



krypted.com

Regression Testing

Charles Edge

Chief Technology Officer, 318

A software regression is a software bug which makes a feature stop functioning as intended after a certain event
-Wikipedia



The Monolithic Image



Random Testing



SQA Tester	Date				
sallred					
Test Area	Use Case	Ris	Impa	Priorit	Steps to Recreate
Software Updates	Verify connection to MacSUS	2	2	2	1. Click the Apple in the upper left corner.
Wireless	Verify Basic connectivity to WDSHE Wireless:	1	1	1	Establish connection to the supported WDSHE Wireless Network 1. Click airport icon in the Menu Bar 2. Select WDSHE Wireless
Wireless	Verify proper placement in Network Prefs:	1	1	1	1. Open system preferences
Wireless	Wake from Sleep	1	1	1	Before you begin, make sure you have disconnected the Ethernet enabled the wireless connection.
Wireless	Move between Access Points while	1	1	1	Before you begin, make sure you have disconnected the Ethernet
Wireless	Verify multiple users do not automatically	2	3	2.5	1. Navigate to System Preferences >> Accounts.
Wireless	verify gConnect through Wireless	1	1	1	NOTE: You must first verify the proper service order (above) in ord
Casper	Verify Casper QuickAdd Package	1	1	1	1. Launch Terminal application
	Locate the test system in Casper	1	1	1	Send the IP and / or machine name to the Deployment Engineer
	Perform Inventory	1	1	1	The Deployment Engineer will execute this function
	Remote Control	1	1	1	The Deployment Engineer will execute this function
	Software Distribution	1	1	1	The Deployment Engineer will execute this function
	Verify Package Version	1	1	1	The Deployment Engineer will execute this function
	Verify Asset Information	1	1	1	The Deployment Engineer will execute this function
	Verify User (UnixID)	1	1	1	The Deployment Engineer will execute this function
	pairing for BlueTooth Mouse	2	1	1.5	Acquire the mouse from the SQA Lead
	pairing for BlueTooth Keyboard	2	1	1.5	Acquire the Keyboard from the SQA Lead
Directory Settings	Verify 2 LDAP configurations in Directory Utility	1	1	1	Make sure you are connected to the WDSHE network by ethernet 1. Navigate to Applications >> Utilities
Adobe Reader	Verify Adobe Reader 9	1	2	1.5	1. Navigate to Applications >> Adobe Reader 9
iLife Applications	iTunes, iWeb, iMovie, iDVD	3	1	2	Verify that all applications exist in the Applications folder
WDSHE Folder	Verify Applications	2	1	1.5	Navigate to Applications >> Utilities >> WDSHE
	Verify VPN configuration file	1	1	1	1. Navigate to System Preferences >> Network
	Verify Retrospect installer	1	1	1	1. Navigate to Applications >> Utilities >> WDSHE
Flip-4-Mac	Verify Installation	3	3	3	1. Open System Preferences
Mail	Verify Exchange Setup	2	1	1.5	Setup Mail with the following preferences: Email = <unixID>@EXAMPLE.COM
	Directory lookup should only pull one entry	1	1	1	1. Click New Message
	Verify Core Functionality: Send / Receive	2	1	1.5	1. Send yourself an email with any small attachment.
Real Player	Verify Version 10.1	3	3	3	1. Acquire a RealPlayer file from the SQA Lead.
Groupware Apps	iCal	2	1	1.5	
	Address Book	2	1	1.5	



1 Thin Image + 5 Package Combinations



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WDSHE Folder	Verify Applications	2	1	1.5	Navigate to Applications >> Utilities >> WDSHE
	Verify VPN configuration file	1	1	1	1. Navigate to System Preferences >> Network
	Verify Retrospect installer	1	1	1	1. Navigate to Applications >> Utilities >> WDSHE
Flip-4-Mac	Verify Installation	3	3	3	1. Open System Preferences
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	Verify Core Functionality: Send / Receive	2	1	1.5	1. Send yourself an email with any small attachment.
Real Player	Verify Version 10.1	3	3	3	1. Acquire a RealPlayer file from the SQA Lead.
Groupware Apps	iCal	2	1	1.5	
	Address Book	2	1	1.5	



14 Images + 64 Package Combinations



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Real Player	Verify Version 10.1	3	3	3	1. Acquire a RealPlayer file from the SQA Lead.
Groupware Apps	iCal	2	1	1.5	
	Address Book	2	1	1.5	



And Profile Combinations...



$$2\% \text{ of } 10,000 = 200$$





Scripting

less cat cut more tail



defaults read com.apple.screensaver





systemsetup, networksetup



```
spawn telnet $angry_birds_server
expect "username:"
send "$no_eagles\r"
expect "password:"
send "$my_password\r"
expect "%" send Tk "$play_game\r"
expect "%"
set results $expect_piggies(buffer)
send "exit\r"
expect eof
```

Does The GUI Behave
As It Should?!?!?



