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About this Release

This document provides information about DesktopPlayer for Mac; it includes an overview of the functionality available at this release, installation information, and general usage guidelines.

⚠️ Back up your data prior to installing this release. Consider saving your data to Citrix ShareFile or any cloud-based backup service to access your data from other devices or locations.

About the Citrix DesktopPlayer for Mac Solution

Citrix DesktopPlayer for Mac extends the benefits of desktop virtualization to mobile MacBook users, enabling you to work on your Windows business apps in virtual machines (VMs) whether you are online, offline, or on an intermittent network connection. DesktopPlayer end users gain freedom while IT Administrators gain control and centrally managed Windows VMs deployed to corporate and BYO MacBook.

Sharing the same backend Synchronizer management infrastructure with XenClient Enterprise, DesktopPlayer is a distributed solution that makes managing Windows VMs on thousands of Mac laptops as easy as managing one.

DesktopPlayer for Mac combines centralized VM management with distributed execution of managed Windows VMs on a client endpoint. DesktopPlayer offers IT professionals and Mac end users with a single, unified product that extends the benefits and convenience of local desktop virtualization with the efficiency and control of central, policy-driven management – providing the best of both worlds.

About system memory usage

System memory is shared between the host operating system (Mac OS X) and the guest operating system in the virtual machine (Windows). Operating a virtual machine on a Mac with 4 GB of memory limits memory allocation to the Windows OS (guest). When using DesktopPlayer, consider that Mac OS X requires approximately 2-2.5 GB of memory for normal operation; a Windows 7 32-bit guest virtual machine requires approximately 1.5 GB of memory to perform reasonably. Running a 64-bit Windows OS will require additional memory (8 GB RAM or higher) and is not feasible on a Mac with 4 GB RAM.

⚠️ Citrix recommends MacBooks with 8 GB RAM or higher, with a minimum of 4 GB RAM.

DesktopPlayer Components

The DesktopPlayer for Mac solution uses two key components to provide Windows VMs on Macs:

- DesktopPlayer for Mac, a virtualization-based client application that enables Windows VMs to run on top of the Mac host computer and communicates with a management server
- Synchronizer, a centralized management server that controls multiple DesktopPlayer machines
About DesktopPlayer

DesktopPlayer is installed on individual Mac computers, and provides a virtualized platform to run each Windows VM image. An image contains a virtualized representation of an operating system plus any included applications. DesktopPlayer may have more than one virtual machine image running on top of a Mac computer, and is dependent on the available hardware resources (i.e., CPU, storage, memory) to support the multiple images.

The image definition includes its own specific RAM and storage requirements; memory management is performed by DesktopPlayer.

DesktopPlayer is comprised of a client endpoint, plus value-added functionalities wrapped around the endpoint, including:

- a single installer for quick and simple installation
- in-guest tools for the virtual machine OS
- the management engine that facilitates communication with Synchronizer for VM/Engine provisioning, updates and policy management
DesktopPlayer also performs the management tasks on the computer:

- Establishes network connections for the VM via the Mac platform (wireless and/or wired).
- Communicates securely (through SSL) with Synchronizer and checks for updates to VMs.
- Downloads and prepares updates and new versions of VMs.

**About Synchronizer**

Synchronizer builds the VMs, manages users and groups, and assigns them to computers/users. When contacted by DesktopPlayer, Synchronizer sends down updated VMs, installed applications, or policies.

*Synchronizer version 5.0.4 is required to manage DesktopPlayer endpoints.*

Using Synchronizer, an Administrator can request information about the computer running a VM (disk use, hardware available, and diagnostics). Synchronizer additionally provides:

- Single, unified management for multiple DesktopPlayer (Macs) and XenClient Enterprise (PCs)
- Single, unified Windows VM image that can be deployed on both Macs and PCs
- Common management policies and licensing across corporate endpoints

**Key Features of DesktopPlayer in this Release**

This release provides new features focusing on delivering managed Windows VMs to Mac laptops. It includes:

- Ease of use and convenience
  - Easy, non-disruptive install – run enterprise Windows OS and apps, while retaining the personal Mac OS environment on corporate and BYO Macs
  - Fast setup and local performance – all-in-one installation, fast registration and VM download
  - Flexible – simple interface for fast access to Windows applications

- Control and Security
  - Automated – automatic VM updates
  - Centralized Control – single pane of glass to provision single corporate VM image for multiple Macs (and PCs with XenClient Enterprise)
  - BYO Security – VM Lockout, Expiration, and remote wipe

