


Free and Cheap Test Tools



Cheap and Free Test Tools

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At the Start

- This will be an interactive session
 - Some demos and videos
- Screenshots
- Helpful hints
- I get no compensation from tool vendors, but I do get review licenses for some of the tools.

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Free and Cheap Test Tools



We Can't Cover All Tools

- I focus on tools you may not have heard about.
- I welcome hearing about free and inexpensive tools you have found helpful.
 - At the end of each tool type, I'll ask for your suggestions about other tools.

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Constraints

- You may find it hard to get your management to consider using an open-source or free tool.
- Some companies are heavily invested in commercial tools (that may or may not be the best ones for you), so they keep out any other options.

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Common Acceptance Issues

- Security
 - Code vulnerabilities
- Vendor uncertainty
 - Open source has none
 - Small vendors are often acquired
- Support levels
- Future tool direction
 - Free, paid, or no growth at all

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A Strategy For Acceptance

- Make the business case in cost vs. benefits.
 - Also, bring out the reality of having a free tool vs. no tool.
- Include information about companies like Sun, IBM, and Microsoft that have contributed open-source and free software.

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Free and Cheap Test Tools



Think About Commercial Tools

- Security
 - Do commercial tools have security issues?
- Vendor certainty
 - Are larger vendors acquired?
- Direction of the tool
 - Do major tools fade away?
- Support levels
 - Are major tools well-supported?

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What's the Answer?

- Keep an open mind.
- You can be successful with a wide variety of tools if you get a "best fit" for your needs.
- Price is not the best way to determine tool quality or applicability to your needs.

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Free and Cheap Test Tools



Evaluations

- Regardless of the tool cost or source, you should do a good evaluation and proof of concept.
- Even free tools require an investment of time to:
 - Learn
 - Install
 - Maintain

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Your Personal Toolkit

- As a tester, it's good to have your own set of test tools.
 - You don't get locked into one tool set.
 - You can learn on your own.
 - You can be a value-added resource in your company concerning test tools.
 - You can take your tools wherever you go!

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Free and Cheap Test Tools



Tool Types We Will Cover

- Test Design
- Test Execution
- Test Management
- Test Data
- Test Evaluation
- Defect Tracking
- Special Applications – SOA, Load testing, Web testing

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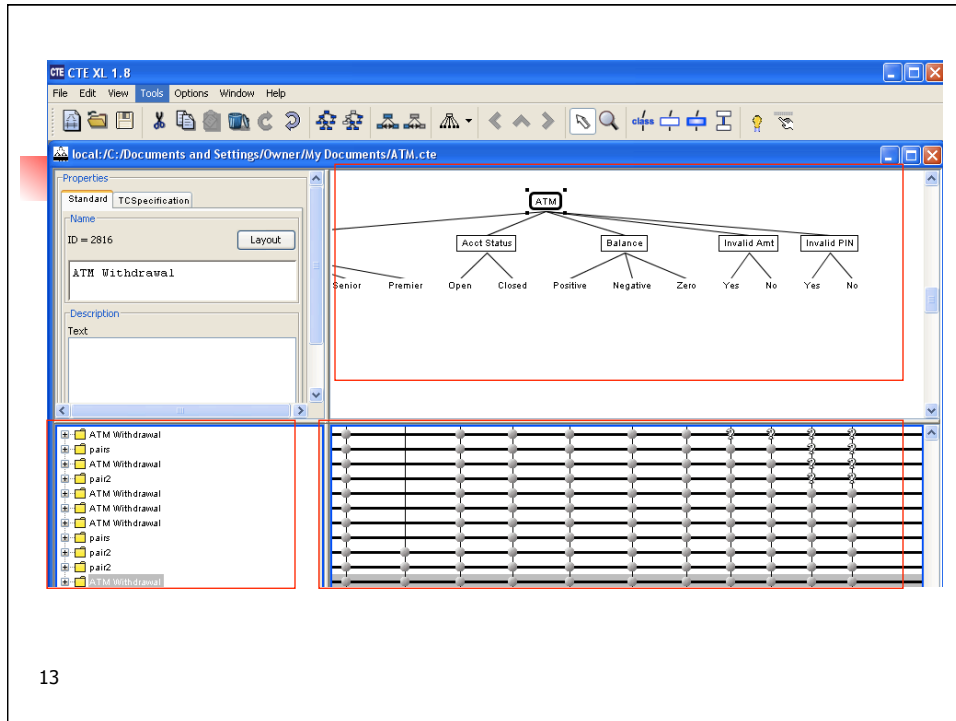


Test Design


- CTE-XL for classification trees
- Testersdesk.com
- ACTS - www.nist.gov
- AllPairs – www.satisfice.com
- PICT – www.microsoft.com
 - More at www.pairwise.org
- METS – Minimal Essential Testing Strategy - <http://www.gregpaskal.com/mets/>

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CTE-XL

- Recently acquired by Berner-Mattner
 - www.berner-mattner.com
- Free version still available
 - And will remain available
- Pro version with extended functionality
- Based on the classification tree approach
- Generates test cases in a variety of ways.

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The screenshot displays the CTE XL 1.8 software interface. The main window shows a hierarchical tree structure for an 'ATM' test case. The root node is 'ATM', which branches into four categories: 'Acot Status', 'Balance', 'Invalid Amt', and 'Invalid PIN'. 'Acot Status' further branches into 'Senior', 'Premier', 'Open', and 'Closed'. 'Balance' branches into 'Positive', 'Negative', and 'Zero'. 'Invalid Amt' branches into 'Yes' and 'No'. 'Invalid PIN' branches into 'Yes' and 'No'. Below the tree, a test matrix is shown with columns corresponding to the categories and rows for test cases. The matrix contains black dots indicating which categories are active for each test case. On the left, a properties panel shows details for 'ATM Withdrawal' (ID = 2816) and a list of test cases: 'pairs.Testcase 1' through 'pairs.Testcase 8'. The number '15' is visible in the bottom left corner of the screenshot.

Testersdesk.com

- A free web service to create test cases:
 - Pairwise
 - N-way/Random
 - T-way
 - Subsets
 - Boundary tests
 - Test permutations
- Also generates test data

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Pairwise TestCase Generator
to reduce test combinations with pairwise coverage

T-way TestCase Generator
to reduce test combinations with increased coverage


N-way/Random TestCase Generator
to select test combinations randomly or completely

Subset TestCase Generator
to collect all subsets of a specified size from n test items

Boundary TestCase Generator (BVA++)
to test interactions between boundaries of fields with ranges

TestCase Permutations Generator
to generate all orders of test input sequences

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Pairwise TestCase Generator
The essence of genius is to know what to overlook. William James

[Load/fill example inputs](#) [Upload input from a file](#) [Read Common Questions](#)

Enter the test parameters with their values:

Journey mode: Return trip, One way
Preferred time: Morning, Afternoon, Evening, Late night
Leaving from: Type1_City, Type2_City, Type3_City
Going to: Type1_City, Type2_City, Type3_City
Booking type: Economy, First class
Customer type: Registered, New
Adults: 1, 2, 3, 4, 5, 6
Children: 0, 1, 2, 3, 4

[Display results](#) [Download results \(CSV\)](#) [Reset/clear](#)

Tool information
Getting started
Step 1: Read the **Context of this tool** (see below)
Step 2: Provide your input (test parameters and their values) in the below format

```
Param1=v1,v2,v3,v4  
Param2=v1,v2  
Param3=v1,v2,v3  
...
```


Step 3: Click **Display Results** to see the reduced number of test cases in the browser or click **Download Results** if you want to save the results to your local filesystem
Step 4: Click **Common Questions** for more

Note: Click on **Load/fill example inputs** button to experience the tool

Context of this tool
Input/Output constraints

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Tool information

Getting started

Step 1: Read the **Context of this tool** (see below)

Step 2: Provide your input (test parameters and their values) in the below format

```
Param1:v1,v2,v3,v4
Param2:v1,v2
Param3:v1,v2,v3
...
```

Step 3: Click **Display Results** to see the reduced number of test cases in the browser or click **Download Results** if you want to save the results to your local filesystem


Step 4: Click **Common Questions** for more

Note: Click on **Load/fill example inputs** button to experience the tool

Context of this tool

Input/Output constraints

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Tool information

Getting started


Context of this tool

- This tool is helpful in situations where several test parameters exist each of which takes several values, resulting in a prohibitively high number of Test Combinations.
- It generates a reduced set of test cases covering all the pair/two-way interactions between those test parameters, and help reduce the test effort in a reasonable way.
- Several testers have judiciously used this tool to reduce millions of test combinations into just a vital few, and successfully found defects in a short time.

