PEPLINK TECH Summit Orlando '25

EDGE COMPUTE LAB

LAB MATERIALS

- Peplink B One router with Docker license, USB-C drive, and ARM-based computer (e.g., Raspberry Pi)
- Firmware 8.5.0
- Laptop
- SSH client (PuTTY or OpenSSH)

**A limited number of lab kits will be provided for attendees to share. Recommended for attendees to bring their own materials, but not necessary.*

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STEP 1: SSH INTO THE SBC (ARM COMPUTER) AND CREATE THE DOCKER BUILD DIRECTORY

- 1. Open an SSH client or terminal on your PC.
- 2. Connect to the SBC:
  - ssh demoXX@<IP_of_SBC>
  - XX is the assigned number for your lab group.
- Enter the password (same as your demoXX username).
- Create a directory for the Docker build:
  - mkdir alpine-icewm
  - (You may use any name you prefer.)
- 5. Change into the new directory:
  - cd alpine-icewm

STEP 2: CREATE THE DOCKERFILE

- Use nano or vim as your text editor
  - nano is recommended for beginners
- Create a new file:
  - nano Dockerfile
- Copy and paste your Dockerfile content using Ctrl+Shift+V.
  - Optional: You may customize the Dockerfile to modify the username, password, or installed packages.
- Save and exit:
  - For nano: press Ctrl+X, then Y, and Enter.

STEP 3: BUILD THE DOCKER IMAGE

- Build the Docker image (use a unique name to avoid conflicts):
  - docker build -t peplinksummit2025/name-of-image .
  - Don't forget the period — it tells Docker to use all files in the current directory.
- Confirm that the build completes without errors.

STEP 4: PUSH THE DOCKER IMAGE TO DOCKER HUB

- Log in to Docker Hub:
  - docker login
- In your web browser, go to the provided link and enter the authentication code.
- Log in with:
  - Username: peplinksummit2025
  - Password: Peplink4life2025!!!
    - You may also use your own Docker Hub account if preferred.)
- Push your image:
  - docker push peplinksummit2025/name-of-image

STEP 5: DEPLOY TO THE B ONE (OR OTHER PEPLINK ARM ROUTER)

- In InControl2, go to Group Level > Settings > Docker Management.
- Click Create Script and enter a unique name.
- Add the following command:
  - docker run --name any-unique-name -p 3389:3389 peplinksummit2025/name-of-image
- Click Save > Apply Script, select the target router, and confirm deployment.

STEP 6: ACCESS THE DOCKER CONTAINER VIA INTOUCH (RDP)

- Find the container's IP address under Web Admin > Advanced > Docker.
- In InControl2, go to Device Level > Settings > InTouch.
- Click Add, name your InTouch connection, select RDP, and enter:
  - Username
  - Container IP
  - Password
- Save the entry and click the Play button to connect.

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BEST PRACTICES & TIPS

- Pull and run the base image interactively first to explore configuration files before customizing your build.
- Use GitHub or AI tools to generate or refine Dockerfiles and scripts.
- Test locally on your PC before deploying to the router to ensure proper functionality.
- Stay organized: create a main project folder with subfolders for each version.
- For production, always review for security risks and use AI or scanners to identify vulnerabilities.

TROUBLESHOOTING

- Symptom: Docker build fails with errors
  - Possible Cause: Syntax mistakes or invalid commands in the Dockerfile
  - Resolution: Review the Dockerfile for typos or formatting issues and correct any invalid lines

- Symptom: Works locally, but not on InTouch
  - Possible Cause: Incompatibility issues
  - Resolution: Try using an older or different base image

- Symptom: Unexpected or random error
  - Possible Cause: Varies depending on the situation
  - Resolution: Review the error message carefully, then search online or use AI tools for specific guidance

- Symptom: Docker image fails to start
  - Possible Cause: No command defined to keep the container running
  - Resolution: Add a proper startup command (e.g., a foreground service or CMD ["tail", "-f", "/dev/null"]) so the container remains active