- Extending Citrix FlexCast
  - BYO and Offline Uses – key component of FlexCast delivery technology
  - Personal vDisk integration - enables users to retain user-installed applications, printer/device software, and desktop settings
  - Follow-Me technology – your data (with ShareFile) follows you wherever you go
System Requirements

Prior to installing DesktopPlayer for Mac, check and ensure that your machine can support the system requirements, as outlined below. You can find information about your Mac by clicking the Apple icon 🍎 and then selecting About This Mac:

If you’re running the latest version of Mac OS X, the screen resembles:

![About This Mac screen for Mac OS X version 10.9](image_url)
Click **More Info** to display additional hardware information:

![MacBook Pro](image)

**Platform and Hardware Requirements**

DesktopPlayer supports the following Mac platforms:

- MacBook Pro (Intel-based Macs), with or without Retina display
- MacBook Air (Intel-based Macs)

Hardware requirements include:

- **CPU**: Intel Core i5 processor, or better. (Second, Third or Fourth generation)
- **Physical memory**: 8 GB RAM or higher recommended (4 GB minimum required)
- **Storage**: Drive with 128 GB or larger; ensure sufficient space to accommodate the size of the guest VM

The storage space requirement is highly dependent on the size of the guest VM and any associated applications installed. Review the general guidelines on the [Support site](#) for information about appropriate disk space when incorporating VMs.

Software requirements include:

- **Host OS**: Mac OS X 10.8, 10.9
- **Guest OS**: Windows 7 (for use as a VM in the Mac host)
  Windows XP and Windows 8 are not currently supported VM operating systems.

Hardware and software not currently on the support list will evaluated for future support. Please contact your Citrix representative for support requests.

- **Language**: English
Activating the DesktopPlayer License

A DesktopPlayer license must be activated by an Administrator using Synchronizer. Administrators can use the information in this section to activate a license.

- Synchronizer version 5.0.4 is required to manage DesktopPlayer endpoints.

To activate a license:

1. Log into Synchronizer as an Administrator.
2. In the Synchronizer Actions panel, click **Import License**:

   - The installation process places a license file (for example, *DesktopPlayer_license.xml*) in the `Synchronizer\conf` directory.
3. In the **Import License** screen, browse to the location of the license file and enter the license filename:

4. Click **Finish**.
Preparing for Installation

Use the information in this section to prepare your Mac for DesktopPlayer. To prepare for installation:

1. Install Synchronizer to take advantage of the management capabilities that are part of the solution.

   Refer to the Synchronizer Installation Guide for explicit instructions.

2. After installing Synchronizer, prepare the Mac by enabling the installation of non-Apple Store developed applications; open System Preferences:

3. In the System Preferences screen, click Security and Privacy:

4. In the Security and Privacy screen, select the Anywhere radio button in the Allow applications downloaded from portion of the screen:
Unlock the page if you can’t access the screen; if necessary, contact your IT Administrator for additional information. If you do not allow applications to be installed from anywhere, an error message similar to the following appears:

```
"DesktopPlayerInstall-1.pkg" can't be opened because it is from an unidentified developer.
Your security preferences allow installation of only apps from the Mac App Store and identified developers.
Safari downloaded this file today at 12:17 PM from c1rxc.sharefile.com.
```

5. To install and run DesktopPlayer and the guest operating system successfully, the Mac user account must have local administrator rights. To check an account's user rights, select the Apple icon ( ), then click System Preferences > Users and Groups (in the System section of the screen).

The current user account is displayed; it should indicate Admin (for Administrative rights). If the current user account does not have this privilege, select the Allow user to administer this computer option:
After enabling application installations from sources other than the Apple Store and verifying the user’s privileges, continue with the DesktopPlayer installation.

**Installing DesktopPlayer**

After preparing your Mac, follow the information in this section to install DesktopPlayer:

1. Double click the DesktopPlayer.dmg installer icon. Contact your IT Administrator if you do not have this installation package:

   ![DesktopPlayer Installer](image)

   The installer is a compressed file; after double clicking the icon, the DesktopPlayer installation directory appears:

   ![DesktopPlayer Directory](image)

   Click DesktopPlayerInstall to start the installation wizard.
2. In the Installation Wizard, use the default settings. Click Continue to proceed with the installation:

![Image of the Installation Wizard]

3. The Introduction screen appears:

![Image of the Introduction screen]

4. Review the terms of the software license agreement for the software. Click Agree, then Continue to proceed with the installation:

![Image of the software license agreement]

Click Agree to continue or click Disagree to cancel the installation and quit the Installer.
5. Specify the installation location, click **Continue**.
6. Select the Installation Type, click **Install**.

