

Field Trainer Development History

Current System Status

- **Version:** Field Trainer v5.2
- **Main Files:**
 - `field_trainer_core.py` - TCP server and device management
 - `field_trainer_web.py` - Flask web interface
 - `field_trainer_main.py` - Application launcher
- **Network:** Device 0 on smithhome wifi, sharing via wlan0 mesh to Devices 1-5
- **GitHub:** https://github.com/darrenmsmith/FT_2025.git

Recent Chat Session Work

TCP Socket Enhancements (Chat Session: [Date])

Problem: Need improved TCP socket reliability for device connections **Solution:** Enhanced HeartbeatHandler with:

- TCP keep-alive configuration (30s idle, 5s intervals, 3 probes)
- Better error handling for ConnectionResetError, BrokenPipeError
- 45-second socket timeouts
- Improved connection cleanup

Files Modified:

- `field_trainer_core.py` - Enhanced HeartbeatHandler and ThreadedTCPServer classes
- Added connection monitoring and better logging

Status:  Code created,  Testing needed

Deployment Automation

Current: Using VSCode Tasks to deploy to Device 0 via SSH **Goal:** Streamlined deployment with backup and restart

Next Priority Items

1. Deploy and test enhanced TCP code
2. Troubleshoot existing issues: [Document specific issues here]

3. Improve deployment automation

Quick Reference Commands

```
bash

# Deploy to Device 0
# (Your current VSCode Task)

# Check service status
ssh pi@192.168.99.100 "sudo systemctl status field-trainer.service"

# View logs
ssh pi@192.168.99.100 "sudo journalctl -u field-trainer.service -f"

# Restart service
ssh pi@192.168.99.100 "sudo systemctl restart field-trainer.service"
```

Code Snippets to Remember

Enhanced TCP Handler (Created: [Date])

```
python

# Key improvements made to HeartbeatHandler:
- TCP keep-alive: 30s idle, 5s interval, 3 probes
- Socket timeout: 45 seconds
- Better error handling for network issues
- Connection cleanup on disconnect
```

Issues and Solutions

Issue: [Describe problem]

Solution: [How we solved it] **Files:** [What was changed] **Status:** [Done/Testing/In Progress]

How to Use This File

1. Update after each productive chat session
2. Save key code snippets and solutions
3. Track deployment status and next steps
4. Reference when starting new chat sessions

