AWS re:Invent

AMZ303

Modernizing Amazon warehouse device connections with AWS IoT

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Agenda

AWS IoT Greengrass refresher

Customer spotlight: AFT

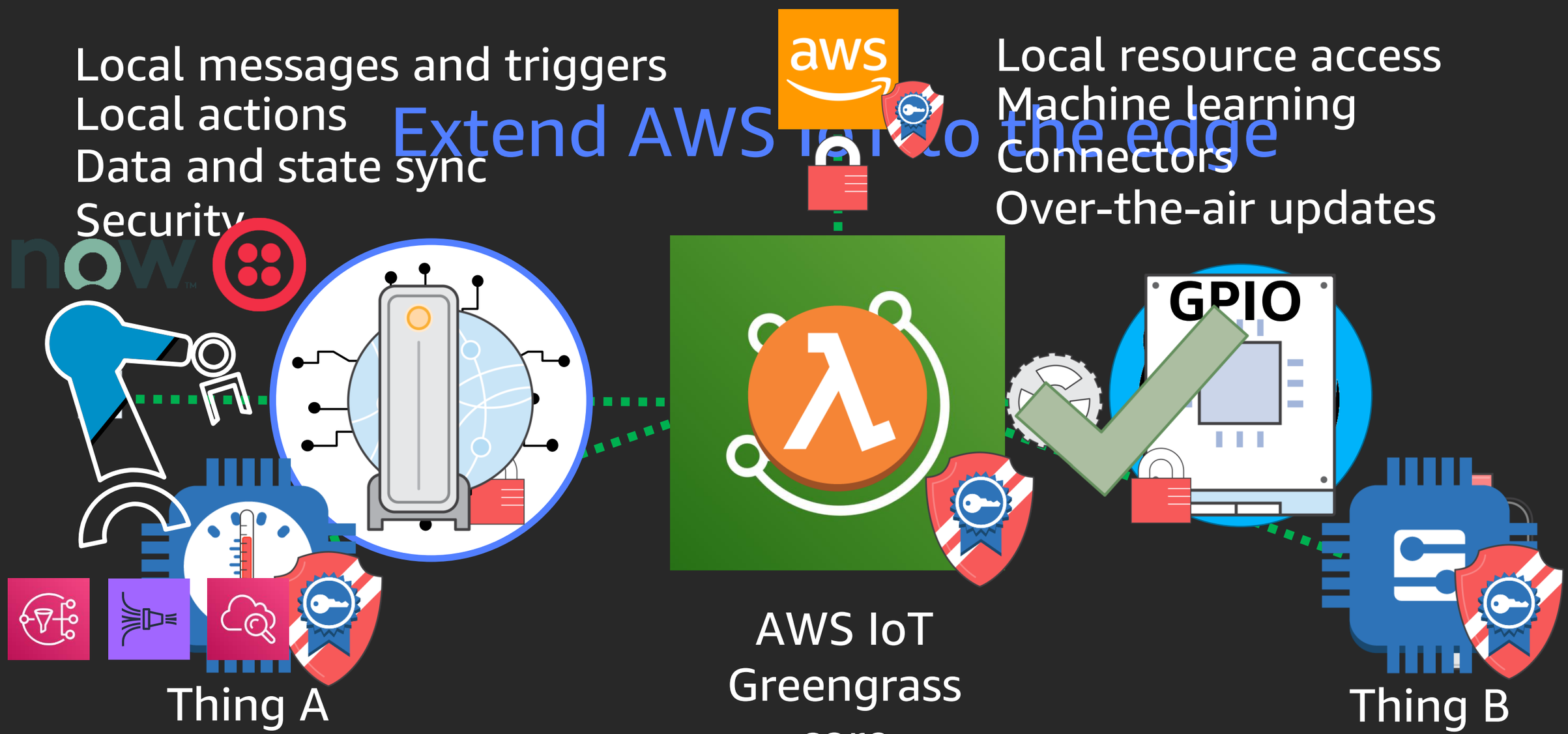
