Extending the Captive Portal ICMP Option

Discussion on the ICMP Options' Contents and User Equipment Identity

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Agenda

- Introduction
- The Problem
- Discussion
Introduction

- draft-wkumari-capport-icmp-unreach-02.txt defines a captive portal ICMP extension
- Enforcement Device needs to identify UE
- Enforcement Device may be on different L2 segment from UE
- API server may be elsewhere in the network
- UE may have multiple NICs, addresses, etc
The Problem

How can all devices involved in the captive portal communicate state and intent for the user equipment?
Some Options

- L2 Address
- L3 Address
- Some combination of L3 address + port (i.e. if dealing with NAT)
- An opaque session ID
Different Flavours

- Implicit
- Explicit
Hackathon

- Explicit L2
- Explicit L3
- Implicit L3 -- simpler, but less flexible
Discussion
Flavours

Advantages and Disadvantages of

- Implicit
- Explicit
How to Identify

Advantages and Disadvantages of

- L2
- L3
- L3 + Port
- Session ID
Security

- L2
- L3
- L3 + Port
- Session ID
Many Clients

- NAT
- CGNAT
- Does each client need its own identity?
How to Proceed

- Do we create requirements for explicit vs implicit?
- Do we recommend one over the other?
- How can we continue to investigate the session ID option?