

Provisioning of IoT devices: Home Routers

Provisioning Initial Device Identifiers into Home
Routers

[draft-richardson-homerouter-provisioning-00](#)

Michael Richardson
<mcr@sandelman.ca>

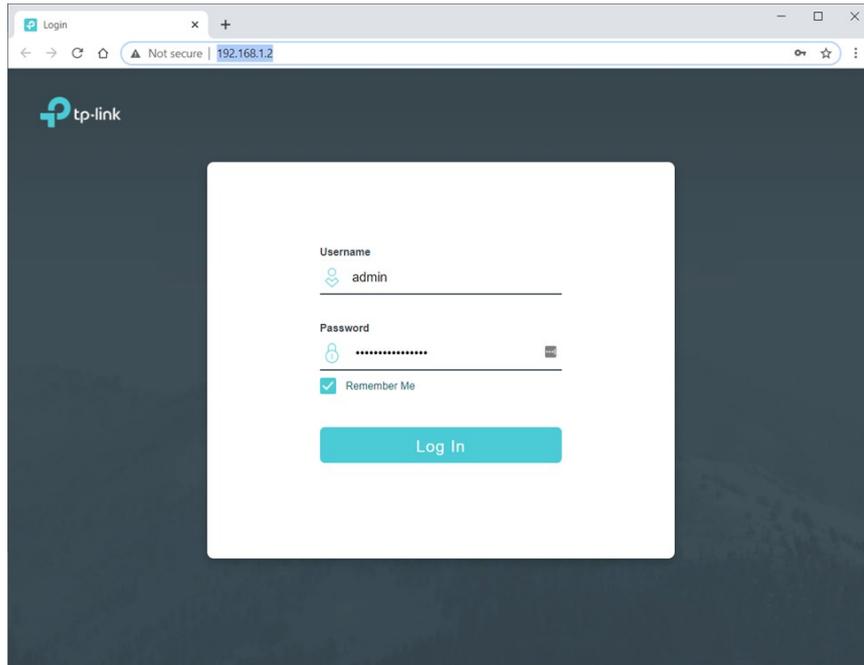
Motivation

- Insert “Murai” story (now close to 5 years ago!)
- admin/admin password is not good enough, but as soon as one does better, malware might collect/observe http. How?
 - ARP spoofing of 192.168.1.1 is trivial, and even used intentionally to add VPN-security
- Implementation of t2trg-idevid-considerations, anima-masa-considerations document

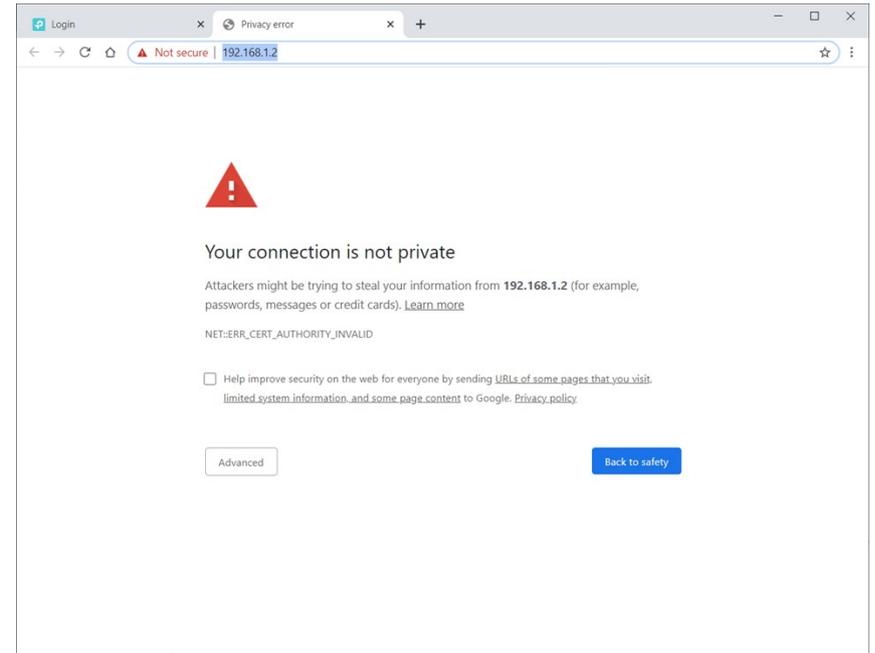
Motivation (2)

