

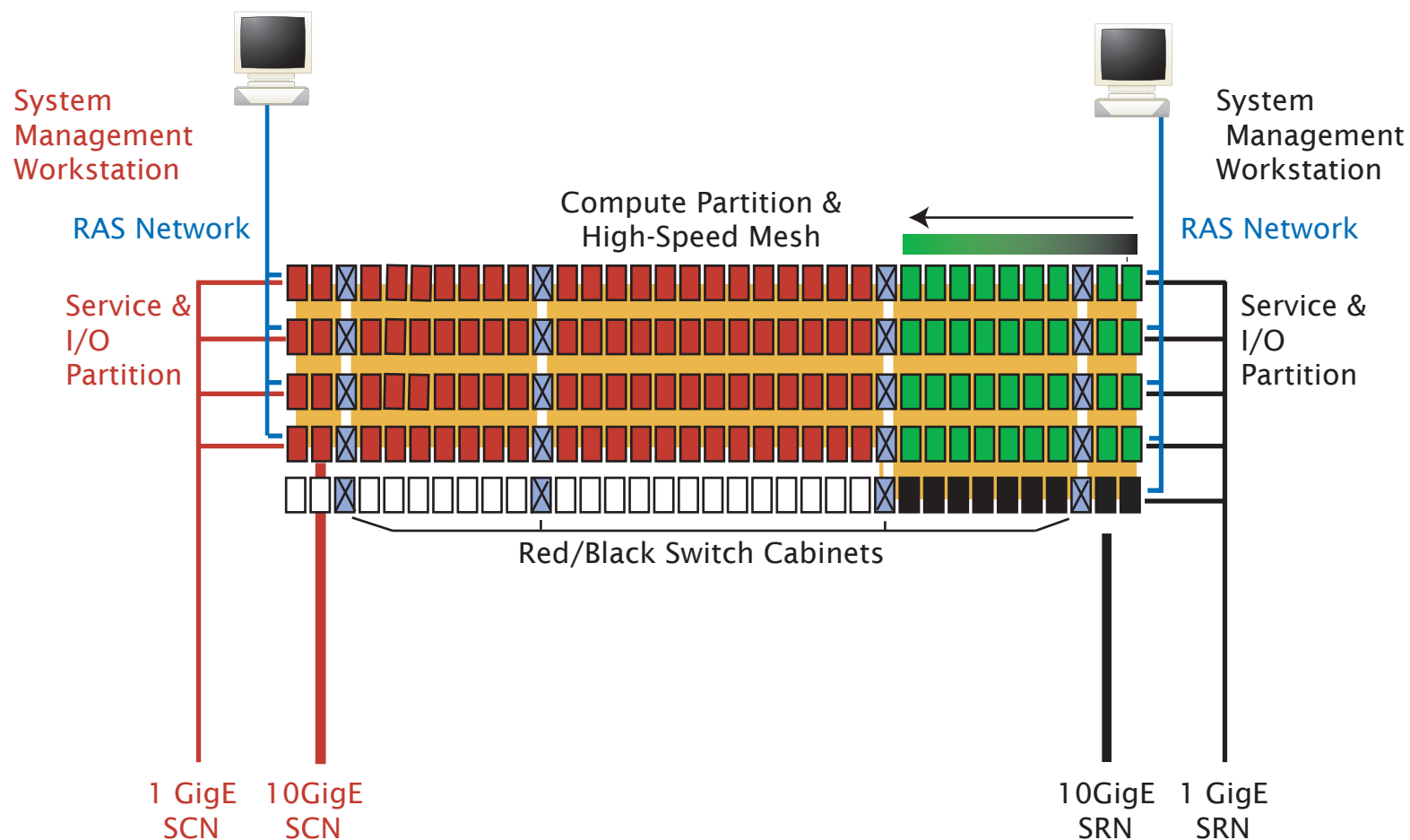
FY07 Red Storm Accomplishments in Review

Robert A. Ballance, 09328
System Manager, Red Storm
October 25, 2007



Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
for the United States Department of Energy's National Nuclear Security Administration under
Contract DE-AC04-94AL85000.

