

MICHIGAN STATE
UNIVERSITY

Project Plan

ITPro Company Portal

The Capstone Experience

Team Microsoft

Bryce Hrusovsky
Reid Wildenhouse
Jingwei Wan
Sam Batali

Department of Computer Science and Engineering
Michigan State University

Fall 2019



From Students...
...to Professionals

Functional Specifications

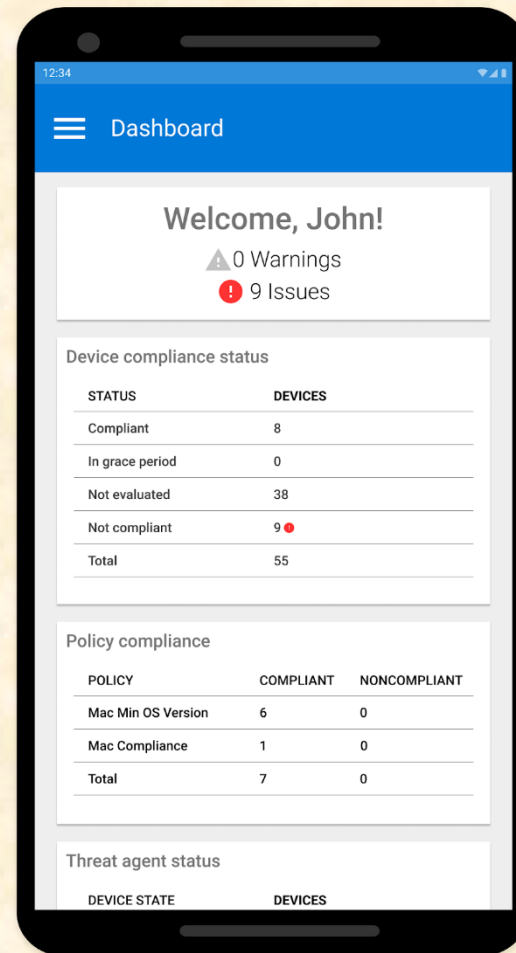
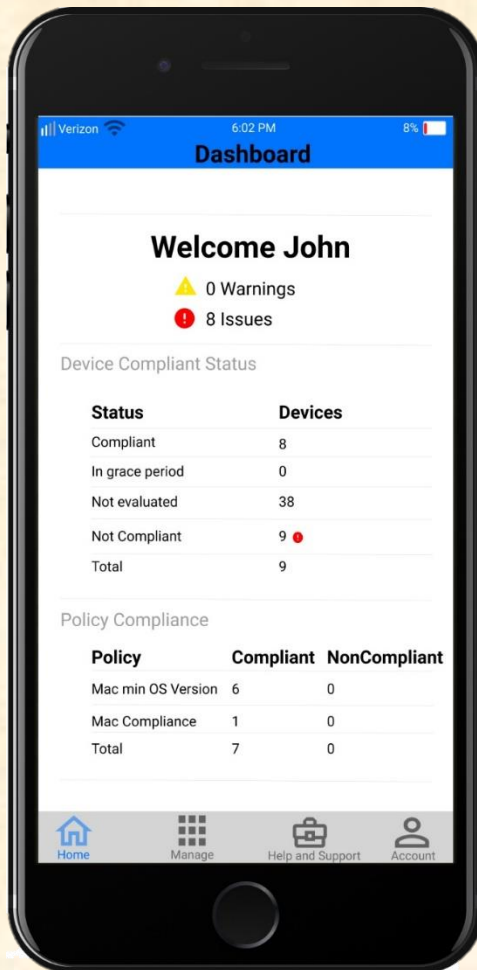
- **Problem:** The number of devices being deployed by corporate entities is growing, increasing the workload for IT specialists.
 - Specialists need the ability to manage corporate devices while they are in the field.
 - Microsoft Intune solves this problem, but requires a desktop or laptop computer to use.
- **Solution:** Create a mobile application that allows IT specialists to easily monitor, manage and maintain corporate devices with Microsoft Intune directly from a mobile device.

