

LC User Meeting

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July 26, 2022



Agenda

- Persistent Data Services and LaunchIT, Zeke Morton
- Globus Endpoint on the LLNL Green Network, Cameron Harr
- Flux Status at LC, Ryan Day
- LC Systems Status, Tim Fahey
- Q&A

LC Systems Status

- The following systems have entered production over the past 2.5 years

System	Date
Magma	6/2020
Tron (SCF Visualization)	8/2020
Mammoth, Ruby	9/2020
RZVernal, Tioga, Tenaya	6/2022

LC Systems Status

- The following systems have been retired over the past 2.5 years

System	Date
Sequoia	2/2020
Zin	3/2021
Surface, RZManta, Shark	1/2022
Ray	6/2022

LC Systems Status

- File Systems Overview
 - /g/g*, home directories, 24GB, backed up, snapshots, CZ & RZ
 - /usr/WS1, WS2, 2TB, snapshots, CZ & RZ
 - CZ /p/lustre1&2, 20TB/70TB, no snapshots or backups
 - RZ /p/lustre1, 20TB/70TB, no snapshots or backups
 - SCF /p/lustre1&2, 20TB/70TB, no snapshots or backups
 - RZ /p/rzanselgpfs1, 20TB/70TB, no snapshots or backups
 - CZ /p/lassengpfs1, 20TB/70TB, no snapshots or backups
 - SCF /p/sierragpfs1, 20TB/70TB, no snapshots or backups
 - CZ /p/vast1, 20TB, 20TB/70TB, no snapshots or backups
 - RZ /p/czvast1, 20TB, 20TB/70TB, no snapshots or backups

LC Systems Status

- HPSS storage archive
 - 300TB quota per fiscal year
- Services/Capabilities
 - Confluence, Jira, Gitlab, Jupyter
- File Interchange Service (FIS) to/from CZ and RZ to and from iSRD and iSNSI
- Shared UNIX groups have /usr/WS directories; /p/lustre by request
- With justification, service accounts are available
- Lc-support@llnl.gov , 2-4533, for account, bank, UNIX group and token information and questions
- Lc-hotline, 2-4532 for technical support on LC systems

Current LC Systems Summary

System	Top500 Rank	Program	Manufacture/ Model	Processor Architecture	OS	Inter-connect	Avg Power Demand (KW)	Nodes	Cores	Memory (GB)	Peak TFLOP/s
Unclassified Network (OCF)											
Lassen	30	ASC+M&IC	IBM	IBM P9	RHEL	2x IB EDR	TBD	792	34,848	253,440	23,047.2
Quartz (CTS-1)	233	ASC+M&IC	Penguin	Intel Xeon ES-2695 v4	TOSS	Omni-Path	TBD	3,136	112,896	401,408	3793.3
Pascal		ASC+M&IC	Penguin	Intel Xeon ES-2695 v4	TOSS	IB EDR	TBD	163	5,868	41,728	1700.0
RZTopaz		ASC	Penguin	Intel Xeon ES-2695 v4	TOSS	Omni-Path	TBD	768	27,648	98,304	929.0
RZVernal	123	ASC	HPE	3rd Generation AMD EPYC	TOSS	Slingshot	TBD	38	2,432	38,912	6917.9
RZAnsel		ASC	IBM	IBM P9	RHEL	2x IB EDR	TBD	54	2,376	17,280	1,570.0
Tioga	135	ASC+M&IC	HPE	3rd Generation AMD EPYC	TOSS	Slingshot	TBD	32	2,048	32,768	5,825.6
Catalyst		ASC+M&IC	Cray	Intel Xeon ES-2695 v2	TOSS	IB QDR	TBD	324	7,776	41,472	149.3
Mammoth		ASC+M&IC	Supermicro	AMD Rome	TOSS	Omni-Path	TBD	69	8,832	131,072	294.0
Ruby	134	ASC+M&IC+CARES	Supermicro	Intel Xeon CLX-8276L	TOSS	Omni-Path	TBD	1,512	84,672	290,304	5959.2
Corona		ASC+M&IC+CARES	Penguin, Supermicro	AMD Naples, AMD Rome	TOSS	IB HDR	TBD	291	13,968	127,488	11335.0
Syrah		ASC+M&IC	Cray	Intel Xeon ES-2670	TOSS	IB QDR	TBD	324	5,184	20,736	107.8
Borax (CTS-1)		ASC+M&IC	Penguin	Intel Xeon ES-2695 v4	TOSS	N/A	TBD	48	1,728	6,144	58.1
RZTrona (CTS-1)		ASC	Penguin	Intel Xeon ES-2695 v4	TOSS	N/A	TBD	48	1,728	6,144	58.1
OCF Totals	Systems	15									61,744.5
Classified Network (SCF)											
Pinot(SNSI)		M&IC	Penguin	Intel Xeon ES-2695	TOSS	Omni-Path	TBD	187	6,732	23,936	232.2
Sierra	5	ASC	IBM	IBM P9	RHEL	2x IB EDR	TBD	4,320	190,080	1,382,400	125,626.0
Tenaya	200	ASC	HPE	3rd Generation AMD EPYC	TOSS	Slingshot	TBD	24	1,536	24,576	4,369.2
Jade+Jadeita (CTS-1)	232	ASC	Penguin	Intel Xeon ES-2695 v4	TOSS	Omni-Path	TBD	2,688	96,768	344,064	3251.4
Mica		ASC	Penguin	Intel Xeon ES-2695 v4	TOSS	Omni-Path	TBD	384	13,824	49,152	464.5
Magma	157	ASC	Penguin	Intel Cascade Lake AP 9242	TOSS	Omni-Path	TBD	722	69,312	296,448	5454.0
Tron		ASC	Supermicro	Intel Cascade Lake	TOSS	IB EDR	TBD	146	4,672	56,064	433.6
Agate (CTS-1)		ASC	Penguin	Intel Xeon ES-2695 v4	TOSS	N/A	TBD	48	1,728	6,144	58.1
SCF Totals	Systems	9									139,889.0
Combined Totals		24									201,633.5

System Category	TFLOP/s	% of Total
Unclassified	61,744.5	30.6%
Capability	37,360.7	60.5%
Capacity	22,567.6	36.5%
Visualization	1,700.0	2.8%
Serial	116.2	0.2%

System Category	TFLOP/s	% of Total
Classified	139,889.0	69.4%
Capability	129,995.2	92.9%
Capacity	9,402.1	6.7%
Visualization	433.6	0.3%
Serial	58.1	0.0%

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