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I. MIF designed Transport Protocols like SCTP, MPTCP provides:
   - Bandwidth Aggregation
   - Multihoming
   - Mobility (Soft Handover)

Problem Satatement: On untrusted and unreliable WLAN, ISPs need
   - To Secure with IPsec End Users’ Communications
   - To make IPsec Secure Communication also benefit from the MIF features
   - Currently IPsec does not address MIF features

II. IPsec MIF features
   - What IPsec badly configured causes?
   - IPsec Security Requirements

III. What is Next?
Bandwidth Aggregation

ISP Network

WLAN Provider
Bandwidth Aggregation
Multihoming

ISP Network

WLAN Provider
Multihoming

ISP Network

NEW IP ADDRESS

WLAN Provider
Multihoming

NEW IP ADDRESS

ISP Network

WLAN Provider
Mobility Soft Handover
Mobility Soft Handover

ISP Network

WLAN Provider

NEW IP ADDRESS
Mobility Soft Handover

ISP Network

WLAN Provider
Offload Context

On WLAN ISPs need:
- MIF features to enhance End User Experience
- To Secure the Communication (IPsec)

How to deal with IPsec?
- Bad IPsec configuration breaks Communication: We don’t want it
- Initiating a new IPsec configuration for each new Interface multiplies exchanges, IKEv2 negotiations, authentications...: We don’t want it

We want IPsec provides the same features as MIF Transport Protocols like MPTCP, SCTP...
- MOBIKE address the problem for a single Interface: We want to extend this to MIF
Ex. Mobility
Ex. Mobility
Mobility Soft Handover

ISP Network

WLAN Provider
Mobility Soft Handover

NEW IP ADDRESS
ADD Interface for Traffic

ISP Network

WLAN Provider
Mobility Soft Handover
Mobility Soft Handover
Mobility Soft Handover
Mobility Soft Handover

ISP Network

WLAN Provider

NEW IP ADDRESS
MOBIKE

MOBIKE does not work because it deals:

- With a Single Interface
- Tunnel mode only
- Multihoming and Mobility (Hard Handover)

MOBIKE needs to be extended for:

- Multiple Interface: ADD / REMOVE
- Traffic Selector for Mobility / Multihoming / Multiple Interfaces Management
- IPsec Transport mode
Future Work

We would like it to be a Working Group Document

Check if there are other use cases than offload

- Vehicular / MPTCP / Connecton Manager

We expect to provide a finalized version of the draft by next IETF