

show mipha

This chapter includes the **show mipha** command output tables.

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show mipha statistics ha-service

Table 1: show mipha statistics ha-service Command Output Descriptions

Field	Description
HA Service	The name of the HA service for which the statistics are displayed.
MIP AAA Authentication	
Attempts	The number of authentication attempts by the HA including those that are authenticated locally.
Success	The number of authentication attempts completed successfully by the HA including those that are authenticated locally.
Total Failures	The total number of failed AAA authentication attempts that were facilitated.
Actual Auth Failures	The number of AAA authentication attempts that were rejected by the AAA server.
Misc Auth Failures	The number of miscellaneous authorization failures.
Registration Request Received	
Total Received Reg	The total number of registration requests received.
Total Accepted Reg	The total number of registration requests accepted.
Total Denied Reg	The total number of registration requests that were denied.
Total Discarded Reg	The total number of registration requests that were discarded.

Field	Description
Congestion Discarded Reg	The number of requests discarded when congestion control is enabled and the system is in a congested state.
Initial Reg Requests	
Received	The number of initial registration requests received.
Accepted	The number of initial registration requests accepted.
Denied	The number of initial registration requests denied.
Renew Reg Requests	
Received	The number of renewal registration requests received.
Accepted	The number of renewal registration requests accepted.
Denied	The number of renewal registration requests denied.
DeReg Requests	
Received	The number of requests for de-registration received.
Accepted	The number of requests for de-registration accepted.
Denied	The number of requests for de-registration denied.
Handoff Requests	The number of handoff requests by HA for an existing session. • Total: • 3GPP2 => 3GPP2: • 3GPP2 => WiMax: • WiMax => 3GPP2: • WiMax => WiMax:
Received	The number of handoff request received by HA for an existing session.
Accepted	The number of handoff request accepted by HA.
Denied	The number of handoff request denied by HA.
Registration Reply Sent	
Total	The number of registration replies sent.
Accepted Reg	The number of successful registration replies sent.
Accepted DeReg	The number of successful de-registration replies sent.
Denied	The number of denied registration replies sent.
Bad Request	The number of denied registration replies that were sent with a reply code of 86H (Registration Denied - poorly formed request).

Field	Description
Mismatched ID	The number of denied registration replies that were sent with a reply code of 85H (Registration Denied - registration identification mismatch).
MN Auth Failure	The number of denied registration replies that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).
FA Auth Failure	The number of denied registration replies that were sent with a reply code of 84H (Registration Denied - home agent failed authentication).
Admin Prohibited	The number of denied registration replies that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
No Resources	The number of denied registration replies that were sent with a reply code of 82H (Registration Denied - insufficient resources).
Simul Bindings Exceeded	The number of denied registration replies that were sent with a reply code of 87H (Registration Denied - too many simultaneous mobility bindings).
Unknown HA	The number of denied registration replies that were sent with a reply code of 88H (Registration Denied - unknown home agent address).
Rev Tunnel Unavailable	The number of denied registration replies that were sent with a reply code of 89H (Registration Denied - reverse tunneling unavailable).
Rev Tunnel Mandatory	The number of denied registration replies that were sent with a reply code of 8AH (Registration Denied - reverse tunneling mandatory).
Encap Unavailable	The total number of denied registration replies that were sent with a reply code of 8BH (Registration Denied - reverse tunneling encapsulation style unavailable).
Send Error	The total number of errors that occurred while sending replies.
Unspecified Reason	The total number of denied registration replies that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Unknown CVSE Rcvd	The total number of messages discarded because of an FA reply code of 100 (Critical Vendor Specific Extension Received).
UDP Encap Unavailable	Indicates registration denial caused by unavailable (minimal or GRE) UDP tunnel encapsulation modes.
RRQ Denied Overload/Congestion Control	
Admin Prohibited(reject)	The number of RRQs rejected when congestion control is enabled and the system is in a congested state.
Unknown HA (redirect)	The number of RRQs redirected to an alternate HA when congestion control is enabled and the system is in a congested state.
Registration Revocation	
Sent	Total registration revocation messages sent to the FA.

