

Curso: API RESTful com NodeJS

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## Instalação das ferramentas

Checklist:

- Google Chrome / Microsoft Edge
- Conta no Github: <https://github.com/signup>
- Git Bash: <https://git-scm.com/downloads>
  - `git --version`
- Postman: <https://www.postman.com/downloads/>
- NodeJS (versão 16.19.0)
  - <https://nodejs.org/download/release/v16.19.0/>
  - Configurar variáveis de ambiente do sistema
    - `node -v`
    - `npm -v`
- IDE / Editor de Código
  - Visual Studio Code (VSCode): <https://code.visualstudio.com/>
  - Extensões para o VSCode:
    - Extension Pack para NodeJS:  
<https://marketplace.visualstudio.com/items?itemName=waderyan.nodejs-extension-pack>
- MySQL Community Server 8: <https://dev.mysql.com/downloads/mysql/>
  - HeidiSQL: <https://www.heidisql.com/download.php>
- Docker Desktop
  - Abra o Windows PowerShell como administrador e execute o comando para instalar o WSL:
    - `wsl --install`
  - Baixe o pacote de atualização do kernel do Linux:
    - <https://learn.microsoft.com/pt-br/windows/wsl/install-manual#step-4---download-the-linux-kernel-update-package>

```
C:\Users\lcs20>node -v
v16.19.0

C:\Users\lcs20>npm -v
8.19.3
```

Reinicie o computador para concluir a instalação do WSL e a atualização para o WSL 2.

### Etapa 4 – Baixar o pacote de atualização do kernel do Linux

1. Baixe o pacote mais recente:

- Pacote de atualização do kernel do Linux do WSL2 para computadores x64

❗ Observação

Se estiver usando um computador ARM64, baixe o pacote ARM64. Se você não tiver certeza do tipo do seu computador, abra o Prompt de Comando ou o PowerShell e insira: `systeminfo | find "System Type"`.

Advertência: em versões do Windows que não estão em inglês, talvez você precise modificar o texto de pesquisa, traduzindo a cadeia de caracteres "Tipo de Sistema". Talvez você também precise escapar as aspas para o comando find. Por exemplo, em alemão, `systeminfo | find "Systemtyp"`.

2. Execute o pacote de atualização baixado na etapa anterior. (Clique duas vezes para executar. Você receberá uma solicitação para fornecer permissões elevadas; selecione 'sim' para aprovar essa instalação.)

Depois que a instalação for concluída, vá para a próxima etapa: configurar o WSL 2 como a sua versão padrão ao instalar novas distribuições do Linux (ignore essa etapa se você quiser que as novas instalações do Linux sejam definidas como WSL 1).

❗ Observação

Para obter mais informações, leia o artigo Alterações na atualização do kernel do Linux para o WSL 2, disponível no blog da linha de comando do Windows.

- Instale o Ubuntu pela Microsoft Store:
  - <https://apps.microsoft.com/store/detail/ubuntu-22042-lts/9PN20MSR04DW>
- Baixe o instalador do Docker Desktop, abra e siga os passos padrões de instalação:
  - <https://docs.docker.com/desktop/windows/wsl/>

The screenshot shows the Docker Docs website with the 'Manuals' tab selected. The left sidebar contains a list of additional resources, with 'Docker Desktop WSL 2 backend on Windows' highlighted. The main content area is titled 'Docker Desktop WSL 2 backend on Windows' and includes an introduction, prerequisites, a list of steps to turn on WSL 2, and instructions for enabling Docker support in WSL 2 distros. A red arrow points to the link 'Download Docker Desktop for Windows' in the first step of the 'Turn on Docker Desktop WSL 2' section. Below the text, there are two code blocks: one for checking the WSL mode and another for upgrading an existing Linux distro to v2.

**Docker Desktop WSL 2 backend on Windows**

Windows Subsystem for Linux (WSL) 2 is a full Linux kernel built by Microsoft, which allows Linux distributions to run without managing virtual machines. With Docker Desktop running on WSL 2, users can leverage Linux workspaces and avoid maintaining both Linux and Windows build scripts. In addition, WSL 2 provides improvements to file system sharing and boot time.

Docker Desktop uses the dynamic memory allocation feature in WSL 2 to improve the resource consumption. This means, Docker Desktop only uses the required amount of CPU and memory resources it needs, while enabling CPU and memory-intensive tasks such as building a container, to run much faster.

Additionally, with WSL 2, the time required to start a Docker daemon after a cold start is significantly faster. It takes less than 10 seconds to start the Docker daemon compared to almost a minute in the previous version of Docker Desktop.

### Prerequisites

Before you turn on the Docker Desktop WSL 2, ensure you have:

- Windows 10, version 1903 or higher, or Windows 11.
- Enabled WSL 2 feature on Windows. For detailed instructions, refer to the [Microsoft documentation](#).
- Downloaded and installed the [Linux kernel update package](#).

### Turn on Docker Desktop WSL 2

1. Download [Docker Desktop for Windows](#).
2. Follow the usual installation instructions to install Docker Desktop. If you are running a supported system, Docker Desktop prompts you to enable WSL 2 during installation. Read the information displayed on the screen and enable WSL 2 to continue.
3. Start Docker Desktop from the Windows Start menu.
4. From the Docker menu, select **Settings** and then **General**.
5. Select the **Use WSL 2 based engine** check box.

If you have installed Docker Desktop on a system that supports WSL 2, this option is enabled by default.

6. Select **Apply & Restart**.

Now `docker` commands work from Windows using the new WSL 2 engine.

### Enabling Docker support in WSL 2 distros

WSL 2 adds support for "Linux distros" to Windows, where each distro behaves like a VM except they all run on top of a single shared Linux kernel.

Docker Desktop does not require any particular Linux distros to be installed. The `docker` CLI and UI all work fine from Windows without any additional Linux distros. However for the best developer experience, we recommend installing at least one additional distro and enabling Docker support by:

1. Ensure the distribution runs in WSL 2 mode. WSL can run distributions in both v1 or v2 mode.

To check the WSL mode, run:

```
$ wsl.exe -l -v
```

To upgrade your existing Linux distro to v2, run:

```
$ wsl.exe --set-version (distro name) 2
```