FreeRADIUS

History, Impact, and Future

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Who I am

RADIUS since 1996
Founded FreeRADIUS in 1999
IETF EAP, RADIUS
CTO, co-founder, Mancala Networks
FreeRADIUS

World’s leading RADIUS server

125K downloads / month

Millions of installations

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Who uses it?

Everyone.
Universities, individuals
Telcos, Enterprises
OEM (NAC, WiFi Access Points, etc.)
Achievements

SQL, LDAP integration

802.1X (EAP)

100 million users
It’s WHAT?

RADIUS, VMPS, DHCP, BFD
Policy Engine

The problem is policy
The implementations are protocols
Driving force behind Mancala
Behind the Scenes

Replacing propriety AAA
Enabling higher performance
Influencing the IETF
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.
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
Thanks

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