

Application Patching Procedure

Document Number	Effective Date	Review Date	Version	Author	Approved By
[ITEP.1.x]	03/05/25	[Date]	1.0	Andrew Barnett	[Approver Name]

IT Admin Procedure

1. Purpose

Describe the purpose of the SOP. Explain why this procedure is necessary and what it aims to achieve.

The purpose of this Standard Operating Procedure (SOP) is to provide a basic guideline for application patching procedures in Jamf Pro. This SOP is especially important for application patching that will be deployed to every applicable Apple device, including both computers and mobile devices. Given the different settings for each type of device, it is crucial to follow a recommended approach to ensure effective deployment.

2. Scope

Define the scope of the SOP. Specify the departments, teams, or processes that this procedure applies to.

This SOP applies to the Local Support responsible for updating operating systems via **Jamf** for **macOS or mobile devices**.

3. Definitions

Provide definitions for any terms, acronyms, or jargon used in the SOP.

- **Self-Service Hub** – A portal within Jamf where users can manually install approved applications.
- **SOP:** Standard Operating Procedure. It typically is a set of written instructions that outlines how to perform a routine task.
- **Apple UEM Team:** Refers to the Apple Unified Endpoint team. It is the team that manages the overall Jamf Pro server health on campus.
- **Jamf Pro Server:** Texas A&M tool of choice to manage Apple devices on campus.
- **Team Dynamix:** The current official ticketing system used by Texas A&M.

- **App Auto-Patch** - App Auto-Patch is an open-source project which combines local application discovery, an Installinator integration, and user-friendly swiftDialog prompts to automate application patch management across Mac computers.
- **Installinator** – An open-source installation script to deploy standard software on Macs.
- **Apple App Store** - A marketplace for apps and games for Apple devices like iPhones, iPads, Macs, Apple TVs, and Apple Watches.
- **Mobile Device Apps** – The app configuration tool for Jamf Pro to manage and deploy third party applications and application updates.
- **Apple School Manager** – A web-based portal used for purchasing and managing apps, books, and other Apple services for an organization.
- **VPP (Volume Purchase Program)** - lets organizations and schools buy and distribute apps and books in bulk.

4. Responsibilities

Outline the roles and responsibilities of individuals or teams involved in the procedure.

- **Local Support**
 - Ensures devices are setup properly and communicating with the Jamf Server.
 - Communicates with the UEM Apple Team if they experience any issues.
- **UEM Apple Team**
 - Review, test, and deploy necessary Configuration Profiles, Policies, and scope of devices.
 - Assists in troubleshooting failed deployments.
 - If a device application needs to not be updated, the Apple UEM team will work with the department or college to un-scope the device to meet their requirements after the necessary security exceptions have been submitted.

5. Procedure

Detail the step-by-step process to be followed. Include any necessary sub-steps, decision points, and contingencies.

5.1. Preparation

- **Description:** Ensure all deployment details are accurate, including the Configuration Profiles, Policies, Mobile Device Apps, deployment scope, and whether the Policies should be available in the Self-Service Hub or Support Hub.
- **Responsible Party:** Apple UEM Team
- **Tools/Resources Needed:**

- **Necessary:** Jamf Pro Server
- **Optional:** App Auto-Patch (for macOS), Microsoft Teams, Team Dynamix

5.2. Execution

- **Description:**
 - **macOS:**
 - Upload the App Auto-Patch and Installomator scripts to Jamf Pro.
 - Configure and test the necessary Configuration Profiles, Policies, and Smart Groups.
 - Verify the App Auto-Patch Policy has deployed properly to the necessary scoped groups for automated application patching on a set schedule.
 - Verify the Installomator script is updated and deployed properly for individual applications in Self-Service to be installed or updated.
 - If an application is not found in the Installomator script, it must be determined if the application has a built-in application update tool or must be manually updated.
 - These should be in the Applications, App Auto-Patch, or Updates Categories in the Policies sections of 'Computers' in Jamf Pro.
 - Devices on macOS 11 or lower will not be able to use App Auto-Patch. They will receive monthly notifications for individual application updates.
 - iPadOS/iOS
 - Configure and test the necessary Smart Device Group.
 - Verify the application has VPP licenses available from Apple School Manager for the application to ensure it is managed by Jamf and can be deployed via Self-Service and updated.
 - Configure the application in the Jamf Mobile Device App.
 - Make sure to enable the box "Automatically force App Updates" to keep the application up to date.
 - Deploy Jamf Mobile Device App to configured Smart Device Group.
- **Responsible Party:** UEM Apple Team
- **Tools/Resources Needed:**
 - **Necessary:** Jamf Pro Server, Jamf Mobile Device Apps, App Auto-Patch, Installomator

5.3. Troubleshooting

- **Description:**

- If deployment fails, or application updates fail to complete in macOS, review the **Console.app – Log Reports** to diagnose errors and escalate issues to the **Apple UEM Team** if needed.
- Local Support can submit a ticket with Team Dynamix with reported issues.
- **macOS:**
 - Target computers with macOS 12 or later for the patching tools to work properly.
 - Communication with the Jamf Pro Server is necessary for Policies to be deployed and patching tools to be implemented.
 - Check the Jamf Pro Configuration Profiles and Policy logs to verify deployment.
- **iPadOS/iOS:**
 - Verify iPads or cellular devices are online to receive the necessary updates from Jamf Pro or the Apple App Store.
- **Responsible Party:** Local Support, Apple UEM Team
- **Tools/Resources Needed:** macOS Device, iPadOS device, iOS device, Jamf Pro Server, Team Dynamix

5.4. Completion

- **Description:**
 - Verify that all scoped devices successfully received and executed the deployment.
 - Confirm with device inventory records are reporting a successful update of the applications.
 - Check Jamf Pro Policies logs are reporting a successful deployment of policies for application updates and tools for updates.
 - Notify the **Apple UEM Team** that the deployment is complete, and if any issues arise, troubleshoot and resolve if possible.
- **Responsible Party:** Local Support, Apple UEM Team
- **Tools/Resources Needed:** Jamf Pro Server

5.5. Review and Approval

- **Description:** After verifying the deployment, the Apple UEM Team will monitor all targeted devices have successfully received the required updates.
- **Responsible Party:** Apple UEM Team
- **Tools/Resources Needed:** Jamf Pro Server

6. Documentation

List any forms, logs, or records that need to be maintained as part of this procedure.

- Any Team Dynamix ticket created while going through this operating system update process.

7. References

Include any related documents, policies, or regulations that support this SOP.

- **Team Dynamix:** <https://service.tamu.edu/>
- **Jamf Pro:** https://learn.jamf.com/en-US/bundle/jamf-pro-documentation-current/page/Jamf_Pro_Documentation.html
- **Jamf Apps Purchased in Volume:** https://learn.jamf.com/bundle/jamf-pro-documentation-current/page/Apps_Purchased_in_Volume.html
- **App Auto-Patch:** <https://github.com/App-Auto-Patch/App-Auto-Patch>
- **Installomator:** <https://github.com/Installomator/Installomator>

8. Revision History

Track changes made to the SOP over time.

Version	Date	Description of Change	Author
1.0	03/05/2025	Initial release	Andrew Barnett
1.1	[Date]	[Description]	[Author Name]

Appendices

Include any additional information, diagrams, or charts that support the procedure.

1. [University Rules and SAPs - Texas A&M University](#)
2. [University-Wide IT Governance Framework](#)
3. [SOPs – Division of Research - Texas A&M University](#)