Mobile Device Management and the Meraki Solution

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Has your school purchased any iPads for classroom use, or are you considering this for next school year? One major concern of using these and other mobile devices in the classroom has been how to manage them (know where they are, install/remove Apps, control access to Apps, enforce security etc.), For the first year of the iPad's life, this was a question that really did not have an answer. But Apple has since provided the necessary infrastructure to allow third party companies to provide solutions to this problem. Now, there are a host of companies providing Mobile Device Management (MDM) solutions, with some specializing in the education market. One company is now offering their MDM solution for **free.**

Meraki was started by two MIT students with funding by Google. In 2009 with their Enterprise Cloud Controller, they were the first to provide a totally Internet- based management solution for a wireless network. So instead of having complicated and expensive equipment on your premises, the management of the wireless access points is handled by their servers somewhere out in the 'cloud'. This means that you can manage your network from any Internet connected device, and system updates are all done automatically. Another key feature of their offering was their mesh technology. Based on the early MIT Roofnet project, the Meraki mesh feature allows you to deploy their wireless access points to locations where you do not have Ethernet wiring. As long as the access points are within range of others, they will serve clients, transmitting the signal back to a device that is connected to your wired network. This allows you to deploy devices to locations otherwise unreachable, or to deploy a network faster, allowing you to provide the hard wiring later. In 2010, Meraki introduced the first of their cloud controller based branch office router later to be followed by models designed for larger campus-wide installations. And now in 2012, they have released a line of cloud controller-based Ethernet switches. Each of these devices provides the same easy-to-use interface for management. For any school looking to provide wireless network capability, or now even to deploy or replace your wired network, I would encourage you to consider Meraki as a potential vendor. Canadian University College and Parkview Adventist Academy have been using their Wireless Access Points since 2009.

Now, specifically, to their MDM solution known as Systems Manager. If you do not already have any Meraki equipment, then simply create an account at www.meraki.com. As mentioned, they are offering this solution free to any user. The only difference between the free accounts and paying customers is that the free accounts will only be supported by e-mail, as opposed to phone support for the paying customers. Once an account is created, go to the "Create a new Systems Manager network" option on the pull-down menu at top, and give a name to your new network. Now, the customized installers will be generated and will show as available when ready.

As with most other MDM solution, you must register devices with your network. For iOS devices (iPads, iPods, iPhones) there is no client or App to install; simply point the device's browser to m.meraki.com and input the unique Network ID that is displayed on your management interface. They also provide an option for you to send this link to users by email or SMS. For Windows and Mac OSX computers, a downloadable client is provided. You can force installation of this through an Active Directory GPO or whatever usual method you use for application deployment Also, a tool for scanning your network, finding clients and pushing out the agent over the network is included. Management for Android devices is in development.

Once registered, your device will show up in the cloud controller, and you are ready to start trying out the options available.

Here is a listing of what you can currently do with managing iOS devices.

- Set policies to enforce use of passcodes, and set their complexity.
- Clear the passcode
- Lock or erase the device. Good for a device reported lost or stolen.
- Configure devices into groups.
- Show the location of the device.
- Display the installed Apps.
- Enforce restrictions such as: Allow installing Apps, Allow screen capture, Allow in-app purchases, Allow multiplayer gaming, Use of Youtube, Use of ITunes Store, Use of Safari, Block popups, Allow iCloud services, Allow explicit music and podcasts. (not an exclusive list)
- Set Autolock, Grace periods, and number of failed attempts.
- Create and deploy WebClips. These are basically web site shortcuts that display as an App on the device, great for lesson plans.
- Select Apps from the Apple App store for installation on a device. They are working on having this feature integrated with Apple's Volume Purchase Program (which is not yet available in Canada) and that will add great functionality when available. For now, you can use this with any free App from the store.

The settings also allow you to set the device so that when it is removed from that profile or from your management, the installed apps and settings will be removed. This allows you to use a device for multiple purposes, changing its appearance and function by switching the profile assigned to it. So if you had a set of devices shared in a school, you could have an Elementary profile, and a Secondary profile; by changing the profiles, you could automatically change the personality of the device for the appropriate audience.

Here are some additional things you can report/manage on PC and OSX computers:

- Report on Security status showing anti-virus, anti-spyware and firewall software compliance.
- Show the current Logged-in user.
- Show processor, memory, bandwidth and disk space usage.
- Show installed software, active TCP connections, routing table, current processes, including the ability to kill a process.
- Take Remote control (or remote view) of the client's desktop (great for support providers).
- Show a screen capture of the client.
- Send a message to display on the desktop (could be used for emergency broadcasting).
- Install an MSI package on a Windows machine, or a PGK package on a Mac OS Machine.
- Run a command line command on any PC or OSX device.

Alerts can be set to send an email message when software is installed on a device, or when a device is off-line for a certain period. More alerts are being added all the time.

There are other solutions out there that have more developed feature sets at present, but none that I know of that are free. Meraki is constantly adding new features and one nice thing about the cloud controller model

is that these new features just automatically ‘show up’ without you having to do any upgrades or refresh your devices. And when you decide to use their wireless access points or ethernet switches, you will gain a whole lot more control and management over your network like Network Access Control, content filtering, application and bandwidth control and securing access to your network.

Resources:

Meraki’s Systems Manager information page: https://www.meraki.com/products/systems-manager/