

OSG Scalability Testing

Job startup rate

GT2, cms-sleepgw.fnal.gov (Xeon E5335), OSG 1.0.0

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Description

This page contains the results of the scalability tests ran against a GT2 CE.

The tested machine was cms-sleepgw.fnal.gov, with an Xeon E5335 CPU. OSG CE version 0.8.0.

The testing suite was loadtest_condor v1_0_0. The client had Condor-G v7.3.1. The client was in UCSD (70ms network RTT).

Submitting 5000 jobs with small files, CE has 10k slots.

The test was performed in August 2009.

Results at a glance

Rate	Alone	Combined
Condor-G to Globus submission	~53/min	~28/min
Condor-G noticing jobs starting	~28/min	~28/min
Condor-G noticing jobs terminating	~14/min	~6.9/min
Limiting one	~14/min	~6.9/min

Detailed results

Test1 – Sleep 30 mins

Command used:

```
loadtest_condor.sh -type grid gt2 cms-sleepgw.fnal.gov/jobmanager-condor -req  
"(condor_submit=(+SleepSlot 'TRUE'))" -end fixed 1800 -jobs 5000 -cluster 100 -in infile 100 -out  
outfile 123
```

Resources used:

Not available.

Detailed rates:

Hourly					Over 10 mins				
08/18 02 SB:	5000 GB:	1791 ST:	785 TM:	11	08/18 02:2 SB:	2300 GB:	240 ST:	57 TM:	1
08/18 03 SB:	0 GB:	1663 ST:	1717 TM:	416	08/18 02:3 SB:	2700 GB:	544 ST:	200 TM:	0
08/18 04 SB:	0 GB:	1546 ST:	1728 TM:	441	08/18 02:4 SB:	0 GB:	534 ST:	280 TM:	0
08/18 05 SB:	0 GB:	0 ST:	771 TM:	835	08/18 02:5 SB:	0 GB:	473 ST:	248 TM:	10
08/18 06 SB:	0 GB:	0 ST:	0 TM:	846	08/18 03:0 SB:	0 GB:	275 ST:	283 TM:	70
08/18 07 SB:	0 GB:	0 ST:	0 TM:	853	08/18 03:1 SB:	0 GB:	277 ST:	284 TM:	66
08/18 08 SB:	0 GB:	0 ST:	0 TM:	866	08/18 03:2 SB:	0 GB:	279 ST:	316 TM:	72
08/18 09 SB:	0 GB:	0 ST:	0 TM:	733	08/18 03:3 SB:	0 GB:	277 ST:	283 TM:	67
					08/18 03:4 SB:	0 GB:	280 ST:	267 TM:	70
					08/18 03:5 SB:	0 GB:	275 ST:	284 TM:	71
					08/18 04:0 SB:	0 GB:	254 ST:	285 TM:	69
					08/18 04:1 SB:	0 GB:	272 ST:	288 TM:	70
					08/18 04:2 SB:	0 GB:	275 ST:	320 TM:	73
					08/18 04:3 SB:	0 GB:	278 ST:	287 TM:	69
					08/18 04:4 SB:	0 GB:	283 ST:	262 TM:	71
					08/18 04:5 SB:	0 GB:	184 ST:	286 TM:	89
					08/18 05:0 SB:	0 GB:	0 ST:	287 TM:	138
					08/18 05:1 SB:	0 GB:	0 ST:	284 TM:	137
					08/18 05:2 SB:	0 GB:	0 ST:	200 TM:	140
					08/18 05:3 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 05:4 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 05:5 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 06:0 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 06:1 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 06:2 SB:	0 GB:	0 ST:	0 TM:	143
					08/18 06:3 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 06:4 SB:	0 GB:	0 ST:	0 TM:	141
					08/18 06:5 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 07:0 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 07:1 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 07:2 SB:	0 GB:	0 ST:	0 TM:	143
					08/18 07:3 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 07:4 SB:	0 GB:	0 ST:	0 TM:	147
					08/18 07:5 SB:	0 GB:	0 ST:	0 TM:	143
					08/18 08:0 SB:	0 GB:	0 ST:	0 TM:	140
					08/18 08:1 SB:	0 GB:	0 ST:	0 TM:	148
					08/18 08:2 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 08:3 SB:	0 GB:	0 ST:	0 TM:	146
					08/18 08:4 SB:	0 GB:	0 ST:	0 TM:	144
					08/18 08:5 SB:	0 GB:	0 ST:	0 TM:	146
					08/18 09:0 SB:	0 GB:	0 ST:	0 TM:	136
					08/18 09:1 SB:	0 GB:	0 ST:	0 TM:	144
					08/18 09:2 SB:	0 GB:	0 ST:	0 TM:	146
					08/18 09:3 SB:	0 GB:	0 ST:	0 TM:	144
					08/18 09:4 SB:	0 GB:	0 ST:	0 TM:	146
					08/18 09:5 SB:	0 GB:	0 ST:	0 TM:	17

Test 2 – Sleep 30s

Command used:

```
loadtest_condor.sh -type grid gt2 cms-sleepgw.fnal.gov/jobmanager-condor -req  
"(condor_submit=(+SleepSlot 'TRUE'))" -end fixed 30 -jobs 5000 -cluster 100 -in infle 100 -out outfile  
123
```

Resources used:

Was able to keep 15 running jobs.

