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# **Command Handbook**

## **For the CFS COSMOS Project**



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## Commands

### CFS CFE\_ES\_CLEAR\_ERLOG

This command causes the contents of the Executive Services Exception and Reset Log to be cleared.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 12      | 56         | 8        | UINT      |       |

### CFS CFE\_ES\_CLEAR\_SYSLOG

This command clears the contents of the Executive Services System Log.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 10      | 56         | 8        | UINT      |       |

### CFS CFE\_ES\_DELETE\_CDS

This command allows the user to delete a Critical Data Store that was created by an Application that is now no longer executing.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 21      | 56         | 8        | UINT      |       |




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|         |   |         |    |     |        |
|---------|---|---------|----|-----|--------|
| CDSNAME | ASCII text string containing name of CDS to delete. | default | 64 | 304 | STRING |
|---------|---|---------|----|-----|--------|

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## CFS CFE\_ES\_DUMP\_CDS\_REG

This command allows the user to dump the Critical Data Store Registry to an onboard file.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>                               | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control  | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum   | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code  | 0   | 255   | 23      | 56         | 8        | UINT      |       |
| DUMPFILENAME   | ASCII text string of full path and filename of file CDS Registry is to be written. |     |       | default | 64         | 512      | STRING    |       |

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## CFS CFE\_ES\_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Executive Services task.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

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## CFS CFE\_ES\_OVERWRITE\_SYSLOG

This command allows the user to configure the Executive Services to either discard new System Log messages when it is full or to overwrite the oldest messages.

| Item Name      | Description   | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>                                  | 0   | 65535      | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control   | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length  | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code   | 0   | 255        | 18      | 56         | 8        | UINT      |       |
| MODE           | CFE_ES_LOG_DISCARD=Throw away most recent messages,<br>CFE_ES_LOG_OVERWRITE=Overwrite | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |



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oldest with most recent

## CFS CFE\_ES\_PERF\_SETFILTERMASK

This command sets the Performance Analyzer's Filter Masks.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>   | 0   | 65535      | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                          | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                               | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                 | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                            | 0   | 255        | 16      | 56         | 8        | UINT      |       |
| FILTERMASKNUM  | Index into array of Filter Masks.                      | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| FILTERMASK     | New Mask for specified entry in array of Filter Masks. | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

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## CFS CFE\_ES\_PERF\_SETTRIGMASK

This command sets the Performance Analyzer's Trigger Masks.

| Item Name      | Description   | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>    | 0   | 65535      | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                           | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                  | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                             | 0   | 255        | 17      | 56         | 8        | UINT      |       |
| TRIGGERMASKNUM | Index into array of Trigger Masks.                      | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| TRIGGERMASK    | New Mask for specified entry in array of Trigger Masks. | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

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## CFS CFE\_ES\_PERF\_STARTDATA

This command causes the Performance Analyzer to begin collecting data using the specified trigger mode.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b><br>CCSDS Packet | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |



|                |  |   |            |       |    |    |      |
|----------------|--|---|------------|-------|----|----|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                  | 0 | 65535      | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length                       | 0 | 65535      | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                         | 0 | 255        | 0     | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code                    | 0 | 255        | 14    | 56 | 8  | UINT |
| TRIGGERMODE    | Desired trigger position (Start, Center, End). | 0 | 4294967295 | 0     | 64 | 32 | UINT |

## CFS CFE\_ES\_PERF\_STOPDATA

This command stops the Performance Analyzer from collecting any more data.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>  | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control   | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length  | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code   | 0   | 255   | 15      | 56         | 8        | UINT      |       |
| DATAFILENAME   | ASCII text string of full path and filename of file Performance Analyzer data is to be written. |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_ES\_QUERY\_ALL

This command takes the information kept by Executive Services on all of the registered applications and writes it to the specified file.

| Item Name        | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification<br><b>Id Value: 6150</b>   | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control  | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum   | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code  | 0   | 255   | 9       | 56         | 8        | UINT      |       |
| QUERYALLFILENAME | ASCII text string containing full path and filename of file in which Application data is to be dumped. |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_ES\_QUERY\_ALL\_TASKS

This command takes the information kept by Executive Services on all of the registered tasks and writes it to the specified file.



| Item Name        | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification<br><b>Id Value: 6150</b>   | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control  | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum   | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code  | 0   | 255   | 24      | 56         | 8        | UINT      |       |
| QUERYALLFILENAME | ASCII text string containing full path and filename of file in which Application data is to be dumped. |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_ES\_QUERY\_ONE

This command takes the information kept by Executive Services on the specified application and telemeters it to the ground.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| APPLICATION    | ASCII text string containing Application Name.       |     |       | default | 64         | 160      | STRING    |       |

## CFS CFE\_ES\_RELOAD\_APP

This command halts and removes the specified Application from the system. Then it immediately loads the Application from the command specified file and restarts it. This command is especially useful for restarting a Command Ingest Application since once it has been stopped, no further commands can come in to restart it.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| APPLICATION    | ASCII text string containing Application Name.       |     |       | default | 64         | 160      | STRING    |       |




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|             |   |         |     |     |        |
|-------------|---|---------|-----|-----|--------|
| APPFILENAME | Full path and filename of Application's executable image. | default | 224 | 512 | STRING |
|-------------|---|---------|-----|-----|--------|

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## CFS CFE\_ES\_RESET

This command resets the following counters within the Executive Services housekeeping telemetry:  
Command Execution CounterCommand Error Counter

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

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## CFS CFE\_ES\_RESET\_PR\_COUNT

This command allows the user to reset the Processor Reset Counter to zero. The Processor Reset Counter counts the number of Processor Resets that have occurred so as to identify when a Processor Reset should automatically be upgraded to a full Power-On Reset.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 19      | 56         | 8        | UINT      |       |

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## CFS CFE\_ES\_RESTART

This command restarts the cFE in one of two modes. The Power-On Reset will cause the cFE to restart as though the power were first applied to the processor. The Processor Reset will attempt to retain the contents of the volatile disk and the contents of the Critical Data Store. NOTE: If a requested Processor Reset should cause the Processor Reset Counter (\$sc\_\$cpu\_ES\_ProcResetCnt) to exceed OR EQUAL the limit CFE\_ES\_MAX\_PROCESSOR\_RESETS (which is reported in housekeeping telemetry as \$sc\_\$cpu\_ES\_MaxProcResets), the command is AUTOMATICALLY upgraded to a Power-On Reset.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |




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|                |  |   |       |   |    |    |      |
|----------------|--|---|-------|---|----|----|------|
| CCSDS_LENGTH   | CCSDS Packet Data Length                           | 0 | 65535 | 1 | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                             | 0 | 255   | 0 | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code                        | 0 | 255   | 2 | 56 | 8  | UINT |
|                | CFE_ES_PROCESSOR_RESET=Processor                   |   |       |   |    |    |      |
| RESTARTTYPE    | Reset or<br>CFE_ES_POWERON_RESET=Power-On<br>Reset | 0 | 65535 | 0 | 64 | 16 | UINT |

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## CFS CFE\_ES\_RESTART\_APP

This command halts and restarts the specified Application. This command does NOT reload the application from the onboard filesystem.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 6       | 56         | 8        | UINT      |       |
| APPLICATION    | ASCII text string containing Application Name.       |     |       | default | 64         | 160      | STRING    |       |

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## CFS CFE\_ES\_SET\_MAX\_PR\_COUNT

This command allows the user to specify the number of Processor Resets that are allowed before the next Processor Reset is upgraded to a Power-On Reset.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>                                    | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control   | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length  | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code   | 0   | 255   | 20      | 56         | 8        | UINT      |       |
| MAXPRCOUNT     | New maximum number of Processor Resets before an automatic Power-On Reset is performed. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

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## CFS CFE\_ES\_SHELL\_CMD

This command passes an ASCII string as a command line to the underlying realtime operating system shell. Any response to the command is both written to the shell command output file and sent as a series of shell command output telemetry packets.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |



|                |  |         |       |       |     |        |      |
|----------------|--|---------|-------|-------|-----|--------|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                              | 0       | 65535 | 49152 | 16  | 16     | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                   | 0       | 65535 | 1     | 32  | 16     | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                     | 0       | 255   | 0     | 48  | 8      | UINT |
| CCSDS_FC       | CCSDS Command Function Code                                | 0       | 255   | 3     | 56  | 8      | UINT |
| CMDSTRING      | ASCII text string containing shell command to be executed. | 0       | 64    | 8     | 8   | UINT   |      |
|                | Array Bit Size: 512  |         |       |       |     |        |      |
| OUTPUTFILENAME | Filename where shell command output is to be written.      | default | 576   | 512   | 512 | STRING |      |

## CFS CFE\_ES\_START\_APP

This command starts the specified application with the specified start address, stack size, etc options.

| Item Name       | Description   | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------|---|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID  | CCSDS Packet Identification<br><b>Id Value: 6150</b>  | 0   | 65535      | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE  | CCSDS Packet Sequence Control   | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH    | CCSDS Packet Data Length  | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM  | CCSDS Command Checksum  | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC        | CCSDS Command Function Code   | 0   | 255        | 4       | 56         | 8        | UINT      |       |
| APPLICATION     | Name of Application to be started.  |     |            | default | 64         | 160      | STRING    |       |
| APPENTRYPOINT   | Symbolic name of Application's entry point.   |     |            | default | 224        | 160      | STRING    |       |
| APPFILENAME     | Full path and filename of Application's executable image.   |     |            | default | 384        | 512      | STRING    |       |
| STACKSIZE       | Desired stack size for the new application.<br>CFE_ES_APP_EXCEPTION_RESTART_APP=On                              | 0   | 4294967295 | 0       | 896        | 32       | UINT      |       |
| EXCEPTIONACTION | exception, restart Application,<br>CFE_ES_APP_EXCEPTION_PROC_RESTART=On<br>exception, perform a Processor Reset | 0   | 65535      | 0       | 928        | 16       | UINT      |       |
| PRIORITY        | The new Applications runtime priority.  | 0   | 65535      | 0       | 944        | 16       | UINT      |       |

## CFS CFE\_ES\_STOP\_APP

This command halts and removes the specified Application from the system. NOTE: This command should never be used on the Command Ingest application. This would prevent further commands from entering the system. If Command Ingest needs to be stopped and restarted, use CFE\_ES\_RESTART\_APP\_CC or CFE\_ES\_RELOAD\_APP\_CC.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |



| Item Name   | Description                                    | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-------------|--|-----|-----|---------|------------|----------|-----------|-------|
| APPLICATION | ASCII text string containing Application Name. |     |     | default | 64         | 160      | STRING    |       |

## CFS CFE\_ES\_TLM\_POOL\_STATS

This command allows the user to obtain a snapshot of the statistics maintained for a specified memory pool.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>   | 0   | 65535      | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                          | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                               | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                 | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                            | 0   | 255        | 22      | 56         | 8        | UINT      |       |
| APPLICATION    | RESERVED - should be all zeroes                        |     |            | default | 64         | 160      | STRING    |       |
| POOLHANDLE     | Handle of Pool whose statistics are to be telemetered. | 0   | 4294967295 | 0       | 224        | 32       | UINT      |       |

## CFS CFE\_ES\_WRITE\_ERLOG

This command causes the contents of the Executive Services Exception and Reset Log to be written to the specified file.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b>   | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control  | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum   | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code  | 0   | 255   | 13      | 56         | 8        | UINT      |       |
| ERLOGFILENAME  | ASCII text string containing full path and filename of file in which ER Log is to be dumped. |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_ES\_WRITE\_SYSLOG

This command causes the contents of the Executive Services System Log to be written to a log file.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6150</b> | 0   | 65535 | 6150    | 0          | 16       | UINT      |       |



|                |  |   |       |         |    |     |        |
|----------------|--|---|-------|---------|----|-----|--------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control  | 0 | 65535 | 49152   | 16 | 16  | UINT   |
| CCSDS_LENGTH   | CCSDS Packet Data Length   | 0 | 65535 | 1       | 32 | 16  | UINT   |
| CCSDS_CHECKSUM | CCSDS Command Checksum   | 0 | 255   | 0       | 48 | 8   | UINT   |
| CCSDS_FC       | CCSDS Command Function Code  | 0 | 255   | 11      | 56 | 8   | UINT   |
| SYSLOGFILENAME | ASCII text string containing full path and filename of file in which System Log is to be dumped. |   |       | default | 64 | 512 | STRING |

## CFS CFE\_EVS\_ADD\_EVENT\_FILTER

This command adds the given filter for the given application identifier and event identifier. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 15      | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |
| EVENTID        | Event ID to use in the command.                      | 0   | 65535 | 0       | 224        | 16       | UINT      |       |
| MASK           | Mask to use in the command.                          | 0   | 65535 | 0       | 240        | 16       | UINT      |       |

## CFS CFE\_EVS\_CLEAR\_LOG

This command clears the contents of the local event log.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 20      | 56         | 8        | UINT      |       |

## CFS CFE\_EVS\_DELETE\_EVENT\_FILTER

This command removes the given filter for the given application identifier and event identifier. Note:



