

#WWDC18

# What's New in Managing Apple Devices

Session 302

Todd Fernandez, Senior Manager, Device Management













Apple Inc.  
Apple School Manager

# Apple School

Manage your institution's devices, apps, and accounts.

Apple ID  
Password

Remember me

[Forgot Managed Apple ID or password?](#)  
[Not yet an Apple School? Enroll now.](#)

Learn More

MacBook Air

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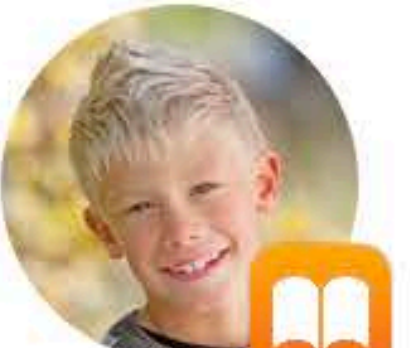


















Science

End Class 🔗 🕒 🔒 🔕 Students Screens 🖥️ 🔄 + 📄

All (29)Safari (14)iBooks (8)Notes (7)

 Aaron Notes	 Addison Safari	 Aiden iBooks	 Alex iBooks	 Anthony Safari	 Aubrey Notes
 Ava Safari	 Avery iBooks	 Brayden Notes	 Brooklyn iBooks	 Chloe Notes	 Claire Safari
 Elizabeth Safari	 Ella iBooks	 Gabriel Safari	 Gavin Safari	 Isabella Safari	 Julia iBooks



***Demo***

Classroom for Mac

Curt Clifton, Classroom Engineer  
Raheel Merali, Classroom Engineer

Science

End Class 🔍 🔄 🔒 🔕 Students Screens 🖥️ 🕒 + 📄

All (29)

Safari (14)

iBooks (8)

Notes (7)

<p>Aaron Notes</p>	<p>Addison Safari</p>	<p>Aiden iBooks</p>	<p>Alex iBooks</p>	<p>Anthony Safari</p>	<p>Aubrey Notes</p>
<p>Ava Safari</p>	<p>Avery iBooks</p>	<p>Brayden Notes</p>	<p>Brooklyn iBooks</p>	<p>Chloe Notes</p>	<p>Claire Safari</p>
<p>Elizabeth Safari</p>	<p>Ella iBooks</p>	<p>Gabriel Safari</p>	<p>Gavin Safari</p>	<p>Isabella Safari</p>	<p>Julia iBooks</p>

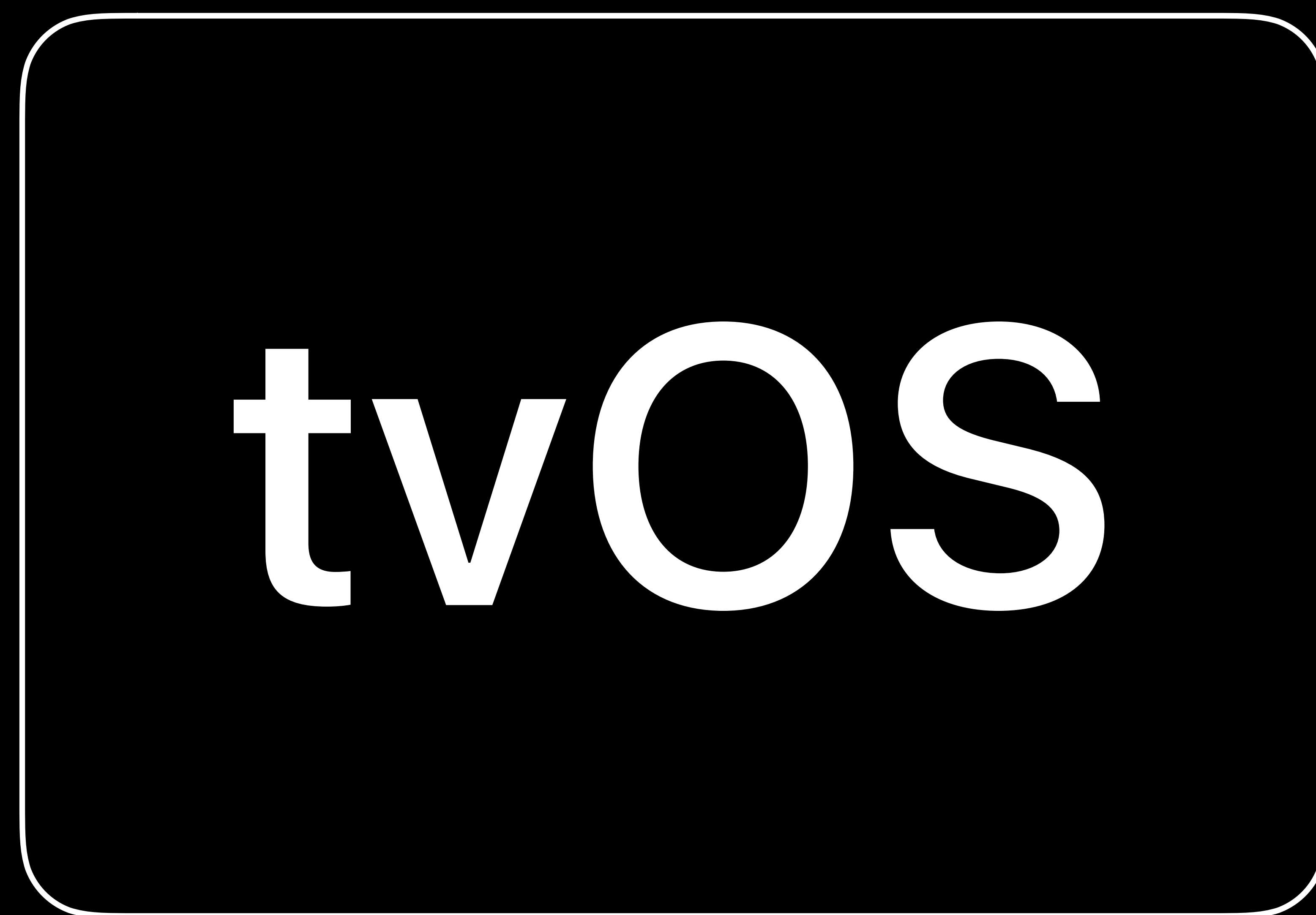






The logo for iOS, consisting of the lowercase letters 'ios' in a white, sans-serif font, centered within a white rounded square outline.

ios

The logo for tvOS, consisting of the lowercase letters 'tvOS' in a white, sans-serif font, centered within a white rounded square outline.

tvOS

The logo for macOS, consisting of the lowercase letters 'mac' in a smaller font above the larger lowercase letters 'OS', all in a white, sans-serif font, centered within a white circular outline.

mac  
OS

# Enrollment

Apple School Manager

iOS

tvOS

mac  
OS

200 GB of iCloud storage for Managed Apple IDs

Easier account password management

New Apps and Books purchasing experience

Flexible license management

Default MDM server for device type





# Enrollment

Apple Business Manager

iOS

tvOS

mac  
OS

Manage Accounts, Apps and Books, Devices

Create Managed Apple IDs for admins

New Apps and Books purchasing experience

Flexible license management

Default MDM server for device type

No Managed Apple IDs for employees



Apple Inc.

Apple Business

Organization

Activity

Locations

People

**Accounts**

Roles

Devices

MDM Servers

Device Assignments

Assignment History

Content

Apps and Books

Settings

Search Accounts

Sort by Last Name

10 Accounts  
All Accounts at Acme, Inc

**Katie Abeles**  
People Manager · Acme, Inc

**Kelly Altick**  
Device Manager · Acme, Inc

**Erny Arifin**  
Content Manager · Acme, Inc

**Kristin Canavan**  
People Manager · Acme, Inc

**Allison Caplan**  
Device Manager · Acme, Inc

**Vera Carr**  
Content Manager · Acme, Inc

**Frank Chien (Me)**  
Administrator · Acme, Inc

**Jeffrey Louie**  
Administrator · Acme, Inc

**Juan Pinzon**  
Administrator · Acme, Inc

**Schoun Regan**  
Administrator · Acme, Inc

KA

# 10 Accounts

**Sign-Ins**  
Create and send new sign-ins for people with new accounts or lost credentials. [Create](#)

**Account Status**  
Deactivate, reactivate or delete these accounts. [Change](#)

**Account Info**  
Add a new Role and Location to these accounts. [Add](#)

**Managed Apple IDs**  
Edit the username and domain of each Managed Apple ID. [Edit](#)



Apple Inc.

Acme, Inc MDM  
0 Devices · Default Server for Apple TV, iPad, iPhone, i...

Add New MDM Server Johnny Appleseed

# Acme, Inc MDM

0 Devices · Default Server for Apple TV, iPad, iPhone, iPod, and Mac

[Upload Key](#) [Get Token](#) [Edit](#)

Name  
Acme, Inc MDM  
Last Date Connected  
Never

Last IP Connected  
None

Default Server for  
Apple TV  
iPad  
Mac  
iPod  
iPhone

Devices  
None



Apple Inc.

Search content by Name, Keyword, ISBN, or URL

Sort By 7 Total

Johnny Appleseed

Organization

Activity

Locations

People

Accounts

Roles

Devices

MDM Servers

Device Assignments

Assignment History

Content

Apps and Books

Settings

	<b>Microsoft Word</b> Microsoft Corporation · iOS App ★★★★★ \$0.00	1 Available
	<b>Numbers</b> Apple · iOS App ★★★★★ \$0.00	1 Available
	<b>Pages</b> Apple · iOS App ★★★★★ \$0.00	1 Available
	<b>Microsoft Excel</b> Microsoft Corporation · iOS App ★★★★★ \$0.00	Processing
	<b>Keynote</b> Apple · iOS App ★★★★★ \$0.00	1 Available
	<b>Microsoft PowerPoint</b> Microsoft Corporation · iOS App ★★★★★ \$0.00	1 Available
	<b>Quip - Docs, Chat, Sheets</b> Quip · iOS App ★★★★★ \$0.00	1 Available

## Keynote

Apple · iOS App

✓ Device Assignable

[View Details](#)

### Buy Licenses

Assign to

Choose a Location

Price	Quantity	Payment Method
\$0.00	0	None

Total Cost **\$0.00** [Buy](#)

