

# Monami6 Working Group meeting

## *Mobile Nodes and Multiple Interfaces in IPv6*

IETF 67 – San Diego  
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<http://www.nautilus6.org/ietf/monami6/>

- Blue sheet
- Scribe

# Web links

- Check the [tools@ietf](http://tools.ietf.org/wg/monami6/) page
  - <http://tools.ietf.org/wg/monami6/>
- The additional page for Monami6 is on the wiki now
  - <http://www.nautilus6.org/ietf/monami6/>
  - Provide information on meetings and documents
  - If you would like to add materials, contact us

# Agenda (1/2)

1. Welcome, agenda bashing ..... 5 minutes
  - Chairs
2. WG documents status ..... 15 minutes
  - draft-ietf-monami6-multihoming-motivation-scenario-01 (chairs)
  - draft-ietf-monami6-mipv6-analysis-01 (chairs)
  - draft-ietf-monami6-multiplecoa-01 (Ryuji Wakikawa)
3. Aviation and aerospace multihoming issues ..... 15 minutes
  - Terry Davis and William Ivancic

# Agenda (2/2)

1. Flow binding in Mobile IPv6 ..... 15 minutes
  - draft-soliman-monami6-flow-binding-03
  - Hesham Soliman
6. Filter rules ..... 15 minutes
  - draft-larsson-monami6-filter-rules-01.txt
  - draft-kauppinen-monami6-binding-filter-rule-00.txt
  - Conny Larsson
6. Interface selection for a multihomed mobile network ..... 5 minutes
  - draft-park-mis-01.txt
  - Semun Lee
7. Failover for Multiple Mobile Routers in a Mobile Network .. 5 minutes
  - draft-ryu-nemo-mr-failover-02.txt
  - Seungjae Lee

# Update of

## Motivations and Scenarios for Using Multiple Interfaces and Global Addresses

draft-ietf-monami6-multihoming-motivation-scenario-01.txt

### Authors

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**K. Kuladinithi** (University of Bremen)

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- Address Pekka comments:
  - Scenarios are too optimistic
  - Remove the satellite technology from scenarios

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- Scenario 3.3: Need to Set Up Preferences
    - Pekka: “technically correct, but seems not to be economically solvable”
- ==> We describe more static preferences

## Old:

“Nami works at home for a publishing company. She has an in-housenetwork and get access to the Internet via ADSL, a public 802.11b WLAN from the street and satellite. She has subscribed to the cheapest ADSL service with limited uplink bandwidth. Also, the satellite link she has access to is downlink only, but it is extremely cheap for TV broadcasting. She has noticed the 802.11b link is unreliable at some point in time during the day, so she chooses to send requests and periodic refreshments for joining the TV broadcasting via ADSL rather than 802.11b although it is free. On the other hand, she has configured her network to use the 802.11b link at night to publish web content comprising video. Once a week, she communicates with overseas peer staff by videoconferencing. Voice being the most important, she has configured her VoIP session over ADSL. Video is sent at maximum rate when 802.11b is working fine, otherwise the video is sent at lower rate.”

## New:

“Nami works at home using her connection to the Internet via ADSL and a public 802.11b WLAN from the street. She is also subscribed to digital video broadcasting. Because the public WLAN is not secure, she downloads email from her company using the ADSL link even though the WLAN service is free. When she is accessing her personal free web-mail account, she would then use the WLAN service. She has noticed the 802.11b link is unstable during the day, so she chooses to send requests and periodic refreshments for joining the digital video broadcasting via ADSL rather than the free WLAN services.”



# Update of draft-ietf-monami6-multihoming-motivation-scenario

- Scenario 3.5. Need to Dispatch Traffic over Distinct Paths
    - WLAN is not usable on highways
- ==> Change WLAN to Wimax technology for cars  
Internet connection

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- Scenario 3.7. Need to Accelerate Transmission
  - Use multiple paths to accelerate transmission
  - Distribute flows over multiple interfaces

Pekka ==> this scenario assumes that the download flows are separable, i.e., different flows. In the specific case described here, this is not given, and in the general case when you have something you'll need to finish ASAP, I'm not sure if this kind of approach is applicable except possibly when using p2p file sharing techniques.

Authors ==> **We didn't make any change**, because this shows the problem that we need to solve: when you launch a download, take the <http://www.nautilus6.org/ietf/monami6/> less loaded interface

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- **Section 4. Goals and Benefits of Multihoming**

Address the comment from Frederic Klamm: added this text:

These benefits and goals listed here are by no means distinct and separate; most of them overlap with one another. It is not the objective here to classify the benefits and goals into different non-overlapping constituents. Instead the objective is to list the possible benefits and goals different people have when deploying a multihomed node.

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- Flow redirection has been added to several places
  - Goal and benefit

## 4.3 Flow redirection

To be able to redirect flow from one interface, or one address to another one, without having to re-initiate the flow. This can be due to preference changes or upon network failure.

- Analysis - Case 1: One Interface, Multiple Prefixes

Flow redirection: YES

The node might need to redirect a flow from one address to another for several reasons. For example, if one of the IPv6 prefix becomes unavailable, flows using the corresponding prefix need to be redirected on an address using another prefix

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- **Analysis - Case 2: Several interfaces**

Flow redirection: YES

In case of a change in user preferences, or a failure, flows might need to be redirected from one interface to another one. Flows can be redirected individually or all flows attached to an interface might be redirected at once.

# Update of draft-ietf-monami6-multihoming-motivation-scenario

- 5.2. Case 2: Several Interfaces
  - Aggregated Bandwidth

Change text from

With multiple interfaces connected **to a link**, the node generally will be able to benefit from an increased aggregated bandwidth.

With multiple interfaces connected **to different links**, the node generally will be able to benefit from an increased aggregated bandwidth.

# Conclusion – next steps

- **Need more reviews**
  - Due on Nov. 2006 (submission to the IESG)
- **Next steps**
  - Ask the WG to review the document
  - Issue a WG last call in few weeks

# Status of

  

# Analysis of Multihoming in Mobile IPv6

draft-ietf-monami6-mipv6-analysis-01.txt

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# Status of WG documents

- Waiting for shepherd reviews
- Also needs WG review
- Proposed schedule
  - Focus first on goals and motivation draft
  - Issue a WG LC on draft-ietf-monami6-multihoming-motivation-scenario
  - Focus on MIPv6 analysis
  - Issue a WG LC on draft-ietf-monami6-mipv6-analysis