Mobility and Profiles

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Topics

- Technology overview
- Implementation thoughts
- Apple and 3rd Party Offerings
- Q&A

MACTECH

Mobile Device Management (MDM)

- Inventory
- Configuration (Profiles)
- Security Management (Profiles/Wipes)
- Distribution

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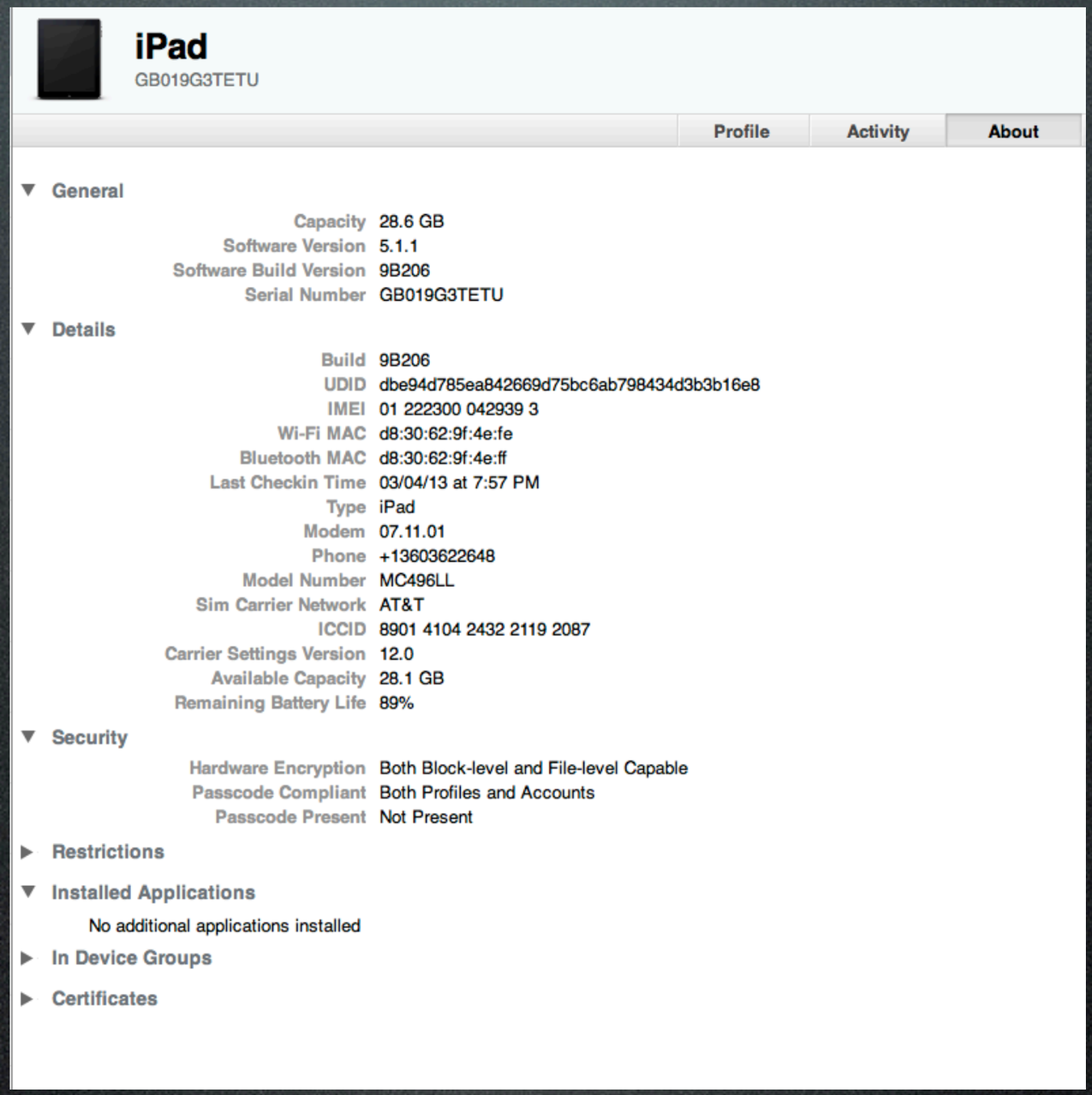
Inventory