Input/Output constraints

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Tool information	
Getting started	
Context of this tool	
Input/Output constraints	
Minimum Test Parameters:	2
Maximum Test Parameters:	20
Average number of values for all parameters together cannot exceed 10	

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Request Timestamp: Jul 26, 2010 7:44:36 PM
 Total possible Test Combinations: 8640
 Pairwise Test Combinations from TestersDesk: 31










[Show results in CSV format](#) [Show results in XML format](#)

	Journey mode	Preferred time	Leaving from	Going to	Booking type	Customer type	Adults	Children
1	Return trip	Morning	Type1_City	Type1_City	Economy	Registered	1	0
2	One way	Afternoon	Type2_City	Type2_City	First class	New	1	1
3	Return trip	Evening	Type3_City	Type3_City	First class	Registered	1	2
4	One way	Late night	Type1_City	Type2_City	Economy	New	1	3
5	One way	Morning	Type2_City	Type3_City	Economy	Registered	1	4
6	One way	Afternoon	Type3_City	Type1_City	First class	New	2	0
7	Return trip	Evening	Type1_City	Type3_City	Economy	New	2	1
8	Return trip	Late night	Type2_City	Type1_City	First class	Registered	2	2
9	Return trip	Morning	Type3_City	Type2_City	First class	Registered	2	3
10	Return trip	Afternoon	Type1_City	Type1_City	First class	New	2	4
11	One way	Evening	Type2_City	Type2_City	Economy	Registered	3	0
12	Return trip	Late night	Type3_City	Type3_City	Economy	New	3	1
13	One way	Morning	Type1_City	Type1_City	Economy	New	3	2
14	any_value_of_Jour	Afternoon	Type2_City	Type3_City	First class	Registered	3	3
15	any_value_of_Jour	Evening	Type3_City	Type2_City	any_value_of_Bool	any_value_of_Cust	3	4
16	One way	Late night	Type1_City	Type3_City	Economy	Registered	4	0
17	Return trip	Morning	Type2_City	Type1_City	First class	New	4	1
18	any_value_of_Jour	Afternoon	Type3_City	Type2_City	Economy	any_value_of_Cust	4	2
19	any_value_of_Jour	Evening	any_value_of_Leav	Type1_City	any_value_of_Bool	any_value_of_Cust	4	3
20	any_value_of_Jour	Late night	any_value_of_Leav	any_value_of_Goir	any_value_of_Bool	any_value_of_Cust	4	4
21	One way	Morning	Type1_City	Type2_City	First class	Registered	5	0

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 Common Test Data Generators to quickly generate test input data of several types and quantities	 Template-based File Generator to generate multiple test data files from a Template and CSV data file
 Size-based File Generator to generate a batch file that creates a file of the specified type and size	 Date/Time (Timestamp) Generator to generate date and time values in the specified format and timezone
 Password Test Generator to generate valid & invalid values to test a password field's test requirements	 Luhn (Mod-10) Number Generator to generate valid or invalid numbers based on Luhn (Mod-10) algorithm
 Person Name Generator to generate real person names with the specified gender, format and quantity	 Universal Unique ID Generator to generate Universally Unique IDs for test fields that need globally unique values
 E-Mail Address Generator to generate several test e-mail addresses in the valid format	

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 SQL Injection Test Generator to generate a single automated and downloadable webpage that can test SQL Injection attacks on the target form	 OS Information Scripts downloadable scripts that can show OS level information on the test machine hardware, processes, software etc
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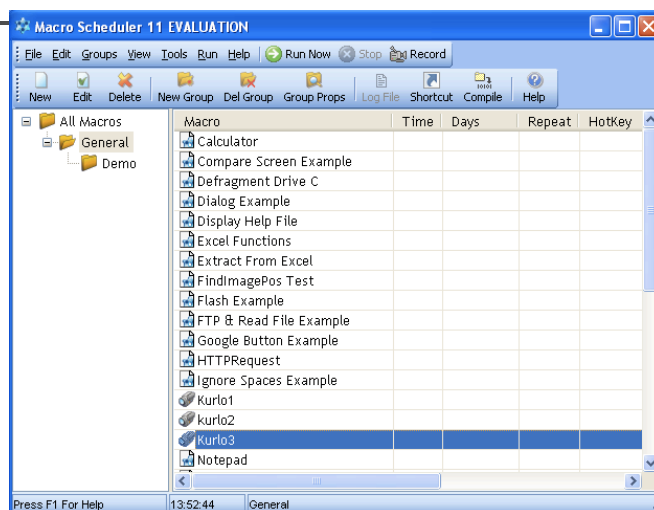
Test Execution

- Macro Scheduler
 - www.mjtnet.com
 - Windows only
 - Row/Column oriented
 - Has object recognition for some Windows objects
 - Will execute VB Script
 - \$29 to \$195 per individual license
 - \$595 for enterprise license
 - Like capture/playback, but no comparison features
 - Has a very robust scripting language



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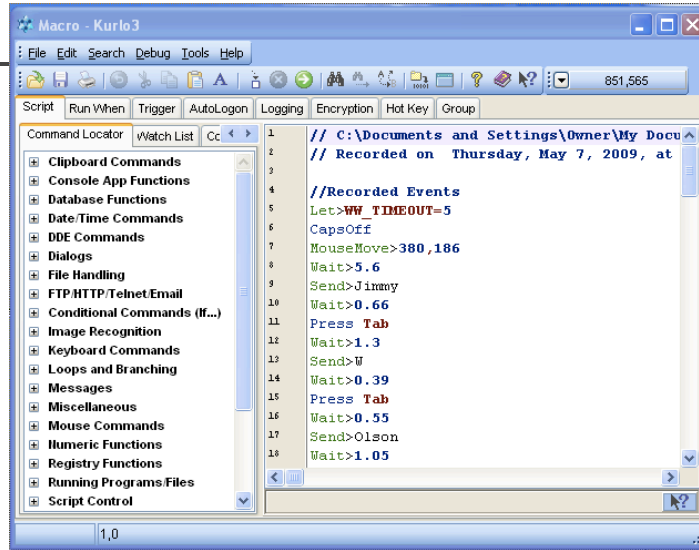
Macro Scheduler Main Interface



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Macro Scheduler Script Editor



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Example Script (1)

```
1 // C:\Documents and Settings\Owner\
2 // Recorded on Thursday, May 7, 20
3
4 //Recorded Events
5 Let>WW_TIMEOUT=5
6 CapsOff
7 MouseMove>380,186 ← Row, column
8 Wait>5.6 ← Data
9 Send>Jimmy ← Keystroke
10 Wait>0.66 ← Wait time
11 Press Tab
12 Wait>1.3
13 Send>W
14 Wait>0.39
15 Press Tab
16 Wait>0.55
17 Send>Olson
18 Wait>1.05
19 Press Tab
20 Wait>0.81
21 MouseMove>369,221
22 Wait>0.82
23 LClick
24 Wait>0.16
25 MouseMove>348,246
26 Wait>1.28
```

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Example Script (2)

```
50 Wait>0.45
51 LClick
52 WaitWindowOpen>Address Book Required
53 MoveWindow>Address Book Required,420,313
54 ResizeWindow>Address Book Required,307,124
55 Wait>0.06
56 MouseMove>576,409
57 Wait>2.12
58 LClick
59 WaitWindowOpen>Jimmy Olson
60 MoveWindow>Jimmy Olson,246,95
61 ResizeWindow>Jimmy Olson,655,561
62 Wait>0.06
63 MouseMove>644,518
64 Wait>2.8
65 LClick
66 Wait>0.14
67 MouseMove>788,635
68 Wait>1.52
69 LClick
70 WaitWindowOpen>Kurlo
71 MoveWindow>Kurlo,-4,-4
72 ResizeWindow>Kurlo,1032,746
73 Wait>0.06
74 MouseMove>929,750
75 Wait>3.51
```

Object Recognition

Duplicated Data

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Sample Data-Driven Script

```
4 //Specify the path of the file here
5 Let>k=1
6 Label>start
7 ReadLn>c:\kurlo.txt,k,line
8 If>line===EOF###,finish ← Loop
9
10 SetFocus>Kurlo
11 MouseMove>69,7
12 Wait>3
13 LClick
14 Press ALT
15 Send>c
16 Release ALT
17 Wait>1.27
18 Press Enter
19 Wait>3.16
20 Send>%line%
21 Wait>1.33
22 Press Tab
23 Wait>1.3
24 Let>k=k+1
25 ReadLn>c:\kurlo.txt,k,line
26 Send>%line% ← Input to screen
27 Wait>0.49
```

Test Data File

Read from file

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Free and Cheap Test Tools



Selenium IDE

- Firefox add-on that records clicks, typing, and other actions to make a test, which you can play back in the browser.

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Selenium IDE (2)

- Selenium IDE is not only recording tool: it is a complete IDE.
- You can choose to use its recording capability, or you may edit your scripts by hand.
- With autocomplete support and the ability to move commands around quickly, Selenium IDE is the ideal environment for creating Selenium tests no matter what style of tests you prefer.

Source: <http://seleniumhq.org>

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Selenium IDE Features

- Easy record and playback
- Intelligent field selection will use IDs, names, or XPath as needed
- Autocomplete for all common Selenium commands
- Walk through tests
- Debug and set breakpoints
- Save tests as HTML, Ruby scripts, or any other format

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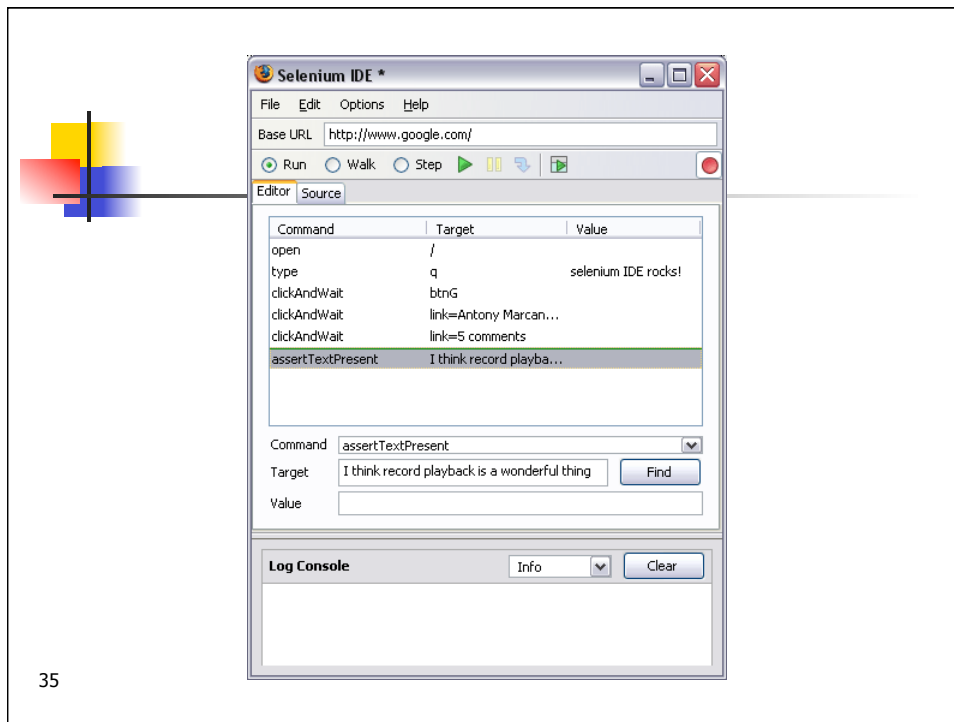


