# **Create folders once (adjust paths if you prefer a different base dir)**

sudo mkdir -p /opt/docker/apachephp8/{config,html}

# **Pull and start the container**

docker run -d

--name apachephp8

-v /opt/docker/apachephp8/config:/config

-v /opt/docker/apachephp8/html:/var/www/html

ghcr.io/nightmeer/apachephp8:latest

/var/www/html/startup.sh

### **Preparing the startup script**

1. Place the custom startup.sh in **/opt/docker/apachephp8/html/** on the host (it will appear inside the container at /var/www/html/startup.sh thanks to the bind-mount).
2. Make it executable: chmod +x /opt/docker/apachephp8/html/startup.sh.

### **Startup.sh**

#!/bin/bash set -e

0) ENV

export OPENAI\_API\_KEY="REPLACETHIS" # <-- put into Docker secrets in prod

export PDF\_PATH="/path/to/your.pdf" # override if needed

1) SYSTEM PACKAGES

apt-get update -qq apt-get install -y --no-install-recommends   
curl gnupg git python3 python3-pip python3-venv

2) NODE 18 + YARN

curl -fsSL https://deb.nodesource.com/setup\_18.x | bash - apt-get install -y nodejs npm install -g yarn

3) PULL LATEST SITE CODE

rm -rf /var/www/html/igem git clone -b ai-main --single-branch   
https://github.com/SalmonSays/IPRO\_Homeostasis\_IIT.git   
/var/www/html/igem cd /var/www/html/igem yarn install --frozen-lockfile

4) PYTHON RAG SERVICE

python3 -m venv /opt/ragenv . /opt/ragenv/bin/activate pip install --no-cache-dir   
fastapi uvicorn[standard] paper-qa faiss-cpu pypdf

cat >/opt/ragenv/chatbot\_server.py <<'PY' import os, traceback from pathlib import Path from fastapi import FastAPI, HTTPException, status from fastapi.middleware.cors import CORSMiddleware from pydantic import BaseModel from paperqa import Docs

PDF\_PATH = os.getenv("PDF\_PATH", "/var/www/html/igem/public/resources/main.pdf")

docs = Docs() app = FastAPI() app.add\_middleware( CORSMiddleware, allow\_origins=[""], allow\_methods=[""], allow\_headers=["\*"] )

@app.on\_event("startup") async def load\_pdf(): pdf = Path(PDF\_PATH) if not pdf.is\_file(): raise FileNotFoundError(f"PDF not found: {pdf}") await docs.aadd(pdf, metadata=False) # async-safe load

class Q(BaseModel): question: str

@app.post("/api/chat") async def chat(q: Q): try: # paper-qa 5.x exposes .empty; fall back to len() for older versions is\_empty = getattr(docs, "empty", False) if is\_empty: raise RuntimeError("PDF not loaded") answer = await docs.aquery(q.question) return {"answer": str(answer)} except Exception as exc: traceback.print\_exc() raise HTTPException( status\_code=status.HTTP\_500\_INTERNAL\_SERVER\_ERROR, detail=str(exc) or "Internal error", ) PY

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4½) GLOBAL /api PROXY

a2enmod proxy proxy\_http ssl >/dev/null apt-get install -y --no-install-recommends ssl-cert >/dev/null

cat >/etc/apache2/conf-available/zzz\_chatbot\_proxy.conf <<'APACHE' ProxyPreserveHost On ProxyPassMatch "^/api(/.\*)?$" "http://127.0.0.1:8000/api$1" ProxyPassReverse "/api" "http://127.0.0.1:8000/api" APACHE

a2enconf zzz\_chatbot\_proxy.conf >/dev/null

if ! pgrep -x apache2 >/dev/null; then service apache2 start fi service apache2 reload

---- run FastAPI service ----------------------------------------------

cd /opt/ragenv uvicorn chatbot\_server:app --host 0.0.0.0 --port 8000 &

5) START VITE DEV SERVER

cd /var/www/html/igem echo "Starting IPRO wiki on port 5173 …" exec yarn dev --host