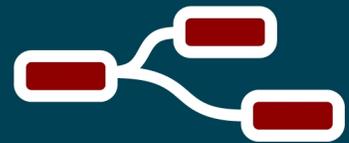




**OL<sup>®</sup> Connect**



**Node-RED**  
Stack

Installation Guide

Version 0.9.0



## Installation Guide

OL Connect Node-RED Stack version 0.9.0

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# Introduction

This manual explains how to install the OL Connect Node-RED Stack.

The stack consists of the following:

- Node.js
- Node-RED: a programming tool for wiring together hardware devices, APIs and online services. It provides a browser-based editor that makes it easy to wire together flows using the nodes in the palette, and to deploy them. The user is allowed to install Node-RED either as a user-run application or as a service that runs in the background and automatically starts when Windows is rebooted.  
This installation of Node-RED gives access to OL Connect's catalogue as well as to the default catalogue which makes it easy to install nodes developed by third parties.
- OL Connect Node-RED stack nodes:
  - data mapping
  - data get
  - paginated content
  - paginated job
  - paginated output
  - all in one
  - html content
  - email content
  - preview pdf
  - file upload
  - file download
  - file delete
  - cotg publish
  - cotg delete

# Installation prerequisites

- OL Connect OL Connect Node-RED Stack Version 0.9.0 can be installed under a regular user account with Administrator privileges.
- OL Connect OL Connect Node-RED Stack Version 0.9.0 **must** be installed on an NTFS file system.
- OL Connect OL Connect Node-RED Stack Version 0.9.0 requires **Microsoft .NET Framework 4.5** already be installed on the target system.
- OL Connect Node-RED stack version 0.9.0 requires a connection to the internet, as some of its content is installed dynamically from the NPM public repository.
- The OL Connect nodes require a working OL Connect Server installation to function properly.

# Installation

The following gives detailed information about the installation of the OL Connect Node-RED Stack 0.9.0.

## Where to obtain the installer

The installers for OL Connect Node-RED Stack 0.9.0 can be downloaded from Objectif Lune's [Resource Center](https://help.objectiflune.com) (https://help.objectiflune.com).

## Starting the installer

The OL Connect Node-RED Stack installer is supplied as an executable.

Navigate to **OL Connect Node-RED Stack.exe** and double-click on it. After a short pause the Setup Wizard will appear as a guide through the installation steps.

## Running the installation with logging

The installer can create an MSI log file, if needed. To make it do this, run **OL Connect Node-RED Stack.exe** from the command line with the following command line option:

```
"OL Connect Node-RED stack.exe" /l=<logFileName.log>
```

## Module licenses

The next page displays the distribution licenses for all modules included in the package (see: [Legal Notices and Acknowledgements](#)). They need to be accepted before clicking **Next**.

## Selecting the destination folders

After clicking the Next button, the destination folder selection page appears. Either select custom locations or accept the default folders by clicking the Next button.

- **Software components:** This is the folder where both Node.js and Node-RED are to be installed. The default installation path is:  
C:\Program Files\Objectif Lune\Node-RED Stack  
Modules will be installed in subfolders of this folder.
- **Data:** The path specified as the default location of data will be written to the Settings.js file of the Node-RED component.  
The default is: C:\Users\

## Configuring Node-RED

After clicking the Next button, the Node-RED setup page appears.

- **Port:** Enter the port to use to communicate with the Node-RED server. By default the Node-RED server service communicates through port 1880.
- **Enable the Projects feature:** Check this option to enable the Projects feature. Projects represent everything that is needed to create a redistributable Node-RED application and they are backed by a Git repository. For more information about this feature, see <https://nodered.org/docs/user-guide/projects/>.  
A Git installation is required for this option, but not included in the installer.
- **Start Node-RED at system startup:** If the Node-RED service must be started at system startup, it can log on using either a **virtual service account** or an existing **user account**.
  - **Create virtual service account (default):** This option sets the Node-RED service to use the virtual service account named `NT Service\Node-RED`.
  - If the Node-RED service should run using an existing user account, enter the **Username** and **Password** of that account.  
The username can be a User Principal Name (i.e., MyName@my.organisation.com) or a Down-Level Logon Name (ie: MyDomain\MyName). If the domain is not present in the username, then the installer will automatically add the `.\` prefix to it, which sets the domain to 'this computer'.

### Note

For enhanced security, it is recommended that the user account be a **non-admin** account. This allows the system administrator to better control the

application's access rights.

It is not recommended that the *Local/System* account be used as it has too many access rights.

The selected user must not be listed in the *Deny logon as a service* group.

Ideally, the selected user account has the same access rights as users who will eventually be editing the Flow configuration.

- **Enable authentication for the Editor and Admin API:** Check this option to enter appropriate user details if the Node-RED server expects authentication. If selected, the following edit boxes activate:
  - **Username:** Enter the user account for connecting to the Node-RED server.
  - **Password:** Enter the password for the selected user account.

