# iPadOS Management

FOR BEGINNERS
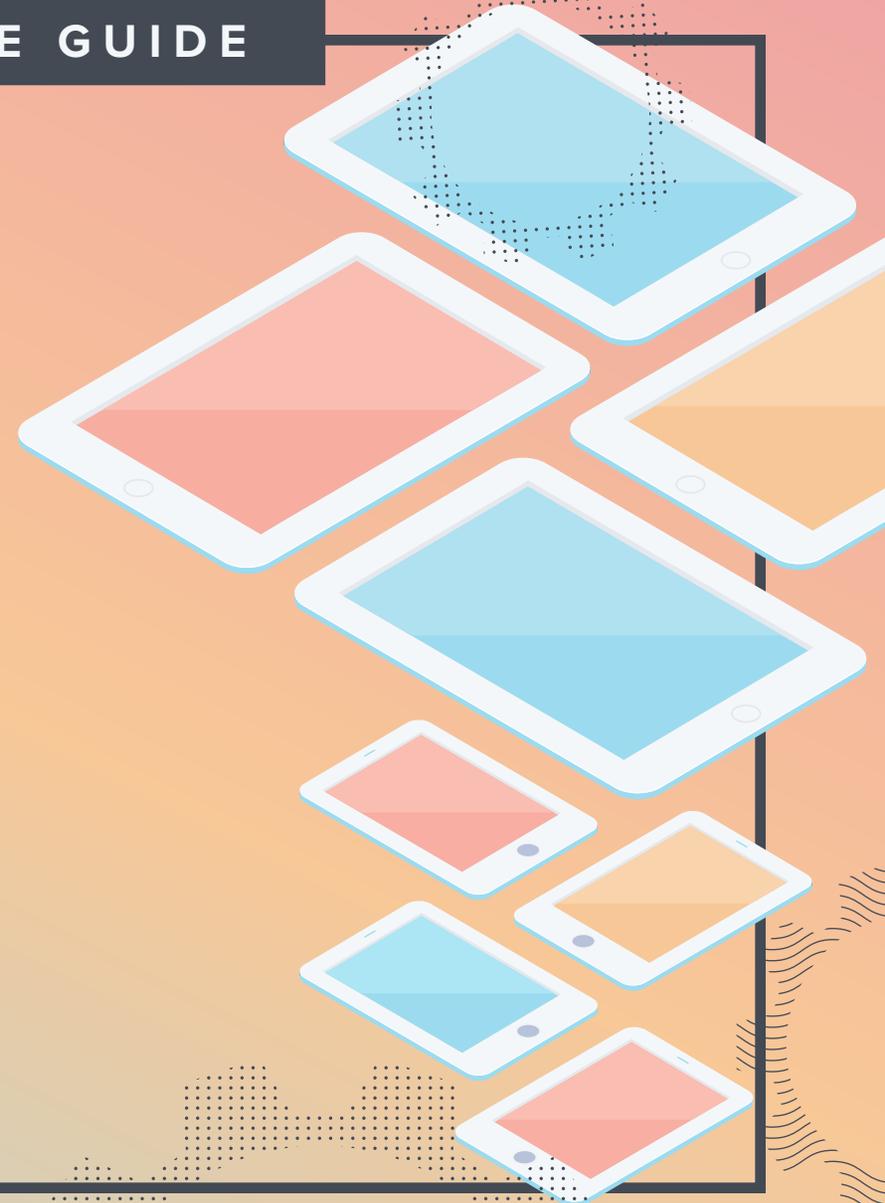
Apple unveiled iPadOS at its 2019 Worldwide Developer's Conference (WWDC).

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 iPad to its full potential. iPadOS is a new operating system that is poised to help IT teams better manage the influx of new devices.

While some are very familiar with Apple already, all are diving into iPadOS management for the first time. This guide will help you learn about this new operating system so you can build and master your iPad management skills.

