

MIP4 Bulk Revocation



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Requirement for RFC 3543 Extension

- ❑ Single network event impact multiple HA Bindings or FA Visitors
- ❑ Home Agent Events (Not all inclusive)
 - Graceful shutdown of the home agent (HA) instance
 - Policy changes that preclude communication with the Foreign Agent
 - Withdrawn of the Home Agent local address from service
 - Home Address Pool deletion or change
 - Other policy change resulting in multiple registrations being revoked

Requirement for RFC 3543 Extension (Continued)

- ❑ Foreign Agent Events (Not all inclusive)
 - Graceful shutdown of the foreign agent (FA) instance
 - Policy changes that preclude communication with the Home Agent
 - Withdrawn of the Foreign Agent CoA from service
 - Other policy change resulting in multiple registrations being revoked

Changes/Extension to RFC 3543

- ❑ Bulk Revocation negotiated on Registration/Registration Acknowledgment
- ❑ Revocation/Revocation Acknowledgment include indication of bulk revocation and prefix length
- ❑ Revocation Request/Revocation support optional extension TLV to further qualify the registration being revoked
 - IP Address range
 - Tunnel Type
 - Regular expression matched on NAI

Registration Revocation / Ack Changes

```

0                               1                               2                               3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   Type           |   Reserved   |A|I|B| Reserved| Prefix Length |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|                                     Home Address/Prefix          |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|                                     Home Domain Address          |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|                                     Foreign Domain Address        |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|                                     Revocation Identifier         |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   Extensions...                                              |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   Authenticator...                                           |
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+

```

Registration Revocation Message Changes

Registration Revocation / Ack Changes

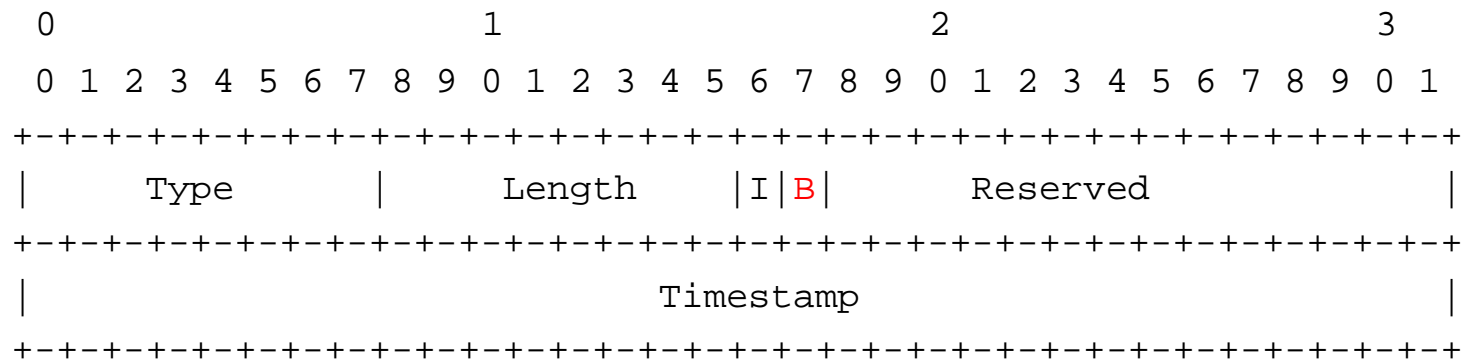
'B' Bit'

This bit is set to '1' by a mobility agent to indicate that this revocation message is a request for bulk revocation. Bulk revocation may apply to one or many registrations.

Prefix Length

The prefix length which, when combined with the home prefix specifies which registrations are to be revoked. If bulk revocation is requested (as specified by the 'B' bit) and this field is zero, the Registration Revocation applies to all registrations for which bulk revocation was previously negotiated using the Revocation Support Extension or a global mechanism beyond the scope of this specification.