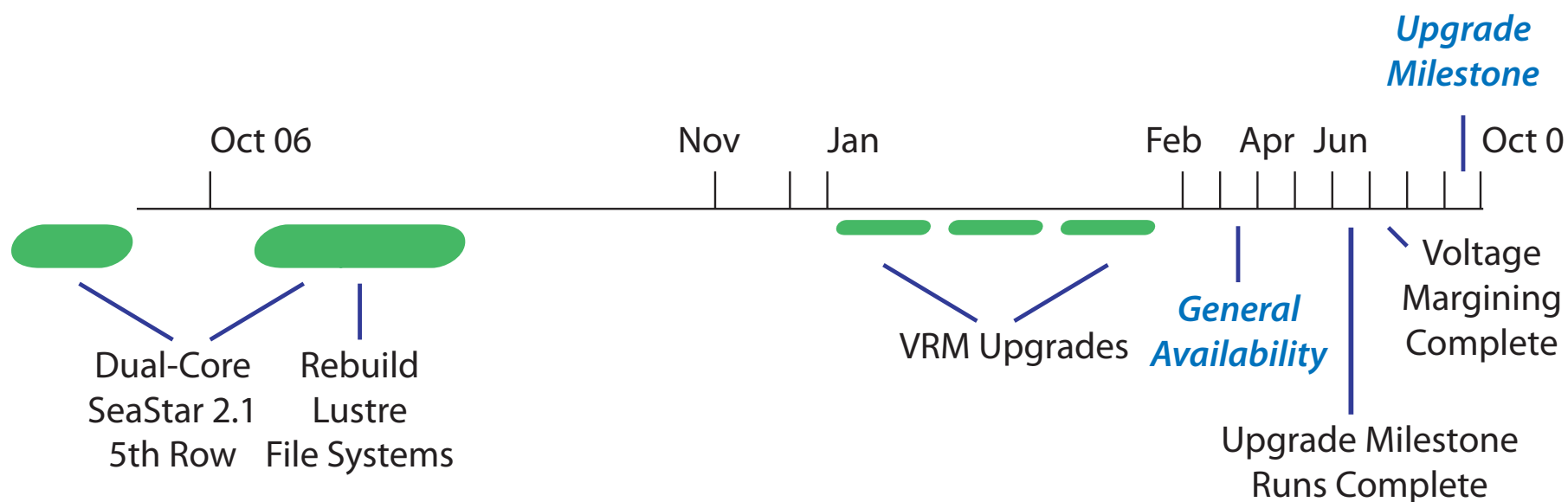
October 1, 2006



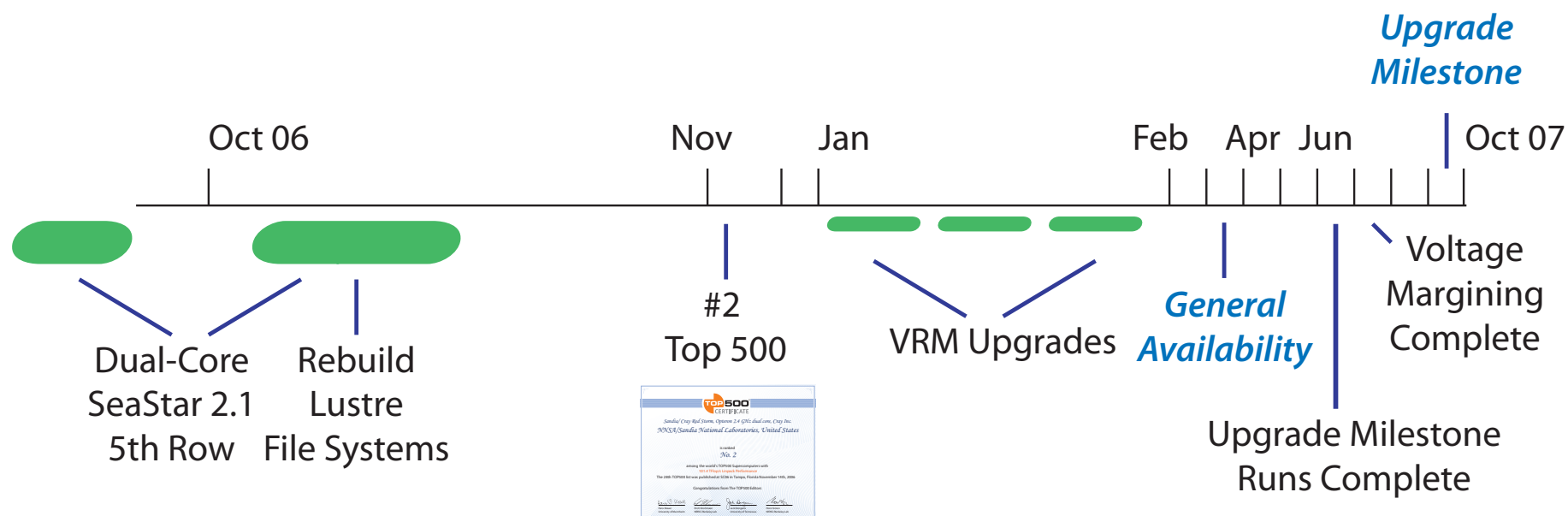
Classified

Unclassified

The System Hardware Perspective

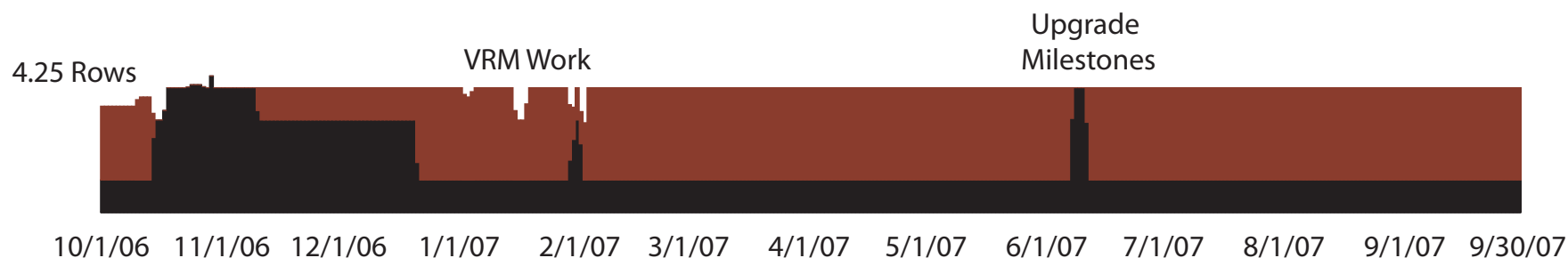


The System Awards Perspective



New York festivals

Operational Perspective



Computes		Operating Modes				Computes	
Jumbo Black	12960					0	Jumbo Black
Large Black	9600					3360	Small Black
Small Black	3360					9600	Large Red
Jumbo Red	0					12960	Jumbo Red

Red-Black Switching Facilitates Upgrades

From	To		Days
10/1/06	10/10/06		9.3
10/10/06	10/14/06		4.0
10/14/06	10/17/06		3.4
10/17/06	10/23/06		6.1
10/23/06	10/27/06		3.6
10/27/06	10/29/06		2.1
10/29/06	10/29/06		0.5
10/29/06	11/8/06		9.6
11/8/06	11/10/06		1.9
11/10/06	12/21/06		41.0
