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Home / Manuals / Docker DesktopPage options Docker Desktop is a one-click-install application for your Mac, Linux, or Windows environment that lets you build, share, and run containerized applications and microservices.It provides a straightforward GUI (Graphical User Interface) that lets you manage your containers, applications, and images directly from your machine.Docker Desktop reduces the time spent on complex setups so you can focus on writing code. It takes care of port mappings, file system concerns, and other default settings, and is regularly updated with bug fixes and security updates.Docker Desktop integrates with your preferred development tools and languages, and gives you access to a vast ecosystem of trusted images and templates via Docker Hub. This empowers teams to accelerate development, automate builds, enable CI/CD workflows, and collaborate securely through shared repositories. What's included in Docker Desktop? What are the key features of Docker Desktop?Ability to containerize and share any application on any cloud platform, in multiple languages and frameworks.Quick installation and setup of a complete Docker development environment.Includes the latest version of Kubernetes.On Windows, the ability to toggle between Linux and Windows containers to build applications.Fast and reliable performance with native Windows Hyper-V virtualization.Ability to work natively on Linux through WSL 2 on Windows machines.Volume mounting for code and data, including file change notifications and easy access to running containers on the localhost network. Home / Manuals / Docker Desktop / Explore Docker DesktopPage options Table of contentsDocker terminalQuick searchThe Docker menuWhen you open Docker Desktop, the Docker Desktop Dashboard displays. It provides a centralized interface to manage your containers, images, volumes, and builds.In addition, the Docker Desktop Dashboard lets you:Use Ask Gordon, a personal AI assistant embedded in Docker Desktop and the Docker CLI. It's designed to streamline your workflow and help you make the most of the Docker ecosystem.Navigate to the Settings menu to configure your Docker Desktop settings. Select the Settings icon in the Dashboard header.Access the Troubleshoot menu to debug and perform restart operations. Select the Troubleshoot icon in the Dashboard header.Be notified of new releases, installation progress updates, and more in the Notifications center. Select the bell icon in the bottom-right corner of the Docker Desktop Dashboard to access the notification center.Access the Learning center from the Dashboard header. It helps you get started with quick in-app walkthroughs and provides other resources for learning about Docker.For a more detailed guide about getting started, see Get started.Access Docker Hub to search, browse, pull, run, or view details of images.Get to the Docker Scout dashboard.Navigate to Docker Extensions.From the Docker Dashboard footer, you can use the integrated terminal directly within Docker Desktop.The integrated terminal:Persists your session if you navigate to another part of the Docker Desktop Dashboard and then return.Supports copy, paste, search, and clearing your session.To open the integrated terminal, either:Hover over your running container and under the Actions column, select the Show container actions menu. From the drop-down menu, select Open in terminal.Or, select the Terminal icon located in the bottom-right corner, next to the version number.To use your external terminal, navigate to the General tab in Settings and select the System default option under Choose your terminal.Use Quick Search, which is located in the Docker Dashboard header, to search for:Any container or Compose application on your local system. You can see an overview of associated environment variables or perform quick actions, such as start, stop, or delete.Public Docker Hub images, local images, and images from remote repositories (private repositories from organizations you're a part of in Hub). Depending on the type of image you select, you can either pull the image by tag, view documentation, go to Docker Hub for more details, or run a new container using the image.Extensions. From here, you can learn more about the extension and install it with a single click. Or, if you already have an extension installed, you can open it straight from the search results.Any volume. From here you can view the associated container.Docs. Find help from Docker's official documentation straight from Docker Desktop.Docker Desktop also includes a tray icon, referred to as the Docker menu for quick access.Select the icon in your taskbar to open options such as:Dashboard. This takes you to the Docker Desktop Dashboard.Sign in/Sign upSettingsCheck for updatesTroubleshootGive feedbackSwitch to Windows containers (if you're on Windows)About Docker Desktop. Contains information on the versions you are running, and links to the Subscription Service Agreement for example.Docker HubDocumentationExtensionsKubernetesRestartQuit Docker Desktop Edit this page Request changes Docker Desktop enhances its capabilities through Docker Extensions, allowing