Technical Committee

Open Roaming Platform

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CONNECTING A SMARTER PLANET

LoRa Alliance®

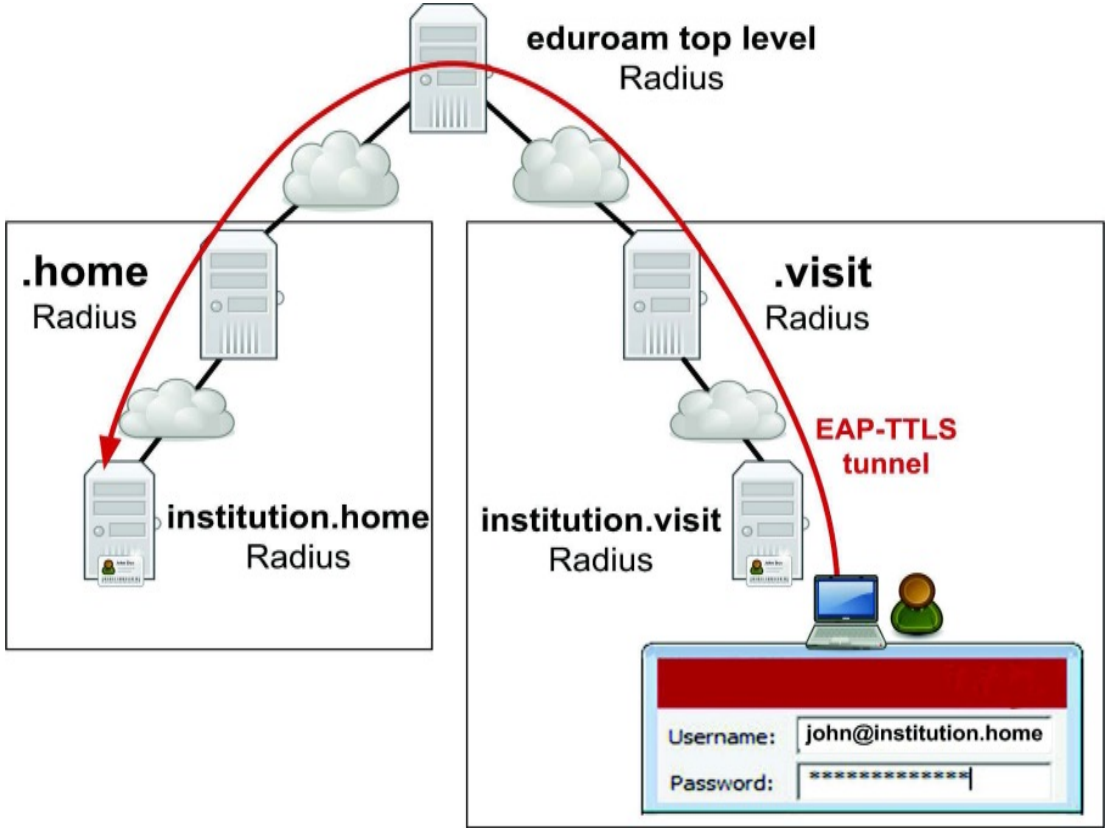


Motivation

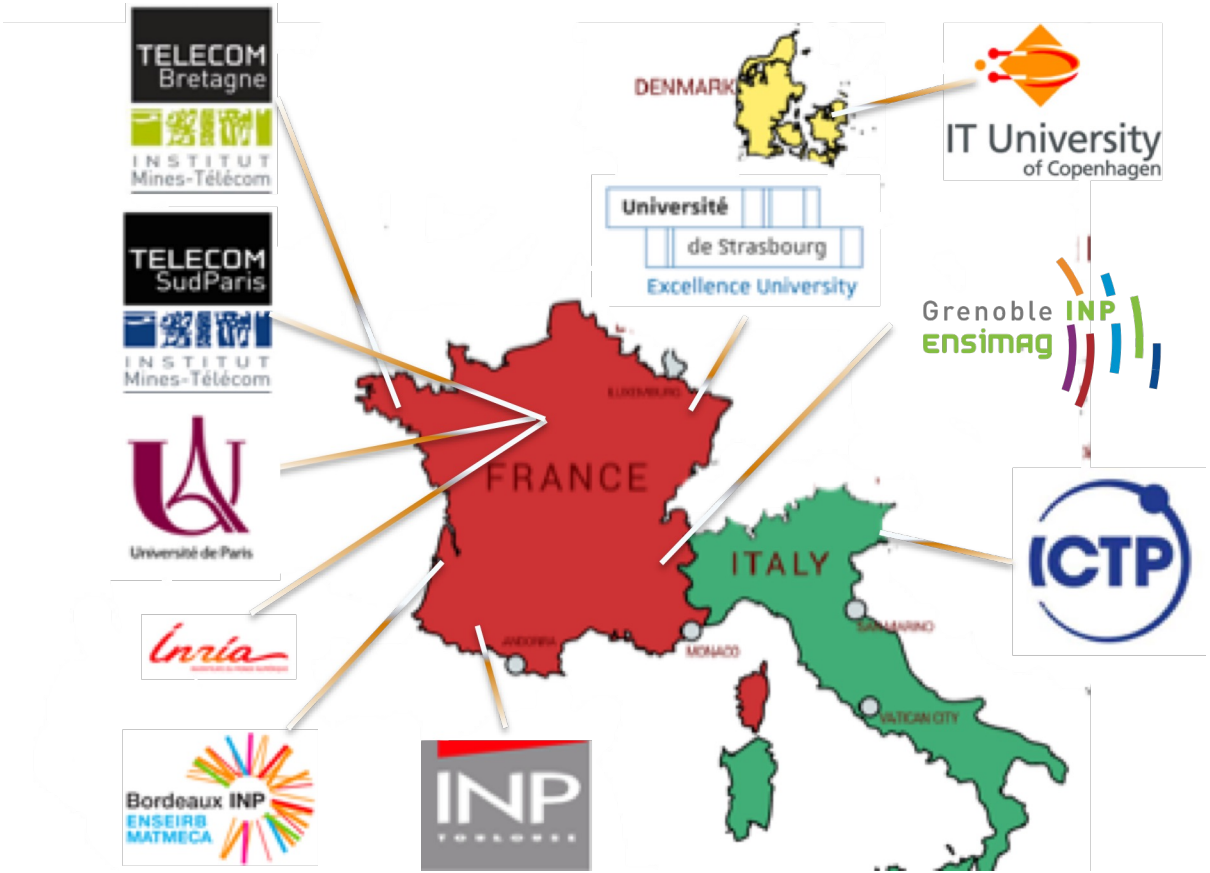
- To set up an Open/Free LoRaWAN roaming infrastructure for the community
- Initially start with Research Institutions
- Interaction with Roaming-Hub
- Include real use-cases

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Use-Case - EduRoam