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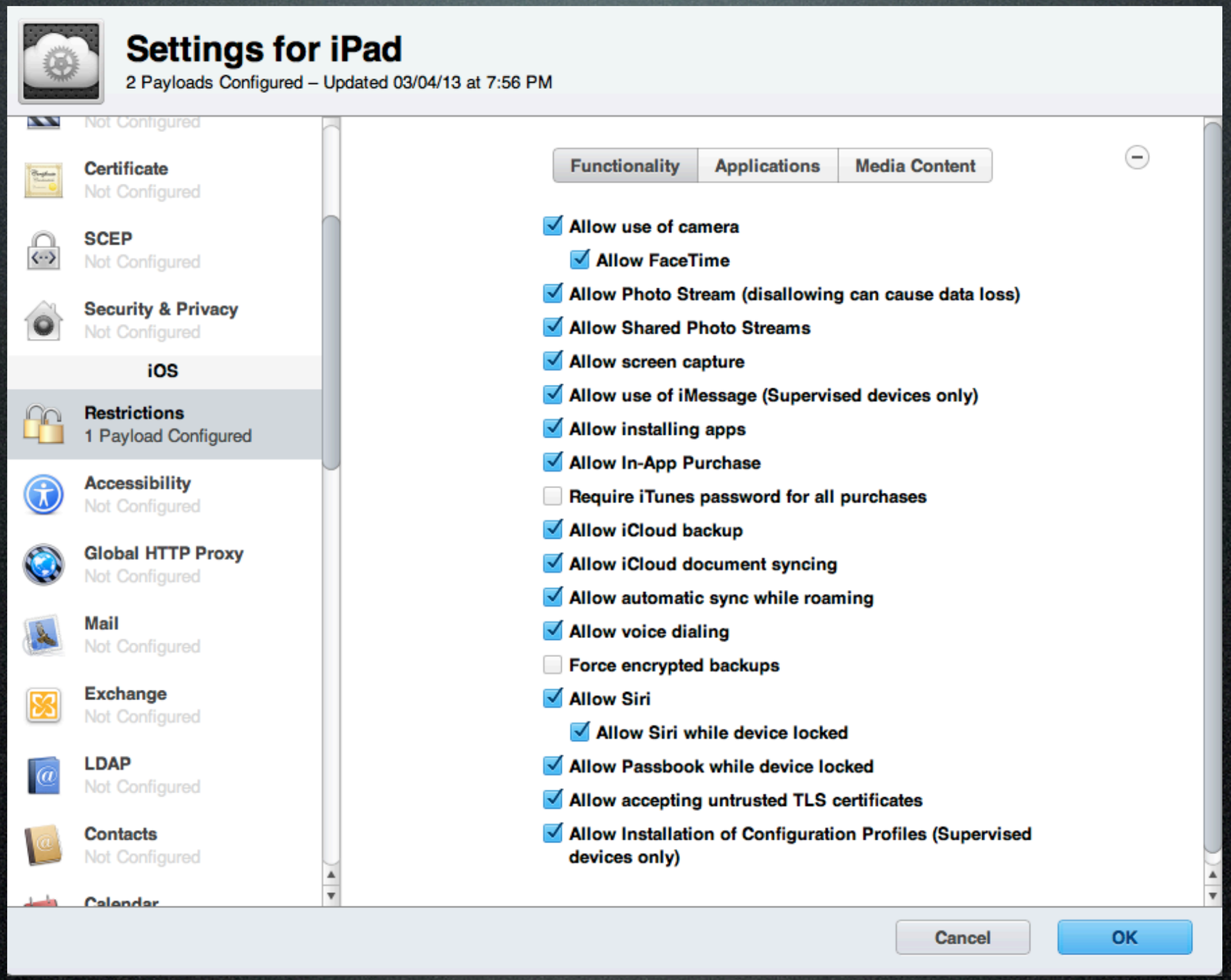
Configuration