Detailed rates:

Hourly					Over 10 mins				
08/17 18 SB:	5000 GB:	866 ST:	799 TM:	180	08/17 18:3 SB:	5000 GB:	342 ST:	209 TM:	45
08/17 19 SB:	0 GB:	1625 ST:	1655 TM:	410	08/17 18:4 SB:	0 GB:	257 ST:	305 TM:	66
08/17 20 SB:	0 GB:	1619 ST:	1624 TM:	415	08/17 18:5 SB:	0 GB:	267 ST:	285 TM:	69
08/17 21 SB:	0 GB:	890 ST:	923 TM:	603	08/17 19:0 SB:	0 GB:	275 ST:	259 TM:	69
08/17 22 SB:	0 GB:	0 ST:	0 TM:	850	08/17 19:1 SB:	0 GB:	270 ST:	281 TM:	66
08/17 23 SB:	0 GB:	0 ST:	0 TM:	855	08/17 19:2 SB:	0 GB:	273 ST:	300 TM:	69
08/18 00 SB:	0 GB:	0 ST:	0 TM:	869	08/17 19:3 SB:	0 GB:	262 ST:	272 TM:	66
08/18 01 SB:	0 GB:	0 ST:	0 TM:	819	08/17 19:4 SB:	0 GB:	272 ST:	266 TM:	69
					08/17 19:5 SB:	0 GB:	273 ST:	277 TM:	71
					08/17 20:0 SB:	0 GB:	270 ST:	268 TM:	69
					08/17 20:1 SB:	0 GB:	277 ST:	275 TM:	67
					08/17 20:2 SB:	0 GB:	274 ST:	277 TM:	73
					08/17 20:3 SB:	0 GB:	269 ST:	245 TM:	70
					08/17 20:4 SB:	0 GB:	261 ST:	261 TM:	66
					08/17 20:5 SB:	0 GB:	268 ST:	298 TM:	70
					08/17 21:0 SB:	0 GB:	267 ST:	268 TM:	70
					08/17 21:1 SB:	0 GB:	268 ST:	266 TM:	69
					08/17 21:2 SB:	0 GB:	268 ST:	265 TM:	71
					08/17 21:3 SB:	0 GB:	87 ST:	124 TM:	115
					08/17 21:4 SB:	0 GB:	0 ST:	0 TM:	140
					08/17 21:5 SB:	0 GB:	0 ST:	0 TM:	138
					08/17 22:0 SB:	0 GB:	0 ST:	0 TM:	142
					08/17 22:1 SB:	0 GB:	0 ST:	0 TM:	140
					08/17 22:2 SB:	0 GB:	0 ST:	0 TM:	140
					08/17 22:3 SB:	0 GB:	0 ST:	0 TM:	143
					08/17 22:4 SB:	0 GB:	0 ST:	0 TM:	140
					08/17 22:5 SB:	0 GB:	0 ST:	0 TM:	145
					08/17 23:0 SB:	0 GB:	0 ST:	0 TM:	142
					08/17 23:1 SB:	0 GB:	0 ST:	0 TM:	142
					08/17 23:2 SB:	0 GB:	0 ST:	0 TM:	142
					08/17 23:3 SB:	0 GB:	0 ST:	0 TM:	144
					08/17 23:4 SB:	0 GB:	0 ST:	0 TM:	143
					08/17 23:5 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 00:0 SB:	0 GB:	0 ST:	0 TM:	146
					08/18 00:1 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 00:2 SB:	0 GB:	0 ST:	0 TM:	143
					08/18 00:3 SB:	0 GB:	0 ST:	0 TM:	147
					08/18 00:4 SB:	0 GB:	0 ST:	0 TM:	143
					08/18 00:5 SB:	0 GB:	0 ST:	0 TM:	148
					08/18 01:0 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 01:1 SB:	0 GB:	0 ST:	0 TM:	148
					08/18 01:2 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 01:3 SB:	0 GB:	0 ST:	0 TM:	142
					08/18 01:4 SB:	0 GB:	0 ST:	0 TM:	144
					08/18 01:5 SB:	0 GB:	0 ST:	0 TM:	101

Test 3 – Sleep 3h

Command used:

```
loadtest_condor.sh -type grid gt2 cms-sleepgw.fnal.gov/jobmanager-condor -req  
"(condor_submit=(+SleepSlot' TRUE'))" -end fixed 10800 -jobs 5000 -cluster 100 -in infile 100 -out  
outfile 123
```

Resources used:

Reached and kept 5k running jobs.

