Update on Testing Infrastructure and SVN statistics

## Sergey Lyskov

## Jeff GrayLab JHU 2011

http://rosettatests.graylab.jhu.edu

Monday, August 1, 11

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#### Score Function Fingerprint

#### **Tests Statistics**





**SVN Statistics** 



# **Tests Statistics**

Monday, August 1, 11

• Build tests

- Build tests
- Unit tests



- 127

   76

   41

   17

   2008
   2009
   2010
   2011
- Build tests
- Unit tests
- Integration tests

	2010	2011
Profile Tests	9	11
Performance Tests	9	8
Score Function fingerprint Tests	-	3

- Build tests
- Unit tests
- Integration tests
- Performance tests
- Profile test
- [new this year] Score Function fingerprint



- Profile test
- [new this year] Score Function fingerprint
- Scientific tests

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**Tests Statistics** 



### Score Function Fingerprint

• Each test calls 'version\_scorefunction' (written by Andrew).

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# Score Function: history view

Revision	Age, days	Author	Earliest SVN revision files equal to	Commit message
[T] [@43377]	0	sergey	[@42738]	Dummy commit to trigger sfxn tests diff.
[T] [@43374]	0	sergey	[@42741]	Dummy commit to trigger sfxn tests diff.
[T] [@42776]	28	sergey	[@42738]	Dummy commit to trigger sfxn tests diff.
[T] [@42761]	29	sergey	[@42741]	Dummy commit to trigger sfxn tests diff.
[T] [@42746]	30	sergey	[@42738]	Dummy commit to trigger sfxn tests diff.

# Score Function: history view



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- The burden of keeping track of SF moved from developers to TestingServer.
- In publications, you can precisely specify SF version used. Releases could do that as well.
- History-view allows us to keep track of changes in SF: who/when/ what



#### Score Function Fingerprint





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Categories: Linux Linux.MPI Mac Mac.Clang Windows		Legend: Passed Failed Failed Again Running Exception Offline No data		Personalized fo	Personalized for	
		Linux	Linux.MPI	Мас	Mac.Clang	Windows
43364	cmiles					
Small update to WeightedReservoirSampler. Ignore non-positive weighted items.						
43360	cmiles					
Library for weighted reservoir sampling and unit tests						
43359	smlewis					
adding a comment to AngleConstraint; it appears to take angles in radians; also updating constraint documentation. Why was this not documented before?? No test changes expected.						
43358	momeara					
Minor bug fixes to features cluster scientific benchmark submission.						
43357	weitzner					
Adding docking prepack to mainpage.dox						
43356	sergey					
Docking docs update.						

### Thanks:

# Matthew O'Meara and Samuel DeLuca for setting up and supporting BuildBot daemons on their sites!

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- You can request (re)build for a particular revision using web interface!

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**SVN Statistics** 

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Right now mini source code is ~ 1,426,000 lines long [Last year was at ~1,163,000 lines, so it grew ~23%]

Since last year we have 2,659 revisions committed to mini trunk, thats ~7.3 rev/day [Last year: 2,187 ~ 6 rev/day]

#### Student/postdoc with highest rate of broken builds: Elizabeth H.Kellogg

Time frame:	ast_year \$) Sort by: [build	\$) Show onl	y users who committed at least:	16 + revisions Co!
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integration tests changed (%)
ekellogg	30	4 (13%)	o (o%)	3 (10%)
possu	25	3 (12%)	0 (0%)	2 (8%)
johnk	26	3 (11%)	o (o%)	5 (19%)
Nikolas	20	2 (10%)	o (o%)	2 (10%)
chrisk	32	3 (9%)	o (o%)	11 (34%)
dgront	54	5 (9%)	1 (1%)	19 (35%)
olange	97	8 (8%)	2 (2%)	41 (42%)
tex	141	11 (7%)	2 (1%)	29 (20%)
delucasl	40	3 (7%)	o (o%)	6 (15%)
scombs	45	3 (6%)	1 (2%)	16 (35%)

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olange	97	8 (8%)	2 (2%)	41 (42%)
tex	141	11 (7%) I	Last year highest i	rate was: 18%
delucasl	40	3 (7%)		
scombs	45	3 (6%)	1 (2%)	16 (35%)

