## Apple TV Management

Moving education forward

If you think Apple TV devices are just for entertainment, think again. In a recent Jamf Nation survey, 99 percent of the 502 school respondents report leveraging Apple TV devices in their education institution, and for good reason. They enable wireless sharing without the need for adapters, and they make the classroom a more collaborative and engaging learning environment. Apple TV is also applicable outside the classroom. But they haven't always been easy to set up and manage. That all changed with the introduction of tvOS 10.2, which enabled new management for all fourth-generation Apple TV devices. And now with tvOS 12, IT has even more ways to better manage and enable their Apple TV devices.

IN THIS WHITE PAPER, LEARN:

- Why Apple TV matters for education.
- How to make set up and management easy with mobile device management.
- How to leverage Apple TV beyond the classroom.
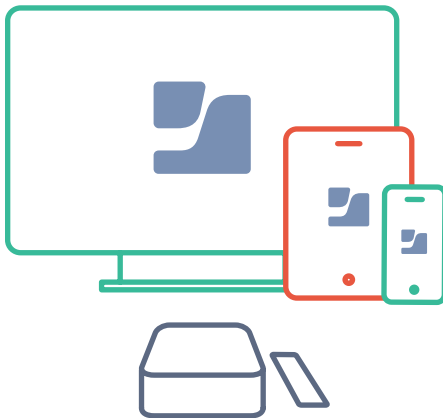
Why Apple TV for education

Like Mac and iPad, Apple TV is a powerful tool for educators. Twenty-three percent of schools surveyed about their Apple TV usage have 51-100 Apple TV devices, with a further 23 percent citing 101-500 TV devices. From promoting interaction and collaboration to fitting seamlessly within the Apple ecosystem, the use cases and benefits are vast. Before expanding on these, let's examine four core Apple TV fundamentals that are key to its appeal.

GOODBYE DONGLES. HELLO AIRPLAY.

AirPlay is a wireless streaming technology. Introduced in 2004, it eliminates the need for display adapters, changing the way presentations are delivered and how people collaborate. By placing an Apple TV in a classroom, hallway or faculty conference room, a Mac, iPad or iPhone user can enable AirPlay to wirelessly display their content onto the connected screen. Because AirPlay is a built-in feature of Apple's modern operating systems, it is very simple for even the youngest users to leverage. When a Mac, iPad or iPhone detects an Apple TV on the network, AirPlay options are automatically made available.

AIRPLAY FOR NON-APPLE DEVICES

While AirPlay is built into all Apple devices, Apple TV works with common non-Apple platforms and devices, such as Windows and Chromebook. With third-party solutions like AirParrot 2 or Ditto installed on a student or teacher device, content can be streamed wirelessly to an Apple TV, creating a similar experience to AirPlay. And at a price point starting at $149, Apple TV devices with AirPlay become an attractive alternative to projector systems that require replacement parts.

BUILT FOR APPS

Apple TV is all about the apps. Apps give users control of what they want to watch and when. With the release of tvOS 12, schools can deploy apps directly from the App Store to devices. Additionally, schools can develop and deploy custom, in-house apps for tvOS. All it takes is an idea (or the ability to reimagine a custom in-house app for tvOS).

EQUIPPED WITH ITS OWN OPERATING SYSTEM

tvOS is an operating system developed by Apple in late 2015 for the latest fourth-generation Apple TV. With a dedicated operating system purpose-built for Apple TV, Apple will develop both new and dedicated consumer and IT features for the platform and continue to bring it in line with its other operating systems. Based on iOS, tvOS inherited many of the same features and accessibility options users have come to know and expect from other Apple devices. Beyond user experience consistency, tvOS is now equipped with a mobile device management (MDM) framework (like iOS), making robust over-the-air management with a mobile device management solution possible for the first time.

Apple TV Management

Prior to fourth-generation Apple TV and tvOS 10.2, Apple TV devices lacked many of the streamlined enrollment and management features IT admins had grown accustomed to with macOS and iOS devices. However, with tvOS 10.2 for the first time, IT admins has access to new management capabilities for Apple TV including, zero-touch setup, over-the-air configuration, remote commands and in-house app distribution—making the set up process as seamless as setting up their Mac or iPad. This allowed for scalable mass deployments and an interconnected experience between Apple devices.

Additional management capabilities released with tvOS 11 made it possible for IT to strengthened AirPlay security by assigning passwords to specific devices and associate them with an Apple TV. This ensured information can only be shared with the intended room. tvOS 11 also allowed IT to modify and lock Apple TV device names for easier inventory reporting.

With the most recent tvOS update, tvOS 12, IT has the ability to purchase and distribute Apple TV App Store apps (in bulk) directly to devices as well as deploy in-house custom apps. Additionally, IT can now install software update commands and block proximity password requests.