Selenium IDE Features (2)

- Support for Selenium user-extensions.js file
- Option to automatically assert the title of every page
- NEW! Easy customization through plugins

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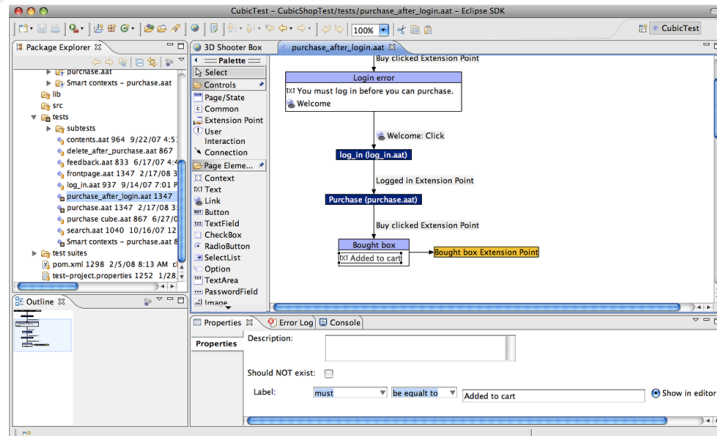
Cubic Test

- CubicTest is a graphical Eclipse plug-in for writing Selenium and Watir tests.
- CubicTest's test editor is centered around pages/states and transitions between these pages/states.
- CubicTest features an innovative test recorder and test runner based on Selenium RC which are fully integrated with the graphical test editor.

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Cubic Test



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Bad Boy



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Bad Boy

- Record/playback
- Free for individuals and deployments of 5 computers or less & not-for-profits
- \$45/user license fee otherwise
- <http://www.badboy.com.au/>

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Cucumber

- <http://cukes.info/>
- Cucumber is a tool that executes plain-text functional descriptions as automated tests.
- The language that Cucumber understands is called [Gherkin](#)

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Cucumber Language Example

```
Feature: Search courses
  In order to ensure better utilization of courses
  Potential students should be able to search for courses

Scenario: Search by topic
  Given there are 240 courses which do not have the topic "biology"
  And there are 2 courses A001, B205 that each have "biology" as one of the topics
  When I search for "biology"
  Then I should see the following courses:
  | Course code |
  | A001        |
  | B205        |
```

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Other Free Test Execution Tools

- FitNesse - <http://fitnesse.org>
- Apodora - <http://sourceforge.net/projects/apodora/>
- AutoIT - <http://www.autoitscript.com/autoit3/index.shtml>
- Frankenstein – <http://frankenstein.openqa.org/>
- WET - Commercial grade Opensource Web automation testing tool - <http://wet.openqa.org>
- Grease Monkey - <http://testertools.com/browsers-based-tools/grease-monkey-web-testing-tool-with-scripts/>

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Test Management

■ Testopia

- Testopia is a test case management extension for Bugzilla.
- It is designed to be a generic tool for tracking test cases, allowing for testing organizations to integrate bug reporting with their test case run results.
- Though it is designed with software testing in mind, it can be used to track testing on virtually anything in the engineering process.
- <http://sourceforge.net/projects/testopia>

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Test Run 1: Run 1

Overview

Plan	Plan Test Version	Start Date
Test Plan	1	2006-03-22 00:00:00 MDT
Product	Product Version	Stop Date
TestProduct		
Manager	Status	Default Tester
Greg_sghendricks@novell.com	RUNNING	Greg_sghendricks@novell.com

[Create regression test cases](#) [Delete test run](#) [Clone Test Run](#) [Add Test Cases](#) [View Run History](#)

Tags

CC List	Case Run Status	Tags
a@b.c <input type="button" value="Add"/>	*todo: Show todo' test case logs	Scott <input type="button" value="Add"/>
ghendricks@novell.com	Passed: Show passed test case logs	www [i]
a@b.c	Failed: Show failed test case logs	see [i]
<input type="button" value="Remove"/>	Total: Show all test case logs	url [i]
	% Completed: <input type="text" value="20"/>	

Test Case Run Logs

Case ID	Build	Assigned	Tested by	Close Date	Status	Category	Bugs
1	56a	as@b.c	ghendricks@novell.com	2006-04-04 23:06:56	✓	My Cat	0

Summary: FIVE

Action: TEXT	Effect: MORE TEXT
--------------	-------------------

Notes:

Running by me, started at:

Bugs detected: [.] a@b.c

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Reports

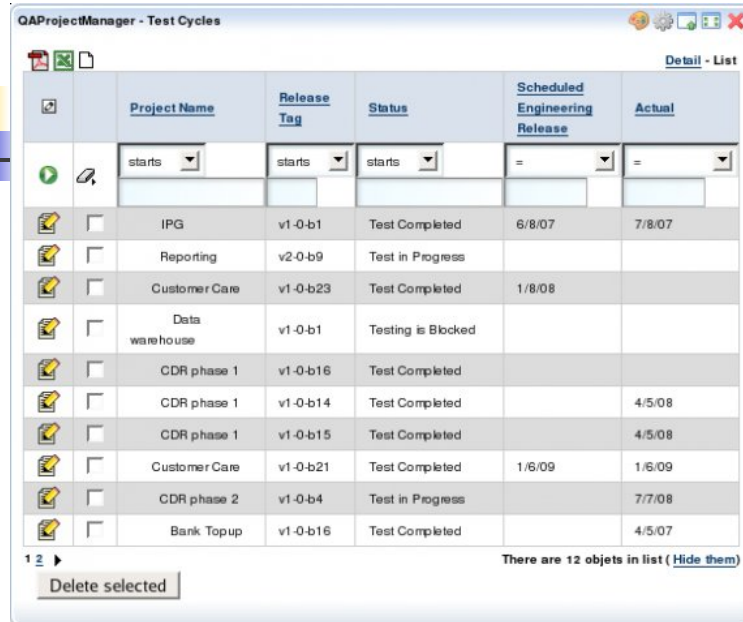
[Test log](#) | [Test incident](#) | [Bugs detected in this test run](#) | [Bugs severity status](#) | [Test burnout chart](#)

Free and Cheap Test Tools

Test Management (2)

- qaManager
 - <http://sourceforge.net/projects/qamanager>
 - web based application used for keeping track of engineering and customer releases of Software Projects, Resource allocations and related information.
 - It helps QA Managers to keep track of releases effectively. Powered by OpenXava and Java.

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The screenshot shows the QAProjectManager - Test Cycles application window. It features a table with columns for Project Name, Release Tag, Status, Scheduled Engineering Release, and Actual. The table contains 12 rows of data, including projects like IPG, Reporting, Customer Care, Data warehouse, CDR phase 1, and Bank Topup. The status of each project is indicated, such as 'Test Completed', 'Test in Progress', or 'Testing is Blocked'. The application also includes a search bar at the top and a 'Delete selected' button at the bottom.

	Project Name	Release Tag	Status	Scheduled Engineering Release	Actual
	starts	starts	starts	=	=
<input type="checkbox"/>	IPG	v1-0-b1	Test Completed	6/8/07	7/8/07
<input type="checkbox"/>	Reporting	v2-0-b9	Test in Progress		
<input type="checkbox"/>	Customer Care	v1-0-b23	Test Completed	1/8/08	
<input type="checkbox"/>	Data warehouse	v1-0-b1	Testing is Blocked		
<input type="checkbox"/>	CDR phase 1	v1-0-b16	Test Completed		
<input type="checkbox"/>	CDR phase 1	v1-0-b14	Test Completed		4/5/08
<input type="checkbox"/>	CDR phase 1	v1-0-b15	Test Completed		4/5/08
<input type="checkbox"/>	Customer Care	v1-0-b21	Test Completed	1/6/09	1/6/09
<input type="checkbox"/>	CDR phase 2	v1-0-b4	Test in Progress		7/7/08
<input type="checkbox"/>	Bank Topup	v1-0-b16	Test Completed		4/5/07

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Free and Cheap Test Tools

Test Management (2)

- TestMaster
 - <http://testmaster.sourceforge.net/>
 - A test case logging, reporting and test automation tool, much like the commercial product Test Director.

