

## Create and Configure IBM Cloud Services

### Create Node-RED Service

Date	4 November 2022
Team ID	PNT2022TMID32826
Project Name	Smart farmer - IoT Enabled Smart Farming Application

The screenshot shows the Node.js download page in a web browser. The browser's address bar displays 'nodejs.org/en/download/'. The page features the Node.js logo and a navigation menu with links to HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, CERTIFICATION, and NEWS. Below the navigation menu, the 'Downloads' section is highlighted, showing the 'Latest LTS Version: 18.12.0 (includes npm 8.19.2)'. A message encourages users to download the Node.js source code or a pre-built installer. The page is divided into two main sections: 'LTS Recommended For Most Users' and 'Current Latest Features'. Under the 'LTS' section, there are three download options: 'Windows Installer' (node-v18.12.0-x64.msi), 'macOS Installer' (node-v18.12.0.pkg), and 'Source Code' (node-v18.12.0.tar.gz). Below these, a table lists the available download formats for the Windows Installer, Windows Binary, and macOS Installer. The table has columns for the format and the architecture (32-bit, 64-bit, and 64-bit / ARM64). The '64-bit' column is highlighted in green. The '64-bit / ARM64' option is also highlighted in green. The browser's taskbar at the bottom shows the time as 10:52 AM on 11/3/2022.

Download | Node.js

nodejs.org/en/download/

node

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | CERTIFICATION | NEWS


### Downloads


Latest LTS Version: **18.12.0** (includes npm 8.19.2)


Download the Node.js source code or a pre-built installer for your platform, and start developing today.

**LTS**  
Recommended For Most Users

**Current**  
Latest Features

  
Windows Installer  
node-v18.12.0-x64.msi

  
macOS Installer  
node-v18.12.0.pkg

  
Source Code  
node-v18.12.0.tar.gz

Windows Installer (.msi)	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit
macOS Installer (.pkg)	64-bit / ARM64	

<https://nodejs.org/dist/v18.12.0/node-v18.12.0-x64.msi>

Activate Windows  
Go to Settings to activate Windows.

10:52 AM  
11/3/2022


Download | Node.js


nodejs.org/en/download/


Download the Node.js source code or a pre-built installer for your platform, and start developing today.

LTS  
Recommended For Most Users

Current  
Latest Features

  
Windows Installer  
node-v18.12.0-x64.msi

  
macOS Installer  
node-v18.12.0.pkg

  
Source Code  
node-v18.12.0.tar.gz

Windows Installer (.msi)

Windows Binary (.zip)

macOS Installer (.pkg)

macOS Binary (.tar.gz)

Linux Binaries (x64)

Linux Binaries (ARM)

Source Code

32-bit	64-bit
32-bit	64-bit
64-bit / ARM64	
64-bit	ARM64
64-bit	
ARMv7	ARMv8
node-v18.12.0.tar.gz	

