DHCP Option for discovering IEEE 802.21 Information

draft-daniel-dhc-mihis-opt-02.txt

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Outlook on IEEE802.21 Information Service

- *IEEE802.21 is consist of three kinds of services.*
  - *MIES: Media Independent Event Service*
  - *MICS: Media Independent Command Service*
  - *MIIS: Media Independent Information Service*

- *MIIS provides a framework by which a MIH function both in the MN and in the network can discover and obtain homogeneous and heterogeneous network information within a geographical area to facilitate handovers.*

- *MIIS includes support for various Information Elements (IEs). IEs provide information that is essential for a handover module to make intelligent handover decision.*

DHCP issues from IEEE802.21 Specifi cation

- *IEEE802.21 Information Service supports schema*
  - *A schema defines structure of information. A schema is used in the 80 2.21 information service to define the structure of each information ele ment as well as the relationship among different information elements s upported.*
  - *The MIIS schema is classified into two major categories where one category needs a discovery mechanism for schema URL.*

- *To use Information Service, IS Server locations must be discov ered by MN*
  - *DHCP was decided as a candidate mechanism within IEEE802.21 spec ification. (IEEE P802.21/D00.05 @ 06 January 802.21 meeting)*

MIIS Discovery Information

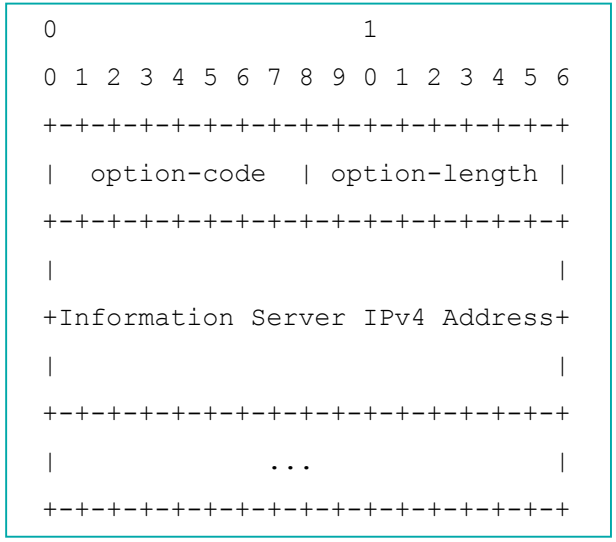
- *A list of IP addresses of MIIS Information Servers*
  - *This information is used by an MIIS client on a host to communicate wi th MIIS Information Servers using an MIIS transport protocol*

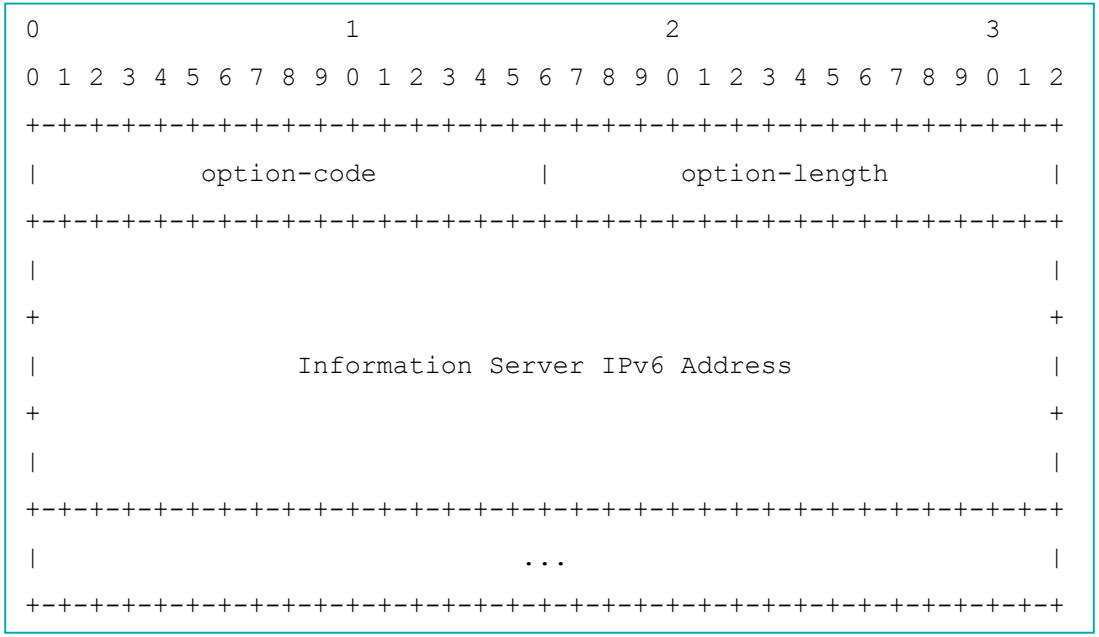
- *An URL of an extended schema*
  - *This information is used by an MIIS client on a host to obtain an extend ed schema that is located at a specified URL. The extended schema ma y be stored in a node that is not acting as an MIIS Information Server. The MIIS client needs to know the URL of the extended schema regardl ess of whether the extended schema is stored in an MIIS Information Se rver or not.*

