Configuration Options

draft-bharatia-mip4-gen-ext-01.txt

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Overview

- Intent is to use short and skippable extension (defined in RFC 3344) for exchanging configuration specific information between the network entity and the MN

- MN may request specific configuration information from network entities like FA or HA in the Registration Request

- If requested by the MN, the configuration information is provided from the requested entity in the Registration Reply. Default entity is considered to be the HA

01 Updates

- Sub-Type field from message format is removed
- Exchange of only DHCP configuration options are considered in this solution
- Added usage example
- Incorporated comments suggested on the mailing list

Message Format

Type	Length	Entity-Type	Reserved

Config-Data …
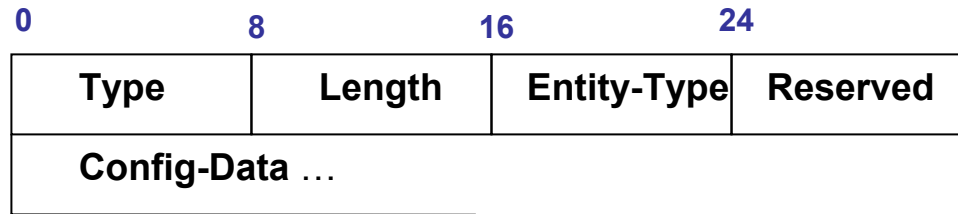
- **Type**: IPV4-CONF-OPTIONS-EXT-TYPE. This extension value will be assigned by IANA from the numbering space defined in RFC3344 for skippable extensions

- **Length**: Indicates the length (in bytes) of the data field within this Extension. The length does NOT include the Type and Length bytes

- **Entity-Type**: This field indicates which Mobility Agent was asked or inserted the extension in the Registration Request or Registration Reply, respectively. This can be HA (=1), FA(=2) etc

- **Reserved**: Sent as zero, ignored on reception

- **Config-Data**: The configuration parameters are packed in DHCP-based format in the Config-Data field. Since the size of the Config-Data field is limited to 253 bytes, the Mobility Agent needs to add multiple extensions with this subtype when the configuration information exceeds the boundary. A DHCP option must be contained within one extension and never split up across multiple extensions.

Example of Config Parameters Request

The MN requests the home network prefix mask and DNS servers' IP addresses from its Home Agent during registration procedure.

0	8	16	24
Type	<Len>=6	<Ent>=1	<Rsv>=0
<OpCode>=55	<OpLen>=2	<NetMask>=1	<DNS>=6

Example of Config Parameters Response

The HA responds with the home network prefix mask and DNS servers' IP addresses

0	8	16	24
Type	<Len>=18	<Ent>=1	<Rsv>=0
<OpCode>=1	<OpLen>=4	<Home Network Prefix>	
…		<OpCode>=6	<OpLen>=8
<Primary DNS Server Address>			
<Secondary DNS Server Address>			

Open Issues

- Only DHCP based parameters are considered. Is there any need of having non-DHCP parameters?