

# From Imperative to Declarative: A New Era of Device Management

● **JAMF  
NATION  
LIVE**



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Jamf

# Agenda

## 1 | What is Declarative Device Management?

Sure. You know how Mobile Device Management works today, but what's different and how will it impact you?

## 2 | What can I do today?

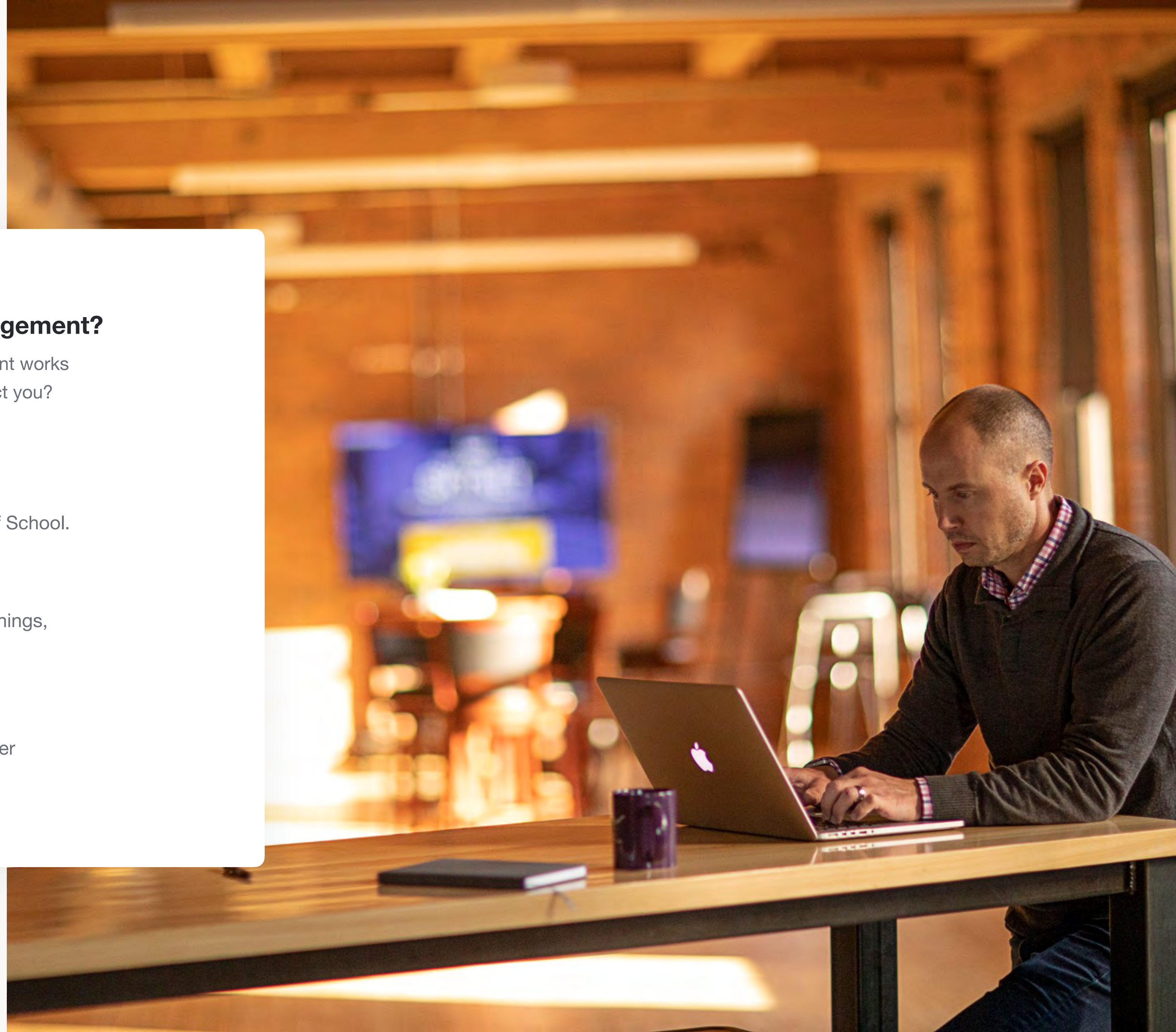
Let's talk about where Declarative Device Management exists inside Jamf Pro and Jamf School.

## 3 | The future is bright!

Declarative Device Management means big things, let's talk about what comes next!

## 4 | WWDC

What's new from Apple's Worldwide Developer Conference?