In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 16      | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |
| EVENTID        | Event ID to use in the command.                      | 0   | 65535 | 0       | 224        | 16       | UINT      |       |
| MASK           | Mask to use in the command.                          | 0   | 65535 | 0       | 240        | 16       | UINT      |       |

## CFS CFE\_EVS\_DISABLE\_APP\_EVENTS

This command disables the command specified application from sending events through Event Service. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |

## CFS CFE\_EVS\_DISABLE\_APP\_EVENT\_TYPE

This command disables the command specified event type for the command specified application, preventing the application from sending event messages of the command specified event type through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, critical, and error. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data                                    | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



| NAME           | Length                                  | U | TYPE | U       | U   | U   | U      |
|----------------|---|---|------|---------|-----|-----|--------|
| CCSDS_CHECKSUM | CCSDS Command Checksum                  | 0 | 255  | 0       | 48  | 8   | UINT   |
| CCSDS_FC       | CCSDS Command Function Code             | 0 | 255  | 6       | 56  | 8   | UINT   |
| APPNAME        | Application name to use in the command. |   |      | default | 64  | 160 | STRING |
| BITMASK        | BitMask to use in the command.          | 0 | 255  | 0       | 224 | 8   | UINT   |
| SPARE          | Pad to even byte.                       | 0 | 255  | 0       | 232 | 8   | UINT   |

## **CFS CFE\_EVS\_DISABLE\_EVENT\_TYPE**

This command disables the command specified Event Type preventing event messages of this type to be sent through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, error and critical. This command is a global disable of a particular event type, it applies to all applications.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| BITMASK        | BitMask to use in the command.                       | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255   | 0       | 72         | 8        | UINT      |       |

## **CFS CFE\_EVS\_DISABLE\_PORTS**

This command disables the specified port from outputting event messages.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 12      | 56         | 8        | UINT      |       |
| BITMASK        | BitMask to use in the command.                       | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255   | 0       | 72         | 8        | UINT      |       |

## CFS CFE EVS ENABLE APP EVENTS



This command enables the command specified application to send events through the Event Service. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |

## CFS CFE\_EVS\_ENABLE\_APP\_EVENT\_TYPE

This command enables the command specified event type for the command specified application, allowing the application to send event messages of the command specified event type through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, critical, and error. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |
| BITMASK        | BitMask to use in the command.                       | 0   | 255   | 0       | 224        | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255   | 0       | 232        | 8        | UINT      |       |

## CFS CFE\_EVS\_ENABLE\_EVENT\_TYPE

This command enables the command specified Event Type allowing event messages of this type to be sent through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, error and critical. This command is a global enable of a particular event type, it applies to all applications.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |



| CCSDS_SEQUENCE | Control                        | 0 | 0000049152 | 10 | 10 | UINT |
|----------------|--------------------------------|---|------------|----|----|------|
| CCSDS_LENGTH   | CCSDS Packet Data Length       | 0 | 65535 1    | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum         | 0 | 255 0      | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code    | 0 | 255 2      | 56 | 8  | UINT |
| BITMASK        | BitMask to use in the command. | 0 | 255 0      | 64 | 8  | UINT |
| SPARE          | Pad to even byte.              | 0 | 255 0      | 72 | 8  | UINT |

## CFS CFE\_EVS\_ENABLE\_PORTS

This command enables the command specified port to output event messages

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 6145  | 0       | 16         | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255 11      | 56      | 8          | 8        | UINT      |       |
| BITMASK        | BitMask to use in the command.                       | 0   | 255 0       | 64      | 8          | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255 0       | 72      | 8          | 8        | UINT      |       |

## CFS CFE\_EVS\_FILE\_WRITE\_APP\_DATA

This command writes all application data to a file for all applications that have registered with the EVS. The application data includes the Application ID, Active Flag, Event Count, Event Types Active Flag, and Filter Data.

| Item Name       | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID  | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 6145  | 0       | 16         | 16       | UINT      |       |
| CCSDS_SEQUENCE  | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | 16       | UINT      |       |
| CCSDS_LENGTH    | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | 16       | UINT      |       |
| CCSDS_CHECKSUM  | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | 8        | UINT      |       |
| CCSDS_FC        | CCSDS Command Function Code                          | 0   | 255 17      | 56      | 8          | 8        | UINT      |       |
| APPDATAFILENAME | Filename where applicaton data is to be written.     |     |             | default | 64         | 512      | STRING    |       |

## CFS CFE\_EVS\_FILE\_WRITE\_LOG\_DATA

This command requests the Event Service to generate a file containing the contents of the local event log.

Bit Bit Data



| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 18      | 56         | 8        | UINT      |       |
| LOGFILENAME    | Filename where log data is to be written.            |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_EVS\_NO\_OPERATION

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Event Services task.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS CFE\_EVS\_RESET\_ALL\_FILTERS

This command resets all of the command specified applications event filters. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 14      | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |

## CFS CFE\_EVS\_RESET\_APP\_COUNTER



This command sets the command specified application's event counter to zero. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 9       | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |

## CFS CFE\_EVS\_RESET\_COUNTERS

This command resets the following counters within the Event Services housekeeping telemetry:  
Command Execution Counter (\$sc\_\$cpu\_EVS\_CMDPC)Command Error Counter (\$sc\_\$cpu\_EVS\_CMDEC)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS CFE\_EVS\_RESET\_FILTER

This command resets the command specified application's event filter for the command specified event ID. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 13      | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |



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|         |                                 |   |       |   |     |    |      |
|---------|---------------------------------|---|-------|---|-----|----|------|
| EVENTID | Event ID to use in the command. | 0 | 65535 | 0 | 224 | 16 | UINT |
|---------|---------------------------------|---|-------|---|-----|----|------|

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## CFS CFE\_EVS\_SET\_EVENT\_FORMAT\_MODE

This command sets the event format mode to the command specified value. The event format mode may be either short or long. A short event format detaches the Event Data from the event message and only includes the following information in the event packet: Processor ID, Application ID, Event ID, and Event Type. Refer to section 5.3.3.4 for a description of the Event Service event packet contents. Event Data is defined to be data describing an Event that is supplied to the cFE Event Service. ASCII text strings are used as the primary format for Event Data because heritage ground systems use string compares as the basis for their automated alert systems. Two systems, ANSR and SERS were looked at for interface definitions. The short event format is used to accommodate experiences with limited telemetry bandwidth. The long event format includes all event information included within the short format along with the Event Data.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 4       | 56         | 8        | UINT      |       |
| MODE           | Mode to use in the command.                          | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255   | 0       | 72         | 8        | UINT      |       |

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## CFS CFE\_EVS\_SET\_FILTER

This command sets the command specified application's event filter mask to the command specified value for the command specified event. Note: In order for this command to take effect, applications must be registered for Event Service.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 10      | 56         | 8        | UINT      |       |
| APPNAME        | Application name to use in the command.              |     |       | default | 64         | 160      | STRING    |       |
| EVENTID        | Event ID to use in the command.                      | 0   | 65535 | 0       | 224        | 16       | UINT      |       |
| MASK           | Mask to use in the command.                          | 0   | 65535 | 0       | 240        | 16       | UINT      |       |

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## CFS CFE\_EVS\_SET\_LOG\_MODE

This command sets the logging mode to the command specified value.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6145</b> | 0   | 65535 | 6145    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 19      | 56         | 8        | UINT      |       |
| MODE           | Mode to use in the command.                          | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| SPARE          | Pad to even byte.                                    | 0   | 255   | 0       | 72         | 8        | UINT      |       |

## CFS CFE\_SB\_DISABLE\_ROUTE

This command will disable a particular destination. The destination is specified in terms of MsgID and PipeID. The MsgID and PipeID are parameters in the command. All destinations are enabled by default.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b>          | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                                 | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                      | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                                   | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| MSGID          | Message ID of route to be enabled or disabled CFE_SB_MsgId_t. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| PIPE           | Pipe ID of route to be enabled or disabled CFE_SB_PipeId_t.   | 0   | 255   | 0       | 80         | 8        | UINT      |       |
| SPARE          | Spare byte to make command even number of bytes.              | 0   | 255   | 0       | 88         | 8        | UINT      |       |

## CFS CFE\_SB\_DISABLE\_SUB\_REPORTING

be used only by the CFS SBN (Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When subscription reporting is enabled, SB will generate and send a software bus packet for each subscription received. The software bus packet that is sent contains the information received in the subscription API. This subscription report is needed by SBN if offboard routing is required.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence                                | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |



|                       |                             |   |            |    |    |      |
|-----------------------|-----------------------------|---|------------|----|----|------|
| <b>CCSDS_SEQUENCE</b> | Control                     | 0 | 0000049152 | 10 | 10 | UINT |
| <b>CCSDS_LENGTH</b>   | CCSDS Packet Data Length    | 0 | 65535 1    | 32 | 16 | UINT |
| <b>CCSDS_CHECKSUM</b> | CCSDS Command Checksum      | 0 | 255 0      | 48 | 8  | UINT |
| <b>CCSDS_FC</b>       | CCSDS Command Function Code | 0 | 255 10     | 56 | 8  | UINT |

## CFS CFE\_SB\_ENABLE\_ROUTE

This command will enable a particular destination. The destination is specified in terms of MsgID and PipeID. The MsgID and PipeID are parameters in the command. All destinations are enabled by default. This command is needed only after a CFE\_SB\_DISABLE\_ROUTE\_CC command is used.

| Item Name             | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| <b>CCSDS_STREAMID</b> | CCSDS Packet Identification<br><b>Id Value: 6147</b>             | 0   | 65535 6147  | 0       | 16         | 16       | UINT      |       |
| <b>CCSDS_SEQUENCE</b> | CCSDS Packet Sequence Control                                    | 0   | 65535 49152 | 16      | 16         | 16       | UINT      |       |
| <b>CCSDS_LENGTH</b>   | CCSDS Packet Data Length   | 0   | 65535 1     | 32      | 16         | 16       | UINT      |       |
| <b>CCSDS_CHECKSUM</b> | CCSDS Command Checksum   | 0   | 255 0       | 48      | 8          | 8        | UINT      |       |
| <b>CCSDS_FC</b>       | CCSDS Command Function Code                                      | 0   | 255 4       | 56      | 8          | 8        | UINT      |       |
| <b>MSGID</b>          | Message ID of route to be enabled or disabled<br>CFE_SB_MsgId_t. | 0   | 65535 0     | 64      | 16         | 16       | UINT      |       |
| <b>PIPE</b>           | Pipe ID of route to be enabled or disabled<br>CFE_SB_PipeId_t.   | 0   | 255 0       | 80      | 8          | 8        | UINT      |       |
| <b>SPARE</b>          | Spare byte to make command even number of bytes.                 | 0   | 255 0       | 88      | 8          | 8        | UINT      |       |

## CFS CFE\_SB\_ENABLE\_SUB\_REPORTING

be used only by the CFS SBN (Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When subscription reporting is enabled, SB will generate and send a software bus packet for each subscription received. The software bus packet that is sent contains the information received in the subscription API. This subscription report is needed by SBN if offboard routing is required.

| Item Name             | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| <b>CCSDS_STREAMID</b> | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 6147  | 0       | 16         | 16       | UINT      |       |
| <b>CCSDS_SEQUENCE</b> | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | 16       | UINT      |       |
| <b>CCSDS_LENGTH</b>   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | 16       | UINT      |       |
| <b>CCSDS_CHECKSUM</b> | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | 8        | UINT      |       |
| <b>CCSDS_FC</b>       | CCSDS Command Function Code                          | 0   | 255 9       | 56      | 8          | 8        | UINT      |       |

## CFS CFE\_SB\_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Software Bus task.



| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS CFE\_SB\_RESET\_CTRS

This command resets the following counters within the Software Bus housekeeping telemetry:  
Command Execution Counter (\$sc\_\$cpu\_SB\_CMDPC)Command Error Counter  
(\$sc\_\$cpu\_SB\_CMDEC)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS CFE\_SB\_SEND\_MAP\_INFO

map information. The message map is a lookup table (an array of uint16s)that allows fast access to the correct routing table element during a software bus send operation. This is diagnostic information that may be needed due to the dynamic nature of the cFE software bus. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE\_SB\_DEFAULT\_MAP\_FILENAME.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| FILENAME       | Path and Filename of data to be loaded.              |     |       | default | 64         | 512      | STRING    |       |



## CFS CFE\_SB\_SEND\_PIPE\_INFO

This command will create a file containing the software bus pipe information. The pipe information contains information about every pipe that has been created through the CFE\_SB\_CreatePipe API. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE\_SB\_DEFAULT\_PIPE\_FILENAME.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| FILENAME       | Path and Filename of data to be loaded.              |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_SB\_SEND\_PREV\_SUBS

regarding all subscriptions previously received by SB. This command is intended to be used only by the CFS SBN(Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When this command is received the software bus will generate and send a series of packets containing information about all subscription previously received.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 11      | 56         | 8        | UINT      |       |