Design Specifications

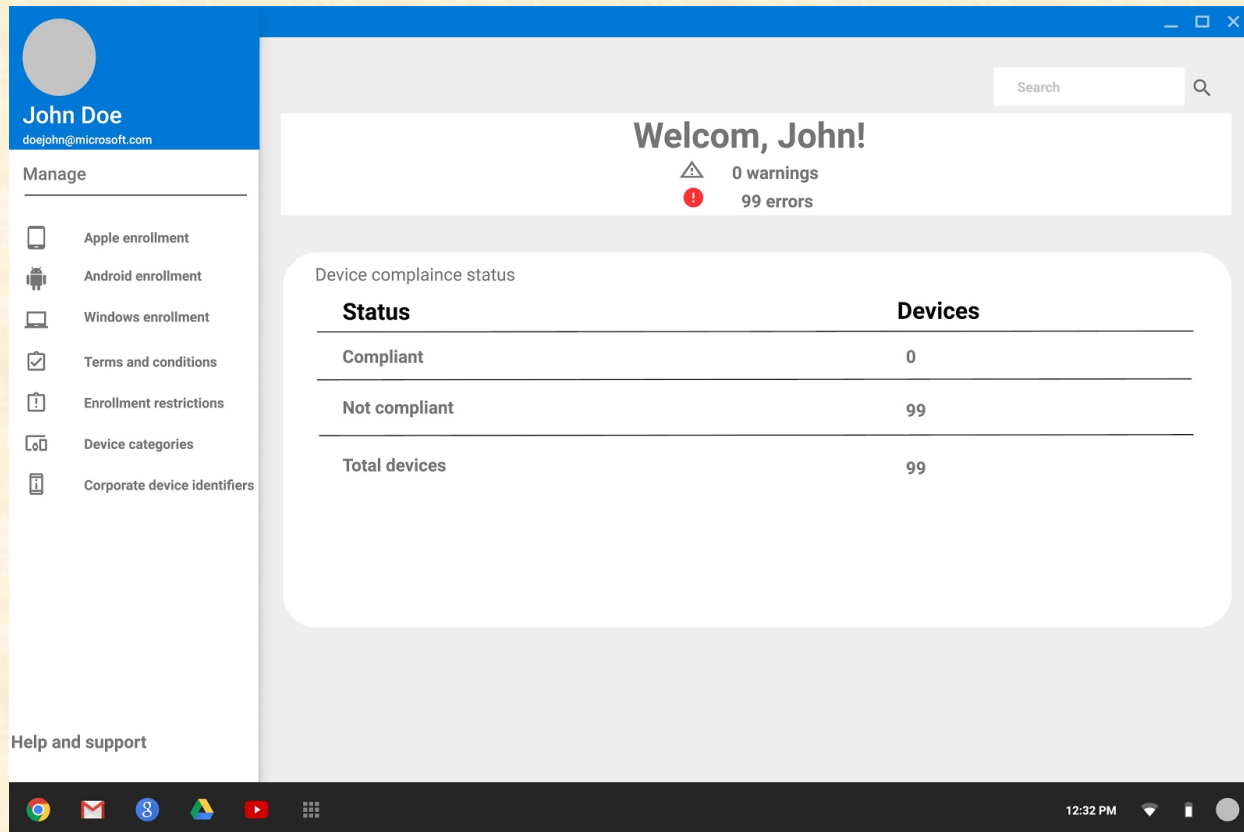
- Cross Platform: The application is created to run in both iOS, Android, and UWP using Xamarin platform. 3 different platforms, different UI designs, same codebase for models and controls
- Login Page: The first window a user interact with after the launch page. The user must enter correct login credentials (Email/Phone and Passwords) before being redirected to the main page
- Main Page: The main window for the application. Contains multiple tabs, sidebar, and summary page, user information, and status
- Navigation: The application contains various tabs, links in the sidebar which links users to other pages such as device(s) page, manage page, settings page, terms and services, and Help and support page