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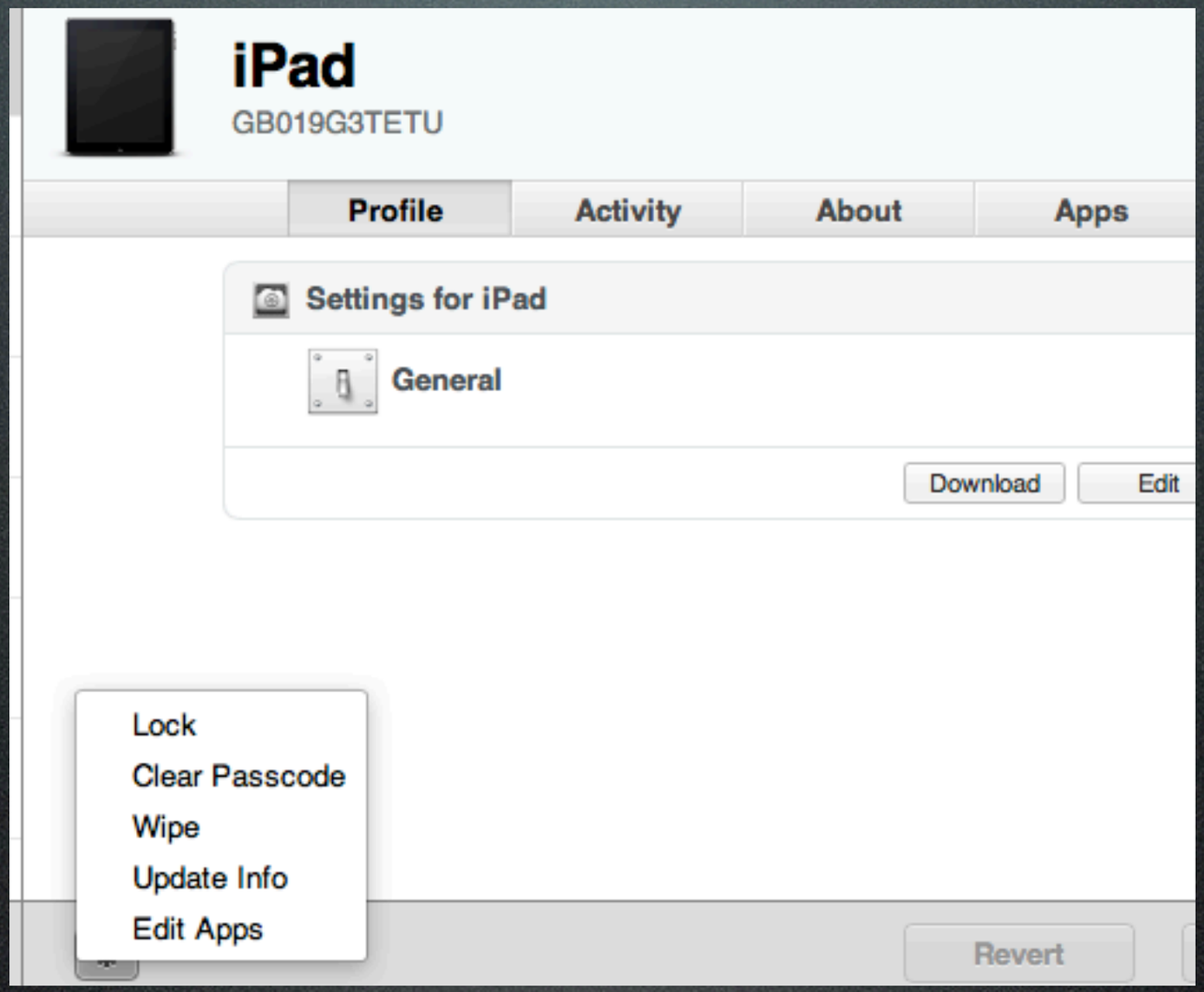
Security Management



