



JPSS Ground Project



Overview of the JPSS GRAVITE System

Peyush Jain

DPES Development Manager
NASA GSFC Code 586

Gyanesh Chander

DPES Manager
NASA GSFC Code 586



GRAVITE



- GRAVITE stands for “Government Resources for Algorithm Verification, Independent Test and Evaluation”
- GRAVITE is the JPSS Ground System’s Calibration/Validation Node
 - Data center class hardware housed at the NOAA NSOF
- GRAVITE services facilitate:
 - Algorithm Integration and Checkout
 - Algorithm and Product Operational Tuning
 - Instrument Calibration
 - Product Validation
 - Algorithm Investigation
 - Data Quality Support and Monitoring
- Science algorithms are provided by NOAA STAR



GRAVITE Subsystems



- **Four subsystems:**
 - **IPS (Investigator-led Processing System)**
 - In-house developed. Production system, operator managed. Consists of Ingest, Automated Processing, and Distribution components. Runs PGEs (Product Generation Executable) for Cal/Val and Data Quality Monitoring
 - **G-ADA (GRAVITE Algorithm Development Area)**
 - Interface Data Processing Segment (IDPS) compliant development and testing platform for JPSS algorithms and Look-Up-Tables. After verification, proposed changes are sent to CGS as Algorithm Change Packages (ACP) for integration
 - **ICF (Investigator Computing Facility)**
 - Science tools and libraries, personal user space, access to data, and computing power are provided to run CPU and memory intensive applications. Provides access to subscribed data
 - **GIP (GRAVITE Information Portal)**
 - Coordination and knowledge sharing for GRAVITE projects through Blogs, Wikis, Action trackers, etc.



GRAVITE Purpose and Unique Features



GRAVITE provides a unique environment to support the Calibration/Validation and Data Quality Assessment of JPSS mission data products:

Category	Description	Unique Feature(s)
Distribution	Fast access to IDPS created data products (anticipated to be on the order of minutes in Block 2.0)	Direct interfaces to IDPS and STAR
Cal/Val tools	Automated and ad-hoc tools that cal/val users use for algorithm analysis and update	Product Generated Executables and Algorithm Support Functions
IDPS “Clone”	The G-ADA provides an instance of the IDPS available for algorithm change testing, science investigation, and data quality investigation	Installation of latest IDPS code in identical SW environment on similar hardware
Access to baselined data	Access to the latest baselined Processing Coefficient Tables (PCTs) and Look Up Tables (LUTs)	Access to ICF with the latest updated tables provided to IDPS
DQA offline	Data Quality Assurance Offline Tools	DQA offline in GRAVITE takes advantage of the performance features as well as proximity to near-real time data flows



GRAVITE Technical Specifications



Operations Environment

- 760 TB storage
- 3 IBM General Parallel File System (GPFS) clusters serving: ICF, IPS, G-ADA, G-ADA Block 2.0
- 35 IBM 787x series blades. Each blade has 12 or 16 CPU cores, 128 GB memory, 4 network interfaces
- 2 Dell R710s running VMware, hosting 11 virtual machines
- ICF and IPS use Red Hat Enterprise Linux 6.6, G-ADA uses AIX 6.1

Test/Development Environments

- 434 TB storage
- 1 IBM GPFS clusters serving: test, test2, test3
- 13 IBM 787x series blades. Each blade has 12 or 16 CPU cores, 128 GB memory, 4 network interfaces
- 4 IBM blades running VMware, hosting 17 virtual machines
- ICF and IPS use Red Hat Enterprise Linux 6.6

Network

- 12 IBM racks
- 10 GE Cisco Nexus switches, computing to storage
- 1/10 GE Cisco and IBM switches, computing to backbone
- 1/10 GE interfaces between Cisco ASA next-generation firewalls (558x series) and mission partners and internet

Data Flow

- 2.2 TB/day ingest from IDPS
- 0.7 TB/day ingest from CLASS
- 1.2 TB/day ingest from G-ADA
- 2.6 TB/day RIPs distribution to NASA SDS and CLASS
- 1.3 TB/day data distribution to Cal/Val community