- Demo
- Whiteboard challenges

AWS IoT Greengrass refresher

Local messages and triggers
Local actions
Data and state sync
Security

Extend AWS IoT to the edge

Local resource access
Machine learning
Connectors
Over-the-air updates



Thing A

AWS IoT Greengrass core

Thing B

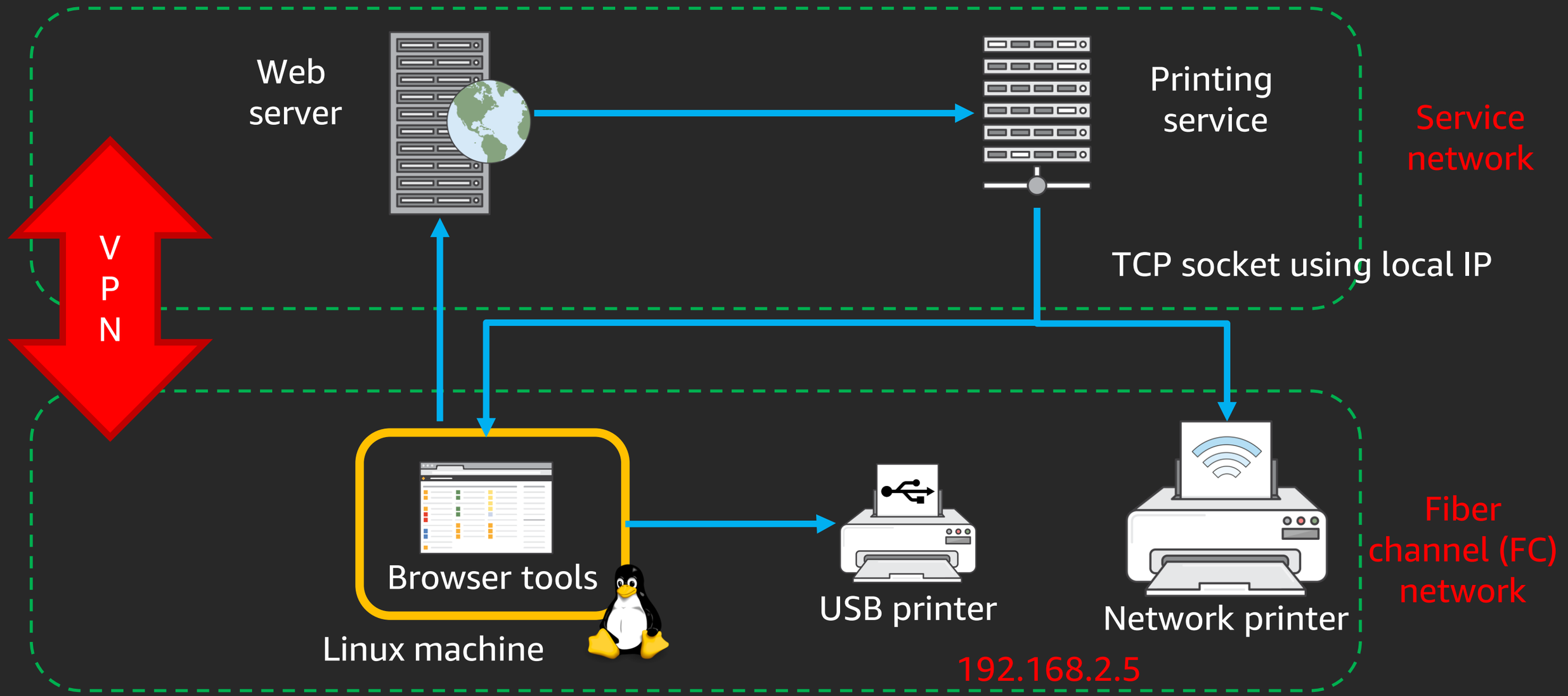
Externalized printing using AWS IoT

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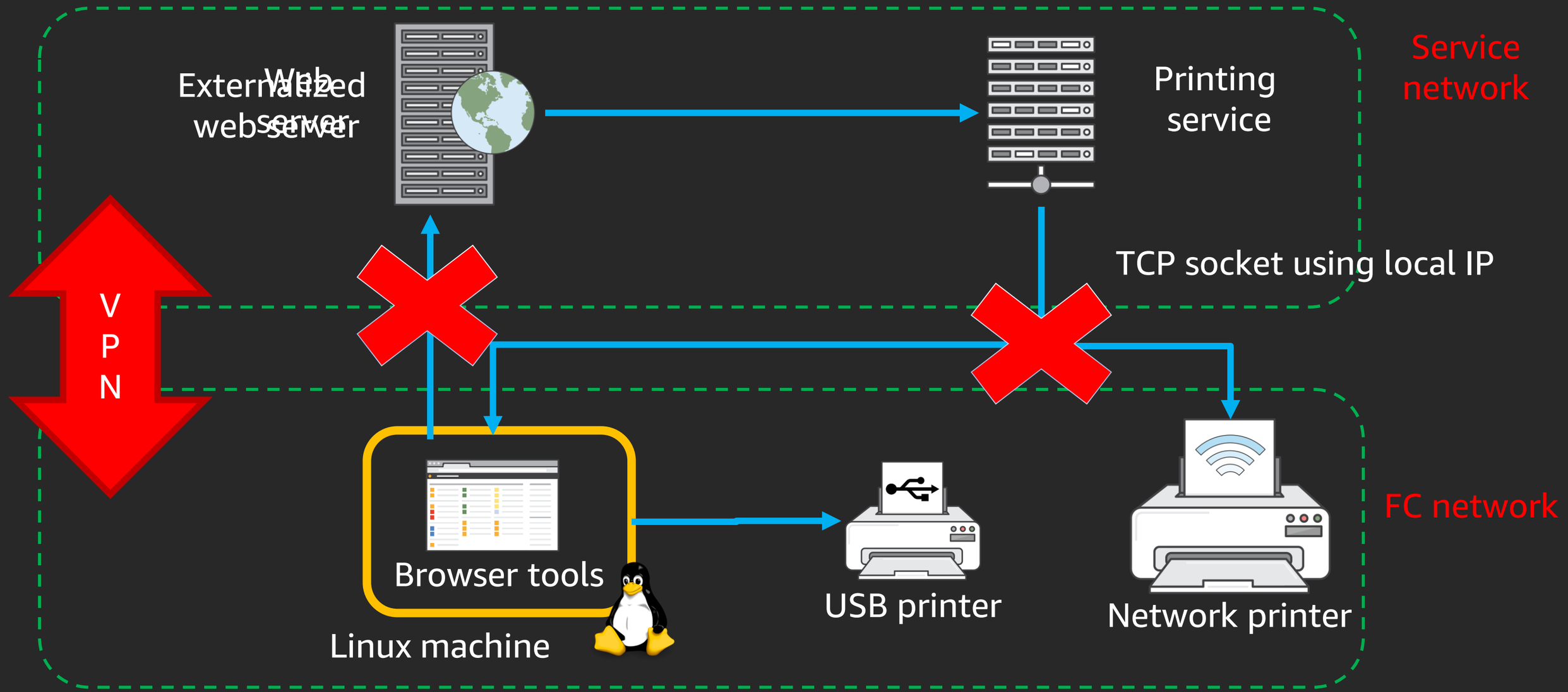
Externalized printing using AWS IoT