#### Student/postdoc with highest rate of broken Unit tests: Gordon Lemmon

Time frame:	ast_year \$) Sort by: unit	\$ Show on	y users who committed at least:	16 + revisions Col
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integration tests changed (%)
glemmon	38	1 (2%)	2 (5%)	15 (39%)
kenjung	35	2 (5%)	1 (2%)	9 (25%)
dimaio	78	2 (2%)	2 (2%)	28 (35%)
scombs	45	3 (6%)	1 (2%)	16 (35%)
leaverfa	95	4 (4%)	2 (2%)	32 (33%)
olange	97	8 (8%)	2 (2%)	41 (42%)
dgront	54	5 (9%)	1 (1%)	19 (35%)
momeara	166	8 (4%)	3 (1%)	59 (35%)
tex	141	11 (7%)	2 (1%)	29 (20%)
cmiles	202	6 (2%)	2 (0%)	27 (13%)

#### Student/postdoc with highest rate of broken Unit tests: Gordon Lemmon

Time frame: [la	ast_year + Sort by: unit	\$) Show on	ly users who committed at lea	ast: 16 🛊 revis	ions Col
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integ	
glemmon	38	1 (2%)	2 (5%)	15 (39%)	Gordon Lemmon
kenjung	35	2 (5%)	(2%) Kenneth J	ung <b>(25%)</b>	
dimaio	78	2 (2%)	2 (2%)	28 (35%)	Frank Dimaio
scombs	45	3 (6%)	1(2%) Steven C	ombs 35%)	
leaverfa	95	4 (4%)	2 (2%)	32 (33%)	
olange	97	8 (8%)	2 (2%)	41 (42%)	
dgront	54	5 (0%)	1 (1%)	19 (35%)	
momeara	Last year h	ighest rate was:	: 11%	59 (35%)	
tex	141	11 (7%)	2 (1%)	29 (20%)	
cmiles	202	6 (2%)	2 (0%)	27 (13%)	

#### Student/postdoc with highest rate of Integration tests change: Monica Berrondo

Time frame: la	st_year + Sort by: (integration	on (\$) Show onl	y users who committed at least	16 + revisions Col
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integration tests changed (%)
monica	16	1 (6%)	o (o%)	9 (56%)
andre	26	1 (3%)	0 (0%)	11 (42%)
olange	97	8 (8%)	2 (2%)	41 (42%)
glemmon	38	1 (2%)	2 (5%)	15 (39%)
csmith	21	o (o%)	0 (0%)	8 (38%)
barak	24	1 (4%)	o (o%)	9 (37%)
dimaio	78	2 (2%)	2 (2%)	28 (35%)
scombs	45	3 (6%)	1 (2%)	16 (35%)
momeara	166	8 (4%)	3 (1%)	59 (35%)
dgront	54	5 (9%)	1 (1%)	19 (35%)

#### Last year highest rate was the same: 56%

sts change: Monica Berrondo

Time frame: la	st_year 🔹 Sort by: (integration	on 🔹 Show onl	y users who committed at least:	16 🛊 revis	sions Col
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integ	in the second (0/)
monica	16	1 (6%)	o (o%)	9 (56%)	Monica Berrondo
andre	26	1 (3%)	Ingemar Andre	11 (42%)	
olange	97	8 (8%)	2 (2%)	41 (42%)	Oliver Lange
glemmon	38	1 (2%)	Gordon Lemmon	15 (39%)	
csmith	21	o (o%)	0 (0%)	8 (38%)	Colin A. Smith
barak	24	1 (4%)	Barak Raveh	<mark>9 (3</mark> 7%)	
dimaio	78	2 (2%)	2 (2%)	28 (35%)	
scombs	45	3 (6%)	1 (2%)	16 (35%)	
momeara	166	8 (4%)	3 (1%)	59 (35%)	
dgront	54	5 (9%)	1 (1%)	19 (35%)	

