



iPhone and iPad Management

FOR BEGINNERS





As Apple device numbers rise in business and education environments around the globe,

it's imperative that technology investments are maximized so that organizations can leverage Mac, iPad, iPhone and Apple TV to their full potential. This can put a heavy burden on IT teams that are now tasked with managing this influx of new devices — and many of these devices are in remote locations.

While some are very familiar with Apple already, many of you are diving into iPhone and iPad hardware and iOS and iPadOS management for the first time. This guide will help you master your iPad and iPhone management skills by providing:



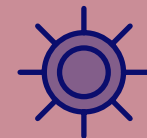
Introduction to iOS and iPadOS operating systems



Explanation of services and programs available for iPadOS and iOS devices



Outline of lifecycle management stages



Overview of the industry-leading Apple management solution



Introduction to iOS and iPadOS Management

You can manage iPhone and iPad with mobile device management (MDM), devices which is Apple's framework for managing iOS and iPadOS.

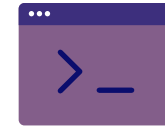
How MDM works

To effectively manage Apple devices and unleash their full potential, organizations require an equally powerful MDM solution. Most Apple devices are able to understand and apply settings such as remote wipe or passcode restrictions to the built-in framework. Two core components to the MDM framework are configuration profiles and commands.



Configuration profiles

... are XML files that define various settings for your Apple devices and tell that device how to behave. They can be used to automate configuring passcode settings, Wi-Fi passwords and VPN configurations. They can also be used to restrict items such as device features like the App Store, web browsers or the ability to rename a device. These profiles can all be specified and deployed leveraging Jamf and be set at the device or user level.



MDM commands

...are singular commands that you can send to your managed devices to take specific actions. Has a device gone missing? Send a command to put the device in Lost Mode or even wipe it remotely. Need to upgrade to the latest OS? Send the command to download and install updates. These are just a few examples of the different actions you can take on a fully managed Apple device.



Apple services and programs

As Apple devices became more popular in schools and the enterprise, questions about how to best deploy devices at scale, how to address Apple IDs and the purchasing of apps arose. Apple introduced various programs and services to take device management one step further, address these challenges and make managing devices in bulk easier and more cost effective.

Not every Apple device management solution supports Apple's programs and services. Check with your vendor to ensure they support these programs, as well as the incremental changes Apple makes throughout the year.



Apple Business Manager

Apple Business Manager is a web-based portal for IT administrators that combines zero-touch deployments and Apps and Books so everything can be overseen from one central location. Apple Business Manager is available to all non-educational organizations. Organizations with existing DEP or VPP accounts can upgrade to Apple Business Manager within a few minutes, or organizations can sign up for the first time at business.apple.com



Zero-Touch Deployment

Apple's automated MDM enrollment solution allows organizations of any size to pre-configure devices purchased from Apple or an authorized Apple reseller without ever having to touch the device. By leveraging the power of zero-touch deployments (formerly Apple's Device Enrollment Program or DEP), you no longer need to be the only person receiving, unboxing and configuring new hardware. Instead, you can ship new devices directly to individual employees and let them unbox it. The first time the device is turned on, it will automatically reach out to Apple and your mobile device management solution to pull down relevant configurations, settings and management.



Apple School Manager

Apple School Manager is a web-based portal for IT administrators to oversee people, devices and content – all from one place. Exclusively for education, Apple School Manager combines zero-touch deployments as well as Apps and Books and other classroom management tools such as the Classroom app in one portal. Apple School Manager enables Managed Apple IDs and Shared iPad and can be integrated with your school's student information systems (SISs).



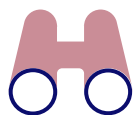
Apps and Books

With Apps and Books from Apple (formerly Volume Purchase Program or VPP) you can purchase and license apps and books in bulk from Apple and distribute them to individuals via Apple ID or directly to devices without an Apple ID. Apps can be reassigned as deployment needs change. You can link your Apps and Books service token (received from Apple) to your Apple management solution for assignment and distribution.



Apple IDs

Apple IDs are the personal account credentials users use to access Apple services such as the App Store, iTunes Store, iCloud, iMessage and more. Depending on the needs of your organization, your end users can leverage their personal Apple ID on the job, or you can avoid using Apple IDs altogether thanks to the ability to deploy Apps and Books to devices directly without an Apple ID. If you're an education institution, your students will receive a different type of Apple ID.



