Backend solutions for AA in the MUSE network supporting FMC

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Network service AA flow (1)
Network service AA flow (2)

Backend solutions for AA in the MUSE network supporting FMC

BroadBand Europe 2007
Network service AA flow (3)
How to route AAA messages in an unbundled network?

Solution:
Identity Selection Hints for the Extensible Authentication Protocol

No CP specific realm specified.
Present list of CP’s to MS.
How to combine connectivity and network service AAA?

Solution:

Generic EAP Encapsulation (GEE)

or

Protocol for carrying Authentication for Network Access (PANA)
How to assign IP addresses in a FMC network? (1)

Bob is already authenticated for network service by NSP1

DHCP relay does not know where to forward the DHCP discover to

Bob is already authenticated for network service by NSP1
How to assign IP addresses in a FMC network? (2)

This works well for Bob, but now Alice joins at the visited location. Alice needs an IP address from her NSP, NSP 2 …

DHCP server address is stored in the access node

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How to assign IP addresses in a FMC network? (2)

DHCP server address from NSP 1 is stored in the access node.
How to assign IP addresses in a FMC network? (3)

This works well for Bob, and now Alice joins at the visited location.

Alice needs an IP address from her NSP, NSP 2 …

MS of Bob adds MS identifier (e.g. MAC address) to AAA message
How to assign IP addresses in a FMC network? (3)

MS of Alice adds MS identifier (e.g. MAC address) to AAA message

Solution:
DHCP relay decision using NAI and Mobile Station ID

AAA server includes address of DHCP server along with MS identifier in Access-Accept message

DHCP server address and MS identifier is stored in the access node

MS of Alice adds MS identifier (e.g. MAC address) to AAA message

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Conclusion

MUSE studied several AAA issues in FMC networks and have found the following adequate solutions:

> How to route AAA messages in an unbundled network?
  • Solution: Identity Selection Hints for EAP (RFC 4284)

> How to combine connectivity and network service AAA?
  • Solution: GEE (IETF draft) or PANA (IETF draft)

> How to assign IP addresses in a FMC network?
  • Solution: DHCP relay decision using NAI and Mobile Station ID
Questions?
Backup slides