



AUTOMATA

Technology Services LLC

macOS Client Management

Mac Hardware Support

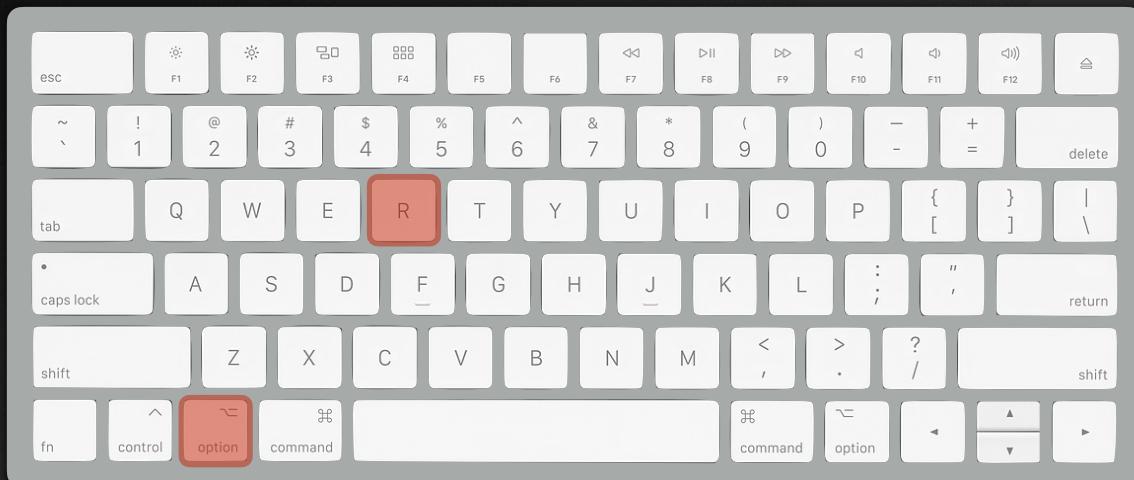
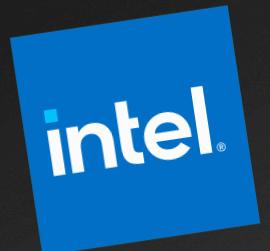
Lecture