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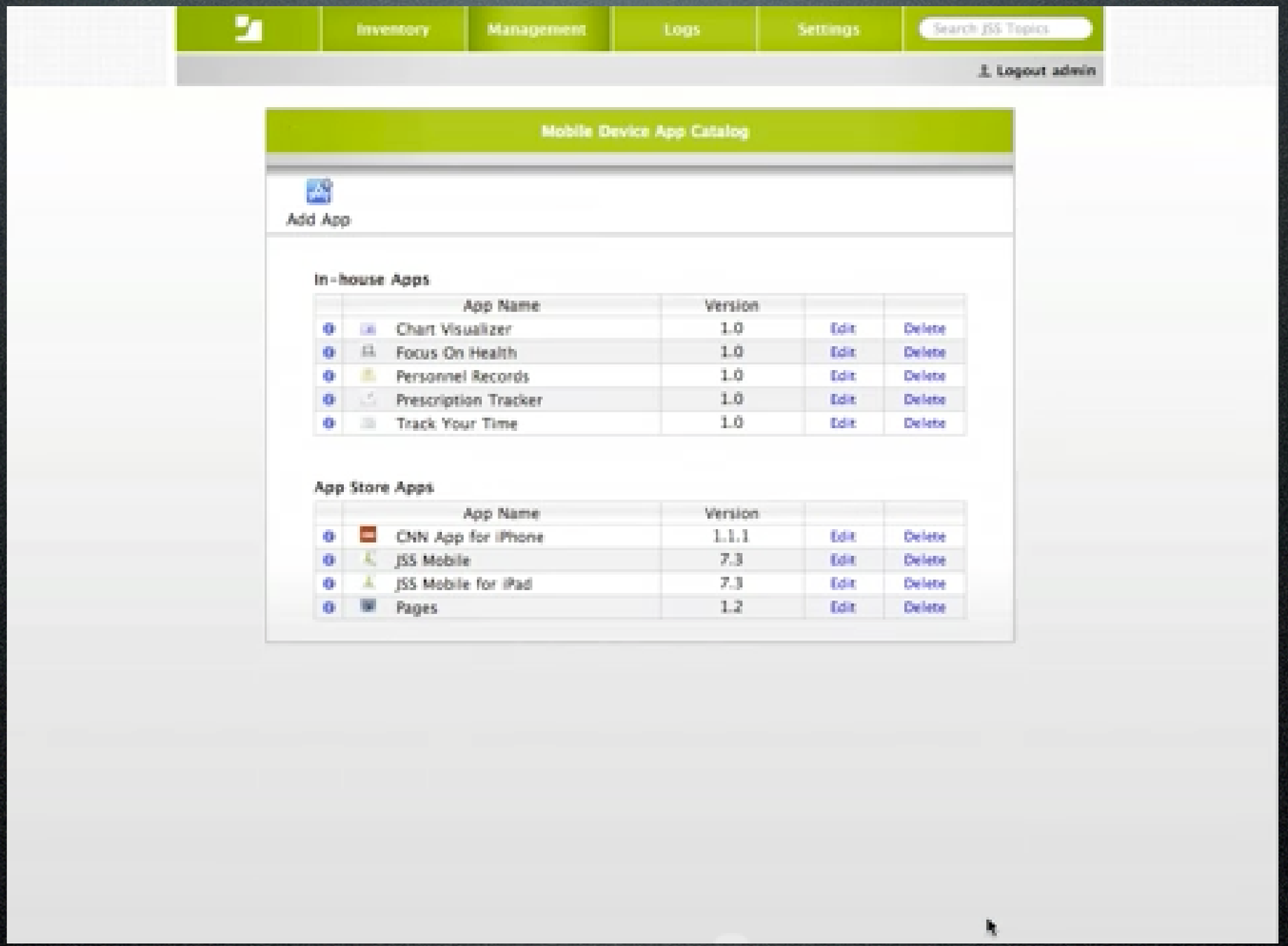
Distribution



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MDM landscape

- Early on it was all about email
  - Blackberry BES
  - Exchange ActiveSync
- Then calendars & contacts
- Now a logical extension of desktop management (w/all the mobile requirements)
- Moving towards isolation of personal data/apps from company data/apps

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BYOD is Here to Stay

- BYOD will be less an option, and more a mandate, for employment —Gartner
- 50% of businesses will demand employees participate in BYOD programs in the near future
- Procure less devices, offer more purchase allowances

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MDM building blocks

- Web Service/Database
- Directory (OD/AD/LDAP)
- Certificates
- Profile Generator for all device functionality
- Connected to Apple Push Notification Service (APNs) to notify devices of updates
- Apple Volume Purchase Program (VPP)

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Apple's solutions

- iCloud...Not for Business
- Apple Configurator
- OS X Profile Manager (10.8)

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Third Party MDM solutions

- JAMF Casper Suite, Absolute Manage, Airwatch, Maas360, MobileIron, and a cast of many more

  www.enterpriseios.com/wiki/Comparison_MDM_Providers

- Apple or Third Party MDM?
  - Non iOS Devices
  - Features
    - Granular control
    - OTA Application Deployment
    - GeoFencing!!!
  - Money

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Yours vs. Hosted vs. Cloud

- Building, maintaining, replacing infrastructure
- Solution mobility; data mobility
- Total Cost of Ownership (remember eng./adm!!!)
  - Yours: server hardware + server software +++
  - Hosted Casper / robotcloud.net
    = $5/month/device
  - Cloud-based Maas360

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Business drives implementation

- Who owns the equipment?
- BYOD (Bring your own device)?
- Who controls the equipment?

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Deployment

- Devices already out there
- Mass Deployment

- Initial setup Apple Configurator

- Directory integration

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iCloud MDM

- Inventory - each device!
- Configuration via iTunes - each device!
  - also does backups!
- Security Management
  - Find My iThing
- Distribution - App Store
  - Provide redemption codes via email
  - User uses personal Apple ID!