Device Supervision

Supervision is a special mode iOS and tvOS devices are placed into when enrolled via Apple Business Manager, Apple School Manager or Apple Configurator. Supervision gives institutions greater control over the iOS devices they own. A larger number of management features including Managed Lost Mode, blocking apps and silently installing apps all require supervision. It is recommended that institutionally-owned devices be put into Supervision mode.



Shared iPad

Shared iPad extends the value of an iPad device by providing multiple users access to the device. Each user, with their own Managed Apple ID, can log in and out while their apps, content and work stay intact. Shared iPad is available for both educational and enterprise organizations (requires Apple School Manager or Apple Business Manager.)



Managed Apple IDs

Apple School Manager and Apple Business Manager enables Managed Apple IDs for users. Managed Apple IDs can be integrated with a school's student information systems (SISs). They don't require special permission, and they allow you, as an IT admin, to create and dynamically update user information – since they are owned by your organization. Managed Apple IDs are created in the Apple School Manager or Apple Business Manager portal and allow IT administrators to assign apps and other services to the the user or device.



Classroom App

An instructional tool for iPad, Apple's Classroom app empowers teachers to streamline classroom instruction, encourages interaction and collaboration, and supports productivity. A student's device can be limited to a specific app or webpage while teachers can monitor student devices for comprehension assessment.





Lifecycle management stages

Apple's device management framework, commonly referred to as the MDM framework includes six key elements across the entire lifecycle of your Apple devices.

MDM is Apple's built-in management framework – available for macOS, iOS and tvOS and aids with these functions:

1 Automated deployment and provisioning

Getting devices into the hands of end users.

2 Configuration management

Applying the correct settings to devices.

3 App management

Ensuring the correct software and apps are on each device.

4 Inventory management

Reporting on the status of each device.

5 Security and privacy

Ensuring the correct software and apps are on each device.

6 User empowerment

Allow users to access company apps, resources and services from a curated portal.

From initial deployment to the end-user experience, it's critical to understand, manage and support the entire lifecycle of iOS devices in your environment. This ensures both the security and maximized potential of your devices.



Automated deployment and provisioning

Before configuring devices for end users, devices must be enrolled into an Apple management solution. The Apple ecosystem is a flexible platform that offers several methods of enrollment, but the one highlighted below is recommended for enterprise and educational institutions looking for a streamlined and positive end-user experience.

| | Description | User Experience | Supervision | Best For |
|---------------------------------------|---|--|----------------|--|
| Zero-Touch Deployment | Automated enrollment via Apple Business Manager or Apple School Manager | New-in-box device is sent from the factory directly to a user's desk or home and is automatically configured when powered on | Yes—wirelessly | Providing users an out-of-box Apple experience. With Zero-Touch Deployment you can: <ul style="list-style-type: none"> • Ship devices to remote employees • Speed up the onboarding process • Support education institutions with iPad programs |
| Apple Configurator | Enrollment through a Mac app that connects to devices via USB (does not apply to Apple TV 4K) | IT manages the setup process and hands devices to users | Yes—wired | <ul style="list-style-type: none"> • Shared and cart-device models, labs • Devices purchased through a retailer such as Best Buy |
| Account-driven User Enrollment | Manual enrollment over the air via Settings App | Users install the MDM profile by visiting the enrollment portal in the Settings app of their device | No | Unmanaged, personally owned devices that need to be enrolled into a new MDM server |
| User enrollment via URL | BYOD enrollment for personally-owned devices | User visits a specific URL to configure their device | No | Empowering employees to use their personally-owned devices with company apps and resources while still protecting their privacy |

Deploy Apps and Books with Apple Business Manager and Apple School Manager

1



Sign up via **Apple School Manager** or **Apple Business Manager** and add your MDM server to your portal.

2



From the deployment program portal, find and procure app licenses from the “Apps and Books” menu.

3



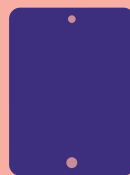
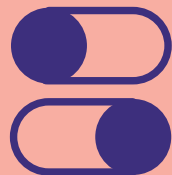
Add app licenses to your MDM server, including free apps.

4



Decide how to distribute apps. The easiest method is to deploy apps directly to user devices, no Apple ID required.

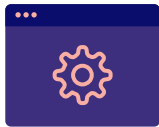
Alternatively, you can send an email or push notification to invite users to get apps by joining Apps and Books.





Configuration management

When it comes to configuring Apple devices, the world is your oyster. You can personalize and tailor individual devices or groups of devices based on the needs of your end users.



