



## VDS-VR Tunables

Tunable is an internal term, tunables are configuration parameters for CServer which is a core component in VDS-VR.

This appendix describes four categories of VDS-VR tunables:

- [Debug Tunables](#)
- [Info Tunables](#)
- [Configuration Tunables](#)
- [Recorder Tunables](#)

## Debug Tunables

Debug tunables are used in production environment to debug issues. Changes to these tunables affect the behavior of the system. These tunables are Read and Write (RW) type tunables.

[Table I-1](#) lists the Debug tunables.

**Table I-1**      **Debug Tunables**

Tunable name/Location	Description	Units/Type	Default Value
/proc/calypso/internal/shutdown_adapter_index	Tunable to bring down adapter. Echo X is the input command line used. for example. Echo 2 to bring down the second adapter. This affects driver code as well. This is equivalent to if down	index	1
/proc/calypso/internal/skip_resiliency_check	Popular contents are made available in another play streamer in the play group for resiliency. This reduces the cache working set size and thus reducing the cache efficiency. By setting this tunable, popular contents do not get duplicated to the other streamers but the cache working set size increases thus improving the cache efficiency	boolean	0
/proc/calypso/internal/dbg_verbosedump	To enable verbose level logging about the system onto the /var/log/messages	functionality (enable/disable)	0

Table I-1 Debug Tunables

Tunable name/Location	Description	Units/Type	Default Value
/proc/calypso/internal/disableControlNetworkAdapter	To simulate the loss of link state on the control adapter. Related tunable: /proc/calypso/internal/disableNetworkAdapter9	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableManagementNetworkAdapter	To simulate the loss of link state on the management adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter0	To simulate the loss of link state on the configured cache fill interface adapter0 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter1	To simulate the loss of link state on the configured cache fill interface adapter1 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter10	To simulate the loss of link state on the configured cache fill interface adapter10 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter11	To simulate the loss of link state on the configured cache fill interface adapter11 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter12	To simulate the loss of link state on the configured cache fill interface adapter12 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter2	To simulate the loss of link state on the configured cache fill interface adapter2 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter3	To simulate the loss of link state on the configured cache fill interface adapter3 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter4	To simulate the loss of link state on the configured cache fill interface adapter4 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter5	To simulate the loss of link state on the configured cache fill interface adapter5 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE

Table I-1 Debug Tunables

Tunable name/Location	Description	Units/Type	Default Value
/proc/calypso/internal/disableNetworkAdapter6	To simulate the loss of link state on the configured cache fill interface adapter6 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter7	To simulate the loss of link state on the configured cache fill interface adapter7 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter8	To simulate the loss of link state on the configured cache fill interface adapter8 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/disableNetworkAdapter9	To simulate the loss of link state on the configured cache fill interface adapter9 configured in /arroyo/test/setupfile adapter	functionality (enable/disable)	FALSE
/proc/calypso/internal/enable_dynamic_trick_read_history	To enable dynamic trick related locate and transfer request and response logging onto the readhistory.log.	functionality (enable/disable)	0
/proc/calypso/internal/enable_igate_receive_log	To enable logging of the debugigaterate.log	functionality (enable/disable)	0
/proc/calypso/internal/enable_inband_heartbeat	Enables/Initializes inband heartbeat mpeg ts packet at the time of play setup	functionality (enable/disable)	0
/proc/calypso/internal/enable_receive_bad_packet_capture	If the receive capture is turned on, then bad packets received will be logged into the receive.log  Related tunable: /proc/calypso/internal/enable_receive_capture	functionality (enable/disable)	0
/proc/calypso/internal/enable_receive_capture	To enable logging of the received packets on the server  Related tunable: /proc/calypso/internal/enable_transmit_capture	functionality (enable/disable)	0
/proc/calypso/internal/enable_transmit_capture	To enable logging of the transmitted packets from the server  Related tunable: /proc/calypso/internal/enable_receive_capture	functionality (enable/disable)	0
/proc/calypso/internal/reset_adapter_index	To force execute the Adapter Reset Logic on a specified adapter index	functionality (enable/disable)	0