developers to integrate seamlessly with their favorite tools and services. These extensions expand Docker Desktop’s functionality, providing a tailored experience that meets specific development needs. Learn more about Extensions Learn more about Extensions Julius Pravtchev Senior DevOps, CARIAD Ready to enhance your development workflow? Compare subscriptions now or reach out to us for more information. TipAs an IT administrator, you can use endpoint management (MDM) software to identify the number of Docker Desktop instances and their versions within your environment. This can provide accurate license reporting, help ensure your machines use the latest version of Docker Desktop, and enable you to enforce sign-in.IntuneJamfKandjiKolideWorkspace One Home / Get started / Introduction / Get Docker DesktopPage options Docker Desktop is the all-in-one package to build images, run containers, and so much more. This guide will walk you through the installation process, enabling you to experience Docker Desktop firsthand.Docker Desktop termsCommercial use of Docker Desktop in larger enterprises (more than 250 employees OR more than $10 million USD in annual revenue) requires a paid subscription.Once it's installed, complete the setup process and you're all set to run a Docker container.In this hands-on guide, you will see how to run a Docker container using Docker Desktop.Follow the instructions to run a container using the CLI.Open your CLI terminal and start a container by running the docker run command:For this container, the frontend is accessible on port 8080. To open the website, visit in your browser. Open Docker Desktop and select the Containers field on the left sidebar.You can view information about your container including logs, and files, and even access the shell by selecting the Exec tab. Select the Inspect field to obtain detailed information about the container. You can perform various actions such as pause, resume, start or stop containers, or explore the Logs, Bind mounts, Exec, Files, and Stats tabs. Docker Desktop simplifies container management for developers by streamlining the setup, configuration, and compatibility of applications across different environments, thereby addressing the pain points of environment inconsistencies and deployment challenges.Now that you have Docker Desktop installed and ran your first container, it's time to start developing with containers.Develop with containers Read now Read now Read now Before understanding the concept of Docker, let's first discuss the concept of Hypervisors. So in an IT Company, or any cooperation, there is a development team, a testing team, and an operation team for developing the application, testing it, and deploying it. Now suppose the developers are working on a different OS, for example, let's say macOS, and they used some dependencies or libraries as per the language they are using, so they just won't hand the software to the testing team, but also the libraries, But now, the application didn't run the tester's machine, but it worked on the developer's machine, maybe because the tester's machine has different OS features than the developer's one.In this article, we will guide you through on firstly discussing what is docker, what are the requirements to docker for installing in Windows, why to install docker on windows, its implementation guide, best practices and troubleshooting issues and much more, The following is the table of content, helping you to give a overview what we going to cover in this article. But the problem here is, for every application, one needs a different OS, this will result in a waste of resources as multiple OSs will be running. So for this problem, we have the concept of Containers, the difference between Hypervisors and containers is that we don't need multiple OS for every application, multiple applications can share the same OS kernel, can't they? So instead of installing HYPERVISOR, we will be installing Docker. What is Docker?Docker is an open-source container platform software tool, where you run your applications in the form of containers. Docker containers comes with light weighted softwares having all the dependencies and configurations so we can run them across different computing environments. It facilitates the developers to package their application with all its dependencies into a single entity in the form of images. These can be portable easily or sharable with other developers without worrying about the underlying OS.Requirements of Windows For Downloading DockerThe following are the requirements of Windows on Docker:Windows 11 64-bit: Home or Pro version 21H2 or higher, or Enterprise or Education version 21H2.Windows 10 64-bit: Home or Pro version 21H2 or higher, or Enterprise or Education version 21H2.4GB RAM or Higher.Hyper V feature must be enabled in Windows.Specifications for Docker Desktop InstallationThe following are specifications for installing Docker on windows:RAM: The minimal amount of Memory needed to run containers smoothly is 4GB, however, if a program has more complicated functions, it will need more than 6 GB RAM.Storage: For running the containers and installation of docker the minimum space required is 