7. Enter an Administrative user ID (name and password). Click **Install Software**.
8. The installation progress screen appears:

![Installation progress screen]

9. An screen appears confirming the installation:

![Confirmation screen]

After installing DesktopPlayer, restart your Mac to complete the process.

- DesktopPlayer simplifies the way a user uses a VM. The controls for DesktopPlayer are located in the Mac's system settings extra menu, located at the upper-right side of the Mac desktop. Choose the Windows VM that you want to work with.
Activating the DesktopPlayer License

A DesktopPlayer license must be activated by an Administrator using Synchronizer. Administrators can use the information in this section to activate a license.

- Synchronizer version 5.0.4 is required to manage DesktopPlayer endpoints.

To activate a license:

1. Log into Synchronizer as an Administrator.
2. In the Synchronizer Actions panel, click Import License:

   The installation process places a license file (for example, DesktopPlayer_license.xml) in the Synchronizer\conf directory.

3. In the Import License screen, browse to the location of the license file and enter the license filename:

4. Click Finish.

Registering DesktopPlayer to Synchronizer

After installing DesktopPlayer, register it to the Synchronizer management server; after registering, download a Windows VM that has been assigned to you.

- It is strongly recommended that you register your Mac device to Synchronizer from a Citrix office, otherwise you may experience longer download times when invoking the VM. If you do connect remotely to Synchronizer, you must first connect to the Citrite network via VPN.
1. **Select the Register option** from the menu bar to associate DesktopPlayer with Synchronizer and to download any assigned VMs:

![Citrix DesktopPlayer for Mac](image)

2. In the dialog screen, enter the Synchronizer information that your IT Administrator provided; use this login information to gain access to a Windows VM that your IT Administrator has created for you. **Click Register:**

![Register](image)

⚠️ **Registration times vary depending on various factors, including network traffic, etc. You can only register a single Mac with Synchronizer. If you are using 2 different Macs for testing purposes, they must be uniquely registered with Synchronizer.**

3. **After successfully registering DesktopPlayer to Synchronizer,** you can check the Settings menu to determine the last time the client checked in with Synchronizer. At the same time, you can view the name of the VM that has been assigned to you at the top right of the menu settings (click the icon to display additional information about the VM):
Based on the assignment by your IT Administrator, DesktopPlayer begins downloading the Windows VM. This process may take up to 1-2 hours depending on the size of the VM, distance from the Synchronizer management server, network connection, whether you are the first user connecting to a Remote Office server, and other factors.

You can view the progress of the download by clicking the DesktopPlayer icon in the top menu bar.

Once downloaded, the VM information screen displays information captured in the screen below:

Click the icon to display information and configure aspects of the VM.
Starting your Virtual Machine

After registering DesktopPlayer to Synchronizer, check to see if a VM is available for download by choosing the Check for Updates option in the DesktopPlayer Updates menu:

When the Windows VM has been completely downloaded, click the DesktopPlayer icon to get information about the state of the VM and to start it:

Click the grey shaded area to start the VM.

Once you start the VM, it may take approximately 15-30 seconds before any activity is displayed.
After starting the VM, Windows launches and goes through the startup process:

After going through the Windows startup process, the login screen appears; the VM is now ready for use. Use your Active Directory (AD) account credentials provided by your IT Administrator to log into Windows:

Consider the following when logging in to the guest Windows VM:

- To gain access to the Windows guest VM login screen, use the keystroke `command+fn+delete` while the VM screen is in focus; this effectively initiates the Ctrl+Alt+Delete command in the guest VM. Alternately, choose the Machine>Insert Ctrl+Alt+Del menu item to automatically add the command:

Use your AD credentials at the Windows login screen.
The Windows keyboard layout for ctrl+alt+del resembles:

- Use your AD credentials when logging in to the Windows guest VM.

When logging in, you may need to switch users; for the username, enter <domain>\<your AD username> and <your AD password>. This username/password combination may not be the credentials used to register with Synchronizer.

