

# Central Macintosh and iOS Device Management Service

**Service:** OneIT End User Support: Device Management  
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**TeamDynamix Project Number:** TBD

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## Executive Summary

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This document outlines:

1. The Central Macintosh and iOS Device Management Service offered to campus.
2. The service and tools the Device Management Team (ECM) provide during each phase of lifecycle.
3. Supported software
4. Supported operating systems

The device lifecycle as defined at the University of Iowa is broken down into the following phases. Planning, Procurement, Staging, Device Enters Service, Device in Service and End of Life.

In the **Planning Phase** ECM will sponsor the Campus Computer Bid Team which is tasked with evaluating current standards, making recommendations for new standards, and getting the best standard hardware at the best price for the three regent Universities.

In the **Procurement Phase** ECM will prepare the Device Management Infrastructure for the newly purchased device(s). This will be accomplished by enrolling the Apple hardware into the Apple Device Enrollment Program (DEP) and taking ownership of Apple iLife licenses and associating them with each Organizations/Departments (Org/Dept) Volume Purchase Program (VPP) Account.

In the **Staging Phase** ECM will maintain the Device Management Imaging infrastructure to allow the Desktop Support Consultants the ability to easily image and or reimage a device.

In the **Device Enter Service Phase** ECM will maintain the Casper Self Service tool and deploy VPP Applications upon request from the Desktop Support Consultant.

In the **Device in Service Phase** ECM will manage the software and OS updates on all managed devices, maintain the Casper Self Service Tool for Desktop Support Consultants and End Users, deploy new VPP application and software to devices/end users upon request, and maintain the end user experience through Policies and Configuration Profiles.

In the **End of Life Phase** ECM will remove object from AD and Casper upon request from the Desktop Support Consultant team

As part of the service, core software as well as operating systems will be supported by the team and provided to campus. Documentation outlining processes for minor and major software updates will be developed and made available to interested individuals.

Tweaks will be made to the service based on feedback from our campus partners.

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## Planning

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In the Planning lifecycle stage ECM will sponsor the Campus Computer Bid Team. This team is tasked with evaluating current standards, making recommendations for new standards, and working with UIHC, ISU, UNI, UI Purchasing, and our Vendors to get the best standard hardware at the best price for the three regent Universities annually.

### Campus Computer Bid Team Membership:

- UIHC Representative
  - ISU Representative
  - UNI Representative
  - UI Purchasing Agent
  - ECM Lead (Chair)
  - Desktop Support Consultant Lead
  - Desktop Support Consultant
  - Learning Spaces Staff Member
  - 5 Collegiate and/or Administrative IT Stakeholders (rotate every 3 years)
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## Procurement

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In the Procurement lifecycle stage ECM will prepare the Device Management Infrastructure for the newly purchased device(s) by enrolling the Apple hardware into the Apple Device Enrollment Program (DEP) and taking ownership of Apple iLife licenses and associating them with each Organization's/Department's (Org/Dept) Volume Purchase Program (VPP) Account for later delivery to the devices on an as needed basis.

### Device Enrollment Program

To enroll a device ECM will need to receive the Apple Sales Order number and the Org/Dept name to successfully add it to that Org/Dept DEP Account.

### iLife Licenses

To claim iLife licenses ECM will need a copy of the sales receipt or invoice of the devices purchased and the Org/Dept name to submit on a web form to associate the licenses with the Org/Dept VPP Account.

### Action Items:

- Create a workflow that automates the delivery of the Apple Sales Order Number and copy of the sales receipt or invoice to ECM.

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## Staging

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In the Staging lifecycle stage ECM will maintain the Device Management Imaging infrastructure to allow the Desktop Support Consultants the ability to easily image and or reimage a device. The Device Management imaging infrastructure includes the following: Existing NetBoot Servers on campus, Images, and JAMF Casper management infrastructure.

### Existing NetBoot Servers

Some Org/Depts have NetBoot Servers on their building networks to allow their consultants the ability to boot into the Casper imaging process directly from a Macintosh with a network connection without any additional media. ECM will maintain the existing infrastructure with the intent of consolidating all NetBoot servers into a single NetBoot service that is housed in the University's two primary datacenters that will have the ability to service all client computer networks on campus.