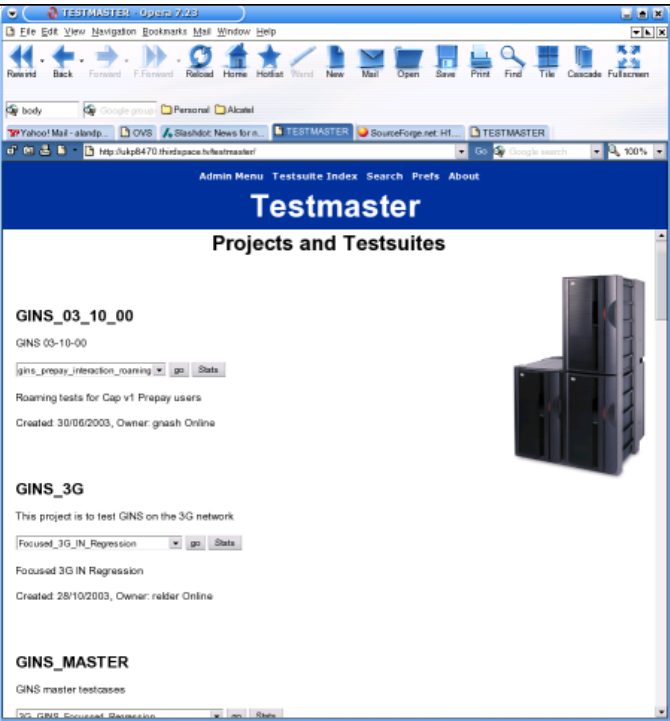
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The screenshot displays the TestMaster web application interface. The browser window title is "TESTMASTER - Opera 7.0.2". The address bar shows the URL "http://knp8470.thd.space/http://testmaster/testtracker.cgi?operation=RetrieveAllTestcases". The page header includes "Admin Menu Testsuite Index Search Prefs About" and the "Testmaster" logo. The main content area is a table listing test cases with columns for ID, description, status, user, date, and count.

Test Case ID	Description	Status	User	Date	Count
AcctPartN-002.01	Verify that the IN Prepay application on the SCP specifies the following pre-defined set of account partitions at the Service Provider and Product levels: Family & Friends, Best Friends, and General Minutes. Confirm that each of these pre-defined account partitions are defined for Voice Tariffs. Further confirm that the pre-defined account partitions have separate balances for Off-Peak and Peak calls.	Hold	testmaster	22/04/2004	0
AcctPartN-002.02	Verify that the P-SMS specifies the following pre-defined set of account partitions at the Service Provider and Product levels: Family & Friends, Best Friends, and General Minutes. Confirm that each of these pre-defined account partitions are defined for Voice Tariffs. Further confirm that the pre-defined account partitions have separate balances for Off-Peak and Peak calls.	Pass	apearson	15/01/2003	0
AcctPartN-003.01	Verify that up to 15 user-definable account partitions can be defined for a given ServiceProvider.	Pass	apearson	15/01/2003	0
AcctPartN-003.02	Verify that when a Product is created, there are no user-definable account partitions defined for that Product.	Pass	apearson	15/01/2003	0
AcctPartN-003.03	Verify that a Maximum Balance for Peak and Off-Peak periods can be specified for each user-definable account partition.	Fail	testmaster	22/04/2004	1
AcctPartN-003.04	Verify that a user-definable account partition can be associated with the "Voice" TariffType.	Pass	apearson	15/01/2003	0
AcctPartN-003.05	Verify that a user-definable account partition can be associated with the "Data" Tariff Type.	In Progress	testmaster	22/04/2004	0
AcctPartN-003.06	Verify that a user-definable account partition can be associated with the "SMS" Tariff Type.	Pass	apearson	16/01/2003	0
AcctPartN-003.07	Verify that a user-definable account partition can be associated with the "Application Event" Tariff Type.	Pending	testmaster	22/04/2004	0
AcctPartN-003.08	Verify that a user-definable account partition must be associated with a Tariff Type.	Pass	apearson	16/01/2003	0

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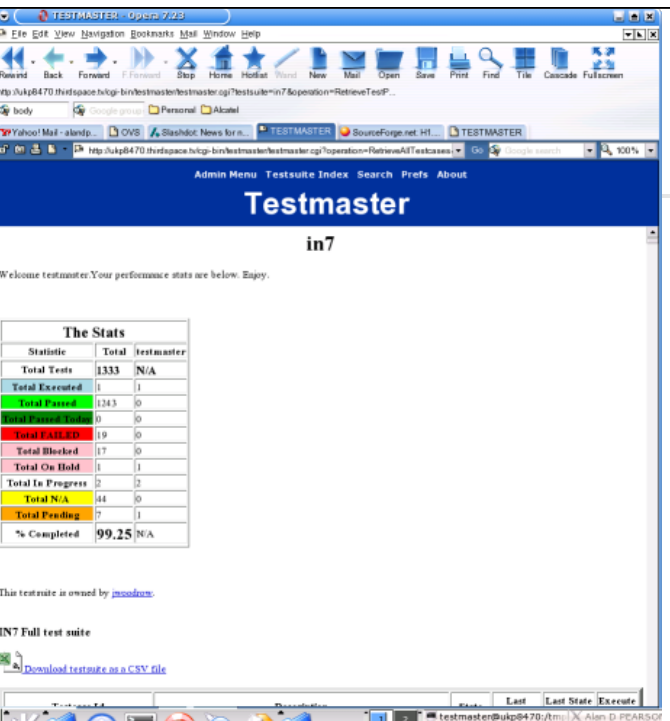


The screenshot shows the Testmaster web interface in a browser window. The page title is "Testmaster" and the subtitle is "Projects and Testsuites". There are three project entries listed:

- GINS_03_10_00**: GINS 03-10-00. Description: Roaming tests for Cap v1 Prepay users. Created: 30/06/2003, Owner: gnash Online.
- GINS_3G**: This project is to test GINS on the 3G network. Description: Focused 3G IN Regression. Created: 28/10/2003, Owner: raldier Online.
- GINS_MASTER**: GINS master testcases.

Each entry includes a dropdown menu for selecting a test suite and a "State" button. To the right of the list is an image of server hardware.

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The screenshot shows the Testmaster web interface displaying test statistics for the "in7" test suite. The page title is "Testmaster" and the subtitle is "in7". A welcome message reads: "Welcome testmaster: Your performance stats are below. Easy."

The Stats

Statistic	Total	testmaster
Total Tests	1333	N/A
Total Executed	1	1
Total Passed	1243	0
Total Passed Total	0	0
Total FAILED	19	0
Total Blocked	17	0
Total On Hold	1	1
Total In Progress	2	2
Total N/A	44	0
Total Pending	7	1
% Completed	99.25	N/A

Below the table, it states: "This test suite is owned by [pauldixon](#)." and "IN7 Full test suite". There is a link to "Download test suite as a CSV file".

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TESTMASTER - Opera 7.23

File Edit View Navigation Bookmarks Mail Window Help

http://ukp8470.thetospace.biz/testmaster/testmaster_admin.cgi?operation=CreateTestSuite&prev...

body | Google gmail | Personal | Alcatel

Yahoo! Mail - alandp... | OVS | Slashdot: News for... | TESTMASTER | SourceForge.net: HI... | TESTMASTER

http://ukp8470.thetospace.biz/testmaster/

User Menu Dept Admin Project Admin Testsuite Admin User Admin Reporting Admin About

Testmaster

Add testcases

There are currently 4 methods to add testcases to a testmate.

1. Upload a CSV file of testcases
2. Upload a formatted word document of testcases
3. Add a single testcase
4. Add testcases from an existing testmate designated as a template

The Checked In By field should be used to choose who actually wrote the testcase, as not all users have the privilege to check in testcases, but all can write them. It should be noted that a testmate, project or department administrator will only be able to see users in their own department, where a tm_admin will be able to choose from users in any department.

Department:

Project:

Testsuite:

Checked In by:

Upload a CSV or MS word doc file
Upload CSV file or a word document in the correct format expected by testmaster.

Filename:

Add a single testcase

Testcaseid:

Section Name:

Description:

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TESTMASTER - Opera 7.23

File Edit View Navigation Bookmarks Mail Window Help

body | Google gmail | Personal | Alcatel

Yahoo! Mail - alandp... | OVS | Slashdot: News for... | TESTMASTER | SourceForge.net: HI... | TESTMASTER

http://ukp8470.thetospace.biz/testmaster/

Admin Menu Testsuite Index Search Prefs About

Testmaster

2GCF.N-006.05

/in7 / 2G Call Forwarding / 2GCF.N-006.05 | change

Testcase:

Confirm that an ERAD is produced if the calling for a Call Forward fails due to a non-configured Range. If on editing this testcase...

Test Procedure:

No one has uploaded the test procedure yet.

Check in details:

Checked in by: apearson on 04/12/2002

References:

This testcase is derived from requirement: 2GCF.N-006.05

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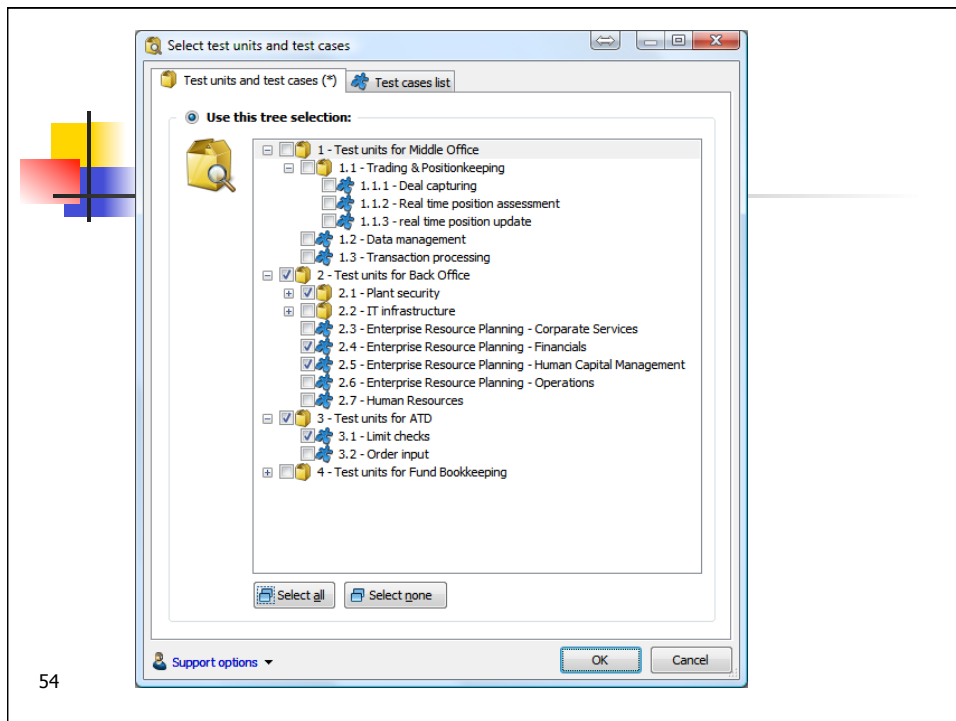
Free and Cheap Test Tools