Table I-1 Debug Tunables

Tunable name/Location	Description	Units/Type	Default Value
/proc/calypso/tunables/bwm_logLevel	To enable verbose logging on the bwm.log	LogLevel	DEBUG (DEBUG Builds), INFO (CRITICAL - 0x0001, ERROR - 0x0002, WARNING - 0x0003, INFO - 0x0004, DEBUG - 0x0005, DEBUG_V - 0x0006)
/proc/calypso/tunables/c2k_log_arp_info	To Log ARP packets/information onto the c2k.log	functionality (enable/disable)	0
/proc/calypso/tunables/c2k_loginusecs	To enable c2k logging in microseconds	functionality (enable/disable)	0
/proc/calypso/tunables/c2k_verbosedump	To enable verbose logging on the c2k.log	LogLevel	C2K_NOTICE_LEVEL - 5
/proc/calypso/tunables/cm_logserverinfo	To query the server status and enable the cm_logserverinfo command tunable for avs_rtd to process the debug related request. Information is dumped in /arroyo/log/serverinfo.log	integer	-1
/proc/calypso/tunables/cm_logserverinfo command	The avs_rtd script uses this tunable to pass run time debugger command to CServer  Related tunable: /proc/calypso/tunables/cm_logserverinfo command, /proc/calypso/tunables/cm_logserverinfo oid, /proc/calypso/tunables/cm_logserverinfo oidinfo.	String	1
/proc/calypso/tunables/cm_logserverinfo oid	Goes along with the /proc/calypso/tunables/cm_logserverinfo, Few values specified onto the cm_logserverinfo can take an optional param of GOID which can be specified onto this tunable	GOID	0
/proc/calypso/tunables/cm_logserverinfo oid info	To query the detailed status of GOID on all the Vault on the same group	GOID	0

**Table I-1**      **Debug Tunables**

<b>Tunable name/Location</b>	<b>Description</b>	<b>Units/Type</b>	<b>Default Value</b>
/proc/calypso/tunables/ /debugevaluatormask	To enable verbose level logging for the evaluator framework related logs	LogLevel	All (DEBUG), EVAL_DBG_VERBOSE(OTHERS)
/proc/calypso/tunables/ /enableFillBandwidth Log	to enable the logging of fillbandwidth.log	functionality (enable/disable)	TRUE(DEBUG), FALSE(OTHERS)
/proc/calypso/tunables/ /enableFillLog	to enable the logging of fill.log	functionality (enable/disable)	TRUE(DEBUG), FALSE(OTHERS)
/proc/calypso/tunables/ /enableLostPacketLog	to enable the logging of lostpacket.log	functionality (enable/disable)	FALSE
/proc/calypso/tunables/ /enableLowPriorityStatsLog	to enable the lowprioritystats logging	functionality (enable/disable)	TRUE
/proc/calypso/tunables/ /enableReadHistoryLog	to enable readhistory.log	functionality (enable/disable)	TRUE
/proc/calypso/tunables/ /enableReceivePathLog	to enable receivepath.log	functionality (enable/disable)	TRUE(DEBUG), FALSE(OTHERS)
/proc/calypso/tunables/ /http_log_level	to enable verbose level logging on the http.log	LogLevel	LOG_INFO - 6 (range 0-7)
/proc/calypso/tunables/ /logsamplinginmsecs	Used by StatsFile Logging, Protocoltiming.log sampling	Seconds	10
/proc/calypso/tunables/ /msa_dumplevel	to enable the MSA event dump level	LogLevel	C2K_NOTICE_LEVEL
/proc/calypso/tunables/ /ping_with_icmp	to check the reachability of the destination IP by ICMP packets	IP	1
/proc/calypso/tunables/ /ping_with_stun	to check the reachability over STUN. Performs stun handshake internally	IP	1
/proc/calypso/tunables/ /stop_being_primary	to stop all the primary services running on the server and gracefully make backup to be the new primary	functionality (enable/disable)	0
/proc/calypso/tunables/ /streamevent_verbosedump	to enable the verbose logging on the streamevent.log	LogLevel	C2K_NOTICE_LEVEL
/proc/calypso/tunables/ /streamtrace_verbosedump	to enable the verbose logging on the streamtrace.log	LogLevel	LOG_WARNING
/proc/calypso/tunables/ /traceroute	To write the traceroute information into serverinfo log	IP	1

**Table I-1** *Debug Tunables*

Tunable name/Location	Description	Units/Type	Default Value
/proc/calypso/tunables/capture_filter	To enable filtering on the received and transmitted packets logging	Filter Values	0
/proc/calypso/tunables/cm_burstaheadtime	fetch the data ahead in the specified time to start streaming	Seconds	2
/proc/calypso/test/reopen_logfiles	To reopen all the log files written by CServer	functionality (enable/disable)	0

## Info Tunables

The Info tunables are used to get a snapshot of various parameters in the system. These tunables are Read only.



