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?