### Manage Licenses

Location	In Use	Available	
Acme, Inc	0	1	<a href="#">Transfer</a>



# Enrollment

Availability



# Enrollment

Availability: Today



# Enrollment

Availability: Today

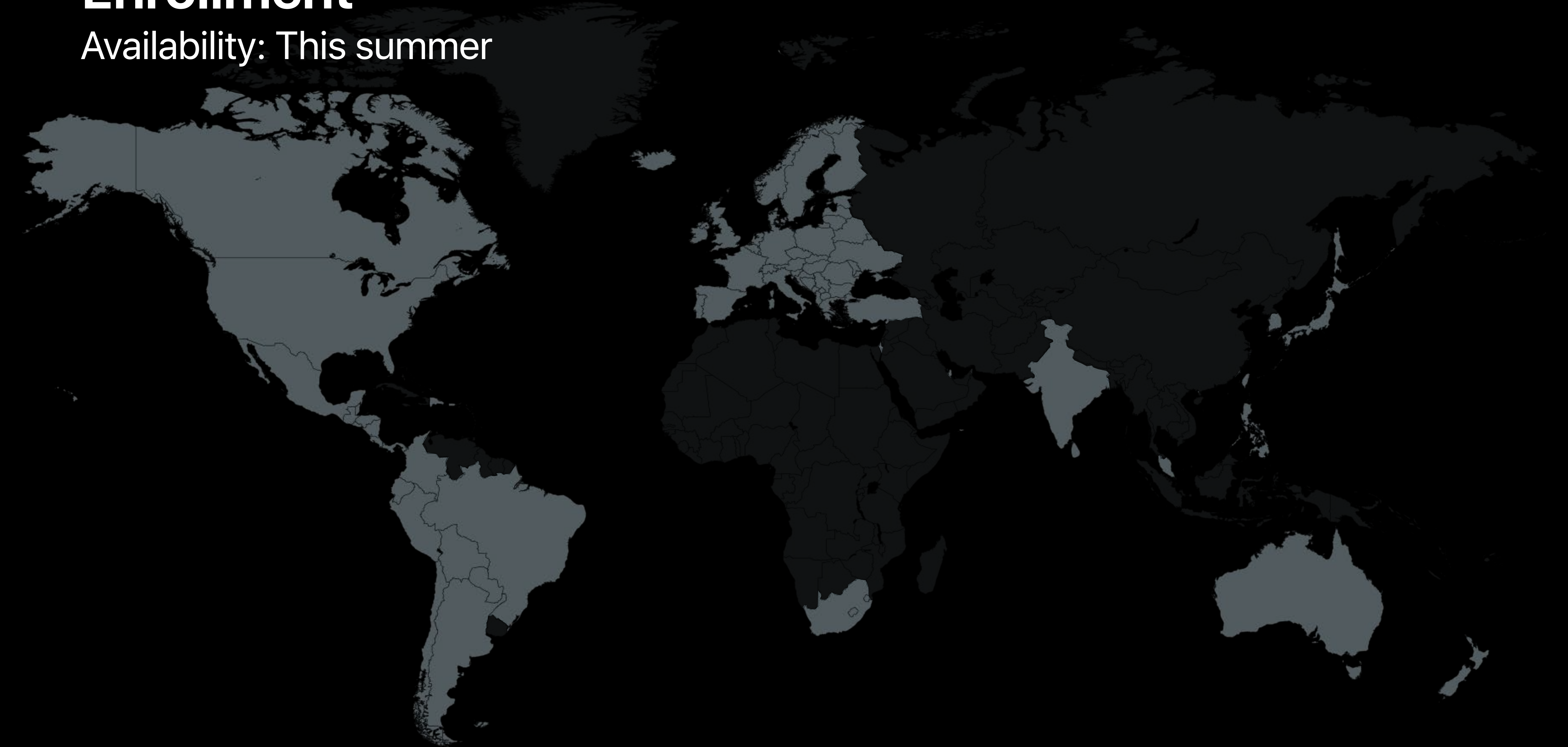
A dark gray world map is centered in the background, showing the outlines of continents and countries. The map is rendered in a low-contrast, almost silhouette style.

**34**

**COUNTRIES**

# Enrollment

Availability: This summer





# Enrollment

Availability: This summer

A dark grey world map is centered in the background, showing the outlines of continents and countries. The map is rendered in a monochromatic style with varying shades of grey.

# 65

**COUNTRIES**

# Enrollment

New countries



# Enrollment

New countries

Bulgaria

Lithuania

South Korea

Ecuador

Nicaragua

Bahrain

Malta

Malaysia

El Salvador

Panama

Cyprus

Qatar

Philippines

Costa Rica

Paraguay

Estonia

Romania

Argentina

Guatemala

Peru

Iceland

Slovakia

Bolivia

Honduras

Israel

Slovenia

Chile

Dominican  
Republic

Latvia

Ukraine

Colombia

# Enrollment

New countries

Bulgaria

Lithuania

 South Korea 

Ecuador

Nicaragua

Bahrain

Malta

Malaysia

El Salvador

 Panama 

Cyprus

Qatar

Philippines

 Costa Rica 

Paraguay

Estonia

Romania

 Argentina 

Guatemala

 Peru 

 Iceland 

Slovakia

Bolivia

Honduras

Israel

Slovenia

Chile

Dominican  
Republic

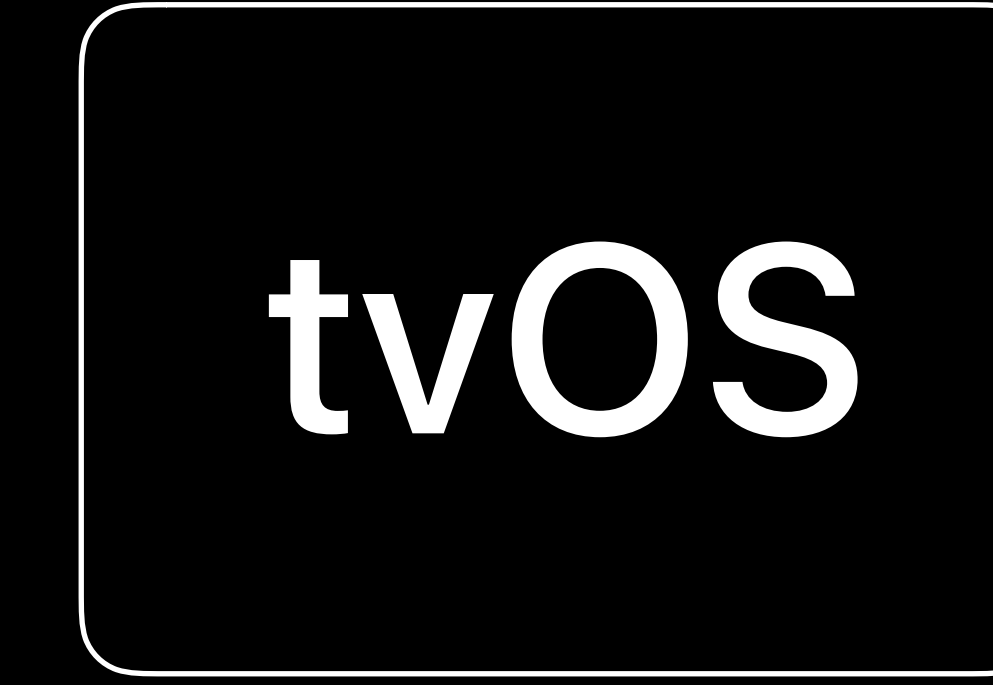
Latvia

Ukraine

 Colombia 

# Enrollment

Volume Purchase Credit



Add credit to your account via purchase order

Purchase from Apple or reseller

Launched last week in 10 new countries

# Enrollment

Volume Purchase Credit



Add credit to your account via purchase order

Purchase from Apple or reseller

Launched last week in 10 new countries

Austria

Finland

Netherlands

Switzerland

Belgium

Ireland

Norway

Denmark

Luxembourg

Sweden

# Enrollment

Setup Assistant configuration

iOS

tvOS

mac  
OS

Privacy

10.13.4/11.3

# Enrollment

Setup Assistant configuration



Privacy

10.13.4/11.3

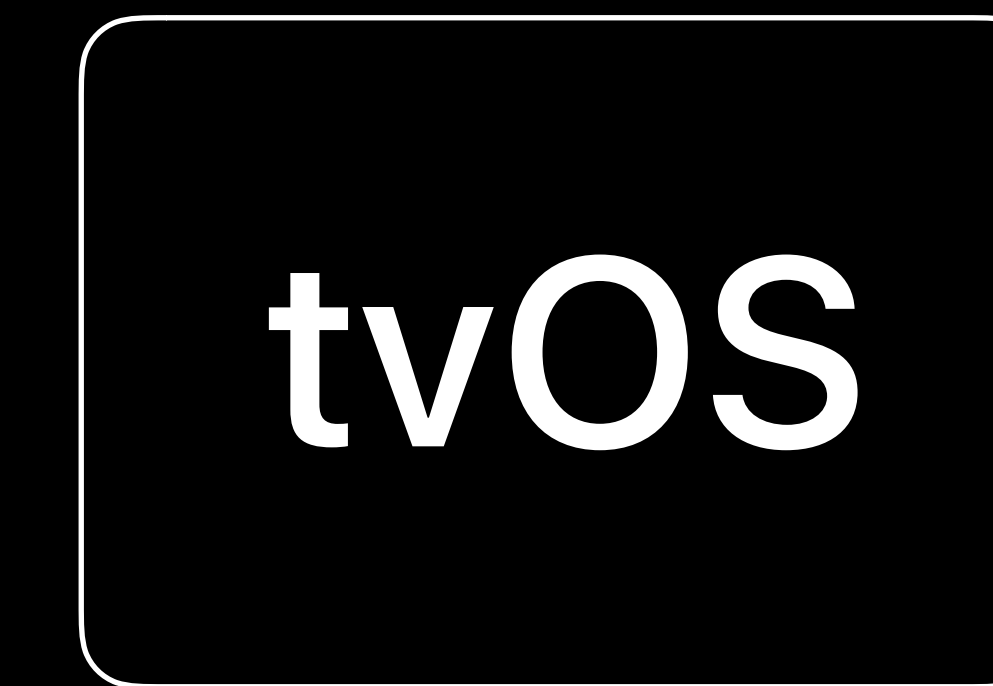
iCloud storage

10.13.4



# Enrollment

Setup Assistant configuration



Privacy 10.13.4/11.3

iCloud storage 10.13.4

Set language and region 11.3

Where is this Apple TV? 11.4

# Enrollment

Setup Assistant configuration

iOS

tvOS

mac  
OS

Privacy 10.13.4/11.3

iCloud storage 10.13.4

Set language and region 11.3

Where is this Apple TV? 11.4

iMessage and FaceTime

Screen Time

Software Update

# Enrollment

Apple Push Notification service

iOS

tvOS

mac  
OS

Legacy Binary Provider API obsolete

Adopt HTTP/2 API

- More capable and efficient

Documented in 'Communicating with APNs'