25GB. If you want to store the container images and data then we need at least more than 35 GB to 40 GB.Network: To download, push, and pull the images we need active internet then only we can maintain the container images with the help of docker.CPU: At least a 64-bit processor is required for docker.Docker can be run on a laptop with 4 GB of Memory, a 64-bit processor, and 25 GB of storage. It might change based on our use cases.Why to Install Docker on Windows?The following are the some of the reasons and insights specifying the needs and uses of installing the docker on windows:Consistent Environments: It ensure the applications to run smoothly across different systems without any compatibility issues.Resource Efficiency: It uses less resources compared to virtual machines, which facilitates with allowing for faster startups and better resource utilization.Enhanced Collaboration: It facilitates with easy sharing and replication of development setups among teams.Seamless Integration: It facilitates to work well with existing Windows development tools and workflowsHow to Install Docker Desktop on Windows? A Step-By-Step GuideThe following are the steps to guide for installing the Docker Desktop on Windows:Step 1: Download Docker DesktopOpen your preferred web browser (e.g., Chrome).Then search in the browser by typing s "Docker download" and press Enter.Click on the first link that appears in the search results.Step 2: Select Software Respective to your OSOn the Docker download page, select "Windows" as your operating system. Step 3: Start the DownloadThe download will begin automatically. The duration will depend on your internet speed. How to Start Docker Desktop?Step 4: After installation, open Docker Desktop.Accept the Docker Subscription Service Agreement window and click "Continue."Docker Desktop will start after accepting the terms and conditions. Step 5: After clicking "OK," the installation will start. Step 6: After installation completes, it will show a confirmation screen. Step 7: Restart your PC to install WSL 2 (Windows Subsystem for Linux), a compatibility layer for running Linux binary executables natively on Windows 10.Step 8: After restarting, a dialog box will appear. Click the "Stop Docker" button. Step 9: Enable Hyper-VRestart your PC and enter the BIOS setup:Navigate to Settings > Update and Security > Recovery > Advanced Setup > Device Configuration.Ensure the "Enable Turbo Boost on DC" option is marked. Save and exit. Step 10: Activate Hyper-VGo to Control Panel > Turn Windows Features on or off.Check "Hyper-V" and "Windows Hypervisor Platform."How to Install Docker Desktop from the Command Line?To install Docker Desktop, follow these procedures:Step 1: Run the following command in the Command Prompt:start /w "" "Docker Desktop Installer.exe" install Step 2: Add the user account to the Docker user group:net localgroup docker-users /add Step 3: Verify Docker Installation and VersionsOpen the Command Prompt.Run the following command to check the Docker version:docker --versionUpon starting Docker for the first time, you will receive a Beta invitation email.How to Install Docker on Windows 10?You must perform the following steps in order to install Docker on Windows 10:Step 1: Ensure CompatibilityVerify that your system meets the minimum requirement for Docker: 64-bit Windows 10 Pro.Step 2: Download DockerDownload Docker Desktop from the official website.Step 3: Install Docker DesktopComplete the installation process.Open Docker Desktop from the Start menu.Enable Hyper-V and Windows Subsystem for Linux (WSL) features when prompted.Docker Desktop will automatically restart after enabling these features.Step 4: Verify Installation:Open a command prompt or PowerShell window.Pull a sample image, such as Nginx, using the following command:docker pull nginxIf the image pulls successfully, Docker Desktop has been installed correctly.How to Install Docker on Windows 11?First, make sure that your Windows matches Docker's requirement Docker requires 64-bit Windows 11 Pro, and the rest of all the steps are the same as Windows 10 as follows:You must perform the following steps in order to install Docker on Windows 10:Step 1: Ensure CompatibilityVerify that your system meets the minimum requirement for Docker: 64-bit Windows 10 Pro.Step 2: Download DockerDownload Docker Desktop from the official website.Step 3: Install Docker DesktopComplete the installation process.Open Docker Desktop from the Start menu.Enable Hyper-V and Windows Subsystem for Linux (WSL) features when prompted.Docker Desktop will automatically restart after enabling these features.Step 4: Verify InstallationOpen a command prompt or PowerShell window.Pull a sample image, such as Nginx, using the following command:docker pull nginxIf the image pulls successfully, Docker Desktop has been installed correctly.By following the steps mentioned below we can update our Docker:Step 1: Open Docker Desktop from the Start menuStep 2: Click on Settings and navigate to the "Resources" tab. Click on "Check for Updates." Docker Desktop will check for any available updates.Step 3: If an update is available, click "Download and Install." Docker Desktop will automatically download and