Boot Selection



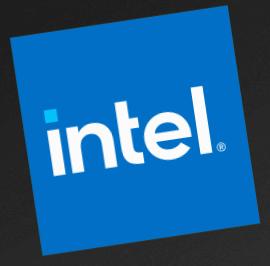
Startup Disk Selection Mode

Recovery Boot Selection



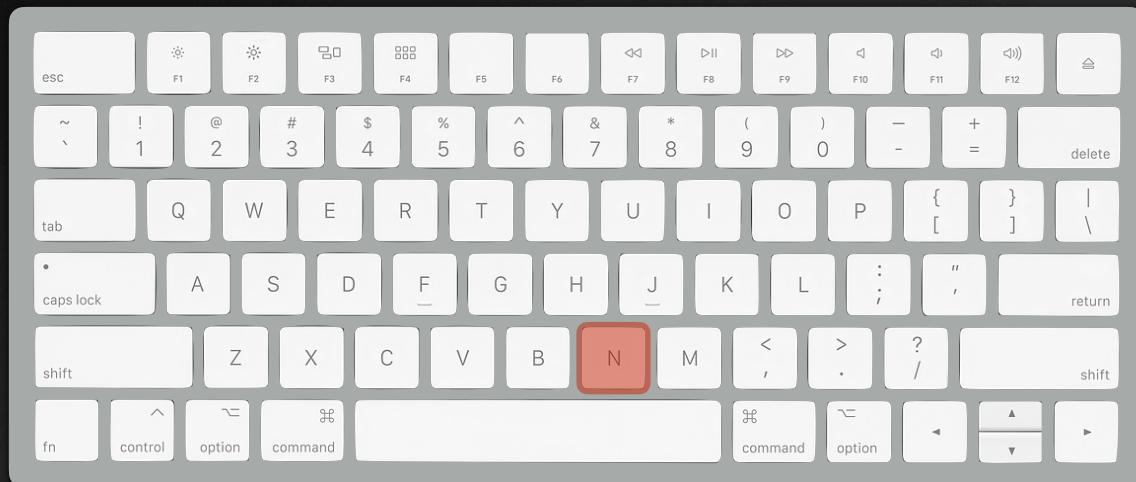
Local Recovery Partition Boot Mode

Apple Internet Recovery



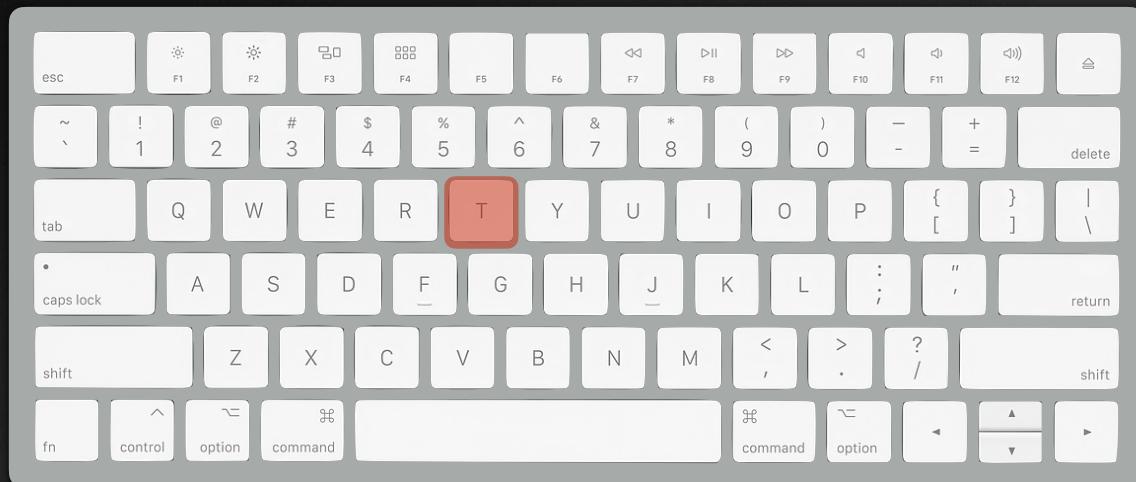
Network Boot Over the Internet (Apple's Server)

NetBoot (Legacy)



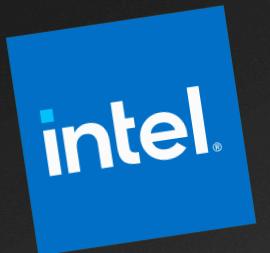
NetBoot - Booting from local Network Server (Deprecated)

Target Disk Mode



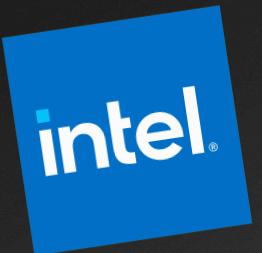
Treats the Mac as a big external hard disk via Firewire or USB.

Reset PRAM



“Zapping” the Parameter RAM (RAM Cache)

Reset SMC



Reset SMC on MacBooks without Removable Battery

Reset SMC



**Remove Battery & Unplug Power.
Hold for 5 Seconds.**

Reset SMC on MacBooks with Removable Battery

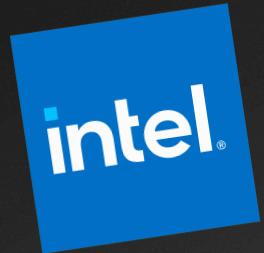
Reset SMC



**Unplug Power.
Hold for 5 Seconds.**

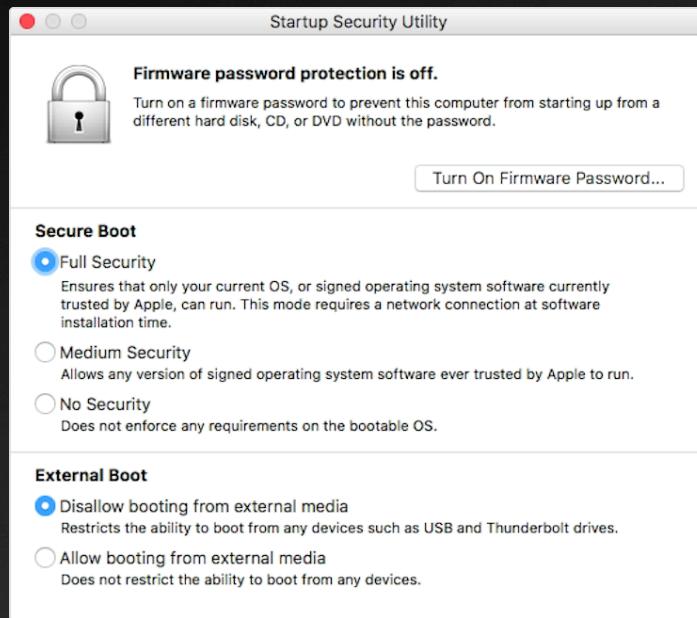
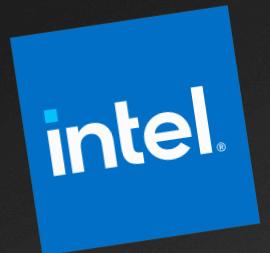
Reset SMC on Macs without Batteries