Detailed rates:

Hourly

08/17 09	SB: 5000	GB: 3084	ST: 1549	TM: 1
08/17 10	SB: 0	GB: 1916	ST: 1710	TM: 0
08/17 11	SB: 0	GB: 0	ST: 1686	TM: 0
08/17 12	SB: 0	GB: 0	ST: 56	TM: 764
08/17 13	SB: 0	GB: 0	ST: 0	TM: 843
08/17 14	SB: 0	GB: 0	ST: 0	TM: 839
08/17 15	SB: 0	GB: 0	ST: 0	TM: 864
08/17 16	SB: 0	GB: 0	ST: 0	TM: 862
08/17 17	SB: 0	GB: 0	ST: 0	TM: 828

Over 10 mins

08/17 09:0	SB: 4600	GB: 436	ST: 157	TM: 1
08/17 09:1	SB: 400	GB: 508	ST: 283	TM: 0
08/17 09:2	SB: 0	GB: 535	ST: 278	TM: 0
08/17 09:3	SB: 0	GB: 537	ST: 274	TM: 0
08/17 09:4	SB: 0	GB: 558	ST: 282	TM: 0
08/17 09:5	SB: 0	GB: 510	ST: 275	TM: 0
08/17 10:0	SB: 0	GB: 568	ST: 112	TM: 0
08/17 10:1	SB: 0	GB: 535	ST: 438	TM: 0
08/17 10:2	SB: 0	GB: 521	ST: 281	TM: 0
08/17 10:3	SB: 0	GB: 292	ST: 307	TM: 0
08/17 10:4	SB: 0	GB: 0	ST: 288	TM: 0
08/17 10:5	SB: 0	GB: 0	ST: 284	TM: 0
08/17 11:0	SB: 0	GB: 0	ST: 258	TM: 0
08/17 11:1	SB: 0	GB: 0	ST: 318	TM: 0
08/17 11:2	SB: 0	GB: 0	ST: 285	TM: 0
08/17 11:3	SB: 0	GB: 0	ST: 256	TM: 0
08/17 11:4	SB: 0	GB: 0	ST: 281	TM: 0
08/17 11:5	SB: 0	GB: 0	ST: 288	TM: 0
08/17 12:0	SB: 0	GB: 0	ST: 56	TM: 70
08/17 12:1	SB: 0	GB: 0	ST: 0	TM: 140
08/17 12:2	SB: 0	GB: 0	ST: 0	TM: 142
08/17 12:3	SB: 0	GB: 0	ST: 0	TM: 140
08/17 12:4	SB: 0	GB: 0	ST: 0	TM: 132
08/17 12:5	SB: 0	GB: 0	ST: 0	TM: 140
08/17 13:0	SB: 0	GB: 0	ST: 0	TM: 142
08/17 13:1	SB: 0	GB: 0	ST: 0	TM: 140
08/17 13:2	SB: 0	GB: 0	ST: 0	TM: 140
08/17 13:3	SB: 0	GB: 0	ST: 0	TM: 141
08/17 13:4	SB: 0	GB: 0	ST: 0	TM: 140
08/17 13:5	SB: 0	GB: 0	ST: 0	TM: 140
08/17 14:0	SB: 0	GB: 0	ST: 0	TM: 142
08/17 14:1	SB: 0	GB: 0	ST: 0	TM: 141
08/17 14:2	SB: 0	GB: 0	ST: 0	TM: 136
08/17 14:3	SB: 0	GB: 0	ST: 0	TM: 139
08/17 14:4	SB: 0	GB: 0	ST: 0	TM: 137
08/17 14:5	SB: 0	GB: 0	ST: 0	TM: 144
08/17 15:0	SB: 0	GB: 0	ST: 0	TM: 144
08/17 15:1	SB: 0	GB: 0	ST: 0	TM: 142
08/17 15:2	SB: 0	GB: 0	ST: 0	TM: 144
08/17 15:3	SB: 0	GB: 0	ST: 0	TM: 144
08/17 15:4	SB: 0	GB: 0	ST: 0	TM: 144
08/17 15:5	SB: 0	GB: 0	ST: 0	TM: 146
08/17 16:0	SB: 0	GB: 0	ST: 0	TM: 143
08/17 16:1	SB: 0	GB: 0	ST: 0	TM: 146
08/17 16:2	SB: 0	GB: 0	ST: 0	TM: 142
08/17 16:3	SB: 0	GB: 0	ST: 0	TM: 142
08/17 16:4	SB: 0	GB: 0	ST: 0	TM: 140
08/17 16:5	SB: 0	GB: 0	ST: 0	TM: 149
08/17 17:0	SB: 0	GB: 0	ST: 0	TM: 141
08/17 17:1	SB: 0	GB: 0	ST: 0	TM: 144
08/17 17:2	SB: 0	GB: 0	ST: 0	TM: 146
08/17 17:3	SB: 0	GB: 0	ST: 0	TM: 141
08/17 17:4	SB: 0	GB: 0	ST: 0	TM: 149
08/17 17:5	SB: 0	GB: 0	ST: 0	TM: 107