Login




<https://gravite.ipss.noaa.gov/>



Search



GRAVITE		Search	Download Bag	Subscriptions
		<i>Last Updated @ 2015-08-26 17:24:21</i>		
<input type="checkbox"/> Collapse Search Criteria				
Granule Id	<input type="text" value="Granule Id"/>			
File Name	<input type="text" value="File Name"/> * = Wildcard			
Domain	<input type="text" value="ops"/>			
Mission	<input type="text" value="NPP"/>			
Instrument	<input type="text" value="ATMS"/>			
Product	<input type="text" value="RDR"/>			
Sub-Product	<input type="text" value=""/> Delete Sub-Products Selected - ATMS-SCIENCE-RDR			
Orbit	<input type="text" value="Orbit Number"/> <input type="text" value="Equals"/>			
Cloud Cover	<input type="text" value="Cloud Cover Percen"/> <input type="text" value="Equals"/>			
Day/Night	<input type="text"/>			
Observed Time	From <input type="text" value="08/25/2015"/> <input type="text" value="12"/> <input type="text" value="3"/> : <input type="text" value="00"/> To <input type="text" value="08/25/2015"/> <input type="text" value="17"/> <input type="text" value="3"/> : <input type="text" value="02"/>			
Generic Group	<input type="text"/>			
Usertype	<input type="text"/>			
Granule Reference ID	<input type="text" value="Reference Id"/> * = Wildcard			
Spatial	<input type="text" value="Bounding Box: S, W, N, E"/> 			



Search Results



Order By:

[\(Refresh\)](#) Showing 1 to 5 of 5

<< < 1 > >>

<input type="checkbox"/>	file	
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0301517_e0302237_b19816_c20150825045746129706_noaa_ops.h5 Granule Id: NPP001211437000 NPP001211437200, NPP001211437400, NPP001211437137, Domain: ops Mission: NPP Instrument: SPACECRAFT, ATMS Product: RDR Sub-Product: SPACECRAFT-DIARY-RDR, ATMS-SCIENCE-RDR Filesize: 196 KB Observed Time: 2015-08-25 03:01:51 to 2015-08-25 03:02:23 Received Time: 2015-08-25 04:59:52 Expiration Time: 2070-05-28	
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0301197_e0301517_b19816_c20150825045701332550_noaa_ops.h5 Granule Id: NPP001211436817 NPP001211436800, NPP001211437000, Domain: ops Mission: NPP Instrument: ATMS, SPACECRAFT Product: RDR Sub-Product: ATMS-SCIENCE-RDR, SPACECRAFT-DIARY-RDR Filesize: 177.6 KB Observed Time: 2015-08-25 03:01:19 to 2015-08-25 03:01:51 Received Time: 2015-08-25 04:58:49 Expiration Time: 2070-05-28	
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0300477_e0301197_b19816_c20150825045643099910_noaa_ops.h5 Granule Id: NPP001211436497 NPP001211436600, NPP001211436800, NPP001211436400, Domain: ops Mission: NPP Instrument: ATMS, SPACECRAFT Product: RDR Sub-Product: ATMS-SCIENCE-RDR, SPACECRAFT-DIARY-RDR Filesize: 196 KB Observed Time: 2015-08-25 03:00:47 to 2015-08-25 03:01:19 Received Time: 2015-08-25 04:58:48 Expiration Time: 2070-05-28	
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0300157_e0300477_b19816_c20150825045607092293_noaa_ops.h5 Granule Id: NPP001211436400 NPP001211436200, NPP001211436000, NPP001211436177, Domain: ops Mission: NPP Instrument: SPACECRAFT, ATMS Product: RDR Sub-Product: SPACECRAFT-DIARY-RDR, ATMS-SCIENCE-RDR Filesize: 195.9 KB Observed Time: 2015-08-25 03:00:15 to 2015-08-25 03:00:47 Received Time: 2015-08-25 04:57:47 Expiration Time: 2070-05-28	
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0259437_e0300157_b19816_c20150825045540210622_noaa_ops.h5 Granule Id: NPP001211436200 NPP001211436000, NPP001211435800, NPP001211435857, Domain: ops Mission: NPP Instrument: SPACECRAFT, ATMS Product: RDR Sub-Product: SPACECRAFT-DIARY-RDR, ATMS-SCIENCE-RDR Filesize: 196 KB Observed Time: 2015-08-25 02:59:43 to 2015-08-25 03:00:15 Received Time: 2015-08-25 04:57:42 Expiration Time: 2070-05-28	

Download Bag has 0 files

Add To Bag

Go To Bag

- Click on a file to download it immediately to your local machine
- Select multiple files and click *Add to Bag* to download multiple files



Download Bag



GRAVITE Search **Download Bag** Subscriptions

Last Updated @ 2015-08-26 17:29:09

<input type="checkbox"/>	File Name
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0259437_e0300157_b19816_c20150825045540210622_noaa_ops.h5
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0300157_e0300477_b19816_c20150825045607092293_noaa_ops.h5
<input type="checkbox"/>	RATMS-RNSCA_npp_d20150825_t0300477_e0301197_b19816_c20150825045643099910_noaa_ops.h5

Remove Selected

Zip	Download Location Local Machine	Download
------------	---	-----------------

Staging Zone	Staging Location /inv/data/subscriptions/pjain/ATMS_stage/	COMPLETED	ATMS_stage	Stage
---------------------	--	-----------	------------	--------------

- Files added via *Add To Bag* are available under *Download Bag* Tab
- Download files as a zip on your local machine
- Files staged on GRAVITE, accessible from ICF under:
/inv/data/subscriptions/<username>/<directory name>



