

EOS Production Sites Network Performance Report

This is a monthly summary of EOS network performance testing between production sites for July 2006 -- comparing the measured performance against the requirements.

Highlights:

- **Abridged version**

Ratings:

Rating Categories:

Rating	Value	Criteria
Excellent:	4	Total Kbps > Requirement * 3
Good:	3	1.3 * Requirement <= Total Kbps < Requirement * 3
Adequate:	2	:Requirement < Total Kbps < Requirement * 1.3
Almost Adequate:	1.5	Requirement / 1.3 < Total Kbps < Requirement
Low:	1	Requirement / 3 < Total Kbps < Requirement / 1.3
Bad:	0	Total Kbps < Requirement / 3

Where Total Kbps = Integrated Kbps (where available)

Else = User Flow + iperf monthly average

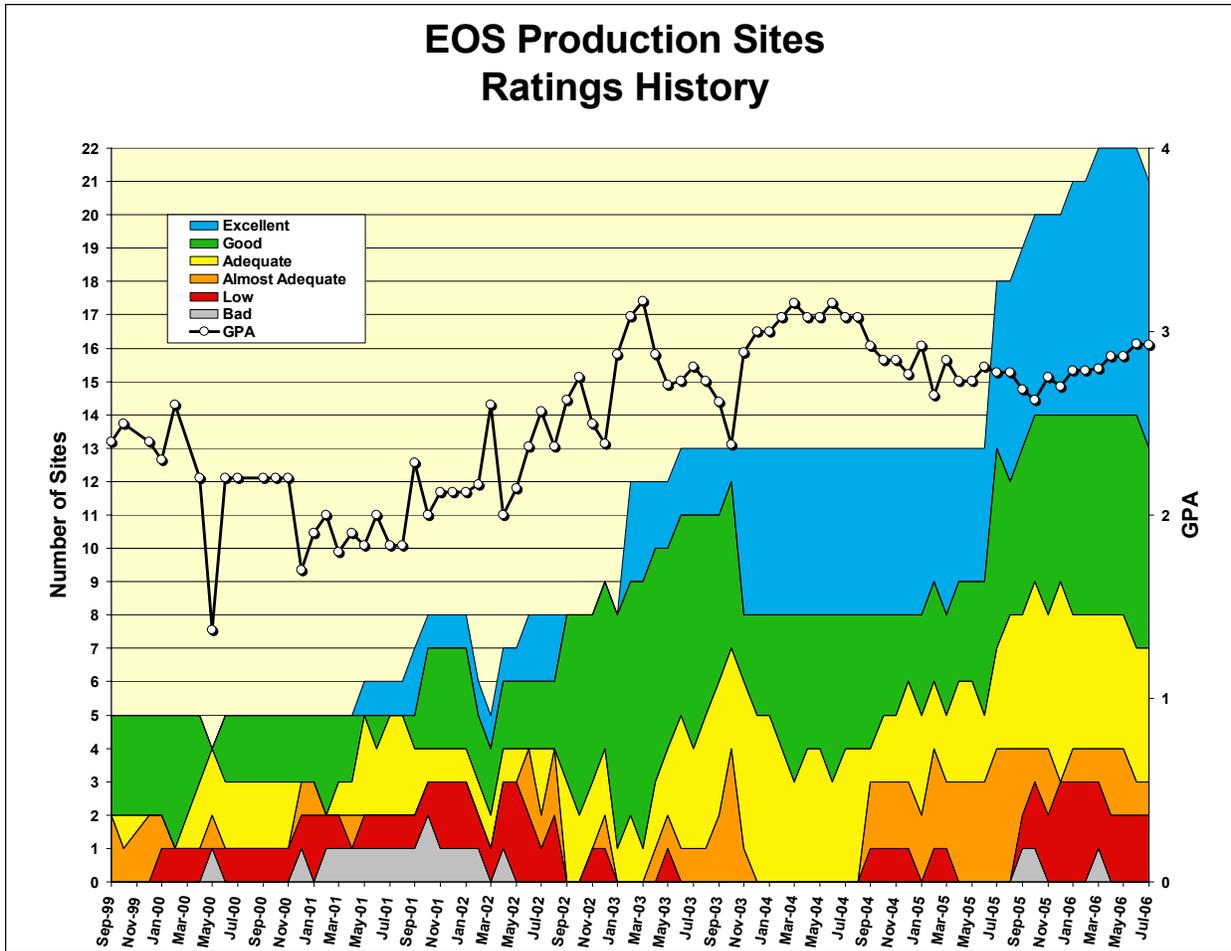
Ratings Changes:

Upgrades: ↑:

GSFC → LDAAC: Almost Adequate → **Good**

Downgrades: ↓:

JPL-PODAAC → GSFC DAAC: Good → **Adequate**

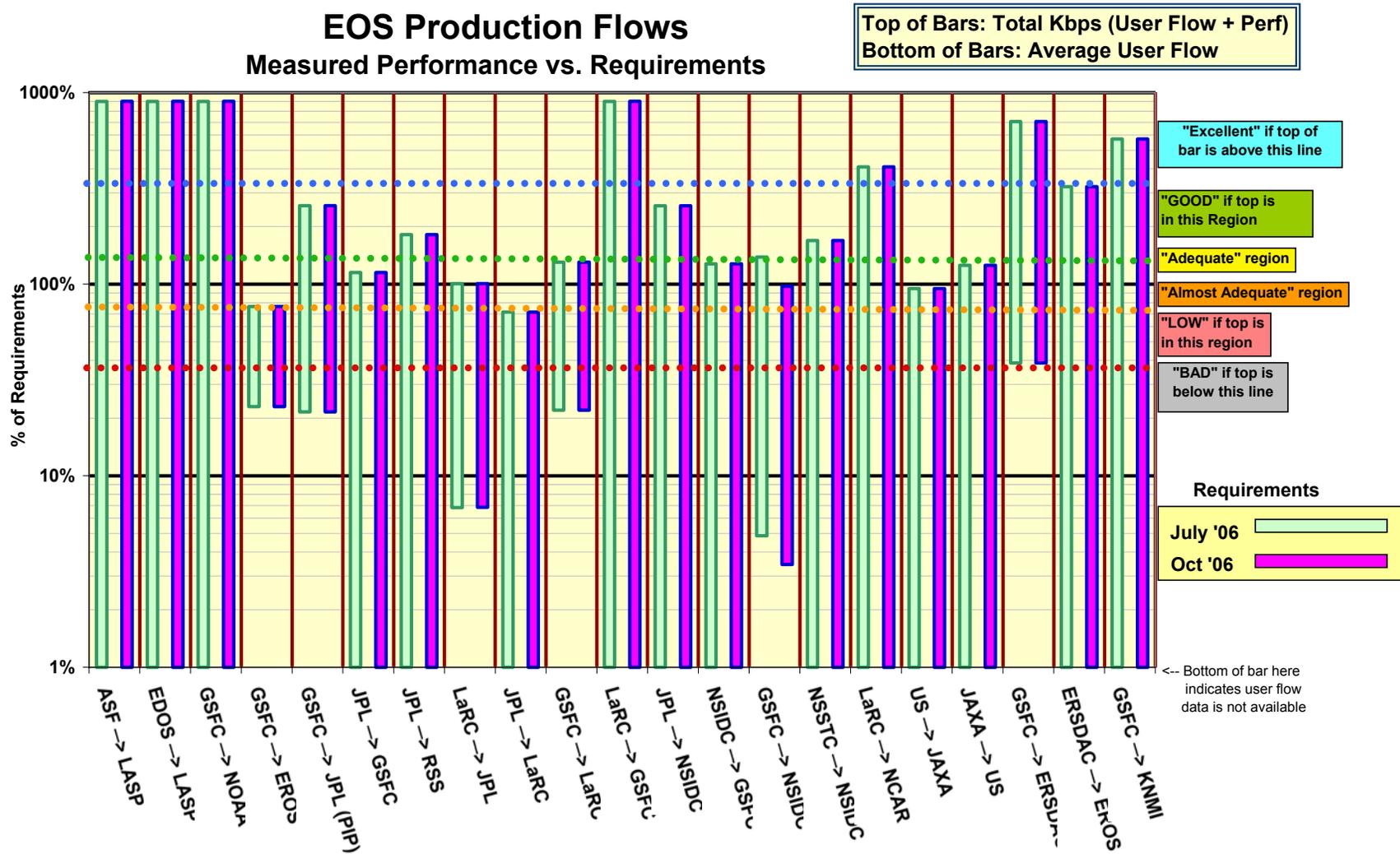


The chart above shows the number of sites in each classification since EOS Production Site testing started in September 1999. Note that these ratings do NOT relate to absolute performance -- they are relative to the EOS requirements.