12/21/06	1/1/07		10.7
1/1/07	1/2/07		1.3
1/2/07	1/4/07		2.1
1/4/07	1/15/07		10.9
1/15/07	1/18/07		3.2
1/18/07	1/29/07		10.9
1/29/07	1/30/07		1.3
1/30/07	2/1/07		1.9
2/1/07	2/2/07		1.0
2/2/07	6/7/07		124.8
6/7/07	6/11/07		4.3
6/11/07	10/1/07		111.4

System Software Perspective

	Black	Red
1.3.21		01-Oct-06
1.4.22	01-Oct-06	
1.4.35	06-Oct-07	14-Oct-06
1.4.45	14-Dec-06	
1.5.39	12-Apr-07	07-Jun-07
1.5.52	05-Jul-07	17-Jul-07
Moab	02-Aug-07	07-Aug-07
1.5.59a	Soon	

Active Accounts*

Black	9/28/06	3/23/07	10/4/07	FY Net growth	
SNL	192	224	273	↑ 81	42%
LANL	19	26	22	↑ 3	16%
LLNL	11	14	24	↑ 13	118%
Cray	4	5	4	0	
PSAP (Alliance)	2	9	21	↑ 19	950%
Red					
SNL	112	124	143	↑ 31	28%
LANL	29	44	53	↑ 24	83%
LLNL	22	18	37	↑ 15	68%

Over 1200 Customer Interactions Logged!