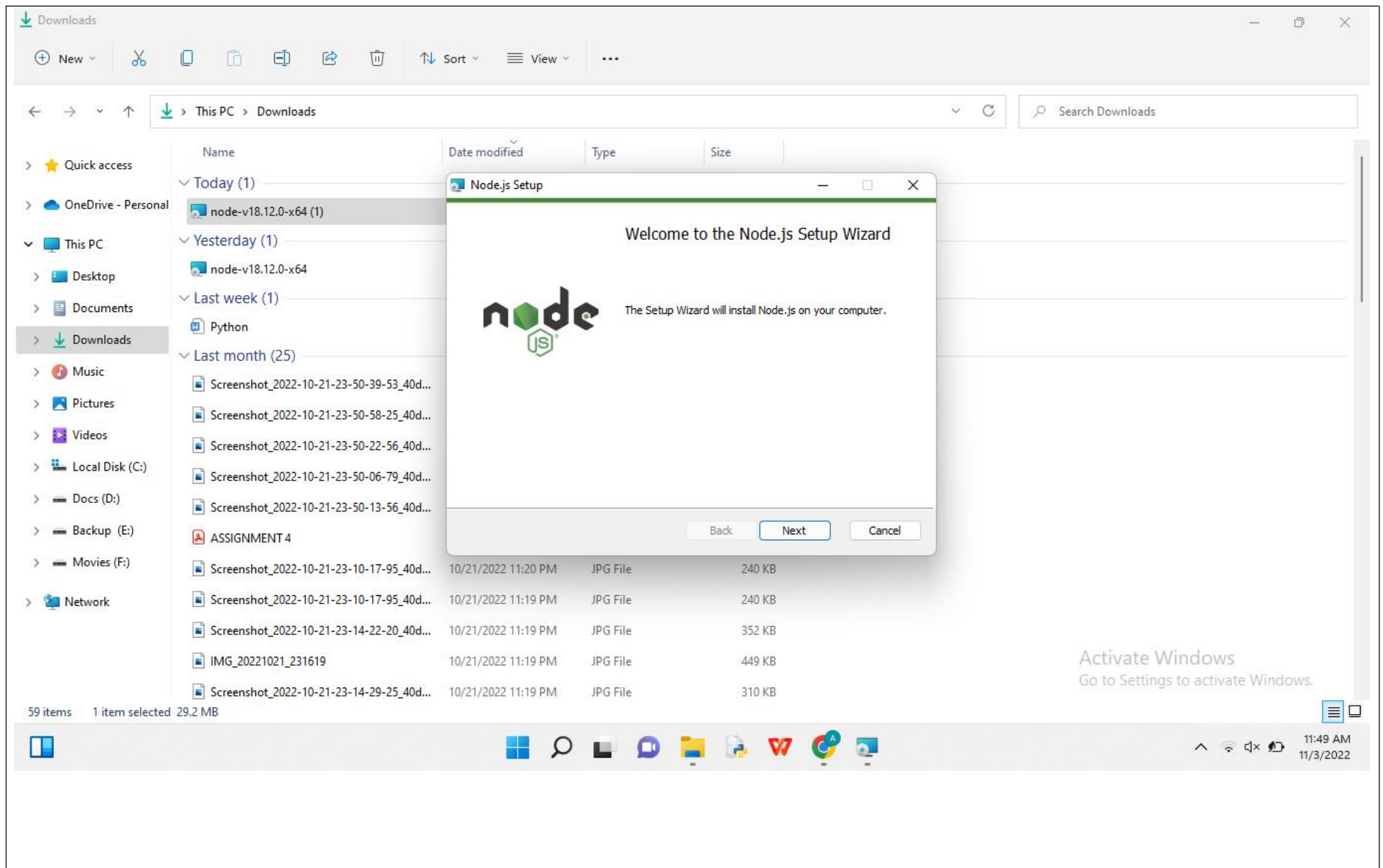
Additional Platforms

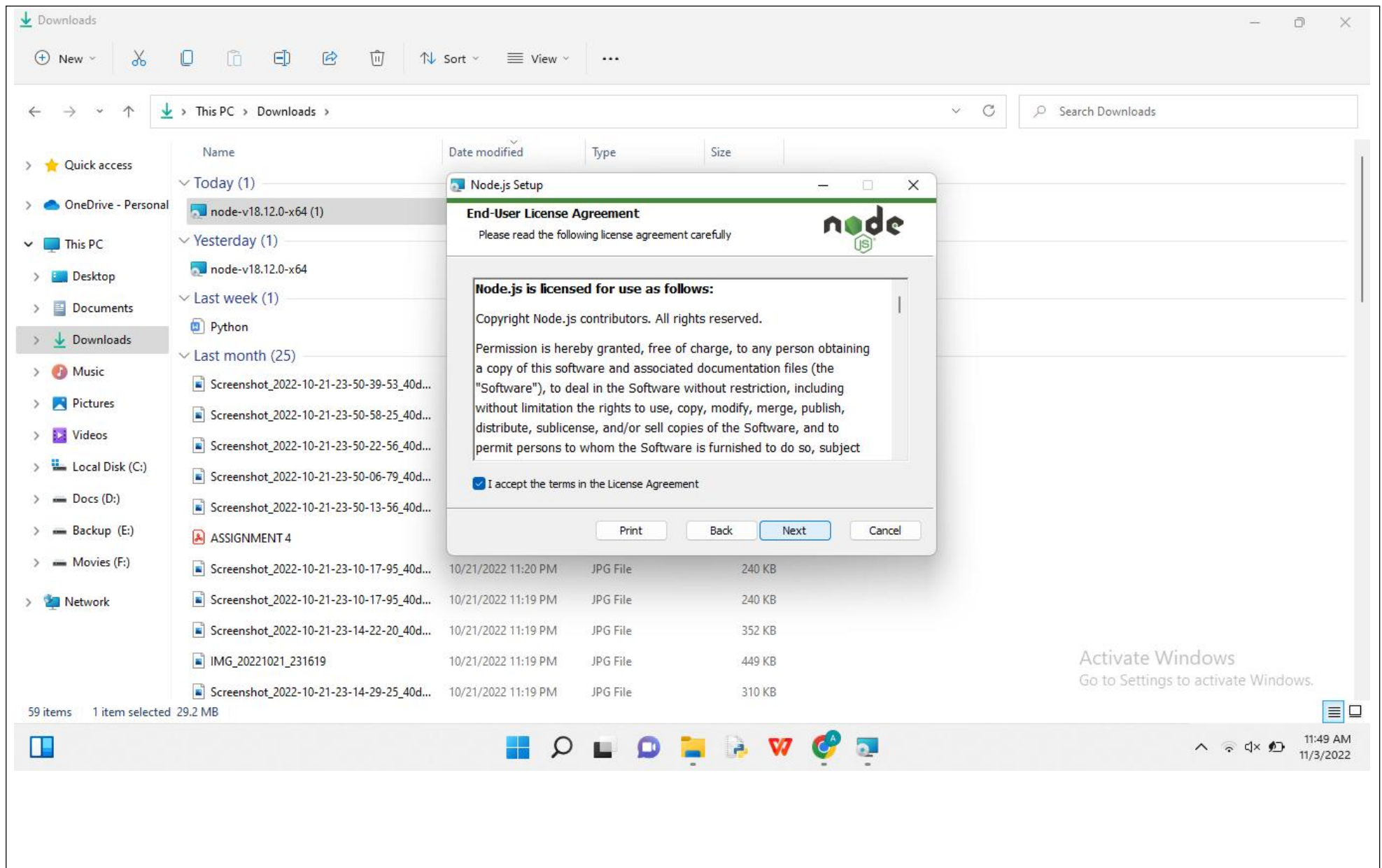
https://nodejs.org/dist/v18.12.0/node-v18.12.0-x64.msi