Zeta Test

- Zeta Test is an integrated test management environment that enables you to perform black-box tests, white-box tests, regression tests or change management tests of software applications.
- Zeta Test helps you to plan, perform, log, monitor and document the tests, and then to evaluate the test results.
- Cost – Free
- www.zeta-test.com

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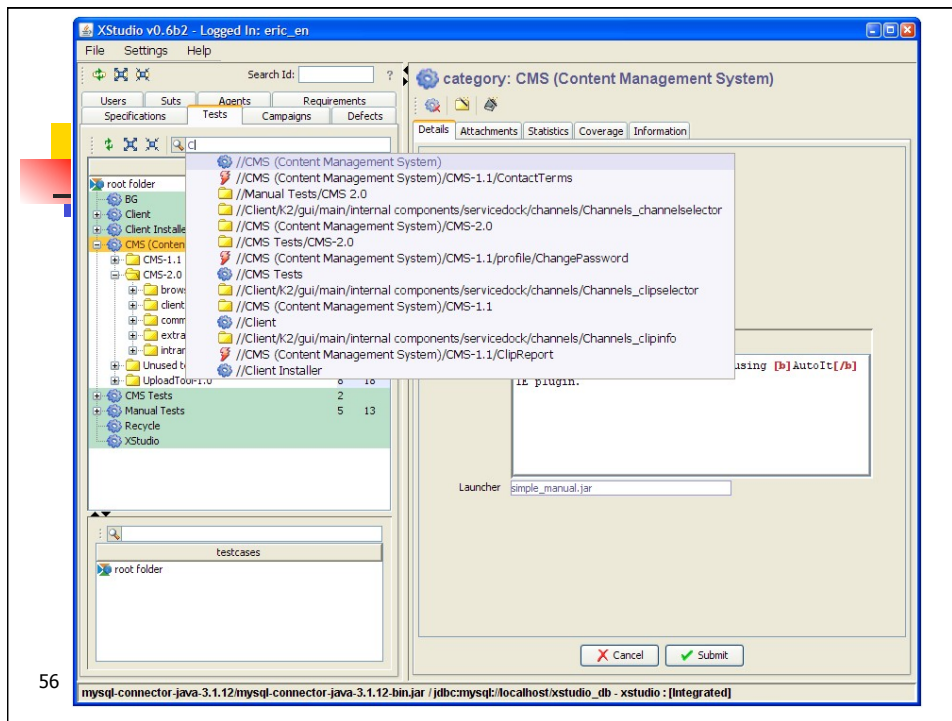
54

Free and Cheap Test Tools



- Free at <http://www.xqual.com>
- XStudio is a fully-graphical application developed in Java (so theoretically deployable on any OS).
- All of the data are organized within trees for more flexibility.
- Integrated management - All entities involved in the QA/testing projects are managed by XStudio.
 - This makes lots of metrics/statistics/status generation much more easier.

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Free and Cheap Test Tools



Bromine

- <http://bromine.seleniumhq.org/>
- Part of the Selenium suite of tools
- Web-based QA tool for Selenium, that enables you to easily run Selenium-RC tests and view the results.
- It scales from the single tester that just wants to run some tests without all the hassle to the corporate solution with multiple user-groups and hundreds of test cases.

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Test Data Generation

- Generatedata.com
 - www.generatedata.com
 - Creates test data in a variety of forms:
 - Text, cvs, XML, Excel, SQL
 - Free and Cheap Subscriptions Available
- DBFeeder - Free
 - Automatically generate test data for Oracle Databases which fits primary and foreign keys of tables.
 - <http://dbfeeder.sourceforge.net/index.html>
- Testersdesk.com – Free
- Fake Name Generator – Free - <http://www.fakenamegenerator.com/>

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Free and Cheap Test Tools

GENERATEDATA.COM

About Generator Download Donate Log In Forums

Result type: HTML Excel XML CSV SQL

Country-specific data: Canada Netherlands UK US

Number of results:

Order	Column Title	Data Type	Examples	Options	Help
1	Name	Name	John (Male Name)	MaleName	
2	Phone	Phone/Fax	Canada (1)	1-XXX-XXX-XXXX	
3	Country	Country	No examples available.	No options available.	
4	Date	Date	Jan 1, 2006	From: 06/05/2007 To: 06/05/2009 Format code: M j, Y	
5		Please Select			


Add Row(s)

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Name	Phone	Country	Date
Fitzgerald	1-696-847-9724	Uzbekistan	Mar 22, 2009
Harrison	1-616-877-0863	Nigeria	Nov 12, 2007
Tiger	1-832-613-9835	Nepal	Aug 30, 2007
Raja	1-465-605-0566	Iran, Islamic Republic of	Dec 10, 2008
Gavin	1-442-189-9731	Estonia	Aug 5, 2008
Ivan	1-523-879-6151	Romania	Mar 9, 2009
Jonah	1-771-445-7800	Sweden	May 26, 2008
Sawyer	1-975-398-7400	Ecuador	Nov 14, 2008
Raymond	1-189-506-0741	Brunei Darussalam	Sep 26, 2008
Tate	1-797-795-5931	Estonia	Jan 19, 2008
Denton	1-907-919-7187	Poland	Jul 3, 2008
Steven	1-476-897-6663	Iran, Islamic Republic of	Oct 24, 2008
Lucian	1-906-318-5093	Belize	Sep 30, 2007
Bradley	1-382-169-9975	Saudi Arabia	Jul 12, 2007
Oren	1-444-188-6882	Brunei Darussalam	Aug 17, 2008
Yoshio	1-270-201-2305	Indonesia	Mar 21, 2009
Marvin	1-536-394-0384	Guadeloupe	Oct 6, 2008
Paul	1-305-227-1442	Moldova	Sep 27, 2007
Hu	1-487-531-1857	Christmas Island	Jan 16, 2009
Keegan	1-229-172-8024	Cayman Islands	Sep 9, 2008
Kareem	1-230-655-0946	Heard Island and Mcdonald Islands	Feb 21, 2008
Palmer	1-156-628-1401	Moldova	Mar 21, 2009
Perry	1-447-689-2022	Nepal	Dec 21, 2008
Preston	1-866-250-9555	Colombia	Mar 27, 2008
Tate	1-433-559-2830	Malawi	Jan 13, 2009
Cyrus	1-972-298-9756	Vanuatu	Mar 8, 2008
Benjamin	1-796-458-2926	Iceland	Jan 8, 2008
Phelan	1-666-961-2594	Singapore	Mar 3, 2008

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Free and Cheap Test Tools




Testersdesk.com

Common Test Data Generators


[Load example inputs in all forms](#) [Clear data from all forms/fields](#)

Language String Generator (UTF-8 encoded Unicode) Language: <input type="text" value="Select a language"/> String length: <input type="text"/> Quantity: <input type="text"/> <input type="button" value="Generate language strings"/>	Simple String Generator (English/ASCII) Character type: <input type="text" value="Select character type"/> String length: <input type="text"/> Quantity: <input type="text"/> <input type="button" value="Generate simple strings"/>
Custom Syntax String Generator Syntax/format: <input type="text" value="Provide syntax/format"/> Quantity: <input type="text"/> <input type="button" value="Generate syntax strings"/>	Duplicate String Generator Base string: <input type="text" value="Provide string to duplicate"/> Times to repeat: <input type="text"/> <input type="button" value="Generate duplicate strings"/>
Random Number Generator Min value: <input type="text"/> Max value: <input type="text"/> <input checked="" type="radio"/> Integers <input type="radio"/> Real numbers Quantity: <input type="text"/> <input type="button" value="Generate numbers"/>	Quantified String Generator <input checked="" type="radio"/> Start with a character <input type="radio"/> Start with a number Text length: <input type="text"/> Separator: <input type="text" value="\$"/> <input type="button" value="Generate quantified text"/>

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FakeNameGenerator.com



Lucille J. Papas
2782 Oakdale Avenue
Polk City, FL 33868

Phone: 863-605-4854
Website: MadisonAutomobile.com
Email Address: LucilleJPapas@example.com
This is a real email address. [Click here to use it!](#)

Password: ohD0ohhoJ1
Mother's Maiden name: Hamilton
Birthday: February 24, 1936 (74 years old)
MasterCard: 5437 8551 1057 5866
Expires: 5/2015
SSN: 262-79-1093
You should [click here](#) to find out if your SSN is online.