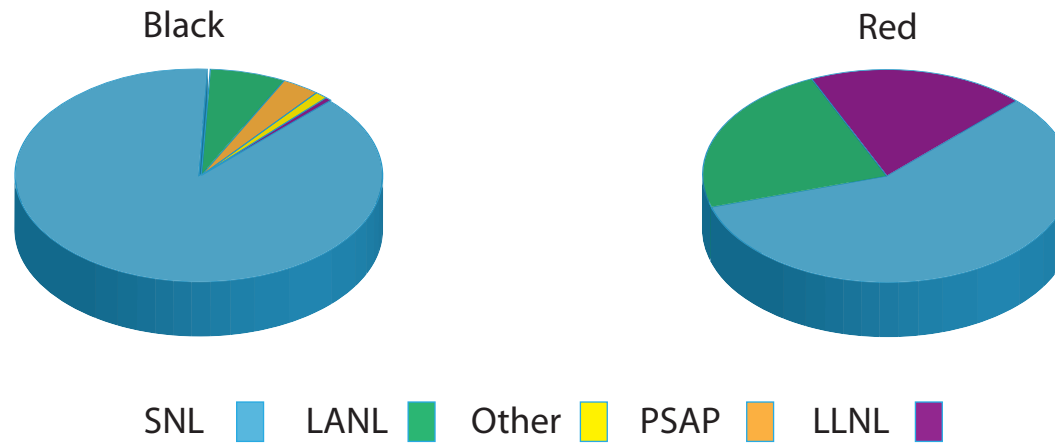
**Based on weekly snapshots from Accounts processing*

Work Supported

- LANL/Daly
 - 5,000 nodes or
 - 6,000 cores
 - VN Mode
- SNL/Attaway
 - up to 25,000 cores
 - Lustre Support
- LLNL/Stills
 - up to 4,096 cores
 - Simulations improving NIF design
- SNL/Payne
 - 1,024 cores
 - Level 2 NW milestone
- SNL/Chen/Lignell
 - 7,920 nodes
 - Soot Formation
 - Moved to ORNL
- SNL/Lemke
 - 128 cores
 - Z renovation support

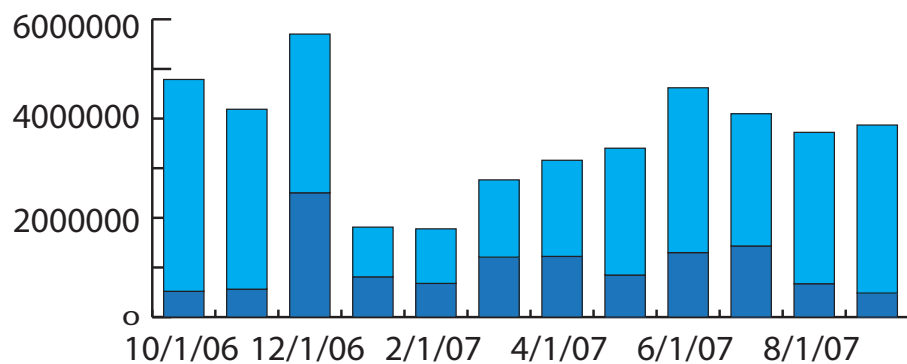
Where did 456,729 yod records come from?

Usage by Lab/Customer (Node Hours)

