Using RIT on a Mac: Instruction Guide

Introduction

To use the full RIT Market Simulator package with the RIT Decision Cases, students will need *RIT User Application* and real-time data links (RTD)[1] for the start-up Excel/VBA based decision-support models for introduction to the *RIT Decision Cases*. At most universities, students will have a Lab with computers that have a Windows OS to run the *RIT User Application* during classes. However, students often need to access *RIT Decision Cases* outside class times to practice strategies and prepare for upcoming classes. Anyone who must use Mac computers for that purpose, will need to access a Windows environment.

The easiest option is to install the required tools on a Windows computer or visit your School's Lab to ensure that you can access RIT without any compatibility issues.

Those who prefer to practice on a Mac, will need to set up a Windows environment. Several approaches are available, ranging from free solutions such as VMware Fusion to paid options like Parallels Desktop, which provides a smoother and more user-friendly experience. The sections below outline these options to help you decide which setup best fits your needs.

Please note that if you have not previously installed a Windows environment on your Mac, the process may take several hours and require approximately 50–80 GB of free disk space. Depending on your macOS version and your comfort with technical setup, you may also need to consult online resources during installation.

1. Key Requirements

- RIT User Application software
- RTD Links
- Microsoft Office (Excel) for Windows

Please note that all three applications must be installed within the same Windows environment. For example, the RIT User Application running in a Windows virtual machine cannot interact with Microsoft Office installed directly on macOS. Similarly, cloud-based versions of Excel (e.g., Office 365 Web) will not work, as RTD Links require a full desktop installation of Excel for Windows.

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[1] Note that RTD refers to Excel-based real-time links using the Windows .NET Framework. Python users will access the same data points using the REST API which involves sending HTTP requests to specific endpoints like GET /securities and parsing the returned JSON responses. Please refer to the 'Resource Links for Alternative API Choices for the RIT Market Simulator' or the 'RIT - User Guide - REST API Documentation' documents for more details.

2. Options for Running RIT on a Mac

- Option A: Virtual Machine (recommended for most students)
  A virtual machine allows you to create a Windows operating environment on your Mac in a relatively straightforward way. Based on our experience, Parallels Desktop provides the smoothest user experience, though other options are available if you prefer free alternatives. In practice, Windows activation has not been necessary for running RIT and RTD Links.
  - Parallels Desktop (recommended for M1/M2/M3/M4 Macs or recent Intel Macs)
    - Access with academic discount **link**: the standard edition is sufficient for most RIT use cases unless you plan to run large Excel models or algorithms. The installer will automatically prompt you to set up Windows 11.
  - VMWare Fusion Pro (recommended for Intel Macs; latest version also supports Apple Silicon)
    - This application is offered **free of charge** for personal use; you can download and install the application from **this link**. Make sure to download VMWare Fusion Pro (**not** VMWare Workstation). You will need to download and install the Windows ISO manually after installing this application.
  - VirtualBox (Intel Macs only)
    - This open-source application is also offered **free of charge**; you can download and install the application from this link. You will need to download and install the Windows ISO manually after installing this application.

- Option B: Boot Camp (**Intel-based Macs only, free**)
  If you own a relatively older Intel-based Mac (introduced before 2020), you can install a full version of Windows 10 using Boot Camp. This method allows Windows to run natively on your Mac, though you will need to restart your computer each time you switch between MacOS and Windows.

  For detailed step-by-step instructions, you can refer to Apple's official Boot Camp support page. If you only need a high-level overview of the installation process, you can review Apple's Boot Camp installation guide.

- Option C: Cloud-based PCs
  Another option is to use a cloud-based virtual Windows environment through services such as Microsoft Azure Virtual Desktop or Amazon WorkSpaces. This approach lets you access Windows from your Mac without installing it locally.

  While convenient, these services usually involve a monthly subscription fee ($20–$40/month) and may require a more complex setup. Performance also depends on

having a stable, high-speed internet connection. For that reason, this option is generally best for students who expect to use a Windows environment regularly over the long term, rather than for occasional coursework.

- Option D: Windows Emulator (UTM, advanced option for Apple Silicon Macs)
  A free, open-source application called UTM can emulate or virtualize Windows on Apple Silicon Macs. It can be downloaded and installed at no cost, but as an open-source tool, it does not offer centralized technical support.

  While UTM can work for running Windows and RIT, performance may be slower than with Parallels, and complex Excel models may run less efficiently. This option is best suited for tech-savvy students who are comfortable troubleshooting on their own and who are looking for a no-cost alternative to commercial solutions.

3. Running RTD Links and Microsoft Office (Excel) for Windows

Since RTD Links works only with the Windows version of Microsoft Excel, you will need to install Excel in your Windows environment first, followed by the RTD Links add-in.

Most universities provide access to Microsoft Office 365. Once your Windows setup is complete, log into your institution's Microsoft Office 365 webpage with your credentials and download the desktop version of Excel for Windows.

The final step is to install RTD Links. You can download the installer file from the [RIT Downloads webpage](#) and, in most cases, select the 64-bit version, since Office 365 is 64-bit by default.

Additional Considerations

If you plan to use the RIT REST API, you will also need to install Python (or another IDE of your choice) within your Windows environment. We recommend using the Anaconda Distribution, as it includes Python, Jupyter Notebook, and commonly used libraries in one package.

Keep in mind that installing Anaconda requires additional disk space, setup time, and may involve troubleshooting depending on your system. Before proceeding, carefully consider whether this extra effort is worthwhile compared to simply using a Windows computer or coming to your School's Lab, where all required tools are already set up and ready to use.