Extended Attributes

The story so far...

Alan DeKok
Infoblox, Inc.

What we know

- We need “more”
- More... what?
  - Attributes
  - Length extensions
  - Grouping

We know this works

- RFC 2865 VSA, with new IETF Vendor-Id
  - 8-bit attributes
  - No grouping
  - No length extensions
- Implemented in nearly all RADIUS servers
  - If a server doesn't implement this, it doesn't have enough market share to matter!
- Does not meet the need for “more”

We know this meets our needs

- Diameter AVP format
  - 32-bit attributes
  - Grouping (encapsulation)
  - Length
- Multiple implementations
  - Diameter itself,
  - EAP-TTLS
- Does not fit into RADIUS model

Recent proposals

- RFC 2865 VSA++
  - Pro: grouping and length extensions
  - Con: vendor ID zero, adds 'tag' byte
- Diameter AVP--
  - Pro: grouping and length extensions
  - Con: verbose, interoperability questions
- Other?
  - Nothing is perfect..

Other considerations

- Why do we need grouping?
  - Existing structs (location == opaque data)
  - Sub-attributes (3GPP, etc.)
- Extended lengths look to be very useful
- Would an 8-bit type be good enough?
  - Why not just use 16-bits? Or 32?
- Is packet size an issue?
  - Does the extended attribute format matter at all?

Interoperability and Deployment

- All RADIUS servers will need upgrading
  - Maybe just dictionary files, maybe more
- RADIUS clients may need upgrading
  - If they implement the new attributes
- Diameter -> RADIUS gateways
  - All proposals should support this
- RADIUS -> Diameter gateways
  - All proposals must support this