Printing in AFT today



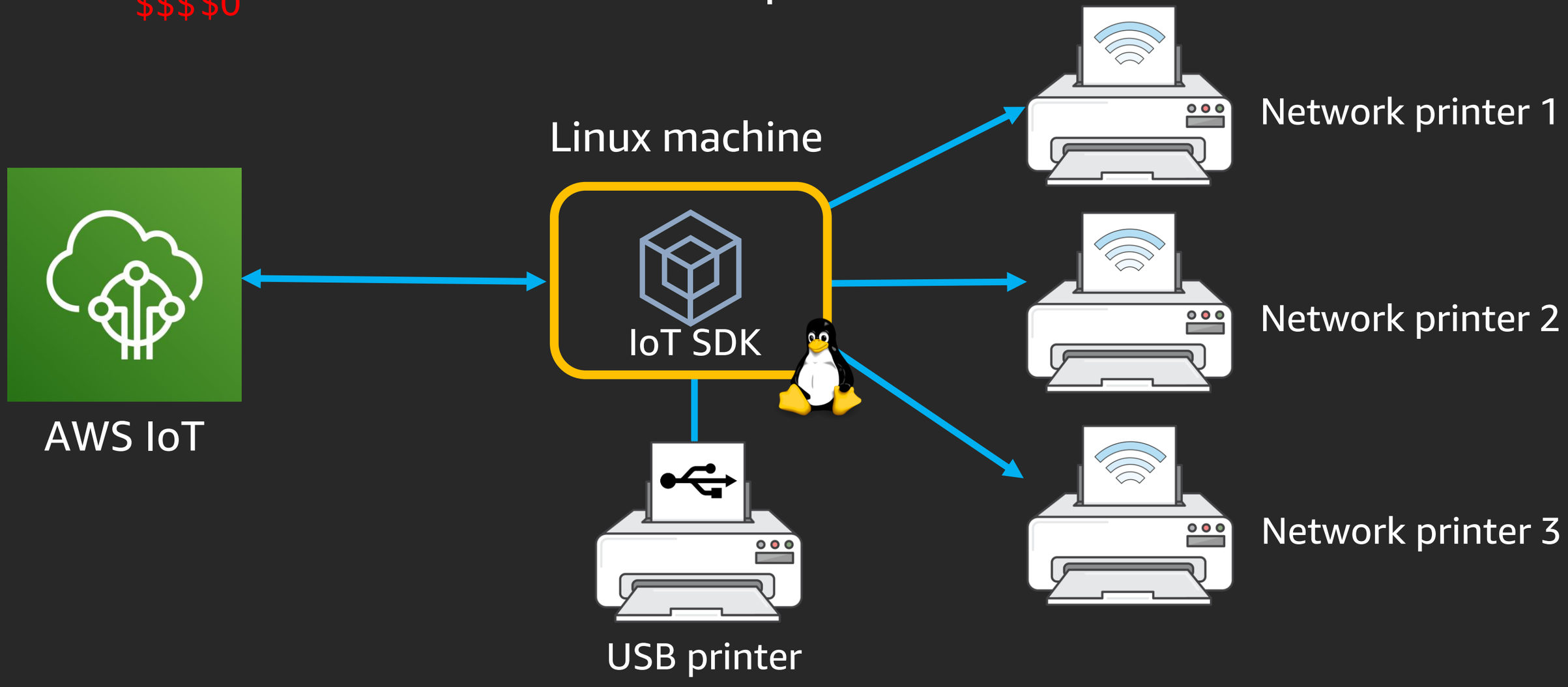
External FC


Service network
Externalized web server
Web server
Printing service
TCP socket using local IP
VPN
Browser tools
Linux machine
USB printer
Network printer
FC network