# Enrollment

Security: App Transport Security



App Transport Security (ATS) required in 2018

SCEP server capabilities

DES no longer supported in iOS 11 or tvOS 11 

Support AES and SHA-512 

Advertise your capabilities 

# Enrollment

Security: App Transport Security



Verify your server supports ATS using

```
nscurl --ats-diagnostics <URL>
```

- Check-in
- Server
- SCEP
- OTA profile delivery
- Enterprise app distribution

# Management

Password restrictions

SUPERVISED



Password AutoFill

- Implies Safari AutoFill

Password sharing

- Also blocks WiFi password sharing

Password proximity requests

# Management

Commands and settings



Enable/disable Bluetooth 10.13.4/11.3

Exchange: Use OAuth

Managed Software Updates 10.13.4/11.3

# Management

## Managed Software Updates



## Restrictions SUPERVISED

- Delay when user will see new update
- Configure delay period

ScheduleOSUpdate supports version number

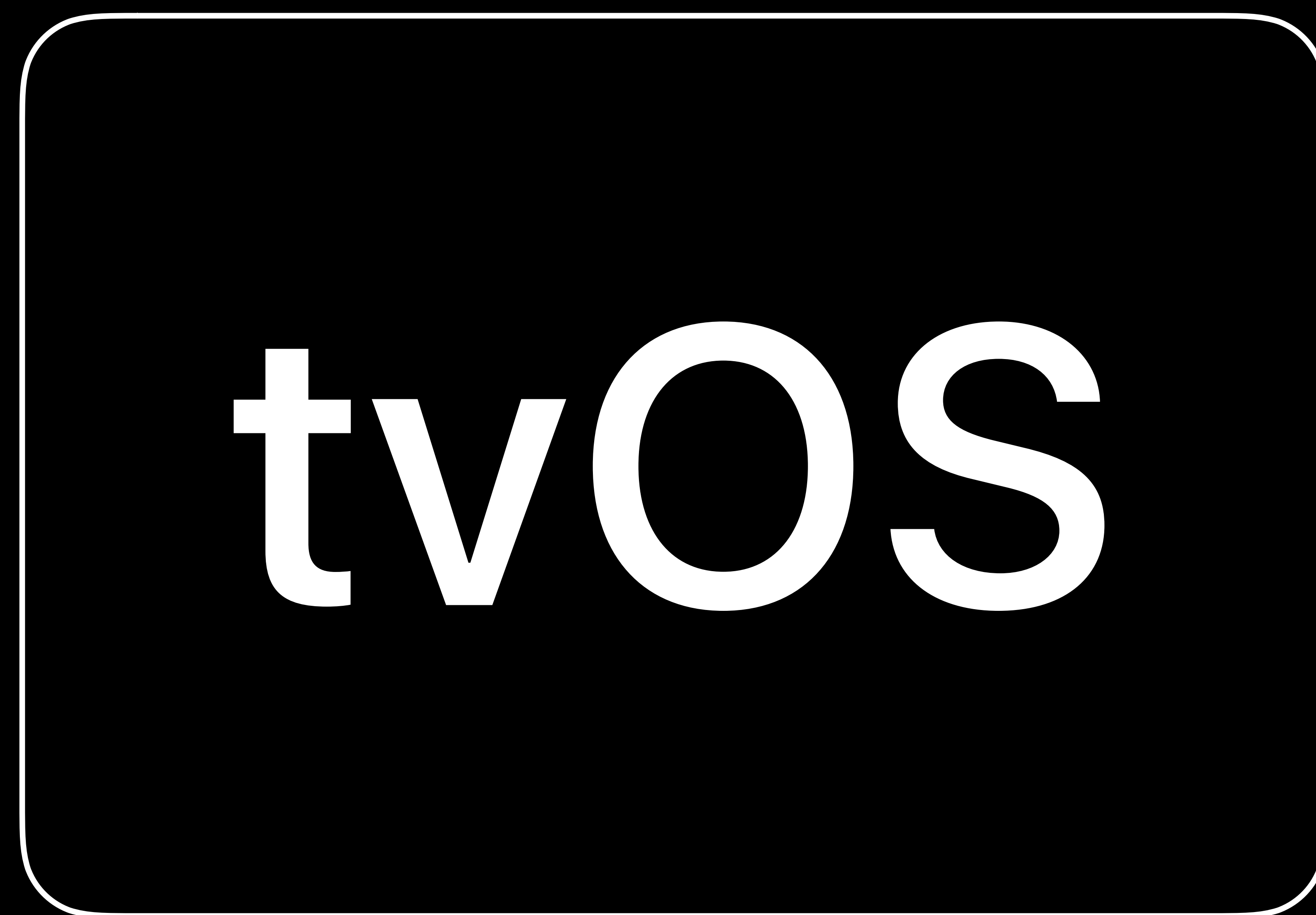
## Apple Software Lookup Service

- Catalog API for iOS updates
- Documentation available



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tvOS

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mac  
OS



# Announcements

## Security

2018

Allow USB accessories while device is locked

Switch in Settings to allow when locked

Supervised restriction to force switch on

Configurator managed devices

# Announcements

Supervised-only restrictions

2018



# Announcements

Supervised-only restrictions

2018

Restrictions that should have been supervised only will only be honored on supervised devices



# Announcements

Supervised-only restrictions

2019

Restrictions that should have been supervised only will only be honored on supervised devices

Now will be enforced in 2019

Upgrade and migration policy



# Announcements

Supervised-only restrictions

2019

App installation	Siri *
App removal	iCloud documents and data
FaceTime	Multiplayer gaming
iTunes	Add Game Center friends
Safari	Explicit content



# Announcements

Managed Open In

Improvements in iOS 11.3 and iOS 12

Sharing files

Contacts API respects boundary in iOS 11.3





# Management

Settings new in iOS 11.3

Require authentication before AutoFill **SUPERVISED**

Allow USB accessories while device is locked **SUPERVISED** **11.4.1**

Require teacher consent to leave a teacher created Classroom class **SUPERVISED**

Restrict Remote pairing to whitelisted devices **SUPERVISED**

VPN: AlwaysOn support CellularServices service exception

Home Screen Layout: Web Clip support

# Management

Settings new in iOS 12

NEW

Notifications: Critical alerts, Show in CarPlay

Restrictions: Set date and time automatically **SUPERVISED**

# Management

Settings new in iOS 12: S/MIME for Mail and Exchange



NEW

Allow user to

- Enable or disable signing
- Modify signing cert selection
- Enable or disable encryption by default
- Modify encryption cert selection

# Management

Settings new in iOS 12: VPN IKEv2



NEW

DNS server addresses

Primary domain of the tunnel

DNS search domains

DNS supplemental match domains

# Management

## Commands and Settings

Erase Device: Prevent proximity setup 11.3

macOS Server Account REMOVED

# Troubleshooting

Install MDM and APNs logging profiles

Get logs using Console or Apple Configurator 2

Filter logs by process

- APNs: apsd
- MDM: mdmd, dmd
- Profiles, restrictions, certs: profiled
- Apps: mdmd, dmd, appstored
- Shared iPad: mdmuserd

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<https://developer.apple.com/bug-reporting/profiles-and-logs/>

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**Developers, Developers, Developers**

Pad



9:41 AM

### Schoolwork

### Classes

**Science**  
2 Handouts due

**Pre-Algebra**  
3 Handouts due

**Math**  
1 Handout due

**Technology**  
1 Handout due



100%

### Due Next 7 Days

SCIENCE • ALL STUDENTS  
**Field Trip Tomorrow!**  
Read this chapter before we go. 🐼

1 NOT DONE

**TODAY**  
DUE DATE

PRE-ALGEBRA • ALL STUDENTS  
**Numbers Time**  
Do your Nearpod lesson and show me what you learned in Geogebra.

2 NOT DONE

**TOMORROW**  
DUE DATE

TECHNOLOGY • ALL STUDENTS  
**Algorithms**  
Read Algorithms, then follow the lessons, and show me what you learned by...

2 NOT DONE

**MAR 29**  
DUE DATE

SCIENCE • ALL STUDENTS

TECHNOLOGY • ELLEN CHOU

PRE-ALGEBRA • ALL STUDENTS



# Developers

Schoolwork

NEW

Easily share content

Leverage power of apps

View student progress

Tailor instruction

Collaborate and provide feedback



# Developers

## ClassKit

Integrate with Schoolwork

Help teachers discover activities in your app

Take students directly to activity

Securely share progress data with teachers



# Developers

Roster API: Class Name

Use Class Name as display name 

Consistency in Classroom and Schoolwork

# Developers

Roster API: Class Name

Use Class Name as display name 

Consistency in Classroom and Schoolwork

Date	Class Name
Before January 2018	<blank>

# Developers

Roster API: Class Name

Use Class Name as display name 

Consistency in Classroom and Schoolwork

Date	Class Name
Before January 2018	<blank>
January 2018	Derived by Apple School Manager

# Developers

Roster API: Class Name

Use Class Name as display name 

Consistency in Classroom and Schoolwork

Date	Class Name
Before January 2018	<blank>
January 2018	Derived by Apple School Manager
June 2018	Set by administrator