Subscriptions



Collapse Search Criteria

Granule Id

File Name * = Wildcard

Domain

Mission

Instrument

Product

Sub-Product

Delete Sub-Products Selected

ATMS-SCIENCE-RDR

Orbit

Cloud Cover

Day/Night

Observed Time

From :

To :

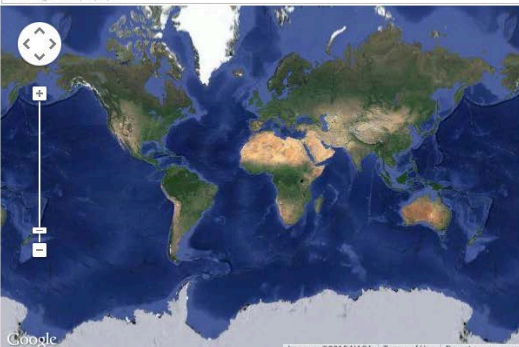
Generic Group

Usertype

Granule Reference ID * = Wildcard

Spatial

Bounding Box: S, W, N, E



Imagery ©2015 NASA | Terms of Use | Report a map error

Subscription

Subscription Name Requirements

No special characters or spaces

GRAVITE					
Search Download Bag Subscriptions					
Last Updated @ 2015-08-27 18:38:47					
Subscription Name	Created	Last Updated	Total Files	Subscription Criteria	
<input type="checkbox"/> ATMS_SCI_RDR	2015-08-26 17:47:46	2015-08-27 11:29:15	1963900	Mission: NPP Instrument: ATMS Product: RDR Sub Product: ATMS-SCIENCE-RDR	
<input type="checkbox"/> CRIS_SDR	2015-08-26 17:48:20	2015-08-27 11:29:13	109676	Mission: NPP Instrument: CHS Product: SDR	

- Select subscription criteria and provide subscription name
- Review and manage subscriptions under *Subscriptions* Tab
- Files staged on GRAVITE, accessible from ICF under:
`/inv/data/subscriptions/<username>/<subscription name>`



Pull/Push Data



- Pull
 - Subscribed data can be pulled by connecting to gravite.jpss.noaa.gov via RSYNC, SFTP protocols
 - Data is available under `/subscriptions/<username>/<subscription name>`
- Push
 - Dedicated Line
 - Need Inter-Connection Security Agreement (ISA), Interface Control Document (ICD), Interface Requirements Document (IRD), Service Level Agreement (SLA)
 - 10G dedicated line established between GRAVITE and STAR. In case of STAR, ICD and IRD are approved. ISA and SLA are pending NOAA security signatures
 - Over internet
 - Need to add GRAVITE L4 requirement to ensure adequate resources are available
 - Work with GRAVITE operators to add a new push subscription or enable existing subscription for pushes



Prelaunch J1/NPP data



- Prelaunch J1/NPP data is obtained directly from the factory sites where the instruments are tested. GIP hosts this data under instrument projects
 - <https://gip.jpss.noaa.gov/projects/<project>>
 - J1 Projects: j1cris, j1omps, j1viirs, j1atms
 - NPP Projects: npp_cris, npp_omps, npp_viirs, npp_atms
- Instruments:
 - CrIS (pulled from Excelis)
 - OMPS (pulled from Ball Aerospace)
 - VIIRS (pushed from Raytheon)
 - ATMS (manually uploaded by test conductors)
- Access:
 - Download data from projects using RSYNC, SFTP by connecting to gdata.jpss.noaa.gov
 - From ICF, data is available under `/var/www/data/<project>`



