DMM Framework based on Functional Elements

draft-liebsch-dmm-framework-analysis-02

M. Liebsch, P. Seite, G. Karagiannis

IETF88, Vancouver
DMM WG
08th November 2013
Preamble..

- DMM can be enabled by deployment
  - Mobility protocols and components
  - Other components, e.g. Transport Network
  - Interworking between these components

- Proven technology is available in operators’ TN
  - IP, IP-MPLS, SDN technology

- Objectives
  - Provisioning of technology to enable operators with tools to deploy DMM in their network
  - Consider extensions of existing protocol functions
  - Consider provisioning of hooks and definition of attributes to enable interworking
  - Increase gain in deploying DMM
    - Increased networking performance (data path)
    - Lower costs (transport, encapsulation, data path)
Methodology

• A protocol-agnostic **Functional Framework** supports building DMM solutions around existing mobility protocols
  - Enables various deployment models (self-contained mobility protocols or by system integration)

• Used to build missing capabilities (gaps) to accomplish DMM
  - Distributed mobility context management and transfer between distributed anchors
  - Traffic steering after runtime anchor change
  - Advanced traffic steering by mobility state exposure and inter-working with transport network (Forwarding Control, Forwarding Elements)
Methodology

• This framework document defines 4 Functional Elements (FE) to close identified gaps (mobility control and data path management)
  – Supports the specification of required protocol gaps

• Document defines clear reference points between FEs
  – Supports the specification of hooks/attributes to enable optimal deployment
One abstract deployment model

Note:
For detailed deployment models with MIPv6, PMIPv6, please refer to the draft
Another abstract deployment model

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Summary: What’s Next?

• DMM analysis and specification of extensions should be done on a functional level

• Proposed functional framework enables the specification of protocol gaps and hooks for optimal deployment

• WG indicated large interest in working on a framework at IETF87

• Framework considered mature
  – Received comments will go into next revision
  – Publish with reasonable effort and low latency
  – Considered as suitable documentation to support next steps in the DMM WG