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Apple Configurator

- Everything you wanted in a MDM, except the M
- Prepare mode - imaging
- Supervise mode - imaging + app management
  - The ONLY solution for app distribution where you can revoke applications and redemption code can be re-used
- Assign

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MDM vs Configurator

www.enterpriseios.com

	MDM	Configurator (unsupervised)	Configurator (supervised)
Installation	web page or (sometimes) app	USB	USB
Delivery of Updates	OTA Push	USB from original computer	USB from original computer
Multi-user devices?	No	No	Yes, with short backup-and-restore cycle
Set up mobileconfig restrictions, web clips, email, VPN, etc.?	Yes, with push updates and changes	Yes, only during initial config	Yes, only during initial config
Update iOS	No	Yes	Yes
Set Lock Screen Image	No	Yes, with optional device name	Yes, with device and/or user name and/or user photo
Set Wallpaper	No	Yes	Yes
Install free apps	Yes	Yes	Yes
Owner (Apple ID) of free apps	End User	Installer	Installer
Install Paid Apps with VPP Codes	Yes	Yes	Yes
Owner of Paid Apps	End-User	?	Device
Revokable and Reuse VPP Codes?	No	Yes (if device erased by ACfg)	Yes
Passwords entries needed for N app installs on a single device?	N (most implementations) or 1 (some implementations)	0	0
Can push documents?	Not through MDM (some have companion app)	Yes, as part of initial image	Yes, per-user docs backed up and saved
Query installed apps	Yes	No	No
Remote Wipe	Yes	No	No
Ideal for	BYOD and/or widely-dispersed users	Initial configuration and deployments, especially when paired with MDM	Classrooms, loaner units, trainings, kiosks

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OS X Server Profile Manager

- Everything you wanted in an MDM, except app management and platform agnosticism
- Reference for iOS profiles
- Automatically sets up Apple Push Notification Service (APNs), and certs/ profiles for device enrollment
- $19! (+Server +Admin +access)

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Maas360

- An examle of a 3rd Party MDM

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Issues

- Apple ID
  - From MacWorld - "...An Apple ID is for an individual person, and Apple has no concept of a corporate ID. You don't get around that, you surrender to it."
  - You MUST have a strategy for managing
- Apple Push Notification Service integration

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More Considerations

- Role-based Apple IDs (Purchases, Certs, Admin)
- Apple Volume Purchasing Program (VPP)
- Certificates - Used everywhere to establish trust, and encrypt/decrypt information
  - hard to generate, hard to import, hard to export, and they expire (Much easier than it used to be!)
- Wiping can destroy personal data

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References & Acknowledgements

- http://www.enterpriseios.com
- http://www.apple.com/ipad/business/it-center/
- http://www.jamfsoftware.com/products/casper-suite
- http://robotcloud.net
- Kirk Godtfredsen

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Apple Configurator

Prepare Supervise Assign

Prepare Devices

Prep your iOS devices for mass deployment.

Configure your organization's devices. Quickly update them to the latest iOS version, install profiles, install free and volume purchased apps, or restore a device backup. Learn more

Supervise Devices

Enforce a standard configuration on your iOS devices.

Maintain control over groups of devices that share common apps, settings, and profiles. Automatically restore devices to the specified configuration when reconnected. Learn more

Assign Devices

Assign iOS devices to users in your organization.

Create and manage users and groups. Assign supervised devices to individual users, back up and restore users' content and settings, and distribute and retrieve users' documents. Learn more

Welcome to Apple Configurator

iOS device configuration, supervision and assignment made easy.

Start Preparing Devices

MACTECH

Apple Configurator
Prepare
Supervise
Assign
Settings
Apps
Name:
No Change
Number sequentially starting at 1
Supervision:
OFF
Supervised devices can only be configured by Apple Configurator on this Mac.
iOS:
No Change
Erase before installing
Restore:
Don't Restore Backup
Profiles:
No Profiles
Click + to add a profile
Prepare
AT&T
16:53
Photos
WSDOT...Bl
Dropbox
1Password
SoundHound
Yelp
Fruit Ninja
Authenticator
KEXP Radio
NetNewsWire
D40 Guide
Words
Truphone
Mail
Phone
Music
Safari

