

## # 🏭 Market Monitor: System Recovery Guide

### 1. Hardware & OS Prep

- **OS:** Raspberry Pi OS (64-bit) Bookworm.
- **Storage:** SD Card for OS, USB Drive (UUID: 67E4-9C28) for Logs.
- **Dependencies:** bash pip install yfinance pandas\_ta google-genai pytz schedule matplotlib sudo apt install log2ram

### 2. Storage Shield (Log2Ram + USB)

To protect the SD card, logs live in RAM and sync to the USB drive once an hour. \* **Mount USB:** Add to /etc/fstab: UUID=67E4-9C28 /mnt/usb\_logs exfat defaults,uid=1000,gid=1000,umask=000,nofail 0 0 \* **Config Log2Ram:** Set PATH\_DISK="/mnt/usb\_logs" and SIZE=128M in /etc/log2ram.conf.

### 3. Resilience (Systemd + Watchdog)

The script is managed by a service that restarts it if it crashes or freezes. \* **Enable Watchdog:** In /etc/systemd/system.conf, set RuntimeWatchdogSec=15. \* **Service File:** /etc/systemd/system/market-monitor.service \* Restart=always \* WatchdogSec=30 \* Environment= (Add your Email and Gemini Keys here)

### 4. Scheduled Maintenance (Crontab)

Open with sudo crontab -e: \* **Weekly Reboot:** 00 04 \* \* 0 /sbin/reboot (Sundays at 4 AM). \* **Hourly Log Sync:** 05 \* \* \* \* /usr/local/bin/log2ram write > /dev/null 2>&1

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### 🛠 Management Cheat Sheet

Task	Command
<b>Check Live Logs</b>	journalctl -u market-monitor.service -f
<b>Check Script Status</b>	systemctl status market-monitor.service
<b>Check USB Health</b>	dmesg \  grep sda
<b>View USB Logs</b>	ls -lh /mnt/usb_logs
<b>Force Log Sync</b>	sudo log2ram write
<b>Restart Script</b>	sudo systemctl restart market-monitor.service

### Final Tip

Always keep a copy of your **Gmail App Password** and **Gemini API Key** in a separate secure place, as they are the only things not stored in this guide.