ISOC : Backup ISOC Functional Checkout

This page last changed on Dec 16, 2008 by blee.

1. Overview

This document describes the steps used to confirm that the Backup ISOC system provides the interfaces and functionality necessary to support a subset of ISOC and LAT operations in the event of an extended outage of the primary ISOC systems at SLAC. This subset includes:

1. Receipt of real-time Fermi telemetry from the MOC.
2. Receipt of level-0 telemetry files from the MOC.
3. Receipt of redacted level-0 telemetry files from the SSC.
4. Receipt of mission-planning products from the MOC and SSC.
5. Delivery of LAT science timelines and PROC requests to the SSC (or MOC).
6. Access to the Fermi MOC website, including Web display of ITOS telemetry pages and logs.

2. External Interface Checkout

1. Real-time telemetry is delivered to the backup ISOC by the RedactRT process running at the MOC in response to connections initiated by the ITOS system.
   a. From the RedactRT server, confirm TCP connectivity with the Backup-ISOC server by issuing the command `telnet <ip_address> 34721`.
   b. Configure RedactRT with the backup ISOC server as an additional output destination. During a scheduled contact, confirm via the RedactRT logfile that RedactRT connects to the backup ISOC server.
2. Level-0 telemetry files and mission-planning files are delivered to the backup ISOC via FASTCopy transfers.
   a. From the MOC FASTCopy servers, confirm TCP connectivity with the backup ISOC server by issuing the command `telnet <ip_address> 40000`.
   b. From the SSC FASTCopy servers, confirm TCP connectivity with the backup ISOC server by issuing the command `telnet <ip_address> 40000`.
   c. From the MOC FASTCopy servers, perform a manual transfer by invoking the `fcopy` command with appropriate arguments, including the `-report` argument to provide confirmation of the progress and status of the transfer.
   d. From the SSC FASTCopy servers, perform a manual transfer by invoking the `fcopy` command with appropriate arguments, including the `-report` argument to provide confirmation of the progress and status of the transfer.
3. LAT timelines and PROC requests are delivered to the SSC or MOC via FASTCopy transfers.
   a. From the backup ISOC server, confirm TCP connectivity with the MOC primary and backup servers by issuing the command `telnet <ip_address> 40000`.
   b. From the backup ISOC server, confirm TCP connectivity with the SSC server by issuing the commands `telnet [glyph|gloss].gsfc.nasa.gov 40000`.
   c. From the backup ISOC server, perform a manual transfer to each MOC server by invoking the `fcopy` command with appropriate arguments, including the `-report` argument to provide confirmation of the progress and status of the transfer.
   d. From the backup ISOC server, perform a manual transfer to each SSC server by invoking the `fcopy` command with appropriate arguments, including the `-report` argument to provide confirmation of the progress and status of the transfer.
4. Access to the Fermi MOC website is via the https protocol. ITOS telemetry pages are served as Java applets that retrieve data via a custom protocol on port 7777/tcp. ITOS event logs are served as a Java applet that receives data via a custom protocol on ports 6068/tcp and 6069/tcp.
   a. From the backup ISOC server, confirm TCP connectivity with the MOC web server by issuing the command `telnet glastopen.nascom.nasa.gov 443`.
   b. From the backup ISOC server, confirm TCP connectivity with the ITOS telemetry server by issuing the command `telnet glastopen.nascom.nasa.gov 7777`.
   c. From the backup ISOC server, confirm TCP connectivity with the ITOS event server by issuing the commands `telnet glastopen.nascom.nasa.gov 6068` and `telnet glastopen.nascom.nasa.gov 6069`.

3. Internal Functionality Checkout

TBR

1. During a real-time contact, examine the ISOC real-time displays to confirm that telemetry packets are processed into EGU-converted mnemonic samples.
2. Use the Mission Planning Tool to schedule a PROC request invoking a LAT no-op command.
3. Submit the PROC request to the SSC. Confirm that the request is received at SSC and delivered to the MOC.
4. From a backup ISOC workstation launch the Firefox browser and navigate to https://glastopen.nascom.nasa.gov/~glast. Use the links on that page to bring up ITOS telemetry displays.
5. From a backup ISOC workstation launch the Firefox browser and navigate to https://glastopen.nascom.nasa.gov/~glast. Use the links on that page to bring up ITOS log displays.

Testing Results

Item	Element	Status	Date	Notes
2.1.1	MOC	Successful	2008-11-25	
2.1.2	MOC			
2.2.1	MOC	Successful	2008-11-25	
2.2.2	SSC	Successful	2008-12-08	
2.2.3	MOC			
2.2.4	SSC	Successful	2008-12-08	
2.3.1	ISOC	Successful	2008-11-24	
2.3.2	ISOC	Successful	2008-12-15	
2.3.3	ISOC	Successful	2008-12-05	
2.3.4	ISOC	Successful	2008-12-16	
2.4.1	ISOC	Successful	2008-11-26	
2.4.2	ISOC	Successful	2008-11-26	
2.4.3	ISOC	Unsuccessful	2008-11-26	Requires Restricted IONET change with several weeks lead-time due to Shuttle support.
3.1	ISOC			
3.2	ISOC	Successful	2008-12-05	Created MW30 LATNOOP request. Submission to

				"LISOC" loopback path also worked.
3.3	ISOC	Successful	2008-12-16	
3.4	ISOC	Successful	2008-11-26	
3.5	ISOC	Unsuccessful	2008-11-26	Requires Restricted IONET change with several weeks lead-time due to Shuttle support.