MACTECH

Apple Configurator
Prepare
Supervise
Assign
Settings
Apps
Name:
Kirk's iPhone
Number sequentially starting at 1
Supervision:
OFF
Supervised devices can only be configured by Apple Configurator on this Mac.
iOS:
No Change
Erase before installing
Restore:
Don't Restore Backup
Profiles:
ml.kkheconsulting.com enr...
Trust Profile for kkhe consu...
Prepare
AT&T
16:54
Photos
Dropbox
1Password
SoundHound
Yelp
Fruit Ninja
Authenticator
KEXP Radio
NetNewsWire
D40 Guide
Words
Truphone
Mail
Phone
Music
Safari

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Apple Configurator
Prepare
Supervise
Assign
Settings
Apps
MyMadrid
22.9 MB, version 4.0.00...
Sports
Free
Prepare
AT&T
16:54
Photos
WSDOT...BI
Dropbox
1Password
SoundHound
Yelp
Fruit Ninja
Authenticator
KEXP Radio
NetNewsWire
D40 Guide
Words
Truphone
Mail
Phone
Music
Safari

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Apple Configurator

Prepare Supervise Assign

Settings Apps

Name: Kirk's iPhone

Number sequentially starting at 1

Supervision: OFF

Supervised devices can only be configured by Apple Configurator on this Mac.

iOS: No Change

Erase before installing

Restore: Don't Restore Backup

Profiles:

ml.kkheconsulting.com enr...

Trust Profile for kkhe consu...

All connected devices will be updated

Kirk's iPhone
Tap device to install profile

0 of 1 device prepared

Stop

AT&T 16:55

Cancel Install Profile

Trust Profile for kkh...

Not Verified Install

Description Configures your device to trust the Profile Manager server.

Signed Apple Configurator (B8:8D:12:09:B4:2A)

Received Mar 5, 2013

Contains Certificate

More Details

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Apple Configurator
Prepare
Supervise
Assign
Settings
Apps
Name:
Kirk's iPhone
Number sequentially starting at 1
Supervision:
OFF
Supervised devices can only be configured by Apple Configurator on this Mac.
iOS:
No Change
Erase before installing
Restore:
Don't Restore Backup
Profiles:
ml.kkheconsulting.com enr...
Trust Profile for kkhe consu...
All connected devices will be updated
Kirk's iPhone
Tap device to install profile
0 of 1 device prepared
Stop
AT&T
16:55
Cancel
Install Profile
ml.kkheconsulting.c...
kkhe consulting
Not Verified
Install
Description
Enrolls your devices with the management server.
Signed
Apple Configurator (B8:8D:12:09:B4:2A)
Received
Mar 5, 2013
Contains
Device enrollment challenge
More Details

MACTECH

Apple Configurator
Prepare
Supervise
Assign
Settings
Apps
Name:
Kirk's iPhone
Number sequentially starting at 1
Supervision:
OFF
Supervised devices can only be configured by Apple Configurator on this Mac.
iOS:
No Change
Erase before installing
Restore:
Don't Restore Backup
Profiles:
ml.kkheconsulting.com enr...
Trust Profile for kkhe consu...
All connected devices will be updated
Kirk's iPhone
Tap device to install profile
0 of 1 device prepared
Stop
AT&T
16:55
Cancel
Warning
Install
Mobile Device Management
Installing this profile will allow the administrator at "https://ml.kkheconsulting.com/devicemanagement/api/device/connect" to remotely manage your iPhone.
The administrator may collect personal data, add/remove accounts and restrictions, list, install, and manage apps, and remotely erase data on your iPhone.

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Apple Configurator

Prepare Supervise Assign

Settings Apps

Name: Kirk's iPhone

Number sequentially starting at 1

Supervision: OFF

Supervised devices can only be configured by Apple Configurator on this Mac.

iOS: No Change

Erase before installing

Restore: Don't Restore Backup

Profiles:

ml.kkheconsulting.com enr...

Trust Profile for kkhe consu...

All connected devices will be updated

Kirk's iPhone
32 GB iPhone

1 of 1 device prepared

Stop

AT&T 16:56

Profile Installed Done

Remote Management
kkhe consulting

Verified

Description Allows the server to manage your device.

Signed ml.kkheconsulting.com Code Signing Certificate

Received Mar 5, 2013

Contains SCEP enrollment request
Mobile Device Management

More Details

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Profile Manager: Devices: Kirk's iPhone

https ml.kkheconsulting.com/profilemanager/#/device/3/

Reader

Profile Manager

Bookmarks Bar

Profile Manager: Devices: Kirk's iPhone

Profile Manager

Search Devices

lad

LIBRARY

Devices

Device Groups

Users

Groups

ACTIVITY

Active Tasks

Completed Tasks

ENROLLMENT PROFILES

ml.kkheconsulting.com e...

