Deployment Walkthrough: Purchase Order System on Docker with Network Share Mount

This walkthrough explains how the Purchase Order System was deployed on a Raspberry Pi using Docker, including mounting a Windows network share for storing generated PDF purchase orders.

1. Prepare Raspberry Pi

1. Install Docker and Portainer on the Pi.
2. Ensure CIFS utilities are installed for SMB mounting: sudo apt install -y cifs-utils.

2. Create Credentials File

1. Create a secure file to store SMB credentials: /etc/smbcred/po_store.cred.
2. File contents (replace placeholders with real values):
3. username=SERVICEUSER
4. password=SECRET_PASSWORD
5. domain=POWERSYSTEMS
6. Lock down permissions: sudo chmod 600 /etc/smbcred/po_store.cred.

3. Test SMB Access with smbclient

1. Run: sudo smbclient //pss-dc02/cad_iot -A /etc/smbcred/po_store.cred -c 'cd "Purchase Orders"; dir'
2. Verify that you can list files inside the Purchase Orders folder.

4. Mount Network Share on Host

1. Mount the network share directly to the Purchase Orders subfolder:
2. sudo mount -t cifs //pss-dc02/cad_iot /mnt/po_share -o 'credentials=/etc/smbcred/po_store.cred,vers=3.0,sec=ntlmssp,uid=0,gid=0,file_mode=0666,dir_mode=0777,prefixpath=Purchase Orders,noperm,iocharset=utf8'
3. Check contents: ls -la /mnt/po_share

5. Persist Mount in /etc/fstab

1. Add this line to /etc/fstab to auto-mount on boot:
2. //pss-dc02/cad_iot /mnt/po_share cifs credentials=/etc/smbcred/po_store.cred,vers=3.0,sec=ntlmssp,uid=0,gid=0,file_mode=0666,dir_mode=0777,prefixpath=Purchase\040Orders,noperm,_netdev 0 0
3. Apply with: sudo mount -a

6. Configure Docker Container

1. In Portainer (or docker-compose.yml), configure the web service:
2. volumes:
3. - ./instance:/app/instance
4. - ./output:/app/output

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- /mnt/po_share:/mnt/share:rw
environment:
NETWORK_ARCHIVE_DIR: /mnt/share
SAVE_PDF_ON_DOWNLOAD: "1"
```

7. Verify Inside Container

1. Check mount is visible inside container:
2. `docker exec -it po_system ls -la /mnt/share`
3. Test write: `docker exec -it po_system bash -lc 'echo container_ok > /mnt/share/_container_test.txt'`

8. Application Test

1. Access a PO PDF route in browser: http://:8000/po//pdf
2. Verify PDF is stored in: \\pss-dc02\cad_iot\Purchase Orders\-.pdf

Result: The Purchase Order System now saves generated PDFs both for browser download and into the designated network folder automatically, with persistence across reboots.