System Status



GRAVITE IPS

- Ingest
 - Ingest Controller - <http://ingest01test.gravite.gov:9010>
 - ingest ingest-engine ingest01test10003 start:Mon Aug 24 20:41:06 UTC 2015 hb:Wed Aug 26 20:32:24 UTC 2015 IE on DB files:10 [10] in 9.971 s
 - ingest ingest-engine ingest01test10002 start:Mon Aug 24 20:41:06 UTC 2015 hb:Wed Aug 26 20:32:27 UTC 2015 IE on DB files:10 [10] in 18.932 s
 - ingest ingest-engine ingest01test10006 start:Wed Aug 26 06:11:51 UTC 2015 hb:Wed Aug 26 20:32:32 UTC 2015 IE on DB files:10 [10] in 10.553 s
 - ingest ingest-engine ingest01test10005 start:Mon Aug 24 20:41:06 UTC 2015 hb:Wed Aug 26 20:32:31 UTC 2015 IE on DB files:10 [10] in 11.212 s
 - ingest ingest-engine ingest01test10004 start:Mon Aug 24 20:41:06 UTC 2015 hb:Wed Aug 26 20:32:31 UTC 2015 IE on DB files:10 [10] in 22.667 s
 - Job Status - FileCollector:
 - Job Status Dir:/test/data/ingest/lz/pge_output Crawls:4935 Files:61406 Upd:Wed Aug 26 20:17:56 UTC 2015 Time:171442
 - Job Status Dir:/test/data/ingest/lz/user/h5 Crawls:5685 Files:0 Upd:Wed Aug 26 20:32:18 UTC 2015 Time:172305
 - Job Status Dir:/test/data/ingest/lz/ada Crawls:5709 Files:0 Upd:Wed Aug 26 20:32:22 UTC 2015 Time:172308
 - Job Status Dir:/test/data/ingest/lz/dps Crawls:4965 Files:128192 Upd:Wed Aug 26 20:31:59 UTC 2015 Time:172286
 - Job Status Dir:/test/data/ingest/lz/class Crawls:5327 Files:139202 Upd:Wed Aug 26 20:32:24 UTC 2015 Time:172310
 - Job Status Dir:/test/data/ingest/lz/user/nonh5 Crawls:5714 Files:0 Upd:Wed Aug 26 20:32:06 UTC 2015 Time:172292
 - Job Status Dir:/test/data/ingest/lz/ext_staging Crawls:5697 Files:0 Upd:Wed Aug 26 20:32:29 UTC 2015 Time:172315
 - Job Status - FileCollector:
 - Job Status Dir:/test/data/ingest/lz/block2_ldps/j01 Crawls:5582 Files:0 Upd:Wed Aug 26 20:32:04 UTC 2015 Time:172284
 - Job Status Dir:/test/data/ingest/lz/block2_ldps/npp Crawls:5582 Files:0 Upd:Wed Aug 26 20:31:56 UTC 2015 Time:172277
 - Job Status Dir:/test/data/ingest/lz/block2_ldps/j02 Crawls:5722 Files:0 Upd:Wed Aug 26 20:32:11 UTC 2015 Time:172291
 - Job Status Dir:/test/data/ingest/lz/block2_ldps/common Crawls:5577 Files:0 Upd:Wed Aug 26 20:32:04 UTC 2015 Time:172285
- Ingest Controller - <http://ingest02test.gravite.gov:9010>
 - ingest ingest-engine ingest02test10002 start:Mon Aug 24 20:45:41 UTC 2015 hb:Wed Aug 26 20:32:24 UTC 2015 IE on DB files:10 [10] in 18.373 s
 - ingest ingest-engine ingest02test10001 start:Mon Aug 24 20:43:30 UTC 2015 hb:Wed Aug 26 20:32:23 UTC 2015 IE on DB files:4 [4] in 9.162 s
 - ingest ingest-engine ingest02test10005 start:Mon Aug 24 20:45:41 UTC 2015 hb:Wed Aug 26 20:32:28 UTC 2015 IE on DB files:10 [10] in 9.585 s
 - ingest ingest-engine ingest02test10004 start:Mon Aug 24 20:45:41 UTC 2015 hb:Wed Aug 26 20:32:30 UTC 2015 IE on DB files:10 [10] in 21.141 s
 - ingest ingest-engine ingest02test10003 start:Mon Aug 24 20:45:41 UTC 2015 hb:Wed Aug 26 20:32:26 UTC 2015 IE on DB files:10 [10] in 10.566 s
- PGE
 - Workflow Manager <http://pgemgr01test.gravite.gov:9001> up 63 instances
 - Resource