# Developers

Shared iPad

Data not available locally on new device

App persists any data to the cloud

Works well after deleting local data



# Developers

Managed App Configuration

Thousands of developers

Shared schemas

App warming

Customization



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<https://www.appconfig.org>

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# Developers

Enterprise SDKs

IBM Watson Services for Core ML



IBM Cloud Developer Console

SAP Cloud Platform SDK



GE Predix SDK for iOS



# Developers

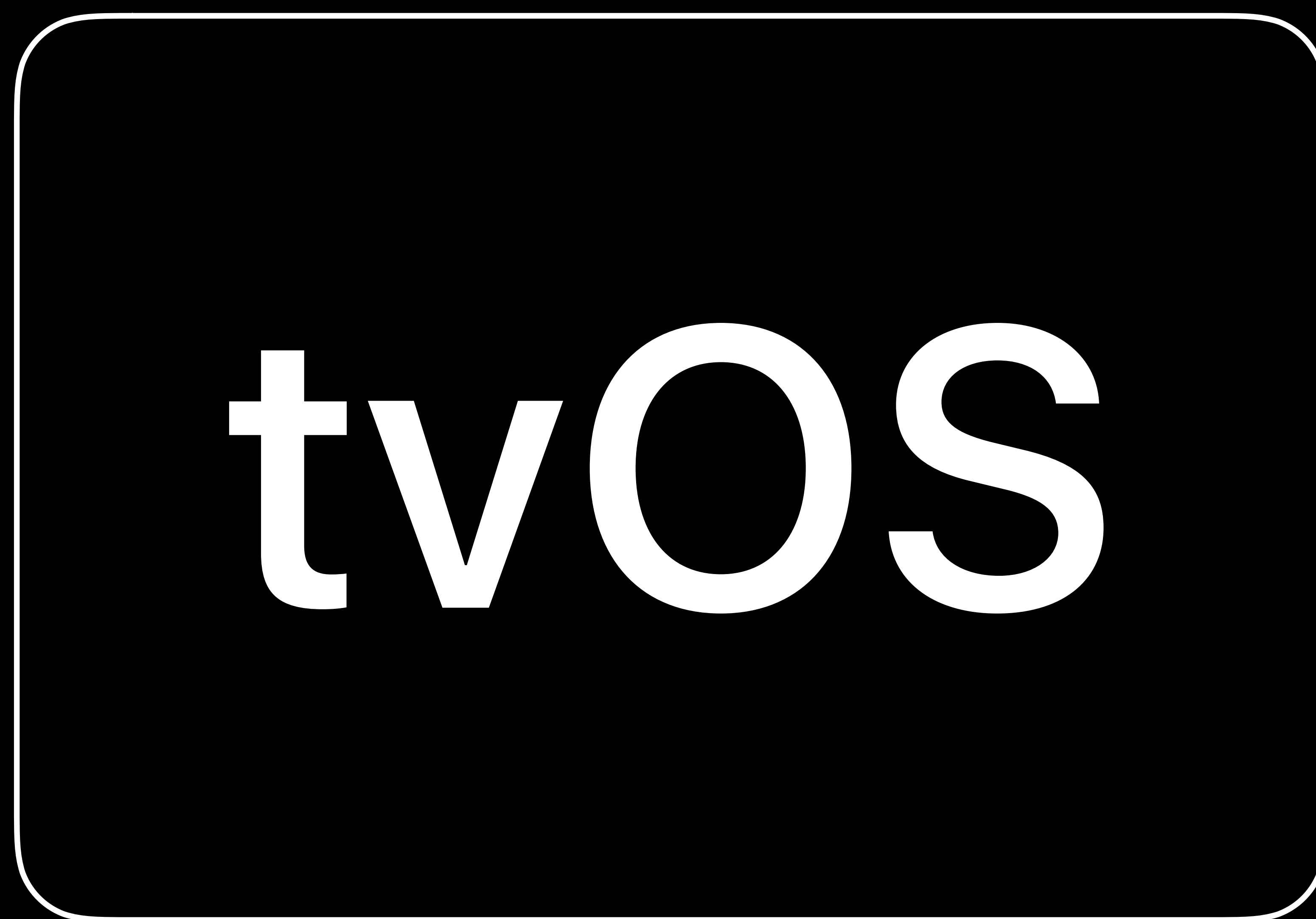
Cisco Fastlane

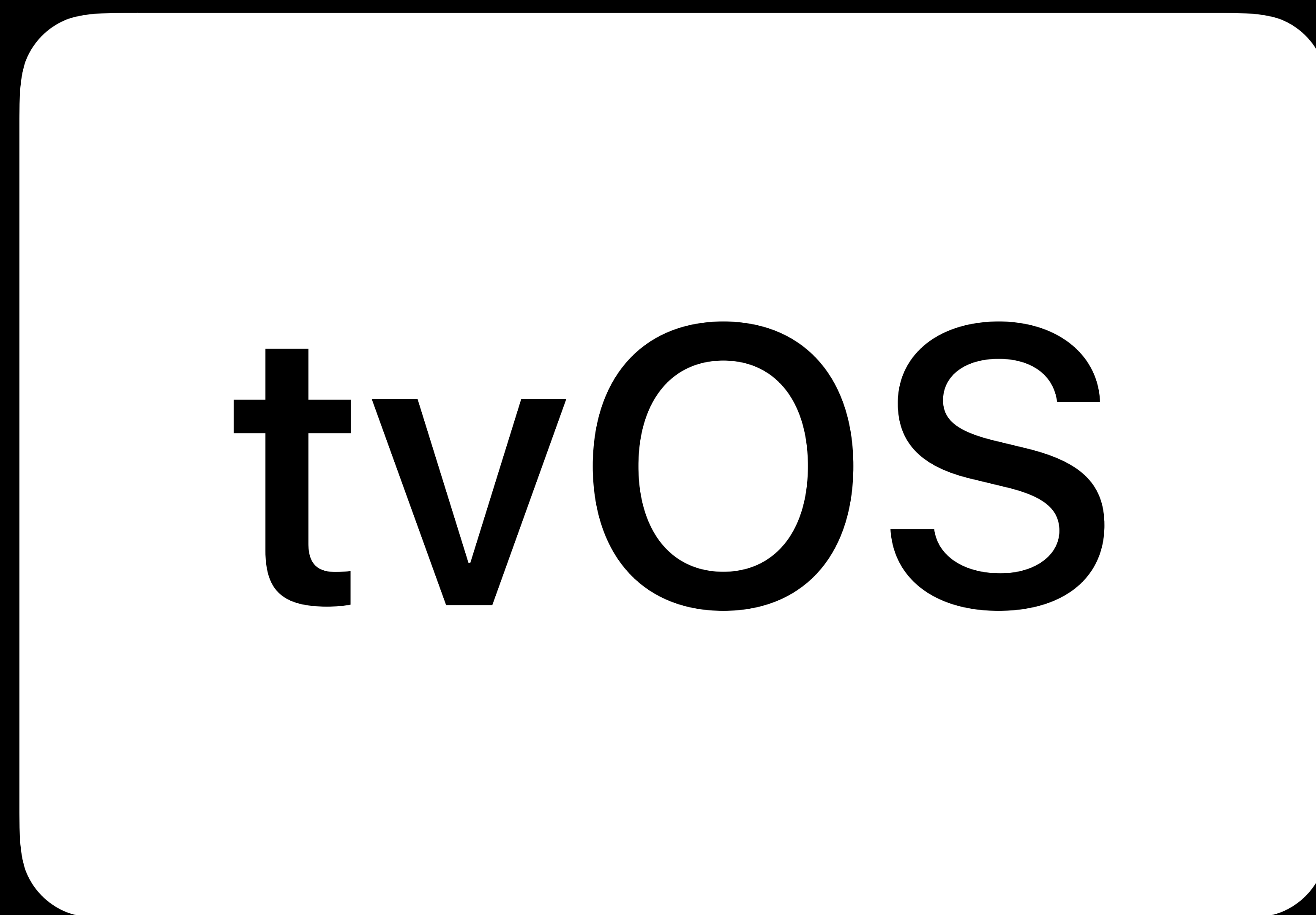
Enterprise app developers and MDM vendors should support profile keys