Kirk's iPhone
C38GMEUHDTD5

iPad
GB019G3TETU

ml
ladmin

Kirk's iPhone

C38GMEUHDTD5

Profile | Activity | About | Apps

Settings for Kirk's iPhone

General

Download

Revert

AT&T 16:56

Profile Installed

Done

Remote Management

kkhe consulting

Verified

Description Allows the server to manage your device.

Signed ml.kkheconsulting.com Code Signing Certificate

Received Mar 5, 2013

Contains SCEP enrollment request
Mobile Device Management

More Details

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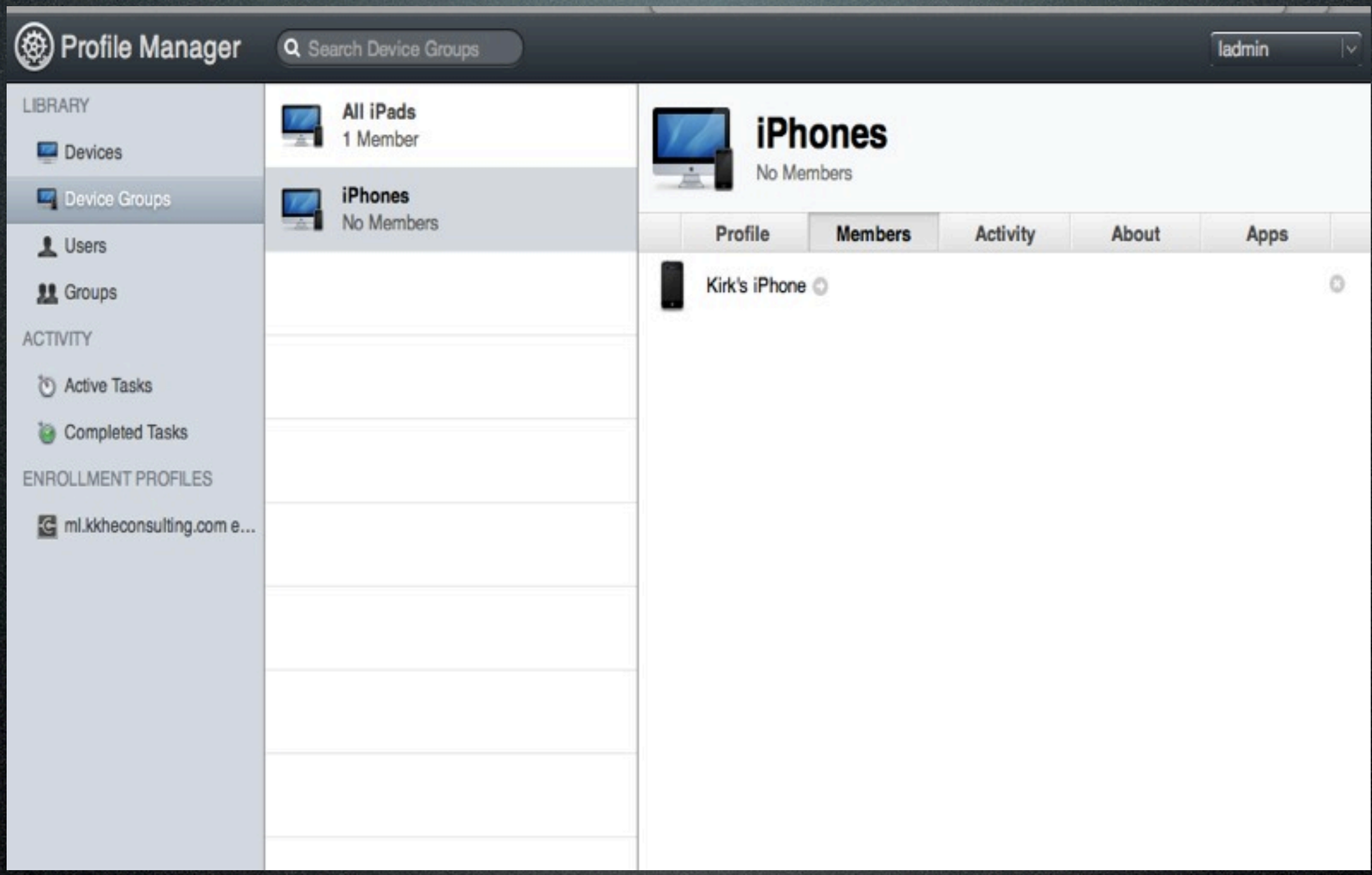
Profile Manager
Search Device Groups
ladmin
LIBRARY
Devices
Device Groups
Users
Groups
ACTIVITY
Active Tasks
Completed Tasks
ENROLLMENT PROFILES
ml.kkheconsulting.com e...
All iPads
1 Member
iPhones
No Members
iPhones
No Members
Profile
Members
Activity
About
Apps
Kirk's iPhone

