Applicability of Proxy Mobile IPv6 for Service Provider Wi-Fi Deployments

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Motivation

• PMIPv6 is specified as a mobility protocol which is access agnostic. The specifications do not make any assumptions on the access technology.
• There has been lot of momentum around the use of PMIPv6 based Architecture models for SP Wi-Fi deployments
• In addition to the requirements around mobility, various Wi-Fi specific deployment needs can be addressed by the PMIPv6 protocol and the extensions
• Objective is to go over the architecture use cases for SP Wi-Fi based up on PMIPv6 and discuss some of the key deployment considerations
Scope of the document

• Architecture Models
  o Flat Model Deployments with EPC Integration
  o Hierarchical deployments with domain chaining

• WLAN Access Network Types
  o Controller based
  o Autonomous

• Deployment Considerations
  o IP addressing
  o Access authentication & user identity
  o Realizing Point to Point link models on WLAN access
  o Policy Provisioning
  o Accounting Considerations
  o SIPTO Considerations
Flat Model Deployments

- AP
- WLC+ MAG
- LMA+ WAG
- BILLING
  - RADIUS
  - DIAMETER
- PCRF
- CAPWAP
- PMIPv6
- Internet

- RADIUS
  - DIAMETER
Hierarchical Model Deployments

- **AP**
  - CAPWAP

- **WLC+ MAG**
  - PMIPv6

- **L1 LMA+ L2 MAG**
  - PMIPv6

- **L2 LMA**
  - RADIUS/DIAMETER

- **BILLING**
  - RADIUS/DIAMETER

- **PCRF**

Localized Services

Centralized Services
Hierarchical Model Deployments: Packet Core Integration

WLAN Access

- AP
- CAPWAP
- WLC+ MAG
- PMIPv6

Localized Services
- SIPTO
- Localized Services

EPC

- HSS
  - 3GPP AAA
- BILLING
- PCRF
- DIAMETER

Centralized Services

- L1 LMA+
  - L2 MAG
  - (PMIPv6/GTP)
  - S2a
- L2 LMA
  - P-GW
Thank You!