Field	Description
Retries Sent	Total registration revocation messages re-sent to the FA.
Ack Rcvd	Total registration revocation request acknowledgements received from the FA.
Not Acknowledged	Total registration revocation request messages that timed-out before an acknowledgement was received from the FA.
Rcvd	Total registration revocation request messages received from the FA.
Ack Sent	Total registration revocation request acknowledgements sent to the FA.
P-AAA Messages:	
BC Query Requests:	
Received	The total number of Binding Cache requests received from the proxy-AAA server.
Accepted	The total number of Binding Cache requests received from the proxy-AAA server that were accepted.
Denied	The total number of Binding Cache requests from the proxy-AAA server that were denied.
Discarded	The total number of Binding Cache requests from the proxy-AAA server that were discarded.
BC Query Responses:	
Sent	The total number of Binding Cache responses that were sent to the proxy-AAA server.
BC Found	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that the requested binding context was found.
BC Not Found	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that the requested binding context was not found.
IP Pool Overflow	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that there is an IP Pool overflow condition for the requested binding context.
Miscellaneous	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated other miscellaneous errors for the requested binding context.
HA-IPSEC Tunnels	
Requests Received	The total number of HA-IPSEC tunnel session requests received.
Initiated	The total number of HA-IPSEC session requests received and initiated.
Denied	The total number of HA-IPSEC session requests received and denied.
Discarded	The total number of HA-IPSEC sessions initiated and discarded.
Connected	The total number of HA-IPSEC sessions initiated and connected.

Field	Description
Failed	The total number of HA-IPSEC sessions initiated, connected and failed.
Tunnel Data Received	
Total Packets	Total number of encapsulated packets received by this system.
IPIP	Total number of IP-in-IP encapsulated packets received by this system.
GRE	Total number of GRE tunneled packets received by this system.
IP-UDP	Total number of IP-in-UDP packets received by the system.
MIP-IPSEC	Total Number of MIP IP Sec packets received by the system.
Total Bytes	Total number of encapsulated bytes received by this system.
IPIP	Total number of IP-in-IP encapsulated bytes received by this system.
GRE	Total number of GRE encapsulated bytes received by this system
IP-UDP	Total number of IP-in-UDP bytes received by the system.
MIP-IPSEC	Total Number of MIP IP Sec bytes received by the system.
Errors	
Protocol Type Error	Total number of encapsulated packets received with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths.
No Session Found	Total number of errors that occurred due to no session being present in received tunnels.
Tunnel Data Sent	
Total Packets	The total number of encapsulated packets sent by this system.
IPIP	The total number of IP-in-IP encapsulated packets sent by this system.
GRE	The total number of GRE encapsulated packets sent by this system.
IP-UDP	Total number of IP-in-UDP packets sent by the system.
MIP-IPSEC	Total Number of MIP IP Sec packets sent by the system.
Total Bytes	The total number of encapsulated bytes sent by this system.
IPIP	The total number of IP-in-IP encapsulated bytes sent by this system.
GRE	The total number of GRE encapsulated bytes sent by this system
IP-UDP	Total number of IP-in-UDP bytes sent by the system.

Field	Description
MIP-IPSEC	Total Number of MIP IP Sec bytes sent by the system.
Total Disconnects	The total number of sessions that were disconnected.
Lifetime expiry	The total number of sessions that were disconnected due to the expiration of their lifetime setting.
Deregistrations	The total number of sessions that were disconnected due to de-registrations.
Admin Drops	The total number of sessions that were disconnected due to an administrative clearing of calls (i.e. executing the **clear subscribers** command).
FA Revocations	The total number of disconnects that were due to revocations received from the FA.
IPSEC Tunnel Down	The total number of sessions that were disconnected due to IPSEC tunnels down.
Stale Key Disconnect	The number of sessions that were disconnected due to a Stale Key.
Other Reasons	The total number of disconnects that were due to reasons other than those already listed.
HA Monitoring	
Monitor RRQ Received	The total number of HA monitor request messages received by this HA due to inactivity.
Monitor RRP Sent	The total number of HA monitor response messages sent by this HA.
DMU Refresh Key	
Attempted	The number of Dynamic Mobile IP Key Update refreshes attempted.
Invalid Packets	
Discarded	The number of invalid packets discarded