Configurable via profile

- New QoS keys







# Management

Commands and Settings for tvOS

Configure movie ratings, TV ratings, app ratings, explicit content 11.3

Remote pairing to whitelisted devices 11.3 SUPERVISED

Install App Store app

Install software update



# Management

Commands and Settings for tvOS

Configure movie ratings, TV ratings,  
app ratings, explicit content

Remote pairing to whitelisted devices

Install App Store app

Install software update

Install enterprise app

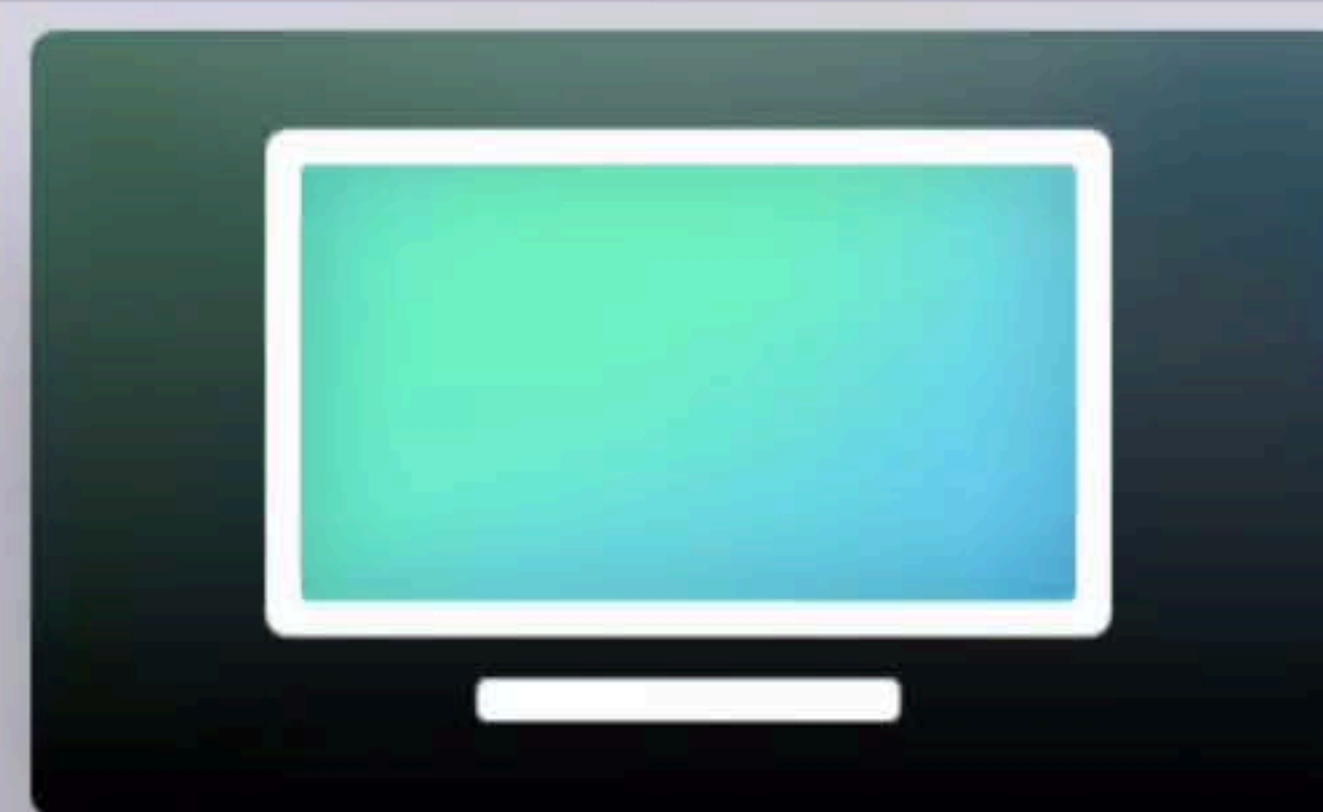
Configure home screen layout

Single App Mode

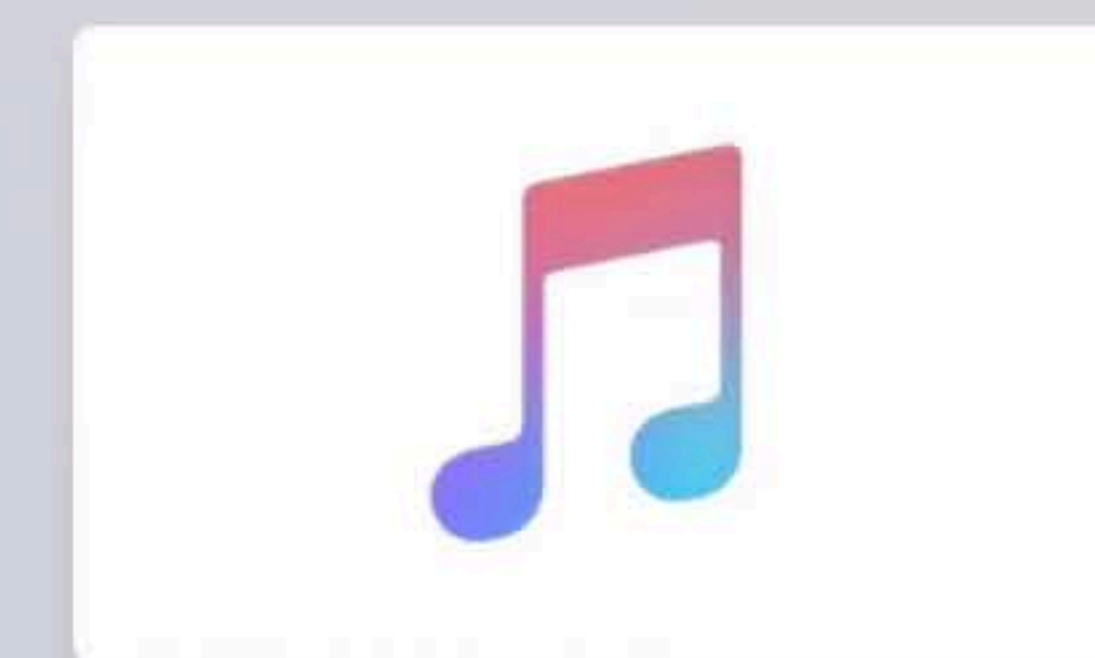
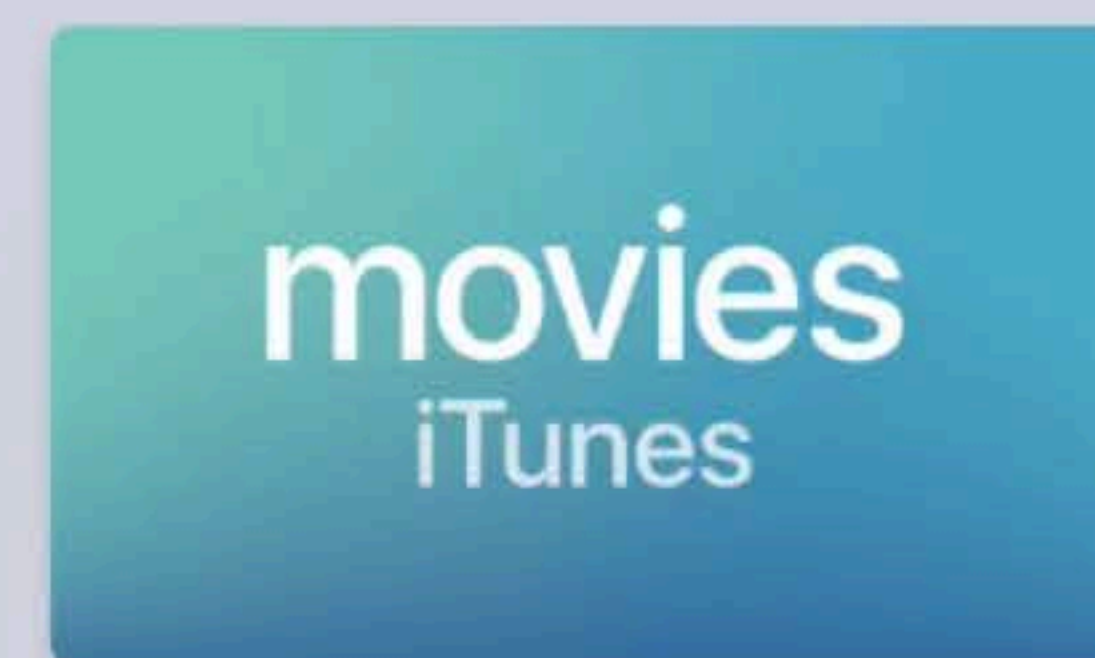




Apple tv

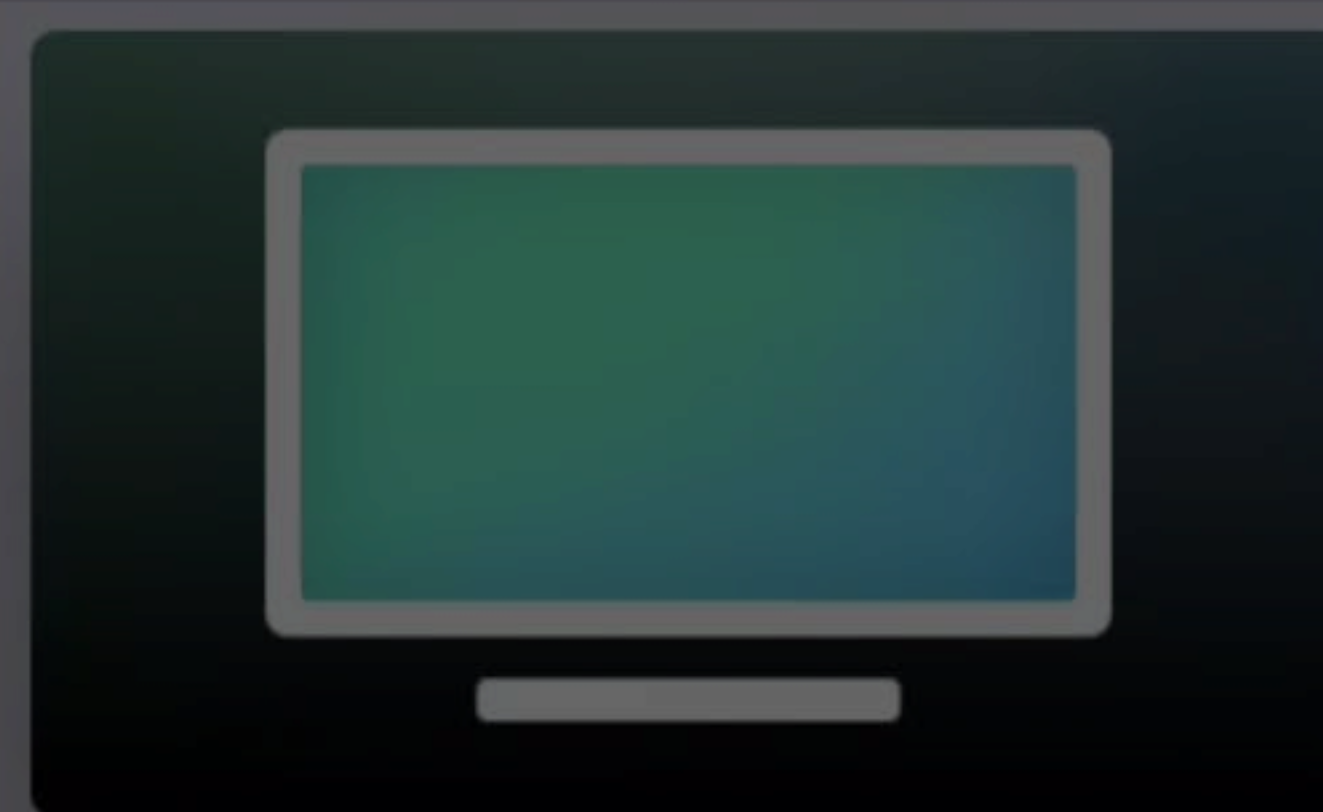


TV

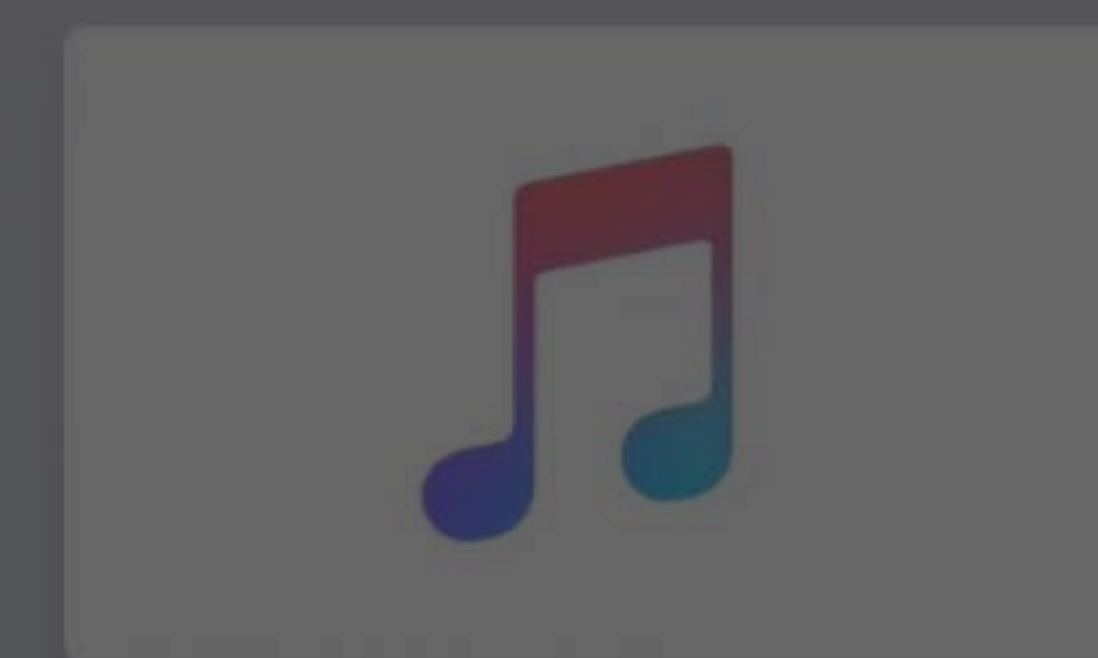
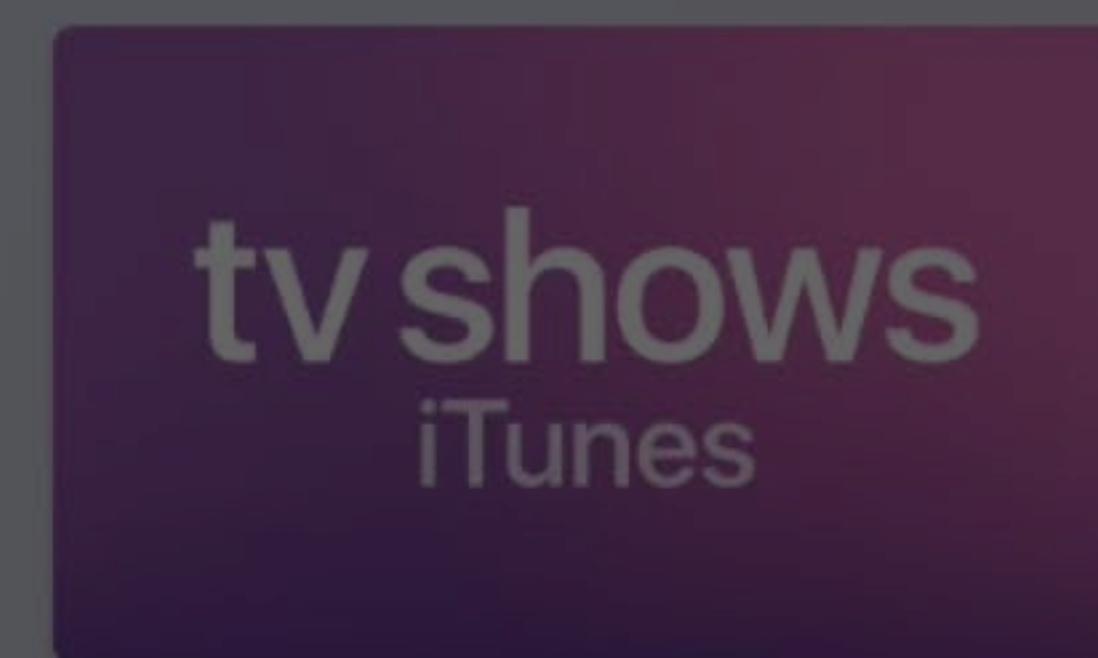
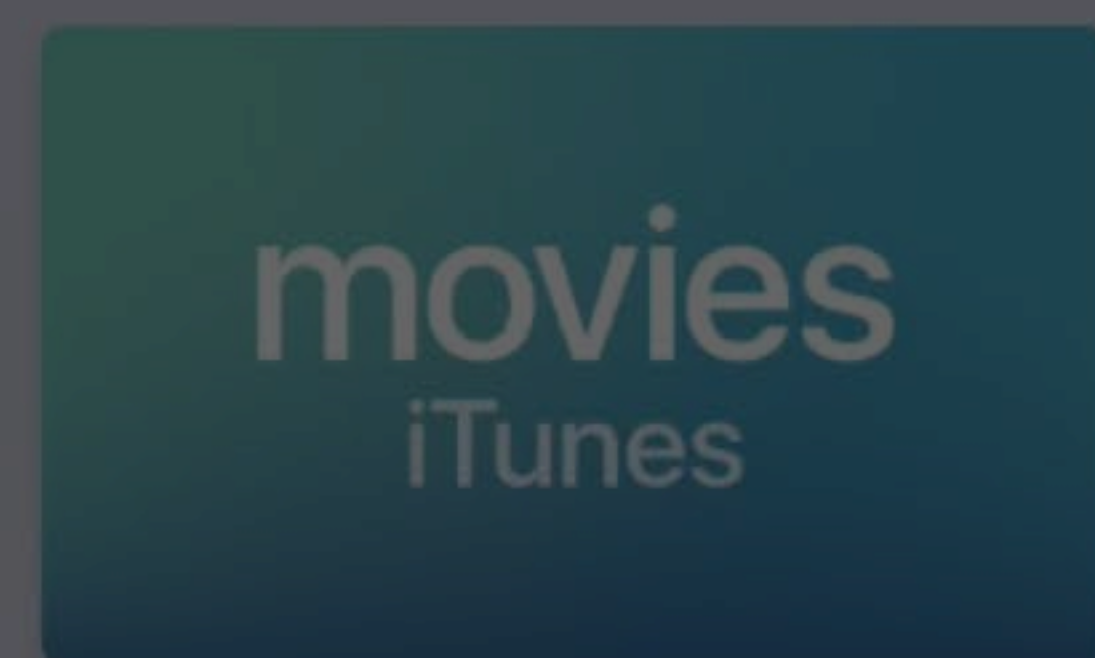




