

EOS Science Networks Performance Report

This is a summary of EOS QA SCF performance testing for the 3rd quarter of 2006 -- comparing the performance against the requirements from BAH, including Terra, TRMM, and QuikScat, Aqua, Aura, and ICESat requirements

Up to date graphical results can be found on the EOS network performance web site: http://ensight.eos.nasa.gov/active_net_measure.html. Or click on any of the individual site links below.

Highlights:

- NISN SIP was upgraded to new backbone on July 22 '06.
 - Performance improvements noted – mostly from LaRC
 - Testing was then returned – further performance improvements resulted.
- Increased congestion from ICESAT at GSFC reduced performance
 - But no change to the same destinations from other GSFC nodes
- Otherwise, very stable performance.
- Discontinued testing and reporting to:
 - SAGE II nodes – SAGE III Mission was completed in March 2006
 - the University of Maryland, as of the end of May, due to campus security concerns.
 - NOAA NESDIS, due to reconfiguration
- The Feb '06 requirements are used as the basis for the ratings

Ratings:

Rating Categories:

Excellent : median of daily worst cases > 3 x requirement

Good : median of daily worst cases > requirement

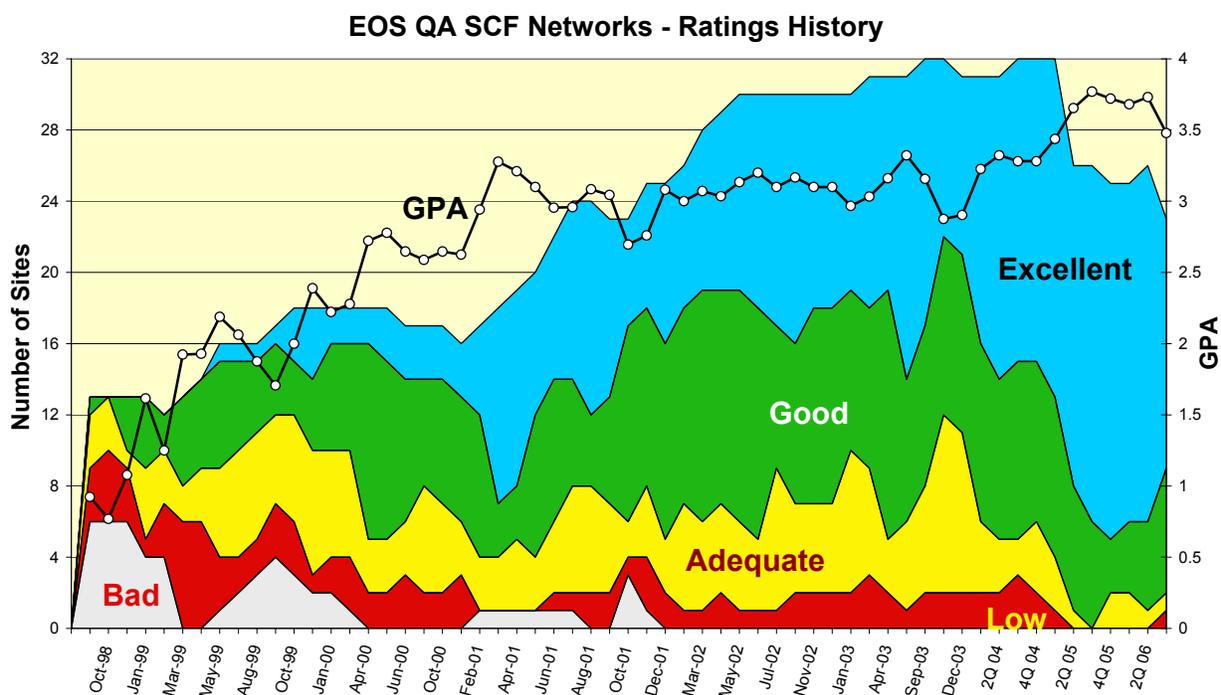
Adequate : median of daily worst cases < requirement
and
median of daily medians > requirement

Low : median of daily medians < requirement.

Bad : median of daily medians < 1/3 of the requirement.

Ratings Changes:**Upgrades: ↑**GSFC-GES DAAC → Miami: Adequate → **Good**GSFC-GES DAAC → Wisconsin: Good → **Excellent****Downgrades: ↓**GSFC-ICESAT → UCSD: Excellent → **Good**GSFC-ICESAT → Ohio State: Excellent → **Good**GSFC-ICESAT → Washington: Good → **Adequate**LaRC-ASDC DAAC → JRC (Italy): Excellent → **Good**GSFC → Oxford: Excellent → **Low****Ratings History:**

The chart below shows the number of sites in each classification since the testing started in 1998. Note that these ratings do NOT relate to absolute performance -- they are relative to the EOS requirements. The GPA is calculated based on Excellent: 4, Good: 3, Adequate: 2, Low: 1, Bad: 0