install the update. After completion, you can verify the Docker version by using the following command in Command Prompt or PowerShell:docker versionAdvantages of Docker In WindowsThe following are the advantages of Docker in Windows:Docker for Windows allows developers to their applications easily on any Windows.Docker can be installed very easily on Windows.Docker containers can be moved in between Windows and Linux without changing the Source code.The application is isolated from the underlying OS which makes it more secure. How to Uninstall the Docker Desktop Tool? A Step-By-Step GuideThe following are the steps to uninstall the docker Desktop Tool:Step 1: Find "Add or Remove Programs" in the start menu and choose it.Step 2: Click Docker Desktop when you see Docker in the list of installed programs.Step 3: Click on Uninstall in Docker Desktop and follow the on-screen instructions.Step 4: After the uninstallation is complete, restart the computer.How to Install and Enable WSL 2 on Windows Before installing docker by using WSL 2 make sure your Windows is supported for that and then install and enable WSL2 on your laptop.Step 1: Enter the following command as an administrator to enable the Windows Subsystem for Linux feature.dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestartStep 2: In this step, you need to enable the virtual machine platform feature to enable it to run the following command in Powershell as an administratordism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestartStep 3: After running the above command you need to restart your computer by this the virtual machine platform feature will be enabled.Step 4: Download and install the WSL 2 Linux kernel updated package from the official website of MicrosoftStep 5: Make WSL 2 the standard version. Run the following command when logged in as an administrator in Windows PowerShell. Install a Linux distribution by using the Microsoft Store. You can pick from a variety of Linux distributions, including Kali Linux, Debian, and Ubuntu.wsl --set-default-version 2After completing the above steps we can use execute Linux commands on your Windows using WSL 2.How to Install Docker With WSL 2 Backend on Windows?Utilizing dynamic memory allocation will help the WSL 2 backend consume resources more efficiently. which enables us to launch Docker very quickly and improve Docker's speed. To make this happen please follow the steps mentioned below.Step 1: Install and enable WSL 2 on Windows by following the steps outlined in the previous answers. And install Docker Desktop as mentioned above for Windows.Step 2: Once the Docker Desktop installation is completed open the settings in Docker Desktop click on the resources tab and click on WSL 2 integration. Click "Apply & Restart" to apply the changes.Step 3: Open a terminal in your WSL 2 distribution and use the following command to confirm that Docker is operational after Docker Desktop has restarted.docker pull ubuntu If the image is successfully retrieved, WSL 2 has likely been deployed as a backend for Docker. The WSL 2 backend now allows you to use Docker to construct and manage containers on your Windows computer.Note: The Docker CLI interacts with the Docker daemon running in the Windows Docker Desktop application when you issue Docker commands in your WSL 2 terminal.How to Install Docker on Windows Without Docker Desktop? A Step-By-Step GuideThe following are the steps that guide you in installing the Docker on Windows without Docker Desktop:Step 1: Enable WSL 2Open the power shell as administrator and run the following command:wsl --installStep 2: Install a Linux DistributionDownload and install a Linux distributions from the Microsoft Store (e.g., Ubuntu)Step 3: Set a WSL 2 as DefaultOpen the PowerShell and set WSL 3 as the default versionwsl --set-default-version 2Step 4: Install Docker Engine on WSL 2Open your linux distribution and update the packages list:sudo apt updateInstall the docker using the a shell script as per defining, It looks as follows:curl -fsSL -o get-docker.shsudo sh get-docker.shStep 5: Start Docker ServiceStart the docker service with the following command:sudo service docker startStep 6: Verify InstallationUsing the following command check the docker version for verifying the installation.docker --versionStep 7: Run Docker Commands from WindowsInstall `wsl` command line tool to run the docker commands from the windows command prompt or PowerShell:wsl docker run hello-worldWhat's the difference between Docker for Windows and Docker on Windows?The following are the difference between docker for windows and docker on windows:AspectDocker for WindowsDocker on WindowsEnvironmentIt will run Docker containers using a lightweight VM (Hyper-V/WSL 2).It will run the Docker containers natively on Windows Server.CompatibilityIt is suitable for development and testing on Windows 10/11.It is suitable for production environments on Windows Server.PerformanceIt used as a VM, which might have slight overhead compared to native.It runs natively with offering better performance and integration.Best practices of using Docker on WindowsThe following are the some of the best practices of using Docker on Windows:Use WSL2 