S

#### Student/postdoc who committed most revisions: Mike Tyka

Time frame: last_year + Sort by: revision + Show only users who committed at least: 16 + revisions Col					
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integration tests changed (%)	
sergey	279	6 (2%)	1 (0%)	27 (9%)	
mtyka	260	12 (4%)	2 (0%)	49 (18%)	
cmiles	202	6 (2%)	2 (0%)	27 (13%)	
sarel	192	7 (3%)	1 (0%)	60 (31%)	
momeara	166	8 (4%)	3 (1%)	59 (35%)	
tex	141	11 (7%)	2 (1%)	29 (20%)	
sheffler	98	o (0%)	o (o%)	2 (2%)	
olange	97	8 (8%)	2 (2%)	41 (42%)	
leaverfa	95	4 (4%)	2 (2%)	32 (33%)	
dimaio	78	2 (2%)	2 (2%)	28 (35%)	
smlewis	77	0 (0%)	o (o%)	20 (25%)	

Sta Time frame: [la User	udent/postd	Last year h	ighest number was: 2	204 sions Collyration tests changed (%)
sergey	279	0 (270)	1 (070)	-/ (9/0)
mtyka	260	12 (4%)	<b>2(0%)</b> Mike Tyka	49 (18%)
cmiles	202	6 (2%)	2 (0%)	271 Christopher Miles
sarel	192	7 (3%)	1(0) Sarel Fleishm	an (31%)
momeara	166	8 (4%)	3 (1%)	59 (3 Matthew O'Meara
tex	141	11 (7%)	2 (19 James Thompso	on ) (20%)
sheffler	98	0 (0%)	o (o%)	2(2% William Sheffler
olange	97	8 (8%)	2) Oliver Lange	41 (42%)
leaverfa	95	4 (4%)	2 (2%)	32 (3: Andrew Leaver-Fay
dimaio	78	2 (2%)	21 Frank Dimaio	28 (35%)
smlewis	77	0 (0%)	o (o%)	20 Steven Lewis

1. More score function tests.

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- 2. New dedicated machine for BuildBot builds (?)

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- 3. More BuildBot builds on different platforms.

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- 3. More BuildBot builds on different platforms.
- 4. New faster Test server for revision-by-revision daemon.

Special Thanks to:

Steven Lewis Matthew O'Meara Vladimir Yarov-Yarovoy

and to everyone else who helped develop and maintain these tests, feedback, and bug reports.

### Thank you!

# List of currently implemented builds:

- Scientific Linux-64 GCC 4.1.2: pilot apps debug/release/release-static
- CentOS Linux-64 GCC 4.5.1 pilot apps release/release-mpi
- Mac GCC 4.2 pilot apps debug/release/release-static
- Mac Clang debug/release
- Windows (cygwin) (I know it is failing, but it is implemented!)





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Profile Tests	9	11
Performance Tests	9	8
Score Function fingerprint Tests	-	3

	2010	2011
Profile Tests	9	11
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#### [2010] User with highest rate of broken builds: Oliver Lange

Time frame: Since last year 🗘 Sort by: Builds broken 🗘 Go!						
User	Revisions commited	Builds broken (%)	Unit tests broken (%)	Integration tests changed (%)		
olange	64	12 (18%)	0 (0%)	22 (34%)		
possu	36	5 (13%)	0 (0%)	7 (19%)		
aroop	38	5 (13%)	0 (0%)	12 (31%)		
dgront	85	11 (12%)	1 (1%)	27 (31%)		
ekellogg	74	8 (10%)	o (o%)	5 (6%)		
barak	20	2 (10%)	o (o%)	7 (35%)		
sid	42	4 (9%)	2 (4%)	11 (26%)		
renfrew	21	2 (9%)	1 (4%)	8 (38%)		
sheffler	43	4 (9%)	0 (0%)	2 (4%)		
rhiju	44	4 (9%)	4 (9%)	10 (22%)		
andre	49	4 (8%)	o (o%)	11 (22%)		
glemmon	25	2 (8%)	o (o%)	14 (56%)		

### List of currently implemented scientific tests:

1. abinitio 2. dna interface design 3. docking 4. ligand docking 5. loop 6. membrane 7. monomer ddg 8. multi\_residue\_ligand\_docking 9. relax 10.rna denovo 11.rna design 12.sequence recovery 13.detailed balance 14.enzdes benchmark **15.**Rotamer Recovery