



## Monitoring the Service

This chapter provides information for monitoring service status and performance using the **show** commands found in the Command Line Interface (CLI). These command have many related keywords that allow them to provide useful information on all aspects of the system ranging from current software configuration through call activity and status.

The selection of keywords described in this chapter is intended to provided the most useful and in-depth information for monitoring the system. For additional information on these and other **show** command keywords, refer to the *Command Line Interface Reference*.

In addition to the CLI, the system supports the sending of Simple Network Management Protocol (SNMP) traps that indicate status and alarm conditions. Refer to the *SNMP MIB Reference Guide* for a detailed listing of these traps.

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## Monitoring System Status and Performance

This section contains commands used to monitor the status of tasks, managers, applications and other software components in the system. Output descriptions for most of the commands are located in the *Statistics and Counters Reference*.

**Table 1: System Status and Performance Monitoring Commands**

To do this:	Enter this command:
<b>View Congestion-Control Statistics</b>	
View Congestion-Control Statistics	<b>show congestion-control statistics { a11mgr   gtpcmgr   hamgr   l2tpmgr }</b>
<b>View Subscriber Information</b>	
View session resource status	<b>show resources session</b>
<b>Display Subscriber Configuration Information</b>	
View locally configured subscriber profile settings (must be in context where subscriber resides)	<b>show subscribers configuration username subscriber_name</b>

To do this:	Enter this command:
View remotely configured subscriber profile settings	<b>show subscribers aaa-configuration username</b> <i>subscriber_name</i>
<b>View Subscribers Currently Accessing the System</b>	
View a listing of subscribers currently accessing the system	<b>show subscribers all</b>
<b>Display PCF-Summary Session Counters</b>	
View PCF-summary session counters	<b>show session counters pcf-summary</b>
<b>Display Session State Statistics</b>	
View session state statistics	<b>show session progress</b>
<b>Display Session State PCF Statistics</b>	
View session state PCF statistics	<b>show session progress pcf all</b>
Display Session Subsystem and Task Statistics <b>Important</b> Refer to the System Software Task and Subsystem Descriptions appendix in the System Administration Guide for additional information on the Session subsystem and its various manager tasks.	
View A11 Manager statistics	<b>show session subsystem facility a11mgr all</b>
View AAA Manager statistics	<b>show session subsystem facility aaamgr all</b>
View FA Manager statistics	<b>show session subsystem facility famgr all</b>
View L2TP demux manager statistics	<b>show session subsystem facility l2tpdemux all</b>
View L2TP Manager statistics	<b>show session subsystem facility l2tpmgr all</b>
View Session Manager statistics	<b>show session subsystem facility sessmgr all</b>
View Session Recovery Status	
View session recovery status	<b>show session recovery status [verbose]</b>
Display Session Disconnect Reasons	
View session disconnect reasons with verbose output	<b>show session disconnect-reasons</b>
View Point-to-Point Protocol Statistics	
Display a Summary of PPP Counter Status	
View cumulative subscriber session PPP counters	<b>show ppp</b>
Display PPP Counters for a Specific Subscriber	
View individual subscriber session PPP counters	<b>show ppp username</b> <i>subscriber_name</i>
View individual subscriber session PPP error and data counters	<b>show ppp counters username</b> <i>subscriber_name</i>

To do this:	Enter this command:
View individual subscriber session detailed PPP counters	<b>show ppp full username</b> <i>subscriber_name</i>
Display PPP Statistics for PDSN Services	
Views PPP statistics for a all PDSN services	<b>show ppp statistics pdsn-service</b>
Views PPP statistics for a specific PDSN service	<b>show ppp statistics pdsn-service</b> <i>service_name</i>
View R-P Interface Statistics	
Display a Summary of R-P Interface Counter Status	
View cumulative R-P interface counters for every subscriber session currently in progress	<b>show rp</b>
Display R-P Interface Counters for a Specific Subscriber	
View R-P interface counters for a specific subscriber	<b>show rp full username</b> <i>subscriber_name</i>
Display R-P Interface Statistics for PDSN Services	
View R-P interface statistics for all PDSN services	<b>show rp statistics pdsn-service</b>
View R-P interface statistics for a specific PDSN service	<b>show rp statistics pdsn-service</b> <i>service_name</i>
View Mobile IP Foreign Agent Statistics	
Display Mobile IP FA Information for a Specific Subscriber	
View Mobile IP FA counters for a specific subscriber	<b>show mipfa full username</b> <i>subscriber_name</i>
Display Mobile IP Statistics for FA Services	
View statistics for a specific FA service	<b>show mipfa statistics fa-service</b> <i>service_name</i>
Display Mobile IP FA Counters	
View Mobile IP FA counters for individual subscriber sessions	<b>show mipfa counters</b>
Display RADIUS Server States  <b>Important</b> These commands can display 10 state transition histories of RADIUS accounting and authentication servers (Active/Not responding/Down States).  For a complete explanation of RADIUS server states, refer to the RADIUS Server State Behavior appendix in the AAA Administration and Reference.	
View RADIUS authentication server group server states for a specific group	<b>show radius authentication servers radius group</b> <i>group_name</i> <b>detail</b>

To do this:	Enter this command:
View RADIUS accounting server group server states for a specific group	<b>show radius accounting servers radius group group_name detail</b>
Display RADIUS Protocol Counters	
View cumulative RADIUS protocol counters	<b>show radius counters all</b>
View RADIUS protocol counter summary of RADIUS authentication and accounting	<b>show radius counters summary</b>
View L2TP Information	
Display L2TP Session Information	
View cumulative statistics for all sessions processed within the current context  <b>Important</b> If this command is executed from within the localout-of-band context, cumulative session information is displayed for all contexts.	<b>show l2tp sessions</b>
View all information pertaining to the L2TP session of a specific subscriber	<b>show l2tp session full username subscriber_name</b>
Display L2TP Statistics	
View statistics for a specific LAC service  <b>Important</b> If this command is executed from within the localout-of-band context, cumulative session information is displayed for all contexts.	<b>show l2tp statistics lac-service service_name</b>
Display L2TP Tunnel Information	
View all tunnels currently being facilitated by LAC services within a specific context	<b>show l2tp tunnels all</b>
Display IPSec Security Association Statistics	
View IPSec security association statistics for crypto maps in the current context	<b>show crypto ipsec security-associations statistics</b>
Display Pre-shared ISAKMP Keys	
View pre-shared keys received from peer security gateways as part of the Diffie-Hellman exchange	<b>show crypto isakmp keys</b>
Display IPSec Statistics	
View cumulative IPSec statistics for the current context	<b>show crypto statistics</b>

# Clearing Statistics and Counters

It may be necessary to periodically clear statistics and counters in order to gather new information. The system provides the ability to clear statistics and counters based on their grouping (PPP, MIPHA, MIPFA, etc.).

Statistics and counters can be cleared using the CLI **clear** command. Refer to the *Command Line Interface Reference* for detailed information on using this command.

