

# GIGAdoc Installation Manual

## System Requirements

### Windows

- Windows 10 or Windows 11 (Home or Professional edition)
- AMD64 CPU (Intel or AMD)
- WSL2
- Minimum 16 GB RAM (32 GB recommended)
- Desktop PC recommended

### Linux

- Tested on Ubuntu 22.04 LTS
- AMD64 CPU (Intel or AMD)
- Minimum 16 GB RAM (32 GB recommended)
- Docker
- Python

### Mac

- Not tested
  - May be possible to run under QEMU or Rosetta environment
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## Installation Guide for Windows PC

### 1. Install WSL2

1. Open the terminal as an Administrator and enter the following command:
2. `wsl --install`
3. Reboot your PC, then open the Linux terminal and set up your username and password.

## Increasing WSL2 Memory Allocation (If Needed)

If WSL2 crashes due to memory issues, increase the memory allocation:

1. Open the terminal in your home folder (`C:\Users\<your_username>`).
2. Run the following commands to create or edit the `.wslconfig` file:
3. `echo [wsl2] >> .wslconfig`
4. `echo memory=12GB >> .wslconfig`

This allocates 12 GB of RAM to WSL2. Adjust the amount as needed.

5. You can also edit the `.wslconfig` file later using a text editor like Notepad.

## 2. Install Rancher Desktop or Docker Desktop

Follow the installation instructions at:

- Rancher Desktop: <https://rancherdesktop.io/>
- Docker Desktop: <https://docs.docker.com/desktop/install/windows-install/>

## 3. Install Python (Optional)

Python installation is not required if you use the executable version of GIGAdoc. However, if you prefer running the Python script directly:

1. Download Python from the [official website](#) and follow the installation guide.
2. After installing Python, install the required libraries using `pip`:
3. `pip install docker psutil biopython pandas openpyxl`

## 4. Get the GIGAdoc Program from GitHub

Visit the [GIGAdoc GitHub repository](#) to download the program.

### For Python Script Version

1. Download all files from the `bin` directory into the same folder.
2. To run GIGAdoc, open a terminal, navigate to the folder, and execute:
3. `python gigadoc.py`

**For Windows Executable Version**

1. The executable version is created using PyInstaller. Download `gigadoc.exe` into a folder.
  2. To run GIGAdoc, simply double-click the `gigadoc.exe` file.
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**Running GIGAdoc on ARM64 Architecture**

**Test Environment**

- **Hardware:** Raspberry Pi 5 (8GB RAM)
- **OS:** Raspberry Pi OS 64-bit (Bookworm 12)
- **Emulator:** QEMU version 7.2.15
- **Software:**
  - Docker 27.5.1
  - Python 3.11.2

**Software Compatibility**

Software	Status
SPAdes	Not tested (test run was completed)
AMRFinderPlus	Works correctly
MLST	Works correctly
fastANI	Works correctly
SNIPPY	Works correctly
cgMLST	Not working

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