Sikuli

Sikuli

script

sikuli

Free

<http://sikuli.org>





Command List

Auto Capture

find()

findAll()

wait()

waitVanish()

exists()

click()

doubleClick()

rightClick()

hover()

dragDrop(,)

type(text)

type(, text)

paste(text)

paste(, text)

onAppear(, handler)

onVanish(, handler)

onChange(handler)

observe()

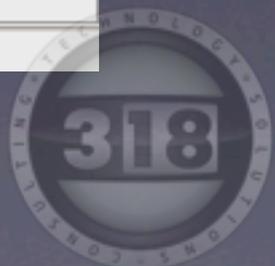
Untitled |

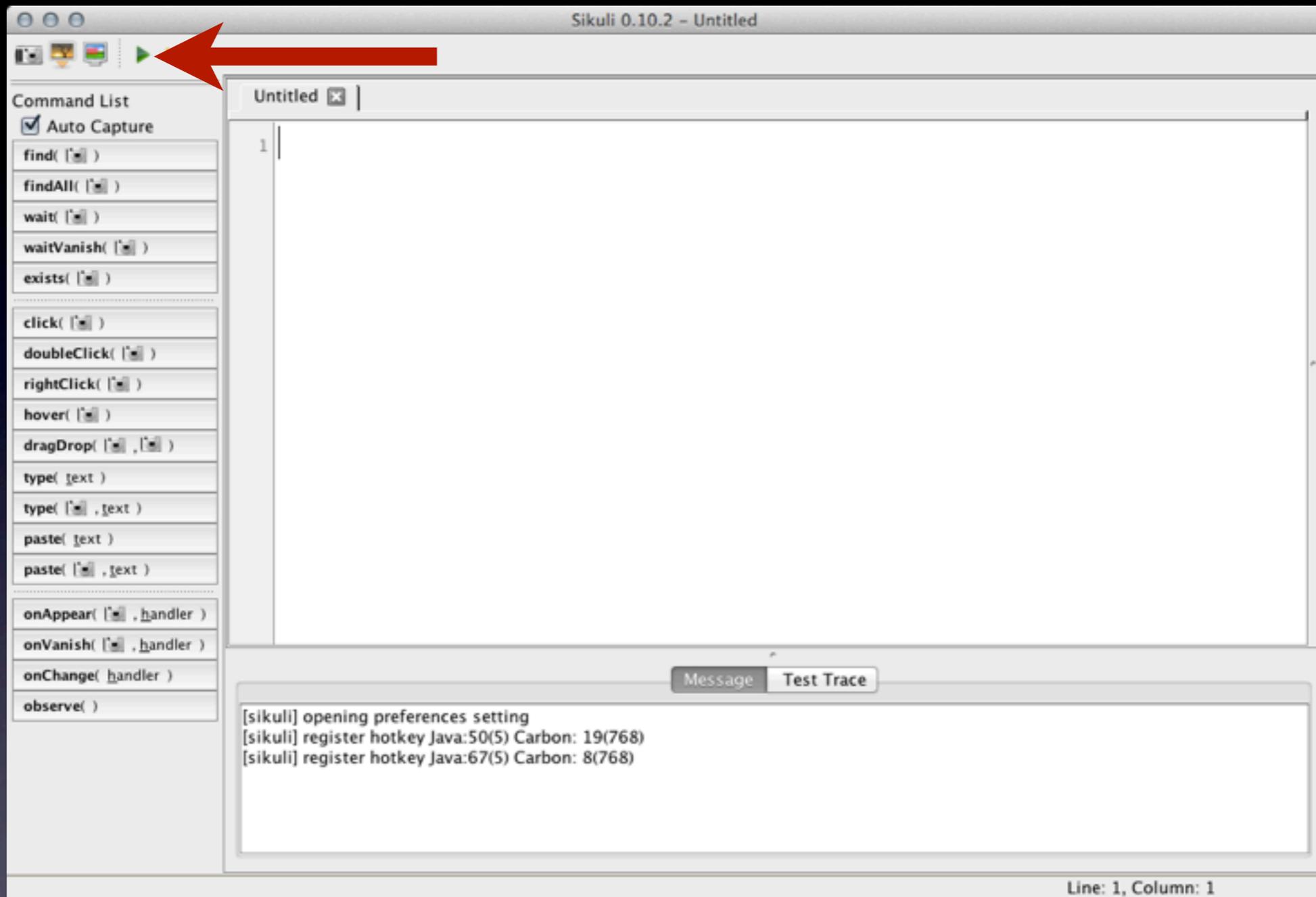
1 |

Message Test Trace

```
[sikuli] opening preferences setting  
[sikuli] register hotkey Java:50(5) Carbon: 19(768)  
[sikuli] register hotkey Java:67(5) Carbon: 8(768)
```

