DHCP Server Identification Option

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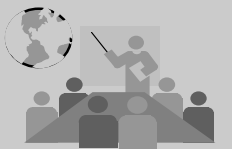
Requirements Statement

- **The DHCP protocol provides no mechanism by which a DHCP client can prefer a binding to a particular DHCP server:**
  - RFC1541 states that the decision is client policy
  - most common implementation is “first offer received”
- **Administrative or end-user “pre-determination” of a binding of a client to a particular server has the following possible applications:**
  - DHCP client segregation (e.g., on a big, flat LAN/subnet)
  - DHCP server production testing
  - private DHCP serving (i.e., non-network-administered)
  - others?

DHCP SIO Proposal



- **Servers optionally include an SIO with the server's administered "id" value in DHCPOFFERs**
- **Client selects among offers received based on pre-configured preferences for some specific server(s) "id" value contained in the SIO**
- **Also, DHCP clients MAY specify an SIO (with a preferred server "id" value) in DHCPDISCOVERs**
- **Option format:**

opcode=tbd	length=2	"server id"

Some Issues

- **Cost vs. benefit of new option for selection based on abstracted "id" value?**
  - e.g., why not just have client selection based on server ipaddr contained in responses?
- **Should server behavior be any different when client specifies a SIO w/ server "id" value**
  - e.g., servers SHOULD(/MUST?) ignore if requested server "id" does not match own
- **SHOULD the DHCP server only respond with SIO option when requested by the client?**