Using your Virtual Machine

This section provides information about using your VM for the first time. When using it, consider the following:

- The VM initially displays as a DesktopPlayer window inside of the Mac OSX operating system.
- You can use the VM within a minimized window, or, you can display it in full screen mode.
- When first starting, the VM launches in windowed mode by default. To go to full screen mode, make sure the VM has focus and hit the keystroke: Command + F (the Command key is also known as the ‘Apple key’). The image below illustrate this keyboard sequence:
There are additional ways to manage the guest VM window size:

1. While the guest VM is in focus, select **View** in the DesktopPlayer menu bar:

2. In the drop down menu, select **Switch to Fullscreen (Host+F)** to maximize the guest VM.
3. Or, you can alternately use the corners of the guest Windows VM to manually size the window to the desired size.

**Logging in for the first time**

Use the procedures in this section to become familiar with DesktopPlayer.

1. Configure Outlook.
   
   **Info** After launching Outlook you will be prompted to add your email address and password to automatically connect to the Exchange server.

2. Configure ShareFile as your primary data storage to ensure access from various access points.
3. Configure Citrix Receiver to connect to published applications and virtual desktops.
4. Configure your USB devices; click the DesktopPlayer icon, and then select the devices icon to change the assignment from the native OS (the Mac) to the guest OS (the Windows VM):

   **Info** The built-in Mac camera may not function properly in the Windows guest VM; use the camera in the host (Mac desktop) environment.
Starting and stopping your virtual machine

To start a VM, select it from the DesktopPlayer icon:

A VM can be stopped in a number of different ways. To stop a VM using the DesktopPlayer icon in the menu bar:

1. Select the VM.
2. Click the DesktopPlayer icon to display the drop down menu.
3. Click **Quit**.

You can also stop a VM by selecting **Quit DesktopPlayerVM** from the menu bar, or, click the **(X)** icon in the upper left portion of the VM window to close it:

You can alternately close the computer lid to suspend the virtual machine, or use the Windows shutdown command accessible from the guest Windows VM start menu. The Windows Start menu provides the same functionality as a native machine: use it to start, stop, switch users, or lock the VM.
Managing USB Devices

Use the procedures in this section to manage USB devices in the guest Windows VM:

1. Click the DesktopPlayer icon in the menu bar, and then click the USB icon:

2. In the drop down menu, click the USB device that you would like to use in the guest Windows VM; ensure that a check mark appears next to the name of the selected USB device.

   The guest Windows VM takes a few moments to recognize the device. Once recognized, DesktopPlayer remembers the device the next time it’s plugged in.

Using an External Monitor

DesktopPlayer supports the ability to connect to an external monitor. Consider the following when connecting an external display:

   DesktopPlayer may not accurately display the correct resolution of an external monitor. In addition, you may experience problems connecting, disconnecting, and reconnecting to your external display. There is a known issue involving multi-monitor support; refer to the Release Notes for more information.

   - Use the Mini Display Port/Thunderbolt to VGA Adapter cable to connect to an external monitor, or, alternately use a USB dongle to establish the connection between the Mac and the monitor.
   - When you first connect a new monitor to the Mac, it configures it in mirror mode; the Windows display manager shows only a single monitor.
   - Once you disable mirror mode on the Mac, the Windows display manager now sees two displays; because it is the first time Windows has detected two displays, it configures the monitors in mirror mode (the default behavior for the Windows 7 guest VM). You can then configure Windows to extend to the second monitor.
   - The Mac remembers monitor configurations for next time use.
To manage the monitor configuration in the Mac OSX environment:

1. In the System Preferences window, select Displays:

![System Preferences window showing Displays selected](image1.png)

2. In the Displays window, select the **Arrangement** tab; to rearrange the displays, drag them to a desired position, or, relocate the menu bar by dragging it to a different display.

![Displays window with Arrangement tab highlighted](image2.png)
Synchronizing with ShareFile

DesktopPlayer provides a seamless vehicle to experience client virtualization. One such example is using ShareFile to synchronize your files. Whether you’re on the phone, tablet, a hosted desktop, or using DesktopPlayer, you’ll have full access to all of your company files.

After launching your Windows Guest VM, open Windows Explorer. If you have it configured properly, and posses a ShareFile account, Windows Explorer displays your home directory:

Help and Feedback

Use the Help & Feedback screen to report problems to Citrix Support, suggest improvements, or to access the Help system:
Use the following guidelines when reporting an issue with DesktopPlayer:

- Provide a short, descriptive subject that describes the problem.
- Include an email address so Citrix Support can contact you, if necessary.
- Provide a description of the problem, click Submit.