T2 Security Chip



- Disables NetBoot & Restricts Removable Media Boot.
- Disables (some) 3rd Party Repairs.
- Holds TouchID data (secure enclave).
- Adds hardware level security (audio/camera).

T2 Startup Security



Startup Security Menu - Intel T2 Macs

Options Menu



Power On and Hold Button Until Options Menu Appears.

Access Boot Options on Apple Silicon Macs

macOS Recovery

Practical Exercise

Introduction to macOS

Practical Exercise

Advanced macOS

Practical Exercise

Managing Hidden Files

Practical Exercise

macOS System Settings

Practical Exercise

macOS Utilities

Practical Exercise

Introduction to Terminal

Practical Exercise

macOS Software Update

Practical Exercise

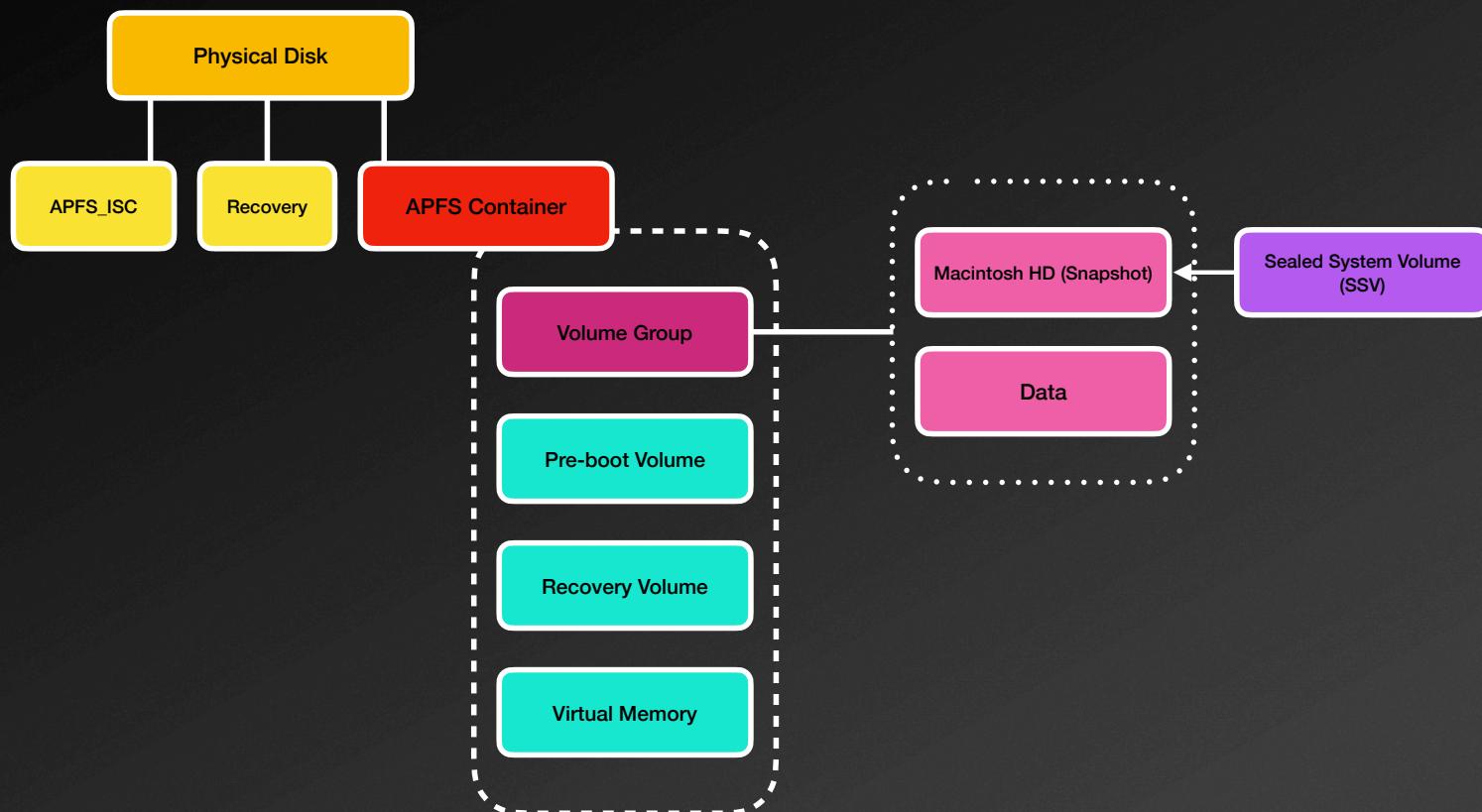
Apple File System (APFS)