### Note

The following tunables are old and are not used:

- /proc/calypso/cm/cache2app\_operational
- /proc/calypso/cm/cachehits
- /proc/calypso/cm/cachemisses
- /proc/calypso/cm/diskreadsectors
- /proc/calypso/cm/diskreadsegments
- /proc/calypso/cm/freedsegments
- /proc/calypso/cm/memoryhits
- /proc/calypso/cm/romreadsectors
- /proc/calypso/cmm/mapped/availableblocks
- /proc/calypso/cmm/mapped/totalblocks

[Table I-2](#) lists the Info tunables.

**Table I-2** *Info Tunables*

Tunable name/Location	Description	Units/Type	Default Values
/proc/calypso/cm/cache2app_operational	To check whether the cache2app services are operational or not	Status Value	0
/proc/calypso/cm/cachehits	To validate the number of objects fully present on the server	Count	0
/proc/calypso/cm/cachemisses	to check the number of objects not being fully present on the server	Count	0
/proc/calypso/cm/diskreadsectors	The count on the number of sectors read from the disk after starting a stream	Count	0

Table I-2 Info Tunables (continued)

Tunable name/Location	Description	Units/Type	Default Values
/proc/calypso/cm/diskreadsegments	To count on the number of object segments read from the disk for streaming	Count	0
/proc/calypso/cm/free dsegments	The total number of free object segments	Count	0
/proc/calypso/cm/memoryhits	To trace the memory hits of the Object	Count	0
/proc/calypso/cm/romreadsectors	Length of the object received from ROM in sectors	Count	0
/proc/calypso/cmm/mapped/availableblocks	The available amount of memory that can be used	Count	0
/proc/calypso/cmm/mapped/totalblocks	The total number of memory blocks on the system	Count	0
/proc/calypso/status/bwm_settings	To query the status of BandwidthManager and the thin pipes configured	String	N/A
/proc/calypso/status/diskbandwidthinfo	Verbose details on the disk bandwidth information	String	N/A
/proc/calypso/status/diskinfo	Verbose details of the Configured Disks on the server	String	N/A
/proc/calypso/status/hw_validation	To validate whether the Hardware configured is according to the Model of the device	String	N/A
/proc/calypso/status/networkbandwidth	Network Bandwidth related information	String	N/A
/proc/calypso/status/pipe_settings	The connected number of thin pipes	String	N/A
/proc/calypso/status/resiliencyinfo	To query the configured ServiceAddress Information (Setup or control service, HTTP Redirector Service and Bandwidth Manager Service)	String	N/A
/proc/calypso/status/resiliencystatus	verbose level details about the configured ServiceAddress	String	N/A
/proc/calypso/status/server_settings	To query the server configurations and other details related to the server	string	N/A
/proc/calypso/status/streamer/activestreamslots	To hold the count of streams which are currently streamed from this server	Count	0

Table I-2 Info Tunables (continued)

Tunable name/Location	Description	Units/Type	Default Values
/proc/calypso/status/streamer/allocatedstreamslots	“Allocated streams” is the streams that have been created. The sum of Allocated Stream from this streamer group should be close to the “alloc” field in the “LRR” line present in protocol	Count	0
/proc/calypso/status/streamer/cutthruinfo	It displays the limitation on the Disk Write allowed for Object based on the PopularityBased Caching design. It gathers the information about CutThruMark which is used in CServer to determine the disk write required	Count	0
/proc/calypso/status/streamer/fillinfo	To log the CCP Fill status	String	N/A
/proc/calypso/status/streamer/resiliencyinfo	To query the configured ServiceAddress information (Setup or control service, HTTP Redirector Service and Bandwidth Manager Service)	String	N/A
/proc/calypso/status/streamer/resiliencystatus	verbose level details about the configured ServiceAddress	String	N/A
/proc/calypso/status/streamer/streaminfo	To query the stream related information	String	N/A
/proc/calypso/status/syslog/last_open_error	Used to store the return value if a file can not be opened through syslog layer	int	0
/proc/calypso/status/syslog/last_write_error	Used to store the return value if a write to syslog fails	int	0
/proc/calypso/status/syslog/multiple_writes	Number of times a log message required multiple writes to the syslog socket. Generally we should be able to send one full message in one single write to the syslog socket	int	0
/proc/calypso/status/syslog/open_errors	Number of times system encountered errors at the time of opening a log file using syslog api	int	0
/proc/calypso/status/syslog/write_errors	Number of times log messages have failed to write to syslog layer	int	0
/proc/calypso/status/vault/fillinfo	To query the CCP Fill status on the vault	String	N/A
/proc/calypso/status/vault/httpinfo	Display the configured HTTP Adapter information	String	N/A
/proc/calypso/status/vault/laninfo	display the details of Capacity, Connections, Inbound request and Outbound request	String	N/A