Occupation: Education and development manager
UPS Tracking Number: 1Z 768 775 76 9903 731 4
Blood type: A-
Weight: 200.4 pounds (91.1 kilograms)
Height: 5' 6" (167 centimeters)

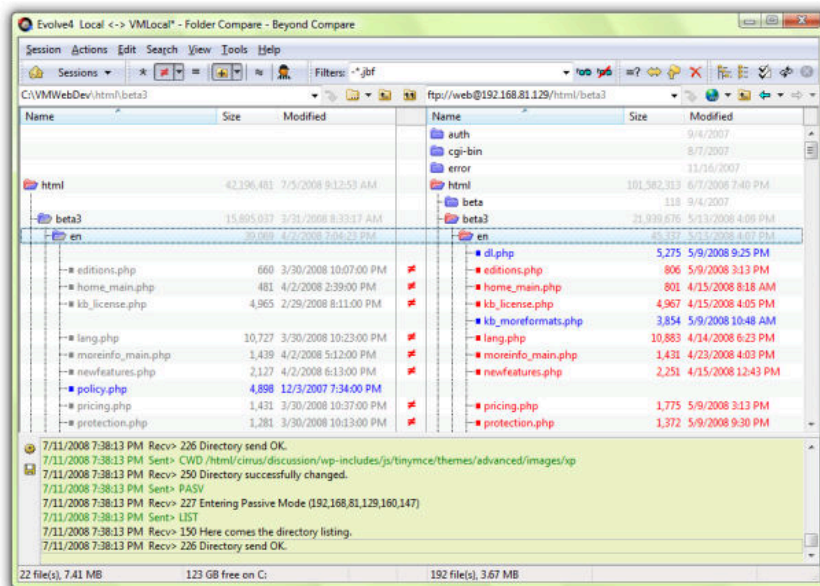
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Free and Cheap Test Tools

Test Evaluation

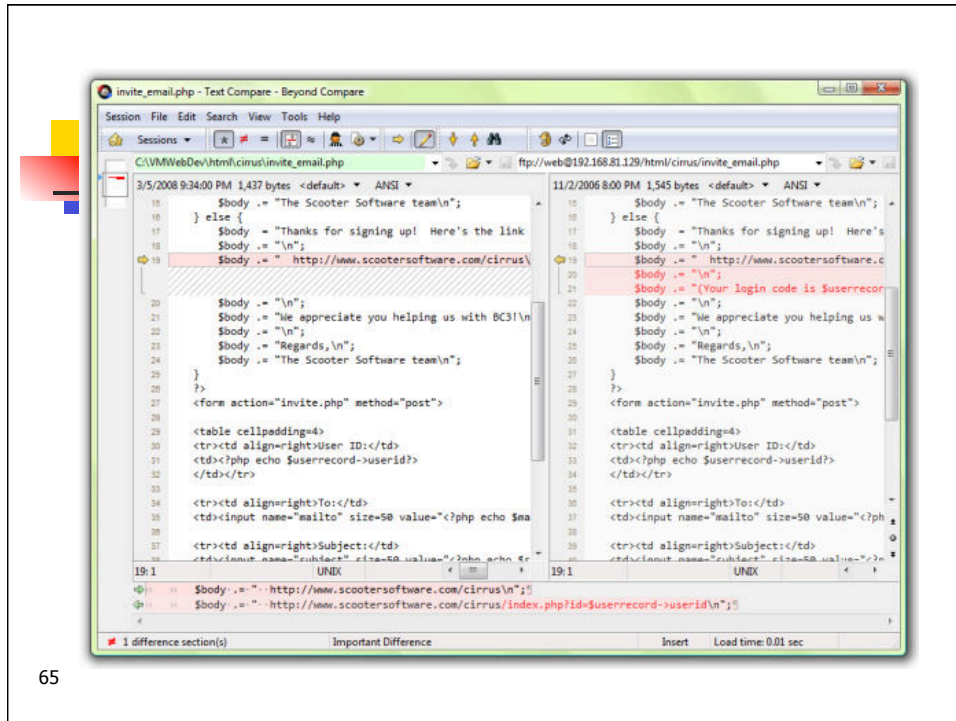
- Beyond Compare
 - www.scootersoftware.com
 - \$30/single user, volume discounts
- Exam Diff
 - www.prestosoft.com
 - Free and Pro versions
 - \$35/single user, volume discounts

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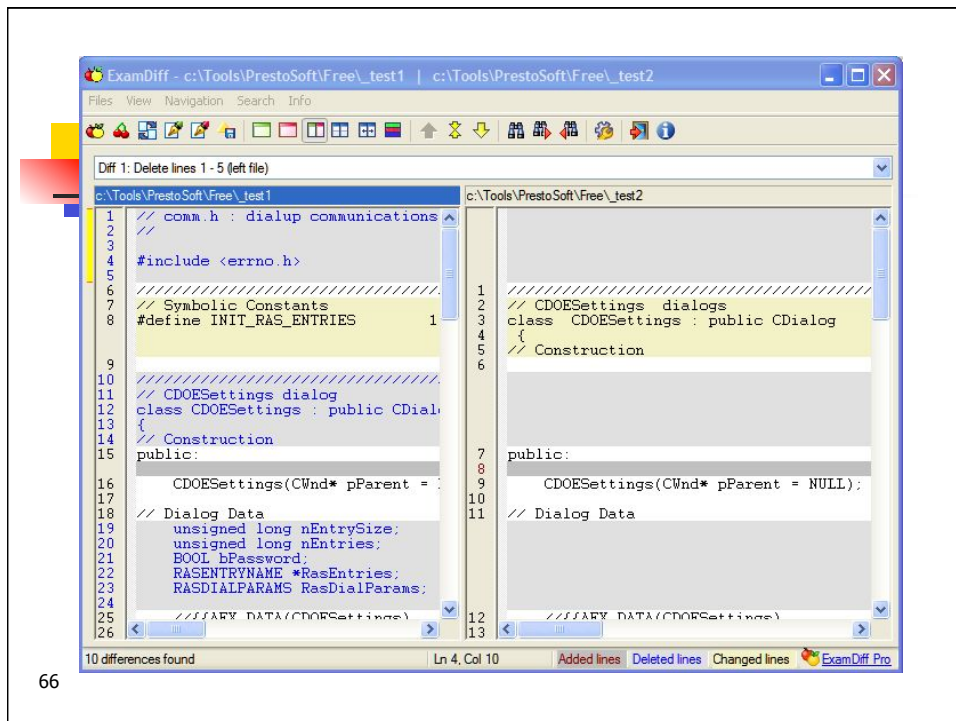


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Free and Cheap Test Tools



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Free and Cheap Test Tools



Test Evaluation (2)

- Windows Media Encoder
 - Free at www.microsoft.com
 - Captures screen video in wmv format
- Hypercam
 - \$30/single user at www.hyperionics.com
 - Captures screen video in avi format
 - Volume discounts
- Jing
 - Free & Pro
 - www.techsmith.com

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Defect Tracking

- Bugzilla – free at www.bugzilla.org
- FlySpray – Free at www.flyspray.org
- Many more at:
 - <http://www.software-pointers.com/en-defecttracking-opensource-tools.html>

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Free and Cheap Test Tools

The screenshot shows a Mozilla Firefox browser window with the address bar displaying `http://bugzilla.ravenbrook.com/show_bug.cgi?id=3`. The page title is "This is Bugzilla" and the version is "Bugzilla Version 2.18". The bug report details are as follows:

- Bug#:** 3
- Hardware:** All
- Reporter:** Gareth Rees (`ggr@ravenbrook.com`)
- Product:** p4dt
- OS:** FreeBSD
- Add CC:** [empty]
- Component:** replicator
- Version:** 2.12
- CC:** [empty]
- Status:** RESOLVED
- Priority:** P2
- Resolution:** FIXED
- Severity:** major
- Assigned To:** Nick Barnes (`nb@ravenbrook.com`)
- URL:** [empty]
- Summary:** New Bugzilla permissions rules not followed

The description includes a note: "4. In 2.16.5, the status can be set to anything by anybody if the 'everconfirmed' flag is set. In 2.17.7, this routine does not pay any attention to the 'everconfirmed' flag." Below this is a "Perforce replication" section with a table of changes:

Change	Effect	Date	User	Description
104593	closed	2004-07-06 15:33:53	(unknown)	Rewrite can_change_field in dt_bugzilla.py to match CheckCanChangeField in Bugzilla 2.17.7. Conditionalize this code on the Bugzilla version discovered by the bugzilla interface module.

At the bottom left of the browser window, the number "69" is visible.

The screenshot shows the Bugzilla search and filter interface. It includes several sections for refining search results:

- Summary:** contains all of the words/strings
- Classification:**
 - Product: addons.mozilla.org, AUS, Bugzilla, Calendar, Camino
 - Component: *.mozilla.org, API, Accessibility, Account Manager, Add-ons
 - Version: 0.1, 0.2, 0.3, 0.4, 0.5
 - Target: --, 0.007, 0.008, 0.009, 0.010
- A Comment:** contains the string
- The URL:** contains all of the words/strings
- Whiteboard:** contains all of the words/strings
- Keywords:** contains all of the keywords
- Status:** UNCONFIRMED, NEW, ASSIGNED, REOPENED, RESOLVED, VERIFIED, CLOSED
- Resolution:** FIXED, INVALID, WON'T FIX, DUPLICATE, WORKSFORME, INCOMPLETE, EXPIRED, MOVED
- Severity:** blocker, critical, major, normal, minor, trivial, enhancement
- Priority:** P1, P2, P3, P4, P5
- Hardware:** All, DEC, HP, Macintosh, PC, PocketPC, SGI, Sun, Other
- OS:** All, Windows 95, Windows 98, Windows ME, Windows NT, Windows 2000, Windows XP, Windows Server 2003, Windows Vista

At the bottom, there are sections for "Email Addresses, Bug Numbers, and Votes" and "Bug Changes".