Second or third-generation Apple TV?

Don't have fourth-generation Apple TV devices? That's OK. While earlier models won't have all of the management functionality of the newest device, the third-generation Apple TV devices still have functionality important to transforming the educational experience for students and enhancing other areas of educational organizations. See the chart below for a side-by-side comparison of key functionality that's available with third- and fourth-generation Apple TV devices.

	3rd Generation Apple TV	4th Generation Apple TV and later
AirPlay	Built-in	Built-in
AirPlay Permissions	●	●
AirPlay Restrictions		●
Apple Configurator Enrollment	●	●
Device Enrollment Program (DEP)		●
Conference Display Mode	Manually	●
Custom App Deployment		●
Single App Mode		●
MDM Commands (remote wipe and restart)		●
Show/Hide Apps		●
Define Home Screen Layout		●
Assign Passcode to Specific Devices		●
Restrict Age Inappropriate Media Content		●

WITH APPLE'S LATEST TV OPERATING SYSTEM AND A MDM SOLUTION, IT CAN ACHIEVE:

ZERO-TOUCH DEPLOYMENT

tvOS 12 and later supports Apple School Manager to power a completely automated setup experience. Education institutions purchasing Apple TV devices through Apple, or an authorized reseller under Apple School Manager, can configure their newly purchased devices with an MDM solution. When the Apple TV is powered on, connected to Ethernet and displayed through HDMI, all configurations, settings and apps deploy automatically without the need for any manual configuration. With this in mind, IT can leverage faculty to unbox the Apple TV, plug in the power and Ethernet, and the management solution does the rest – all in under 60 seconds.

CONFIGURATION PROFILES

Using an MDM solution, IT can define settings with tvOS configuration profiles and distribute them to Apple TV devices. As a result, Wi-Fi, restrictions and AirPlay settings are more easily applied over the air. Further, Apple TV devices can be put in Single App Mode to customize the Apple TV experience by class or Conference Display Mode for an intuitive presentation workflow.

SMART TARGETING

With the ability to automatically collect inventory details, including Apple TV device names from all managed devices, IT can quickly and accurately identify which devices require action. Based on this inventory information, IT can build targeted groups to trigger automatic device management tasks. For example, IT can now find all Apple TV devices without AirPlay settings configured and then deploy that configuration.

AIRPLAY MANAGEMENT

IT can mass associate and configure iOS devices with Apple TV. This empowers professors to easily display content. This functionality exempts IT from troubleshooting display issues, freeing them up to focus on other, more strategic projects. IT also has more control over AirPlay security with the latest tvOS update, IT is now able to set passwords for specific Apple TV devices to share automatically to associated iPad devices.

WIPE AND RESTART

With the ability to remotely wipe and re-boot an Apple TV anywhere and at any time, IT can easily troubleshoot Apple TV devices without having to go to the device's physical location. Further, wiping and re-enrolling devices at the close of a school year ensures the security and privacy of usernames, passwords or other personal information by removing them from the Apple TV.

APP AND DISPLAY SUPPORT

IT can leverage MDM to deploy both custom in-house and App Store apps directly to Apple TV devices. Additionally, IT can set a Home Screen layout, show/hide apps as well as restrict media content based on age guidance.

Apple TV beyond the classroom

By coupling MDM for tvOS with apps, Apple TV is proving its value both in and out of the classroom. Education participants from the Jamf Nation Apple TV survey cited at least six unique use cases, which can be summarized into three distinct categories: in-classroom experiences, digital signage and conference room applications.

COLLABORATIVE LEARNING

Using AirPlay, students can display their Mac, iPad or other device screen on an HDTV or projector. With the ability to instantly share content, teachers can seamlessly highlight student work, encourage collaboration and keep the class engaged. With access to the latest technology, students gain real-world presentation experience with iPad and Apple TV.

CLASSROOM INTERACTIONS

Gone are the days of a teacher being invisibly tethered to the front of the room where a whiteboard or expensive SMART Board requires hands-on interaction. By connecting an Apple TV to an HDTV or projector, educators are free to move around as they please. This allows them to more easily engage with students on a 1-to-1 basis, create more personal interactions and provide individual support when and where needed.