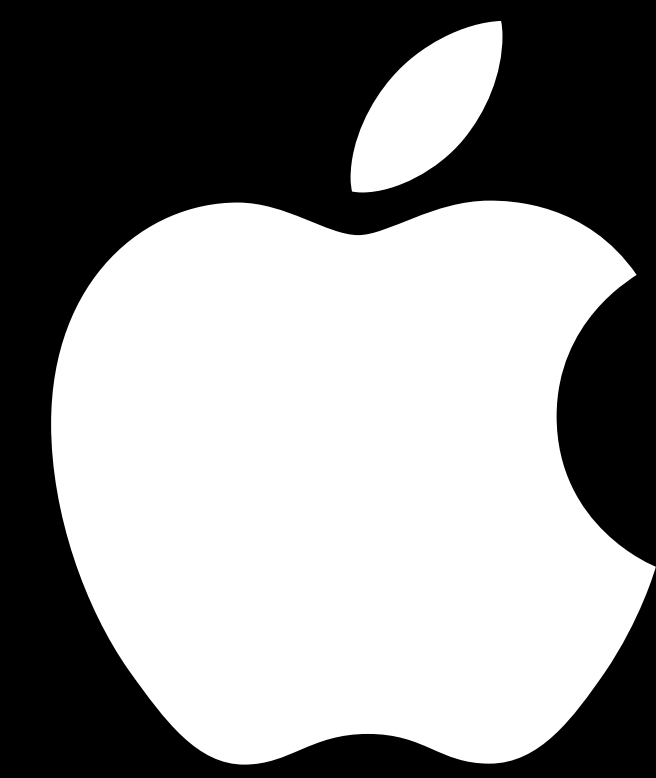
Apple tv



TV

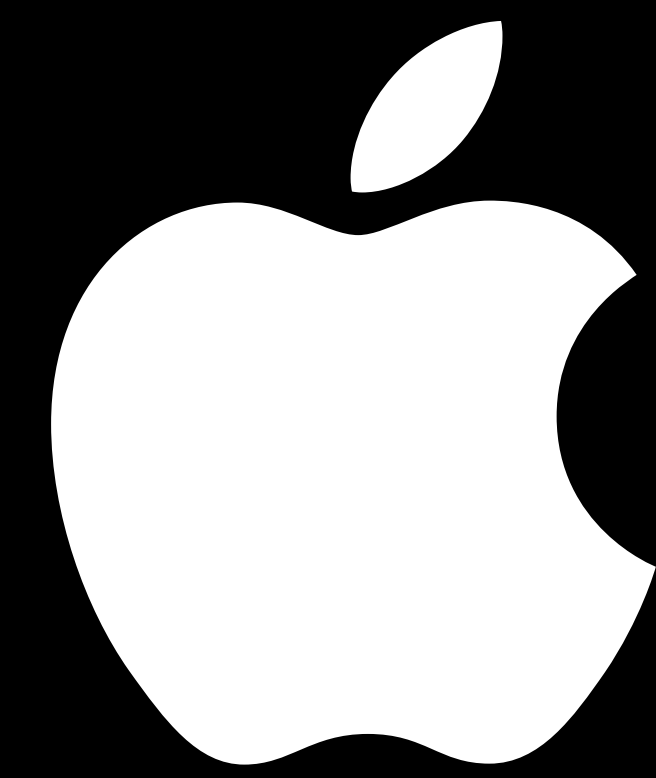






Step 1 of 2: Preparing Update...

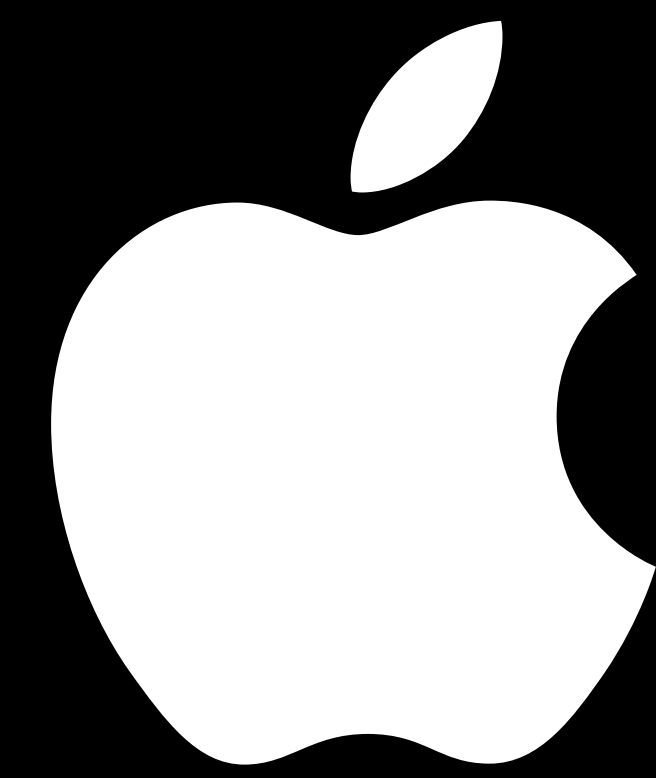
Do not unplug your Apple TV while it's updating. This may take a few minutes.



Step 1 of 2: Preparing Update...

Do not unplug your Apple TV while it's updating. This may take a few minutes.



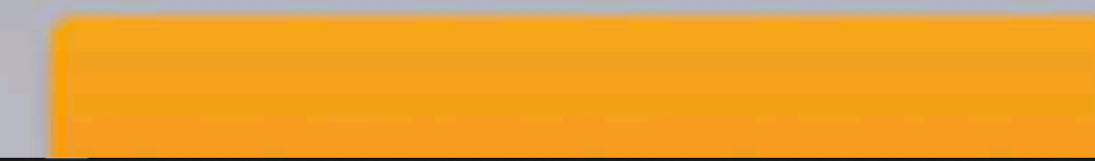
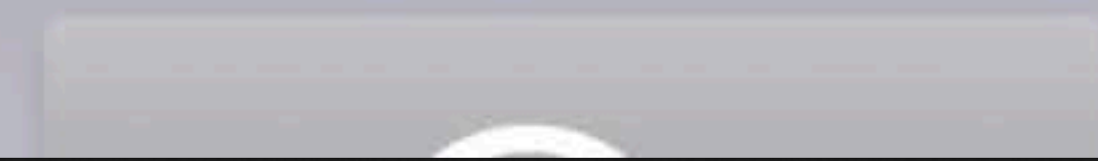
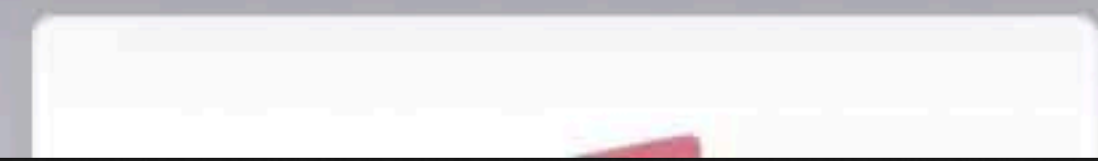


Step 2 of 2: Applying Update...

Do not unplug your Apple TV while it's updating. This may take a few minutes, during which the Image on your TV may briefly disappear.