## CFS CFE\_SB\_SEND\_ROUTING\_INFO

This command will create a file containing the software bus routing information. The routing information contains information about every subscription that has been received through the SB subscription APIs. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE\_SB\_DEFAULT\_ROUTING\_FILENAME.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |



|                |   |   |       |         |    |     |        |
|----------------|---|---|-------|---------|----|-----|--------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control           | 0 | 65535 | 49152   | 16 | 16  | UINT   |
| CCSDS_LENGTH   | CCSDS Packet Data Length                | 0 | 65535 | 1       | 32 | 16  | UINT   |
| CCSDS_CHECKSUM | CCSDS Command Checksum                  | 0 | 255   | 0       | 48 | 8   | UINT   |
| CCSDS_FC       | CCSDS Command Function Code             | 0 | 255   | 3       | 56 | 8   | UINT   |
| FILENAME       | Path and Filename of data to be loaded. |   |       | default | 64 | 512 | STRING |

## CFS CFE\_SB\_SEND\_SB\_STATS

This command will cause the SB task to send a statistics packet containing current utilization figures and high water marks which may be useful for checking the margin of the SB platform configuration settings.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6147</b> | 0   | 65535 | 6147    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |

## CFS CFE\_TBL\_ABORT\_LOAD

This command will cause Table Services to discard the contents of a table buffer that was previously loaded with the data in a file as specified by a Table Load command. For single buffered tables, the allocated shared working buffer is freed and becomes available for other Table Load commands.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 9       | 56         | 8        | UINT      |       |
| TABLENAME      | Full Name of Table whose load is to be aborted.      |     |       | default | 64         | 304      | STRING    |       |

## CFS CFE\_TBL\_ACTIVATE

This command will cause Table Services to notify a table's owner that an update is pending. The owning application will then update the contents of the active table buffer with the contents of the associated inactive table buffer at a time of their convenience.

| Item Name | Description | Min | Max | Default | Bit | Bit | Data | Units |
|-----------|-------------|-----|-----|---------|-----|-----|------|-------|
|           |             |     |     |         |     |     |      |       |



| Item Name      | Description  | Min | Max   | Default | Offset | Size | Type   | Units |
|----------------|--|-----|-------|---------|--------|------|--------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0      | 16   | UINT   |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16     | 16   | UINT   |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32     | 16   | UINT   |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48     | 8    | UINT   |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56     | 8    | UINT   |       |
| TABLENAME      | Full Name of Table to be activated.                  |     |       | default | 64     | 304  | STRING |       |

## CFS CFE\_TBL\_DELETE\_CDS

This command will delete the Critical Data Store (CDS) associated with the specified Critical Table. Note that any table still present in the Table Registry is unable to be deleted from the Critical Data Store. All Applications that are accessing the critical table must release and unregister their access before the CDS can be deleted.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| TABLENAME      | Full Name of Table whose CDS is to be deleted.       |     |       | default | 64         | 304      | STRING    |       |

## CFS CFE\_TBL\_DUMP

This command will cause the Table Services to put the contents of the specified table buffer into the command specified file.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b>                          | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control   | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length  | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code   | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| ACTIVETBLFLAG  | CFE_TBL_INACTIVE_BUFFER=Inactive Table,<br>CFE_TBL_ACTIVE_BUFFER=Active Table | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| TABLENAME      | Full name of table to be dumped.  |     |       | default | 80         | 304      | STRING    |       |
| DUMPFILENAME   | Full filename where data is to be written.                                    |     |       | default | 384        | 512      | STRING    |       |



## CFS CFE\_TBL\_DUMP\_REG

This command will cause Table Services to write some of the contents of the Table Registry to the command specified file. This allows the operator to see the current state and configuration of all tables that have been registered with the cFE.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 6       | 56         | 8        | UINT      |       |
| DUMPFILENAME   | Full Filename where dumped data is to be written.    |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_TBL\_LOAD

This command loads the contents of the specified file into an inactive buffer for the table specified within the file.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| LOADFILENAME   | Filename (and path) of data to be loaded.            |     |       | default | 64         | 512      | STRING    |       |

## CFS CFE\_TBL\_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Table Services task.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |



CFS CFE\_TBL\_RESET

Function Code

This command resets the following counters within the Table Services housekeeping telemetry:

- Command Execution Counter (\$sc\_\$cpu\_TBL\_CMDPC)
- Command Error Counter (\$sc\_\$cpu\_TBL\_CMDEC)
- Successful Table Validations Counter (\$sc\_\$cpu\_TBL\_ValSuccessCtr)
- Failed Table Validations Counter (\$sc\_\$cpu\_TBL\_ValFailedCtr)
- Number of Table Validations Requested (\$sc\_\$cpu\_TBL\_ValReqCtr)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS CFE\_TBL\_TLM\_REG

This command will cause Table Services to telemeter the contents of the Table Registry for the command specified table.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b>          | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                                 | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                      | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                                   | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| TABLENAME      | Full Name of Table whose registry entry is to be telemetered. |     |       | default | 64         | 304      | STRING    |       |

## CFS CFE\_TBL\_VALIDATE

This command will cause Table Services to calculate the Data Integrity Value for the specified table and to notify the owning application that the table's validation function should be executed. The results of both the Data Integrity Value computation and the validation function are reported in Table Services Housekeeping Telemetry.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6148</b> | 0   | 65535 | 6148    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



|                |   |   |       |         |    |     |        |
|----------------|---|---|-------|---------|----|-----|--------|
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0 | 255   | 0       | 48 | 8   | UINT   |
| CCSDS_FC       | CCSDS Command Function Code   | 0 | 255   | 4       | 56 | 8   | UINT   |
| ACTIVETBLFLAG  | CFE_TBL_INACTIVE_BUFFER=Inactive<br>Table,<br>CFE_TBL_ACTIVE_BUFFER=Active<br>Table | 0 | 65535 | 0       | 64 | 16  | UINT   |
| TABLENAME      | Full Name of Table to be validated.   |   |       | default | 80 | 304 | STRING |

## CFS CFE\_TIME\_ADD\_1HZADJ

This command has been updated to take actual sub-seconds ( $1/2^{32}$  seconds) rather than microseconds as an input argument. This change occurred after the determination was made that one micro-second is too large an increment for a constant 1Hz adjustment. This command continuously adjusts the Spacecraft Time Correlation Factor (STCF) every second, by adding the specified value. The adjustment to the STCF is applied in the Time Service local 1Hz interrupt handler. As the local 1Hz interrupt is not synchronized to the tone signal, one cannot say when the adjustment will occur, other than once a second, at about the same time relative to the tone. There was some debate about whether the maximum 1Hz clock drift correction factor would ever need to exceed some small fraction of a second. But, the decision was made to provide the capability to make 1Hz adjustments greater than one second and leave it to the ground system to provide mission specific limits.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 13      | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| SUBSECONDS     |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CFE\_TIME\_ADD\_ADJUST

This command adjusts the Spacecraft Time Correlation Factor (STCF) by adding the specified value. The new STCF takes effect immediately upon execution of this command.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 11      | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |



## CFS CFE\_TIME\_ADD\_DELAY

This command is used to factor out a known, predictable latency between the Time Server and a particular Time Client. The correction is applied (added) to the current time calculation for Time Clients, so this command has no meaning for Time Servers. Each Time Client can have a unique latency setting. The latency value is a positive number of seconds and microseconds that represent the deviation from the time maintained by the Time Server.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 5       | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CFE\_TIME\_DIAG\_TLM

This command requests that the Time Service generate a message containing various data values not included in the normal Time Service housekeeping message. The command requests only a single copy of the diagnostic message. Refer to `CFE_TIME_DiagPacket_t` for a description of the Time Service diagnostic message contents.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535 | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |

## CFS CFE\_TIME\_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Time Services task.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535 | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |




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|                |                             |   |     |   |    |   |      |
|----------------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255 | 0 | 48 | 8 | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255 | 0 | 56 | 8 | UINT |

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## CFS CFE\_TIME\_RESET

This command resets the following counters within the Time Services Housekeeping Telemetry :  
 Command Execution Counter (\$sc\_\$cpu\_TIME\_CMDPC)Command Error Counter  
 (\$sc\_\$cpu\_TIME\_CMDEC) This command also resets the following counters within the Time Services Diagnostic Telemetry :Tone Signal Detected Software Bus Message Counter  
 (\$sc\_\$cpu\_TIME\_DTSDetCNT)Time at the Tone Data Software Bus Message Counter  
 (\$sc\_\$cpu\_TIME\_DTatTCNT)Tone Signal/Data Verify Counter  
 (\$sc\_\$cpu\_TIME\_DVerifyCNT)Tone Signal/Data Error Counter (\$sc\_\$cpu\_TIME\_DVerifyER)Tone Signal Interrupt Counter (\$sc\_\$cpu\_TIME\_DTslSRCNT)Tone Signal Interrupt Error Counter  
 (\$sc\_\$cpu\_TIME\_DTsISRRR)Tone Signal Task Counter (\$sc\_\$cpu\_TIME\_DTsTaskCNT)Local 1 Hz Interrupt Counter (\$sc\_\$cpu\_TIME\_D1HzSRCNT)Local 1 Hz Task Counter  
 (\$sc\_\$cpu\_TIME\_D1HzTaskCNT)Reference Time Version Counter  
 (\$sc\_\$cpu\_TIME\_DVersionCNT)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535 | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

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## CFS CFE\_TIME\_SET\_LEAPS

This command sets the spacecraft Leap Seconds to the specified value. Leap Seconds may be positive or negative, and there is no limit to the value except, of course, the limit imposed by the 16 bit signed integer data type. The new Leap Seconds value takes effect immediately upon execution of this command.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 10      | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

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## CFS CFE\_TIME\_SET\_MET



This command sets the Mission Elapsed Timer (MET) to the specified value. Note that the MET (as implemented for cFE Time Service) is a logical representation and not a physical timer. Thus, setting the MET is not dependent on whether the hardware supports a MET register that can be written to. Note also that Time Service 'assumes' that during normal operation, the MET is synchronized to the tone signal. Therefore, unless operating in FLYWHEEL mode, the sub-seconds portion of the MET will be set to zero at the next tone signal interrupt. The new MET takes effect immediately upon execution of this command.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 8       | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CFE\_TIME\_SET\_SIGNAL

This command selects the Time Service tone signal source. Although the list of potential tone signal sources is mission specific, a common choice is the selection of primary or redundant tone signal. The selection may be available to both the Time Server and Time Clients, depending on hardware configuration. Notes: This command is only valid when the CFE\_TIME\_CFG\_SIGNAL configuration parameter in the cfe\_platform\_cfg.h file has been set to TRUE.

| Item Name      | Description   | Min    | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|--------|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b>                    | 0      | 65535 | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control   | 0      | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length  | 0      | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum  | 0      | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code   | 0      | 255   | 15      | 56         | 8        | UINT      |       |
| TONESOURCE     | CFE_TIME_TONE_PRI=Primary Source,<br>CFE_TIME_TONE_RED=Redundant Source | -32768 | 32767 | 0       | 64         | 16       | INT       |       |

## CFS CFE\_TIME\_SET\_SOURCE

This command selects the Time Service clock source. Although the list of potential clock sources is mission specific and defined via configuration parameters, this command provides a common method for switching between the local processor clock and an external source for time data. When commanded to accept external time data (GPS, MET, spacecraft time, etc.), the Time Server will enable input via an API function specific to the configuration definitions for the particular source. When commanded to use internal time data, the Time Server will ignore the external data. However, the Time Server will continue to use the API function as the trigger to generate a 'time at the tone' command packet regardless of the internal/external command selection. Notes: Operating in FLYWHEEL mode is not considered a choice related to clock source, but rather an element of the clock state. See below for a description of the CFE\_TIME\_SET\_STATE\_CC command. This command is only valid when the CFE\_TIME\_CFG\_SOURCE configuration parameter in the cfe\_platform\_cfg.h file has been set to TRUE.