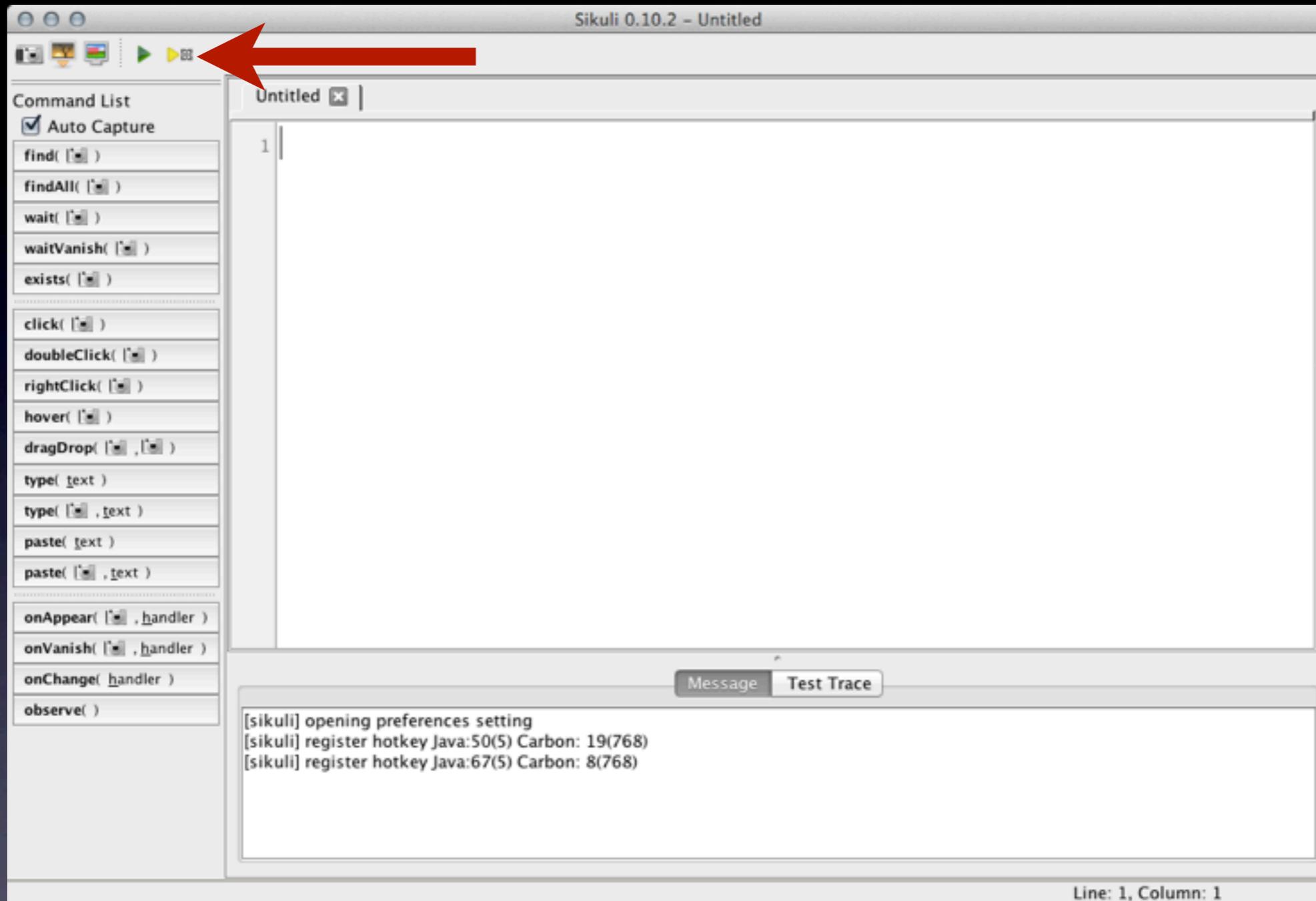
Line: 1, Column: 1





Runs a Workflow





Runs Slow



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])**
- doubleClick([])
- rightClick([])
- hover([])
- dragDrop([] , [])
- type(text)
- type([] , text)
- paste(text)
- paste([] , text)
- onAppear([] , handler)
- onVanish([] , handler)
- onChange(handler)
- observe()

Untitled x |

```
1 click( [W] )
2
```

Message Test Trace

```
[sikuli] opening preferences setting
[sikuli] register hotkey Java:50(5) Carbon: 19(768)
[sikuli] register hotkey Java:67(5) Carbon: 8(768)
[sikuli] captureCompleted: /var/folders/c9/221mpq_14yg5knc967ffgkp40000gp/T/tmp-1412039458.sikuli/1350266220794.png
[sikuli] click()
```