SPONTANEOUS SHARING

In addition to sharing content from apps like iTunes U, teachers can personalize a lesson with photos from a recent trip or a video of wildlife in the Amazon from their iCloud library. With the ability to tap into a variety of apps, teachers aren't limited to presenting a lesson – they allow their students to engage with it. Likewise, students can use Apple TV to highlight their favorite website, share a YouTube video or present a Keynote.
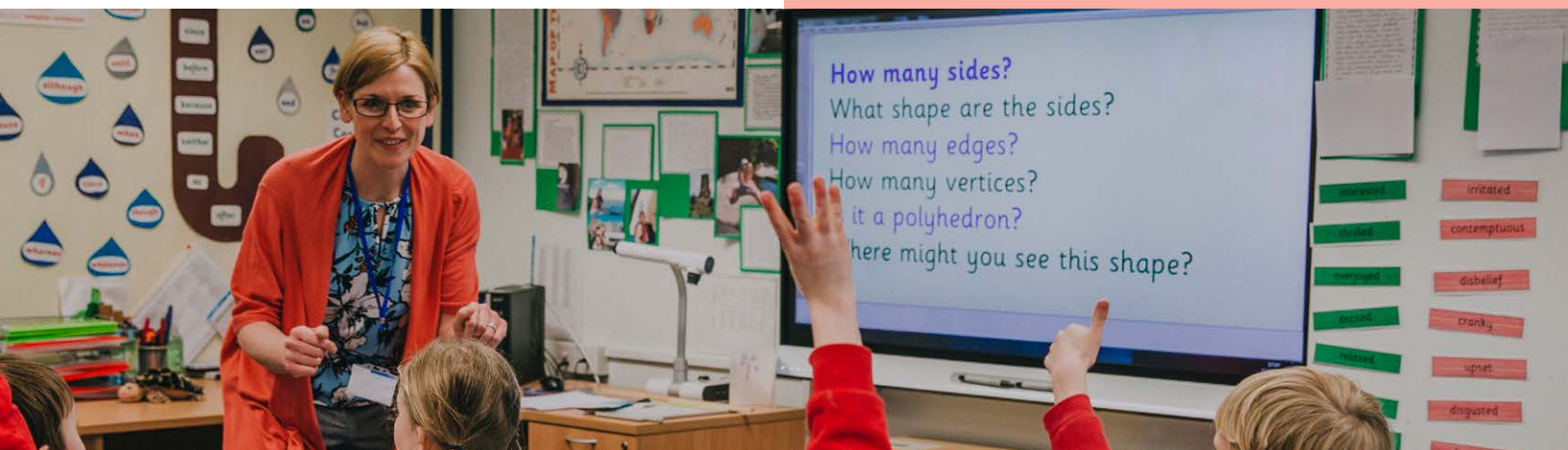
DIGITAL SIGNAGE

Schools have a need to share broadly — with their students, faculty, staff and parents. From school announcements and event information to way-finding and even emergency alerts, Apple TV makes digital signage more affordable, accessible, scalable and manageable. And, with an MDM solution, schools can also control what is shown in different locations throughout the school or district.

FACULTY MEETINGS AND LOUNGE DISPLAYS

Enabling Conference Display Mode transforms the consumer Apple TV experience into a wireless conference room experience with AirPlay — complete with a customizable welcome message. Schools can tailor the welcome message in Conference Display Mode to include additional instructions or information for each conference room or lounge. Additionally, to eliminate confusion, Conference Display Mode hides everything else on the screen, so AirPlay, with the pertinent instructions on how to use it, is the default screen. It's all users see when they enter a conference room for a faculty meeting. In larger schools, IT can even define which Apple TV devices display on each iOS device.

"We imagined teachers being able to display any historic picture, map or other educational content on a classroom display with the simple command of their voice," said Blair Anderson, technology manager, Shawnee Heights School District in Tecumseh Kansas. "That's why we deployed fourth-generation Apple TV devices to every classroom and conference room in the district. Being able to use Jamf Pro to manage our entire ecosystem of Apple products, including Mac, iPad and Apple TV, lets us transform, yet supervise, the total learning experience for students and help improve teacher effectiveness."

How many sides?
What shape are the sides?
How many edges?
How many vertices?
Is it a polyhedron?
Where might you see this shape?

Apple TV Management with Jamf

With a dedicated focus on helping organizations succeed with Apple, Jamf provides an industry-leading management solution for the entire Apple ecosystem that helps IT empower its users with Mac, iPad, iPhone and now Apple TV. By combining **Jamf Pro's Apple TV Management Solution** and the latest tvOS, schools can unlock new device management capabilities for Apple TV, including zero-touch setup with Apple School Manager, configuration profiles and app distribution, MDM commands to wipe and restart Apple TV, and AirPlay permissions enhancements that make the mass pairing of Apple TV devices to iOS devices for content display easy. From enabling wireless presentations to remote management of digital signage in hallways and faculty lounges, Jamf Pro delivers a seamless, interconnected experience for all your Apple devices.

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Request a demo to learn more about managing your school's Apple TV devices with Jamf.