

## **About Parallels Desktop for Mac with Apple silicon**

- Parallels Desktop for Mac Business Edition
- Parallels Desktop for Mac Standard Edition
- Parallels Desktop for Mac Pro Edition

## **About Apple silicon**

<u>Apple M Series chip</u> is a successor of iPad's <u>A14Z chip</u> and the first designed specifically for the Mac. It is built on Arm architecture and includes a <u>system on a chip</u> (SoC) that combines numerous powerful technologies into a single silicon, featuring a unified memory architecture for dramatically improved performance and efficiency.

Virtual machines created on Intel-based Mac computers have  $\underline{x86}$  64 CPU architecture that is fundamentally different from the Arm architecture.

Software applications are heavily dependent on a computer's CPU architecture: an application that is compiled (created) for one architecture, cannot be easily run on another architecture.

Therefore, a virtual machine created on an Intel-based Mac cannot be used on a Mac with Apple silicon, and vise-versa. If you are switching from a Mac with an Intel processor to a Mac with Apple silicon or the other way around, please refer to KB 125344 for more details.

## **About Rosetta**

Mac applications that are originally created for Intel-based Mac computers work on Mac computers with Apple silicon out of the box by utilizing the <u>Rosetta</u> framework - a translation process that allows running Intel x86\_64 applications on Apple silicon. Rosetta can translate most Intel-based applications, but it <u>can't translate</u> the following executables:

- Kernel extensions;
- **Virtual Machine applications** that virtualize x86\_64 computer platforms.

So, due to these technical limitations, Rosetta translates applications that work in user space only. Rosetta can translate the Parallels Desktop user interface and web services, but not virtual machines.

## **About Parallels Desktop for Mac with Apple silicon**

To run virtual machines on a Mac with Apple silicon, Parallels engineers created a **new virtualization engine** that uses the Apple silicon chip hardware-assisted virtualization and allows to run Arm-based virtual machines. All of the best Parallels Desktop features were re-engineered for the Apple silicon, including:

- Choose to have Windows invisible while still using its applications in **Coherence Mode**, side-by-side with Mac apps.
- Shared Profile Tool that enables you to share your Mac desktop, pictures, documents, and other folders with Windows, allowing you to easily access them from Windows applications.
- **Touch Bar controls** for Windows applications truly seamless experience running a Windows app on a Mac.
- Your **Mac keyboard layouts** are added automatically to Windows for greater productivity.
- And hundreds of other Parallels Desktop features await to be discovered.

Note: See the <u>list of supported operating systems</u> in Parallels Desktop on Mac with Apple M Series chip.

To run Windows 11 and its applications on a Mac with Apple silicon, you need to install an Arm-based image of <u>Windows 11</u> that can run the majority of Intel-based Windows 11 applications by using a <u>built-in emulator</u>.

Note: for installing Arm-based image of Windows 11 in Parallels Desktop see KB 125375.

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