Bit Bit Data



| Item Name      | Description  | Min | Max    | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|--------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535  | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535  | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535  | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255    | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255    | 3       | 56         | 8        | UINT      |       |
|                | CFE_TIME_USE_INTERN=Internal                         |     |        |         |            |          |           |       |
| TIMESOURCE     | Source,<br>CFE_TIME_USE_EXTERN=External<br>Source    |     | -32768 | 32767   | 0          | 64       | 16        | INT   |

## CFS CFE\_TIME\_SET\_STATE

This command indirectly affects the Time Service on-board determination of clock state. Clock state is a combination of factors, most significantly whether the spacecraft time has been accurately set, and whether Time Service is operating in FLYWHEEL mode. This command may be used to notify the Time Server that spacecraft time is now correct, or that time is no longer correct. This information will be distributed to Time Clients, and in turn, to any interested sub-systems. Also, this command may be used to force a Time Server or Time Client into FLYWHEEL mode. Use of FLYWHEEL mode is mainly for debug purposes although in extreme circumstances, it may be of value to force Time Service not to rely on normal time updates. Note that when commanded into FLYWHEEL mode, the Time Service will remain so until receipt of another 'set state' command setting the state into a mode other than FLYWHEEL. Note also that setting the clock state to VALID or INVALID on a Time Client that is currently getting time updates from the Time Server will have very limited effect. As soon as the Time Client receives the next time update, the VALID/INVALID selection will be set to that of the Time Server. However, setting a Time Client to FLYWHEEL cannot be overridden by the Time Server since the Time Client will ignore time updates from the Time Server while in FLYWHEEL mode.

| Item Name      | Description  | Min | Max    | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|--------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b>   | 0   | 65535  | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control  | 0   | 65535  | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length   | 0   | 65535  | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum   | 0   | 255    | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code  | 0   | 255    | 4       | 56         | 8        | UINT      |       |
|                | CFE_TIME_INVALID=Spacecraft time has not been accurately set,  |     |        |         |            |          |           |       |
| CLOCKSTATE     | CFE_TIME_VALID=Spacecraft clock has been accurately set,<br>CFE_TIME_FLYWHEEL=Force into FLYWHEEL mode |     | -32768 | 32767   | 0          | 64       | 16        | INT   |

## CFS CFE\_TIME\_SET\_STCF

This command sets the Spacecraft Time Correlation Factor (STCF) to the specified value. This command differs from the previously described SET CLOCK in the nature of the command argument. This command sets the STCF value directly, rather than extracting the STCF from a value representing the total of MET, STCF and optionally, Leap Seconds. The new STCF takes effect immediately upon execution of this command.

| Item Name      | Description                 | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|-----------------------------|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification | 0   | 65535 | 6149    | 0          | 16       | UINT      |       |



| <b>Id Value: 6149</b> |                               |   |            |       |    |    |      |
|-----------------------|-------------------------------|---|------------|-------|----|----|------|
| CCSDS_SEQUENCE        | CCSDS Packet Sequence Control | 0 | 65535      | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH          | CCSDS Packet Data Length      | 0 | 65535      | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM        | CCSDS Command Checksum        | 0 | 255        | 0     | 48 | 8  | UINT |
| CCSDS_FC              | CCSDS Command Function Code   | 0 | 255        | 9     | 56 | 8  | UINT |
| SECONDS               |                               | 0 | 4294967295 | 0     | 64 | 32 | UINT |
| MICROSECONDS          |                               | 0 | 4294967295 | 0     | 96 | 32 | UINT |

## CFS CFE\_TIME\_SET\_TIME

This command sets the spacecraft clock to a new value, regardless of the current setting (time jam). The new time value represents the desired offset from the mission-defined time epoch and takes effect immediately upon execution of this command. Time Service will calculate a new STCF value based on the current MET and the desired new time using one of the following: If Time Service is configured to compute current time as TAI STCF = (new time) - (current MET) (current time) = (current MET) + STCF If Time Service is configured to compute current time as UTC STCF = ((new time) - (current MET)) + (Leap Seconds) (current time) = ((current MET) + STCF) - (Leap Seconds)

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 7       | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CFE\_TIME\_SUB\_1HZADJ

This command has been updated to take actual sub-seconds ( $1/2^{32}$  seconds) rather than microseconds as an input argument. This change occurred after the determination was made that one micro-second is too large an increment for a constant 1Hz adjustment. This command continuously adjusts the Spacecraft Time Correlation Factor (STCF) every second, by subtracting the specified value. The adjustment to the STCF is applied in the Time Service local 1Hz interrupt handler. As the local 1Hz interrupt is not synchronized to the tone signal, one cannot say when the adjustment will occur, other than once a second, at about the same time relative to the tone. There was some debate about whether the maximum 1Hz clock drift correction factor would ever need to exceed some small fraction of a second. But, the decision was made to provide the capability to make 1Hz adjustments greater than one second and leave it to the ground system to provide mission specific limits.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535 | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data                                    | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



| CCSDS_LENGTH   | Length                      | 0 | 00000      | 1  | 02 | 10 | UINT |
|----------------|-----------------------------|---|------------|----|----|----|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255        | 0  | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255        | 14 | 56 | 8  | UINT |
| SECONDS        |                             | 0 | 4294967295 | 0  | 64 | 32 | UINT |
| SUBSECONDS     |                             | 0 | 4294967295 | 0  | 96 | 32 | UINT |

## CFS CFE\_TIME\_SUB\_ADJUST

This command adjusts the Spacecraft Time Correlation Factor (STCF) by subtracting the specified value. The new STCF takes effect immediately upon execution of this command.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 12      | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CFE\_TIME\_SUB\_DELAY

This command is used to factor out a known, predictable latency between the Time Server and a particular Time Client. The correction is applied (subtracted) to the current time calculation for Time Clients, so this command has no meaning for Time Servers. Each Time Client can have a unique latency setting. The latency value is a positive number of seconds and microseconds that represent the deviation from the time maintained by the Time Server. Note that it is unimaginable that the seconds value will ever be anything but zero.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6149</b> | 0   | 65535      | 6149    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 6       | 56         | 8        | UINT      |       |
| SECONDS        |  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| MICROSECONDS   |  | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS CS\_CANCEL\_ONESHOT

Cancels a one shot calculation that is already in progress.

Bit Bit Data



| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_ALL\_CS

Disables all background checking

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_APPS

Disable the App table background checksumming

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 35      | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_CFECORE

Disables background checking on the cFE core code segment

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |



|                |                               |   |       |       |    |    |      |
|----------------|-------------------------------|---|-------|-------|----|----|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control | 0 | 65535 | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length      | 0 | 65535 | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum        | 0 | 255   | 0     | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code   | 0 | 255   | 7     | 56 | 8  | UINT |

## CFS CS\_DISABLE\_EEPROM

Disable the Eeprom table background checksumming

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 15      | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_ENTRY\_EEPROM

Disable the Eeprom entry background checksumming

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 19      | 56         | 8        | UINT      |       |
| ENTRYID        | EntryID to perform a command on.                     | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_DISABLE\_ENTRY\_MEMORY

Disable the Memory entry background checksumming

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |



|                |                                  |   |            |    |    |    |      |
|----------------|----------------------------------|---|------------|----|----|----|------|
| CCSDS_LENGTH   | CCSDS Packet Data Length         | 0 | 65535      | 1  | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum           | 0 | 255        | 0  | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code      | 0 | 255        | 26 | 56 | 8  | UINT |
| ENTRYID        | EntryID to perform a command on. | 0 | 4294967295 | 0  | 64 | 32 | UINT |

## CFS CS\_DISABLE\_MEMORY

Disable the Memory table background checksumming

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 22      | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_NAME\_APP

Disable background checking of the app

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 39      | 56         | 8        | UINT      |       |
| NAME           | App name to perform a command on.                    |     |       | default | 64         | 160      | STRING    |       |

## CFS CS\_DISABLE\_NAME\_TABLE

Disable background checking of the table

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |



|                |                                     |   |         |    |     |        |      |
|----------------|-------------------------------------|---|---------|----|-----|--------|------|
| CCSDS_LENGTH   | CCSDS Packet Data Length            | 0 | 65535   | 1  | 32  | 16     | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum              | 0 | 255     | 0  | 48  | 8      | UINT |
| CCSDS_FC       | CCSDS Command Function Code         | 0 | 255     | 33 | 56  | 8      | UINT |
| NAME           | Table name to perform a command on. |   | default | 64 | 304 | STRING |      |

## CFS CS\_DISABLE\_OS

Disables background checking on the OS code segment code segment

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 11      | 56         | 8        | UINT      |       |

## CFS CS\_DISABLE\_TABLES

Disable the Tables table background checksumming

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 29      | 56         | 8        | UINT      |       |

## CFS CS\_ENABLE\_ALL\_CS

Allows CS to continue background checking

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



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|                |                             |   |     |   |    |   |      |
|----------------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255 | 0 | 48 | 8 | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255 | 4 | 56 | 8 | UINT |

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## CFS CS\_ENABLE\_APPS

Allow the App table to checksummed in the background

| Item Name      | Description                                   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br>Id Value: 6303 | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                 | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                      | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                        | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                   | 0   | 255   | 34      | 56         | 8        | UINT      |       |

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## CFS CS\_ENABLE\_CFECORE

Enables background checking on the cFE core code segment

| Item Name      | Description                                   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br>Id Value: 6303 | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                 | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                      | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                        | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                   | 0   | 255   | 6       | 56         | 8        | UINT      |       |

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## CFS CS\_ENABLE\_EEPROM

Allow the Eeprom table to checksummed in the background

| Item Name      | Description                                   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br>Id Value: 6303 | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                 | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                      | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                        | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                   | 0   | 255   | 14      | 56         | 8        | UINT      |       |

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## CFS CS\_ENABLE\_ENTRY\_EEPROM

Allow the Eeprom entry to checksummed in the background

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 18      | 56         | 8        | UINT      |       |
| ENTRYID        | EntryID to perform a command on.                     | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_ENABLE\_ENTRY\_MEMORY

Allow the Memory entry to checksummed in the background

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 25      | 56         | 8        | UINT      |       |
| ENTRYID        | EntryID to perform a command on.                     | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_ENABLE\_MEMORY

Allow the Memory table to checksummed in the background

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 21      | 56         | 8        | UINT      |       |



## CFS CS\_ENABLE\_NAME\_APP

Allow the app to checksummed in the background

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 38      | 56         | 8        | UINT      |       |
| NAME           | App name to perform a command on.                    |     |       | default | 64         | 160      | STRING    |       |

## CFS CS\_ENABLE\_NAME\_TABLE

Allow the table to checksummed in the background

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 32      | 56         | 8        | UINT      |       |
| NAME           | Table name to perform a command on.                  |     |       | default | 64         | 304      | STRING    |       |

## CFS CS\_ENABLE\_OS

Enables background checking on the OS code segment

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 10      | 56         | 8        | UINT      |       |



## CFS CS\_ENABLE\_TABLES

Allow the Tables table to checksummed in the background

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 28      | 56         | 8        | UINT      |       |

## CFS CS\_GET\_ENTRY\_ID\_EEPROM

Gets the Entry ID of an Eeprom address to use in subsequent commands.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 20      | 56         | 8        | UINT      |       |
| ADDRESS        | Address to get the ID for.                           | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_GET\_ENTRY\_ID\_MEMORY

Gets the Entry ID of a Memory address to use in subsequent commands.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 27      | 56         | 8        | UINT      |       |
| ADDRESS        | Address to get the ID for.                           | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_NOOP



Implements the Noop command that insures the CS task is alive

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS CS\_ONESHOT

Computes a checksum on the command specified address and size of memory at the command specified rate. This command spawns a child task to complete the checksum.

| Item Name        | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification<br><b>Id Value: 6303</b>                                     | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control  | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length   | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum   | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code  | 0   | 255        | 2       | 56         | 8        | UINT      |       |
| ADDRESS          | Address to start checksum.   | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| SIZE             | Number of bytes to checksum.   | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |
| MAXBYTESPERCYCLE | Max Number of bytes to compute per cycle.<br>Value of Zero to use platform config value. | 0   | 4294967295 | 0       | 128        | 32       | UINT      |       |

## CFS CS\_RECOMPUTE\_BASELINE\_APP

Recompute the baseline checksum of the app and use that value as the new baseline. This command spawns a child task to do the recompute.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|          |                                   |   |         |    |     |        |      |
|----------|-----------------------------------|---|---------|----|-----|--------|------|
| CCSDS_FC | CCSDS Command Function Code       | 0 | 255     | 37 | 56  | 8      | UINT |
| NAME     | App name to perform a command on. |   | default | 64 | 160 | STRING |      |

## CFS CS\_RECOMPUTE\_BASELINE\_CFECore

Recomputes the baseline checksum of the cFE core and use the new value as the baseline.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 9       | 56         | 8        | UINT      |       |

## CFS CS\_RECOMPUTE\_BASELINE\_EEPROM

Recompute the baseline checksum of the Eeprom table entry and use that value as the new baseline. This command spawns a child task to do the recompute.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 17      | 56         | 8        | UINT      |       |
| ENTRYID        | EntryID to perform a command on.                     | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_RECOMPUTE\_BASELINE\_MEMORY

Recompute the baseline checksum of the Memory table entry and use that value as the new baseline. This command spawns a child task to do the recompute.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|                |                                  |   |            |    |    |    |      |
|----------------|----------------------------------|---|------------|----|----|----|------|
| CCSDS_CHECKSUM | Checksum                         | v | 200        | v  | 40 | 0  | UINT |
| CCSDS_FC       | CCSDS Command Function Code      | 0 | 255        | 24 | 56 | 8  | UINT |
| ENTRYID        | EntryID to perform a command on. | 0 | 4294967295 | 0  | 64 | 32 | UINT |

## CFS CS\_RECOMPUTE\_BASELINE\_OS

Recomputes the baseline checksum of the OS code segment and use the new value as the baseline.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 13      | 56         | 8        | UINT      |       |

## CFS CS\_RECOMPUTE\_BASELINE\_TABLE

Recompute the baseline checksum of the table and use that value as the new baseline. This command spawns a child task to do the recompute.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 31      | 56         | 8        | UINT      |       |
| NAME           | Table name to perform a command on.                  |     |       | default | 64         | 304      | STRING    |       |