  - *An DHCP option for a schema URL is needed for an extended schema only. for the basic schema, an IANA-assigned persistent URL will be u sed and the URL is supposed to be pre-configured in an MIIS client on a host, thus an DHCP option for a basic schema URL is not needed.*

Proposed solutions (cont'd)

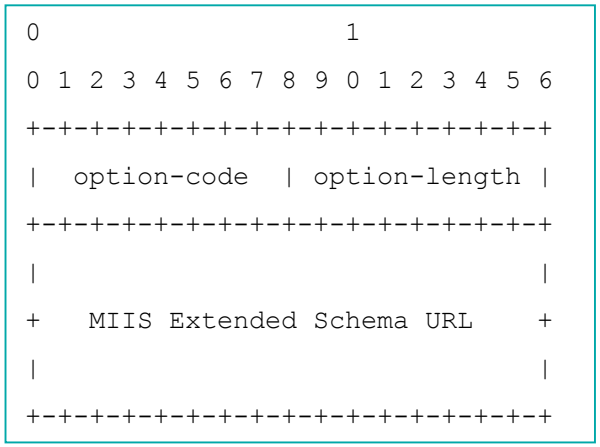
- *MIIS Discovery Option*
  - *MIIS Information Server IPv4 Address Option for DHCPv4*
  - *MIIS Information Server IPv4 Address Option for DHCPv6*