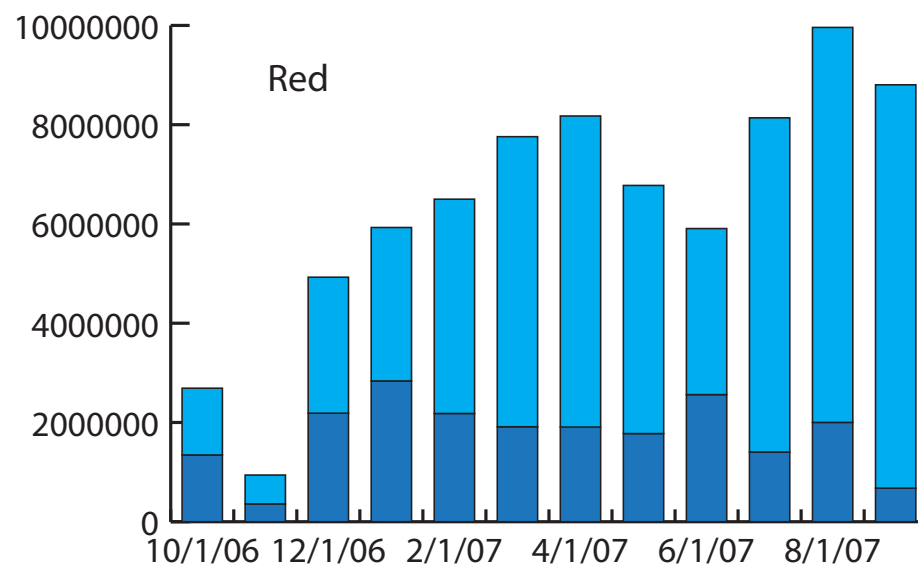


Usage by Month Core-Hours

Black

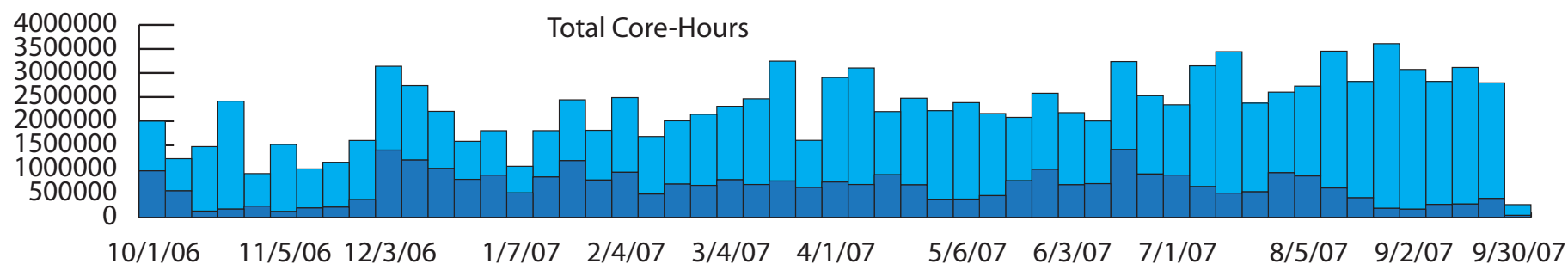
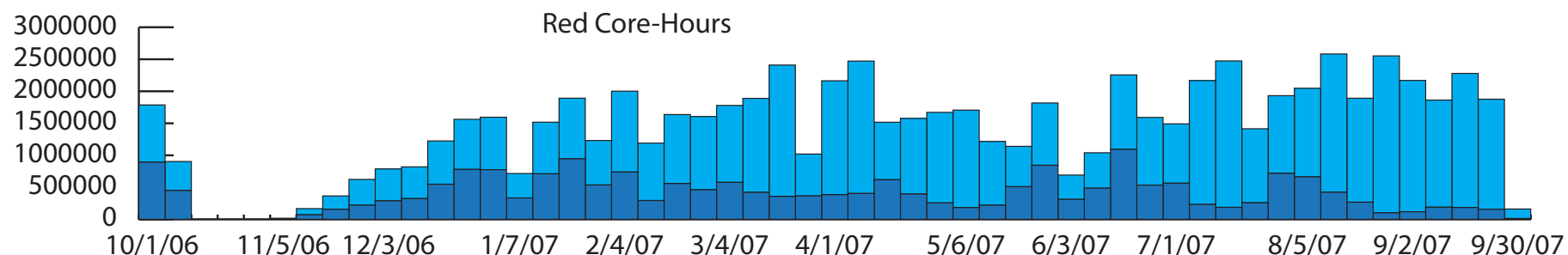
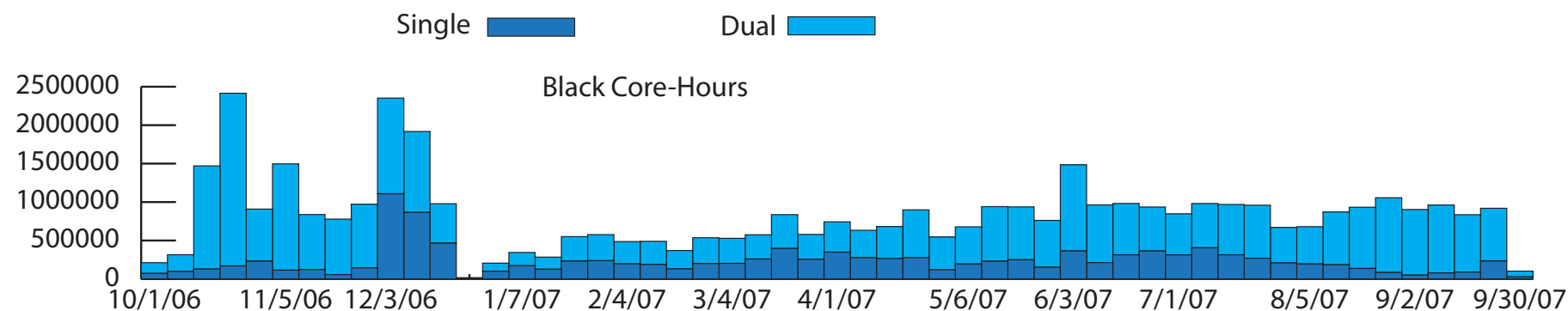