# 1 | What is **Declarative Device Management**?

**DDM - An Overview**

How many of you are using  
**Declarative Device  
Management with Jamf?**

All of you!

# “The future of device management is declarative management”

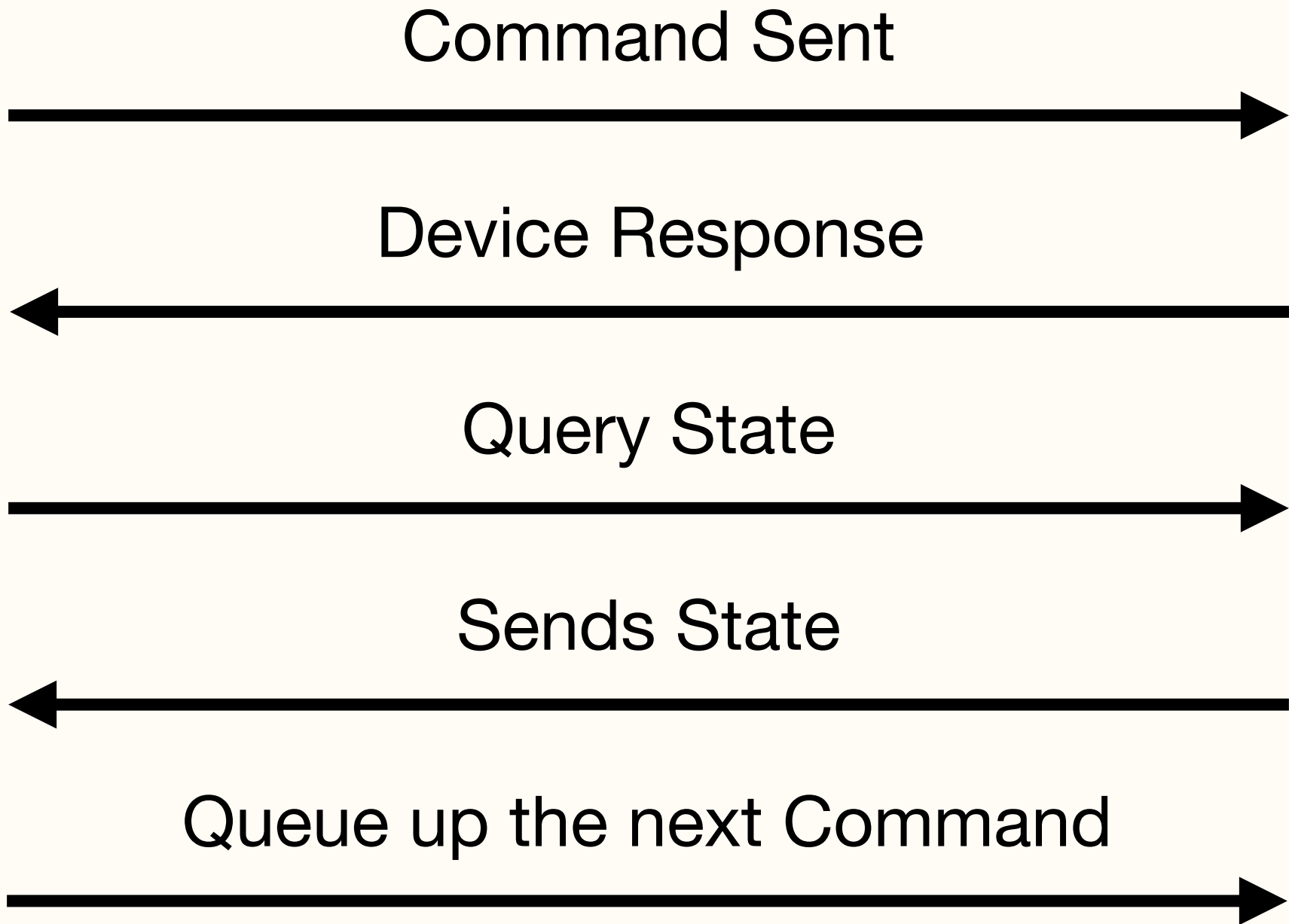
*Apple, Worldwide Developer Conference - June 2022.*