 - Resource Manager <http://pgemgr01test.gravite.gov:9002> up 12 jobs in queue.
 - Resource Batch Stub <http://pge01test.gravite.gov:2001> up 12 load.
 - Resource Batch Stub <http://pge02test.gravite.gov:2001> up 11 load.
- Job Status
 - Job Status - <http://pgemgr01test.gravite.gov:8677>
 - Job Status Orbit Stats builder last run:Wed Aug 26 20:32:30 UTC 2015 avg: 0.282 i:0.294 r:366
 - Job Status Daily Stats last run:Wed Aug 26 20:30:33 UTC 2015 avg: 28.132 i:28.354 r:4
 - Job Status Obsolete User types deleted 0 rows, last run Wed Aug 26 17:30:09 UTC 2015 avg: 0.738 i:0.738 r:1
 - Job Status Delete old stats deleted 1 rows, last run Wed Aug 26 17:30:08 UTC 2015 avg: 0.751 i:0.751 r:1
 - Job Status PGE Cleanup last run:Wed Aug 26 20:31:56 UTC 2015 avg: 105.012 i:115.693 r:4
 - Job Status Stats Cleanup last run:Wed Aug 26 20:32:33 UTC 2015 avg: 0.120 i:0.068 r:366
 - Job Status Ingest Failures File Incinerator last run:Wed Aug 26 20:32:08 UTC 2015 deleted 0, (0 B) avg: 0.019 i:0.014 r:365
 - Job Status Subscription Dir Cleanup last run:Wed Aug 26 20:31:19 UTC 2015 avg: 148.972 i:126.202 r:73
 - Job Status Landing Zone Size worker last run:Wed Aug 26 19:52:19 UTC 2015 avg: 1278.775 i:1340.384 r:3
 - Job Status Gap Minder, Data spans:61508 bxFailures:0 lastRun:Wed Aug 26 20:32:08 UTC 2015 avg: 2.274 i:2.151 r:92
 - Job Status File Rover Monitor - /test/data/logs/ripserver/file_rovers_common_20150826.log [0] /test/data/logs/ripserver/file_rovers_j01_20150826.log [0] /test/data/logs/ripserver/file_rovers_npp_20150826.log [0] avg: 0.139 i:0.031 r:365
 - Job Status Stat Server last run:Wed Aug 26 20:32:27 UTC 2015 avg: 0.811 i:1.637 r:968
 - Job Status File Incinerator last run:Wed Aug 26 20:32:32 UTC 2015 deleted 0, (0 B) D0 avg: 4.640 i:4.980 r:366
 - Job Status Stats near rollover last run:Wed Aug 26 20:32:31 UTC 2015 avg: 0.049 i:0.040 r:366
 - Job Status - <http://dist01test.gravite.gov:8677>
 - Job Status Link Maker avg: 0.000 i:0.000 r:5811
 - Job Status - Manager of Subscription FQ53
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:23 UTC 2015 lastNull=Wed Aug 26 20:32:23 UTC 2015 avg: 0.101 i:0.000 r:23440
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:22 UTC 2015 lastNull=Wed Aug 26 20:32:22 UTC 2015 avg: 0.102 i:0.000 r:24384
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:24 UTC 2015 lastNull=Wed Aug 26 20:32:24 UTC 2015 avg: 0.100 i:0.000 r:24594
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:22 UTC 2015 lastNull=Wed Aug 26 20:32:22 UTC 2015 avg: 0.097 i:0.000 r:25420
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:23 UTC 2015 lastNull=Wed Aug 26 20:32:23 UTC 2015 avg: 0.093 i:0.000 r:25523
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:22 UTC 2015 lastNull=Wed Aug 26 20:32:22 UTC 2015 avg: 0.095 i:0.000 r:24458
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:22 UTC 2015 lastNull=Wed Aug 26 20:32:22 UTC 2015 avg: 0.096 i:0.000 r:24748
 - Job Status Subscription Worker lastFin=Wed Aug 26 20:32:23 UTC 2015 lastNull=Wed Aug 26 20:32:23 UTC 2015 avg: 0.090 i:0.000 r:25850