Line: 2, Column: 1

Clicks on Something



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])
- doubleClick([])**
- rightClick([])
- hover([])
- dragDrop([] , [])
- type(text)
- type([] , text)
- paste(text)
- paste([] , text)
- onAppear([] , handler)
- onVanish([] , handler)
- onChange(handler)
- observe()

Untitled [x] |

```
1 click( [ ] )
2 doubleClick( [ ] )
3
```

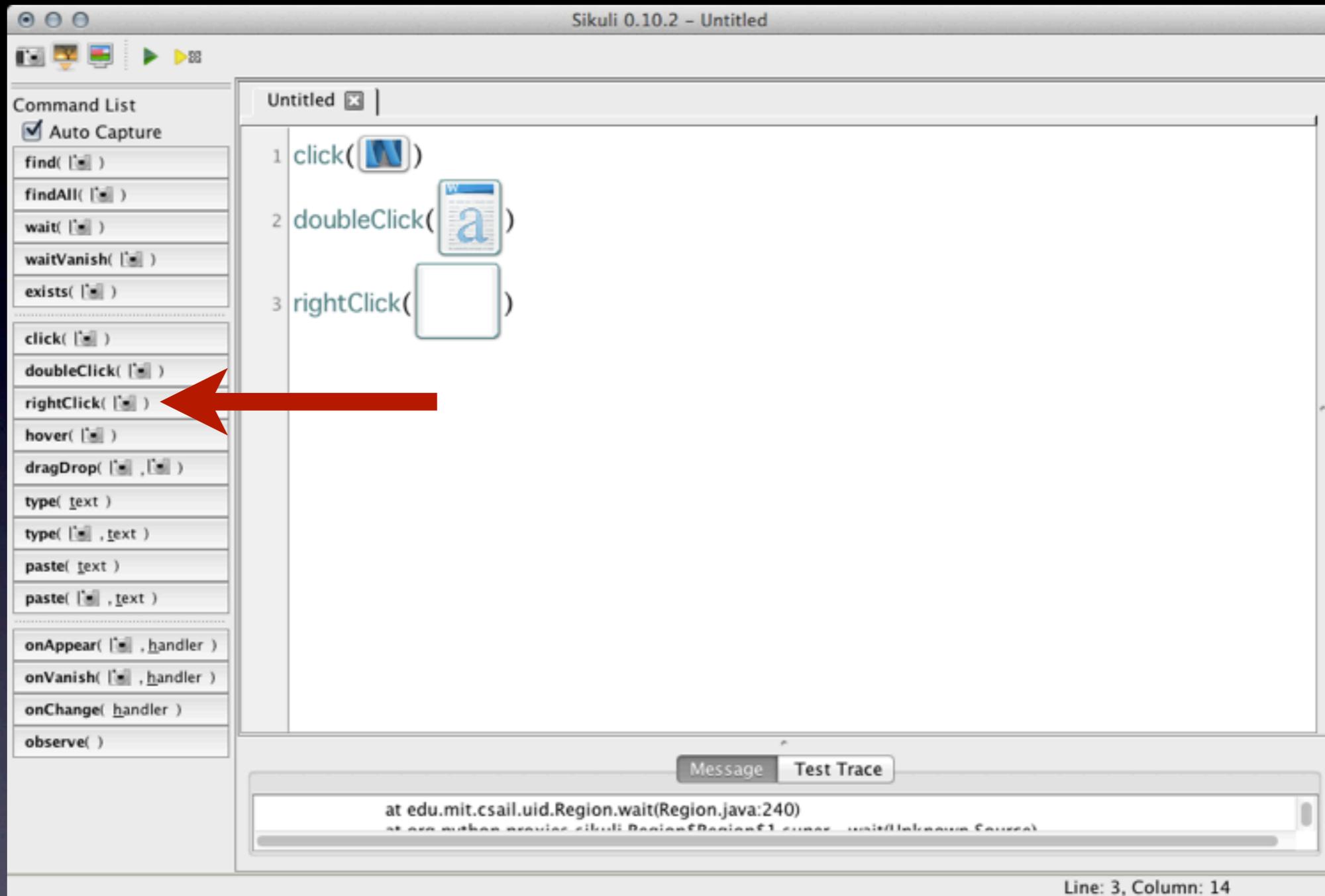
Message Test Trace

```
[sikuli] opening preferences setting
[sikuli] register hotkey Java:50(5) Carbon: 19(768)
[sikuli] register hotkey Java:67(5) Carbon: 8(768)
[sikuli] captureCompleted: /var/folders/c9/221mpq_14yg5knc967ffgkp40000gp/T/tmp-1412039458.sikuli/135026622075
[sikuli] click( )
[sikuli] captureCompleted: /var/folders/c9/221mpq_14yg5knc967ffgkp40000gp/T/tmp-1412039458.sikuli/135026633345
[sikuli] doubleClick( )
```