Note that there are fewer sites included in this chart since 1Q'05 due to:

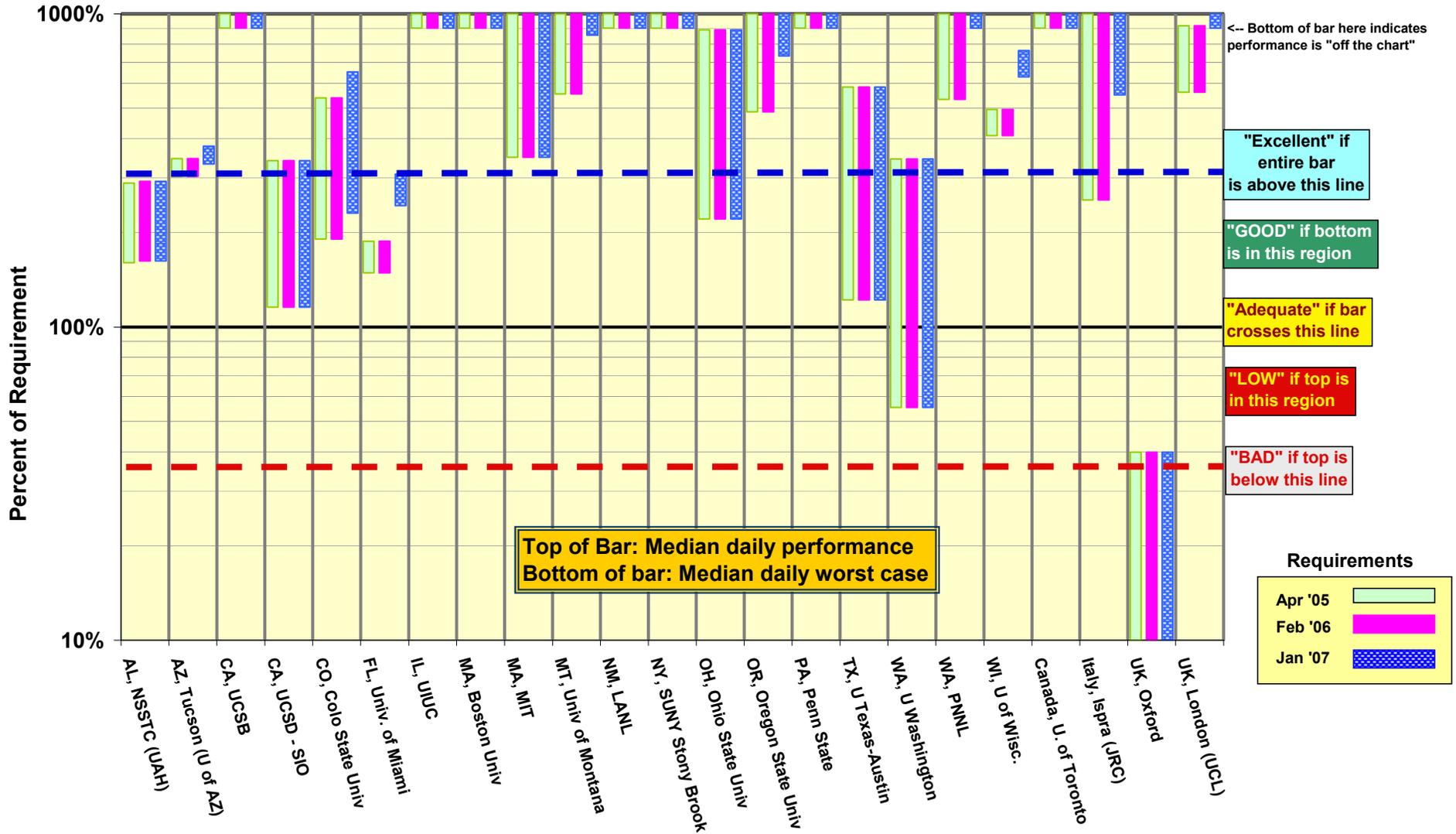
- 3Q06: Discontinuation of tests to NOAA and UMD
- 2Q06: Discontinuation of tests to SAGE III Nodes
- 2Q05: moving the data for SIPS sites to the “EOS Production sites” performance report (NCAR, KNMI, RSS. GSFC → JPL, NSSTC → NSIDC, and GSFC-SAFS → SAGE III MOC).

