



## Supported Registration Reply Codes

Each of the sections that follow describe the registration reply codes supported by the system for the PDSN and FA services.

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### PDSN Service Reply Codes

The following registration reply codes are supported by the system's PDSN service in accordance with the *3GPP2 A.S0001-A v2: 3GPP2 Access Network Interfaces Interoperability Specification* (also known as *3G-IOS v4.1.1*).

**Table 1: Supported PDSN Service Registration Reply Codes**

Reply Code (Hex / Base 10)	Description	Notes
00H / 0	Registration Accepted	Sent when the subscriber session is successfully set up.
80H / 128	Registration Denied - reason unspecified	Sent when internal errors are encountered when processing the Request packet.
81H / 129	Registration Denied - administratively prohibited	Sent when a newcall policy is set to reject.
82H / 130	Registration Denied - insufficient resources	Sent when no memory or session managers are available to process the session.
83H / 131	Registration Denied - mobile node failed authentication	Sent when the mobile node failed authentication. When multiple errors occur on authentication this message takes precedence and is listed first.

Reply Code (Hex / Base 10)	Description	Notes
85H / 133	Registration Denied - identification mismatch	Sent when the PCF's timestamp does not match the PDSN. The PDSN sends a corrected timestamp to be used as the ID by the PCF in subsequent requests.
86H / 134	Registration Denied - poorly formed request	Sent when an unsupported Service option is received or the packet is malformed in any way.
88H / 136	Registration Denied - unknown PDSN address	Sent when PDSN redirect policy is invoked.
89H / 137	Registration Denied - requested reverse tunnel unavailable	Sent when reverse tunneling is requested by the mobile node but it is not enabled on the system.
8AH / 138	Registration Denied - reverse tunnel is mandatory and 'T' bit not set	Sent when reverse tunneling is enabled on the system but is not supported by the mobile node.
8DH / 139	Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE	Sent when the Airlink records from the PCF contain a Vendor ID value other than 0x159F or the Accounting VSE contains an Application Sub Type other than RADIUS or the Request contains a Critical Vendor Specific Extension Type that is not recognized by the PDSN.

## FA Service Reply Codes

The following registration reply codes are supported by the system's FA service in accordance with the following Request For Comments (RFCs):

- RFC-2002, IPv4 Mobility, May 1995
- RFC-2344, Reverse Tunneling for Mobile IP, May 1998
- RFC-2794, Mobile IP Network Access Identifier Extension for IPv4, March 2000
- RFC-3012, Mobile IPv4 Challenge/Response Extensions, November 2000

Table 2: Supported FA Service Registration Reply Codes

Reply Code (Hex / Base 10)	Description	Notes
40H / 64	Registration Denied - reason unspecified	Sent when internal errors are encountered when processing the Request packet.
41H / 65	Registration Denied - administratively prohibited	Sent when a newcall policy is set to reject calls or the subscriber is not permitted to use Mobile IP FA services.
42H / 66	Registration Denied - insufficient resources	Sent when no memory or session managers are available to process the session.
43H / 67	Registration Denied - mobile node failed authentication	Sent when the mobile node failed authentication.
44H / 68	Registration Denied - home agent failed authentication	Sent when an HA attempted to communicate with the FA service using an incorrect security parameter index (SPI).
45H / 69	Registration Denied - requested lifetime too long	Sent when the mobile node requests a registration lifetime longer than the maximum supported by the FA.
46H / 70	Registration Denied - poorly formed request	Sent when the registration request is poorly formed (i.e. missing an Authentication extension).
47H / 71	Registration Denied - poorly formed reply	Sent when the registration reply is poorly formed (i.e. missing an Authentication extension).
48H / 72	Registration Denied - requested encapsulation unavailable	Sent when requested encapsulation type is unavailable (GRE or minimal IP encapsulation).
4AH / 74	Registration Denied - reverse tunneling unavailable	Sent when reverse tunneling is requested by the mobile node but it is not enabled on the system.
4BH / 75	Registration Denied - reverse tunneling mandatory	Sent when reverse tunneling is enabled on the system but is not supported by the mobile node.
4CH / 76	Registration Denied - reverse tunneling mobile node too distant	Sent when IP TTL is not set to 255 in Reg Request with T bit set
4DH / 77	Registration Denied - invalid care-of address	Sent when D bit is set in the Registration Request.

Reply Code (Hex / Base 10)	Description	Notes
4EH / 78	Registration Denied - registration timeout	Sent when FA reg-timeout is exceeded.
4FH / 79	Registration Denied - reverse tunneling delivery style unavailable	Sent if the Encapsulating Delivery Style Extension sent by the mobile is not supported by the FA service.
50H / 80	Registration Denied - home network unreachable (ICMP error received)	Sent when the FA service can not contact the home network due to an Internet Control Message Protocol (ICMP) error.
51H / 81	Registration Denied - home agent host unreachable (ICMP error received)	Sent when the FA service can not contact the HA host due to an Internet Control Message Protocol (ICMP) error.
52H / 82	Registration Denied - home agent port unreachable (ICMP error received)	Sent when the FA service can not contact the HA port due to an Internet Control Message Protocol (ICMP) error.
58H / 88	Registration Denied - home agent unreachable (other ICMP error received)	Sent when the FA service can not contact the HA due to an Internet Control Message Protocol (ICMP) error.
60H / 96	Registration Denied - missing home address	Sent when the FA service could not determine the IP address of the mobile node.
61H / 97	Registration Denied - missing NAI	Sent when the FA service could not determine the subscriber's network access identifier.
62H / 98	Registration Denied - missing home agent	Sent when the FA service could not determine the IP address of the mobile node's home agent.
68H / 104	Registration Denied - unknown challenge	Sent if the FA cannot validate the Mobile IP mobile-to-foreign agent advertisement challenge extension provided in the Registration Request.
69H / 105	Registration Denied - missing challenge	Sent if the mobile node's Registration Request does not include a mobile-to-foreign agent advertisement challenge extension.

Reply Code (Hex / Base 10)	Description	Notes
6AH / 106	Registration Denied - stale challenge	Sent when the mobile node has sent a Registration Request with a challenge value that was already used before.