### Current Non-NetBoot Server Networks

Areas on campus that do not have NetBoot infrastructure at this time will be serviced by bootable USB media that will allow a Desktop Support Consultant to boot into the Casper Imaging Utility and kick off over the network one of the standard images provided by ECM.

### Images

ECM will maintain a standardized list of Images, also known as Configurations in the OS X world. All images will join the Macintosh to the Iowa Domain and install the management client, the University Core Software [\[1\]](#), and one of the current OS X Operating Systems [\[2\]](#). The standardized image list will be designed to meet 80% of Campus needs. Org/Depts that do not fit into the 80% that have a standard software load for their Org/Dept will have their own customized standard image created. Devices that do not fit into one of the two above options will be considered one off devices that can utilize one of the standard images as a base load and then it will be customized post imaging to meet the needs of the Org/Dept/End User.

### Action Items

- Work with ITS Enterprise Infrastructure on building a Centralized NetBoot service for campus
- Create a bootable USB media
- Create standard images

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## Device Entering Service

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In the Device Entering Service lifecycle stage ECM will maintain the Casper Self Service tool and deploy VPP Applications upon request from the Desktop Support Consultant.

### Casper Self Service tool

This tool will be maintained for Desktop Support Consultants so they can login with their TechID and see a list of software, printers, and utilities to help finish setting up of the device for the end user. This tool will also be maintained for the End User to use after the device is in service, allowing a different load of software, printers, and utilities for the end user's HawkID.

### VPP Application Deployment

The Mac App store and iOS App store require the purchase of applications through the VPP store for managed deployment. Once an App is purchased it can be deployed to any device or user that is a part of the Dept/Org VPP scope. It can also be revoked from a device/user allowing for the redeployment to another device/user.

### Action Items:

- Create a workflow for submitting request for the purchase, deployment, and revocation of VPP Applications
- Setup the Self Service Portal to support Desktop Support Consultants using their TechID
- Setup the Self Service Portal to support our End Users with their HawkID

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## Device in Service

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In the Device in Service lifecycle stage ECM will manage the software and OS updates on all managed devices, maintain the Casper Self Service Tool for Desktop Support Consultants and End Users, deploy new VPP application and software to devices/end users upon request, and maintain the end user experience through Policies and Configuration Profiles. ECM will be working with the Desktop Support Consultant team and the local IT Director to verify the settings meet the Org/Dept needs.

### Transition Existing Systems into OneIT Device Management

ECM will provide enrollment tools (Casper Recon and Casper Quick Add Packages) for enrolling existing OS X and iOS devices into the Casper Management Infrastructure if they are not already managed. Reimaging of a device is not required for existing systems to be brought into the management infrastructure or if they need to be moved from an existing Org/Dept managed Casper Site to the OneIT Casper Site for that Org/Dept.

### Software Updates – Current Version-minor release (X.x to X.y releases)

ECM will build and test update packages to update the current version of software to the next minor release. Once testing is complete the update will be deployed to the Self Service Application and to the applications minor software update ring subscription collection with a deadline for each ring. [5] A note will then be sent to the Desktop Support Consultant team with information regarding the update for further dissemination to Org/Dept end users. [3]

### Software Updates – Major Version (X.x to Y.x releases)

ECM will build and test update packages to update the current version of software to the newest major version. Once the testing is complete the update will be deployed to the Self Service Application for the Desktop Support Consultant Team. A note will then be sent to Campus IT Directors and Desktop Support Consultants of the availability of the new major software release asking for a date to follow up on Org/Dept testing. At this point in the process testing and verification is handed off to the Desktop Support Consultants and the IT Directors for their Org/Dept. Once testing and verification is complete at the Org/Dept level the Campus IT Director and or the Desktop Support Consultant Team will follow up with ECM to schedule a date to make the new version available to their end users in the Self Service Application, identify systems that need to be exempt from installing the new version, and agree on an additional date for when a mandatory deployment of the software can happen within their Org/Dept based on the update ring subscription collections [5] for that department. [4]

### OS Updates

ECM will setup a reoccurring schedule for installing OS Updates on all managed Macintosh devices based on update ring subscription [5] for each Org/Dept.