Free and Cheap Test Tools

Smart Publisher V0.5 Keith Ahern @ Origin - Microsoft Internet Explorer

Address <http://codev.planetsearch.com/sp/smartpub.pl>

Messages at Mon Feb 7 11:30:30 PST 2000

keith @ Wed 11:37: ...
keith @ Wed 11:37: ...
keith @ Wed 11:37: ...
keith @ Wed 11:37: ...
keith @ Wed 11:37: michael i checked in a bunch of stuff, can you do a compile?
keith @ Wed 11:55: I guess we should wait until after testing eh...
michaelm @ Wed 11:38: I can do a compile now if you'd like
michaelm @ Wed 11:38: I'm done testing -- I'll check w/jeff
michaelm @ Wed 0:48: Jeff is still testing -- we do a compile later
keith @ Wed 3:44: compile done.
keith @ Wed 4:04: Michael, I'm leaving will you do a compile later? I fixed some more bugs
michaelm @ Wed 4:47: but its kinda interesting
keith @ Wed 4:48: Yes, I'm doing stuff too. I'll do a compile later tonight
michaelm @ Wed 6:15: Yes, I'm doing stuff too. I'll do a compile later tonight
michaelm @ Mon 0:13: hey -- I'm gonna do a build OK?

post

SmartConnect SmartPublisher V0.5 operating in Webmode
Questions to keith@mc.phlips.com Based on compile pl by Allan Timms @ Phlips Research Redball

Status Username

User is keith
SCROOT is /home/keith/localdev
Only displaying device warranty

Origin West Coast Web Hippies!

Bugzilla version 2.6

This is Bugzilla the Mozilla bug system. For more information about what Bugzilla is and what it can do, see [mozilla.org's bug pages](http://mozilla.org/bugzilla). This version has been customized by the Origin Group for the SmartConnect Project

Mon Feb 7 11:32:47 PST 2000

For the first bug of Christmas, my manager said to me, See if they can do it again.

ID	Sev	Pri	Plt	Owner	State	Result	Summary
2	min	P5	Net	quyen.truong@phlips.com	CLOS FIXE		Design Recommendation -- Pictures for Already Registered and
1	nor	P3	All	michael.manning@phlips.com	CLOS WORK		Phlips Logo in the top left had should link to Phlips.com
3	nor	P3	All	michael.manning@phlips.com	CLOS FIXE		Terms and conditions link and handling
4	nor	P2	Net	quyen.truong@phlips.com	NEW		clicked on the UserRegistration link -- err page not found
5	nor	P2	Net	michael.manning@phlips.com	CLOS FIXE		big empty white space on the UserRegistration Page
6	tn	P5	Net	michael.manning@phlips.com	CLOS FIXE		Design Recommendation -- blue strip down the L. side of screen
8	maj	P2	Net	keith.ahern@phlips.com	CLOS FIXE		From the cost help page click on the product

SmartConnect SmartPublisher V0.5 operating in Webmode
Questions to keith@mc.phlips.com Based on compile pl by Allan Timms @ Phlips Research Redball

Status Username

User is keith
SCROOT is /home/keith/localdev
Only displaying device warranty

http://codev.planetsearch.com/bugzilla/buglist.cgi?bug_status=NEW&bug_status=ASSIGNED&bug_status=REOPENED&email=ksenai@planet

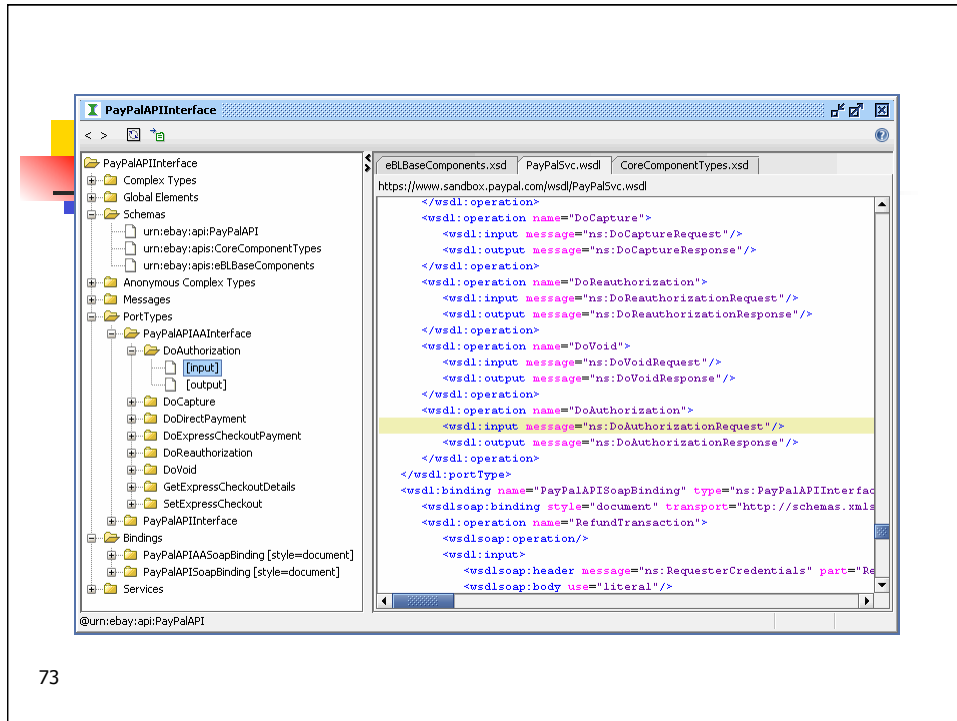
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SOA

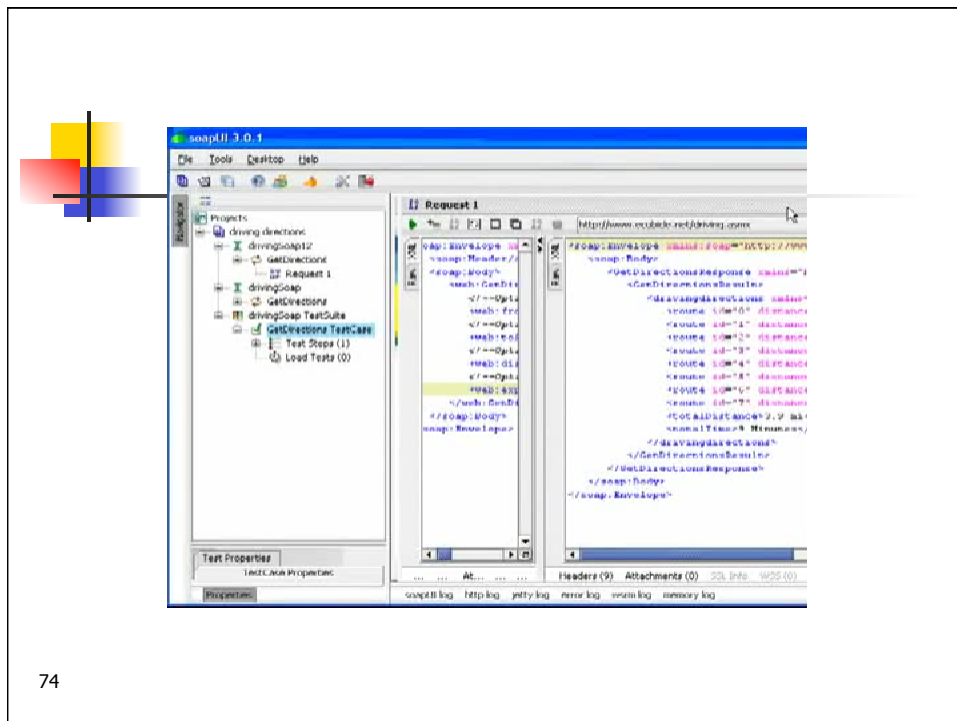
- SoapUI
 - <http://www.soapui.org/>
 - Free and Pro versions
- Push to Test
 - www.pushtotest.com

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Free and Cheap Test Tools



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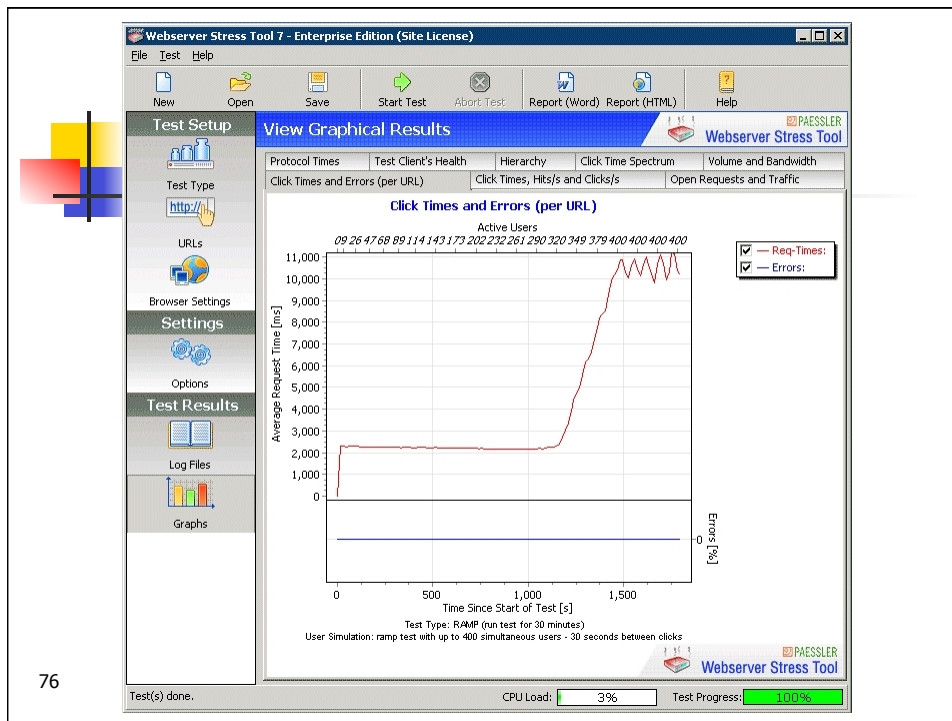
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Free and Cheap Test Tools