**Table I-2 Info Tunables (continued)**

Tunable name/Location	Description	Units/Type	Default Values
/proc/calypso/status/vault/settings	display the vault settings like smoothing, mirroring, local copy and remote mirror copy	String	N/A
/proc/calypso/status/vault/streaminfo	Display the stream related information on the vault	String	N/A
/proc/calypso/status/cache/fillinfo	To query the CCP Fill status on the cache	String	N/A
/proc/calypso/status/cache/httpinfo	Display the configured HTTP Adapter information	String	N/A
/proc/calypso/status/cache/streaminfo	Display the stream related information on the cache	String	N/A
/proc/calypso/tunables/runtimedebbuggersversion	To provide the information related to the version of runtimedebbugger used in the system	Version	1
/proc/calypso/internal/ingest_vault_max_display_count	Configured number of ingesting vault that needs to display the statistics	Count	10

## Configuration Tunables

The Configuration tunables are used to configure the various parameters in the system. These tunables have a GUI counterpart. [Table I-3](#) lists the Config tunables.

**Table I-3 Config Tunables**

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/cm/active_trickspeed_0	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_1	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_2	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_3	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_4	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/cm/active_trickspeed_5	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_6	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_7	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_8	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_9	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_10	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/cm/active_trickspeed_11	Read	Tunable used to read the configured trick speed, which is configured from CDSM	Speed/Hex	default 0
/proc/calypso/test/arp_readroutingtable	Write	Tunable used to read entries from RoutingTable and update. Any change in routing table, we need to do "echo 1 > /proc/calypso/test/arp_readroutingtable" for the new entry to take effect	bool	default 0
/proc/calypso/test/readarptable	Write	Tunable used to read the configuration file /arroyo/test/ArpTable entires and update. Any change in Arp table, we need to do "echo 1 > /proc/calypso/test/readarptable" for the new entry to take effect	bool	default 0
/proc/calypso/test/readfillsourceconfig	Write	Tunable used to read the configuration file /arroyo/test/FillSourceConfig entires and update. Any change in FillSourceConfig, we need to do "echo 1 > /proc/calypso/test/readfillsourceconfig" for the new entry to take effect	bool	default 0

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/test/readrecordingchannelmap	Write	Tunable used to read the configuration file /arroyo/test/RecordingChannelMap entires and update. Any change in RecordingChannelMap, we need to do "echo 1 >/proc/calypso/test/readrecordingchannelmap" for the new entry to take effect	bool	default 0
/proc/calypso/test/readremoteservers	Write	Tunable used to read the configuration file /arroyo/test/RemoteServers entires and update. Any change in RemoteServers file, we need to do "echo 1 >/proc/calypso/test/readremoteservers" for the new entry to take effect	bool	default 0
/proc/calypso/test/readstreamdestinationmap	Write	Tunable used to read the configuration file /arroyo/test/StreamDestinationMap entires and update. Any change in RemoteServers file, we need to do "echo 1 >/proc/calypso/test/readstreamdestinationmap" for the new entry to take effect	bool	default 0
/proc/calypso/test/readsubnettable	Write	Tunable used to read the configuration file /arroyo/test/SubnetTable entires and update. Any change in SubnetTable, we need to do "echo 1 >/proc/calypso/test/readsubnettable" for the new entry to take effect	bool	default 0
/proc/calypso/test/readtgidtable	Write	Tunable used to read the configuration file /arroyo/test/TransportGroupIdTable entires and update. Any change in TransportGroupIdTable, we need to do "echo 1 >/proc/calypso/test/readsubnettable" for the new entry to take effect. We are not using it now.	bool	default 0
/proc/calypso/test/shutdown	Write	Tunable used to shut down CServer module processes	Bool	default 0
/proc/calypso/tunables/trickspeed_0	Write	Tunable used to set both positive and negative trick speed as pair. Since this tunable does not have directional information, we can't have different positive and negative speed. This is older version tunable	Speed/Hex	default -1