### Policies and Configuration Profiles

ECM will setup standard Policies and Configuration Profiles to be applied to Macintosh and iOS Devices to customize the look and feel of the User experience and to secure the device per University Policy.

### Action Items:

- Setup Software Update Subscriptions and workflow for major and minor updates

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- Setup OS Update Subscriptions and workflow
- Setup Standard Policies and Configurations Profiles as a starting point
- Create Customized Policies and Configuration Profiles to meet Org/Dept needs

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## End of Life

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In the End of Life lifecycle stage ECM will remove object from AD and Casper upon request from the Desktop Support Consultant team.

### Action Items:

- Setup a workflow for ECM to receive requests for removal of AD computer objects, Casper Computer and iOS objects

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## Communication

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Communication will be an integral part of the Central Macintosh and iOS Device Management Service. As such ECM will:

- Have regularly scheduled meetings with Desktop Support Consultants and the End User Support Advisory Committee regarding the service to discover gaps/issues that need to be addressed
- Regularly update the IT Community of upcoming features, new OSes that will be supported, and request input on upcoming features/OSes to make sure they meet the campus community's needs
- Provide KPI metrics to the OneIT Steering Committee on a regular basis as determined by the OneIT Steering Committees need for the metrics

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## Appendix

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### [1] University Core Software

- Adobe Flash Player
- Adobe Acrobat Pro
- Apple JAVA
- Cisco AnyConnect VPN Client
- Citrix Receiver
- Google Chrome
- Identity Finder
- iTunes
- Microsoft Lync
- Microsoft Office
- Microsoft OneDrive for Business <when released>
- Microsoft Skype for Business <when released>
- Mozilla Firefox
- Microsoft Silverlight
- Microsoft System Center Endpoint Protection
- Oracle Java
- Photos
- Safari

### [2] Supported OS X releases

Apple supports N-2 releases for OS X

- OS X 10.9 Mavericks
- OS X 10.10 Yosemite
- OS X 10.11 El Capitan

### [3] Minor Software Update Workflow

- See Device Management – Mac and iOS Lifecycle Responsibilities – Visio Diagrams

### [4] Major Software Update Workflow

- See Device Management – Mac and iOS Lifecycle Responsibilities – Visio Diagrams

# Central Macintosh and iOS Device Management Service

## [5] Software Update Rings

### OS Updates and Current Version Updates

Update Ring	Available	Deadline	User Group
0	Week 0	N/A	Internet and ECM
1	Week 1	Week 2	Desktop Support Consultants
2	Week 2	Week 3	Org/Dept End User Test Group
3	Week 3	Week 4	General Population *

\* Excludes exempt populations defined by Org/Dept IT Director and Desktop Support Consultants supporting the area

### OS Upgrades and Major Version Upgrades

Upgrade Ring	Available	Deadline	User Group
0	Month 0	Month 1	Internet and ECM
2	Month 1	Month 2	Desktop Support Consultants and Service Provider Test Systems
3	Month 2	Month 3	Org/Dept End User Test Group
4	Month 3	Summer and or Semester Break**	General Population *

\* Excludes exempt populations defined by Org/Dept IT Director and Desktop Support Consultants supporting the area

\*\* The preference would be to do major upgrades over the summer. With Oses like Windows 10 we can only defer upgrades for 8 months and may need to do upgrades between Semester Breaks or risk not getting security updates for that OS and or piece of software.

### Zero Day Security Risk OS and Software Updates \*

Update Ring	Available	Deadline	User Group
0	Day 0	Day 1	Internet and ECM
1	Day 1	Day 2	Desktop Support Consultants
2	Day 2	Day 3	Org/Dept End User Test Groups
3	Day 3	Day 4	General Population

\* Depending upon the severity and risk level that the zero day involves, the timing between rings may be significantly reduced. This would be done in consultation with the Information Security and Policy office as well as the OneIT Leaders.



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## [6] Casper Site Diagram