## CFS CS\_REPORT\_BASELINE\_APP

Reports the baseline checksum of the app that has already been calculated.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



|                |                                   |   |     |         |    |     |        |
|----------------|-----------------------------------|---|-----|---------|----|-----|--------|
| CCSDS_CHECKSUM | CCSDS Command Checksum            | 0 | 255 | 0       | 48 | 8   | UINT   |
| CCSDS_FC       | CCSDS Command Function Code       | 0 | 255 | 36      | 56 | 8   | UINT   |
| NAME           | App name to perform a command on. |   |     | default | 64 | 160 | STRING |

## CFS CS\_REPORT\_BASELINE\_CFECore

Reports the baseline checksum of the cFE core that has already been calculated.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |

## CFS CS\_REPORT\_BASELINE\_EEPROM

Reports the baseline checksum of the Eeprom table entry that has already been calculated.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535      | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 16      | 56         | 8        | UINT      |       |
| ENTRYID        | EntryID to perform a command on.                     | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS CS\_REPORT\_BASELINE\_MEMORY

Reports the baseline checksum of the Memory table entry that has already been calculated.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |




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|                |                                  |   |            |    |    |    |      |
|----------------|----------------------------------|---|------------|----|----|----|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum           | 0 | 255        | 0  | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code      | 0 | 255        | 23 | 56 | 8  | UINT |
| ENTRYID        | EntryID to perform a command on. | 0 | 4294967295 | 0  | 64 | 32 | UINT |

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## CFS CS\_REPORT\_BASELINE\_OS

Reports the baseline checksum of the OS code segment that has already been calculated.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 12      | 56         | 8        | UINT      |       |

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## CFS CS\_REPORT\_BASELINE\_TABLE

Reports the baseline checksum of the table that has already been calculated.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 30      | 56         | 8        | UINT      |       |
| NAME           | Table name to perform a command on.                  |     |       | default | 64         | 304      | STRING    |       |

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## CFS CS\_RESET

Resets the CS housekeeping counters

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6303</b> | 0   | 65535 | 6303    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



|                |                             |   |     |   |    |   |      |
|----------------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255 | 0 | 48 | 8 | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255 | 1 | 56 | 8 | UINT |

## CFS DS\_ADD\_MID

This command will change the Message ID selection for an unused Packet Filter Table entry to the indicated value.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 16      | 56         | 8        | UINT      |       |
| MESSAGEID      | Message ID to add to Packet Filter Table.            | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS DS\_CLOSE\_ALL

This command will close all open Destination Files. NOTE: Using this command may incur a performance hit based upon the number and size of the files being closed.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 17      | 56         | 8        | UINT      |       |

## CFS DS\_CLOSE\_FILE

This command will close the indicated Destination File.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|                |                                    |   |       |    |    |    |      |
|----------------|------------------------------------|---|-------|----|----|----|------|
| CCSDS_FC       | CCSDS Command Function Code        | 0 | 255   | 14 | 56 | 8  | UINT |
| FILETABLEINDEX | Index into Destination File Table. | 0 | 65535 | 0  | 64 | 16 | UINT |

## CFS DS\_GET\_FILE\_INFO

This command will send the DS File Info Packet.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 15      | 56         | 8        | UINT      |       |

## CFS DS\_NOOP

This command will increment the command execution counter and send an event containing the version number of the application. The command is often used as a general test for application 'aliveness'.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS DS\_RESET

This command will set the following housekeeping counters to zero: Command Execution Counter (\$sc\_\$cpu\_DS\_CMDPC) Command Error Counter (\$sc\_\$cpu\_DS\_CMDEC) Ignored Packet Counter (\$sc\_\$cpu\_DS\_IgnoredPktCnt) Filtered Packet Counter (\$sc\_\$cpu\_DS\_FilteredPktCnt) Passed Packet Counter (\$sc\_\$cpu\_DS\_PassedPktCnt) File Access Counter (\$sc\_\$cpu\_DS\_FileWriteCnt) File Access Error Counter (\$sc\_\$cpu\_DS\_FileWriteErrCnt) Destination Table Load Counter (\$sc\_\$cpu\_DS\_DestLoadCnt) Filter Table Load Counter (\$sc\_\$cpu\_DS\_FilterLoadCnt) Destination Table Ptr Error Counter (\$sc\_\$cpu\_DS\_DestPtrErrCnt) Filter Table Ptr Error Counter (\$sc\_\$cpu\_DS\_FilterPtrErrCnt)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |




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|                |                               |   |       |       |    |    |      |
|----------------|-------------------------------|---|-------|-------|----|----|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control | 0 | 65535 | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length      | 0 | 65535 | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum        | 0 | 255   | 0     | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code   | 0 | 255   | 1     | 56 | 8  | UINT |

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## CFS DS\_SET\_APP\_STATE

This command will modify the Ena/Dis State selection for the DS application. No packets are stored while DS is disabled.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| ENABLESTATE    | Application enable/disable state.                    | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

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## CFS DS\_SET\_DEST\_AGE

This command will modify the max file age selection for the indicated entry in the Destination File Table.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535      | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 12      | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.                   | 0   | 65535      | 0       | 64         | 16       | UINT      |       |
| MAXFILEAGE     | Max file age (seconds).                              | 0   | 4294967295 | 0       | 80         | 32       | UINT      |       |

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## CFS DS\_SET\_DEST\_BASE

This command will modify the Basename portion of the filename for the indicated entry in the Destination File Table.

| Item Name | Description | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|-------------|-----|-----|---------|------------|----------|-----------|-------|
|           |             |     |     |         |            |          |           |       |



|                |  |   |         |       |    |        |      |
|----------------|--|---|---------|-------|----|--------|------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0 | 65535   | 6331  | 0  | 16     | UINT |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0 | 65535   | 49152 | 16 | 16     | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0 | 65535   | 1     | 32 | 16     | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0 | 255     | 0     | 48 | 8      | UINT |
| CCSDS_FC       | CCSDS Command Function Code                          | 0 | 255     | 9     | 56 | 8      | UINT |
| FILETABLEINDEX | Index into Destination File Table.                   | 0 | 65535   | 0     | 64 | 16     | UINT |
| BASENAME       | Base portion of filename.                            |   | default | 80    | 0  | STRING |      |

## CFS DS\_SET\_DEST\_COUNT

This command will modify the sequence count value for the indicated entry in the Destination File Table.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535      | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 13      | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.                   | 0   | 65535      | 0       | 64         | 16       | UINT      |       |
| SEQUENCECOUNT  | Sequence count portion of filename.                  | 0   | 4294967295 | 0       | 80         | 32       | UINT      |       |

## CFS DS\_SET\_DEST\_EXT

This command will modify the Extension portion of the filename for the indicated entry in the Destination File Table.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 10      | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.                   | 0   | 65535 | 0       | 64         | 16       | UINT      |       |



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|           |                                |         |    |    |        |
|-----------|--------------------------------|---------|----|----|--------|
| EXTENSION | Extension portion of filename. | default | 80 | 64 | STRING |
|-----------|--------------------------------|---------|----|----|--------|

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## CFS DS\_SET\_DEST\_PATH

This command will modify the Pathname portion of the filename for the indicated entry in the Destination File Table.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.                   | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| PATHNAME       | Path portion of filename.                            |     |       | default | 80         | 0        | STRING    |       |

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## CFS DS\_SET\_DEST\_SIZE

This command will modify the max file size selection for the indicated entry in the Destination File Table.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535      | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 11      | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.                   | 0   | 65535      | 0       | 64         | 16       | UINT      |       |
| MAXFILESIZE    | Max file size (bytes) before re-open.                | 0   | 4294967295 | 0       | 80         | 32       | UINT      |       |

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## CFS DS\_SET\_DEST\_STATE

This command will modify the Ena/Dis State selection for the indicated entry in the Destination File Table.

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6331</b><br>CCSDS Packet Sequence | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |




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|                |                                    |   |       |       |    |    |      |
|----------------|------------------------------------|---|-------|-------|----|----|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control      | 0 | 65535 | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length           | 0 | 65535 | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum             | 0 | 255   | 0     | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code        | 0 | 255   | 7     | 56 | 8  | UINT |
| FILETABLEINDEX | Index into Destination File Table. | 0 | 65535 | 0     | 64 | 16 | UINT |
| ENABLESTATE    | File enable/disable state.         | 0 | 65535 | 0     | 80 | 16 | UINT |

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## CFS DS\_SET\_DEST\_TYPE

This command will modify the Filename Type selection for the indicated entry in the Destination File Table.

| Item Name      | Description                                | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification Id Value: 6331 | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control              | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                     | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                | 0   | 255   | 6       | 56         | 8        | UINT      |       |
| FILETABLEINDEX | Index into Destination File Table.         | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| FILENAMETYPE   | Filename type - count vs time.             | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

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## CFS DS\_SET\_FILTER\_FILE

This command will modify the Destination File selection for the indicated entry in the Packet Filter Table.

| Item Name        | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification Id Value: 6331           | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| MESSAGEID        | Message ID of existing entry in Packet Filter Table. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| FILTERPARMSINDEX | Index into Filter Parms Array.                       | 0   | 65535 | 0       | 80         | 16       | UINT      |       |
| FILETABLEINDEX   | Index into Destination File Table.                   | 0   | 65535 | 0       | 96         | 16       | UINT      |       |

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## CFS DS\_SET\_FILTER\_PARMS



This command will modify the Algorithm Parameters for the indicated entry in the Packet Filter Table.

| Item Name        | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| MESSAGEID        | Message ID of existing entry in Packet Filter Table. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| FILTERPARMSINDEX | Index into Filter Params Array.                      | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS DS\_SET\_FILTER\_TYPE

This command will modify the Filter Type selection for the indicated entry in the Packet Filter Table.

| Item Name        | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID   | CCSDS Packet Identification<br><b>Id Value: 6331</b> | 0   | 65535 | 6331    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE   | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH     | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM   | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC         | CCSDS Command Function Code                          | 0   | 255   | 4       | 56         | 8        | UINT      |       |
| MESSAGEID        | Message ID of existing entry in Packet Filter Table. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| FILTERPARMSINDEX | Index into Filter Params Array.                      | 0   | 65535 | 0       | 80         | 16       | UINT      |       |
| FILTERTYPE       | Filter type (packet count or time).                  | 0   | 65535 | 0       | 96         | 16       | UINT      |       |

## CFS FM\_CONCAT

This command concatenates two source files into the target file. Sources must both be existing files and target must not exist. Sources and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but copying the first source file to the target file and then appending the second source file to the target file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |



| Item Name | Description                         | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|-------------------------------------|-----|-----|---------|------------|----------|-----------|-------|
| SOURCE1   | Function Code<br>Source 1 filename. |     |     | default | 64         | 512      | STRING    |       |
| SOURCE2   | Source 2 filename.                  |     |     | default | 576        | 512      | STRING    |       |
| TARGET    | Target filename.                    |     |     | default | 1088       | 512      | STRING    |       |

## CFS FM\_COPY

This command copies the source file to the target file. The source must be an existing file and the target must not be a directory name. If the Overwrite command argument is TRUE, then the target may be an existing file, provided that the file is closed. If the Overwrite command argument is FALSE, then the target must not exist. The source and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but copying the file will be performed by a lower priority child task. As such, the command result for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| OVERWRITE      | Allow overwrite.                                     | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| SOURCE         | Source filename.                                     |     |       | default | 80         | 512      | STRING    |       |
| TARGET         | Target filename.                                     |     |       | default | 592        | 512      | STRING    |       |

## CFS FM\_CREATE\_DIR

This command creates the source directory. Source must be a valid directory name that does not exist.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 12      | 56         | 8        | UINT      |       |
| DIRECTORY      | Directory name.                                      |     |       | default | 64         | 512      | STRING    |       |

## CFS FM\_DECOMPRESS

This command invokes a CFE function to decompress the source file into the target file. Source must be an existing file and target must not exist. Source and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command



argument validation will be done immediately but decompressing the source file into the target file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |
| SOURCE         | Source filename.                                     |     |       | default | 64         | 512      | STRING    |       |
| TARGET         | Target filename.                                     |     |       | default | 576        | 512      | STRING    |       |

## CFS FM\_DELETE

This command deletes the source file. Source must be an existing file that is not open.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| FILENAME       | Delete filename.                                     |     |       | default | 64         | 512      | STRING    |       |

## CFS FM\_DELETE\_ALL

This command deletes all files in the source directory. Source must be an existing directory. Open files and sub-directories are not deleted. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory and deleting each file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|                       |  |   |     |         |    |     |        |
|-----------------------|--|---|-----|---------|----|-----|--------|
| CCSDS_FC<br>DIRECTORY | CCSDS Command Function Code<br>Directory name. | 0 | 255 | 7       | 56 | 8   | UINT   |
|                       |  |   |     | default | 64 | 512 | STRING |

## CFS FM\_DELETE\_DIR

This command deletes the source directory, it does not delete the contents of the directory. Source must be a valid directory name that exists.

| Item Name             | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID        | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE        | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH          | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM        | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC<br>DIRECTORY | CCSDS Command Function Code<br>Directory name.       | 0   | 255   | 13      | 56         | 8        | UINT      |       |
|                       |  |     |       | default | 64         | 512      | STRING    |       |