Introduction to iPad and iPadOS managementt	Explanation of services and programs available for iPadOS devices	Outline of lifecycle management stages	Insight for infrastructure planning	Overview of the leading Apple management solution
PAGE 3	PAGE 4	PAGE 6	PAGE 19	PAGE 20

Introduction to iPad and iPadOS management

iPad devices run on the iPadOS platform. You can mange devices with mobile device management (MDM) which is Apple's framework for managing iPadOS.

How MDM works

To effectively manage iPadOS 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

... define various settings for your Apple devices and tell that device how to behave. They can be used to automate configuration of passcode settings, Wi-Fi passwords and VPN settings. 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 an MDM solution such as Jamf Pro.

MDM commands

...are singular commands that you can send to your managed devices to take specific actions. Has a device gone missing? Put it into Lost Mode or send a remote wipe command. 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.
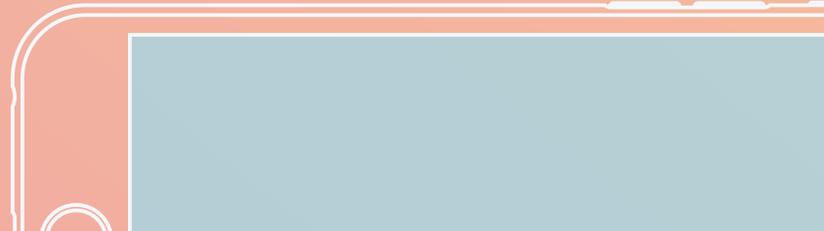
Apple services and programs

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, of course, looked to solve these issues and introduced various programs and services to take device management one step further, making it easier and more cost-effective to manage devices in bulk.

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.

Automated Device Enrollment

Apple's Automated Device Enrollment 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 Automated Device Enrollment (formerly 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.

Purchase content in volume

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. This process if formerly part of the Volume Purchase Program or VPP. You can link your service token (received from Apple) to your Apple management solution for assignment and distribution.

Apple Business Manager

Apple Business Manager is a web-based portal for IT administrators that combines Automated Device Enrollment and volume purchasing of apps and books in 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

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 Automated Device Enrollment, volume purchasing of 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 system (SIS).

Apple IDs

Apple IDs are the personal account credentials users use to access Apple services such as the App 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 direclty without an Apple ID. If you're an education institution, your students will receive a different type of Apple ID (see next page).

Managed Apple IDs

Apple School Manager for educational institutions enables Managed Apple IDs for students and can be integrated with your school's student information system (SIS). Managed Apple IDs are a special type of Apple ID for students. They don't require special permission, and they allow you, as an IT admin, to create and dynamically update user information. Additionally, Managed Apple IDs are created in the Apple School Manager portal and can sync with Classroom data.

For businesses and government organizations, Managed Apple IDs are only used for administrative purposes within Apple Business Manager.

Classroom App

An instructional tool for iPad, Apple's Classroom app empowers teachers to streamline classroom instruction, encourage interaction and collaboration, focus student iPad devices on a specific app or webpage, and view student devices to check for understanding.

Device Supervision

Supervision is a special mode devices are placed into when enrolled via Apple Business Manager, Apple School Manager or Apple Configurator. Supervision gives institutions greater control over the iPadOS 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.

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, iPadOS, iOS and tvOS and aids with these functions:

1 iPadOS 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 iPadOS inventory

Reporting on the status of each device.

5 iPadOS security

Securing devices to organizational standards.

6 User empowerment

Allowing users to self-help when they require resources and services.

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

1 iPadOS deployment and provisioning

Before configuring devices for end users, devices must be enrolled into an Apple management solution. There are several enrollment methods available, but the two highlighted below are recommended for enterprise and educational institutions looking for a streamlined and positive end-user experience.