Red



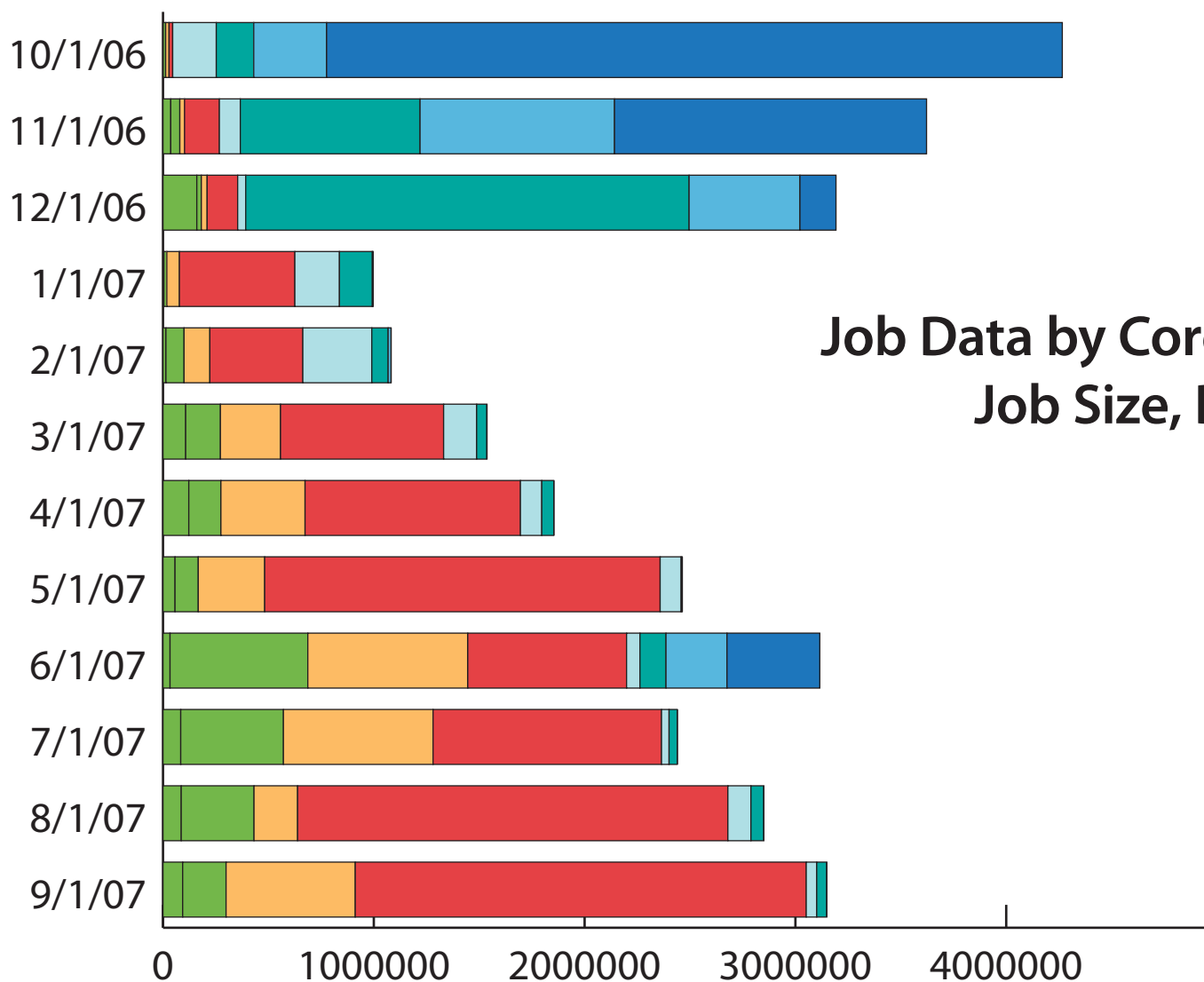
Single-Core Dual-Core

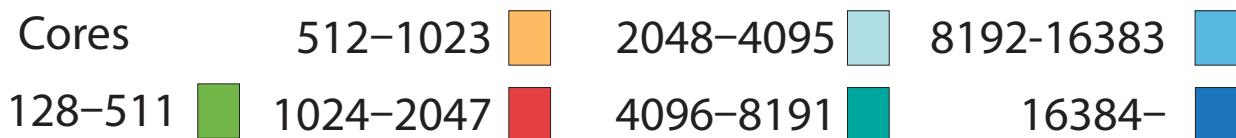
Usage By Week Core-Hours



