

Benchmarking

Modulo del Corso di Architettura degli Elaboratori

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Riepilogo

- 1 Phoronix Test Suite
 - Installazione
 - How-to

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Requisiti

- **PHP 5**
- Release ufficiale all'indirizzo
<http://www.phoronix-test-suite.com/?k=downloads>
- modulo **PHP-GTK** (per interfaccia grafica)
- Moduli PHP consigliati:
 - **PHP DOM**
 - **PHP ZIP**
 - **PHP OpenSSL**
 - **PHP GD**
 - PHP Zlib
 - PHP PCNTL
 - PHP POSIX
 - PHP CURL
 - PHP FPDI

Linux

- Installare PHP5 e i moduli necessari con il proprio gestore di pacchetti
- Estrarre l'archivio `phoronix-test-suite-3.x.x.tar.gz`
- Eseguire come amministratore `./install-sh`

Se si desidera la GUI, la libreria PHP GTK è disponibile pacchettizzata per Ubuntu 10.04 all'indirizzo <http://www.phoronix-test-suite.com/misc/php5-gtk-lucid/>. Altrimenti bisogna compilare i sorgenti del modulo disponibili all'indirizzo <http://gtk.php.net/>.

MacOSX

- PHP dovrebbe essere incluso nel sistema. Installare eventualmente i moduli aggiuntivi
- Estrarre l'archivio `phoronix-test-suite-3.x.x.tar.gz`
- Eseguire come amministratore `./install-sh`

Se si desidera la GUI, la libreria PHP GTK è disponibile all'indirizzo <http://php-gtk.eu/en/install-php-gtk-2-on-macos-x>.

Windows

Sconsigliato!

La Phoronix Test Suite in Windows è in fase di sviluppo, ed ha pochi test disponibili.

Riepilogo

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Elencare test e suite (1/3)

Comando	Descrizione
<code>list-available-suites</code>	elena le test suite disponibili dai repository di OpenBenchmarking.org
<code>list-available-tests</code>	elena i test disponibili dai repository di OpenBenchmarking.org
<code>list-installed-suites</code>	elena le test suite installate nel sistema
<code>list-installed-tests</code>	elena i test installati nel sistema

Elencare test e suite (2/3)

```
nicopao@nicopao-laptop:~/Desktop/phoronix-test-suite$ phoronix-test-suite list-available-tests

Phoronix Test Suite v3.0.1
Available Tests

pts/aio-stress           - AIO-Stress           Disk
pts/apache              - Apache Benchmark     System
pts/battery-power-usage - Battery Power Usage  System
pts/blogbench          - BlogBench            Disk
pts/bork                - Bork File Encrypter  Processor
pts/build-apache        - Timed Apache Compilation Processor
pts/build-imagemagick  - Timed ImageMagick Compilation Processor
pts/build-linux-kernel - Timed Linux Kernel Compilation Processor
pts/build-mplayer       - Timed MPlayer Compilation Processor
pts/build-php           - Timed PHP Compilation Processor
pts/bullet              - Bullet Physics Engine Processor
pts/byte                - BYTE Unix Benchmark  Processor
pts/c...                - C...                  Processor
```

Figure: Available tests

Elencare test e suite (3/3)

```
nicopao@nicopao-laptop:~/Desktop/phoronix-test-suite$ phoronix-test-suite list-available-suites

Phoronix Test Suite v3.0.1
Available Suites

pts/audio-encoding          - Audio Encoding          System
pts/chess                   - Chess Test Suite        Processor
pts/compilation             - Timed Code Compilation  Processor
pts/compiler                - Compiler                Processor
pts/compression             - Timed File Compression  Processor
pts/computational           - Computational Test Suite System
pts/computational-biology   - Computational Biology Test Suite Processor
pts/cpu                     - CPU / Processor Suite   Processor
pts/cryptography            - Cryptography            Processor
pts/daily-kernel-tracker    - Daily Kernel Tracker     System
pts/daily-system-tracker    - Daily System Tracker     System
pts/database                - Database Test Suite      System
pts/desktop-graphics        - Desktop Graphics        System
pts/disk                    - Disk Test Suite         Disk
```

Figure: Available suites

Installare e eseguire test e suite (1/5)