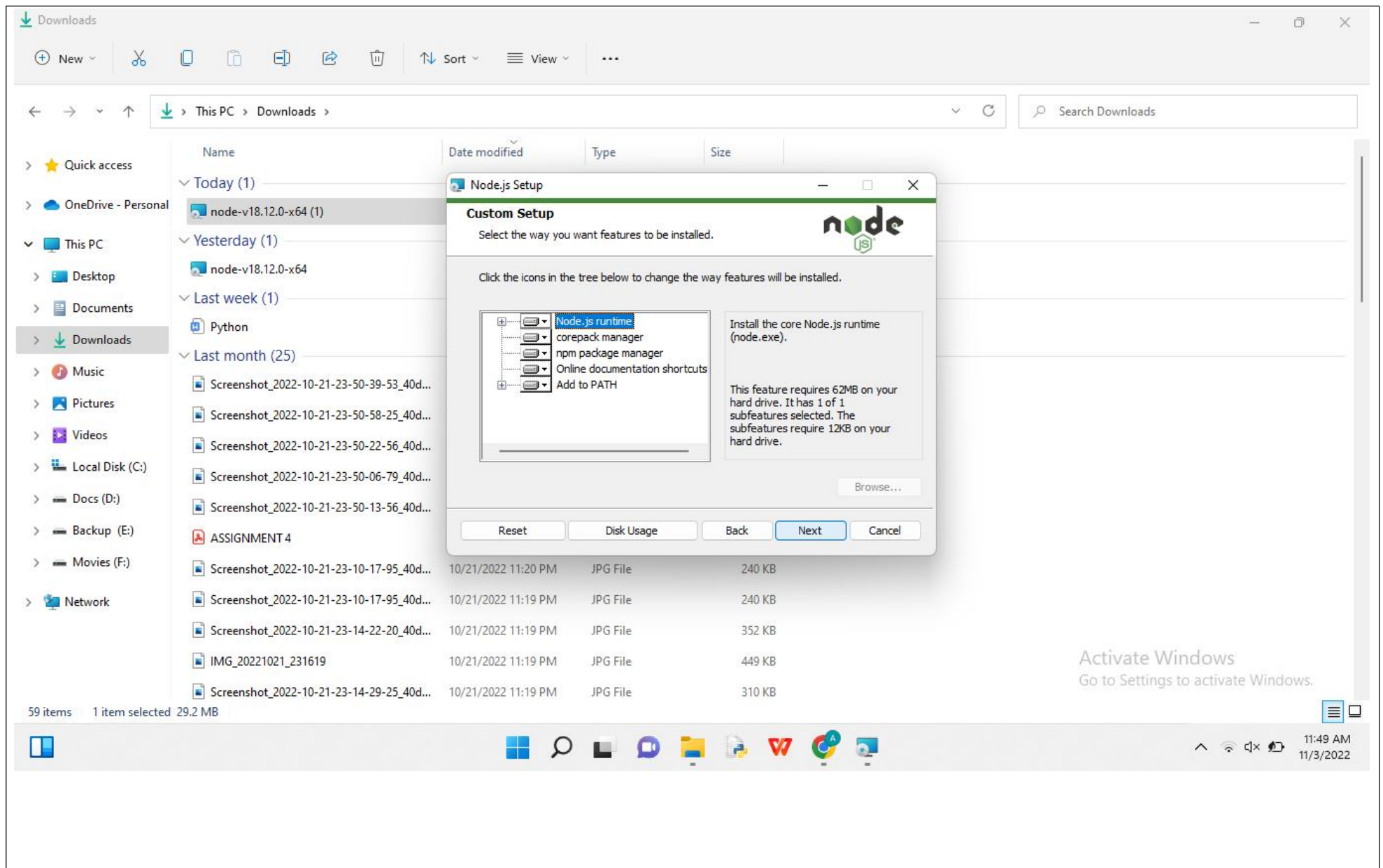
node-v18.12.0-x64....msi

Activate Windows  
Go to Settings to activate Windows.  
Show all

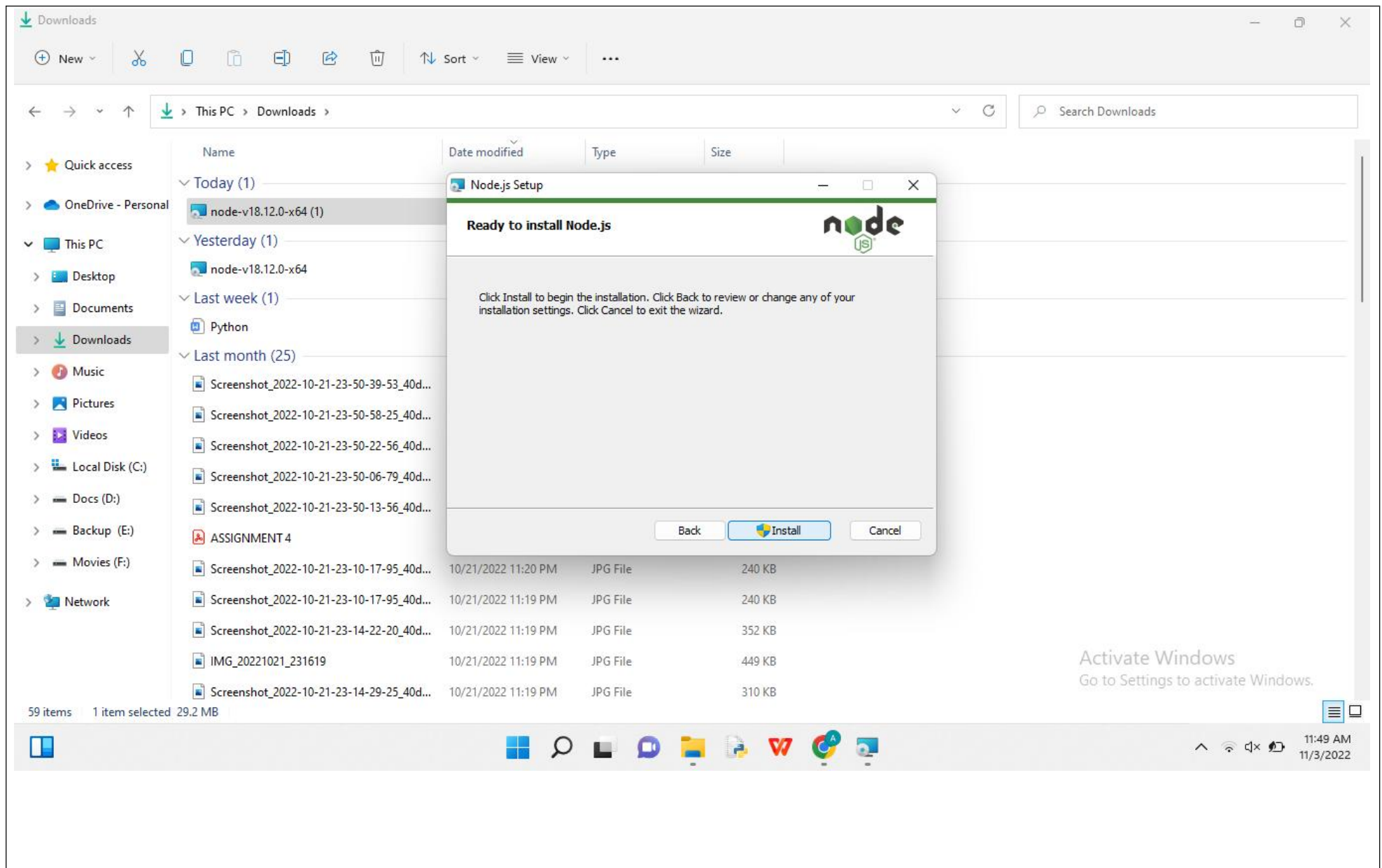
11:49 AM  
11/3/2022

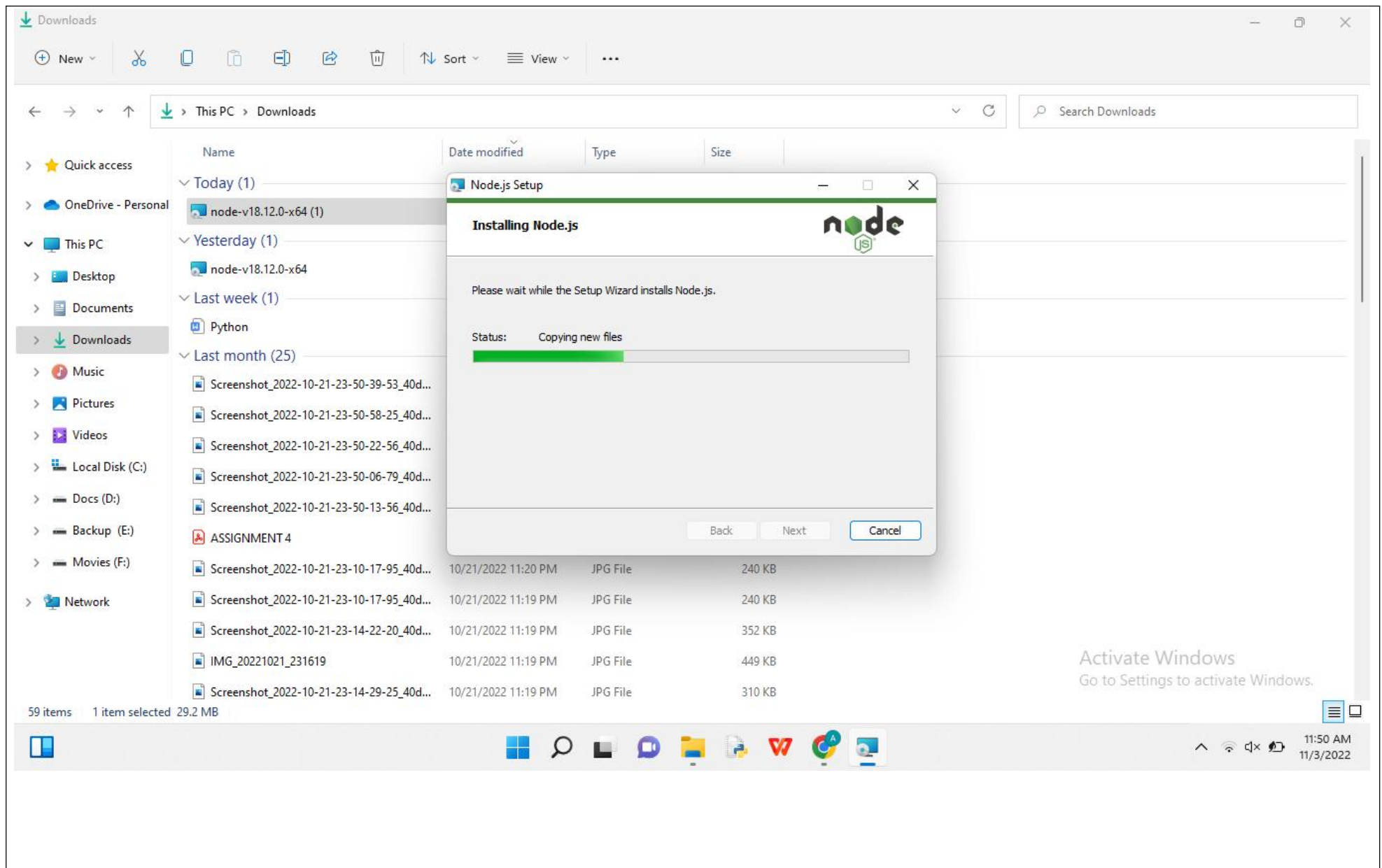


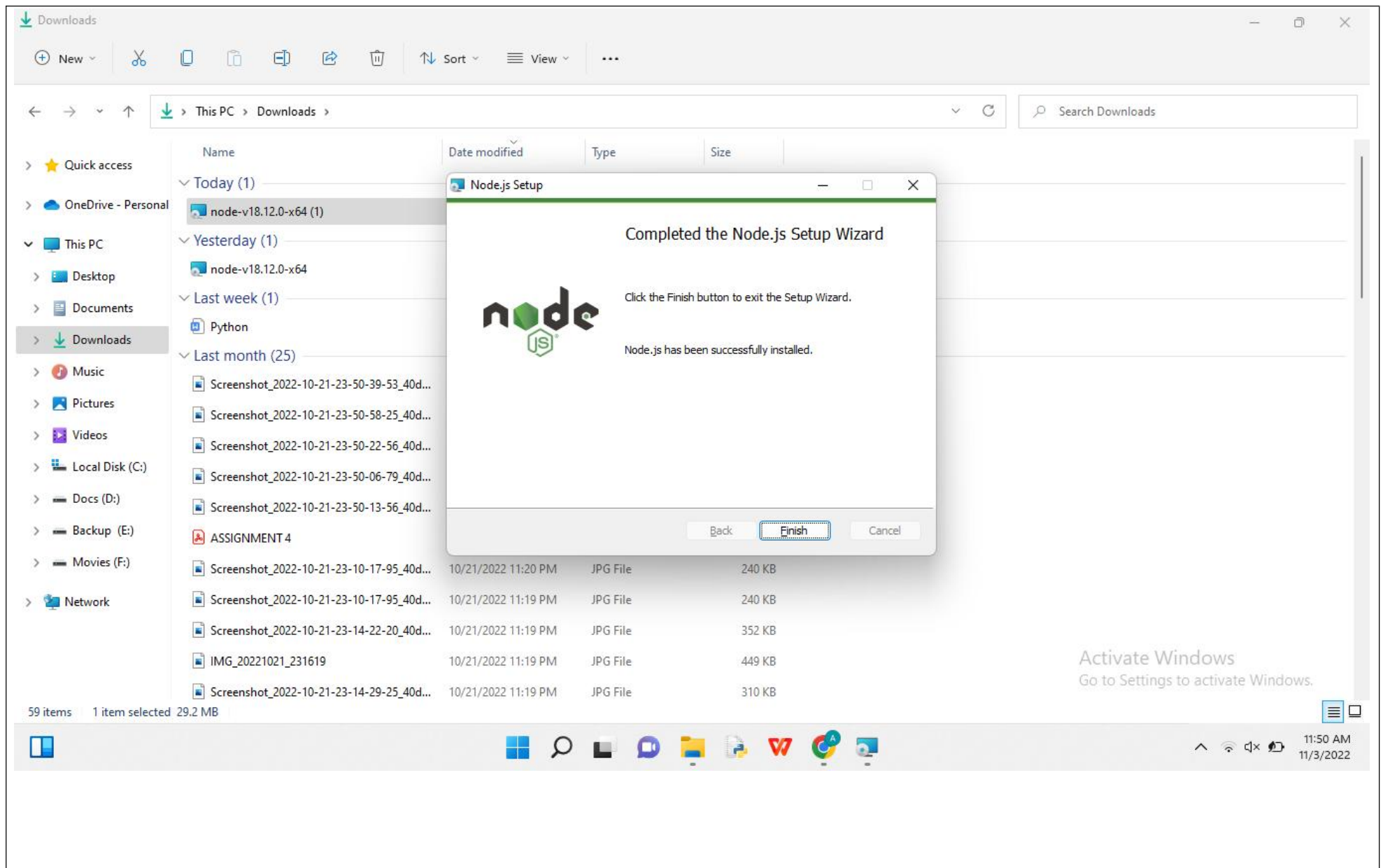














Command Prompt

Microsoft Windows [Version 10.0.22000.856]  
(c) Microsoft Corporation. All rights reserved.

C:\Users\A S ABISHEK>node -h

Usage: node [options] [ script.js ] [arguments]  
node inspect [options] [ script.js | host:port ] [arguments]

Options:

-	script read from stdin (default if no file name is provided, interactive mode if a tty)
--	indicate the end of node options
--abort-on-uncaught-exception	aborting instead of exiting causes a core file to be generated for analysis
--build-snapshot	Generate a snapshot blob when the process exits. Currently only supported in the node_mksnapshot binary.
-c, --check	syntax check script without executing