Configuration Profiles

Define settings within iOS and iPadOS by creating configuration profiles. These small XML files can be distributed to devices utilizing a managed solution. You can apply Wi-Fi, VPN, email settings and more so users can seamlessly connect to the resources they need.

Do you have groups of devices that require different settings? You can use Smart Groups to deploy unique configuration profiles to meet the needs of your end users.



Smart Targeting

Collect inventory details, including custom inventory attributes you define, for all of your managed devices to identify which ones require software updates, security hardening or other management actions. If your device management solution allows, you can build groups based on inventory criteria and then trigger device management tasks automatically to specific individuals or groups. You can also make items available on demand to users with an enterprise app catalog.



Not all Apple management solutions offer smart targeting. Check with your management vendor to ensure this functionality is available to you.

Static Groups

Apply a configuration profile, management command or app



Smart Groups

Find all iOS devices running 15.1.1



Apply a configuration profile, management command or app

Static versus Smart Groups

Static Groups are a set of defined devices, like a classroom or a lab. You can apply a management policy to that entire group.

Patented Smart Groups, on the other hand, are dynamic and always changing based on inventory data. This enables you to dynamically group devices and deploy configuration profiles and restrictions to those devices.

Have questions or need support?
Join the conversation on [Jamf Nation](#).



App management

Apple devices are wildly popular among consumers because of the native communication, learning and productivity tools available right out of the box, but the rich library of apps in the App Store are what set the Apple ecosystem apart. With a device management solution in place to manage your app deployments, you ensure users have the apps they need - configured for their use case and secured for your environment.

App fundamentals

Today, we are all familiar with the App Store on our iPhone, iPad and Apple TV devices. They are the only way for consumers to get apps on their devices. Apple reviews the developer's code to ensure security and performance. This is one of the reasons why Apple enjoys a strong security reputation.



Purchase your Apps and Books here:

For the enterprise:

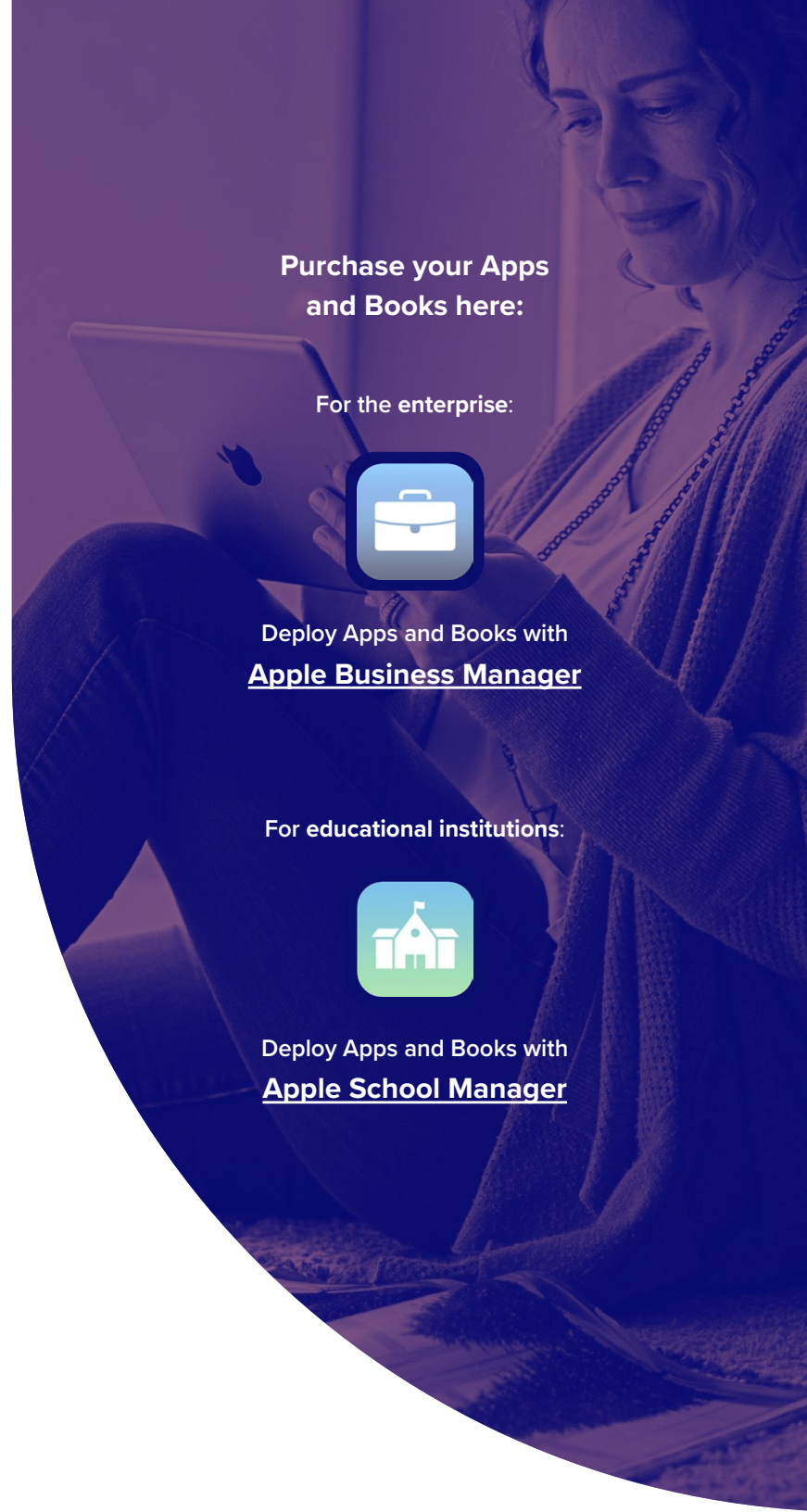


Deploy Apps and Books with [Apple Business Manager](#)

For educational institutions:



Deploy Apps and Books with [Apple School Manager](#)





3

App management

When deploying App Store apps via Apple School Manager or Apple Business Manager, you gain extra security and configurations for that app.



Here's what's possible:

What is a Managed App?

Introduced in iOS 5, managed apps differ from a standard app because they are flagged as being owned by an organization. Specifically, managed apps are distributed via MDM and can be configured and reassigned by MDM.

Managed Open In

Managed Open In takes the concept of managed apps a step further by controlling the flow of data from one app to another. With MDM, organizations can restrict what apps are presented in the iOS and iPadOS share sheets for opening documents. This allows for truly native data management without the need for a container.

App Configurations

Sometimes, deploying an app isn't enough and you'd like to pre-customize some of the settings. This is the premise for app configurations. App developers define what settings can be pre-configured by an MDM server for their app. For example, you could deploy the Box app with the server URL pre-populated, so users only need to enter their username and password to get the app up and running.



Inventory management

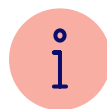
MDM solutions are capable of querying an Apple device to collect a large amount of inventory data, ensuring you always have up-to-date device information and can make informed management decisions. Inventory can be collected from a device at various intervals and include serial number, OS version, apps installed and much more.

Examples of data collected with MDM



Hardware Details

- Device Ownership Type
- Device Model
- Mobile Device Name
- Serial Number
- Battery Level
- Warranty Expiration



Software Details

- Operating System Version
- Installed Apps
- Available Space



Management Details

- Managed Status
- Supervised Status
- IP Address
- Enrollment Method
- File Encryption Capability



Additional Details

- Profiles Installed
- Certificates Installed
- Activation Lock Status
- Purchasing Information
- Last Inventory Update





Inventory management

Why does inventory matter?

You can't manage what you don't measure. The inventory data your MDM solution collects can be used for a wide range of business needs and empower you to answer common questions like:



Are all my devices secure?

How many apps do we have deployed?

What version of iOS are certain devices running?

By leveraging inventory data, smart targeting enables you to dynamically group devices and deploy configuration profiles and restrictions to those devices. At Jamf, this is referred to as **Smart Groups**.





Security and privacy

The security and privacy of devices and access to corporate resources are a top priority for any organization. To address these worries, Apple has a number of security features built right into iOS and iPadOS. Coupled with an Apple Enterprise Management (AEM) solution, you can ensure that your devices are not only secure, but your apps and network are as well.

The Center for Internet Security (CIS) benchmark for iOS is widely regarded as a comprehensive checklist for organizations to follow to secure iPad and iPhone devices. Check out our white paper to [learn how to implement the independent organization's recommendations.](#)



iOS Security Features



Software Updates



Secure System



App Store



Touch ID



Hardware Encryption



App Sandboxing



Privacy



Supervision

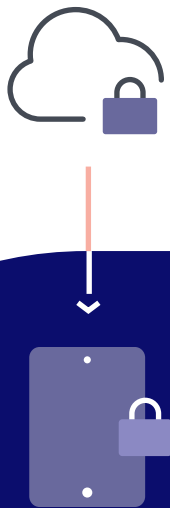




Security and privacy

Unix is the foundation for Apple's operating systems, providing a strong kernel at the core. Apple's OSs are built with security in mind and have unique security settings included. Those settings can be managed via an MDM solution.