Load Testing

- Paessler Web Server Test
- www.paessler.com
 - Pro edition single user - \$249
 - 100 Concurrent virtual users
 - Enterprise edition single user - \$750
 - Up to 10,000 concurrent virtual users
 - Enterprise edition 5 user - \$1,449
 - Enterprise edition site license - \$2,895

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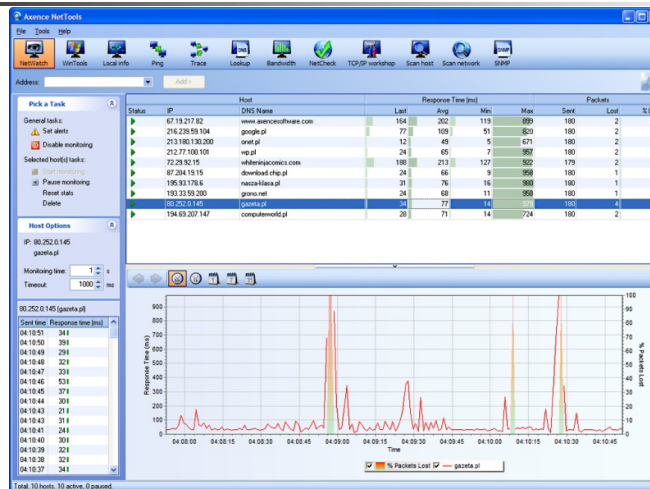
Free and Cheap Test Tools

Network Monitoring

- Axence NetTools Pro – www.axencesoftware.com
- FREE and very comprehensive set of network administration tools:
 - NetWatch - network monitoring with alerting, real-time & historical charts;
 - WinTools lists exhaustive system information from Windows computers;
 - Port scanner; network scanner;
 - NetStat lists local inbound & outbound connections;
 - TCP/IP workshop for low level service testing; ping; fast traceroute;
 - DNS lookup; bandwidth test tool; SNMP browser and more.

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Axence NetTools Pro



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Free and Cheap Test Tools

Web Testing

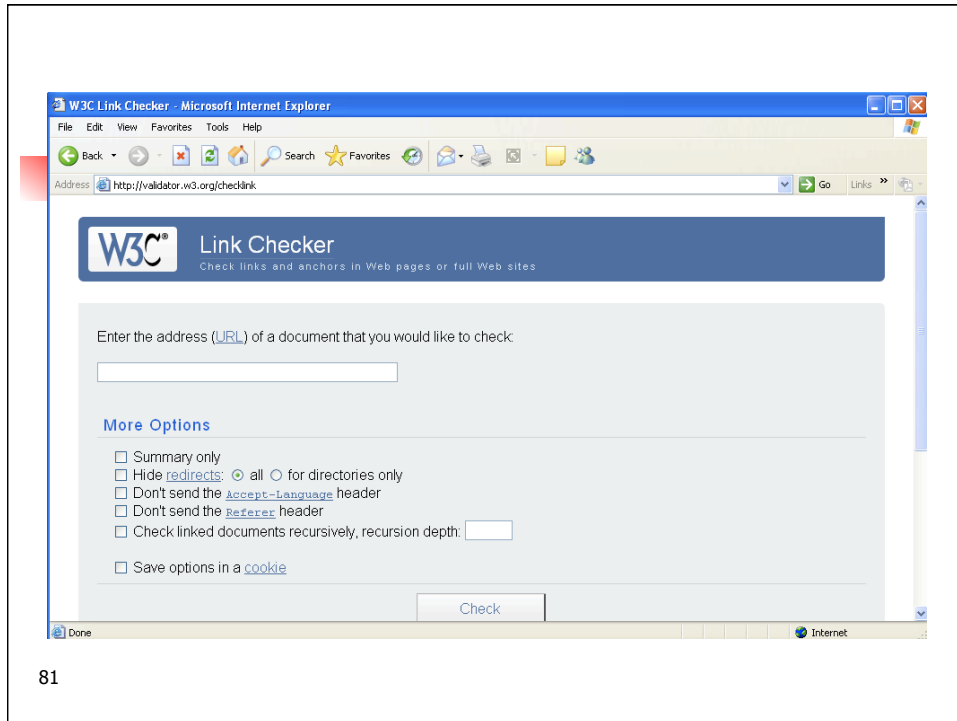
- Link Checkers
 - Link Tiger – www.linktiger.com
 - Xenu – www.xenu.com
 - X3C - <http://validator.w3.org/checklink>
 - Jspider - <http://j-spider.sourceforge.net/>
 - More at http://www.cryer.co.uk/resources/link_checkers.htm
- Compliance Checkers
 - <http://www.thefreecountry.com/webmaster/htmlvalidators.shtml>
- Google Web Site Optimizer

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The screenshot displays the LinkTiger web application interface. At the top, the LinkTiger logo is visible with the tagline "We hunt your broken links". The interface includes a navigation menu with "Dashboard", "Reports", "Users", and "Support". A search bar is present with the text "Search links on www.consumer-website.com" and options for "search all file types" and "All or Part of a filename". A notification banner indicates that the user's Enterprise subscription can check 50,000 links, while the current site has 84,294 links, requiring a Premium subscription (100,000 links). The main dashboard for "Customer-website.com" shows "4737 of 8176 links checked 377 broken links found" and "last check: June 17, 2007". Three pie charts are displayed: "Error Type" (410 404, 400, 500, 501), "Page Report" (Pages with valid links, Pages with broken links), and "Link Report" (Valid links, Broken links). A line graph titled "Broken Links: last 30 days" shows the fluctuation of broken links over time. The footer contains the copyright notice "Copyright © 2004-2007 LinkTiger.com".

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Free and Cheap Test Tools



Canoo Web Test

- Canoo WebTest is a free Open Source tool for automated testing of web applications in a very effective way.
- <http://webtest.canoo.com>

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Free and Cheap Test Tools



Canoo Web Test

Simple Google Test in XML

```
<project default="test">
  <target name="test">

    <webtest
      name="check that WebTest is Google's top 'WebTest' result">
      <invoke url="http://www.google.com/ncr"
        description="Go to Google (in English)"/>
      <verifyTitle text="Google" />
      <setInputField name="q" value="WebTest" />
      <clickButton label="I'm Feeling Lucky" />
      <verifyTitle text="Canoo WebTest" />
    </webtest>

  </target>
</project>
```

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Quality Management

- SpagoWorld – Spagoworld.org
 - **Spago4Q** - The free/open source platform to measure, analyze and monitor Quality of products, processes and services
 - **SpagoBI** – Open Source Business Intelligence suite
 - **Spagic** - The free/open source platform for the governance of middleware services and the development of SOA applications
 - **Spago** - The Java Enterprise Framework for the development of web and multichannel applications in SOA environments


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Free and Cheap Test Tools



The image shows the Spago4Q logo, which consists of a stylized 'S' made of overlapping yellow, red, and blue squares. To the right of the logo is the text 'Spago4Q' in a blue, sans-serif font. Below the logo and text is a screenshot of the Spago4Q software interface. The interface is a web-based dashboard with various data tables and charts. Overlaid on the screenshot are five circular callouts with white text: 'Extractors' (black circle), 'Goal Question Metrics' (orange circle), 'Quality Models' (blue circle), 'SLA' (green circle), and 'KPI' (dark blue circle). The number '85' is located in the bottom-left corner of the slide.

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Online Collaboration Tools

- Web Presentations
 - Openmeetings - <http://code.google.com/p/openmeetings/>
- Conference Calls
 - TalkShoe – www.talkshoe.com
 - Great for distributed teams who want to talk for free.
 - Recordable and private

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Free and Cheap Test Tools



Open Office

- If you don't have MS Office, consider Open Office
 - 3.1 is an excellent release
 - Very compatible with MS Office
 - Spreadsheet macros can be an issue
 - Free at www.openoffice.org
- Or, Google Apps

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Summary

- These tools can all be helpful in different ways.
- With test tools, you don't always get what you pay for, so regardless of the price do a decent evaluation.
- Free and cheap tools allow you to obtain and learn tools on your own.
 - This helps in building your personal tool kit.

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Free and Cheap Test Tools

Resources

- www.OpensourceTesting.org
- www.openqa.org
- www.testertools.com
- www.riceconsulting.com/cheaptools.htm
 - I keep this page updated as I learn of new tools.
 - Let me know if you find a new one!

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Bio - Randall W. Rice

- Over 30 years experience in building and testing information systems in a variety of industries and technical environments
- Certified Software Quality Analyst
- Certified Software Tester
- ISTQB Certified Tester – Foundation level, Advanced Level – Full
- Treasurer of the American Software Testing Qualification Board (ASTQB)
- Chairperson, 1995 - 2000 QAI's annual software testing conference
- Co-author with William E. Perry, *Surviving the Top Ten Challenges of Software Testing*
- Principal Consultant and Trainer, Rice Consulting Services, Inc.



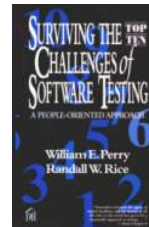
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Free and Cheap Test Tools



Contact Information

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Oklahoma City, OK 73189
Ph: 405-691-8075
Fax: 405-691-1441
Web site: www.riceconsulting.com
e-mail: rrice@riceconsulting.com



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