## Configuring Node-RED over HTTPS

The page that appears after clicking the Next button allows to configure Node-RED to use secured communication.

Check **Enable HTTPS communication** if Node-RED should communicate over HTTPS.

Then select your **private key file** and the **certificate file** (the public key certificate identifying the certified server).

Note that the files inputted must be in the **PEM** format (ASCII base64 encoded).

If the private key or certificate file is not in this format, follow the steps detailed in our Knowledge Base to convert it to PEM format: [Converting a file to PEM](#).

The files will be stored in the `.node-red\certs` subfolder. The paths will be written to the `Settings.js` file of the Node-RED component.

## Test connection to OL Connect server

The page that appears after clicking the Next button allows to enter OL Connect Server connection settings, including credentials. With this information the wizard can automatically configure the OL Connect Configuration node for Node-RED.

- **OL Connect Server URL:** Enter the URL and port number to use to communicate to the Connect server. For example: `127.0.0.1:9340`.
- **Username:** Enter the user account for connecting to the OL Connect server.
- **Password:** Enter the password for the selected user account.

You can test the connection using the **Test Connection** button.

For the OL Connect Configuration node to be configured automatically, you must tick the option **Run Node-RED now** on the last page of this wizard, which appears immediately after the installation.

When Node-RED is launched at the end of the installation, a OL Connect Configuration node will be created using either the connection settings that you entered or the default values if nothing was changed. The connection settings can be changed later from Node-RED.

## Selection confirmation

After clicking Next, this page confirms the installation selections made.

Click **Next** to start the installation itself. This process can take several minutes.

## Completing the installation

This screen gives a summary of the components that have been installed, and gives the following options:

- **Run Node-RED now:** This will start either the Node-RED service (if the Enable Node-RED at startup option was checked) or start the Node-RED executable otherwise. The wizard will automatically configure the OL Connect Configuration node for Node-

RED, using either the connection settings that you entered or the default values if nothing was changed.

- **Open Node-RED Editor:** This will open the Node-RED Editor in the system's default browser.

# Updating Node-RED and NodeJS

The following explains how to update Node-RED and NodeJS manually, without a new installer from Objectif Lune.

Updates of the OL Connect nodes will be made available through Node-RED.

## Updating NodeJS

Download the installer of the desired version of NodeJS from [NodeJS.org](https://nodejs.org).

### Note

OL Connect nodes version 0.9.5 require Node.js 14.18.2 x64 (LTS for Windows) or higher.

The new version of NodeJS must be installed to the path `<Node-RED stack install folder>\NodeJS`.

By default, the OL Connect Node-RED Stack installer sets the `<Node-RED Stack install folder>` to `.\Program Files\Objectif Lune\Node-RED Stack\`, but during installation a different folder may be selected.

The version of NodeJS can be verified from the command line after installation through the following command:

```
node -v
```

## Updating Node-RED

To update Node-RED from the command line:

1. Stop the Node-RED service.
2. Back up the file: `.\Program Files\Objectif Lune\Node-RED Stack\Node-RED Stack\node_modules\node-red\settings.js`
3. Update NodeJS if necessary (see above). OL Connect nodes version 0.9.5 require Node.js 14.18.2 x64 (LTS for Windows) or higher.
4. Open the command prompt in administrator mode.
5. Run the following command:

```
"<Node-RED Stack install folder>\NodeJS\npm.cmd" install -g --unsafe-perm --  
prefix "<Node-RED Stack install folder>\Node-RED Stack" node-red@latest
```

By default, the OL Connect Node-RED Stack installer sets the `<Node-RED Stack install folder>` to `.\Program Files\Objectif Lune\Node-RED Stack\`, but during installation a different folder may be selected.

If you want a specific Node-RED version, replace `@latest` with `@theVersionNumber` (e.g., `@1.3.4`).

6. Restore the file: `.\Program Files\Objectif Lune\Node-RED Stack\Node-RED Stack\node_modules\node-red\settings.js`
7. Restart the Node-RED service.

## Important notes

These are issues that you may encounter under certain circumstances that we cannot influence.

### Certificate errors under HTTPS

In OL Connect and Workflow we have an option to ignore certificate errors with HTTPS connections. The same functionality is not yet available in OL Connect Node-RED Stack, but will be added later.

In the meantime if you wish to ignore certificate errors (when they are self signed) you can do so using by adding this line to the installed `setting.js` file:

```
process.env["NODE_TLS_REJECT_UNAUTHORIZED"] = 0;
```

### Serving resources from a template when creating HTML content

When serving HTML straight from a HTML content node over to an HTTP response node, there is currently no way to intercept the requests coming back from the browser to go fetch a resource inside the template. When in need of these resources (for example, to load CSS stylesheets) select the **Embedded Resources** option or serve your resources from a publicly available location.

This will be addressed in a later release.

### Internet Explorer 11 issues

Not all the OL Connect Node-RED Stack nodes currently work under IE 11. We recommend using an alternative browser.