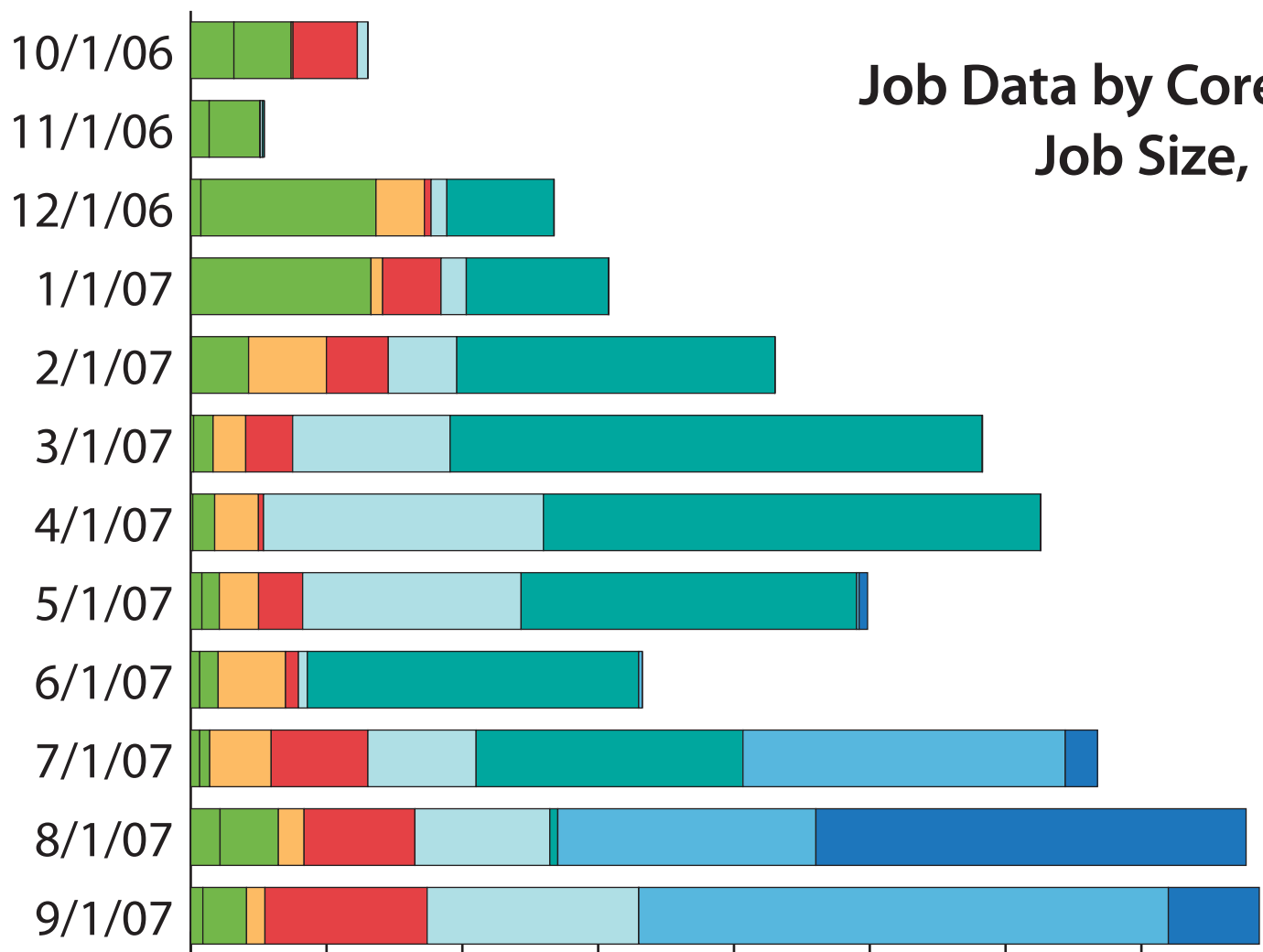
Cores 512-1023 2048-4095 8192-16383
128-511 1024-2047 4096-8191 16384-