VS

Implicitly
Insecure

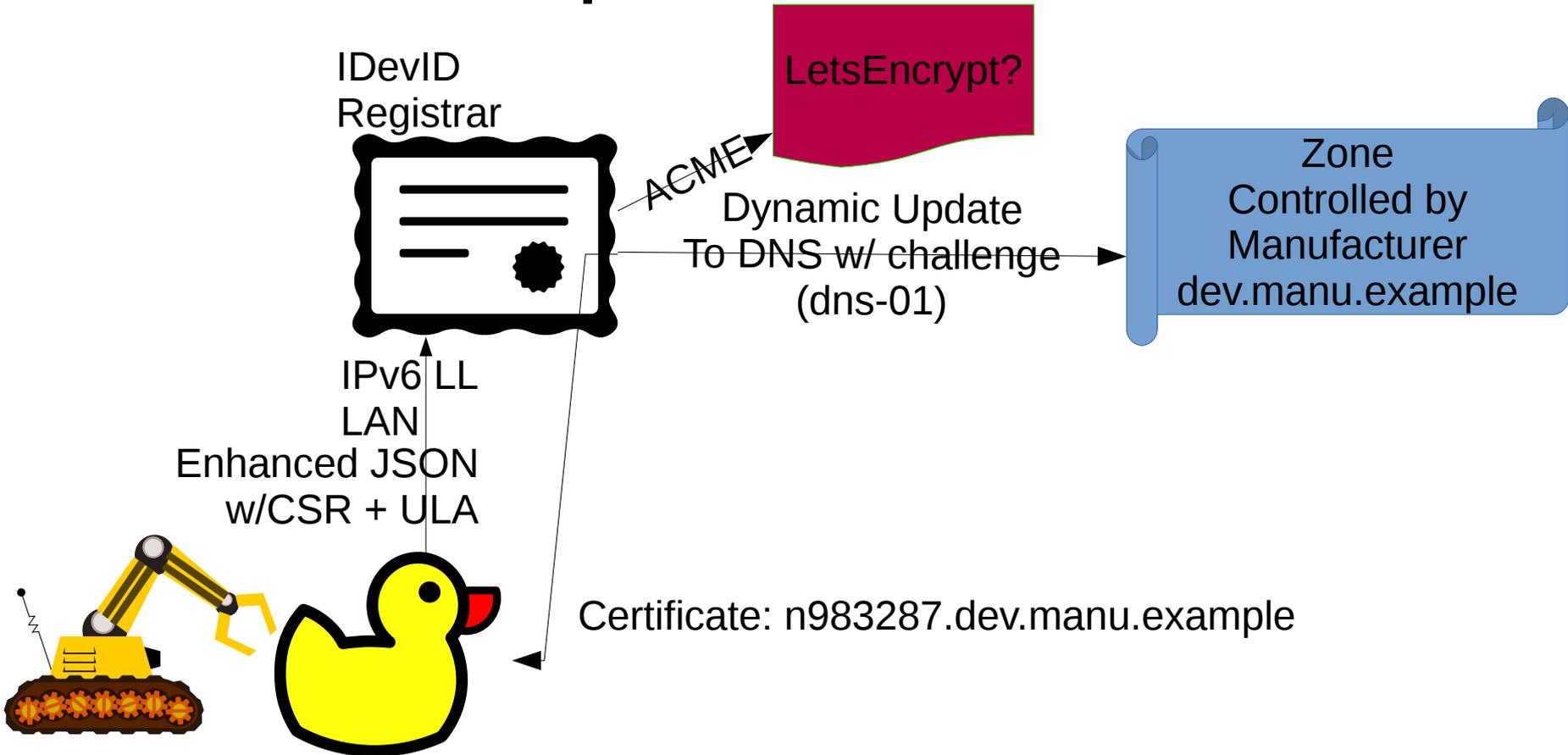


Explicitly
Insecure



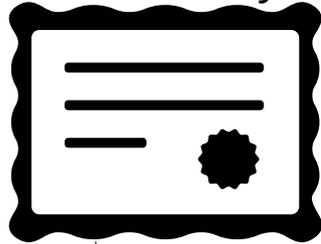
These images from IoTSF ManySecured

Solution Outline part 1: put IDevID in



Solution Outline part 2: populate DNS with name

IDevID
Cert Authority

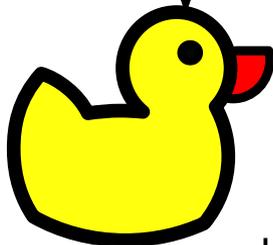
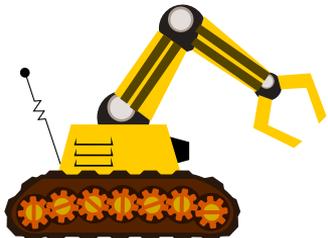


Dynamic Update
To DNS w/ AAAA

Zone
Controlled by
Manufacturer
dev.manu.example

IPv6 LL
LAN

n983287.dev.manu.example
IN AAAA fdd4:444c:fc9f::1

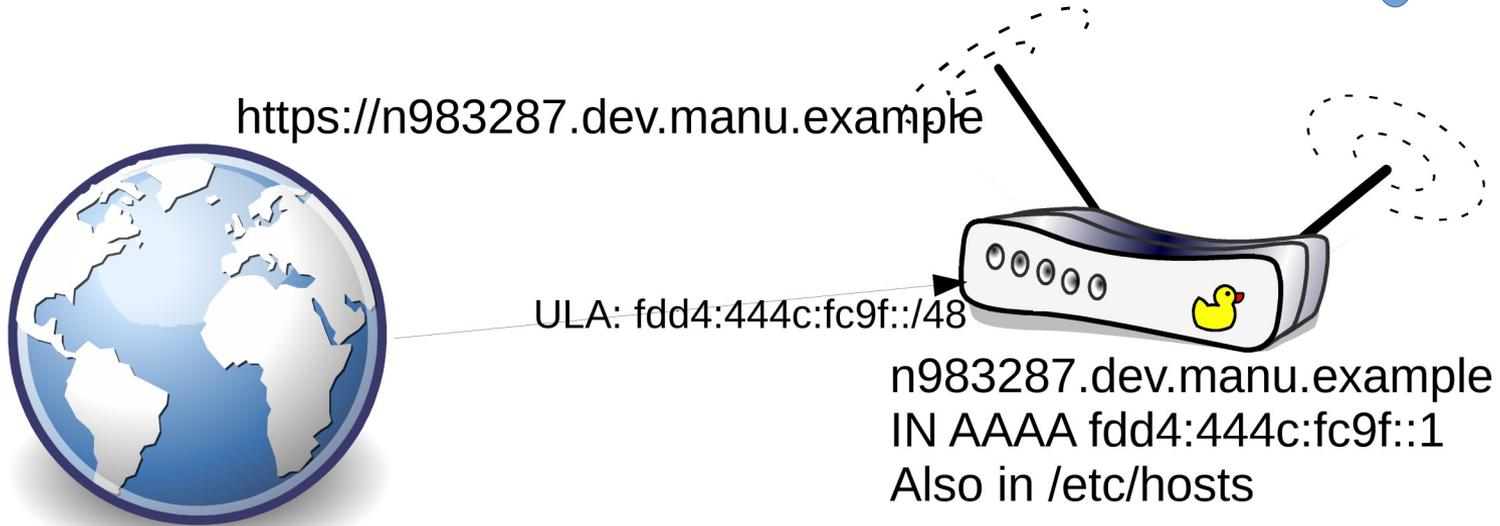


Certificate: n983287.dev.manu.example

ULA: fdd4:444c:fc9f::1

Solution Outline part 3: deployment

Zone
Controlled by
Manufacturer
dev.manu.example



Issues

- Expiry of Certificate while device in in the box
 - Requires online renewal when device online
 - What is device needs human intervention to get online?
- Unwillingness of some browsers to do IPv6 lookups
 - Hack, also include 192.168.1.1 in /etc/hosts ICK.
 - May be limited to Alphabet browsers/systems

Conclusion

Needs some work

Co-authors sought

Some overlap with DANISH (maybe)