## CFS FM\_DELETE\_INT

This is a special version of the FM\_DELETE\_CC command for use when the command is sent by another application, rather than from the ground. This version of the command will not generate a success event, nor will the command increment the command success counter. The intent is to avoid confusion resulting from telemetry representing the results of delete commands sent by other applications and those sent from the ground. Refer to FM\_DELETE\_CC command for use details.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 18      | 56         | 8        | UINT      |       |
| FILENAME       | Delete filename.                                     |     |       | default | 64         | 512      | STRING    |       |

## CFS FM\_GET\_DIR\_FILE

This command writes a listing of the contents of the source directory to the target file. If the target filename buffer is empty, then the default target filename FM\_DIR\_LIST\_FILE\_DEFNAME is used. The command will overwrite a previous copy of the target file, if one exists. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name | Description | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|-------------|-----|-----|---------|------------|----------|-----------|-------|
|-----------|-------------|-----|-----|---------|------------|----------|-----------|-------|



|                 |  |   |       |         |      |     |        |
|-----------------|--|---|-------|---------|------|-----|--------|
| CCSDS_STREAMID  | CCSDS Packet Identification<br><b>Id Value: 6284</b>           | 0 | 65535 | 6284    | 0    | 16  | UINT   |
| CCSDS_SEQUENCE  | CCSDS Packet Sequence Control                                  | 0 | 65535 | 49152   | 16   | 16  | UINT   |
| CCSDS_LENGTH    | CCSDS Packet Data Length                                       | 0 | 65535 | 1       | 32   | 16  | UINT   |
| CCSDS_CHECKSUM  | CCSDS Command Checksum   | 0 | 255   | 0       | 48   | 8   | UINT   |
| CCSDS_FC        | CCSDS Command Function Code                                    | 0 | 255   | 14      | 56   | 8   | UINT   |
| DIRECTORY       | Directory name.  |   |       | default | 64   | 512 | STRING |
| FILENAME        | Filename.  |   |       | default | 576  | 512 | STRING |
| GETSIZETIMEMODE | Option to query size, time, and mode of files (CPU intensive). | 0 | 255   | 0       | 1088 | 8   | UINT   |

## CFS FM\_GET\_DIR\_PKT

This command creates a telemetry packet FM\_DirListPkt\_t that contains a listing of the entries in the specified directory. Since the packet will likely hold fewer entries than will be possible in a directory, the command also provides an index argument to define which entry in the directory is the first entry reported in the telemetry packet. After reading the directory list and skipping entries until reaching the index of the first entry reported, the remaining entries in the packet are filled sequentially until either the packet is full or until there are no more entries in the directory. The first entry index is zero based - thus, when the first entry index is zero the first directory entry will be the first packet entry. The number of entries per packet FM\_DIR\_LIST\_PKT\_ENTRIES is a platform configuration definition. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name       | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID  | CCSDS Packet Identification<br><b>Id Value: 6284</b>           | 0   | 65535      | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE  | CCSDS Packet Sequence Control                                  | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH    | CCSDS Packet Data Length                                       | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM  | CCSDS Command Checksum   | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC        | CCSDS Command Function Code                                    | 0   | 255        | 15      | 56         | 8        | UINT      |       |
| DIRECTORY       | Directory name.  |     |            | default | 64         | 512      | STRING    |       |
| DIRLISTOFFSET   | Index of 1st dir entry to put in packet.                       | 0   | 4294967295 | 0       | 576        | 32       | UINT      |       |
| GETSIZETIMEMODE | Option to query size, time, and mode of files (CPU intensive). | 0   | 255        | 0       | 608        | 8        | UINT      |       |

## CFS FM\_GET\_FILE\_INFO

This command creates an FM file information telemetry packet for the source file. The file information packet includes status that indicates whether source is a file that is open or closed, a directory, or does not exist. The file information data also includes a CRC, file size, last modify time and the source name. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but collecting the status data and



calculating the CRC will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535      | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 10      | 56         | 8        | UINT      |       |
| FILENAME       | Filename.  |     |            | default | 64         | 512      | STRING    |       |
| FILEINFOCRC    | File info CRC method.                                | 0   | 4294967295 | 0       | 576        | 32       | UINT      |       |

## CFS FM\_GET\_FREE\_SPACE

This command queries the amount of free space for each of the enabled entries in the file system free space table. The data is then placed in a telemetry packet and sent to ground.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 16      | 56         | 8        | UINT      |       |

## CFS FM\_GET\_OPEN\_FILES

This command creates an FM open files telemetry packet. The open files packet includes the number of open files and for each open file, the name of the file and the name of the application that has the file opened.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 11      | 56         | 8        | UINT      |       |



## CFS FM\_MOVE

This command moves the source file to the target file. The source must be an existing file and the target must not be a directory name. If the Overwrite command argument is TRUE, then the target may be an existing file, provided that the file is closed. If the Overwrite command argument is FALSE, then the target must not exist. Source and target must both be on the same file system. The move command does not actually move any file data. The command modifies the file system directory structure to create a different file entry for the same file data. If the user wishes to move a file across file systems, he must first copy the file and then delete the original.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| OVERWRITE      | Allow overwrite.                                     | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| SOURCE         | Source filename.                                     |     |       | default | 80         | 512      | STRING    |       |
| TARGET         | Target filename.                                     |     |       | default | 592        | 512      | STRING    |       |

## CFS FM\_NOOP

This command performs no operation other than to generate an informational event that also contains software version data. The command is most often used as a general aliveness test by demonstrating that the application can receive commands and generate telemetry.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS FM\_RENAME

This command renames the source file to the target file. Source must be an existing file and target must not exist. Source and target must both be on the same file system. The rename command does not actually move any file data. The command modifies the file system directory structure to create a different file entry for the same file data. If the user wishes to rename a file across file systems, he must first copy the file and then delete the original.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |



|                |                               |   |         |       |     |        |      |
|----------------|-------------------------------|---|---------|-------|-----|--------|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control | 0 | 65535   | 49152 | 16  | 16     | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length      | 0 | 65535   | 1     | 32  | 16     | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum        | 0 | 255     | 0     | 48  | 8      | UINT |
| CCSDS_FC       | CCSDS Command Function Code   | 0 | 255     | 4     | 56  | 8      | UINT |
| SOURCE         | Source filename.              |   | default | 64    | 512 | STRING |      |
| TARGET         | Target filename.              |   | default | 576   | 512 | STRING |      |

## CFS FM\_RESET

This command resets the following housekeeping telemetry: Command success counter /FM\_CMDPC Command error counter /FM\_CMDEC Command warning counter /FM\_WarnCtr Child cmd success counter /FM\_ChildCMDPC Child cmd error counter /FM\_ChildCMDEC Child cmd warning counter /FM\_ChildWarnCtr

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535 | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS FM\_SET\_FILE\_PERM

This command sets the permissions for a file. This is a direct interface to OS\_chmod in the OSAL. OS\_chmod accepts a uint32 to set the file's mode. The mode value also contains the type of file (regular or directory, etc) so care should be taken to not change the file type from regular to directory or vice-versa. Examples for a regular file:

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535      | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 19      | 56         | 8        | UINT      |       |
| FILENAME       | File name of the permissions to set.                 |     |            | default | 64         | 512      | STRING    |       |
| MODE           | Permissions, passed directly to OS_chmod.            | 0   | 4294967295 | 0       | 576        | 32       | UINT      |       |

## CFS FM\_SET\_TABLE\_STATE



This command enables or disables a single entry in the FM file system free space table. Only table entries that are currently enabled or disabled may be modified by command. Unused table entries cannot be modified.

| Item Name       | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID  | CCSDS Packet Identification<br><b>Id Value: 6284</b> | 0   | 65535      | 6284    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE  | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH    | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM  | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC        | CCSDS Command Function Code                          | 0   | 255        | 17      | 56         | 8        | UINT      |       |
| TABLEENTRYINDEX | Table entry index.                                   | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |
| TABLEENTRYSTATE | New table entry state.                               | 0   | 4294967295 | 0       | 96         | 32       | UINT      |       |

## CFS HK\_NOOP

This command will increment the command execution counter and send an event containing the version number of the application

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6298</b> | 0   | 65535 | 6298    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS HK\_RESET

This command resets the following counters within the HK housekeeping telemetry: Command Execution Counter (\$sc\_\$cpu\_HK\_CMDPC)Command Error Counter (\$sc\_\$cpu\_HK\_CMDEC)Combined Packets Sent Counter (\$sc\_\$cpu\_HK\_CmbPktSent)Missing Data Counter (\$sc\_\$cpu\_HK\_MissDataCtr)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6298</b> | 0   | 65535 | 6298    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |



## CFS HS\_DISABLE\_ALIVENESS

Disables the Aliveness Indicator UART output

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |

## CFS HS\_DISABLE\_APPMON

Disables the Applications Monitor

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |

## CFS HS\_DISABLE\_CPUHOG

Disables the CPU Hogging Indicator Event Message

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 11      | 56         | 8        | UINT      |       |

## CFS HS\_DISABLE\_EVENTMON

Disables the Events Monitor



| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |

## CFS HS\_ENABLE\_ALIVENESS

Enables the Aliveness Indicator UART output

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 6       | 56         | 8        | UINT      |       |

## CFS HS\_ENABLE\_APPMON

Enables the Applications Monitor

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |

## CFS HS\_ENABLE\_CPUHOG

Enables the CPU Hogging Indicator Event Message

| Item Name      | Description                 | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|-----------------------------|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |

**Id Value: 6318**

|                |                               |   |       |       |    |    |      |
|----------------|-------------------------------|---|-------|-------|----|----|------|
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control | 0 | 65535 | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length      | 0 | 65535 | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum        | 0 | 255   | 0     | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code   | 0 | 255   | 10    | 56 | 8  | UINT |

## CFS HS\_ENABLE\_EVENTMON

Enables the Events Monitor

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 4       | 56         | 8        | UINT      |       |

## CFS HS\_NOOP

Implements the Noop command that insures the HS task is alive

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS HS\_RESET

Resets the HS housekeeping counters

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |



| CCSDS_LENGTH   | Length                      | 0 | 00000000 | 00 | 00 | 00 | 00000000 |
|----------------|-----------------------------|---|----------|----|----|----|----------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255      | 0  | 48 | 8  | UINT     |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255      | 1  | 56 | 8  | UINT     |

## CFS HS\_RESET\_RESETS\_PERFORMED

Resets the count of HS performed resets maintained by HS

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |

## CFS HS\_SET\_MAX\_RESETS

Sets the max allowable count of processor resets to the provided value

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6318</b> | 0   | 65535 | 6318    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 9       | 56         | 8        | UINT      |       |
| MAXRESETS      |  | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS LC\_NOOP

Implements the Noop command that insures the LC task is alive

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 | 6308    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|          |                             |   |     |   |    |   |      |
|----------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_FC | CCSDS Command Function Code | 0 | 255 | 0 | 56 | 8 | UINT |
|----------|-----------------------------|---|-----|---|----|---|------|

## CFS LC\_RESET

Resets the LC housekeeping counters

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 | 6308    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS LC\_RESET\_AP\_STATS

Resets actionpoint statistics

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 | 6308    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| APNUMBER       | Which actionpoint(s) to change.                      | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| PADDING        | Structure padding.                                   | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS LC\_RESET\_WP\_STATS

Resets watchpoint statistics

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 | 6308    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 6       | 56         | 8        | UINT      |       |



|          |   |   |         |    |    |      |
|----------|---|---|---------|----|----|------|
| WPNUMBER | Function Code<br>Which watchpoint(s) to change. | 0 | 65535 0 | 64 | 16 | UINT |
| PADDING  | Structure padding.                              | 0 | 65535 0 | 80 | 16 | UINT |

## CFS LC\_SET\_AP\_PERMOFF

Set the specified actionpoint's state to LC\_APSTATE\_PERMOFF

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 6308  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | UINT     |           |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | UINT     |           |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255 4       | 56      | 8          | UINT     |           |       |
| APNUMBER       | Which actionpoint to change.                         | 0   | 65535 0     | 64      | 16         | UINT     |           |       |
| PADDING        | Structure padding.                                   | 0   | 65535 0     | 80      | 16         | UINT     |           |       |

## CFS LC\_SET\_AP\_STATE

Set actionpoint state

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 6308  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | UINT     |           |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | UINT     |           |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255 3       | 56      | 8          | UINT     |           |       |
| APNUMBER       | Which actionpoint(s) to change.                      | 0   | 65535 0     | 64      | 16         | UINT     |           |       |
| NEWAPSTATE     | New actionpoint state.                               | 0   | 65535 0     | 80      | 16         | UINT     |           |       |

## CFS LC\_SET\_LC\_STATE

Sets the operational state of the LC application

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6308</b> | 0   | 65535 6308  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |



|                |                             |   |       |   |    |    |      |
|----------------|-----------------------------|---|-------|---|----|----|------|
| CCSDS_LENGTH   | CCSDS Packet Data Length    | 0 | 65535 | 1 | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255   | 0 | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255   | 2 | 56 | 8  | UINT |
| NEWLCSTATE     | New LC application state.   | 0 | 65535 | 0 | 64 | 16 | UINT |
| PADDING        | Structure padding.          | 0 | 65535 | 0 | 80 | 16 | UINT |