Feature: Try to utilize the features of Windows Subsystem for Linux 2 (WSL2) for experiencing better performance and having compatibility to the applications.Optimize Docker Resources: Make adjustments to your resources such as CPU, memory, and disk settings in Docker Desktop for balancing performance and resource usage.Keep Docker Updated: Try to update the Docker Desktop software regularly, so that your containers can be ensured with security while acessing the new features.Utilize Docker Compose: Make use of Docker Compose for managing multi-container applications efficiently.The following are the some of the common troubleshooting issues related to docker on windows:Hyper-V or WSL2 Not Enabled: Make sure the Hyper-V or WSL2 is enabled in Windows features section for successful installation and work properly with docker.Docker Desktop Won't Start: Try to restart the Docker Desktop or check for updates to resolve startup issues.Network Connectivity Problems: Ensure to configure the network settings or to reset Docker to fix connectivity issues.Insufficient Disk Space: Try to free up the space or increase disk allocation for Docker.ConclusionIn this article, we covered a step-by-step procedure to install docker in Windows 11 and Windows 10. We also covered how to install docker in Windows 10 and 11 with the help of the Command line. Refer to Install in Mac and Ubuntu to know more about installation in different Operating Systems. Connect, collaborate, and create on Docker Hub — a central repository for finding and sharing container images and applications with ease. Docker isn’t just for personal projects. Discover the perfect plan to empower your team and streamline your workflow. HOME In this tutorial, we will discuss the Docker, Docker Desktop and how to install Docker Desktop on the Windows 11. Table of Contents What is Docker? Docker is an open platform for developing, shipping, and running applications using the containers. Docker enables us to separate the applications from the infrastructure so we can deliver software quickly. With Docker, we can manage your infrastructure in the same ways you manage your applications. Containers are lightweight, portable, and self-sufficient units that package an application and its dependencies, ensuring consistency across different environments. What is Docker Desktop? Docker Desktop is a one-click-install application for your Mac, Linux, or Windows environment that lets you build, share, and run containerized applications and microservices. It provides a straightforward GUI (Graphical User Interface) that lets you manage your containers, applications, and images directly from your machine. Before installing Docker on Windows 10 or 11, ensure your system meets the following requirements: Windows 10 64-bit: Build 18362 or higher Windows 11 64-bit Hardware Virtualization Technology (VT-x) enabled in BIOS Microsoft Hyper-V and Containers features enabled How to verify WSL is installed? Windows Subsystem for Linux (WSL) 2 is a prerequisite for Docker Desktop on Windows. It provides a lightweight Linux kernel for compatibility and performance improvements. The output of the above command should display the version of wsl installed on the machine. Open PowerShell as Administrator and run: Restart the computer if prompted. Install Docker Desktop On the Docker download page, select “Windows” as your operating system. The download will begin automatically. The duration will depend on your internet speed. After installation, open Docker Desktop. After clicking “OK,” the installation will start. After installation completes, it will show a confirmation screen. Create an account for Docker Desktop. Once we will create the account, we will login and see that the Docker Engine is stopped. Go to the settings and select “Start Docker Desktop when sign in to your computer.”. This is optional. Go to the bottom tray and right click on the Desktop option. It will show below mentioned options. Select “Quit Docker Desktop”. Start Docker Desktop Docker Desktop does not start automatically after installation. To start Docker Desktop: Search for Docker, and select Docker Desktop in the search results. The Docker menu displays the Docker Subscription Service Agreement. Select Accept to continue. Docker Desktop starts after you accept the terms. Note that Docker Desktop won’t run if you do not agree to the terms. You can choose to accept the terms at a later date by opening Docker Desktop. How to verify successful docker installation Open a command prompt or PowerShell window. Using the following command check the docker version for verifying the installation. Pull a sample image, such as Nginx, using the following command: If the image pulls successfully, Docker Desktop has been installed correctly TroubleShooting The error you’re seeing indicates that Docker is unable to authenticate when trying to pull the NGINX image from Docker Hub Use the below command to login to docker docker login -u my-user-name (using real username) We are done! Congratulations on making it through this tutorial and hope you found it useful! Happy Learning!! Docker Desktop app launchedIf nothing happens, you may need to download Docker Desktop.