

SDF Model-Based IOT Gateway (ASDF/NIPC)

**IETF 123
19–20 July 2025
Madrid, Spain**

Hackathon Plan

- Drafts involved:
 - draft-ietf-asdf-nipc
 - draft-ietf-asdf-sdf
 - draft-ietf-scim-device-model
- Review and solve issues in draft-ietf-asdf-nipc
- Interop with open-source and vendor implementations of an IoT Gateway

What got done - Interop Setup



BLE device



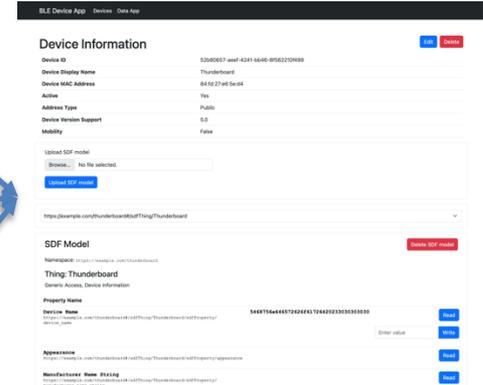
Ericsson Research GW implementation



Cisco GW implementation



Open-source GW implementation



Control app

What else got done/What we learned

- Expand the scope of applicability of NIPC to IP devices
- Improvements on the SDF extensions and NIPC specification
 - NIPC protocol mapping in SDF
 - Defining NIPC problem types based on RFC 9457
 - 26 new issues on GitHub created and solved during the hackathon!
- Created tooling to create SDF models with NIPC protocol mapping
- Initial design for a SCIM extension for SDF information
- Hackathons are great for fast progress

Wrap Up

Team members:

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Bart Brinckman
Carsten Bormann
Jan Romann
Lorenzo Corneo
Michael Richardson
Rohit Mohan

First time @ hackathon

Lorenzo Corneo
Jan Romann

Learn more and contribute to the open-source:

<https://github.com/iot-onboarding/tiedie>

Read the drafts:

[draft-ietf-asdf-nipc](#)

[draft-ietf-asdf-sdf](#) (approved)

[draft-ietf-scim-device-model](#)