

Dec 2017 Power Outrage (Fermi)

Figuring out what we need to get through. None of the pages mapping services to servers are up to date.

Power outage time-line (from Shirley).

Note that the start time of "10am" (PST) on 26 Dec is solid, but that the "5pm" on 30 Dec is notional and could change.

Date	Time	Equipment *	Action
Fri 22 Dec 2017	EOB?	NC	power off
Tue 26 Dec 2017	before 10am	NC5 XC	power off power off (briefly - for power source switch)
	~8:30am		Bldg 50 power off
	after 8:30am	XC	power ON
		HA	continuously powered ON
Sat 30 Dec 2017	before 5pm	XC	power off (briefly - for power source switch)
	5pm		Bldg 50 power ON
	after 5pm	XC NC5	power ON power ON
Mon 8 Jan 2018	starting 8am	NC	power ON

* Equipment categories

Category	Machine status
NC	non-critical for entire 16-day shutdown period
NC5	non-critical if down only during the 5 days of the outage and, possibly, the three days preceding the outage
XC	experiment critical but not in H.A. rack, only a few, short outages acceptable
HA	high-availability (continuous operation)

LISOC Operations Functions

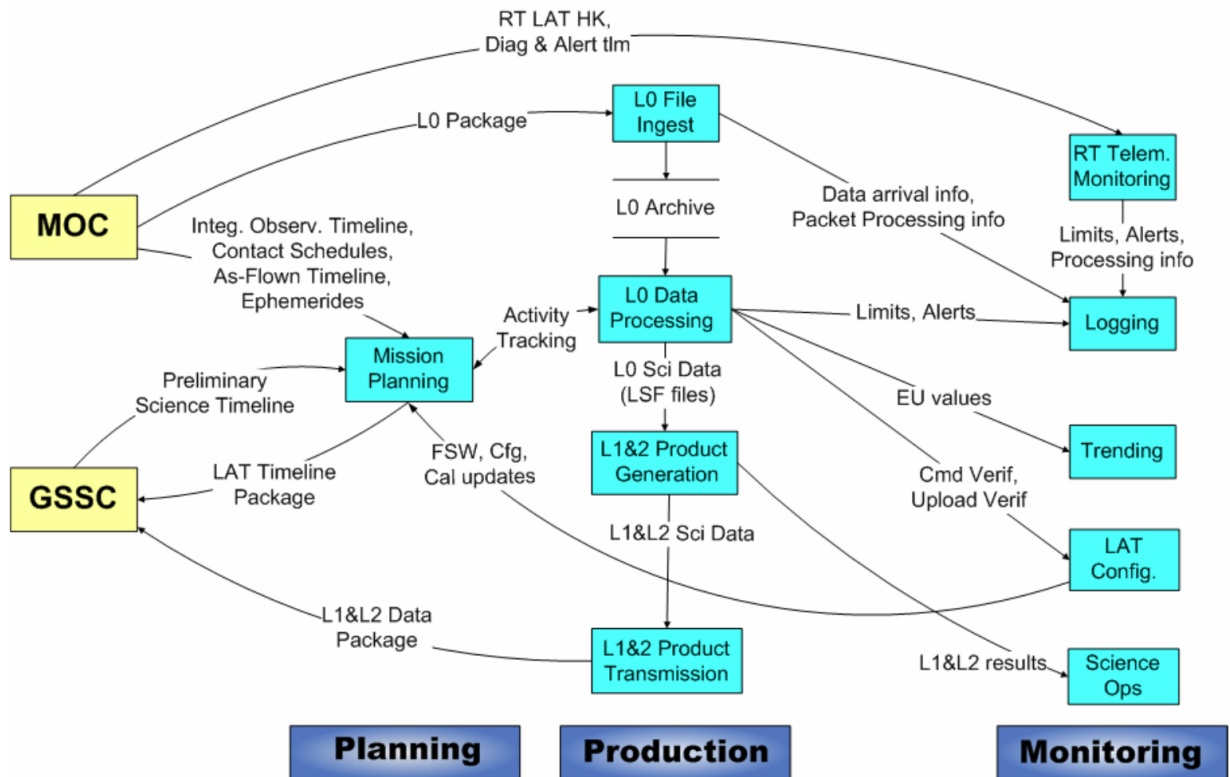


Table of LISOC Tasks and Services

Function/Service	Sub-Functions	Needed Servers	Needed Databases	Needed File Systems	Other Needs	Needed During Shutdown?	Available During Shutdown?
Mission Planning, LAT Configurations	FastCopy	fermilnx01 or fermilnx02	TCDB	AFS	Fermi LAT Portal: Timeline Webview; Confluence, JIRA, Mission Planning s/w	yes	
Real Time Telemetry Monitoring		fermilnx01 or fermilnx02			spread	during anomalies	
Logging		fermilnx01 or fermilnx02	TCDB		Fermi LAT Portal: Log Watcher	yes	
Trending			TCDB		Fermi LAT Portal: Telemetry Trending	yes	
L0 File Ingest and Archive	FastCopy		L0 Archive			yes	
Data Gap Checking and Reporting	FastCopy	fermilnx01 or fermilnx02	L0 Archive			yes, continuously	
L1 processing	pipeline	SLAC Farm	Data Catalog		Fermi LAT Portal: Pipeline, Data Processing	yes	
L1 Data Quality Monitoring					Fermi LAT Portal, Telemetry Trending		
L1 delivery	FastCopy	fermilnx01 or fermilnx02	Data Catalog			yes	
L2 processing (ASP) and Delivery	FastCopy	fermilnx01 or fermilnx02	Data Catalog		Fermi LAT Portal: Pipeline, Data Processing	daily, weekly	
RSP						?	