EOS QA SCF Sites: Network Requirements vs. Measured Performance

3rd Quarter 2006		Requirements (mbps)			Testing							
Destination	Team (s)	Previous:	Current:	Future:	Source Node	Median mbps	Median Daily Worst	Rating re Current Requirements		Rating re	Route Tested	
		Apr-05	Feb-06	Jan-07				3 Q 2006	1H05	Jan-07		
AL, NSSTC (UAH)	CERES, AMSR-E	7.1	7.0	7.0	LaTIS	20.5	11.4	GOOD	G	GOOD	NISN + FDDI	
AZ, Tucson (U of AZ)	MODIS	2.8	2.8	2.6	EROS LPDAAC	9.7	8.5	Excellent	E	Excellent	Abilene via vBNS+ / DC	
CA, UCSB	MODIS	3.1	3.1	2.2	GDAAC	82.7	48.5	Excellent	E	Excellent	Abilene via MAX	
CA, UCSD - SIO	ICESAT, CERES	7.1	7.1	7.1	GSFC-ICESAT	24.1	8.2	GOOD	E	GOOD	Abilene via NISN / MAX	
CO, Colo State Univ	CERES	2.1	2.1	1.8	LaTIS	11.6	4.1	GOOD	G	GOOD	NISN -> Abilene via Chicago	
FL, Univ. of Miami	MODIS, MISR	18.8	18.8	11.5	GDAAC	35.4	28.1	GOOD	A	GOOD	Abilene via MAX	
IL, UIUC	MISR	1.1	1.1	0.6	LaRC DAAC	75.5	55.0	Excellent	E	Excellent	Abilene via NISN / MAX	
MA, Boston Univ	MODIS, MISR	3.0	3.0	2.0	EROS LPDAAC	86.2	61.9	Excellent	E	Excellent	Abilene via vBNS+ / DC	
MA, MIT	ICESAT	7.0	7.0	7.0	GSFC-ICESAT	74.7	24.4	Excellent	E	Excellent	Abilene via NISN / MAX	
MT, Univ of Montana	MODIS	0.8	0.8	0.5	EROS LPDAAC	16.5	4.5	Excellent	E	Excellent	vBNS+ / DC / Abilene	
NM, LANL	MISR	1.0	1.0	0.5	LaRC DAAC	72.2	48.0	Excellent	E	Excellent	NISN -> ESNet via CA	
NY, SUNY Stony Brook	CERES	0.6	0.6	0.5	LaTIS	42.1	25.6	Excellent	E	Excellent	NISN / MAX / Abilene / NYSERnet	
OH, Ohio State Univ	ICESAT	6.3	6.3	6.3	GSFC-ICESAT	56.0	14.0	GOOD	E	GOOD	Abilene via NISN / MAX	
OR, Oregon State Univ	CERES, MODIS	7.6	7.6	5.0	LaTIS	91.0	36.8	Excellent	E	Excellent	Abilene via NISN / MAX	
PA, Penn State	MISR	2.6	2.6	1.9	LaRC DAAC	88.2	50.7	Excellent	E	Excellent	Abilene via NISN / MAX	
TX, U Texas-Austin	ICESAT	11.1	11.1	11.1	GSFC-ICESAT	64.6	13.5	GOOD	G	GOOD	Abilene via NISN / MAX	
WA, U Washington	ICESAT	11.7	11.7	11.7	GSFC-ICESAT	40.4	6.5	Adequate	G	Adequate	Abilene via NISN / MAX	
WA, PNNL	MISR	1.4	1.4	0.7	LaRC PTH	68.3	7.7	Excellent	E	Excellent	NISN -> ESNet via CA	
WI, U of Wisc.	MODIS, CERES, AIRS	16.5	16.5	10.7	GDAAC	81.5	67.2	Excellent	G	Excellent	Abilene via MAX	
Canada, U. of Toronto	MOPITT	0.6	0.6	0.1	LaRC DAAC	40.4	23.1	Excellent	E	Excellent	NISN-CA*net4	
Italy, Ispra (JRC)	MISR	0.5	0.5	0.2	LaRC DAAC	5.5	1.3	GOOD	E	Excellent	NISN-UUNET-Milan	
UK, Oxford	HIRDLS	0.5	0.5	0.5	GSFC-MAX	0.20	0.03	LOW	E	LOW	Abilene->Geant (NY) -> JAnet	
UK, London (UCL)	MISR, MODIS	1.0	1.0	0.5	LaRC DAAC	9.5	5.8	Excellent	E	Excellent	NISN - MAX - Abilene->Geant (NY) -> JAnet	
*Rating Criteria:								Rating	Current	Last	Future:	
									Feb-06	Report	Jan-07	
Excellent	Median of Daily worst hours >= 3 * Requirement							Excellent	14	17	15	
GOOD	Median of Daily worst hours >= Requirement							GOOD	7	5	6	
Adequate	Median of Daily worst hours < Requirement <= Median of Daily Medians							Adequate	1	1	1	
LOW	Requirement > Median of Daily Medians							LOW	1	0	1	
BAD	Requirement > 3 * Median of Daily Medians							BAD	0	0	0	
								Total	23	23	23	
								GPA	3.48	3.70	3.52	

EOS QA SCF Sites

Daily Median and Worst Performance as a percent of Requirements



Details on individual sites:

Each site listed below is the DESTINATION for all the results reported in that section. The first test listed is the one on which the rating is based -- it is from the source most relevant to the driving requirement. Other tests are also listed. The three values listed are derived from [nominally] 24 tests per day. For each day, a daily best, worst, and median is obtained. The values shown below are the medians of those values over the test period.