## CFS MD\_JAM\_DWELL

This command inserts the specified dwell parameters (dwell address, dwell field length, and delay count) into the specified table, at the specified index.

| Item Name            | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID       | CCSDS Packet Identification<br><b>Id Value: 6288</b>   | 0   | 65535      | 6288    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE       | CCSDS Packet Sequence Control  | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH         | CCSDS Packet Data Length   | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM       | CCSDS Command Checksum   | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC             | CCSDS Command Function Code  | 0   | 255        | 4       | 56         | 8        | UINT      |       |
| TABLEID              | Table Id:<br>1..MD_NUM_DWELL_TABLES.   | 0   | 65535      | 0       | 64         | 16       | UINT      |       |
| ENTRYID              | Address index:<br>1..MD_DWELL_TABLE_SIZE.  | 0   | 65535      | 0       | 80         | 16       | UINT      |       |
| FIELDLENGTH          | Length of Dwell Field : 0, 1, 2, or 4.   | 0   | 65535      | 0       | 96         | 16       | UINT      |       |
| DWELLDELAY           | Dwell Delay (number of task wakeup calls before following dwell).  | 0   | 65535      | 0       | 112        | 16       | UINT      |       |
| DWELLADDRESS_OFFSET  | Optional offset that is used as the absolute address if the SymName string is NUL (Parent: Dwell Address in CFS_SymAddr_t format). | 0   | 4294967295 | 0       | 128        | 32       | UINT      |       |
| DWELLADDRESS_SYMNAME | Optional offset that is used as the absolute address if the SymName string is NUL (Parent: Dwell Address in CFS_SymAddr_t format). |     |            |         | 160        | 8        | UINT      |       |
|                      | Array Bit Size: 512  |     |            |         |            |          |           |       |

## CFS MD\_NOOP

This command increments the MD application's valid command execution counter.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6288</b> | 0   | 65535 | 6288    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |




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|                |                             |   |     |   |    |   |      |
|----------------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255 | 0 | 48 | 8 | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255 | 0 | 56 | 8 | UINT |

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## CFS MD\_RESET\_CNTRS

This command resets the following counters within the Memory Dwell housekeeping telemetry:  
 Command Execution Counter (\$sc\_\$cpu\_MD\_CMDPC) Command Error Counter  
 (\$sc\_\$cpu\_MD\_CMDEC)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6288</b> | 0   | 65535 | 6288    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

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## CFS MD\_START\_DWELL

This command sets the Enabled flag(s) associated with the Dwell Table(s) that have been designated by the command's TableMask argument.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6288</b>                                   | 0   | 65535 | 6288    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control  | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum   | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code  | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| TABLEMASK      | 0x0001=TBL1 bit,<br>0x0002=TBL2 bit,0x0004=TBL3<br>bit,0x0008=TBL4 enable bit,<br>etc. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

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## CFS MD\_STOP\_DWELL

This command clears the Enabled flag(s) associated with the Dwell Table(s) that have been designated by the command's TableMask argument.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6288</b> | 0   | 65535 | 6288    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |



|           |   |   |       |   |    |    |      |
|-----------|---|---|-------|---|----|----|------|
| CCSDS_FC  | CCSDS Command Function Code<br>0x0001=TBL1 bit,<br>0x0002=TBL2 bit,0x0004=TBL3<br>bit,0x0008=TBL4 enable bit,<br>etc. | 0 | 255   | 3 | 56 | 8  | UINT |
| TABLEMASK |   | 0 | 65535 | 0 | 64 | 16 | UINT |

## CFS\_MM\_DISABLE\_EEPROM\_WRITE

Disables writing to a specified EEPROM bank

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535      | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 12      | 56         | 8        | UINT      |       |
| BANK           | EEPROM bank number to write-disable.                 | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS\_MM\_DUMP\_IN\_EVENT

Dumps up to MM\_MAX\_DUMP\_INEVENT\_BYTES of memory in an event message

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| MEMTYPE        | Memory dump type.                                    | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| NUMOFBYTES     | Number of bytes to be dumped.                        | 0   | 255   | 0       | 72         | 8        | UINT      |       |
| PADDING        | Structure padding.                                   | 0   | 65535 | 0       | 80         | 16       | UINT      |       |



|                       |   |         |     |      |        |  |  |  |  |
|-----------------------|---|---------|-----|------|--------|--|--|--|--|
|                       | Optional offset that is used as the absolute address if the |         |     |      |        |  |  |  |  |
| SRCSYMADDRESS_OFFSET  | SymName 0 4294967295 0                                      | 96      | 32  | UINT |        |  |  |  |  |
|                       | string is NUL.<br>(Parent: Symbolic source address.)        |         |     |      |        |  |  |  |  |
|                       | Symbol name string.<br>(Parent: Symbolic source address.)   |         |     |      |        |  |  |  |  |
| SRCSYMADDRESS_SYMNAME |   | default | 128 | 512  | STRING |  |  |  |  |

## CFS\_MM\_DUMP\_MEM\_TO\_FILE

Dumps the input number of bytes from processor memory to a file

| Item Name            | Description   | Min     | Max            | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------------|---|---------|----------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID       | CCSDS Packet Identification Id Value:<br><b>6280</b>        | 0       | 65535          | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE       | CCSDS Packet Sequence Control                               | 0       | 65535          | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH         | CCSDS Packet Data Length                                    | 0       | 65535          | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM       | CCSDS Command Checksum                                      | 0       | 255            | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC             | CCSDS Command Function Code                                 | 0       | 255            | 6       | 56         | 8        | UINT      |       |
| MEMTYPE              | Memory dump type.   | 0       | 255            | 0       | 64         | 8        | UINT      |       |
| PADDING              | Structure padding.  |         |                | 0       | 72         | 8        | UINT      |       |
|                      | Array Bit Size:<br><b>24</b>                                |         |                |         |            |          |           |       |
| NUMOFBYTES           | Number of bytes to be dumped.                               | 0       | 4294967295     | 0       | 96         | 32       | UINT      |       |
| SRCSYMADDRESS_OFFSET | Optional offset that is used as the absolute address if the | SymName | 0 4294967295 0 |         | 128        | 32       | UINT      |       |



|                        |  |         |     |     |        |
|------------------------|--|---------|-----|-----|--------|
|                        | string is<br>NUL.<br>(Parent:<br>Symbol plus<br>optional<br>offset.)<br><br>Symbol<br>name string.<br>(Parent:<br>Symbol plus<br>optional<br>offset.)<br><br>Name of<br>memory<br>dump file. | default | 160 | 512 | STRING |
| SRCSYMAADDRESS_SYMNAME |  | default | 672 | 512 | STRING |

## CFS MM\_ENABLE\_EEPROM\_WRITE

Enables writing to a specified EEPROM bank

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535      | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 11      | 56         | 8        | UINT      |       |
| BANK           | EEPROM bank number to write-enable.                  | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS MM\_FILL\_MEM

Reprograms processor memory with the fill pattern contained within the command message

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |



|                        |  |   |            |         |     |     |        |
|------------------------|--|---|------------|---------|-----|-----|--------|
| MEMTYPE                | Code<br>Memory type.   | 0 | 255        | 0       | 64  | 8   | UINT   |
| PADDING                | Structure padding.<br>Array Bit 24<br>Size:  |   |            | 0       | 72  | 8   | UINT   |
| NUMOFBYTES             | Number of bytes to fill.   | 0 | 4294967295 | 0       | 96  | 32  | UINT   |
| FILLPATTERN            | Fill pattern to use.   | 0 | 4294967295 | 0       | 128 | 32  | UINT   |
| DESTSYMADDRESS_OFFSET  | Optional offset that is used as the absolute address if the SymName string is NUL.<br>(Parent: Symbol plus optional offset.) | 0 | 4294967295 | 0       | 160 | 32  | UINT   |
| DESTSYMADDRESS_SYMNAME | Symbol name string.<br>(Parent: Symbol plus optional offset.)  |   |            | default | 192 | 512 | STRING |

## CFS\_MM\_LOAD\_MEM\_FROM\_FILE

Reprograms processor memory with the data contained within the given input file

| Item Name      | Description                                | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification Id Value: 6280 | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control              | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                     | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| FILENAME       | Name of memory load file.                  |     |       | default | 64         | 512      | STRING    |       |

## CFS\_MM\_LOAD\_MEM\_WID

Reprogram processor memory with input data. Loads up to MM\_MAX\_UNINTERRUPTABLE\_DATA data bytes into RAM with interrupts disabled

| Item Name | Description  | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|--------------|-----|-----|---------|------------|----------|-----------|-------|
|           | CCSDS Packet |     |     |         |            |          |           |       |



|                        |   |   |            |         |     |     |        |
|------------------------|---|---|------------|---------|-----|-----|--------|
| CCSDS_STREAMID         | Identification<br><b>Id Value:</b><br><b>6280</b>   | 0 | 65535      | 6280    | 0   | 16  | UINT   |
| CCSDS_SEQUENCE         | CCSDS<br>Packet<br>Sequence<br>Control  | 0 | 65535      | 49152   | 16  | 16  | UINT   |
| CCSDS_LENGTH           | CCSDS<br>Packet Data<br>Length  | 0 | 65535      | 1       | 32  | 16  | UINT   |
| CCSDS_CHECKSUM         | CCSDS<br>Command<br>Checksum  | 0 | 255        | 0       | 48  | 8   | UINT   |
| CCSDS_FC               | CCSDS<br>Command<br>Function<br>Code  | 0 | 255        | 4       | 56  | 8   | UINT   |
| NUMOFBYTES             | Number of<br>bytes to be<br>loaded.   | 0 | 255        | 0       | 64  | 8   | UINT   |
| PADDING                | Structure<br>padding.<br>Array Bit<br>Size:<br>24   |   |            | 0       | 72  | 8   | UINT   |
| CRC                    | Data check<br>value.<br>Optional<br>offset that is<br>used as the<br>absolute<br>address if<br>the  | 0 | 4294967295 | 0       | 96  | 32  | UINT   |
| DESTSYMADDRESS_OFFSET  | SymName<br>string is<br>NUL.<br>(Parent:<br>Symbolic<br>destination<br>load<br>address.)<br>Symbol<br>name string.<br>(Parent:<br>Symbolic<br>destination<br>load<br>address.)<br>Data to be<br>loaded. | 0 | 4294967295 | 0       | 128 | 32  | UINT   |
| DESTSYMADDRESS_SYMNAME | Symbolic<br>destination<br>load<br>address.)<br>Data to be<br>loaded.   |   |            | default | 160 | 512 | STRING |
| DATAARRAY              | Array<br>Bit<br>Size:<br>1600   |   |            | 0       | 672 | 8   | UINT   |

## CFS\_MM\_LOOKUP\_SYM

Queries the system symbol table and reports the resolved address in telemetry and an informational event message

| Item Name | Description | Min | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|-------------|-----|-----|---------|------------|----------|-----------|-------|
|-----------|-------------|-----|-----|---------|------------|----------|-----------|-------|



|                |  |   |         |       |     |        |      |
|----------------|--|---|---------|-------|-----|--------|------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0 | 65535   | 6280  | 0   | 16     | UINT |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0 | 65535   | 49152 | 16  | 16     | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0 | 65535   | 1     | 32  | 16     | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0 | 255     | 0     | 48  | 8      | UINT |
| CCSDS_FC       | CCSDS Command Function Code                          | 0 | 255     | 9     | 56  | 8      | UINT |
| SYMNAME        | Symbol name string.                                  |   | default | 64    | 512 | STRING |      |

## CFS MM\_NOOP

Implements the Noop command that insures the MM task is alive

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS MM\_PEEK

Reads 8,16, or 32 bits of data from any given input address

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| DATASIZE       | Size of the data to be read.                         | 0   | 255   | 0       | 64         | 8        | UINT      |       |



|                        |   |   |            |         |     |     |        |
|------------------------|---|---|------------|---------|-----|-----|--------|
| MEMTYPE                | Memory type to peek data from.                                    | 0 | 255        | 0       | 72  | 8   | UINT   |
| PADDING                | Structure padding.  |   |            |         |     |     |        |
|                        | Array Bit 16 Size:  |   |            |         |     |     |        |
|                        | Optional offset that is used as the absolute address if the       |   |            |         |     |     |        |
| SRCSYMAADDRESS_OFFSET  | SymName string is NUL.<br>(Parent: Symbolic source peek address.) | 0 | 4294967295 | 0       | 96  | 32  | UINT   |
| SRCSYMAADDRESS_SYMNAME | Symbol name string.<br>(Parent: Symbolic source peek address.)    |   |            | default | 128 | 512 | STRING |