Institutions who have expressed interests to test



Issues and Solutions

- Issue - Open Source software for roaming
  - Solution - Beta version of Chirpstack (chirpstack.io)

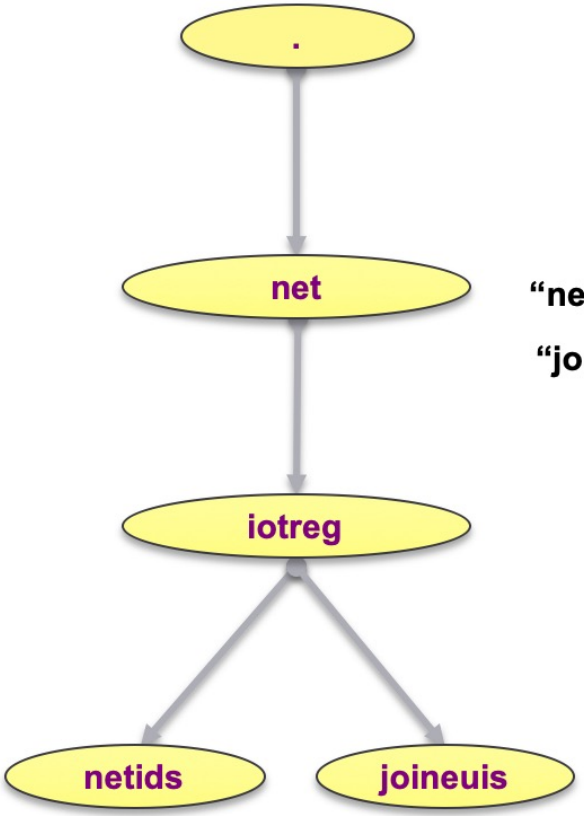
- Issue – LoRaWAN DNS Service
  - Solution – iotreg.net (Operated by Afnic)

- Issue – Scalable Secured communication between the home and visited network backends
  - Solution – Use the well tested PKI infrastructure (Afnic as Root CA)

