

Classroom – Shared iPad

Terms and Definitions

Classroom – this is Apple's application for teachers allowing them to manage a class of students using iPad devices. Main features:

- Lock student devices
- Start application or Safari on a given web page on student devices
- Observe (without interaction) student devices
- Pre-assign shared iPad to students
- Display student iPad screen on Apple TVs

Shared iPad - this is a special mode in which iPad devices can be put, which allows multi-users on a single iPad.

- Only one user is logged in at a time
- Personal data are downloaded from iCloud on first login on the device and cached on the device
- You can configure how many "user caches" can be stored on the device
- Managed Apple IDs are required

Apple School Manager - this is Apple "Super DEP" portal for education.

- Works as a normal DEP account (you can create multiple "virtual servers" and use them to deploy your devices)
- Integrates VPP
- Integrates Student Information System data
- Integrates Managed Apple IDs management

One-to-One (1:1) context - this is a deployment model where a person is getting a device that is not shared with another person.

Cart - this is a Group of devices that usually stay in one classroom, and that are shared by students. They do not have to actually be stored in a cart; this is just a logical grouping that we chose to call a Cart.

While Classroom and Shared iPad share the same underlying concepts, it is not mandatory to use both together:

- Classroom only can be used in 1:1 context without Shared iPad
- Shared iPad can be used without a teacher running Classroom

Hardware Requirements

Apple has the hardware requirements listed here: <https://help.apple.com/classroom/ipad/1.1/#/cad1b9b4f8a> (I know that it's an ugly URL, but it takes you where you need to go). On this page, you will see that the following applies:

- All devices require Bluetooth LE (Low Energy) support
- Nothing additional for teacher devices
- 1:1 student devices must be supervised
- Shared iPad requires more storage space

How it works: Classroom

- Classroom is configured using a special "education" payload (profile), which has to be sent via MDM.
- The profile has to contain data based on SIS data, indicating who is using what.
- From a communication point of view, Apple uses Bluetooth LE (hence the hardware limitation) to initiate the connection between devices and then establish a TCP/IP connection, using SSL certificates for security.

How it works: Shared iPad

- Devices have to be in an ASM account.
- There is a special option you have to enable in DEP profile before activating the device.
- Once the device is activated, it will be prepared for Shared iPad (it will reboot just after enrollment).
- Users can log into the device using a Managed Apple ID from the same ASM account.
- Device space will be shared:
 - iOS
 - Common apps, media
 - For each user, local cache of personal data
- When user logs in / out, data are synchronized via iCloud.

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