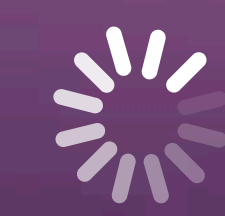
Hotel Cupertino



Hotel Cupertino



Hotel Cupertino





# HOTEL CUPERTINO

Concierge

## IN ROOM SERVICES

Room Service

Dry Cleaning

Housekeeping

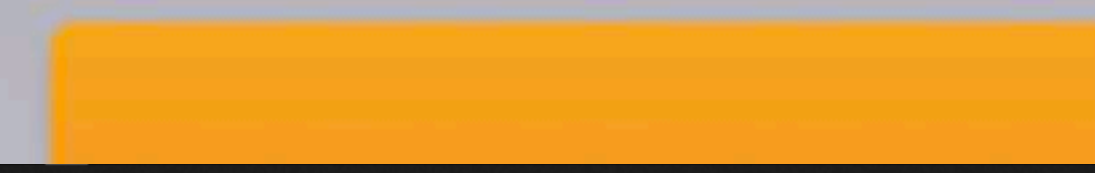
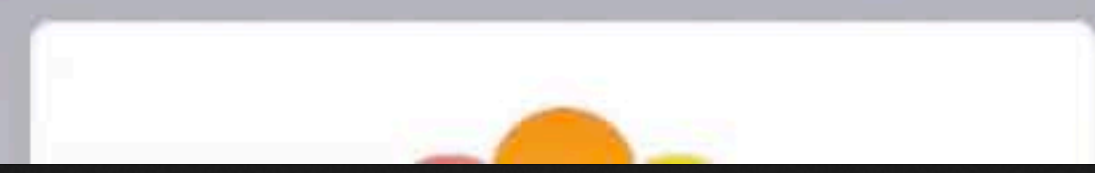
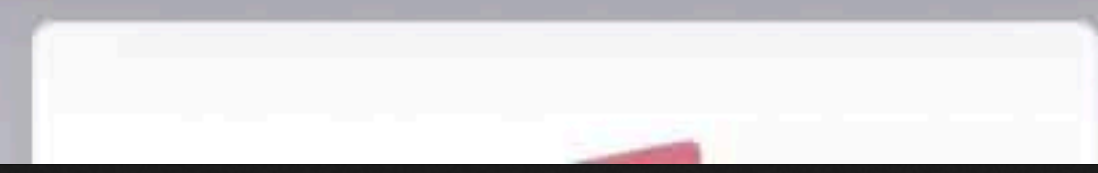
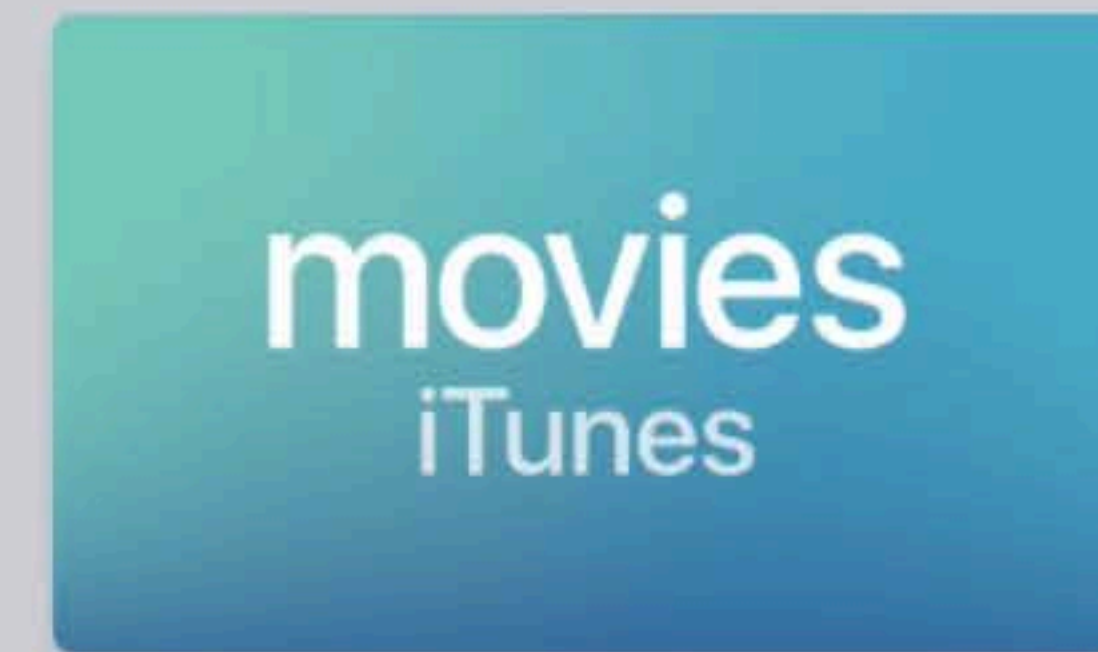
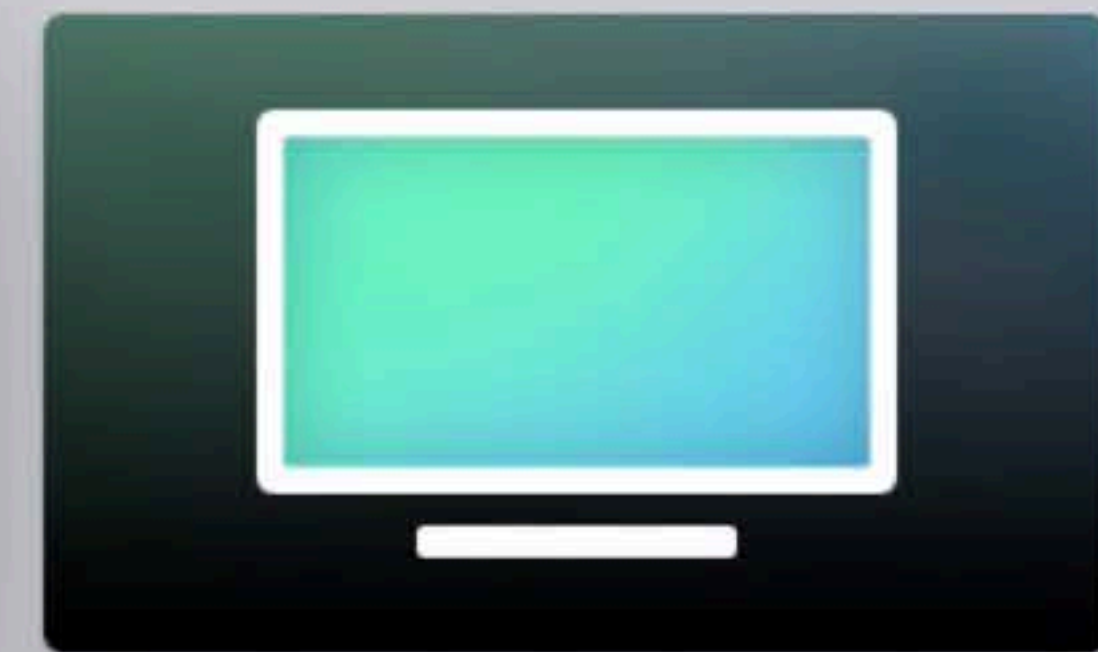
## AROUND TOWN

Shopping and Entertainment

Restaurants



Hotel Cupertino





Hotel Cupertino





**HBO ORIGINAL SERIES**  
Stream every episode of  
HBO's addictive shows.



● HBO NOW

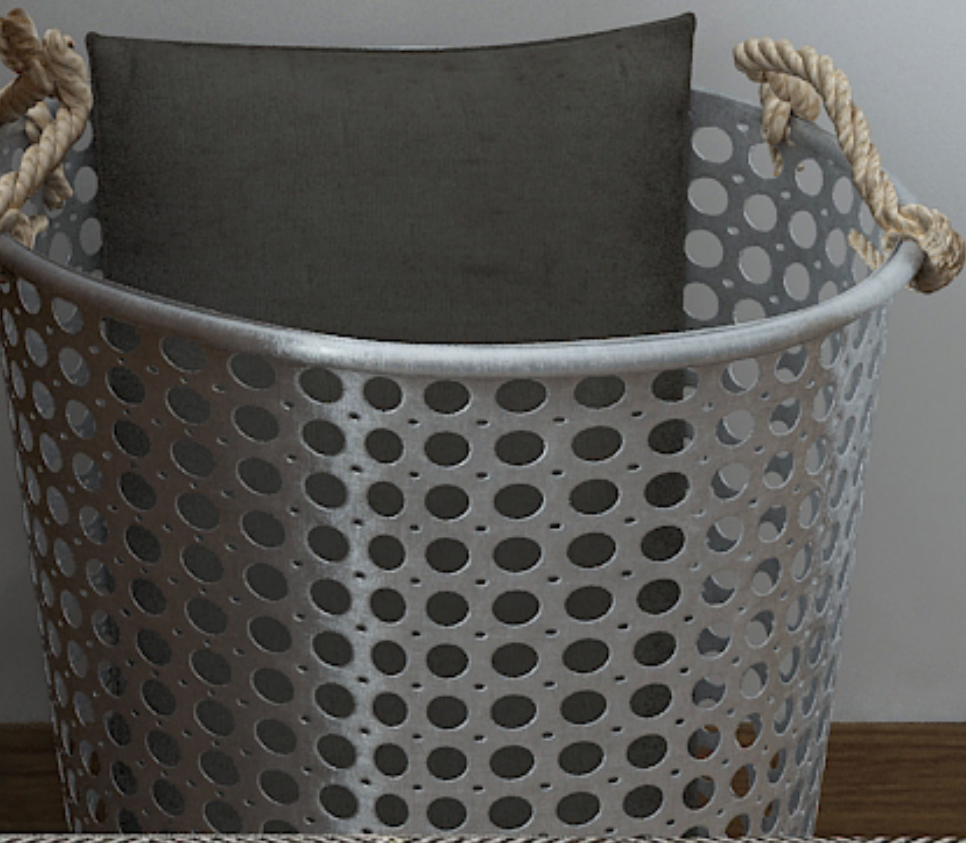
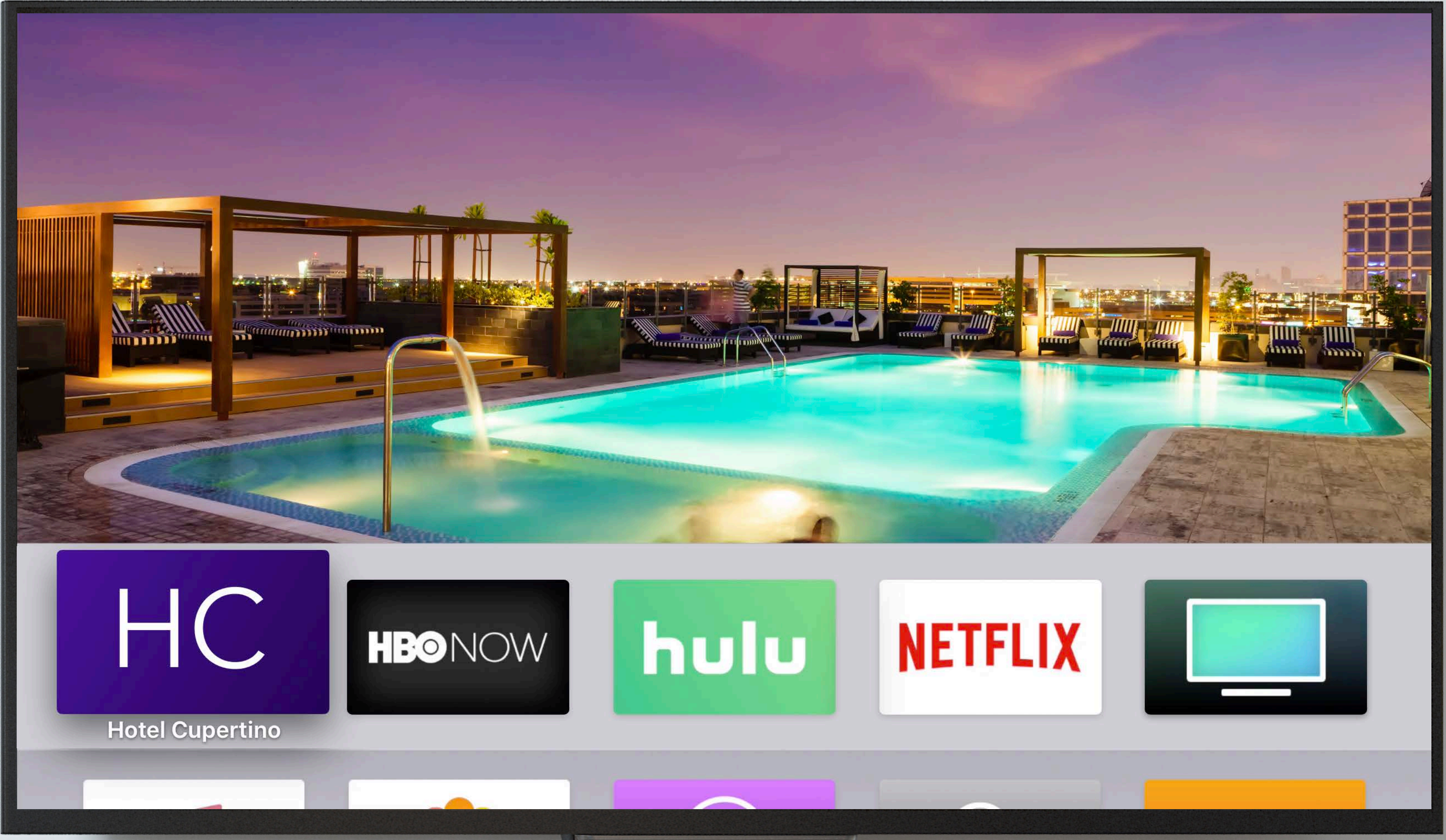


