

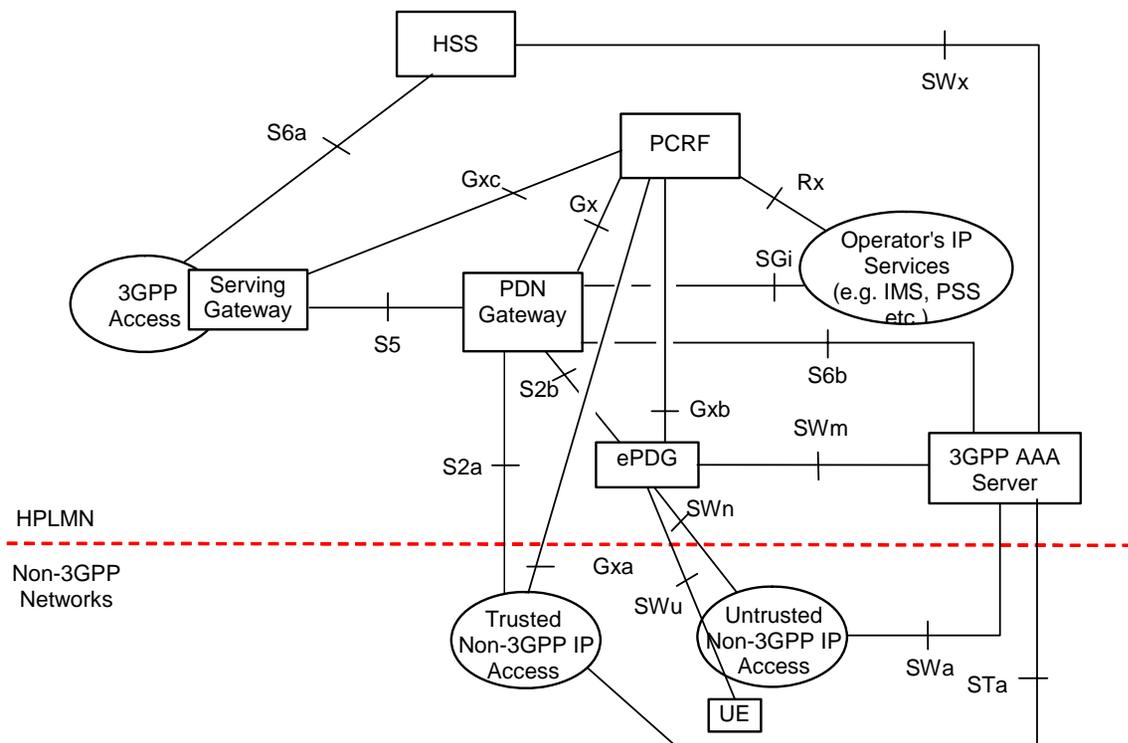
# Roaming Scenarios for WLAN Access

Verizon Wireless  
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# Overview