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/tunables/trickspeed_1	Write	Tunable used to set both positive and negative trick speed as pair. Since this tunable does not have directional information, we can't have different positive and -negative speed. This is older version tunable	Speed/Hex	default -1
/proc/calypso/tunables/trickspeed_2	Write	Tunable used to set both positive and negative trick speed as pair. Since this tunable does not have directional information, we can't have different positive and negative speed. This is older version tunable	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_0	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_1	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_2	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_3	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_4	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_5	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_6	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_7	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_8	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_9	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_10	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/trickspeedv2_11	Write	Tunable used to set trick speed (positive or negative)	Speed/Hex	default -1
/proc/calypso/tunables/stream_null_packets	Write	Tunable used to enable/disable the stream null packet logic at the remaining length. It fills the remaining length with null packets while adding the stream data in stream slot	bool	default 1

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/tunables/stream_using_qam	Write	Tunable used to configure the setup, whether QAM or IP setup. If flag is not set then its IP setup and Motorola PreEncryption use original program number for Encyrption data (Inband). If flag is set then its QAM based setup and Motorola pre Encryption refer program number and data from port (outband).	bool	default 1
/proc/calypso/tunables/bwm_readConfFile	Write	Tunable used to read the configuration file /arroyo/test/BandwidthManager entires and update. Any change in Bandwidth manager configuration, we need to do "echo 1 >/proc/calypso/tunables/bwm_readConfFile" for the new entry to take effect	bool	default 0
/proc/calypso/tunables/cm_playnowatlivepoint	Write	Tunable used to enable/disable the play at live point. When the tunable is enabled, it allows to play at live point.	bool	default 1
/proc/calypso/tunables/convert_npt_using_pts	Write	Usually play npt computation is based offset information, but using this tunable we could improve the accuracy. With tunable enable, the npt computation uses actual frame pts information, which improves the accuracy.	bool	default 1
/proc/calypso/tunables/disable_fade_frame	Write	Tunable used to enable/disable the frame fading option at the file transition. When it enabled, there is no extra fade frame getting inserted at file transition. But when its disabled, there are 4 fade frames are getting inserted at the splice point.	bool	default 0
/proc/calypso/tunables/ftpoutmaxrate		Tunable used to configure the ftpmax rate for total active ftp sessions	Hex/bps	default 19000000
/proc/calypso/tunables/ftpoutmaxsessions	Write	Tunable used to configure the number of ftpsessions	no of session/Hex	default 0

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/tunables/popularity_half_life	Read	Tunable used to denote how often CServer play the content. The value set in popularity_half_life will determine the rate of increase of the bump-on-play value. The bump-on-play value is managed by the class BumpOnUse, which resides in cm/PopularityValue. Set via CDSM	Sec/Hex	default A880
/proc/calypso/tunables/read_etc_hosts	Write	Tunable used to read the etc hosts from /etc/hosts	bool	default 1
/proc/calypso/tunables/pipe_add	Write	Tunable used to add the new pipe with any reboot	Pipe format	default empty
/proc/calypso/tunables/pipe_del	Write	Tunable used to delete the existing pipe	Pipe id	default empty
/proc/calypso/tunables/pipe_modify	Write	Tunable used to modify the existing pipe configuration	Pipe format	default empty
/proc/calypso/tunables/stream_from_local_array	write	Tunable used to enable to stream the content from local server. This tunable specifically to control server	bool	default 0
/proc/calypso/tunables/vaultdecommission	write	Tunable used to decommission the vault. Since vault has been removed, it migrate all the information with other vault. Also It logs the status under decommission information	bool	default 0
/proc/calypso/tunables/vaultmirrorcopies	Read	It will be read from setup file, Used to Make the Number of Mirror Copies needs to be present on the site	Number of copies	default 2
/proc/calypso/tunables/bwm_updateInterval	Write	It decides the time interval at which the Bandwidth management updates are exchanged by server where servers report their bandwidth usage to primary and primary assigns bandwidth to other servers. When committed bandwidth out of bandwidth also it reports the BWM (happen two levels, first at 90% and then second time at 95%)	in sec	default 10
/proc/calypso/internal/offline	Write	Tunable used to offline the server, when its set server become offline.	bool	default 0
/proc/calypso/tunables/bPSIErrorFailsIngest	RW	It will make sure that trick code aborts the ingest when bitstream don't have PAT,PMT	Boolean	default TRUE
/proc/calypso/tunables/bRateErrorFailsIngest	RW	If it is enabled, Ingest fails if Bitrate cannot be computed.	Boolean	default TRUE