1) AL, NSSTC (UAH) (aka GHCC)

Teams: CERES, AMSR

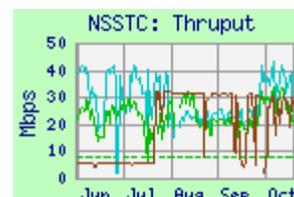
Web Page: <http://ensight.eos.nasa.gov/Missions/terra/NSSTC.shtml>

Rating: Continued **Good**

Domain: nsstc.uah.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC LaTIS	28.7	20.5	11.4	NISN SIP
GSFC-CNE	25.8	23.6	11.8	NISN SIP



Requirements:

Source Node	Date	Mbps	Rating
LaRC LaTIS	Apr '05	7.1	Good
LaRC LaTIS	Feb '06	7.0	Good

Comments: A few changes in thruput observed this period, due to NISN WANR and other NSIN reconfigs, but average performance is about the same as the previous period.

Note: Testing between **NSSTC** and **NSIDC** for AMSR (AQUA) is included in the "Production Sites" report.

2) AZ, Tucson (U of AZ):

Teams: MODIS

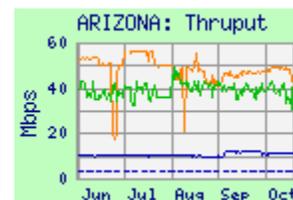
Web Page: <http://ensight.eos.nasa.gov/Missions/terra/ARIZONA.shtml>

Rating: Continued **Excellent**

Domain: arizona.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	11.4	9.7	8.5	Abilene via vBNS+ / DC
GSFC	49.5	46.7	37.9	Abilene via MAX
LaRC	47.8	39.4	26.7	Abilene via MAX



Requirements:

Source Node	FY	Mbps	Rating
EROS LPDAAC	'03 - '06	2.8	Excellent

Comments: The ratings are based on the MODIS flow from EROS -- performance dropped from a median of 25 mbps at the beginning of April, but this is still sufficient to keep the rating "Excellent". Testing from GSFC and LaRC was stable.

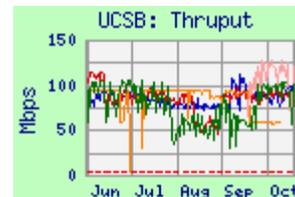
3) CA, UCSB :

Ratings: GSFC: Continued **Excellent**
 EROS: Continued **Excellent**

Teams: MODIS
 Domain: ucsb.edu
 Web page: <http://ensight.eos.nasa.gov/Missions/terra/UCSB.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	109.9	82.7	48.5	Abilene via NISN / MAX
EROS-LPDAAC	92.9	79.2	59.1	Abilene via vBNS+ / DC



Requirements:

Source Node	FY	mbps	Rating
GSFC-DAAC	'04 - '06	3.1	Excellent
EROS-LPDAAC	'04 - '06	2.2	Excellent

Comments: The requirements are split between EROS and GSFC. Performance from both GSFC and EROS has been stable since April '05. The rating remains "Excellent" from both sites.

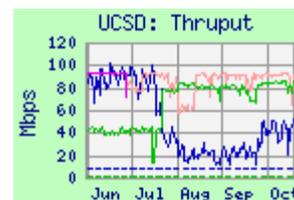
4) CA, UCSD (SIO):

Ratings: ICESAT: ↓ Excellent → **Good**
 LaTIS: Continued **Excellent**

Teams: CERES, ICESAT
 Domain: ucsd.edu
 Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UCSD.shtml>

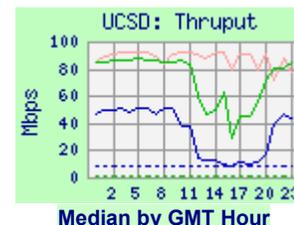
Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	36.2	24.1	8.2	Abilene via NISN / MAX
LaTIS	83.4	77.3	36.6	Abilene via NISN / MAX
GSFC-PTH	91.2	89.0	35.9	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC-ICESAT	'05 – '06	7.0	Good
LaTIS	'02 - '06	0.26	Excellent



Comments: The ICESAT source host at GSFC developed increased congestion in July, which reduced performance to all destinations (was similar to GSFC-PTH until then). The GSFC rating is based on this testing: the daily worst from ICESAT is now only slightly above the requirement (was 23 mbps last period), so the rating drops to "Good". Performance from GSFC-PTH was very stable, and would rate "Excellent".

Performance from LaTIS improved (from a median of 40 mbps previously) with the NISN WANR upgrade in July '06. The LaTIS rating continues as "Excellent".