- Job Status - <http://pgemgr01test.gravite.gov:8711>
 - Job Status - Product File Quality Analyzer FQ0
 - Job Status ProductQA Worker lastFin=Wed Aug 26 20:33:36 UTC 2015 lastNull=Wed Aug 26 20:33:36 UTC 2015 failrate=0.0 avg: 0.383 i:0.000 r:40917
- Job Status - <http://dist01test.gravite.gov:8710>
 - Job Status - PushMaster 14 with 25 workers, 2184 files, 55294148791 bytes
 - Job Status PushSlave for dist0112 conn=true job=4/33988306 bc=0 Last:Wed Aug 26 20:33:02 UTC 2015 avg: 32.806 i:144.275 r:7
 - Job Status PushSlave for dist0112 conn=true job=8/362354799 bc=0 Last:Wed Aug 26 20:31:47 UTC 2015 avg: 17.189 i:69.271 r:9
 - Job Status PushSlave for dist0112 conn=true job=7/325859204 bc=0 Last:Wed Aug 26 20:31:47 UTC 2015 avg: 17.111 i:69.602 r:9
 - Job Status PushSlave for dist0112 conn=true job=6/261682908 bc=0 Last:Wed Aug 26 20:31:53 UTC 2015 avg: 22.785 i:76.215 r:7
 - Job Status PushSlave for dist0112 conn=true job=2/83657472 bc=0 Last:Wed Aug 26 20:33:02 UTC 2015 avg: 218.245 i:43.620 r:5
 - Job Status PushSlave for pgemgr0112 conn=true job=2/83657088 bc=0 Last:Wed Aug 26 20:33:02 UTC 2015 avg: 181.828 i:54.112 r:6
 - Job Status PushSlave for pgemgr0112 conn=true job=3/44390624 bc=0 Last:Wed Aug 26 20:33:03 UTC 2015 avg: 155.958 i:58.594 r:7
 - Job Status PushSlave for pgemgr0112 conn=true job=1/41831088 bc=0 Last:Wed Aug 26 20:33:16 UTC 2015 avg: 110.440 i:21.228 r:10
 - Job Status PushSlave for pgemgr0112 conn=true job=3/44390688 bc=0 Last:Wed Aug 26 20:33:02 UTC 2015 avg: 90.897 i:38.777 r:12
 - Job Status PushSlave for pgemgr0112 conn=true job=3/125485968 bc=0 Last:Wed Aug 26 20:32:56 UTC 2015 avg: 180.808 i:13.354 r:6
 - Job Status PushSlave for pgemgr0112 conn=true job=2/83656608 bc=0 Last:Wed Aug 26 20:33:02 UTC 2015 avg: 181.788 i:37.387 r:6
 - Job Status PushSlave for pgemgr0112 conn=true job=2/83656800 bc=0 Last:Wed Aug 26 20:33:05 UTC 2015 avg: 109.342 i:17.365 r:10
 - Job Status PushSlave for pgemgr0112 conn=true job=2/83656992 bc=0 Last:Wed Aug 26 20:33:08 UTC 2015 avg: 137.055 i:5.761 r:8
 - Job Status PushSlave for pgemgr0112 conn=true job=2/29593792 bc=0 Last:Wed Aug 26 20:33:08 UTC 2015 avg: 84.383 i:6.356 r:13
 - Job Status PushSlave for dist0113 conn=true job=4/1297882352 bc=0 Last:Wed Aug 26 20:30:30 UTC 2015 avg: 17.234 i:55.412 r:46
 - Job Status PushSlave for dist0113 conn=true job=5/118612108 bc=0 Last:Wed Aug 26 20:30:59 UTC 2015 avg: 17.872 i:61.202 r:46
 - Job Status PushSlave for dist0113 conn=true job=4/894891568 bc=0 Last:Wed Aug 26 20:31:30 UTC 2015 avg: 17.405 i:55.055 r:49
 - Job Status PushSlave for dist0113 conn=true job=3/973411764 bc=0 Last:Wed Aug 26 20:30:59 UTC 2015 avg: 16.770 i:154.327 r:4
 - Job Status PushSlave for dist0113 conn=true job=3/973411764 bc=0 Last:Wed Aug 26 20:31:16 UTC 2015 avg: 17.839 i:198.665 r:47
 - Job Status PushSlave for dist0113 conn=true job=5/118613932 bc=0 Last:Wed Aug 26 20:31:03 UTC 2015 avg: 18.609 i:61.224 r:46
 - Job Status PushSlave for dist0113 conn=true job=4/1297882352 bc=0 Last:Wed Aug 26 20:30:16 UTC 2015 avg: 16.929 i:138.677 r:46
 - Job Status PushSlave for dist0113 conn=true job=1/324470588 bc=0 Last:Wed Aug 26 20:32:42 UTC 2015 avg: 19.684 i:26.701 r:47
 - Job Status PushSlave for dist0113 conn=true job=7/118668676 bc=0 Last:Wed Aug 26 20:31:03 UTC 2015 avg: 17.196 i:169.819 r:47
 - Job Status PushSlave for dist0113 conn=true job=7/118671460 bc=0 Last:Wed Aug 26 20:30:27 UTC 2015 avg: 17.963 i:150.665 r:44
 - Job Status DestMonitor push@pgemgr0112 Wed Aug 26 20:33:35 UTC 2015 subs=1 m:664 :: in phase FTPS Link sending file VM050_npp_d20150825_1171168_e1713142_b19824_c20150825180124880981_noaa_ops.h5 got Read timed out
 - Job Status DestMonitor adatest@pgemgr0112 Wed Aug 26 20:33:23 UTC 2015 subs=1 m:0 unverified (paused?):
 - Job Status DestMonitor rftptest@dist0113 Wed Aug 26 20:33:38 UTC 2015 subs=1 m:304 ::
 - Job Status DestMonitor gravite@10.8.255.190 Wed Aug 26 20:33:22 UTC 2015 subs=1 m:0 unverified (paused?):
 - Job Status DestMonitor push@dist0112 Wed Aug 26 20:33:35 UTC 2015 subs=1 m:897 :: in phase FTPS Link sending file GDNBO_npp_d20150826_10928504_e0930146_b19834_c20150826154559738120_noaa_ops.h5 got Read timed out
- Job Status - <http://pge01test.gravite.gov:8677>
 - Job Status vstfpd Monitor - /var/log/vstfpd.log [1127157] avg: 0.024 i:0.014 r:5812