- ***Passive Roaming OTAA tested with the « Open Roaming platform »***

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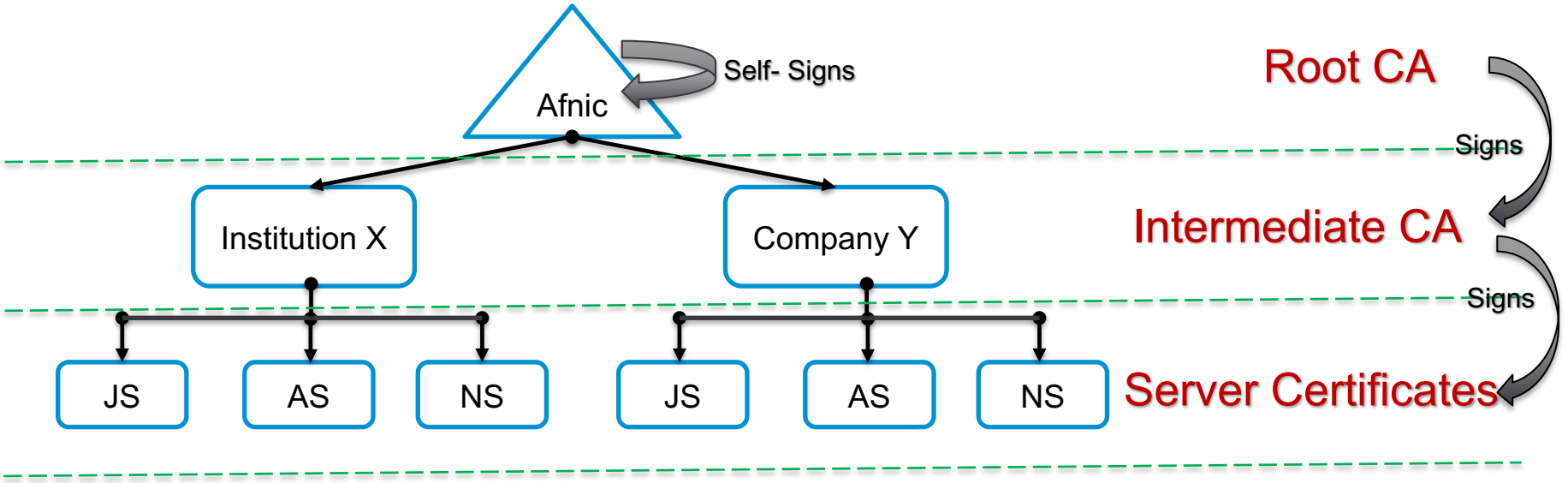
DNS Service



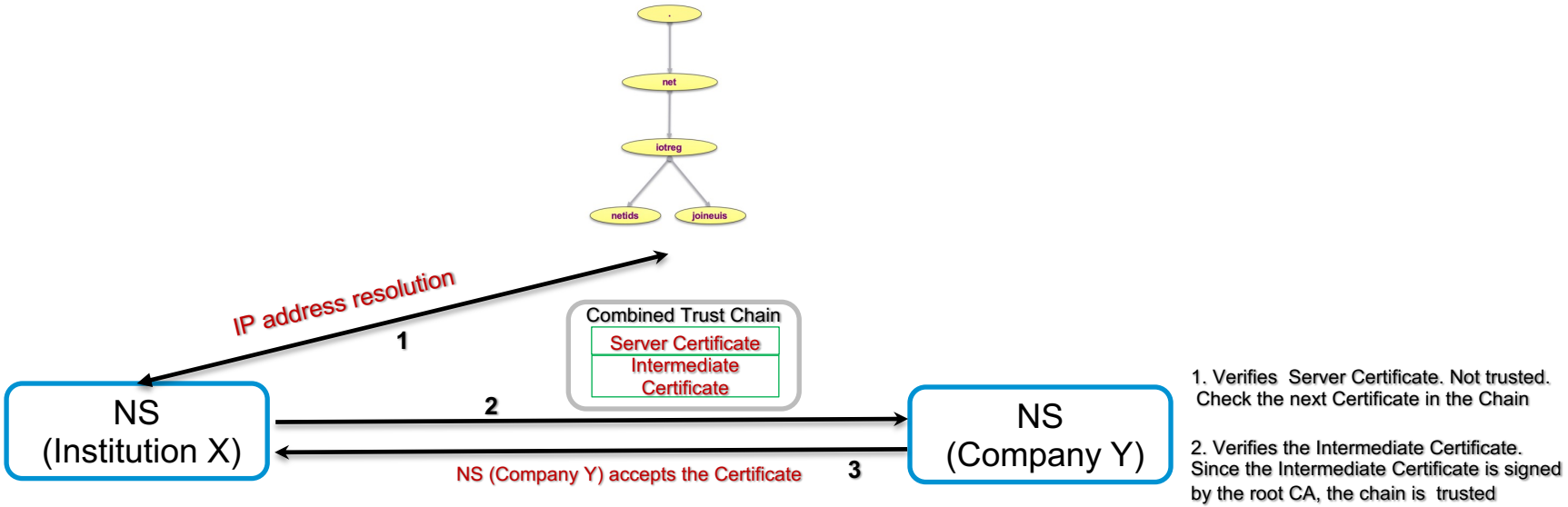
“netids.iotreg.net” => Roaming Service

“joineuis.iotreg.net” => OTAA Service

Public Key Infrastructure (PKI) – Certificate Provisioning Process



Public Key Infrastructure (PKI) – Certificate Validation Process



Benefits of the Open Roaming Platform

- No out of band configuration for NS/JS/AS authentication
- Authentication using port 443. Hence no worry about firewall settings
- Scalable: Ready for billions of devices as the platform uses the classical DNS and TLS infrastructure that has been operationally tested in the Internet
- No cost involved – Self-Signed Certificates and Open DNS infrastructure
- For more info : https://github.com/AFNIC/IoTRoam-Tutorial/
- To participate; contact Sandoche.Balakrichenan@afnic.fr AND antoine.bernard@afnic.fr

Resource Materials