5) CO, Colo State Univ.:

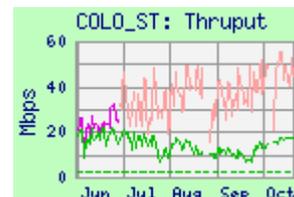
Teams: CERES

Web page: http://ensight.eos.nasa.gov/Missions/terra/COLO_ST.shtmlRating: Continued **Good**

Domain: colostate.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	16.9	11.6	4.1	Abilene via NISN / MAX
GSFC	60.4	35.7	11.0	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '06	2.15	Good

Comments: Performance dropped off a bit from LaTIS, but improved from GSFC with the change in GSFC test host and retuning in July – had been averaging 28 mbps from GSFC. Performance from both sources is noisy, but the daily worst from LaTIS remained between the '05 requirement and 3 x the requirement, so the rating stayed “Good”.

6) FL, Univ. of Miami:

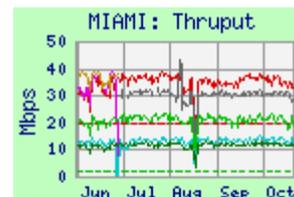
Teams: MODIS, MISR

Domain: rsmas.miami.edu

Web page: <http://ensight.eos.nasa.gov/Missions/terra/MIAMI.shtml>Rating: GSFC: ↑ Adequate → **Good**LaRC: Continued **Excellent**

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	40.8	35.4	28.1	Abilene via MAX
GSFC-MAX	34.9	30.1	26.2	Abilene via MAX
LaRC DAAC	25.8	21.0	13.5	Abilene via NISN / MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '06	18.8	Good
LaRC DAAC	'04 - '06	1.1	Excellent

Comments: Thruput from all sites increased slightly this period – but had dropped dramatically in Aug '05 (Medians were 133 mbps from GSFC and 38 mbps from LaRC at that time). In this period the daily worst value from GDAAC increased back above the requirement, so the rating improves to “Good” from GSFC. It remains “Excellent” from LaRC, due to the much lower requirement.

Along with the thruput decrease in Aug '05, an increase in packet loss was observed at the same time. Since this loss is observed from all sources, the problem appears to be in or near Miami.

7) IL, UIUC:

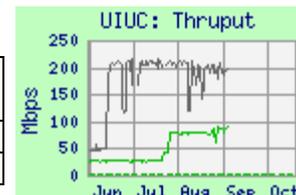
Teams: MISR

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UIUC.shtml>Rating: Continued **Excellent**

Domain: uiuc.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	76.5	75.5	55.0	Abilene via NISN / Chicago
GSFC	221.5	202.0	59.0	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'04 - '06	1.13	Excellent

Comments: Performance from GSFC improved with retuning in June, and from Larc with the NISN WANR upgrade in July. The rating remains "Excellent". **But note that the UIUC test host has been down since early September, for reconfiguration.**

8) MA, Boston Univ:

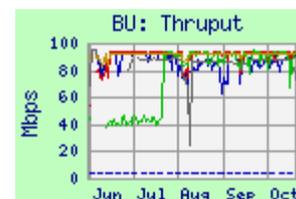
Teams: MODIS, MISR

Domain: bu.edu

Ratings: EROS: Continued **Excellent**LaRC: Continued **Excellent**Web Page: <http://ensight.eos.nasa.gov/Missions/terra/BU.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS DAAC	93.0	86.2	61.9	Abilene via vBNS+ / DC
GSFC	93.4	92.8	69.3	Abilene via MAX
LaRC DAAC	92.7	88.9	46.9	Abilene via NISN / MAX



Requirements:

Source Node	FY	mbps	Rating
EROS DAAC	'04 - '06	3.0	Excellent
LaRC DAAC	'04 - '06	1.2	Excellent

Comments: Performance from GSFC and EROS was very stable this period. Performance from LaRC improved with the NISN WANR upgrade in July. The rating from both sources remains "Excellent".

9) MA, MIT:

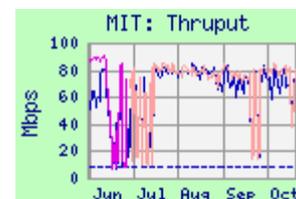
Teams: ICESAT

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/MIT.shtml>Rating: Continued **Excellent**

Domain: mit.edu

Test Results:

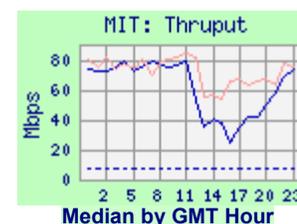
Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	84.8	74.7	24.4	Abilene via NISN / MAX
GSFC-PTH	85.8	77.2	40.2	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC	'04, '05 – '06	6.7, 7.0	Excellent

Comments: Performance from GSFC ICESAT to MIT is still subject to diurnal congestion inside GSFC, about as much as previously. The daily worst remains above 3 x the requirement, so the rating remains "Excellent". From GSFC-PTH there is less congestion apparent.