Job sizes < 128 are omitted from totals





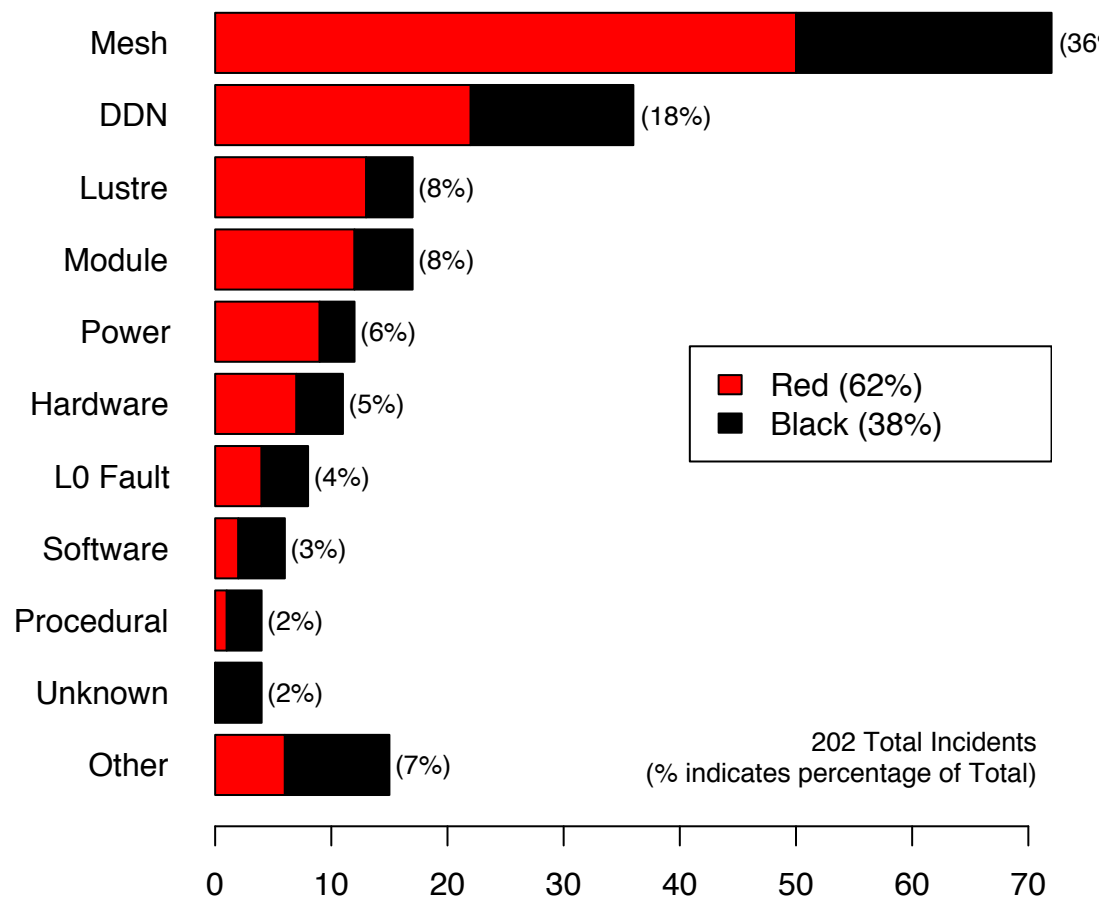
Job sizes < 128 are omitted from totals



Outage Summaries

Primary Causes of Unscheduled Downtime Incidents

Red Storm: 10/01/06 through 09/30/07



Q & A

Q & A

Is it time for lunch?