Table I-3 Config Tunables

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/tunables/nCCErrorsFailIngest	RW	Controls number of CC errors allowed after which Ingest is marked failed	Number	None
/proc/calypso/tunables/nDiscErrorsFailIngest	RW	Number of discontinuity errors allowed after which ingest is marked failed	Number	None
/proc/calypso/tunables/nPicGapsFailIngest	RW	Number of PicGaps after which we fail ingest	Number	3
/proc/calypso/tunables/nPicGapsinHSFailIngest	RW	Amount of time in Hundredth of second in pic Gap which is considered as ingest failure	Time in hundredth of seconds	5 (seconds)
/proc/calypso/tunables/nSyncLossesFailIngest	RW	Number of sync losses after which we fail ingest	Number	3
/proc/calypso/tunables/nSyncLossesinHSFailIngest	RW	Amount of time in Hundredth of second in SyncLoss which is considered as ingest failure	Time in hundredth of seconds	5 (seconds)
/proc/calypso/tunables/maintenancemirrorcopies	RW	No of copies for mirroring during server maintenance	number	2
/proc/calypso/tunables/enable_rtp_rtx	RW	Enables VOD error repair feature with RTP RTX	Boolean	default 0 Range 0,1
/proc/calypso/tunables/nEveryNMinutes	RW	to allow ingestion depending on the ingestknob settings such as a check on the error counts of sample based on time specified	Minutes	30
/proc/calypso/tunables/tm_restrict_enable_ffw_resume	Write	This tunable used to enable/disable the streamer to resume the Fast forward after playing a Fast forward trick restricted content in 1x.	bool	default false
/proc/calypso/tunables/tm_restrict_enable_forward_jump	Write	tunable used to Disable/Enable the forward jump restriction	bool	default false
/proc/calypso/tunables/tm_restrict_enable_forward_jump_resume	Write	tunable used to enable/disable the streamer to resume the forward jump after playing a forward jump restricted content in 1x	bool	default false
/proc/calypso/tunables/tm_restrict_enable_rewind_skip	Write	Tunable used to enable/disable the rewind skip. If it enable then rewind jump to the beginning of the restricted content and continue rewinding from there	bool	default false

**Table I-3 Config Tunables**

Tunable name/Location	Read/Write /RW type	Description	Units/Type	default Values
/proc/calypso/tunables/vaultarraymirror	Write	This tunable used to Configure mirror partner, array id to which the server is mirroring. To stop the array mirroring we need to echo negative value of the partner array id	array id	default 1
/proc/calypso/cm/active_maxpacketize	Read	Active Max packet size to be sent out on their streaming network	Packet Size	7 MPEG Cells for Standard Size packets, 21 MPEG Cells for Jumbo size packets
/proc/calypso/tunables/vaultlocalcopycount	RW	to configure the number of local mirror copy count on Mirroring Policy	count	1
/proc/calypso/tunables/maintenancearraymirroringallowed	RW	to enable the array mirroring during the maintenance	functionality (enable/disable)	TRUE

## Recorder Tunables

The tunables listed in the table below are used to configure the various parameters of the Recorder.

**Table I-4 Recorder Tunables**

Tunable Name/Location	Description	Unit	Default Value
/proc/calypso/tunables/recording_graceperiod	The time interval beyond the requested start time during which it is still acceptable to process a recording. If the RM and Recorder times are not synchronized, this grace period allows for the recording to still proceed. This grace period also allows recordings to proceed when temporary congestion dissipates.	second	5
/proc/calypso/tunables/recording_nodatatimeout	Maximum time in seconds for which to await data on an input source feed before timing out the data connection.	second	1