--completion-bash	print source-able bash completion script
-C, --conditions=...	additional user conditions for conditional exports and imports
--cpu-prof	Start the V8 CPU profiler on start up, and write the CPU profile to disk before exit. If --cpu-prof-dir is not specified, write the profile to the current working directory.
--cpu-prof-dir=...	Directory where the V8 profiles generated by --cpu-prof will be placed. Does not affect --prof.
--cpu-prof-interval=...	specified sampling interval in microseconds for the V8 CPU profile generated with --cpu-prof. (default: 1000)
--cpu-prof-name=...	specified file name of the V8 CPU profile generated with --cpu-prof
--diagnostic-dir=...	set dir for all output files (default: current working directory)
--disable-proto=...	disable Object.prototype.__proto__
--disallow-code-generation-from-strings	disallow eval and friends
--dns-result-order=...	set default value of verbatim in dns.lookup. Options are 'ipv4first' (IPv4 addresses are placed before IPv6 addresses) 'verbatim' (addresses are in the order the DNS resolver returned)
--enable-fips	enable FIPS crypto at startup
--enable-source-maps	Source Map V3 support for stack traces
-e, --eval=...	evaluate script
--experimental-global-customevent	expose experimental CustomEvent on the global scope
--experimental-global-webcrypto	expose experimental Web Crypto API on the global scope
--experimental-import-meta-resolve	experimental ES Module import.meta.resolve() support
--loader, --experimental-loader=...	use the specified module as a custom loader
--experimental-network-imports	experimental https: support for the ES Module loader
--experimental-policy=...	use the specified file as a security policy
--es-module-specifier-resolution, --experimental-specifier-resolution=...	Select extension resolution algorithm for es modules; either 'explicit'

Activate Windows  
Go to Settings to activate Windows.



11:54 AM  
11/3/2022

Command Prompt

```
--update-assert-snapshot    update assert snapshot files
--use-bundled-ca            use bundled CA store (default)
--use-largepages=...       Map the Node.js static code to large pages. Options are 'off' (the
                           default value, meaning do not map), 'on' (map and ignore failure,
                           reporting it to stderr), or 'silent' (map and silently ignore failure)

--use-openssl-ca           use OpenSSL's default CA store
--v8-options               print V8 command line options
--v8-pool-size=...         set V8's thread pool size
-v, --version              print Node.js version
--watch                   run in watch mode
--watch-path=...          path to watch
--zero-fill-buffers        automatically zero-fill all newly allocated Buffer and SlowBuffer
                           instances
```