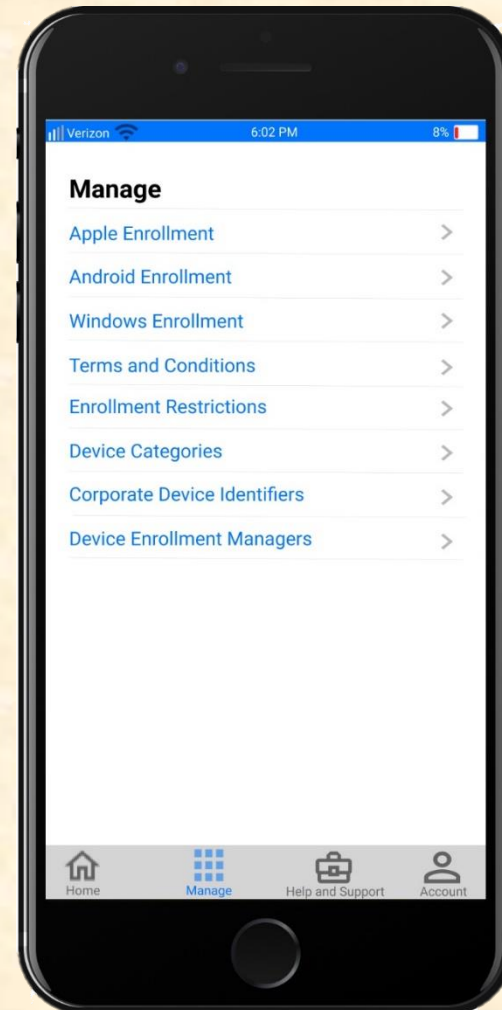
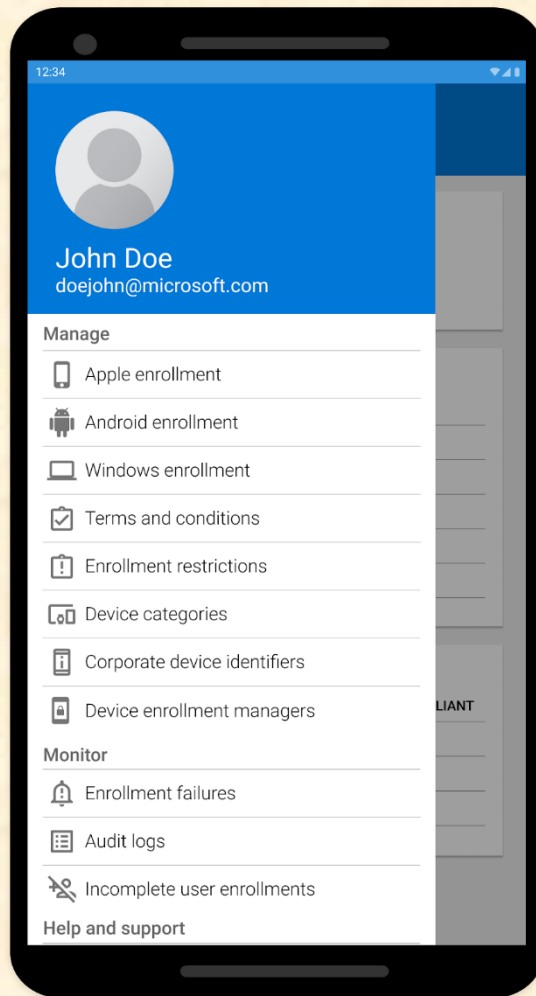
Screen Mockup: Main Dashboard (IOS/Android)



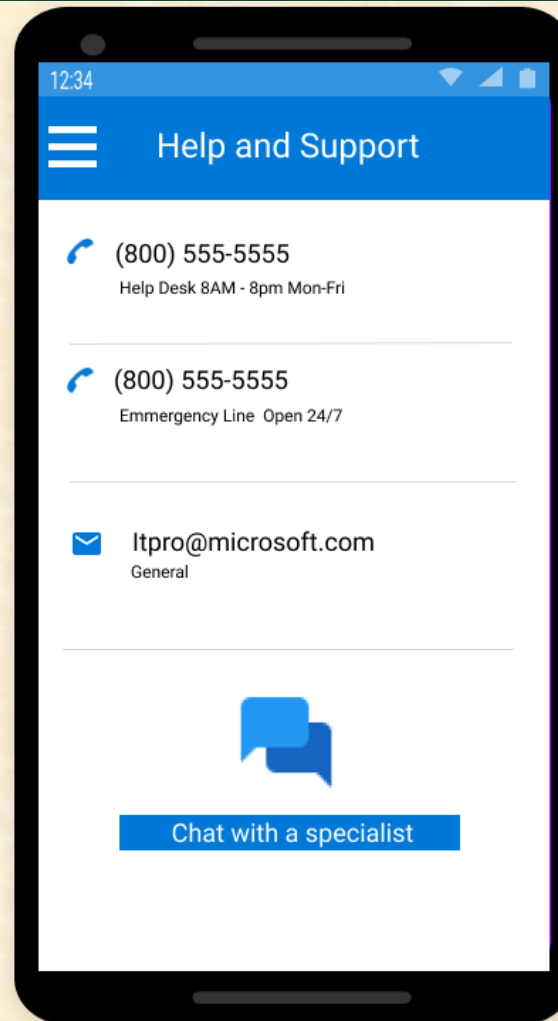
Screen Mockup: Main Dashboard (Windows)



Screen Mockup: Navigation (IOS/Android)



Screen Mockup: Help and Support (Android)