*Session ‘Adopt declarative device management’ - #10046*

# Imperative Device Management



Jamf Pro / School / Now



User Devices

**...Now Multiply That By 1,000 Devices**

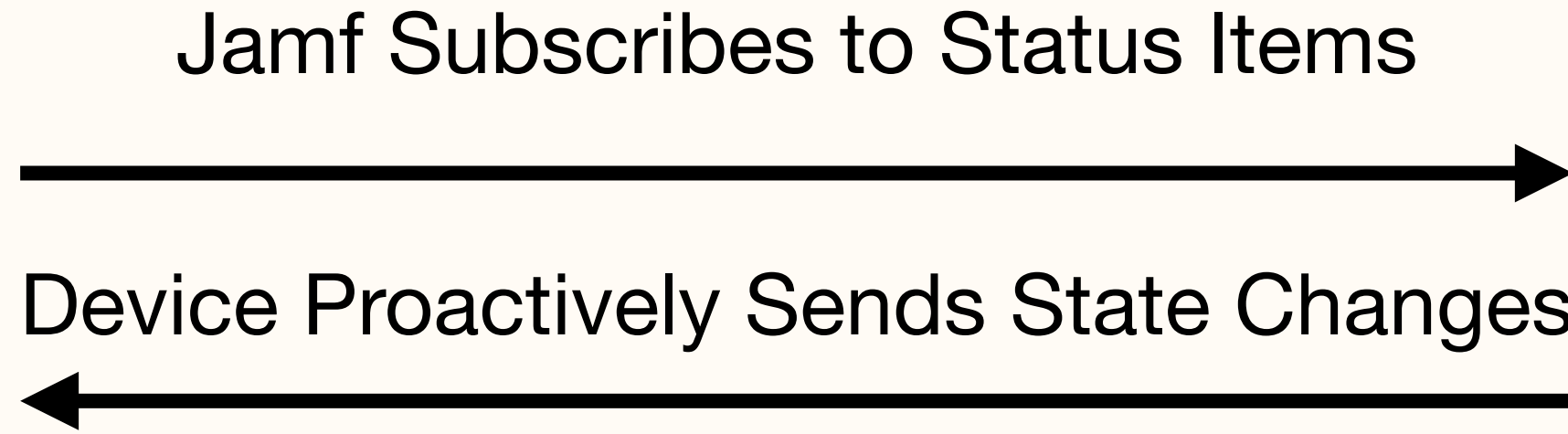
**Imperative Device Management is Hard...**



# Declarative Device Management



Jamf Pro / School / Now

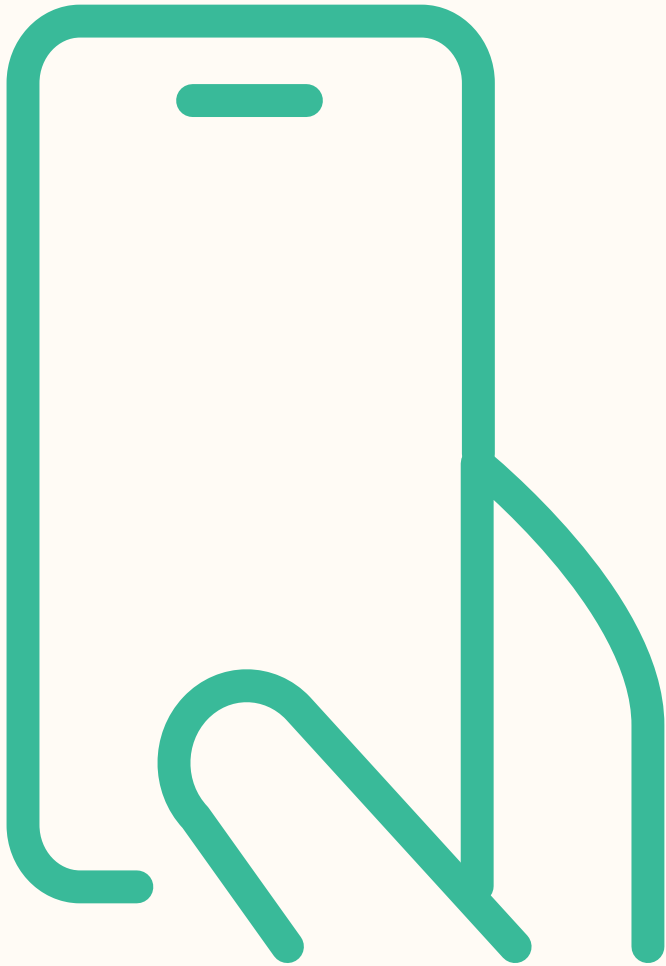
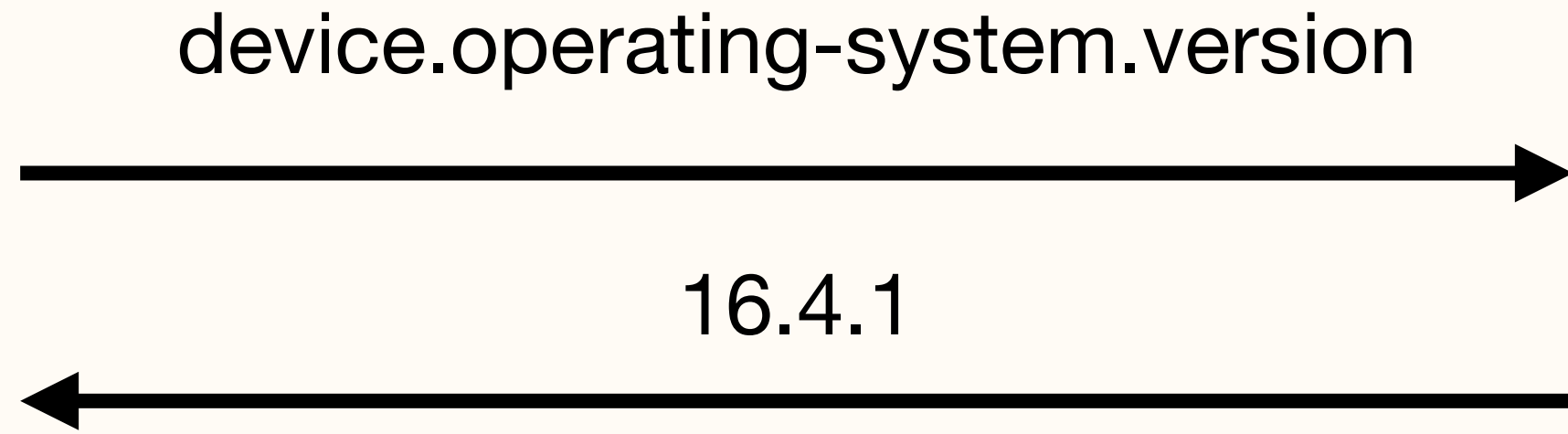