Line: 3, Column: 1

DoubleClicks





RightClicks



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])
- doubleClick([])
- rightClick([])
- hover([])
- dragDrop([] , [])
- type(text)
- type([] , text)
- paste(text)
- paste([] , text)
- onAppear([] , handler)
- onVanish([] , handler)
- onChange(handler)
- observe()

Untitled x |

```
1 click( [W] )
2 doubleClick( [a] )
3 rightClick( [ ] )
4 hover( [Font...] )
```

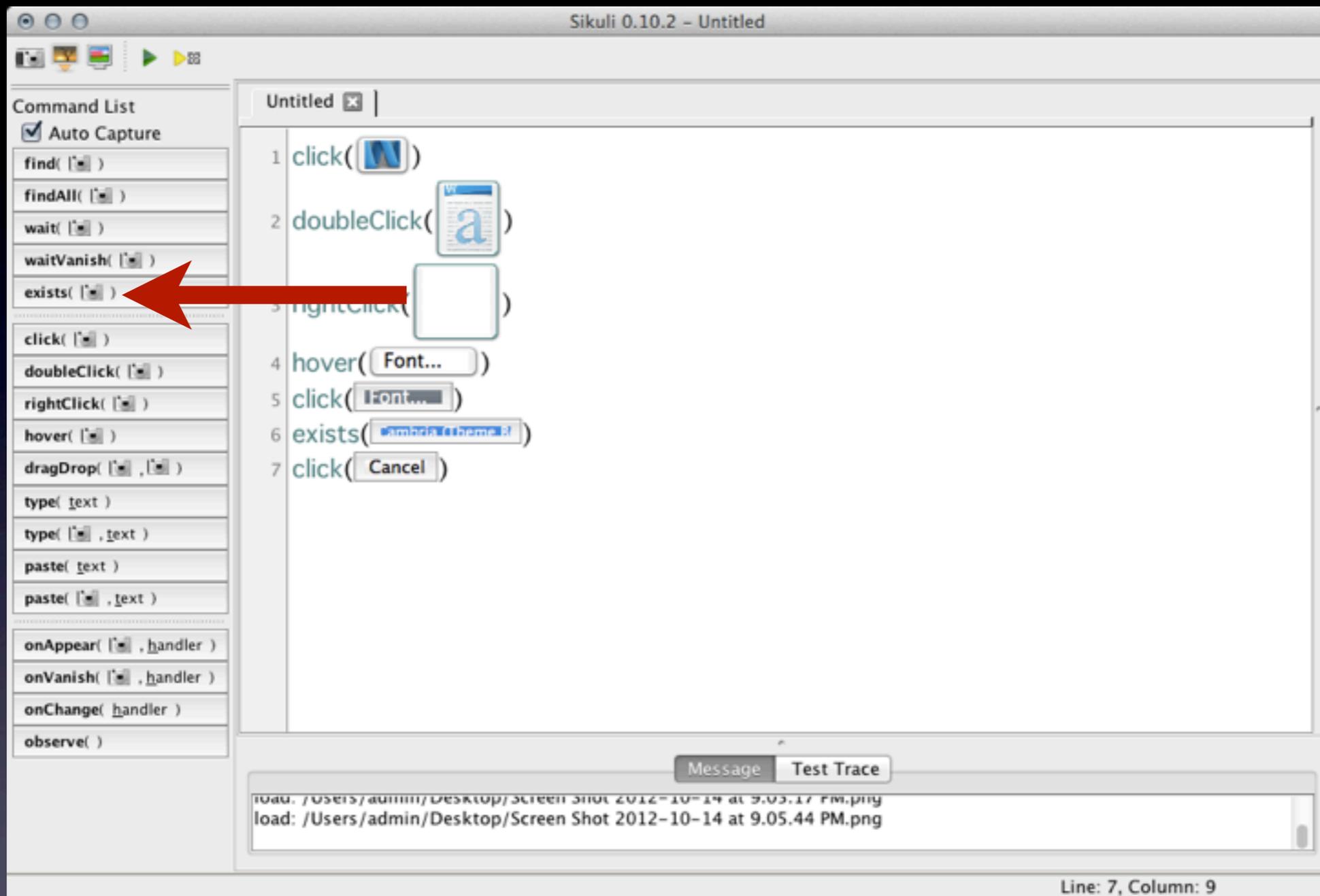
Message Test Trace

[sikuli] showTarget 167 160 50 50
load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.07.43 PM.png

Line: 4, Column: 9

Hovers





Exists



sikuli

Script

Jython



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([img])
- findAll([img])
- wait([img])
- waitVanish([img])
- exists([img])