Other

- Pull Server Exit status: -1, Wed Aug 26 18:00:05 UTC 2015
- IDPS Delivery Check <http://ingest01test.gravite.gov:8679> up:



Ingest and Orbit Statistics



- Recent tests show, at times GRAVITE test system ingested files at 828,000 files/day and volume at 14.2 TB/day

Orbit:

Platform:

Domain:

List:

Jump To:

NPP:ops 19826 - 19840: 1555 cells

- Max Ingested Orbit, CLASS_NPP: 19837
- Max Ingested Orbit, IDPS_NPP: 19840

Sub-Product	19826	19827	19828	19829	19830	19831	19832	19833	19834	19835	19836
SPACECRAFT-DIARY-RDR	306	306	304	306	305	306	305	306	308	306	305
SPACECRAFT-TELEMETRY-RDR	11	11	11	11	11	11	11	11	12	11	11
ATMS-DIAGNOSTIC-RDR	-	-	-	-	-	4	-	-	-	-	-
ATMS-DUMP-RDR	-	-	-	-	-	-	-	-	-	-	-
ATMS-DWELL-RDR	10	11	10	10	10	11	10	10	12	10	10
ATMS-SCIENCE-RDR	194	192	191	192	192	193	192	191	197	192	192
ATMS-TELEMETRY-RDR	191	190	190	191	190	190	191	190	190	191	190
ATMS-SDR	190	190	191	190	190	190	190	190	191	190	190
ATMS-SDR-GEO	190	190	191	190	190	190	190	190	191	190	190
ATMS-TDR	190	190	191	190	190	190	190	190	191	190	190
CRIS-DIAGNOSTIC-RDR	-	-	-	-	-	-	-	-	-	-	-
CRIS-DUMP-RDR	-	-	-	-	-	-	-	-	-	-	-
CRIS-HSKDWELL-RDR	10	11	10	10	10	10	10	10	12	10	10
CRIS-IMDWELL-RDR	10	11	10	10	10	10	10	10	12	10	10
CRIS-SSMDWELL-RDR	10	11	10	10	10	10	10	10	12	10	10
CRIS-SCIENCE-RDR	194	192	191	192	192	193	192	192	198	192	192
CRIS-TELEMETRY-RDR	190	190	191	190	190	191	190	190	192	190	190
CrIS-SDR	190	190	191	190	190	191	190	190	191	190	190
CrIS-SDR-GEO	190	190	191	190	190	191	190	190	191	190	190
OMPS-DUMP-RDR	-	-	-	-	-	-	-	-	-	-	-
OMPS-LPDIAGCAL-RDR	18	-	43	18	18	18	18	19	-	44	-
OMPS-NPDIAGCAL-RDR	17	31	-	17	17	17	17	17	-	-	-
OMPS-TCDIAGCAL-RDR	17	30	-	17	17	17	17	17	-	-	-
OMPS-LPCALIBRATION-RDR	-	-	-	-	-	-	-	-	-	2	-
OMPS-NPCALIBRATION-RDR	-	-	-	-	-	-	-	-	-	-	-
OMPS-TGCALIBRATION-RDR	-	-	-	-	-	-	-	-	-	-	-
OMPS-LPDIAGEXPONE-RDR	-	-	-	-	-	-	-	-	-	-	-



Data Quality Tools



GRAVITE Gap Minder Trending Product Quality DQN Reporter ICVS

Home DQA Settings Help Log out

Last Updated @ 2015-07-10 19:26:08

Domain: ops
Mission: NPP
Instrument: VIIRS
Product: GEO
SubProduct: [dropdown]

Start: 07/09/2015 16:00
End: 07/10/2015 16:00

Filter

Domain	Mission	Instrument	Type	Sub-Type	Gaps	show
ops	NPP	VIIRS	GEO	VIIRS-CLD-AGG-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-IMG-GEO-TC	1	show
ops	NPP	VIIRS	GEO	VIIRS-MOD-GEO-TC	1	show
ops	NPP	VIIRS	GEO	VIIRS-IMG-GTM-EDR-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-Aeros-EDR-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-MOD-GTM-EDR-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-NCC-EDR-GEO	3	show
ops	NPP	VIIRS	GEO	VIIRS-MOD-UNAGG-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-MOD-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-NHF-EDR-GEO	1	show
ops	NPP	VIIRS	GEO	VIIRS-DNB-GEO	2	show
ops	NPP	VIIRS	GEO	VIIRS-IMG-GEO	1	show

© 2013-2015 JPSS GRAVITE 4.0.1

GRAVITE Gap Minder Trending Product Quality DQN Reporter ICVS

Home DQA Settings Help Log out

Last Updated @ 2015-06-10 14:54:29

Select:
Start: 06/03/2015 14:54
End: 06/10/2015 14:54
Domain: ops
Mission: NPP
Instrument: ATMS
Product: SDR
SubProduct: ATMS-SDR
Parameters: [dropdown]

Updates Add Plot

Chart

Trend Data by Parameter - SATMS coldNedt

© 2013-2015 JPSS GRAVITE 4.0

GRAVITE Gap Minder Trending Product Quality DQN Reporter ICVS

Home DQA Settings Help Log out

Last Updated @ 2015-06-10 16:35:28

Orbit: [14 Orbits Back] [7 Orbits Back] [1 Orbit Back] [Reset Orbit] [1 Orbit Forward] [7 Orbits Forward] [14 Orbits Forward]