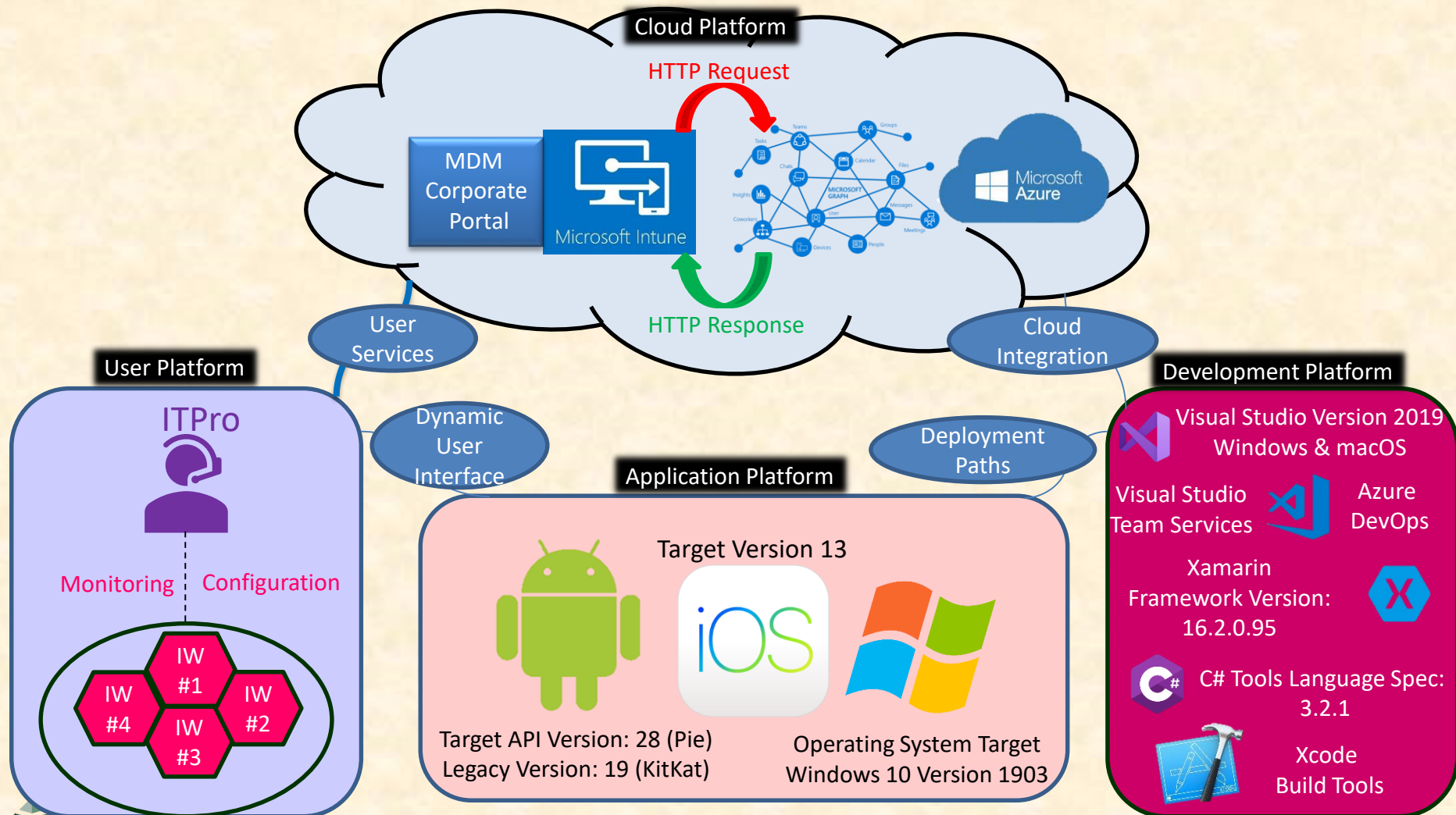


Technical Specifications

- Xamarin Forms
 - The application is developed by using Xamarin cross-platforms and written in C#. Xamarin forms allow developers to build applications for iOS, Android, Windows that share core functionality, business logic code, and implement specific native UIs on each platform.
- Microsoft Graph
 - Microsoft Graph is used to access Microsoft Intune services. It also allows developers to interact with the data of millions of users in the Microsoft cloud.



System Architecture



System Components

- Hardware Platforms
 - Android/iOS/Windows emulators
- Software Platforms / Technologies
 - Microsoft Visual Studio
 - Microsoft Graph API
 - Xamarin Forms

Risks

- Missing Graph API Functionality
 - Description: The Graph API is missing functionality for some features.
 - Mitigation: Migrate the existing implementation to the new version of Graph API
- Cross-Platform Design
 - Description: Three different platforms means three different design principles
 - Mitigation: Develop shared UI components while designing navigation individually for each platform.
- Server-Client Performance Issues
 - Description: Server-client communication can cause major performance issues
 - Mitigation: Implement client-side caching to reduce the amount of data being sent over the network.
- Efficient Group Deployment
 - Description: The client is not satisfied with the current group deployment algorithm
 - Mitigation: Analyze the current implementation and look for ways in which it can be simplified.



Questions?

?

?

?

?

?

?

?

?

?