10) MD, NOAA-NESDIS (Camp Springs)

Rating: Testing Discontinued

Teams: CERES, AMSR-E

Domain: nesdis.noaa.gov

Web Page: http://ensight.eos.nasa.gov/Missions/terra/NOAA_Camp_Springs.shtml

Comments: Testing discontinued in early July due to reconfiguration at NOAA. NOAA may provide a new "CLASS" test host at some point in the future

11) MD, Univ. of Maryland:

Rating: Testing Discontinued

Teams: MODIS

Domain: umd.edu

Web Page: http://ensight.eos.nasa.gov/Missions/terra/UMD_SCF.shtml

Comments: At the end of May 2006, this testing was discontinued, due to security issues on the UMD campus.

12) MT, Univ of Montana:Rating: Continued **Excellent**

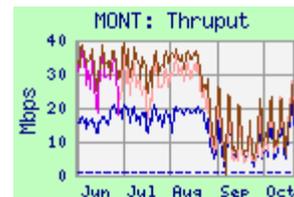
Teams: MODIS

Domain: nts.g.umd.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/MONT.shtml>

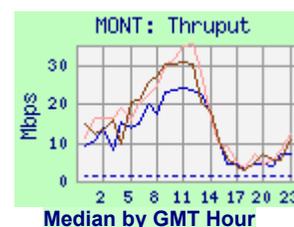
Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
EROS LPDAAC	22.5	16.5	4.5	VBNS+ / DC / Abilene
GSFC	38.1	25.5	8.5	MAX / Abilene
NSIDC	39.7	29.8	9.4	CU / FRGP / Abilene



Requirements:

Source Node	FY	mbps	Rating
EROS LPDAAC	'04 - '06	0.82	Excellent



Comments: Stable performance apparently until the school term resumed at the end of August, then a strong diurnal cycle from all sources. With the low requirement, however, the rating continues as "Excellent".

13) NM, LANL:Rating: Continued **Excellent**

Teams: MISR

Domain: lanl.gov

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/LANL.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	74.6	72.2	48.0	NISN SIP / Chicago / ESnet
GSFC-PTH	87.1	82.9	37.5	MAX / ESnet



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	1.03	Excellent

Comments: Performance improved from LaRC with the NISN WANR upgrade in July, and from GSFC with a new test host and tuning. The rating remains "Excellent"

14) NY, SUNY-SB:

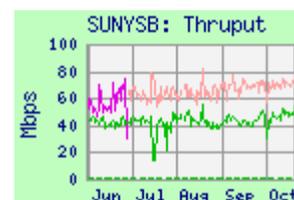
Teams: CERES, MODIS

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/SUNYSB.shtml>Rating: Continued **Excellent**

Domain: sunysb.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	54.2	42.1	25.6	NISN / MAX / Abilene / NYSENet
GSFC	80.4	64.6	35.8	MAX / Abilene / NYSENet



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'02-'06	0.57	Excellent

Comments: Performance from LaTIS increased slightly with the NISN WANR upgrade in July; performance from GSFC was stable. With the low requirement, the rating remains "Excellent".

15) OH, Ohio State Univ:

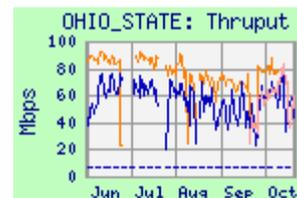
Teams: ICESAT

Web Page: http://ensight.eos.nasa.gov/Missions/icesat/OHIO_STATE.shtmlRating: ↓ Excellent → **Good**

Domain: ohio-state.edu

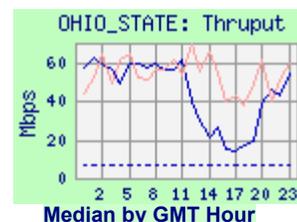
Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	79.8	56.0	14.0	Abilene via NISN / MAX
GSFC-MAX	91.3	73.0	49.9	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC	'04, '05-'06	6.0, 6.3	Good



Comments: The congestion at ICESAT is quite apparent. The daily worst from ICESAT is no longer more than 3 x the requirement, so the rating drops to "Good". Without this congestion, the daily worst from GSFC-MAX is more than 3 x as high – would be rated "Excellent".

16) OR, Oregon State Univ:

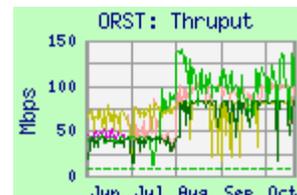
Teams: CERES, MODIS

Domain: oce.orst.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/ORST.shtml>Ratings: LaTIS: Continued **Excellent**GSFC: Continued **Excellent**

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaTIS	119.5	91.0	36.8	Abilene via NISN / Chicago
JPL	81.2	78.6	32.4	Abilene via CalRen
GSFC	107.4	83.8	19.5	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaTIS	'04 - '06	7.5	Excellent
GDAAC	'02 - '06	0.25	Excellent

Comments: Performance from all sources improved at the end of July, initially from LaTIS with the NISN WANR upgrade in July, then with retuning from GSFC and LaTIS source nodes. The high ratio of Daily best to Worst from all sources indicates some congestion near Oregon, but the rating remains "Excellent".