Network Requirements vs. Measured Performance

July 2006		Requirements (mbps)		Testing					Ratings		
Source → Destination	Team (s)	Current	Future	Source → Dest Nodes	Avg User Flow mbps	iperf Avg mbps	Total Avg mbps	Integrated mbps	Rating re Current Requirements		Rating re
		Jul-06	Oct-06						Jul-06	Last Month	Oct-06
GSFC → ASF	QuikScat, Radarsat	n/a	n/a	GSFC-CSAFS → ASF	n/a	1.4	1.4		n/a	n/a	n/a
ASF → LASP	QuikScat	0.02	0.02	ASF → LASP [via IOnet]	n/a	1.1	1.1		Excellent	E	Excellent
EDOS → LASP	ICESat, QuikScat	0.40	0.40	EDOS → LASP [via IOnet]	n/a	14.7	14.7		Excellent	E	Excellent
GSFC → NOAA	QuikScat	0.19	0.00	GSFC-CSAFS → NESDIS	n/a	6.9	6.9		Excellent	E	Excellent
GSFC → EROS	MODIS, LandSat	285.36	285.36	GDAAC → EROS LPDAAC	65.5	204.8	270.3	218.3	LOW	L	LOW
GSFC → JPL (PIP)	AIRS, ISTs	15.76	15.76	GDAAC → JPL-AIRS	3.4	39.8	43.2	40.5	GOOD	G	GOOD
JPL → GSFC	AMSR-E, MISR, etc.	7.39	7.39	JPL-PODAAC → GDAAC	n/a	8.5	8.5		Adequate	G	Adequate
JPL → RSS	AMSR-E	2.49	2.49	JPL-PODAAC → RSS	n/a	4.5	4.5		GOOD	G	GOOD
LaRC → JPL	TES, MISR	39.55	39.55	LARC-DAAC → JPL-TES	2.7	39.7	42.4	39.8	Adequate	A	Adequate
JPL → LaRC	TES	52.63	52.63	JPL-PTH → LARC-PTH	n/a	37.6	37.6		LOW	L	LOW
GSFC → LaRC	CERES, MISR, MOPITT	58.59	58.59	GDAAC → LDAAC	12.9	75.4	88.2	76.4	GOOD	A	GOOD
LaRC → GSFC	MODIS, TES	3.16	3.16	LDAAC → GDAAC	n/a	51.9	51.9		Excellent	E	Excellent
JPL → NSIDC	AMSR-E	1.34	1.34	JPL-PODAAC → NSIDC SIDADS	n/a	3.4	3.4		GOOD	G	GOOD
NSIDC → GSFC	MODIS, ICESAT, QuikScat	13.32	13.32	NSIDC DAAC → GDAAC	0.0	17.0	17.1	17.0	Adequate	A	Adequate
GSFC → NSIDC	MODIS, ICESAT, QuikScat	63.98	90.81	GDAAC → NSIDC-DAAC	3.1	88.7	91.8	88.7	GOOD	G	AA
NSSTC → NSIDC	AMSR-E	7.50	7.50	NSSTC → NSIDC DAAC	n/a	12.7	12.7		GOOD	G	GOOD
LaRC → NCAR	HIRDLS	5.40	5.40	LDAAC → NCAR	n/a	22.1	22.1		Excellent	E	Excellent
US → JAXA	QuikScat, TRMM, AMSR	1.43	1.43	GSFC-CSAFS → JAXA	n/a	1.4	1.4		AA	AA	AA
JAXA → US	AMSR-E	1.28	1.28	JAXA → JPL-QSCAT	n/a	1.6	1.6		Adequate	A	Adequate
GSFC → ERSDAC	ASTER	12.45	12.45	ENPL-PTH → ERSDAC	4.8	87.9	92.8	87.9	Excellent	E	Excellent
ERSDAC → EROS	ASTER	26.83	26.83	ERSDAC → EROS PTH	n/a	86.6	86.6		Excellent	E	Excellent
GSFC → KNMI	OMI	3.28	3.28	GSFC-MAX → OMI-PDR	n/a	18.8	18.8		Excellent	E	Excellent
Notes:	Flow Requirements include TRMM, Terra, Aqua, Aura, ICESAT, QuikScat				Ratings Summary						
									Jul-06	Req	Oct-06
									Score	Prev	Score
*Criteria:	Excellent	Total Kbps > Requirement * 3			Excellent				8	8	8
	GOOD	1.3 * Requirement <= Total Kbps < Requirement * 3			GOOD				6	7	5
	Adequate	Requirement < Total Kbps < Requirement * 1.3			Adequate				4	4	4
	Almost Adequate	Requirement / 1.3 < Total Kbps < Requirement			Almost Adequate				1	1	2
	LOW	Requirement / 3 < Total Kbps < Requirement / 1.3			LOW				2	2	2
	BAD	Total Kbps < Requirement / 3			BAD				0	0	0
									Total		21
									GPA	2.93	2.93
											2.86

This graph shows two bars for each source-destination pair. Each bar uses the same actual measured performance, but compares it to the requirements for two different times (June and October, '06). Thus if the requirements increase, the same measured performance will be lower in comparison.



Interpretation: The bottom of each bar is the average measured user flow to a site. Thus the bottom of each bar indicates the relationship between the requirements and actual flows. Note that the requirements include a 50% contingency factor above what was specified by the projects, so a value of 66% would indicate that the project is flowing as much data as requested. The top of each bar represents the sum of the MRTG user flow plus the iperf measurement – it is this value which is used as the basis of the rating