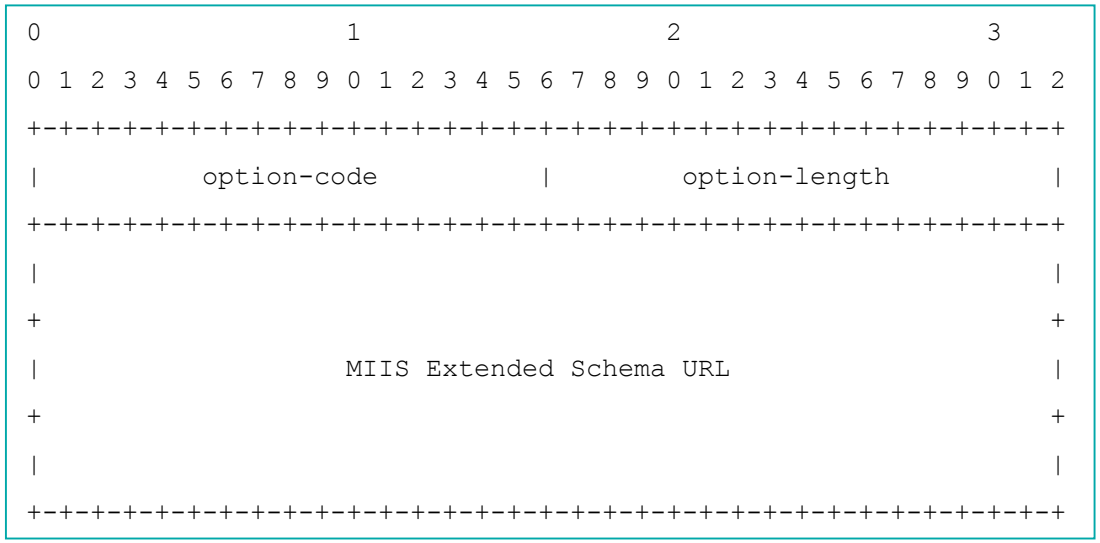




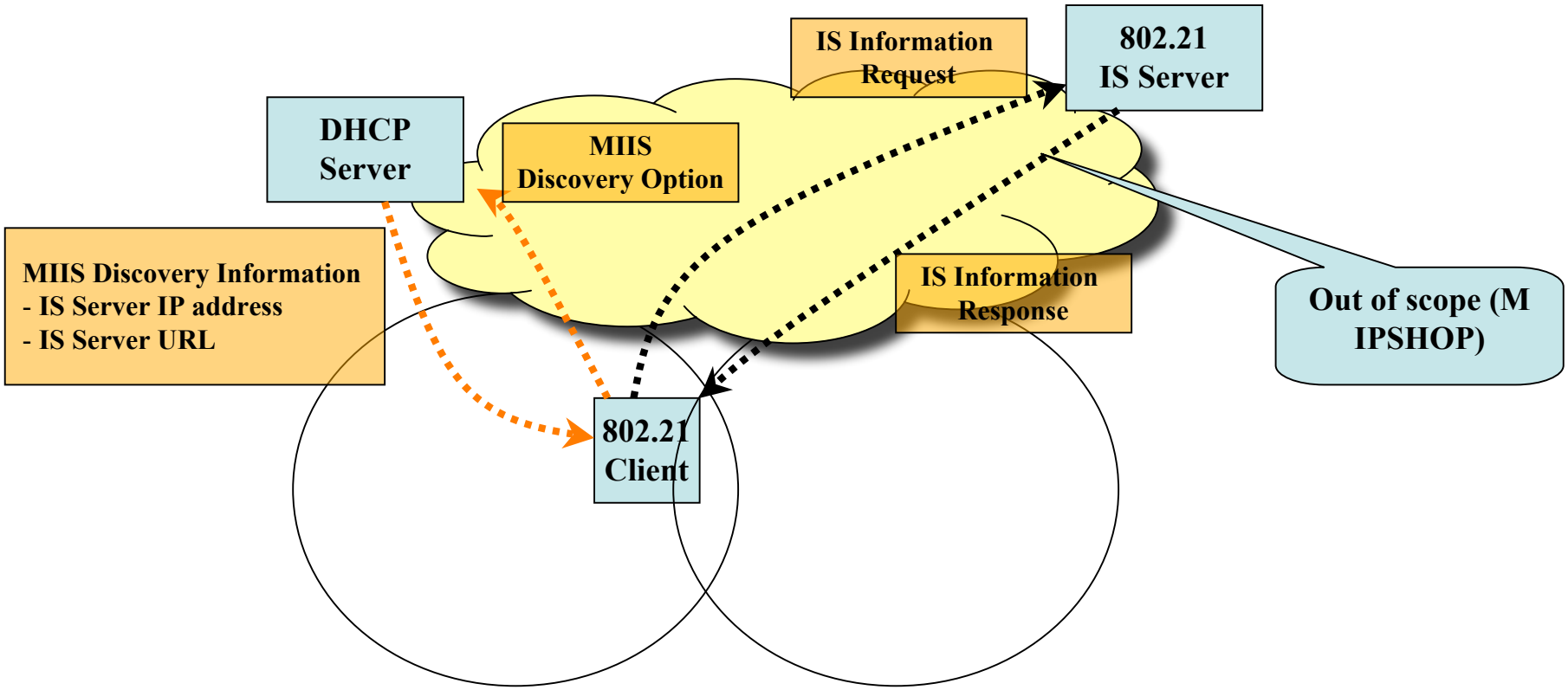
Proposed solutions (cont'd)

- *MIIS Extended Schema URL Option for DHCPv4*
- *MIIS Extended Schema URL Option for DHCPv6*





Proposed solutions



Moving forward

- *IEEE802.21 already decided DHCP as one of candid ate mechanism for discovering IS Server.*
  - *Draft availability via MIPSHOP WG Chair Request*
    - *http://www1.ietf.org/mail-archive/web/mipshop/current/msg02410.html*
- *Ready for the DHC WG adoption ?*