Environment variables:

```
FORCE_COLOR               when set to 'true', 1, 2, 3, or an empty string causes NO_COLOR and
                           NODE_DISABLE_COLORS to be ignored.
NO_COLOR                  Alias for NODE_DISABLE_COLORS
NODE_DEBUG                '-'-separated list of core modules that should print debug information
NODE_DEBUG_NATIVE         '-'-separated list of C++ core debug categories that should print debug
                           output
NODE_DISABLE_COLORS       set to 1 to disable colors in the REPL
NODE_EXTRA_CA_CERTS       path to additional CA certificates file. Only read once during process
                           startup.
NODE_NO_WARNINGS          set to 1 to silence process warnings
NODE_PATH                '-'-separated list of directories prefixed to the module search path
NODE_PENDING_DEPRECATION  set to 1 to emit pending deprecation warnings
NODE_PENDING_PIPE_INSTANCES set the number of pending pipe instance handles on Windows
NODE_PRESERVE_SYMLINKS    set to 1 to preserve symbolic links when resolving and caching modules
NODE_REDIRECT_WARNINGS    write warnings to path instead of stderr
NODE_REPL_EXTERNAL_MODULE path to a Node.js module which will be loaded in place of the built-in
                           REPL
NODE_REPL_HISTORY         path to the persistent REPL history file
NODE_SKIP_PLATFORM_CHECK  set to 1 to skip the check for a supported platform during Node.js
                           startup
NODE_TLS_REJECT_UNAUTHORIZED set to 0 to disable TLS certificate validation
NODE_V8_COVERAGE         directory to output v8 coverage JSON to
TZ                        specify the timezone configuration
UV_THREADPOOL_SIZE        sets the number of threads used in libuv's threadpool
```

Documentation can be found at <https://nodejs.org/>

C:\Users\A S ABISHEK>

Activate Windows

Go to Settings to activate Windows.



11:54 AM  
11/3/2022

Command Prompt

Microsoft Windows [Version 10.0.22000.856]  
(c) Microsoft Corporation. All rights reserved.

C:\Users\A S ABISHEK>npm -h  
npm <command>

Usage:

npm install       install all the dependencies in your project  
npm install <foo>   add the <foo> dependency to your project  
npm test         run this project's tests  
npm run <foo>      run the script named <foo>  
npm <command> -h   quick help on <command>  
npm -l           display usage info for all commands  
npm help <term>   search for help on <term> (in a browser)  
npm help npm      more involved overview (in a browser)

All commands:

access, adduser, audit, bin, bugs, cache, ci, completion,  
config, dedupe, deprecate, diff, dist-tag, docs, doctor,  
edit, exec, explain, explore, find-dupes, fund, get, help,  
hook, init, install, install-ci-test, install-test, link,  
ll, login, logout, ls, org, outdated, owner, pack, ping,  
pkg, prefix, profile, prune, publish, query, rebuild, repo,  
restart, root, run-script, search, set, set-script,  
shrinkwrap, star, stars, start, stop, team, test, token,  
uninstall, unpublish, unstar, update, version, view, whoami

Specify configs in the ini-formatted file:

C:\Users\A S ABISHEK\.npmrc

or on the command line via: npm <command> --key=value

More configuration info: npm help config

Configuration fields: npm help 7 config

npm@8.19.2 C:\Program Files\nodejs\node\_modules\npm

C:\Users\A S ABISHEK>

Activate Windows  
Go to Settings to activate Windows.



12:19 PM  
11/3/2022





Select node-red

```
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSI-HardwareMonitor] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susi\nodes\0.0.9\win32\x64\node_SUSI.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSI-GPIO] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susi\nodes\0.0.9\win32\x64\node_SUSI.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSI-Backlight] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susi\nodes\0.0.9\win32\x64\node_SUSI.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSI-WatchDog] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susi\nodes\0.0.9\win32\x64\node_SUSI.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSIIoT-Info] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susiiot\nodes\0.0.8\win32\x64\node_SUSIIoT.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSIIoT-Data] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susiiot\nodes\0.0.8\win32\x64\node_SUSIIoT.node
3 Nov 12:22:09 - [warn] [node-red-contrib-susi/SUSIIoT-Control] Error: The specified module could not be found.
\\?\C:\Users\A S ABISHEK\AppData\Roaming\npm\node_modules\node-red-contrib-susi\node_modules\node-susiiot\nodes\0.0.8\win32\x64\node_SUSIIoT.node
3 Nov 12:22:09 - [warn] -----
3 Nov 12:22:09 - [info] Settings file : C:\Users\A S ABISHEK\.node-red\settings.js
3 Nov 12:22:09 - [info] Context store : 'default' [module=memory]
3 Nov 12:22:09 - [info] User directory : C:\Users\A S ABISHEK\.node-red
3 Nov 12:22:09 - [warn] Projects disabled : editorTheme.projects.enabled=false
3 Nov 12:22:09 - [info] Flows file : C:\Users\A S ABISHEK\.node-red\flows.json
3 Nov 12:22:09 - [info] Creating new flow file
3 Nov 12:22:09 - [warn]
```

-----  
Your flow credentials file is encrypted using a system-generated key.

If the system-generated key is lost for any reason, your credentials file will not be recoverable, you will have to delete it and re-enter your credentials.