Additionally, utilizing Apple's deployment programs with an MDM solution allows for even more management of those settings within your environment.



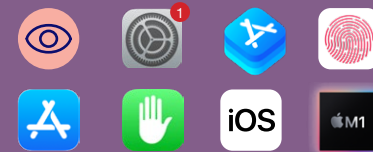
Apple's deployment programs



Management



Apple security features



Apple OSs



Foundation for Apple's OSs

UNIX



Security and privacy

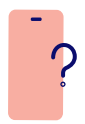


MDM security commands

There are a number of ways to shore up the security of your fleet during day-to-day operations, whether they are in an office building, at home or in the field.

A few common MDM commands that help with device security include:

- Enable/Disable Lost Mode
- Lock and wipe a device
- Update Inventory
- Update OS Version
- Clear Screen Time Passcode
- Unmanage Device
- Restrict Autofill passwords
- Block passwords via proximity requests



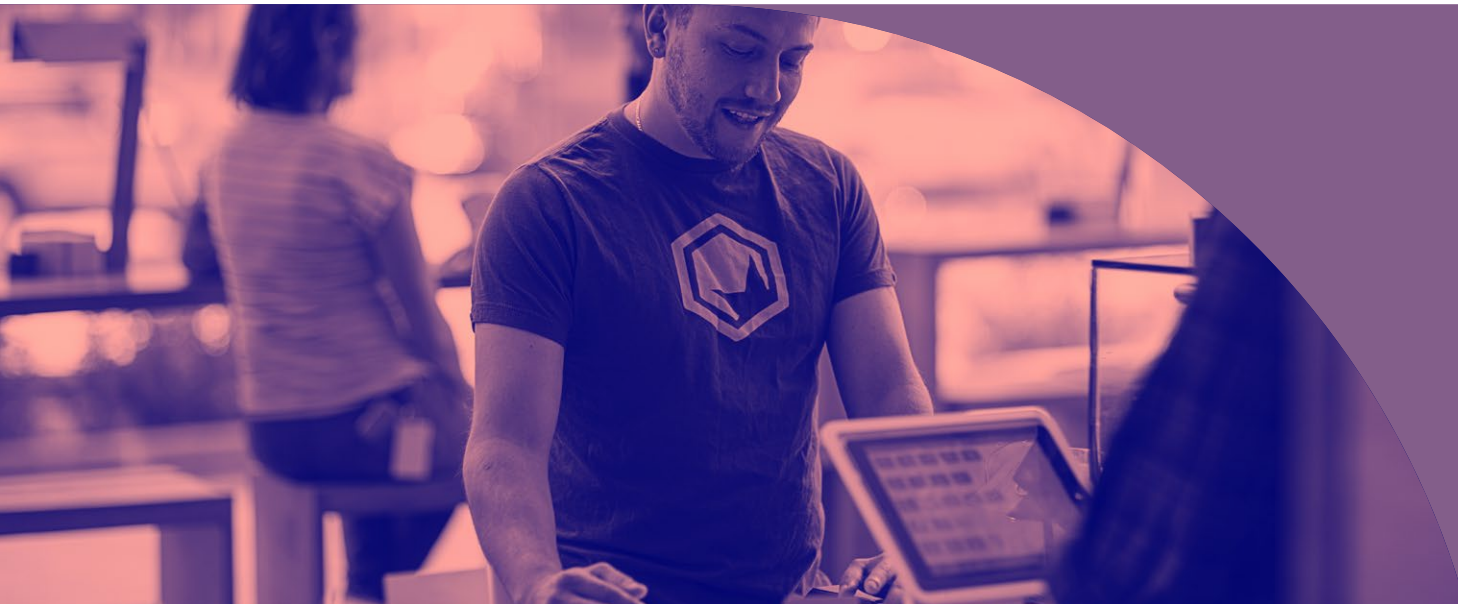
Lost Mode

By utilizing Apple's Lost Mode with an MDM solution, you can lock, locate and recover lost or stolen devices without compromising privacy through ongoing tracking. When Lost Mode is activated, devices receive a customized lock screen message, are disabled from use and send the location to IT.



Software upgrades

Each year, Apple unveils new consumer features and also adds layers of security and fixes vulnerabilities. These updates can be critical for devices used by employees or students in order to protect their data. Your management solution needs to be able to deploy updates from Apple, but also needs to quickly support (ideally on **the same day**) all the new management features that come with them too.





