Ad-Hoc IP Autoconfiguration Solution Space Analysis
draft-bernardos-autoconf-solution-space-02

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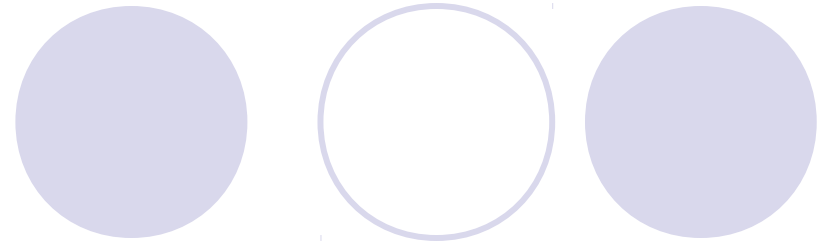
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Outline

- A bit of history
- Goals of the document
- Issues of MANET autoconf solutions
- IP autoconf solution space analysis
- Next Steps
- A question to the WG

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A bit of history

- -00 version submitted in November 2007
- Latest version (-02) not updated since November 2008
  - References to the former autoconf-statement and manet-arch documents...
  - Therefore, it does not reflect all of the latests discussions around the addr-model
  - Some terminology is also a bit outdated now

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Goals

- ## Analyse the solution space of IP autoconf
  - Classifies possible approaches to solve the autoconf problem
  - Provides also pointers to existing proposed solutions
  - Identifies benefits and tradeoffs of each of the approaches
    - Many autoconf scenarios, many potential solutions

- ## Describe the issues of IP autoconf
  - Depending on the target scenario/requirements, issues vary

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Issues of MANET autoconf solutions

- Additional signalling overhead
- Increased protocol complexity and processing load
- Scalability
- Security considerations
- Convergence time
- Routing protocol dependency
- IP address space assignment efficiency

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IP autoconf solution space analysis (1)

- Which entities are involved?
  - MANET Routers (distributed approach)
  - MANET Routers and Border Routers
  - MANET Routers and distributed servers
  - MANET Routers and centralised server(s) (centralised approach)
- What type of IP delegation: addresses or prefixes?
- How are IP addresses obtained?

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IP autoconf solution space analysis (2)

- How is IP address uniqueness guaranteed?
  - How is address uniqueness detection performed?
  - When address uniqueness detection is performed: pre-service and/or in-service?
  - How are address conflicts resolved?
- How is signalling performed?
- Are existing protocols modified?
- What are the security considerations?

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Next (possible) Steps

- (as usual) Comments are very welcome
- Update the draft!
  - It's almost 3 years old
  - Reflect current WG status, reference addr-model document, remove references to autoconf-statement and manet-arch documents
- Improve the document based on WG feedback
  - Authors are willing to do the job of edit the document and improve it reflecting WG comments
- This document may be very useful for the solution design work

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A question to the WG

- Does the WG consider this effort worthwhile?
  - The NEMO WG generated a similar doc in the past when looking at NEMO RO
  - It might be useful for the solution design

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