Apple K-12 iOS Management

Fort Thomas Independent Schools
Andrew Martin - District Technician
Matthew Winkler - Network Administrator
Schedule...

Thursday, March 14th 2:30pm to Saturday, March 16th 11:59am

Breaks...
Breakfast, Lunch, Dinner
A little time for Sleep
Restroom
K12 Apple MDM

iOS Management

Next Steps
- Network Settings
- Hardware
- Software
- Apple ID
- Air Access
Objective...

What are you trying to accomplish?

Deploy iPads that are designed for personal use to a variety of users with a variety of needs.
Goals

- Keep Cost EXTREMELY Low - FREE is always BEST
- Allow as much management as possible
- Quick Setup of New Devices - Out the door quickly
- Low maintenance
- App Management
- Limited technology involvement past deployment
Hurdles...Problems...

-Age Requirement for Apple ID's (minimum 13)
-Ownership of Apps - District Content
-Proxy Issues
-Off-site management
-Apple configurator
-iTunes syncing
-Mass Creation - Apple ID's and AD accounts
iCloud

- iCloud is for PERSONAL USE
- iCloud is not designed to meet institutional deployment needs
iCloud Legalese

- "The Service is available to individuals aged 13 years or older."
- "The Find My iPhone and Find My Mac features are intended for your personal use only."
- "You further acknowledge and agree that the Service is designed and intended for personal use on an individual basis and you should not share your Account and/or password details with another individual."
Solutions

- iOS 6 - September 19th, 2012
- OS 10.8.2
- Profile Manager 2
- Apple Configurator 1.2.1
- VPP
Next Steps

Network Settings
Hardware
Software
Apple IDs
AD Accounts
The GUTS...

What you gotta have to make it work...
Network Setup for Server

- Static IP - Web Server Range - Avoid that Proxy!
- External DNS Entry - External ONLY!
- Ports - 2195, 2196, 5223, 80, 443, 1640
- Single Apple ID
# MDM Protocols and Ports (HT5302)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Protocol</th>
<th>Port</th>
<th>Source</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile access</td>
<td>TCP</td>
<td>443</td>
<td>Client</td>
<td>MDM</td>
</tr>
<tr>
<td>Certificate access</td>
<td>TCP</td>
<td>1640</td>
<td>Client</td>
<td>MDM</td>
</tr>
<tr>
<td>Inbound notifications</td>
<td>TCP</td>
<td>5223</td>
<td>Client</td>
<td>17/8 network</td>
</tr>
<tr>
<td>APNS</td>
<td>TCP</td>
<td>2195</td>
<td>MDM</td>
<td>17/8 network</td>
</tr>
<tr>
<td>APNS feedback</td>
<td>TCP</td>
<td>2196</td>
<td>MDM</td>
<td>17/8 network</td>
</tr>
</tbody>
</table>
Network Setup for iPads

- Transparent Proxy
- Bonjour Traffic
- Same Subnet or Multicast
- Single Apple ID
- Appropriate Wireless Coverage
- New DHCP Scope (Optional)
- Bandwidth Planning (iOS updates, large apps)
MDM Service

Apple Services 17/8

APNS (TCP 2195)
APNS Feedback Service (TCP 2196)

Profiles (TCP 443)
Certificates (TCP 1640)

Notifications (TCP 5223)

Arrow indicates direction of initial connection. All channels are bidirectional.
Hardware

- Mac Mini
- MacBook
- iPads (at least iPad 2)
Software

- Mountain Lion OS X ($20 upgrade if needed)
- Mac OS X Server ($20)
- Apple Configurator (Free)
- iOS 6 (Free)
Apple ID’s

- 4 are needed - Master, PM, PF, EU
  - Master
    - Setup Server, Download Software, Push Notifications
  - Program Manager (VPP)
    - Setup the VPP program, Buys Vouchers
  - Program Facilitator (VPP)
    - Purchases the Apps
  - End User (VPP)
    - No Credit Card
    - Downloads Apps
    - Used on each device
PlayGround

Show it to me in ACTION!
Demo Topics...

Setup Configurator
- Supervise or Unsupervise
- Configure device for Backup
- Login to Profile Manager for Trust and Auto Enrollment
- Configure Trust with password and wifi

Enroll Devices

Profile Manager
- Create Schools and Groups
- Add devices to groups (looks like AD)

iTunes
- Download Apps
- Push Apps
- Authenticate App
Questions...

Ask Andrew, Matthew is on break...

16 Districts Assisted

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Thanks for Coming!