17) PA: Penn State Univ:

Teams: MISR

Web Page: http://ensight.eos.nasa.gov/Missions/terra/PENN_STATE.shtmlRating: Continued **Excellent**

Domain: psu.edu

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	91.6	88.2	50.7	Abilene via NISN / MAX
GSFC-PTH	317.0	269.3	114.0	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'03-'06	2.6	Excellent

Comments: Performance from both sources improved at the end of July, initially from LaRC DAAC with the NISN WANR upgrade in July, then with retuning from the GSFC source node. The rating remains "Excellent".

18) TX: Univ. of Texas - Austin:

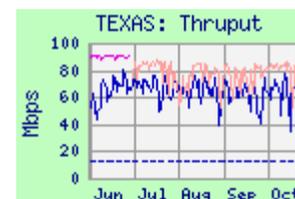
Teams: ICESAT

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/TEXAS.shtml>Rating: Continued **Good**

Domain: utexas.edu

Test Results:

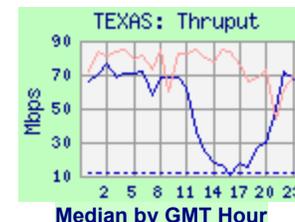
Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	78.2	64.6	13.5	Abilene via NISN / MAX
GSFC-PTH	85.8	78.3	25.0	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC-ICESAT	'03, '05-'06	10.7, 11.1	Good

Comments: Congestion near ICESAT pushed the daily worst thrupt below 3 x the requirement, keeping the rating "Good". There is less congestion from GSFC-PTH, but the rating would be the same.

**19) WA, Univ Washington:**

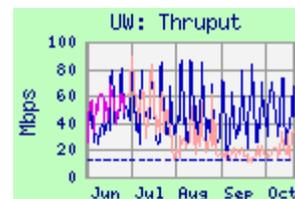
Teams: ICESAT

Web Page: <http://ensight.eos.nasa.gov/Missions/icesat/UW.shtml>Rating: ↓ Good → **Adequate**

Domain: washington.edu

Test Results:

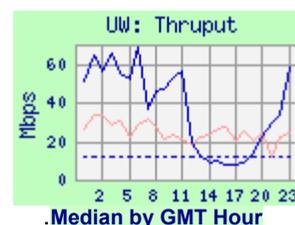
Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-ICESAT	85.9	40.4	6.5	Abilene via NISN/MAX
GSFC-PTH	63.0	22.9	7.2	Abilene via MAX



Requirements:

Source Node	FY	mbps	Rating
GSFC-ICESAT	'04, '05-'06	11.3, 11.7	Adequate

Comments: Like other ICESAT sites, congestion from the ICESAT test node is strong. The daily worst from ICESAT is now below the requirement; dropping the rating to "Adequate". Looks like retuning is needed from GSFC-PTH.



20) WA, PNNL:

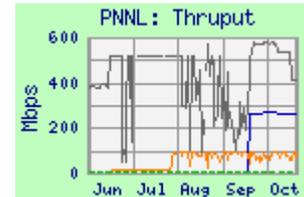
Teams: MISR

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/PNNL.shtml>Ratings: LaRC: **Excellent**

Domain: pnl.gov

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC-PTH	89.9	68.3	7.7	NISN / MAX / ESnet
GSFC-MAX	517.2	509.9	198.6	MAX / ESnet



Requirements:

Source Node	FY	mbps	Rating
LaRC	'04-'06	1.4	Excellent

Comments: Performance from LaRC PTH increased with the NISN WANR upgrade in July. The rating remains "Excellent". Performance from GSFC-MAX is **OUTSTANDING!**

21) WI, Univ. of Wisconsin:

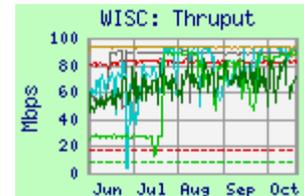
Teams: MODIS, CERES, AIRS

Domain: ssec.wisc.edu

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/WISC.shtml>Ratings: GSFC: ↑ Good → **Excellent**LARC: ↑ Good → **Excellent**

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC-DAAC	86.4	81.5	67.2	MAX / Abilene / Chi / MREN
LaTIS	86.7	74.0	54.5	NISN / Chicago / MREN
GSFC-MAX	89.9	88.1	85.0	MAX / Abilene / Chi / MREN



Requirements:

Source Node	FY	mbps	Rating
GSFC	'04 - '06	16.5	Excellent
LaRC Combined	'04, '05-'06	7.5, 7.9	Excellent

Comments: Performance from LaTIS increased with the NISN WANR upgrade in July. The rating from LaTIS improved to "Excellent". Performance from GDAAC was less noisy; the rating also improved to "Excellent".