User Devices

# Declarative Device Management



Jamf Pro / School / Now



User Devices

# How do they compare?

## **Imperative Device Management**

Very Chatty Protocol

Hard to Scale

Lots of Logic for Some Workflows

Hard to Expose Custom MDM Commands

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## **Imperative Device Management**

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## **Declarative Device Management**

Matches Apple's Programming Approach

More Scalable

It's Autonomous

Easier for Jamf to Implement New Additions

# What's Inside Declarative Management?

# Declarations

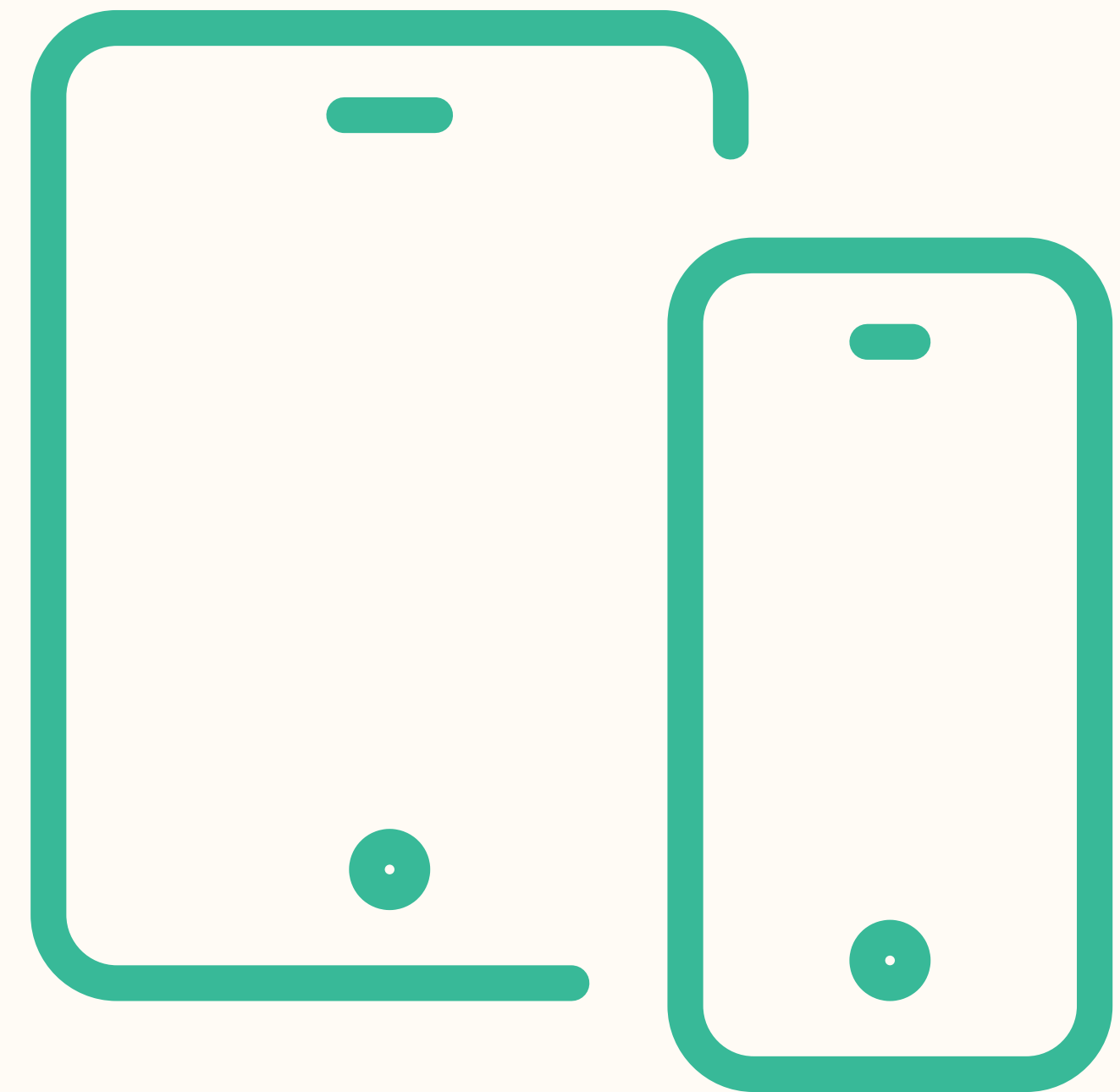
- Deliver device functionality
- Comprised of a dictionary of key/value pairs
- *\*New\** This is sent as JSON objects instead of .plist



# Status



- Used to track changes in device state.
- Comprised of a dictionary of key/value pairs.
- *\*New\** This is sent as JSON objects instead of .plist

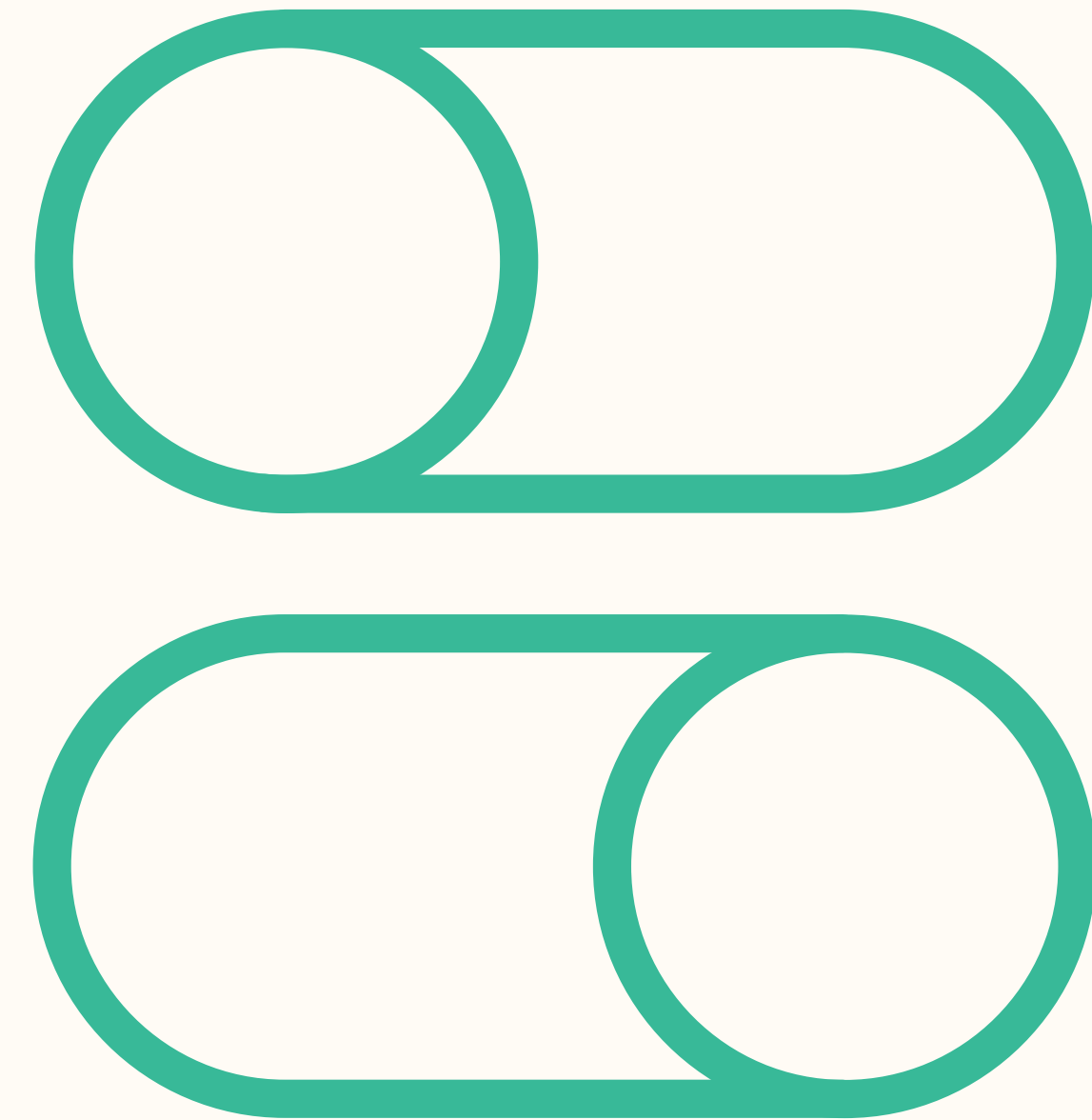


```
{
  "device": {
    "identifier": {
      "serial-number": "abc123",
      "udid": "d4bffb90be0845c6a8b8184a7e06d487"
    }
  },
  "management": {
    "push-token": "xyz789"
  }
}
```