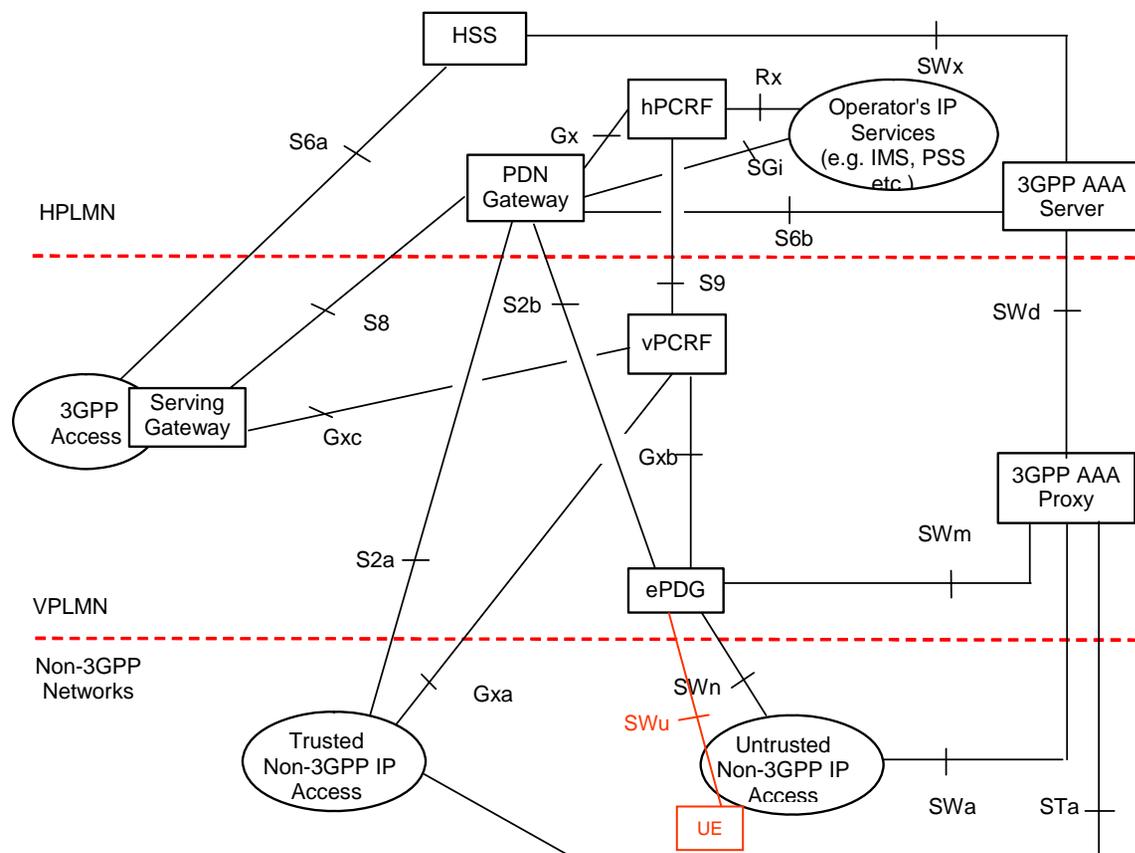
- ❑ Roaming Scenarios using WLAN
  - Non-roaming EPS but roaming on WLAN access only
  - Roaming EPS Architecture – Home Routed
  - Roaming EPS Architecture – Local Breakout
  
- ❑ Infrastructure Considerations
  
- ❑ UE Considerations
  
- ❑ Summary

## Non-Roaming Architecture within EPS using S5, S2a, S2b



- Scenario where HPLMN has roaming agreement with WLAN provider
- GTP-based S5 interface already deployed
- ePDG is owned by HPLMN in usecase for untrusted WLAN Access
- Infrastructure Considerations: Minimal PGW impact since it can re-use GTP-based S5 aspects
- UE Considerations: EAP, IPsec, ANDSF

## Roaming Architecture for EPS using S8, S2a, S2b – Home Routed



- Scenario where HPLMN has roaming agreement with VPLMN; VPLMN owns or has agreement with untrusted WLAN Access
- Roaming interface GTP-based S8 is already in deployment
- Infrastructure Considerations: Minimal PGW impact since it can re-use GTP-based S8 aspects
- UE Considerations: EAP, IPsec, ANDSF



# Summary

- ❑ Roaming scenarios identified
  - Agreements between HPLMN and WLAN provider
  - Agreements between HPLMN and VPLMN; VPLMN has Agreements with WLAN provider
- ❑ Infrastructure Perspective: For the roaming scenarios identified where GTP-based S5/S8 are used, there is reduced impact on infrastructure due to use of GTP-based S2b as compared to use of PMIP-based S2b or DS-MIPv6 based S2c on WLAN access
- ❑ UE perspective: The impact due to addition of WLAN access support using GTP is similar to using PMIPv6
- ❑ Conclusion: From Operator perspective and roaming considerations, option of GTP-based S2b allows network simplicity and efficiencies due to use of single mobility protocol