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Settings for iPhones

2 Payloads Configured – Updated 03/05/13 at 4:41 PM

OS X and iOS

General
1 Payload Configured

Passcode
1 Payload Configured

Network
Not Configured

VPN
Not Configured

Certificate
Not Configured

SCEP
Not Configured

Security & Privacy
Not Configured

iOS

Restrictions
Not Configured

Accessibility
Not Configured

Global HTTP Proxy

Allow simple value
Permit the use of repeating, ascending, and descending character sequences

Require alphanumeric value
Requires passcode to contain at least one letter

4 **Minimum passcode length**
Minimum number of passcode characters allowed

-- **Minimum number of complex characters**
Minimum number of non-alphanumeric characters allowed

730 **Maximum passcode age**
Days (1-730) after which the passcode must be changed

-- **Maximum Auto-Lock**
Device automatically locks when minutes elapse

Passcode history (iOS only)
Number (1-50) of unique passcodes before reuse

-- **Maximum grace period for device lock (iOS only)**
Maximum amount of time the device can be locked without prompting for passcode on unlock

-- **Maximum number of failed attempts**
Number of passcode entry attempts allowed before all data on device will be erased

Cancel OK

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Profile Manager

Search Device Groups

ladmin

LIBRARY

Devices

Device Groups

Users

Groups

ACTIVITY

Active Tasks

Completed Tasks

ENROLLMENT PROFILES

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All iPads
1 Member

iPhones
No Members

iPhones

No Members

Profile | Members | Activity | About | Apps

Settings for iPhones

General | Passcode

Download | Edit

Save Changes?

This might cause settings to be pushed to devices.

Cancel | Save

Revert | Save...

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Profile Manager

Search Completed Tasks

ladmin

LIBRARY
- Devices
- Device Groups
- Users
- Groups

ACTIVITY
- Active Tasks
- Completed Tasks

ENROLLMENT PROFILES
- ml.kkheconsulting.com e...

- **Update Info** 1 succeeded
- **Push Settings: Settings for iP...** 1 succeeded
- **Update Info: Kirk's iPhone** Succeeded
- **Update Info: Kirk's iPhone** Succeeded
- **Update Info: Kirk's iPhone** Succeeded
- **Update Info: Kirk's iPhone** Succeeded
- **Push Settings: Settings for iP...** 1 succeeded
- **Update Info** 1 succeeded
- **Push Settings** 1 succeeded
- **Push Settings** 1 succeeded
- **Push Settings** 1 succeeded
- **Push Settings** 1 succeeded

Update Info

1 succeeded

Devices		
Kirk's iPhone	Succeeded	03/05/13 at 4:59 PM

AT&T 17:00

General

Profiles

Configuration Profiles

- **TestFlight WebClip** testflightapp.com
- **Trust Profile for kkhe co...**
- **Remote Management** kkhe consulting
- **Settings for iPhones** kkhe consulting

Provisioning Profiles

- **Team Provisioning Profile** Expires on Feb 27, 2014

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Profile Manager

Search Completed Tasks

ladmin

LIBRARY
- Devices
- Device Groups
- Users
- Groups

ACTIVITY
- Active Tasks
- Completed Tasks

ENROLLMENT PROFILES
- ml.kkheconsulting.com e...

Update Info
1 succeeded

Push Settings: Settings for iP...
1 succeeded

Update Info: Kirk's iPhone
Succeeded

Update Info: Kirk's iPhone
Succeeded

Update Info: Kirk's iPhone
Succeeded

Update Info: Kirk's iPhone
Succeeded

Push Settings: Settings for iP...
1 succeeded

Update Info
1 succeeded

Push Settings
1 succeeded

Push Settings
1 succeeded

Push Settings
1 succeeded

Push Settings
1 succeeded

Update Info
1 succeeded

Devices

Kirk's iPhone	Succeeded	03/05/13 at 4:59 PM

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Demo

- Apple Configurator
  - Backup
  - Name Device
  - Install Profiles for auto MDM enrollment

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