The following table of servers must remain powered up and operational for Fermi Level 1 to succeed.

- ✓ Confirm current H.A. rack occupants. See spreadsheet here (thanks Shirley!) <https://portal.slac.stanford.edu/info/ITHelp/KB%20Assets/HA-Servers.xlsx>
- ✓ Confirm the VM-master for a given VM. Use the 'node' command, e.g., \$ node -whereis fermilnx-v12
- ✓ Confirm the tomcat <-> service associations. Table here.

☑ Confirm the tomcat-VM associations in this table. Use the 'node' command, e.g., \$ node -whereis glast-tomcat01

Category	server	VM/service	function
XC	fermi-gpfs02		xrootd server
XC	fermilnx05-vmm	fermilnx-v02	xrootd redirector
XC	fermilnx07-vmm	fermilnx-v12	xrootd redirector
HA	wain031 (or equivalent)		NFS storage
HA	fermilnx01		LAT config, fastcopy and real-time telemetry
HA	fermilnx02		LAT config, fastcopy and real-time telemetry
XC	fermilnx05-vmm	fermilnx-v03	archiver
HA	fermi-oracle01		oracle primary
HA	fermi-oracle02		oracle secondary
HA	mysql05/06	mysql-node03	calibration, etc. DB
HA	hequ0001-0030		batch hosts. queues={express,short,long, glastdataq} users={glast,lsstsim,lsstprod,glastmc,glastraw}
XC	hequ0031-0050		batch hosts
HA	fermilnx03-vmm	fermilnx-v07/tomcat01	Commons, Group manager
XC	fermilnx09-vmm	fermilnx-v16/tomcat06	rm2
XC	fermilnx07-vmm	fermilnx-v05/tomcat08	dataCatalog
XC	fermilnx09-vmm	fermilnx-v17/tomcat09	Pipeline-II
XC	fermilnx08-vmm	fermilnx-v15/pipeline-mail01	Pipeline-II email server
XC	fermilnx09-vmm	fermilnx-v18/tomcat10	FCWebView, ISOCLogging, MPWebView TelemetryMonitor, TelemetryTableWebUI
XC	fermilnx07-vmm	fermilnx-v10/tomcat11	DataProcessing
XC	fermilnx07-vmm	fermilnx-v11/tomcat12	TelemetryTrending
NC5	(non-Fermi server)	astore	data archive
HA	(non-Fermi server)	trscron	tokenized cron
HA	(non-Fermi server)	lnxcron	cron
XC	(non-Fermi server)	(farm manager, etc.)	LSF management
HA	yfs01 (non-Fermi)		AFS
HA	yfs02 (non-Fermi)		AFS
HA	(non-Fermi server)	JIRA	issue tracking (HA as of 10/20/2017)
XC	fermi-gpfs03/04	GPFS	Fermi user disk
XC	fermi-cnfs01/02	GPFS/NFS bridge	Fermi user disk

High availability racks

For general information about the High-availability racks, Shirley provided this pointer to the latest [list](#):

"Service Now, Knowledge Base, search for "High Availability" , following link for current servers"

And here is the current statement about high-availability functionality:

Current Services in HA Racks

- CATER application
- Confluence application
- Data center management tool
- Drupal web
- Email lists
- Email transport infrastructure
- ERP application
- Exchange email
- EXO application
- Facilities monitoring
- Fermi application
- IT Ticketing system
- Network infrastructure
- Site Security infrastructure
- Unix authentication infrastructure
- Unix AFS infrastructure
- Unix mailboxes
- Unix monitoring
- VPN
- Windows authentication infrastructure
- Windows file servers and SAN
- Windows monitoring
- Windows web

The services for L1:

oracle

- pipeline
- data catalog
- group manager

mysql

- calibrations

tomcats

- pipeline
- data catalog
- data processing

isoc servers

xroot

- fermi-gpfs02 (xrootd server)
- fermilnx-v02 (redirector)
- fermilnx-v12 (redirector)

nfs

- Pretty much everything that's currently on wain031

LSF

- ~25 hosts should let us keep up

Here's what ISOC tasks need:

FASTCopy chain

wain031
fermilnx01
fermilnx02
trscron
fermilnx-v03 (Archiver)
Whatever the pipeline server runs on.
xroot servers
astore system

Web servers

tomcat01 Commons
tomcat06 rm2
tomcat09 Pipeline-II
tomcat10 FCWebView, ISOCLogging, MPWebView
TelemetryMonitor, TelemetryTableWebUI
tomcat11 DataProcessing
tomcat12 TelemetryTrending

Notes:

9/29/2017 - (TG and WK) added list of xrootd servers needed to bridge the gap in December; Started table of server names