Practical Exercise

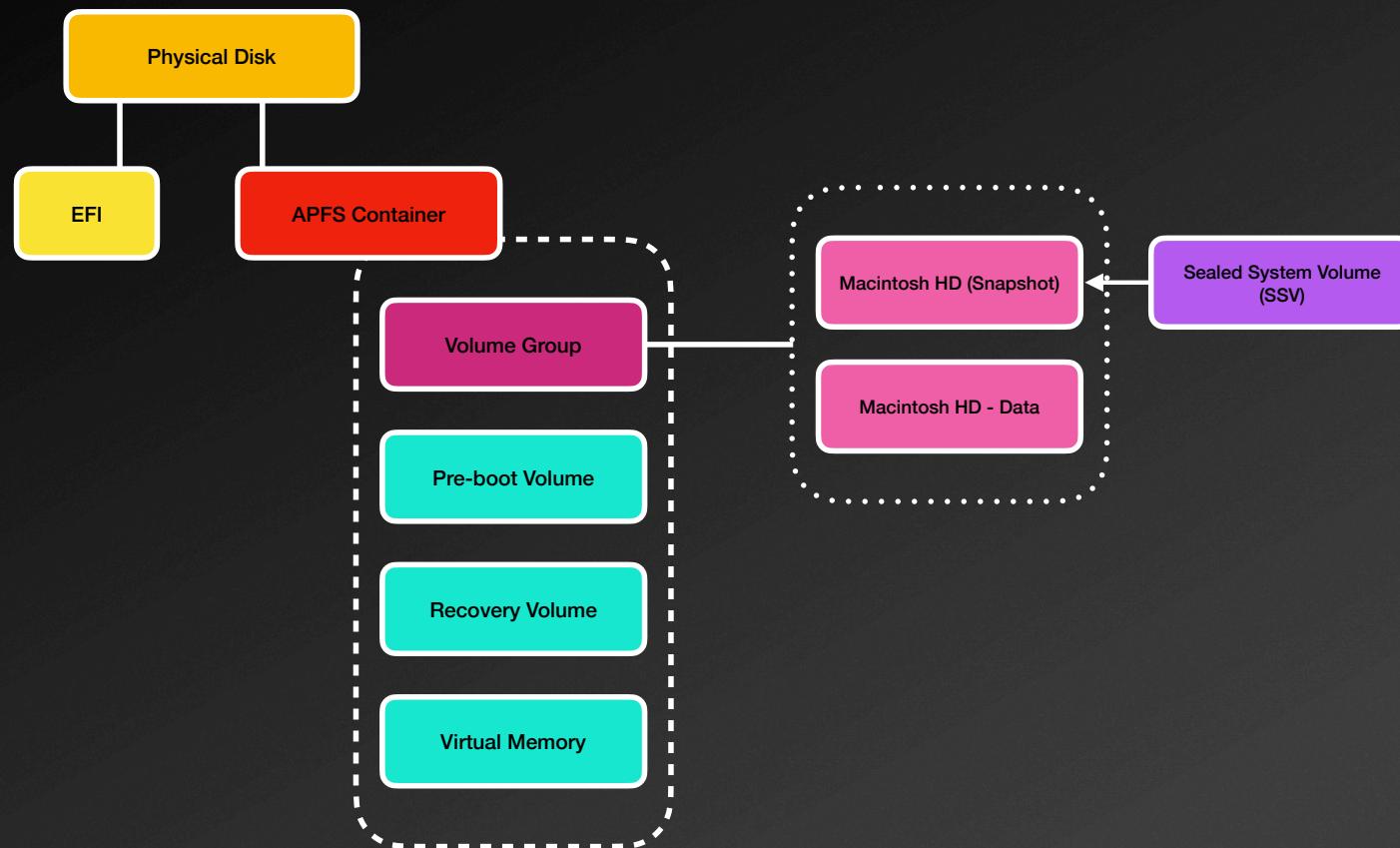
APFS vs HFS+

- HFS+ is the legacy file system for older Macs prior to macOS Sierra (10.12)
- APFS is the standard file system for current versions of macOS. Modern and integrates support for virtual volumes, snapshots, and encryption.
- APFS specifically designed for Solid State Disk style drives.
- Regardless of format, Apple uses GUID for the Partition Map for bootable macOS Media (USB, Internal Disks, etc).