Smarter idea

Frugal solution of reusing existing compute of USB printers

$$$$0



Journey from prototype to production

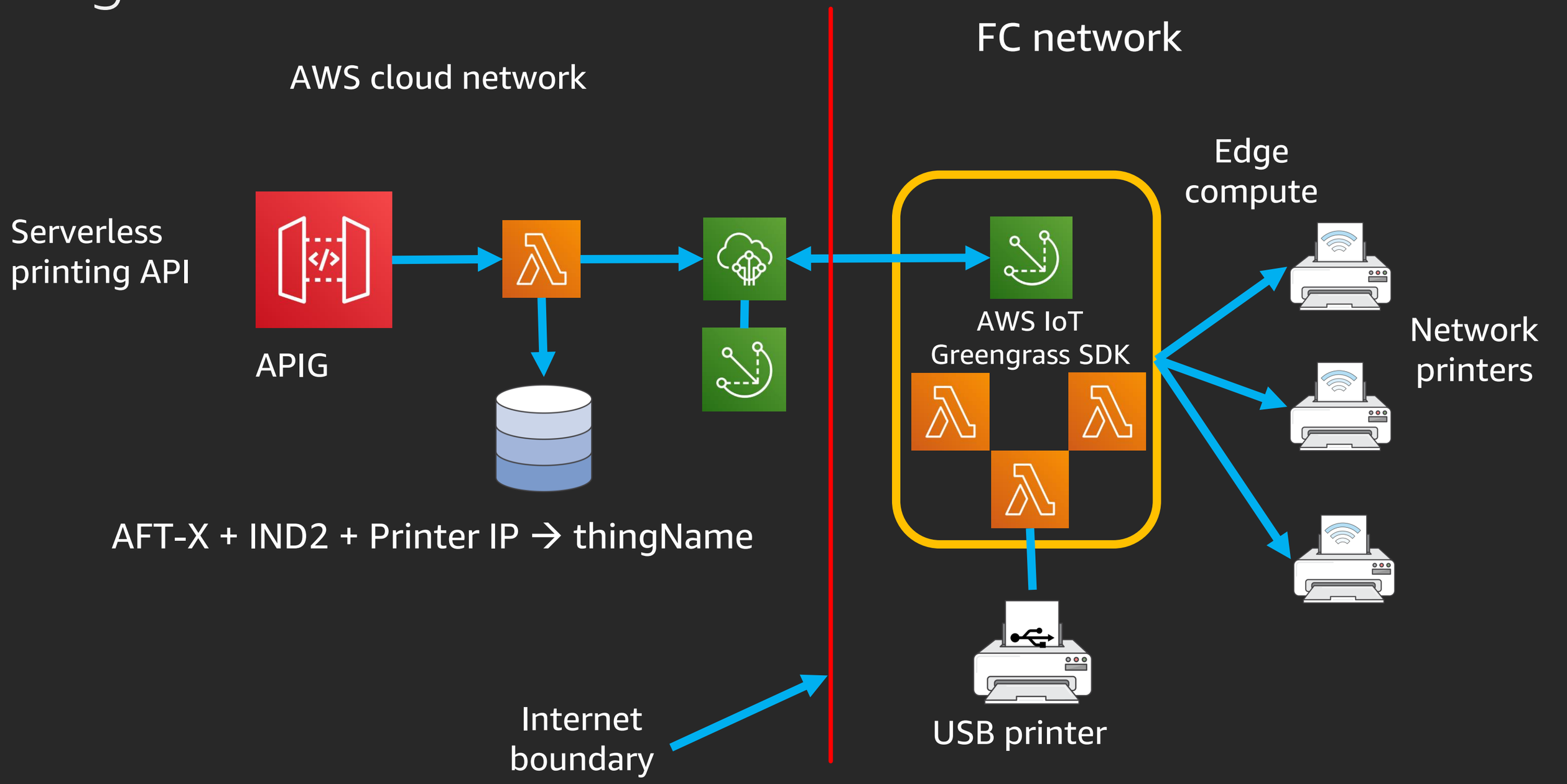




Prototype vs. production solution at Amazon scale

- Multiple-platform support, code packaging, phased deployments
- Automated provisioning solution
- Synchronous application programming interfaces (APIs) in AFT
- Sequencing of commands
- Redundancy of devices
- Print idempotency
- Large print docs
- Monitoring, alarms

High-level architecture



Things to keep in mind

- AWS IoT quality of service concepts
- No ordering of connect and disconnect events
- AWS IoT Greengrass deployment success: Does that mean your Lambda functions are running fine?
- On-the-fly new Lambda functions at edge
- Container vs. no-container AWS IoT Greengrass approach
- On-demand Lambda

Thank you!

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