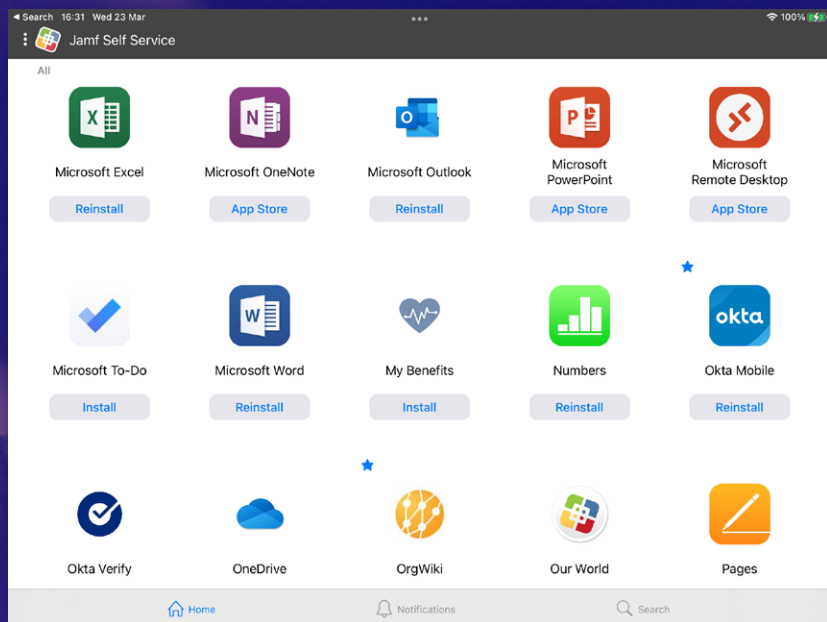
User empowerment

With the rise of on-demand tools and services like Lyft, Headspace and Duolingo, today's workforce expects to get the tools they want, when they need them. Enterprise app catalogs meet the needs of users by empowering them with instant access to resources, content, tier-one help and trusted apps through a single click from their device - all without submitting a help desk ticket to IT.

With enterprise app catalogs, users have the ability to access:

- App Store, B2B, in-house apps
- Email, VPN and other configurations
- E-books, guides and videos
- Web clips
- Software and OS upgrades
- Localized language support for English, French, German, Japanese and Simplified Chinese

App catalog for Mobile



Example: Jamf Self Service for iOS offers an app catalog that can integrate seamlessly into any organization's internal resources or corporate intranet.



User empowerment

Benefits of on-demand app and resource catalogs.

What's in it for IT?

- Reduce help desk tickets and support costs while maintaining control of your environment
- Automatically install an app catalog like Jamf Self Service on any managed iPad or iPhone
- Integrate with directory services to personalize content based on department, user role, location and more
- Automate common IT tasks, such as password resets and system diagnostics for tier-zero support

What's in it for users?

- Give end users instant access to a full-service destination of apps and resources
- Intuitive user interface personalized for local language and your environment
- Web clip common web services such as HR tools, communication platforms or internal resources for an easy entry point to valuable company information
- Install organization-approved apps without IT help
- Receive real-time notifications for available apps

Best-of-breed MDM solutions should offer the ability to brand your app catalog to match your existing corporate resources. This seamlessly integrates your app catalog among existing internal properties, increasing familiarity and ease of use.



Bonus: Third-party integrations

Apple device management is just one piece of your technology portfolio, but it's a critical and instrumental piece. Regardless of whether you use a help desk ticketing system like Service Now or an SSO authentication tool like Okta, your Apple device management solution must integrate seamlessly with your existing IT tools.

Extend the power of your ecosystem by leveraging third-party integrations like those seen in the [Jamf Marketplace](#). From cross-industry integrations to specific solutions, integrations like these bridge IT teams and services, creating an integrated, secure and seamless experience for end users.



The Standard in Apple Enterprise Management

To get the absolute most out of Apple and your technology investment, you require a management solution that matches Apple's intuition and has proven from day one that helping people succeed with Apple is top priority.

As the gold standard in Apple management and with dedication to the Apple ecosystem since 2002, Jamf is the product most trusted by businesses and schools that want to offer Apple and provide a consistent management experience across the entire ecosystem.

Put our word to the test by taking a free test drive and you'll see why 96 percent of Jamf customers stick with us year over year.

Request Trial

Or contact your preferred reseller of Apple devices.