APFS - Apple Silicon



APFS - Intel



Managing Mac Computer Names

Practical Exercise

macOS Erase Assistant

Practical Exercise

Managing User Accounts

Practical Exercise

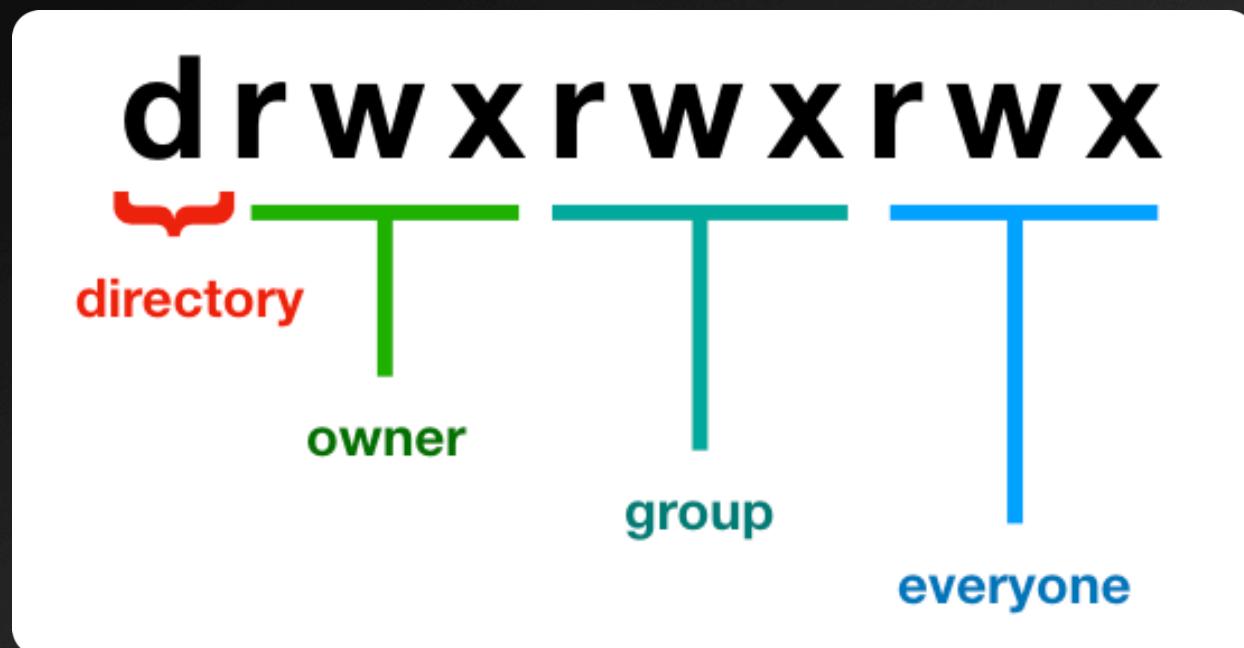
Directory Services Overview

- **Local User Account Scope**
 - Local User Account Resident on Device
- **Network User Account**
 - User Account from a Network-based LDAP like Active Directory
 - Requires Mac being 'bound' to the LDAP and Connected to the Network
- **Kerberos Authentication**
 - Uses Kerberos Extension to Allow Local User Account to Authenticate to Network-based LDAP without Binding.
- **Platform Single-Sign-on**
 - Local User Account that syncs with an Internet-based Identity Provider like Microsoft Azure / Entra ID.

File Security & Permissions

Practical Exercise

POSIX



CLI Permissions Values

Value	Permission	Directory Listing
0	no read, no write, no execute	-
1	no read, no write, execute only	-x
2	no read, write only, no execute	-w-
3	no read, write & execute only	-wx
4	read only, no write, no execute	r-
5	read and execute only, no write	r-x
6	read and write only, no execute	rw-
7	read, write, and execute	rwx

macOS Privacy

Practical Exercise