

Authentication Extensions for the Dynamic Host Configuration Protocol

draft-pruss-dhcp-auth-dsl-04.txt

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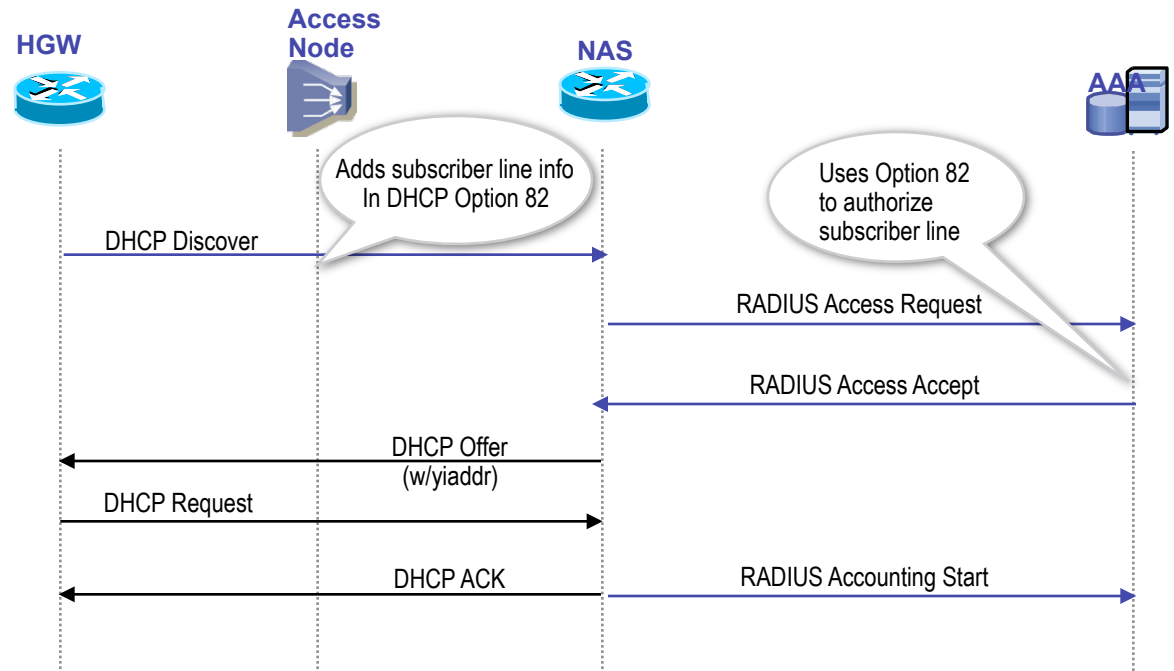
Quick reminder of “DHCP Proxy” to AAA*

Host configuration
provided by
centralized AAA
systems

RADIUS subscriber
attributes are
mapped to DHCP
Options

Driven by the need to
protect massive
investments in
custom AAA systems
and back-end
infrastructure

* This function is available
from a number of NAS
vendors today



Relying on option 82 marking may not be sufficient in some cases:

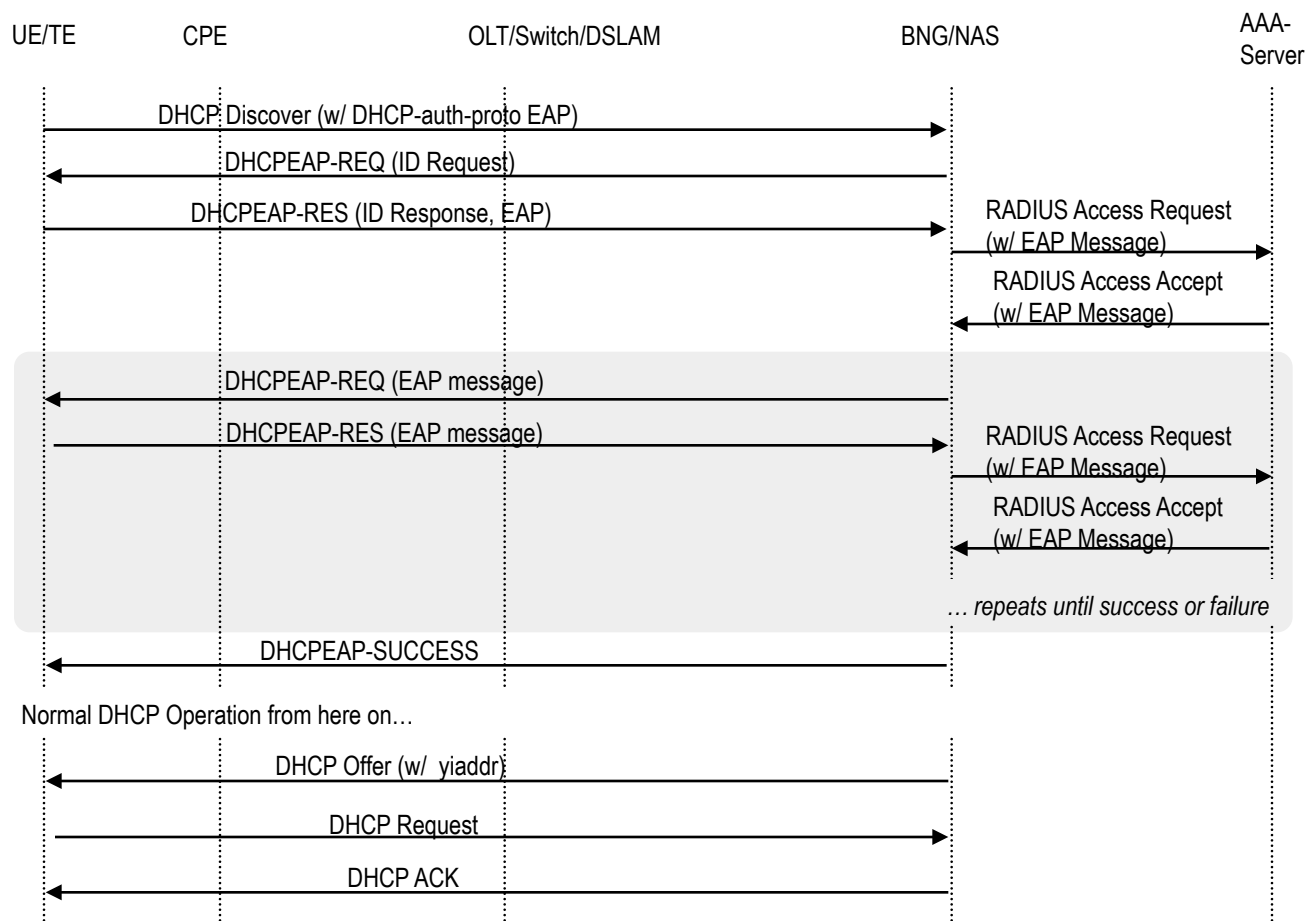
- Migration existing Username/Password systems
- End user controlled retail ISP selection (@domain)
- Subscriber nomadicity
- Line information at the Access Node may not always be reliable

Changes in this version

- Bernie's Vendor-specific Message type for both DHCPv4 and DHCPv6 to hold the EAP messages.
- The final EAP-Success or EAP-Failure message is delivered to the client inside a DHCPEAP message and is then followed by the DHCPOFFER or ADVERTISE.
- Some small details, syntax clarifications and cut & paste errors were also cleaned up.