22) Russia, CAO (Moscow):

Teams: SAGE III

Rating: Testing discontinued

Domain: mipt.ru

Note: The SAGE III mission was completed in March '06, and the NISN dedicated service was terminated at that time. All testing has been stopped, and will not be included in further reports

23) Canada, Univ of Toronto:Rating: Continued **Excellent**

Team: MOPITT

Domain: utoronto.ca

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/TORONTO.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC → Test Node	26.8	23.8	15.2	NISN / Chicago / CA*net4
GSFC → Test Node	53.9	37.4	11.8	MAX / Abilene / Chicago / CA*net4

Requirements:

Source Node	FY	kbps	Rating
LaRC DAAC	'02 - '06	100	Excellent
GSFC EOC	'02 - '06	512	Excellent



Comments: Flows to the Toronto IST node were switched from the dedicated NISN T1 to CA*net4 in late October '04. Performance from LDAAC (source of QA data) increased with the NISN WANR upgrade in July. Performance from GSFC (source for IST) was stable. The ratings remain "Excellent".

24) Italy, EC - JRC:Rating: ↓ Excellent → **Good**

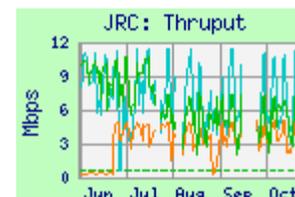
Teams: MISR

Domain: jrc.it

Web Page: <http://ensight.eos.nasa.gov/Missions/terra/JRC.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	7.3	5.5	1.3	NISN / UUnet / Milan
GSFC-NISN	11.2	6.4	1.6	NISN / UUnet / Milan



Requirements:

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '06	0.52	Good

Comments: Performance got noisier from both sources, with the daily worst values dropping about 50% each (The daily medians dropped only about 25%). The daily worst from LaRC is no longer 3 x the requirement, so the rating drops to "Good"

25) UK, London: (UCL)

Rating: Continued **Excellent**

Teams: MODIS, MISR

Domain: ucl.ac.uk

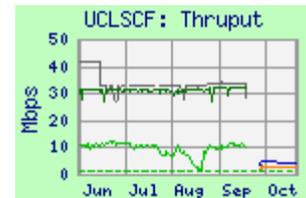
Web Page: <http://ensight.eos.nasa.gov/Missions/terra/UCLSCF.shtml>

Test Results:

Source Node	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
LaRC DAAC	11.9	9.5	5.8	NISN / Sprintlink / JAnet
GSFC MAX	32.8	32.6	30.8	MAX / Abilene / NY / Geant / JAnet

Requirements

Source Node	FY	mbps	Rating
LaRC DAAC	'02 – '06	1.03	Excellent



Comments: Performance from LaRC was mostly stable this period. Thruput remains well above 3 x the requirement, so the rating remains “Excellent”. This test did not benefit from the NISN WANR upgrade since NISN does not have access to Abilene’s International routes. Performance from GSFC is much higher than from LaRC, due to the superior route.

Note that in late September the testing was modified due to a new firewall at UCL, with much lower results.

26) UK, Oxford:

Rating: ↓ Excellent → **Low**

Teams: HIRDLS

Domain: ox.ac.uk

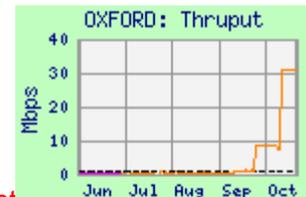
Web Page: <http://ensight.eos.nasa.gov/Missions/aura/OXFORD.shtml>

Test Results:

Source Node	Medians of daily tests (kbps)			Route
	Best	Median	Worst	
GSFC	752	204	25	MAX / Abilene / NY / GEANT / JAnet

Requirements: (IST Only)

Source Node	FY	kbps	Rating
GSFC	'03 – '06	512	Low



Comments: The Oxford test node began having difficulty in August '05, and was down from mid October to early February '06. When it recovered the testing was re-tuned, and it worked well until May. Then it had terrible thruput (and high packet loss) until September (An.Ethernet duplex mismatch at Oxford is suspected). This current thruput drops the rating to “Low” compared to the IST requirement. The problem was fixed in September!

Test Results to other EOS HIRDLS UK Sites: Rutherford Appleton Lab

Web Page: http://ensight.eos.nasa.gov/Missions/aura/UK_RAL.shtml

Source → Dest	Medians of daily tests (mbps)			Route
	Best	Median	Worst	
GSFC → RAL	30.3	26.8	7.1	MAX / Abilene / NY / GEANT / JAnet

Comments: Thruput to RAL remains noisy, but quite good, and about the same as the last report. There is no stated requirement to RAL, so there is not rating.

