



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.