	Description	User Experience	Supervision	Best For
Automated Device Enrollment with Apple Business Manager and Apple School Manager	Automatic enrollment over the air	User receives shrink-wrapped box, and the device is automatically configured when turned on	Yes—wirelessly	Providing users an out-of-box experience. With Automated Device Enrollment you can: • Ship devices to remote employees • Speed up the onboarding process • Support education instituions 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	• Shared and cart-device models, labs • Devices purchased through a retailer such as Best Buy
User-initiated enrollment via URL	Manual enrollment over the air	User visits a specific URL to configure their device	No	Unmanaged devices currently in the field or devices that need to be reenrolled into a new MDM server

BEST PRACTICE

Deploy apps and books with Apple Business Manager and Apple School Manager

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

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

Apps are deployed directly to the device. No interaction or Apple ID required.

1

2

3

?

4

4

5

Choose to assign apps to either devices directly or to a user's Apple ID.

Find and purchase app licenses in **Apple Business Manager** or **Apple School Manager**. You will also need to "purchase" free apps.

Invite users to participate in your **app and book** deployment via email or push notification.

Apps are linked to a user's Apple ID and are found in the Purchased tab of the App Store.
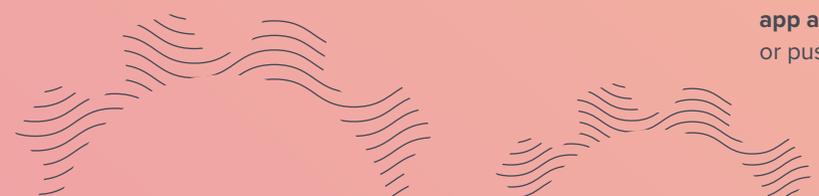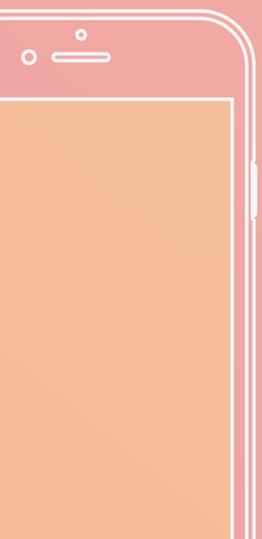
2 Configuration management

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 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.

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.

Don't know where to start? Check out a list of MDM configuration profiles **here**, or join the conversation on **Jamf Nation**.
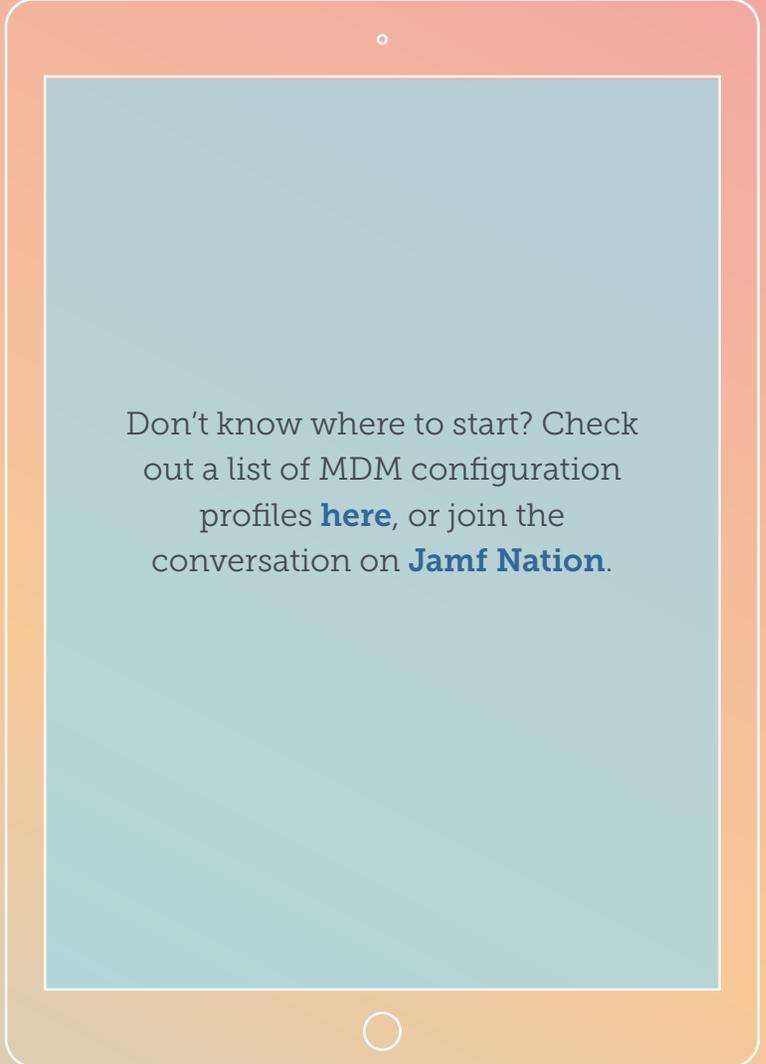
ⓘ Not all Apple management solutions offer smart targeting.
Check with your management vendor to ensure this functionality is available to you.

