

FreeRADIUS

History, Impact, and Future

Alan DeKok

CTO Mancala Networks SAS

OSSIR - 15 May 2012 - Mancala Networks SAS

Who I am

RADIUS since 1996

Founded FreeRADIUS in 1999

IETF EAP, RADIUS

CTO, co-founder, Mancala Networks

OSSIR - 15 May 2012 - Mancala Networks SAS

FreeRADIUS

World's leading RADIUS server

125K downloads / month

Millions of installations

OSSIR - 15 May 2012 - Mancala Networks SAS

Who uses it?

Everyone.

Universities, individuals

Telcos, Enterprises

OEM (NAC, WiFi Access Points, etc.)

Achievements

SQL, LDAP integration

802.1X (EAP)

100 million users

OSSIR - 15 May 2012 - Mancala Networks SAS

It's WHAT?

RADIUS, VMPS, DHCP, BFD

OSSIR - 15 May 2012 - Mancala Networks SAS

Policy Engine

The problem is policy

The implementations are protocols

Driving force behind Mancala

OSSIR - 15 May 2012 - Mancala Networks SAS

Behind the Scenes

Replacing propriety AAA

Enabling higher performance

Influencing the IETF

OSSIR - 15 May 2012 - Mancala Networks SAS

Security

Dynamic analysis

Static analysis

Don't do stupid things

Security Problems

No known exploits in 2.0

Dependent on OpenSSL

Exploits in third-party libraries

Concepts

The protocol is **ADVISORY**.

NASes can do whatever they want.

Expect this.

Principles

Blame everyone else.

The NAS is broken.

The database is down

The home server is broken.

OSSIR - 15 May 2012 - Mancala Networks SAS

Problems

FreeRADIUS is probably a bad name

RADIUS is hidden.

Working software is bad.

Happening Now

RADIUS is growing

TLS, TCP, DTLS, ...

Extending the protocol

Diameter

€ 10m? Diameter!

3G Authorization

Everyone else... RADIUS

Version 3

RadSec (TLS)

Simpler Configuration.

More powerful.

The Future

Diameter will grow (slowly)

RADIUS will grow (faster)

Mancala

Generic network security

Policy engine

Correlation

OSSIR - 15 May 2012 - Mancala Networks SAS

Thanks

Alan DeKok

FreeRADIUS Leader

CTO Mancala Networks

OSSIR - 15 May 2012 - Mancala Networks SAS