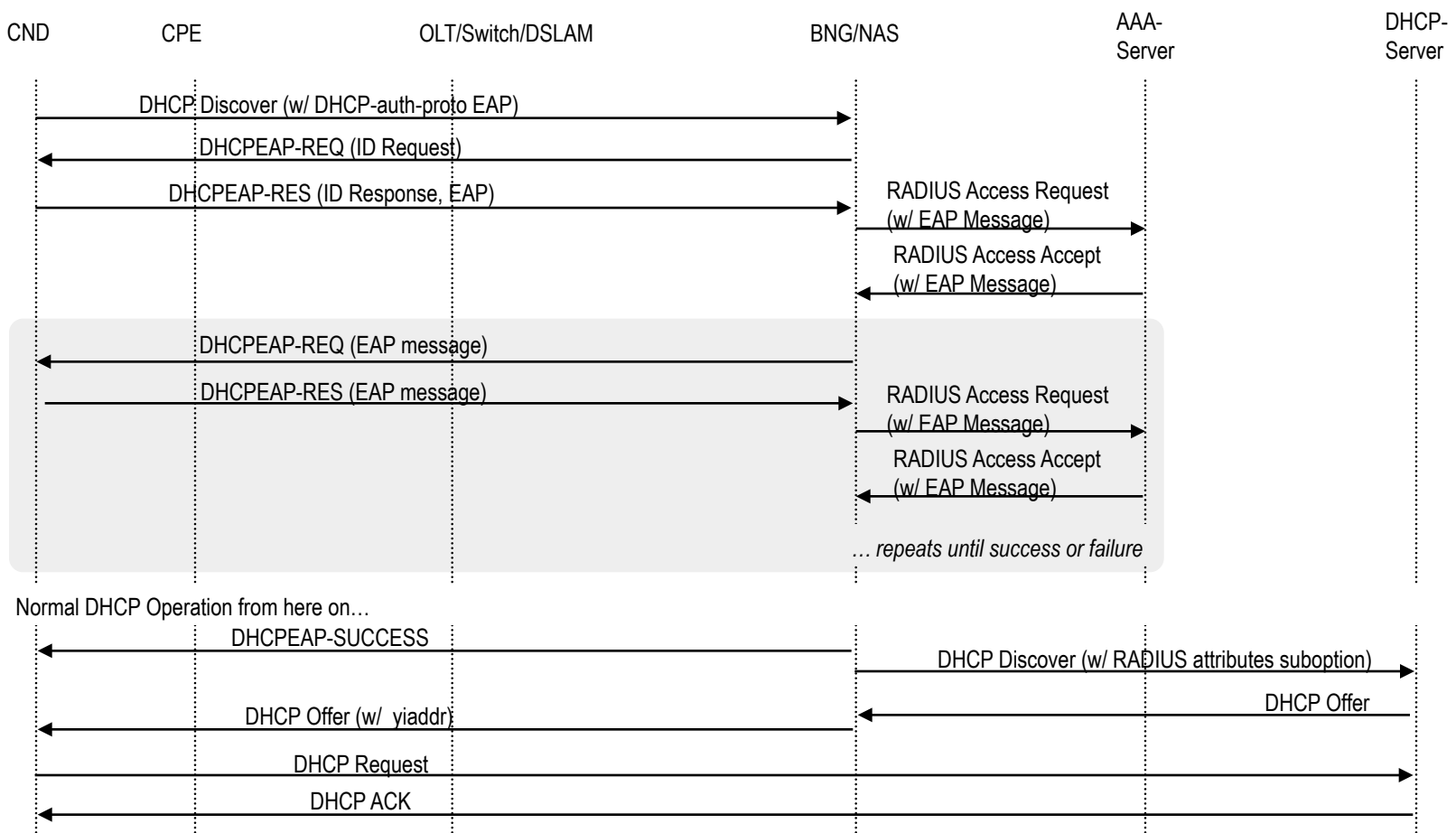
DHCP-Auth

DHCPv4 Message Flow – BNG acting as DHCP-Server



DHCP-Auth

DHCPv4 Message Flow with BNG acting as DHCP-Relay



Cisco's EAPoDHCP implementation

- Supported in IOS DHCP Server
- Open Source DHCP Client implementation
- Based on BusyBox under Linux
 - Separate process triggered by receipt of DHCPEAP
 - Terminates upon receipt of EAP Success/Failure
- Modifications to DHCP are simple
 - Additional “DHCPEAP Capable” Vendor-specific suboption
 - Parsing of “DHCPEAP” Vendor-specific message type
 - Invoking EAPoDHCP subroutine/subprocess
 - Additional CLI options