3   App management

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.

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.

Purchase your apps and books here:

For the **enterprise**:

Apple Business Manager

For **educational institutions**:

Apple School Manager
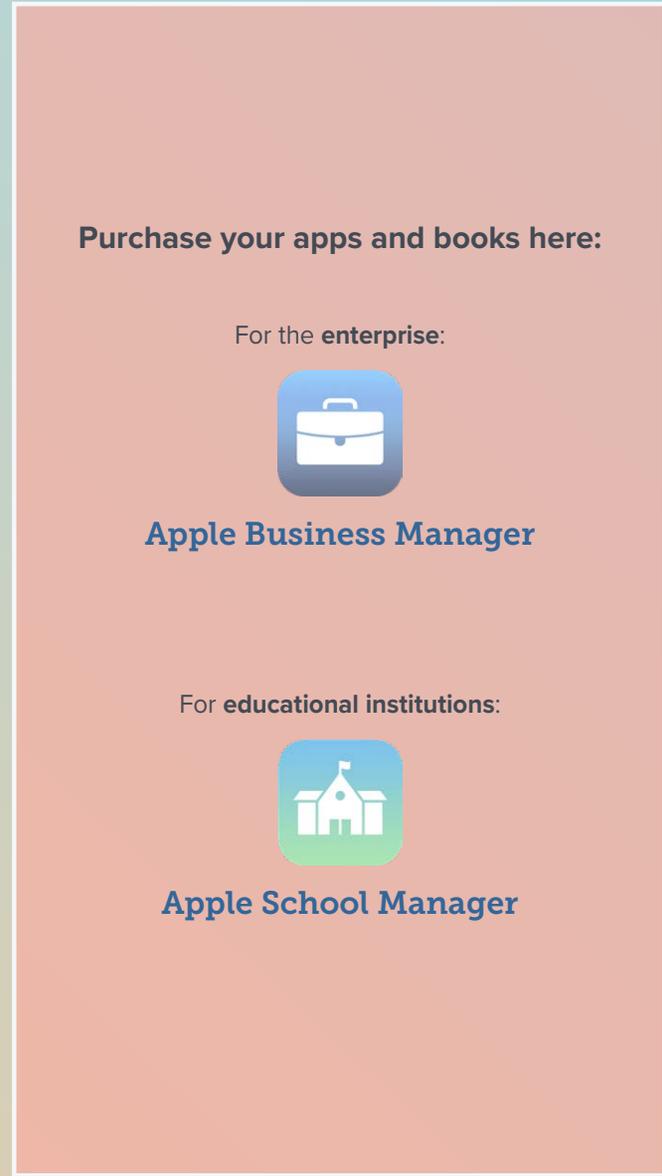
3 App management

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?

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 iPadOS share sheet 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.

4 iPadOS inventory

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 Type
- Device Model
- Device Name
- Serial Number
- UDID
- Battery Level

Software Details

- iPadOS Version
- List of Apps Installed
- Storage Capacity
- Available Space

Management Details

- Managed Status
- Supervised Status
- IP Address
- Enrollment Method
- Security Status

Additional Details

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

4 iPadOS inventory

Why does inventory matter?

You can't manage what you can'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 iPadOS 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.