Table I-4 Recorder Tunables

Tunable Name/Location	Description	Unit	Default Value
/proc/calypso/tunables/ingest_capture_min_failover_timeout	<p>Minimum time an ingest link must be inactive for the ingest interface failover feature to be enabled.</p> <p>An ingest link is timed out based on /proc/calypso/tunables/recording_nodatatimeout.</p> <p>If /proc/calypso/tunables/recording_nodatatimeout is less than /proc/calypso/tunables/ingest_capture_min_failover_timeout, the recording is terminated.</p> <p>Else, recording is resumed on another ingest link.</p>	second	5
/proc/calypso/test/stopIngestArchiveSizeLimitInSectors	Specifies the maximum archive file size for a recording. When this file size is reached, the recording is terminated.	Number of sectors	ffffff
<b>EBP</b>			
/proc/calypso/tunables/trick_ebpu_setimestamps	Enable or disable the use of EBP information in the transport stream at ingest. When enabled, EBP time stamps are parsed to determine the start of a recording.	boolean	1
/proc/calypso/tunables/trick_ebpe_nableimplicit	Include implicit audio EBP records in the index file.	boolean	1
/proc/calypso/tunables/trick_ebpe_ndusingvideo	End a recording at a video EBP boundary. Otherwise, the recording will end at the implicit audio EBP boundary of the last audio stream.	boolean	0
/proc/calypso/tunables/trick_ebp_maxdrift	The maximum EBP time stamp drift allowed from the current time of the Recorder. This allows recording to continue even if the transcoder and Recorder times are not synchronized.	second	1800
/proc/calypso/tunables/trick_ebptimeout	The maximum time for which to await an EBP on the input source feed before proceeding.	second	5
/proc/calypso/tunables/trick_ebpproceedontimeout	Proceed to record even if there are no EBPs in the input source feed.	boolean	1

Table I-4 Recorder Tunables

Tunable Name/Location	Description	Unit	Default Value
/proc/calypso/tunables/trick_ebpu seccurrenttime	Replace the EBP timestamps in the input source feed with current time of the Recorder.	boolean	0
<b>Audio</b>			
/proc/calypso/tunables/trick_minia acsamples	The minimum AAC samples to be used to determine the audio bitrate.	Count	50
/proc/calypso/tunables/trick_useaac table	Use a table of well known bitrates for determining the audio bitrate. Otherwise, round to the nearest 1000.	boolean	0
<b>Reporting</b>			
/proc/calypso/tunables/ndvr_deliv ery_threshold	The threshold as a percentage of the maximum delivery bandwidth at which to report status change due to variation in active delivery bandwidth.	Percentage	1
/proc/calypso/tunables/ndvr_recor ding_threshold	The threshold as a percentage of the maximum recording bandwidth at which to report status change due to variation in active recording bandwidth.	Percentage	1
/proc/calypso/tunables/ndvr_stora ge_threshold	The threshold as a percentage of the maximum storage capacity at which to report status change due to variation in used storage space.	Percentage	1
<b>Bandwidth</b>			
/proc/calypso/tunables/recording_ maxdiskbandwidth	Maximum allowable bandwidth per disk.  This parameter controls the active recording bandwidth based on the number of disks in operation.	bps	620,000,000 (CDE460)
/proc/calypso/tunables/recording_ overdeliveryfactor	The recording over delivery factor is used to reserve greater or lesser delivery bandwidth relative to the recording bandwidth.  For example, a value of 3 implies a 3:1 recording:delivery factor.	Number	3
<b>Stream ID</b>			

Table I-4 Recorder Tunables

Tunable Name/Location	Description	Unit	Default Value
/proc/calypso/tunables/trick_feed checkstreamid	Enable checking the input source feed for SCTE35 streamID messages and reject the recording if the streamID in the input source feed does not match the requested streamID for the recording.	boolean	1
/proc/calypso/tunables/trick_strea midmissingmaxseconds	The time for which an SCTE35 streamID message can be missing from the input source feed before a recording is terminated.  A value of 0 implies that the input source feed need not have an SCTE35 streamID message.	second	0
<b>C2 V2 Indexing</b>			
/proc/calypso/tunables/trick_inde xdefaultversion	If a C2 indexing version is not specified in the recording request, this value is used.	Number	1
<b>MBR Profiles Alignment</b>			
/proc/calypso/tunables/trick_sync profilesbypts	Terminate profiles of a recording at the closest PTS of a terminated profile.	boolean	1
/proc/calypso/tunables/trick_finis hprofilesimmediately	Terminate profiles of a recording immediately.	boolean	0