- click([img])
- doubleClick([img])
- rightClick([img])
- hover([img])
- click([img])
- if exists([img]):
- dragDrop([img], [img])
- type(text)
- type([img], text)
- paste(text)
- paste([img], text)

- onAppear([img], handler)
- onVanish([img], handler)
- onChange(handler)
- observe()

Untitled [x] |

```
1 click( [img] )
2 doubleClick( [img] )
3 rightClick( [img] )
4 hover( [img] )
5 click( [img] )
6 if exists( [img] ):
7     print 'awesome'
8 click( [img] )
```

Message Test Trace

load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.05.17 PM.png
load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.05.44 PM.png

Line: 8, Column: 9

thien



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])
- doubleClick([])
- rightClick([])
- hover([])
- dragDrop([], [])
- type(text)
- type([], text)
- paste(text)
- paste([], text)
- onAppear([], handler)
- onVanish([], handler)
- onChange(handler)
- observe()

```
1 click( [W] )
2 doubleClick( [a] )
3 rightClick( [ ] )
4 hover( [Font...] )
5 click( [Font...] )
6 if exists( [ ] ):
7     print 'awesome'
8 else:
9     print 'sucks2bu'
10 click( [Cancel] )
```

Message Test Trace

load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.05.17 PM.png
load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.05.44 PM.png

Line: 10, Column: 9

Else



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])
- doubleClick([])
- rightClick([])
- hover([])
- dragDrop([], [])
- type(text)
- type([], text)
- paste(text)
- paste([], text)
- onAppear([], handler)
- onVanish([], handler)
- onChange(handler)
- observe()

Untitled [x] |

```
1 click( [W] )
2 doubleClick( [a] )
3 rightClick( [ ] )
4 hover( [Font...] )
5 click( [ ] )
6 if exists( [ ] ):
7     print 'awesome'
8 else:
9     print 'sucks2bu'
10 click( [Cancel] )
11 while exists ( [Word] ):
12     type("q",KeyModifier.CMD)
```

Message Test Trace

load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.03.44 PM.png
load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.24.50 PM.png

Line: 11, Column: 16

While



Sikuli 0.10.2 - Untitled

Command List

- Auto Capture
- find([])
- findAll([])
- wait([])
- waitVanish([])
- exists([])
- click([])
- doubleClick([])
- rightClick([])
- hover([])
- dragDrop([], [])
- type(text)
- type([], text)
- paste(text)
- paste([], text)
- onAppear([], handler)
- onVanish([], handler)
- onChange(handler)
- observe()

Untitled [x] |

```
1 click( [W] )
2 doubleClick( [a] )
3 rightClick( [ ] )
4 hover( [Font...] )
5 click( [ ] )
6 if exists( [ ] ):
7     print 'awesome'
8 else:
9     print 'sucks2bu'
10 click( [Cancel] )
11 while exists ( [Word] ):
12     type("q",KeyModifier.CMD)
```

Message Test Trace

load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.03.44 PM.png
load: /Users/admin/Desktop/Screen Shot 2012-10-14 at 9.24.50 PM.png

