

GMSEC

GSFC Mission Services Evolution Center



At A Glance

The GMSEC Environment Diagnostic Analysis Tool provides a visual representation of a GMSEC system.

Features

- Visual notification of component, computer, or bus failure
- Animation of spacecraft pass, telemetry status, and alert paging
- Plots computer resources such as network bandwidth, CPU, memory, and disk utilization
- Configurable to user preferences

Benefits

- Provides a quick overview of the configuration and status of a GMSEC system

NASA's GMSEC Environment Diagnostic Analysis Tool

Summary

The GMSEC Environment Diagnostic Tool (GEDAT) provides a visual representation of the GMSEC environment. It identifies and tracks all components performing message-based publish/subscribe communications over a GMSEC message bus. GEDAT alerts the user to various error conditions including component and bus failover. Key events, such as a spacecraft pass, telemetry downlink, and alert paging can optionally be animated.

Component Status	Bus Status	Date	Time
2 Critical 2 Warning 25 OK	MB_PRIME MB_BACKUP	11/07/2011	15:20:18

Component	Status	Mission ID	Facility	Node	Component	Publish Rate (sec)	Elapsed Msg Time
GMSEC	CRITICAL						
OFFICE	WARNING						
ELMO-PC	WARNING						
MB_PRIME	WARNING						
GMSEC	OK	GMSEC	OFFICE	ELMO-PC	MB_PRIME	0	56
SYSTEMS	OK						
GMSEC_LAB	OK						
ELMO-PC	OK	SYSTEMS	GMSEC_LAB	ELMO-PC	MB_PRIME	5.00	1:18
MB_PRIME	OK						
GS00009601664_NDC_NASA_GOV	OK						
EAN	OK	SYSTEMS	GMSEC_LAB	GS00009601664	EAN	30	24
GEDAT	OK	SYSTEMS	GMSEC_LAB	GS00009601664	GEDAT	30	27
OFFICE	OK						
MAC	OK						
STMG	OK	SYSTEMS	OFFICE	MAC	STMG	5.00	1:18
TEST	WARNING						
GMSEC_LAB	WARNING						
MAC	WARNING						
STMG	WARNING						
TRACE	CRITICAL						
GMSEC_LAB	CRITICAL						
GIANDT07	CRITICAL						
CAT	CRITICAL	TRACE	GMSEC_LAB	GIANDT07	CAT	1.00	1:05
GREAT	CRITICAL	TRACE	GMSEC_LAB	GIANDT07	GREAT	10.00	1:04
PDF	CRITICAL	TRACE	GMSEC_LAB	GIANDT07	PDF	1.00	1:05
EMC	OK	TRACE	GMSEC_LAB	GIANDT08	EMC	10.00	1:04
EMC	OK	TRACE	GMSEC_LAB	GIANDT09	EMC	10.00	39
EMC	OK	TRACE	GMSEC_LAB	GIANDT09	EMC	10.00	39
Flexplan	OK	TRACE	GMSEC_LAB	GIANDT10	Flexplan	10.00	39
GMSEC_LAB	OK	TRACE	GMSEC_LAB	GIANDT10	DMS	10.00	39
DMS	OK	TRACE	GMSEC_LAB	GIANDT10	ITOS-SIM	10.00	38
ITOS-SIM	OK	TRACE	GMSEC_LAB	GIANDT11	ANSR	10.00	37
ANSR	OK	TRACE	GMSEC_LAB	GIANDT11	ANSR	10.00	37

AOS	LOS	Page	TLM Nominal	TLM Limit Violation	TLM Off
2011-11-15 18:22	Detected recovery from Component [Missions: SYSTEMS: OFFICE: MAC: STMG]				
2011-11-15 18:22	Detected recovery from Component [Missions: SYSTEMS: GMSEC_LAB: ELMO-PC: MB_PRIME]				
2011-11-15 18:24	Detected recovery from Component [Missions: TRACE: GMSEC_LAB: MAC: ITOS]				
2011-11-15 18:24	Detected recovery from Component [Missions: TRACE: GMSEC_LAB: MAC: ANSR]				
2011-11-15 18:35	Detected recovery from Component [Missions: TRACE: GMSEC_LAB: GIANDT07: CAT]				
2011-11-15 18:35	Detected recovery from Component [Missions: TRACE: GMSEC_LAB: GIANDT07: GREAT]				
2011-11-15 20:15	No longer receiving heartbeats from Component [Missions: TRACE: GMSEC_LAB: GIANDT07: CAT]				
2011-11-15 20:15	No longer receiving heartbeats from Component [Missions: TRACE: GMSEC_LAB: GIANDT07: GREAT]				

Screen Shot of the GMSEC Environment Diagnostic Analysis Tool

Features

GEDAT utilizes a hierarchical ordering scheme to display detailed information about each component of a GMSEC system. For large-scale environments the user can customize the view by filtering components based on a number of different search criteria. The user can select a computer node to view its memory, CPU, and disk utilization values plotted over time. Animations of certain key events are controlled by directive messages published by another component, such as GMSEC's Criteria Action Table (CAT). GEDAT provides programmable message buttons that allow the user to publish a message at the click of a button. This feature could be used in concert with other components, for instance, to send a directive to a telemetry and command system to start a script.

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