# Raspberry Pi Project

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## Project Overview:

Research began on May 20th 2024.

The goal of this project is to replace the monotonous task of replacing the schedule flash drives for the TVs(2). This project must display a PowerPoint slideshow loop automatically, can make live updates remotely, and be able to control and sync multiple screens up at once without having to pay for a subscription. The idea is to design software on the Raspberry Pi’s for this purpose.

1. Raspberry Pi version
   1. The best version will give us the most recent updates, will last the longest and be cheaper and only give us what we need
   2. Raspberry Pi 4
      1. Needs microSD cards with the selected OS system to be used.
      2. Added needs may be an active cooler per suggestions from online reviews
   3. Product purchase
      1. Decide between home use or for industry use.
2. Setting up virtual connection to display the PowerPoints
   1. <Https://pimylifeup.com/raspberry-pi-rclone/> - for directions to set up rclone to connect microsoft onedrive to the VLC video display
   2. <https://forums.raspberrypi.com/viewtopic.php?t=285369> - starting instructions for setting up powerpoint to rclone to vlc.
   3. <https://rclone.org/onedrive/> - for setting up microsoft onedrive through rclone on raspberry
   4. Making a bash script executable – chmod +x
   5. Use fort account to login to sharepoint/onedrive to access the root drive and access data.
   6. <https://www.andrewcbancroft.com/blog/musings/make-bash-script-executable/> - making a nano file
   7. <https://linuxconfig.org/how-to-save-and-exit-file-using-nano-editor> - to save code in nano
   8. <https://www.cyberciti.biz/faq/bash-while-loop/> - while loop help in bash

## Setting up of the Raspberry pi:

### Raspberry pi 1:

Host name: raspberrypi1.local

Username:

Password:

Wireless lan: Fort Staff Access

IP address:

#### Progress notes:

6/4 - OS on SD card, Pi started

6/5 - OS had to be reinstalled, All re installed and up to date, Idea for using Systemed for startup files

6/7 – asked forum question info below

6/8 - Started the process to use systemd to automatically boot the onedrive script and the video script, Systemd works!! It connects to onedrive at boot

6/9 - Working on python code for displaying realtime video .mp4 from onedrive, Python downloads the file to desktop and runs the most recent file with a different mp4 filename on it, Python runs most recent file only downloads if the recent file has a different time stamp as the current file. Python file runs on startup and changes when changes are made to the onedrive files. All work is saved to OneDrive in testVideo on the pi-kiosk onedrive.

6/11 - turn on test – all systems run! VNC updated and turned on,Virtual Connection from computer established

6/15 - added pi to sonosnet network so it works on the canteen deck! Fort logo added to background! Set to dark mode!

6/18 – IP addresses updated and not on Sonosnet anymore

### Raspberry pi 2:

Host name: raspberrypi2.local

Username:

Password:

Wireless lan:

IP Address:

#### Progress notes:

6/05/2024 – OS installed, Updates

6/10 - Rclone installed, Can connect to onedrive, Program started, Runs video from onedrive – need to figure out how to change video when updated, Updated the files to the same as pi 1 and all worked!

6/11 - Displays on boot and displays the right thing – the issue is that something I did in the past boots another file that does not correctly open vlc so there looks like an error but it is just a miss configured boot system file. I don’t know where to find it tho.

6/12 - I decided to start over on this aspect of the pi project, Something went wrong and finding the error was impossible.

#### Start over notes: 6/12/2024

Rclone installed, Mount created to onedrive, Startup files uploaded, System files created and started, VNC up to date, Installed GUFW for firewall purposes

6/15 - Changed made to the python file and uploaded

6/18 – IP addresses updated and not on Sonosnet anymore

### Raspberry pi 3:

Host name: raspberrypi3.local

Username:

password:

IP-address:

#### Progress notes:

6/5 - OS installed, Pi turned on – connected to the tv (tv needed update), Updates,

6/10 - All file added to pi and start up .system files added, All systems worked!! all systems work but needed to uncomment stop\_vlc() when there was a new file

6/11 - Setting up Virtual Network Connection (VNC) for remote access to the raspberry pi, VNC connections successful!

VNC viewer login: pi-kiosk@fortwilderness.com , Pass: PostDirt20@$

6/15 - Python file updated

6/18 – IP addresses updated and not on Sonosnet anymore

6/24 – session files and general announcement files added to program to play at specific times.

7/21 - the python start file is saved as python-start2.service because the normal python-start.service file is broken

7/27/24 – Final Pi-kiosk Folder updated on pi, Iteration 4 updated on all pis

### Raspberry Pi 4:

Host name: raspberrypi4.local

Username:

password:

IP-address:

#### Progress notes:

7/7 - SD card updated with os system, Pi started, IP address set, VNC connected and added to VNC viewer, Rclone downloaded and mount to onedrive created, Files added to pi for start up things, .sh file make excituable, Startup files created and started – py file began with no bumps, Rebooted and runs

7/28/24 – Final Pi-kiosk Folder updated on pi, Iteration 4 updated on all pis

### Extra login information:

Raspberry pi Forum:

ambambi000

XGB6JsCv^y"Rdne

## Notes:

6/23 - New Project – set up pi’s to recognize the time of day and play the file from the appropriate folder. d = date\_time.strftime("%-I%p") - output: 9AM

## Issues:

Issues: 6/27/24

The celebration file did not run and there were added files to the pi-kiosk onedrive from the marketing team.

6/30/2024 - Start video iteration 3 set up of rasp pi 3. Added more timed files so that they can be set up and ran. Need to get put on each other rasp pi. Thinking about making a desktop application but not sure how to do that. – maybe a future idea

7/1 - Maybe gonna switch the language to java ? Visual studio code installed

7/5 - Try the new pi with java programming – did not happen as time did not allow