show mipha full username

Table 2: show mipha full username Command Output Descriptions

Field	Description
Username	Subscriber's username
Callid	Subscriber's call identification number
MSID	Subscriber's mobile station identification number (MSID)
Home Address	IP address assigned to the subscriber's mobile node for the session
HA Address	IP address of the HA facilitating the subscriber's MIP session

Field	Description
Send NAI Extension in Revocation Message	Indicates whether or not an NAI extension is sent in a revocation message for this user. Options are: • No • Yes
Binding #	The mobility binding record (MBR) number associated with a particular subscriber session. Since it is possible for a single subscriber to have multiple bindings, information for each of the subscriber's binding records will be displayed according to the MBR number.
Care of Address	The IP address of the device terminating the tunnel to the mobile node. The address may belong to either a Foreign Agent that is facilitating the subscriber's Mobile IP session or another device that the mobile node is associated (co-located) with.
FA Address	The IP address of the Foreign Agent that is facilitating the subscriber's Mobile IP session.
Lifetime	The maximum amount of time that the subscriber's session can remain registered.
Remaining Life	The amount of time that is currently available to the subscriber to remain registered.
Reverse Tunneling	Displays whether or not reverse tunneling is enabled for the subscriber's session.
Encapsulation Type	The encapsulation method used for the subscriber's session.
GRE Key	The key that uniquely identifies the subscriber session when the Generic Routing Encapsulation (GRE) protocol Encapsulation Type
IPSec Required	Indicates whether or not IPSec is required for the subscriber Mobile IP session.
IPSec Ctrl Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the control tunnel has been established.
IPSec Data Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the data tunnel has been established.
Revocation Negotiated	Indicates whether or not MIP Registration Revocation was negotiated between the FA and the HA for this subscriber session. Options are: • No • Yes
Rev I bit Negotiated	Indicates whether or not the Revocation I bit was negotiated. Possible values are : • No • Yes

Field	Description
Colocated COA	Indicates whether or not the subscribers that registered a MIP colocated COA directly with the HA. Options are: • No • Yes
NAT Detected	Indicates whether or not network address translation (NAT) is detected.Options are: • No • Yes
MN-HA-Key-Present	The security parameter index (SPI) key used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of mobile node (MN) - home agent (HA) key. Options are: • True • False
MN-HA-SPI	Mobile node (MN) - home agent (HA) security parameter index (SPI).
FA-HA-Key-Present	The security parameter index (SPI) key used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of the FA - HA key. Options are: • True • False
FA-HA-SPI	FA - HA security parameter index (SPI)
HA-RK-Key-Present	The HA root key (RK) received by the HA from the AAA in the Radius Access-Accept. Checks for presence of HA-RK key. Options are: • True • False Note: True indicates a WiMAX session.
HA-RK-SPI	HA - RK security parameter index (SPI) Note: This field applies to WiMAX sessions only.
HA-RK-Lifetime	The total lifetime applied to an HA-RK. Note: This field applies to WiMAX sessions only.
HA-RK-Remaining-Lifetime	Thew total remaining lifetime for the HA-RK. Note: This field applies to WiMAX sessions only.

show mipha peers ha-service

Table 3: show mipha peers ha-service Command Output Descriptions

Field	Description
Context	The name of the context where the HA service is located.
HA Service	The name of the HA service.
Peer Address	The IP address of the peer.
Current Sessions	The number of sessions currently running on the peer.
Total Sessions	The total number of current and past sessions for the peer.
IP Security	Specifies if IP security is enabled or disabled on the peer.
FA-HA Authentication	Specifies if FA-HA authentication is enabled or disabled on the peer.
Total Peers	The total number of peers in the output of this show command.
Total Current Sessions	The total number of sessions across all peers in the output of this show command.