Comando	Descrizione
<code>install</code> <code>\$nome_test/\$nome_suite</code>	installa il test (o la suite) specificato
<code>benchmark</code> <code>\$nome_test/\$nome_suite</code>	installa (se necessario) ed esegue il test (o la suite) specificato
<code>run</code> <code>\$nome_test/\$nome_suite</code>	esegue il test (o la suite) specificato

Installare e eseguire test e suite (2/5)

```
└─Zip Compression:
pts/compress-7zip-1.5.0
Test 1 of 4
Expected Trial Run Count: 3
  Started Run 1 @ 11:30:20
  Started Run 2 @ 11:30:52
  Started Run 3 @ 11:31:25 [Std. Dev: 1.61%]

Test Results:
4141
4024
4032

Average: 4066 MIPS


Gzip Compression:
pts/compress-gzip-1.1.0
Test 2 of 4
Expected Trial Run Count: 3
Running Pre-Test Script @ 11:32:06
  Started Run 1 @ 11:32:44
  Started Run 2 @ 11:33:27
  Started Run 3 @ 11:33:47 [Std. Dev: 46.02%]
  Started Run 4 @ 11:34:07 [Std. Dev: 42.69%]
  Started Run 5 @ 11:34:27 [Std. Dev: 39.94%]
  Started Run 6 @ 11:34:47 [Std. Dev: 37.56%]
Running Post-Test Script @ 11:35:05

Test Results:
37.233104944229
17.800881147385
17.908066987991
17.849029064178
17.79515004158
17.871964931488

Average: 21.08 Seconds
```

Figure: run compression suite

Installare e eseguire test e suite (3/5)

compression_test	
	intel_i9400
Processor	Intel Core 2 Duo T9600 @ 2.53GHz (2 Cores)
Motherboard	TOSHIBA Portable PC
Chipset	Intel Mobile 4 MCH + ICH9M
Memory	4096MB
Disk	250GB Western Digital WDC WD2500BEVS-2 + 250GB TOSHIBA MK2552GS
Graphics	ATI Mobility Radeon HD 3650 512MB (600/500MHz)
Audio	Realtek ALC268
Monitor	LP154WX4-TLC8
OS	Ubuntu 10.04
Kernel	2.6.32-31-generic (x86_64)
Desktop	GNOME 2.30.2
Display Server	X Server 1.7.6
Display Driver	fglrx 8.72.11
OpenGL	3.2.9756
Compiler	GCC 4.4.3
File-System	ext4
Screen Resolution	1280x800

PHORONIX-TEST-SUITE.COM

Figure: Results - System info

Installare e eseguire test e suite (4/5)


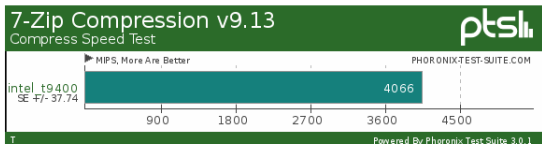
compression_test		
	Intel _® i9400	
7-Zip Compression	4066	
Gzip Compression	21.08	
Parallel BZIP2 Compression	35.15	
LZMA Compression	226.82	
PHORONIX-TEST-SUITE.COM		

Figure: Results - Riepilogo

Installare e eseguire test e suite (5/5)

Test Results

7-Zip Compression ^{9.13}



Gzip Compression

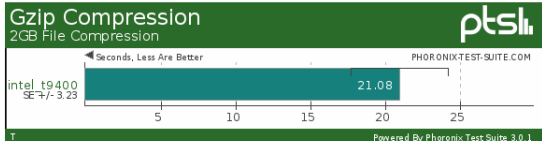


Figure: Results - Dettaglio

Creare una propria suite (1/2)

2 modi:

- comando `build-suite`: fornisce una procedura guidata
- creare manualmente il `suite-definition.xml`

Creare una propria suite (2/2)

```
<?xml version="1.0"?>
<!--Phoronix Test Suite v3.0.1 (Ireland)-->
<PhoronixTestSuite>
  <SuiteInformation>
    <Title>suite_prova</Title>
    <Version>1.0.0</Version>
    <TestType>Processor</TestType>
    <Description>solo una prova</Description>
    <Maintainer>Nicola Paoletti</Maintainer>
  </SuiteInformation>
  <Execute>
    <Test>pts/apache</Test>
  </Execute>
  <Execute>
    <Test>pts/computational-biology</Test>
  </Execute>
</PhoronixTestSuite>
```

Figure: suite-definition.xml