# Extensibility

- Used to advertise what a device is capable of.



# Declarative Device Management

**June 2021**

**DDM announced**

Account-Driven  
User Enrolment

**October 2021**

**Jamf launches  
support for account-  
driven enrolment**

Jamf Pro  
+  
Jamf School

**June 2022**

**DDM Protocol  
extended**

Support for

iOS  
iPadOS  
macOS  
tvOS

**Nov 2022**

**Jamf enables DDM**

All Devices in

Jamf Pro  
+  
Jamf School

Early Support  
for Status Channel  
Reporting

**April 2023**

**Jamf Extends  
Support for DDM**

More Status Channels  
Added

**June 2023**

**WWDC 2023**

# 2| What can I do **today**?

Let's look at Jamf supported features

# Interoperability

DDM & Config Profiles / Commands Coexist

We are all-in on DDM.

# Jamf Pro Support (DDM)

- Automatically enabled in iOS/iPadOS 16 & macOS
- Device proactively reports inventory to Jamf Pro
- Smart groups are automatically reevaluated
- Device evaluates itself against existing declarations



# Jamf School Support (DDM)

Current status channels:

- device.model.family
- device.model.identifier
- device.model.marketing-name
- device.operating-system.build-version
- device.operating-system.family
- device.operating-system.marketing-name
- device.operating-system.version
- device.identifier.serial-number
- device.identifier.udid
- passcode.is-compliant
- passcode.is-present

# 3| The future is **bright!**

Let's talk about what comes next.

# Old Workflows

Pending Commands					Cancel All
COMMAND	STATUS	DATE ISSUED	DATE OF LAST PUSH	USERNAME	
Update Inventory	Device was busy. Will try again.	About a minute ago	About a minute ago		Cancel
Install Configuration Profile Restrictions	Device was busy. Will try again.	Less than a minute ago			Cancel

# Status Channels Examples

**Declarative Device Management:** Enabled

iOS Version: 16.4.1

iOS Rapid Security Response: (a)

iOS Build: 20E252

iOS Supplemental Build Version: 20E772520a

# What Can I Do Today?

- Upgrade workflows become simpler this summer
- Proactive reporting makes for more responsive security workflows
- Fewer scripts and smart groups become more contextually aware

# 4| Apple's Worldwide Developer Conference

What just got announced?

# WWDC 2023 Announcements

- Managing software updates
- App Deployment Enhancements
- Support for deployment of certificates
- Support for a managed set of service configurations
- Migration of Legacy Profiles in iOS, iPadOS, and macOS
- Using Status items for managed devices insights in macOS



**Thank You!**