Static Groups

Apply a configuration profile, management command or app

⌄

| 1 | 2 | 3 |
| 4 | 5 | 6 |

Smart Groups

🔍 Find all iPadOS devices running 11.4.1

Apply a configuration profile, management command or app

Static Groups are a set of devices that are manually defined, like a classroom or a lab. You can apply configuration profiles and management commands to the entire group.

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.

5 iPadOS security

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 iPadOS. Coupled with an Apple management solution, you can ensure that your devices are not only secure, but your apps and network are as well.

iPadOS

iPadOS Security Features

Software Updates

Secure System

App Store

Touch ID

Hardware Encrytion

App Sandboxing

Privacy

Supervision

5 iPadOS security

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

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

Apple's deployment programs

Management

Apple security features

Apple OSs

iPadOS

Foundation for Apple's OSs

UNIX

5 iPadOS security

MDM security commands for iPadOS

iPadOS

- Enable Lost Mode
- Lock and wipe a device
- Remote wipe
- Update iPadOS
- Clear restrictions and passcodes
- Remove MDM
- Restrict Autofill passwords
- Block passwords via proximity requests

MDM Lost Mode for iPadOS

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

Software upgrades

By developing major versions of macOS, iOS, tvOS and now iPadOS annually, Apple has set the pace of innovation. Each year, Apple unveils new and great consumer features, but 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 not only needs to be able to deploy updates from Apple, but also needs to quickly support (ideally on **day zero**) all the new management features that come with them too.

6 User empowerment and adoption

With the rise in self-sufficiency tools like Lyft, Amazon Prime and WebMD, 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.

App catalog for mobile

Example: Jamf Self Service for iPadOS offers an app catalog that can integrate seamlessly into any organization's internal resources or corporate intranet.
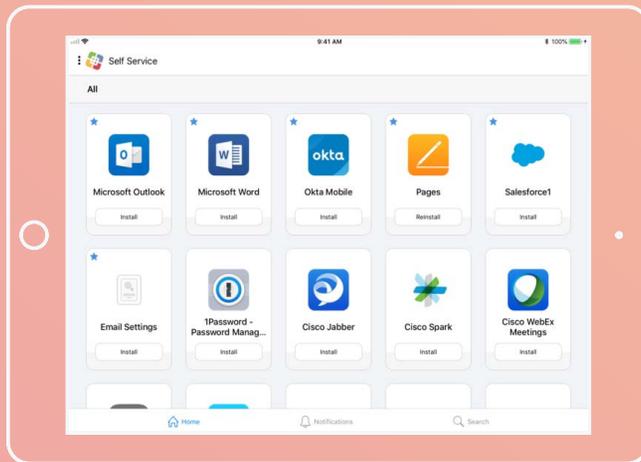
With enterprise app catalogs, users have the ability to access:

- 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

6 User empowerment and adoption

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

- 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 uers 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

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.

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.

Infrastructure planning

Where you host your management environment is just as important as the management solution you choose. Not only does cloud hosting make upgrades a breeze, it takes the added pressure of server management, disaster recovery and more off of your IT team.

More and more organizations are moving to the cloud.

Below are just a few reasons why enterprise organizations like **Eventbrite** are going cloud:

Benefits of cloud hosting

Server provisioning, ongoing security and update management

Backup administration and testing

Storage infrastructure for global availability

Disaster recovery; offsite location

Database administration, ongoing security and updates

Server monitoring and response team

Industry-leading Apple management

Apple continues to build an interconnected ecosystem, with apps and services being cross-compatible across devices. Growing enterprise partnerships (IBM, Cisco, SAP, etc.) and a boom in technology choice programs will only bring more Mac, iPad, iPhone and Apple TV devices to your doorstep.

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.

jamf

By integrating with all Apple services and providing **immediate support for Apple operating systems and features**, Jamf empowers you with the tools necessary to address all support needs, and gives you the freedom to focus on strategic tasks so you can save your organization time and money.

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.

Or contact your preferred authorized reseller of Apple devices to take Jamf for a test drive.

Start Trial