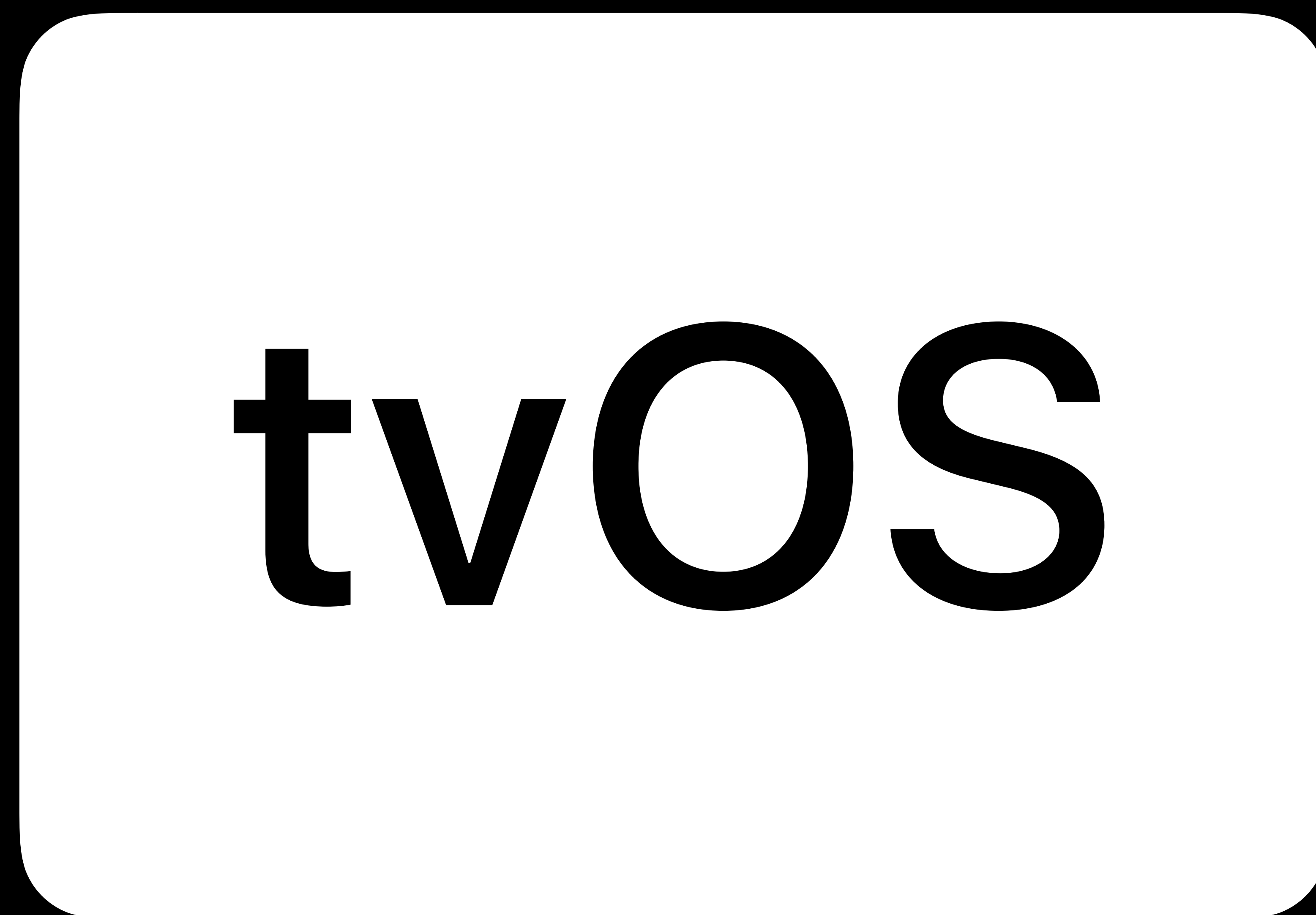


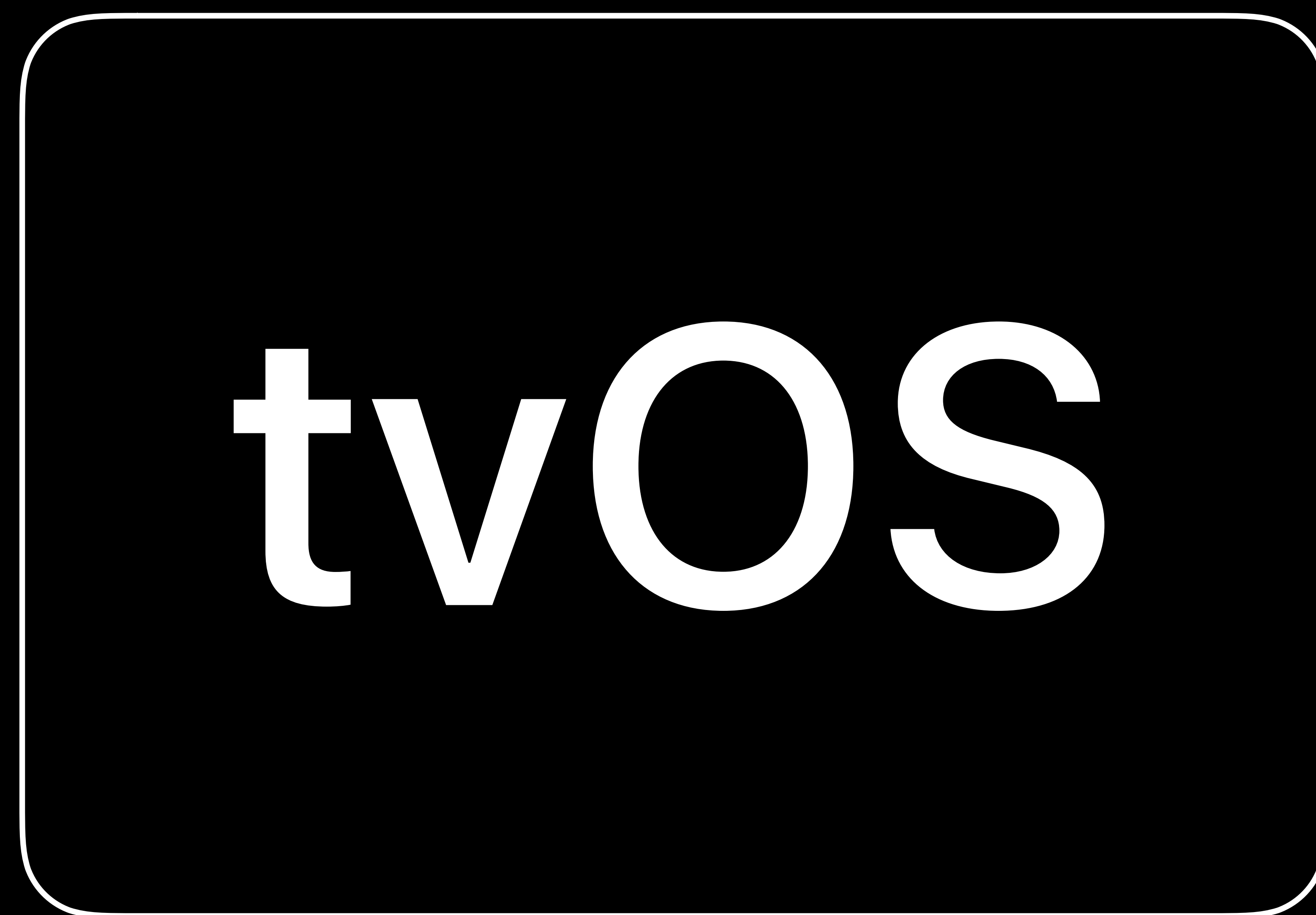












# Installation

startosinstall 10.13.4

Part of macOS installer

Install macOS on startup disk

Install packages after macOS

`--installpackage`

Erase current startup disk first

`--eraseinstall`



# Enrollment

macOS user experience

NEW

Simpler

Matches iOS



# Enrollment

Security: Enterprise app manifest delivery

NEW

`InstallApplication` still supported

Switch to one of the new, secure methods 

`InstallEnterpriseApplication`

- Inline manifest
- Provide certs to pin



# Management

## System Profiles

2019

Calendar

Contacts

Exchange

Dock

Mail

Web Clip



# Management

Commands and Settings for macOS 10.13.4

Generated private keys not exportable

AD Certificate: Auto-renew certs

Content Caching

Smart Card

- Require to sign in `10.13.2`
- Enable screen saver on removal
- New options for Check Cert Trust key





# Management

User-approved MDM

Manage features which should only be available on organization-owned Mac

- Kernel extension permissions 10.13.2 UA MDM

Introduced in 10.13.2

Required in 10.13.4



# Developers

## Assessments

Support for testing apps 10.13.4

Requires entitlement



# Troubleshooting

Install Managed Client and APNs logging profiles

Get logs using Console

Filter logs by subsystem `com.apple.ManagedClient`

Use `profiles`

---

<https://developer.apple.com/bug-reporting/profiles-and-logs/>

---

# Summary

Admins

Apple School Manager

Apple Business Manager

Use new device management capabilities

Prepare for security changes

# Summary

MDM developers

Support new features

Adopt security features

# Summary

App developers

ClassKit

Shared iPad

Managed App Configuration

Enterprise SDKs

Cisco Fastlane

# More Information

<https://developer.apple.com/wwdc18/302>

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Device Management Lab

Technology Lab 2

Thursday, 1:30PM

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Device Management Lab

Technology Lab 12

Friday, 9:00AM

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Safari, WebKit, and Password AutoFill Lab

Technology Lab 12

Friday, 2:45PM

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 **WWDC18**