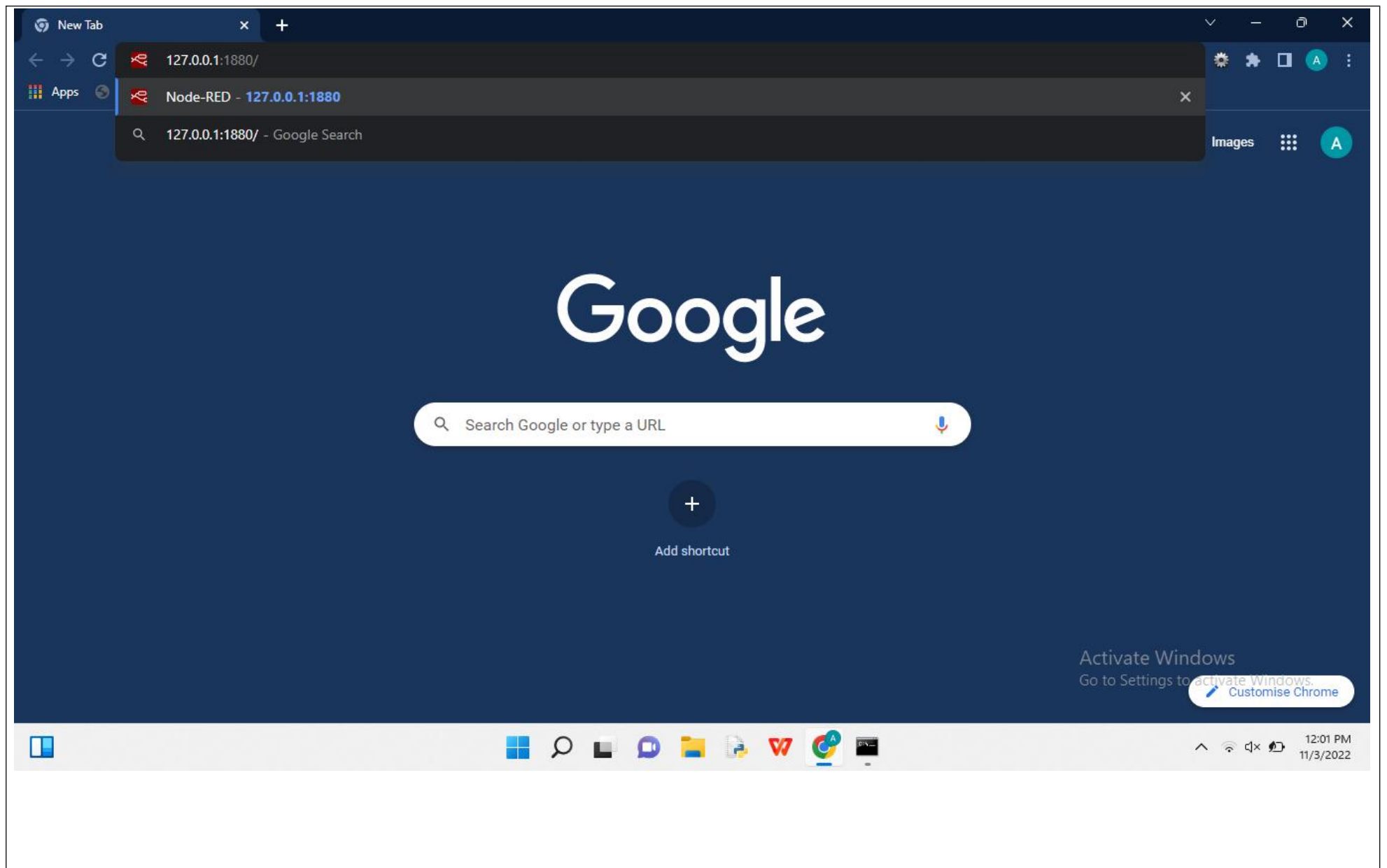
You should set your own key using the 'credentialSecret' option in your settings file. Node-RED will then re-encrypt your credentials file using your chosen key the next time you deploy a change.

-----  
3 Nov 12:22:10 - [info] Server now running at <http://127.0.0.1:1880/>  
3 Nov 12:22:10 - [warn] Encrypted credentials not found  
3 Nov 12:22:10 - [info] Starting flows  
3 Nov 12:22:10 - [info] Started flows

Activate Windows  
Go to Settings to activate Windows.



12:22 PM  
11/3/2022





Node-RED

127.0.0.1:1880/#flow/ba14cf69d5255d7f

Node-RED

Deploy

filter nodes

common

inject

debug

complete

catch

status

link in

link call

link out

comment

function

switch

Flow 1

timestamp

debug 1

info

Search flows

Flows

Flow 1

Subflows

Global Configuration Nodes

debug 1

Node"898550888ee16d3b"

Typedebug

show more

You can remove the selected nodes or links with delete

Activate Windows

Go to Settings to activate Windows.

12:02 PM

11/3/2022

Node-RED

127.0.0.1:1880/#flow/ba14cf69d5255d7f

Node-RED

Deploy

filter nodes

common

inject

debug

complete

catch

status

link in

link call

link out

comment

function

function

switch

Flow 1

timestamp

debug 1

info

Search flows

Flows

Flow 1

Subflows

Global Configuration Nodes

Flow 1

Flow

"ba14cf69d5255d7f"

You can remove the selected nodes or links with delete

Activate Windows

Go to Settings to activate Windows.

12:02 PM

11/3/2022