Platform: NPP
Domain: ops
Jump To: 18730

Sub-Product	18730	18731	18732	18733	18734	18735	18736	18737	18738	18739	18740	18741	18742	18743	18744
NPP:ops:ATMS:ATMS-SDR	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0
NPP:ops:CrIS:CrIS-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:OMPS-TC:OMPS-TC-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-DNB-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I1-IMG-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I1-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I4-IMG-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I4-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I5-IMG-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-I5-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-M1-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-M12-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-M1ST-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-M8-SDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NPP:ops:VIIRS:VIIRS-NCC-EDR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

© 2013-2015 JPSS GRAVITE 4.0

DQA Offline Tools

- Gap Minder
- Trend Data Collector (TDC)
- Product File Quality Analyzer (PFQA)
- Sensor Quality Analysis Product Generations Executables (PGEs)
- Number Extractor (N-Extract)
- Integrated Calibration/Validation System (ICVS) Lite
- Data Quality Notification (DQN) Reporter



PGE Control



Looping Controls

Start	Stop	Status	PGE
START	STOP	■	ALL
START	STOP	■	AeronetDsMatchPpV3
START	STOP	■	AeronetMatchPpV2
START	STOP	■	AtmsTdrQfNextractV1
START	STOP	■	CrisDailyDqfAPlotV1
START	STOP	■	CrisDailyDqfBPlotV1
START	STOP	■	CrisSdrGeoQfNextractV1
START	STOP	■	OmpsAllRdrNpEarth24V1
START	STOP	■	OmpsAllRdrNpEarthV1
START	STOP	■	OmpsAllRdrTcEarth24V1
START	STOP	■	OmpsAllRdrTcEarthV1
START	STOP	■	OmpsCompareEarthSdrNpTcV1
START	STOP	■	OmpsSdrTcRadFlagNextractV1
START	STOP	■	OmpsStatisticsEarthSdrNpV1
START	STOP	■	OmpsStatisticsEarthSdrTcOzoneV2
START	STOP	■	OmpsStatisticsEarthSdrTcReflectivityV1
START	STOP	■	ViirsAeronetDsMatchV3
START	STOP	■	ViirsAeronetMatchV4
START	STOP	■	ViirsCloudApuV2
START	STOP	■	ViirsImgGeoMatchV1
START	STOP	■	ViirsIstMatchV1
START	STOP	■	ViirsLrvV1
START	STOP	■	ViirsLstMatchV1
START	STOP	■	ViirsSdrM7ReflectanceQfNextractV1
START	STOP	■	ViirsSurfRefIV4
START	STOP	■	ViirsTelScanEvalDailyV1
START	STOP	■	ViirsTelScanEvalMonthlyV1
START	STOP	■	ViirsTelScanEvalWeeklyV1
START	STOP	■	ViirsTleQualityFlagV1
START	STOP	■	ViirsVIQcV1
START	STOP	■	ViirsVITimelineV1

Terminator Controls

Stop	Task	ID	Status
STOP	Gravite Looping Planner-global-conditions-eval	urn:d56f10a4-db2a-4eae-a747-609c09d0a09c	PAUSED
STOP	ViirsImgGeoMatchV1	urn:a519cd72-f84d-4297-b729-021fdc3dfdb5	STARTED



Summary



- GRAVITE is currently in operations and has been successfully supporting SNPP since its launch in Oct 2011
- GRAVITE has evolved as a system with increased performance
 - Robust, stable, reliable, maintainable, scalable, and secure
 - Supports development, test, and production strings
 - Uses open source software
 - Compliant with NASA and NOAA standards



GRAVITE



Backup



Help



- New GRAVITE account request
 - Erica Handleman: erica.handleman@nasa.gov
 - Please cc operations mailing list: OPS-GRAVITE-DPES-JPSS@lists.nasa.gov
- Please contact GRAVITE
 - Support at gravite.service@noaa.gov for system access issues
 - Operators at ops-gravite-dpes-jpss@lists.nasa.gov for all other issues
- GRAVITE Web Interface:
 - <https://gravite.jpss.noaa.gov>



Documentation



- The following documents are available at:
https://gip.jpss.noaa.gov/projects/gip_user/dmsf
 - GV4.0 Training Slides (GV4.0 Training Slides.pdf)
 - GRAVITE User Guide (GRAVITE User Guide.pdf)
 - GRAVITE DQE Guide (GRAVITE DQE Guide.pdf)
 - PGE Integration Form (GRAVITE PGE Integration Form.pdf)
 - PGE Details document (PGE details.xlsx)
 - DQA Configuration Details (dqConfig.html)
 - Documentation for the DQA Configuration (DQA Configuration Report.docx)
- Documents on individual Sensor Quality tools are available in:
https://gip.jpss.noaa.gov/projects/jpssdpa_external/repository
under Algorithm Support Function (ASF), Cal/Val and Data Quality Monitoring folders



IPS High Level Functions