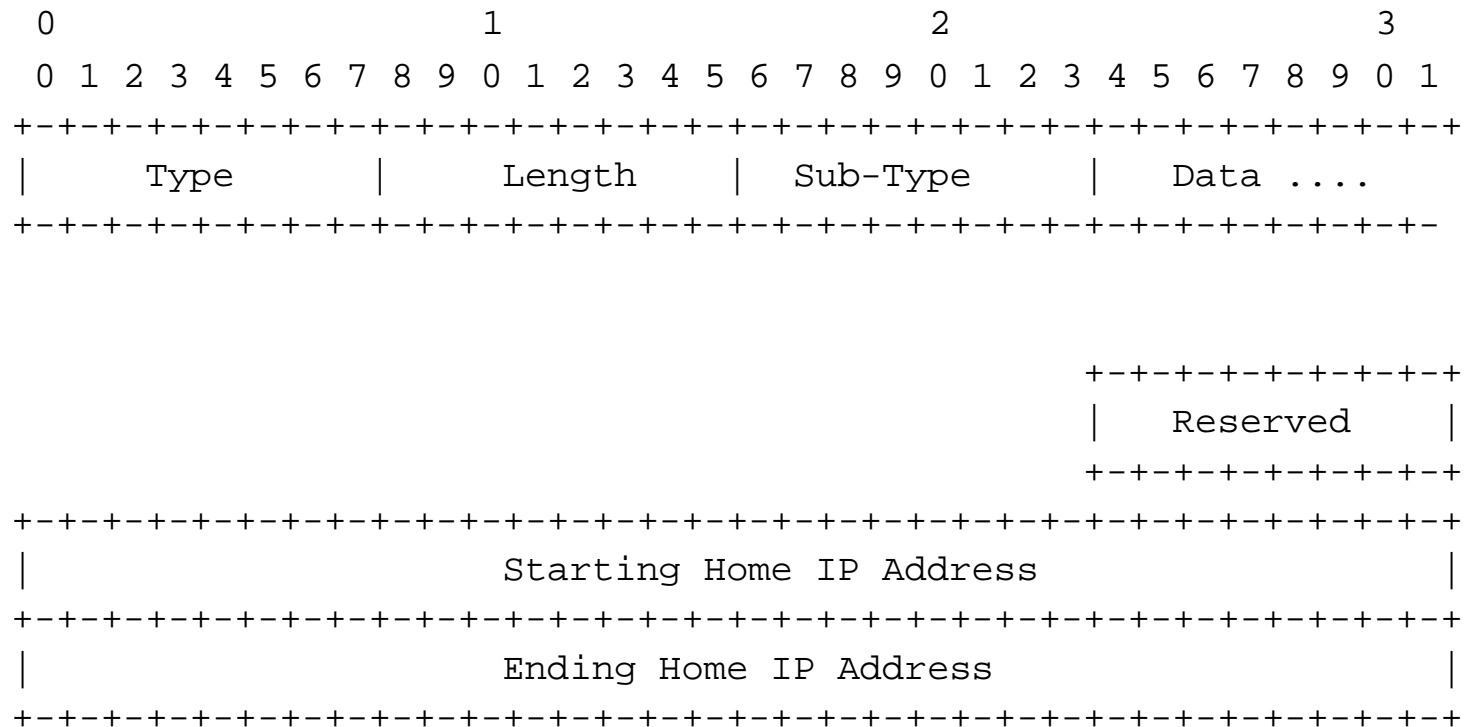
Registration/Registration Ack Changes



'B' Bit

This bit is set to '1' by a mobility agent to indicate that bulk revocation (as specified herein) is applicable to this binding.

Optional Selection Extension



IP Address Starting/Ending Addresses (Sub-type 1)

Age Group	Percentage
18-24	15%
25-34	25%
35-44	30%
45-54	20%
55-64	10%
65-74	5%
75-84	2%
85+	1%