## CFS MM\_POKE

Writes 8, 16, or 32 bits of data to any memory address

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification Id Value:<br><b>6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| DATASIZE       | Size of the data to be written.                      | 0   | 255   | 0       | 64         | 8        | UINT      |       |
| MEMTYPE        | Memory type to poke data to.                         | 0   | 255   | 0       | 72         | 8        | UINT      |       |
| PADDING        | Structure padding.                                   |     |       |         |            |          |           |       |



|                        |  |                       |            |         |     |     |        |  |
|------------------------|--|-----------------------|------------|---------|-----|-----|--------|--|
|                        |  | Array Bit 16<br>Size: |            |         |     |     |        |  |
| DATA                   | Data to be written.  | 0                     | 4294967295 | 0       | 96  | 32  | UINT   |  |
| DESTSYMADDRESS_OFFSET  | Optional offset that is used as the absolute address if the SymName string is NUL.<br>(Parent: Symbolic destination poke address.) | 0                     | 4294967295 | 0       | 128 | 32  | UINT   |  |
| DESTSYMADDRESS_SYMNAME | Symbolic destination poke address.)  |                       |            | default | 160 | 512 | STRING |  |

## CFS MM\_RESET

Resets the MM housekeeping counters

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS MM\_SYMTBL\_TO\_FILE

Saves the system symbol table to a file that can be transferred to the ground

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6280</b> | 0   | 65535 | 6280    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 10      | 56         | 8        | UINT      |       |



| Item Name | Description               | Min     | Max | Default | Bit Offset | Bit Size | Data Type | Units |
|-----------|---------------------------|---------|-----|---------|------------|----------|-----------|-------|
| FILENAME  | Name of symbol dump file. | default | 64  | 512     |            |          | STRING    |       |

## CFS SCH\_DISABLE

This command disables a single activity in the Schedule Definition Table.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |
| SLOTNUMBER     | Slot Number of Activity whose state is to change.    | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| ENTRYNUMBER    | Entry Number of Activity whose state is to change.   | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS SCH\_DISABLE\_GROUP

This command disables a single group and/or a collection of Multi-Group Activities in the Schedule Definition Table.

| Item Name      | Description  | Min | Max        | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535      | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535      | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535      | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255        | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255        | 5       | 56         | 8        | UINT      |       |
| GROUPDATA      | Group and Multi-Group Identifiers.                   | 0   | 4294967295 | 0       | 64         | 32       | UINT      |       |

## CFS SCH\_ENABLE

This command enables a single activity in the Schedule Definition Table.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| SLOTNUMBER     | Slot Number of Activity whose state is to change.    | 0   | 65535 | 0       | 64         | 16       | UINT      |       |



|             |  |   |         |    |    |      |
|-------------|--|---|---------|----|----|------|
| SLOTNUMBER  | state is to change.                                | 0 | 000000  | 04 | 10 | UINT |
| ENTRYNUMBER | Entry Number of Activity whose state is to change. | 0 | 65535 0 | 80 | 16 | UINT |

## CFS SCH\_ENABLE\_GROUP

This command enables a single group and/or a collection of Multi-Group Activities in the Schedule Definition Table.

| Item Name      | Description  | Min | Max          | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|--------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535        | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535        | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535        | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255          | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255          | 4       | 56         | 8        | UINT      |       |
| GROUPDATA      | Group and Multi-Group Identifiers.                   | 0   | 4294967295 0 |         | 64         | 32       | UINT      |       |

## CFS SCH\_ENABLE\_SYNC

This command allows the operator to enable processing and synchronization of the Major Frame Signal to the processing of the Schedule Definition Table.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 6       | 56         | 8        | UINT      |       |

## CFS SCH\_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Scheduler Application.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length<br>CCSDS Command            | 0   | 65535 | 1       | 32         | 16       | UINT      |       |




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|                |                             |   |     |   |    |   |      |
|----------------|-----------------------------|---|-----|---|----|---|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum      | 0 | 255 | 0 | 48 | 8 | UINT |
| CCSDS_FC       | CCSDS Command Function Code | 0 | 255 | 0 | 56 | 8 | UINT |

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## CFS SCH\_RESET

This command resets the following counters within the Scheduler housekeeping telemetry:

Command Execution Counter (\$sc\_\$cpu\_SCH\_CMDPC) Command Error Counter  
(\$sc\_\$cpu\_SCH\_CMDEC) Schedule Activities Success Counter (\$sc\_\$cpu\_SCH\_ActSuccessCtr)  
Schedule Activities Failure Counter (\$sc\_\$cpu\_SCH\_ActFailCtr) Schedule Slots Processed Counter  
(\$sc\_\$cpu\_SCH\_SlotProcCtr) Schedule Skipping Slots Counter  
(\$sc\_\$cpu\_SCH\_SlotSkipCtr) Multiple Schedule Slots Processed Counter  
(\$sc\_\$cpu\_SCH\_MultSlotCtr) Awoke in Same Slot Counter (\$sc\_\$cpu\_SCH\_SameSlotCtr)  
Corrupted Table Data Counter (\$sc\_\$cpu\_SCH\_BadTblDataCtr) Table Loads Successfully Verified Counter  
(\$sc\_\$cpu\_SCH\_TblPassVerifyCtr) Table Loads Unsuccessfully Verified Counter  
(\$sc\_\$cpu\_SCH\_TblFailVerifyCtr) Valid Major Frames Received Counter  
(\$sc\_\$cpu\_SCH\_ValidMajorFrameCtr) Missed Major Frames Received Counter  
(\$sc\_\$cpu\_SCH\_MissedMajorFrameCtr) Unexpected Major Frames Received Counter  
(\$sc\_\$cpu\_SCH\_UnexpectedMajorFrameCtr)

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

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## CFS SCH\_SEND\_DIAG\_TLM

This command generates and sends the Scheduler Application's Diagnostic Telemetry packet.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6293</b> | 0   | 65535 | 6293    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 7       | 56         | 8        | UINT      |       |

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## CFS SC\_APPEND\_ATS

Adds contents of the Append table to the specified ATS table

| Item Name      | Description                 | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|-----------------------------|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification | 0   | 65535 | 6213    | 0          | 16       | UINT      |       |



|                |   |   |             |    |    |      |
|----------------|---|---|-------------|----|----|------|
| CCSDS_STREAMID | <b>Id Value: 6313</b>                                 | 0 | 65535 6313  | 0  | 16 | UINT |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                         | 0 | 65535 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH   | CCSDS Packet Data Length                              | 0 | 65535 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                | 0 | 255 0       | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code                           | 0 | 255 11      | 56 | 8  | UINT |
| ATSID          | The ID of the ATS to append to, 1 = ATS_A, 2 = ATS_B. | 0 | 65535 0     | 64 | 16 | UINT |

## CFS SC\_CONTINUE\_ATS\_ON\_FAILURE

Sets the flag which specifies whether or not to continue processing an ATS if one of the commands in the ATS fails checksum validation before being sent out.

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 6313  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | UINT     |           |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255 0       | 48      | 8          | UINT     |           |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255 10      | 56      | 8          | UINT     |           |       |
| CONTINUESTATE  | TRUE or FALSE, to continue ATS after a failure.      | 0   | 65535 0     | 64      | 16         | UINT     |           |       |

## CFS SC\_DISABLE\_RTS

Disables the specified RTS

| Item Name      | Description   | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>    | 0   | 65535 6313  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                           | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                | 0   | 65535 1     | 32      | 16         | UINT     |           |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                  | 0   | 255 0       | 48      | 8          | UINT     |           |       |
| CCSDS_FC       | CCSDS Command Function Code                             | 0   | 255 6       | 56      | 8          | UINT     |           |       |
| RTSID          | The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 0     | 64      | 16         | UINT     |           |       |

## CFS SC\_DISABLE\_RTSGRP

The enable state for an RTS may be ENABLED or DISABLED. This command sets the enable state for the specified group of RTS to DISABLED.

| Item Name      | Description  | Min | Max         | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 6313  | 0       | 16         | UINT     |           |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 49152 | 16      | 16         | UINT     |           |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 1     | 32      | 16         | UINT     |           |       |



|                |  |   |       |    |    |    |      |
|----------------|--|---|-------|----|----|----|------|
| CCSDS_CHECKSUM | CCSDS Command Checksum                                     | 0 | 255   | 0  | 48 | 8  | UINT |
| CCSDS_FC       | CCSDS Command Function Code                                | 0 | 255   | 15 | 56 | 8  | UINT |
| FIRSTRTSID     | ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS. | 0 | 65535 | 0  | 64 | 16 | UINT |
| LASTRTSID      | ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.  | 0 | 65535 | 0  | 80 | 16 | UINT |

## CFS SC\_ENABLE\_RTS

Enables the specified RTS

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>    | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                           | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                             | 0   | 255   | 7       | 56         | 8        | UINT      |       |
| RTSID          | The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS SC\_ENABLE\_RTSGRP

The enable state for an RTS may be ENABLED or DISABLED. This command sets the enable state for the specified group of RTS to ENABLED.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>       | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                              | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                     | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                                | 0   | 255   | 16      | 56         | 8        | UINT      |       |
| FIRSTRTSID     | ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| LASTRTSID      | ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.  | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS SC\_JUMP\_ATS

Moves the 'current time' pointer in the ATS to another time

| Item Name      | Description                 | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|-----------------------------|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |



| <b>Id Value: 6313</b> |                               |   |            |       |    |    |      |
|-----------------------|-------------------------------|---|------------|-------|----|----|------|
| CCSDS_SEQUENCE        | CCSDS Packet Sequence Control | 0 | 65535      | 49152 | 16 | 16 | UINT |
| CCSDS_LENGTH          | CCSDS Packet Data Length      | 0 | 65535      | 1     | 32 | 16 | UINT |
| CCSDS_CHECKSUM        | CCSDS Command Checksum        | 0 | 255        | 0     | 48 | 8  | UINT |
| CCSDS_FC              | CCSDS Command Function Code   | 0 | 255        | 9     | 56 | 8  | UINT |
| NEWTIME               | the time to 'jump' to         | 0 | 4294967295 | 0     | 64 | 32 | UINT |

## CFS SC\_MANAGE\_TABLE

This command signals a need for the host application (SC) to allow cFE Table Services to manage the specified table. For loadable tables, this command indicates that a table update is available. For dump only tables, this command indicates that cFE Table Services wants to dump the table data. In either case, the host application must call the table manage API function so that the pending function can be executed within the context of the host.

## CFS SC\_NOOP

Implements the Noop command that insures the SC app is alive

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 0       | 56         | 8        | UINT      |       |

## CFS SC\_RESET\_COUNTERS

Resets the SC housekeeping counters

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 1       | 56         | 8        | UINT      |       |

## CFS SC\_START\_ATS

Starts the specified ATS



| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 2       | 56         | 8        | UINT      |       |
| ATSID          | The ID of the ATS to start, 1 = ATS_A, 2 = ATS_B.    | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS SC\_START\_RTS

Starts the specified RTS

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>    | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                           | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                             | 0   | 255   | 4       | 56         | 8        | UINT      |       |
| RTSID          | The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS SC\_START\_RTSGRP

The load state for an RTS may be LOADED or NOT LOADED. The enable state for an RTS may be ENABLED or DISABLED. The run state for an RTS may be STARTED or STOPPED. This command STARTS each RTS in the specified group that is currently LOADED, ENABLED and STOPPED.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>       | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                              | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                     | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                                | 0   | 255   | 13      | 56         | 8        | UINT      |       |
| FIRSTRTSID     | ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| LASTRTSID      | ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.  | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS SC\_STOP\_ATS



Stops the specified ATS

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 3       | 56         | 8        | UINT      |       |

## CFS SC\_STOP\_RTS

Stops the specified RTS

| Item Name      | Description   | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|---|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>    | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                           | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                  | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                             | 0   | 255   | 5       | 56         | 8        | UINT      |       |
| RTSID          | The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |

## CFS SC\_STOP\_RTSGRP

The load state for an RTS may be LOADED or NOT LOADED. The enable state for an RTS may be ENABLED or DISABLED. The run state for an RTS may be STARTED or STOPPED. This command STOPS each RTS in the specified group that is currently STARTED.

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b>       | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                              | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                                   | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                                     | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                                | 0   | 255   | 14      | 56         | 8        | UINT      |       |
| FIRSTRTSID     | ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS. | 0   | 65535 | 0       | 64         | 16       | UINT      |       |
| LASTRTSID      | ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.  | 0   | 65535 | 0       | 80         | 16       | UINT      |       |

## CFS SC\_SWITCH\_ATS



Switches the running ATS and the ATS no running

| Item Name      | Description  | Min | Max   | Default | Bit Offset | Bit Size | Data Type | Units |
|----------------|--|-----|-------|---------|------------|----------|-----------|-------|
| CCSDS_STREAMID | CCSDS Packet Identification<br><b>Id Value: 6313</b> | 0   | 65535 | 6313    | 0          | 16       | UINT      |       |
| CCSDS_SEQUENCE | CCSDS Packet Sequence Control                        | 0   | 65535 | 49152   | 16         | 16       | UINT      |       |
| CCSDS_LENGTH   | CCSDS Packet Data Length                             | 0   | 65535 | 1       | 32         | 16       | UINT      |       |
| CCSDS_CHECKSUM | CCSDS Command Checksum                               | 0   | 255   | 0       | 48         | 8        | UINT      |       |
| CCSDS_FC       | CCSDS Command Function Code                          | 0   | 255   | 8       | 56         | 8        | UINT      |       |