Line: 11, Column: 16

type



sikuli-ide.sh



TestPlant / Eggplant



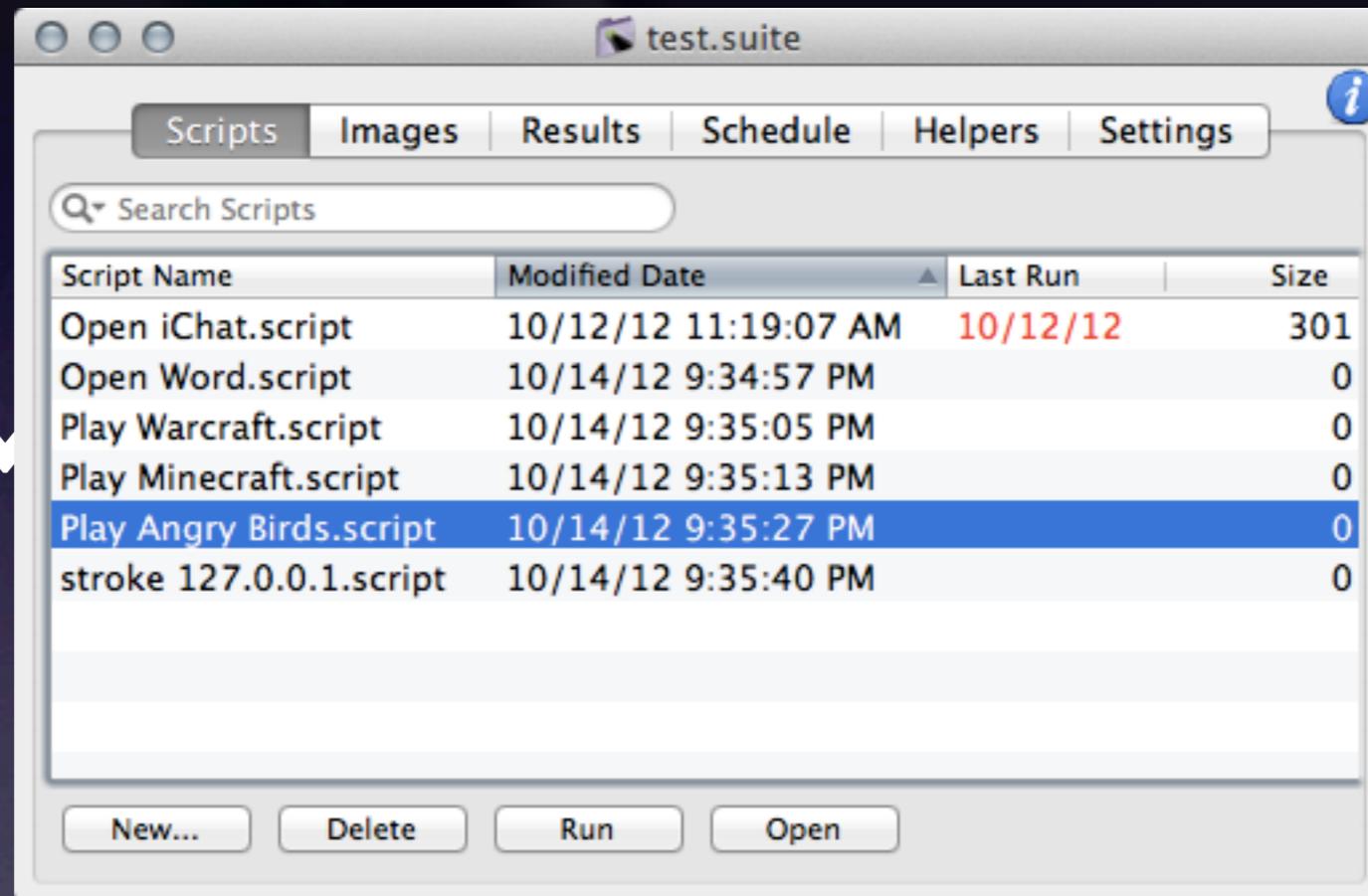
Connection List

Status	Name	Host	Port	Color
	c.pretendco.co	127.0.0.1	5900	Default
	test.pretendco.c	192.168.210.19:	5900	Default

Add... Edit Connect

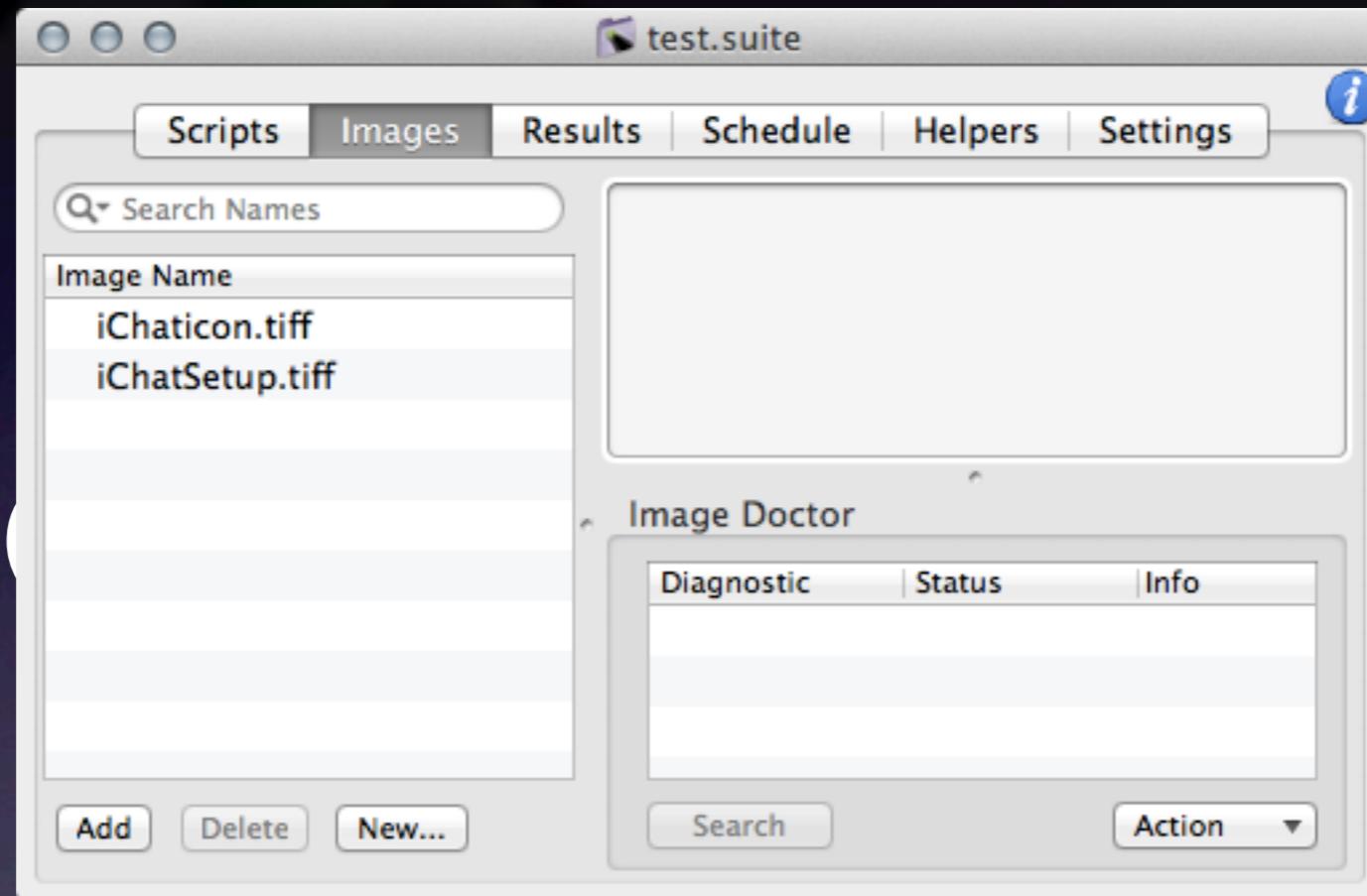
“Suite” of tests





N

”



test.suite - Open iChat.script

Run Script Run Selection Line 14 Add Comment Show Suite Show Results Show Resource Insert... to Open_iChat Handler

```
params Test
set myTest to item 1 of Test
set myResult to true
Put ("theTest:" & myTest
Click "iChaticon"
Repeat with each item outcome of keys (myTest)
  Put ("outcome:") & outcome
  if ImageFound("iChatSetup") is false then
    set myResult to false
  end if
Log myTest & ":" myTest.(outcome)
end repeat
```



```

Click "ABicon"
WaitFor 8.0,"ABplay"
Click "ABplay"
Click "ABIVI"
Click "AB1"
Click "ABnext"
WaitFor 8.0,"ABHigh"
MoveTo "ABHigh"
MoveTo "ABredbirdtarget"
Drag "ABredbird"
Drop "ABredbirdtarget2"

```

```

Click "ABicon"
WaitFor 8.0,"ABplay"
Click "ABplay"
Click "ABIVI"
Click "AB1"
Click "ABnext"
WaitFor 8.0,"ABHigh"
MoveTo "ABHigh"

```

Done 1: Eggplant.script in mt.suite

```

10/15/12 7:48:31 PM click ABIVI at (204, 296)
10/15/12 7:48:34 PM click AB1 at (210, 138)
10/15/12 7:48:37 PM click ABnext at (1382, 836)
10/15/12 7:48:38 PM waitfor ABHigh found at (1206, 18)
10/15/12 7:48:39 PM moveto ABHigh at (1206, 18)
10/15/12 7:48:41 PM moveto ABredbirdtarget at (184, 618)
10/15/12 7:48:42 PM drag ABredbird at (386, 528)
10/15/12 7:48:44 PM drop ABredbirdtarget2 at (94, 673)
10/15/12 7:48:44 PM SUCCESS Execution Time 0:00:24
Eggplant.script

```

Vine Server Server Edit Window Help

Vine Server: test.pretendco.com (test)

Host Names
test.local
test.pretendco.com
test.pretendco.com.three18.com

IP Addresses
76.79.219.82 External
192.168.55.184 Internal
10.211.55.2 Internal

Port
Display Number: 0 Port: 5900

Server Running
5 Clients Connected: 10.37.129.2, 10.211.55.2, 10.211.55.2, 10.211.55.2, 192.168.55.132

Stop Server Restart Server

Mission Control

test.pretendco.c	192.168.55.184	5900	Default
WelcomeScreen	192.168.55.198	5900	Default
318server	192.168.55.2	5900	Default
318	192.168.55.206	5900	Default
318server2	192.168.55.34	5900	Default
Katana	192.168.55.4	5900	Default

Add... Edit Disconnect

[http://
www.testplant.com/
support/tutorials/](http://www.testplant.com/support/tutorials/)



iOS



Simulator



Jailbreak



Problems

STAND BACK



**I'M GOING TO TRY
SCIENCE**

Jailbreaking & MDM



Gamers With Botnets





