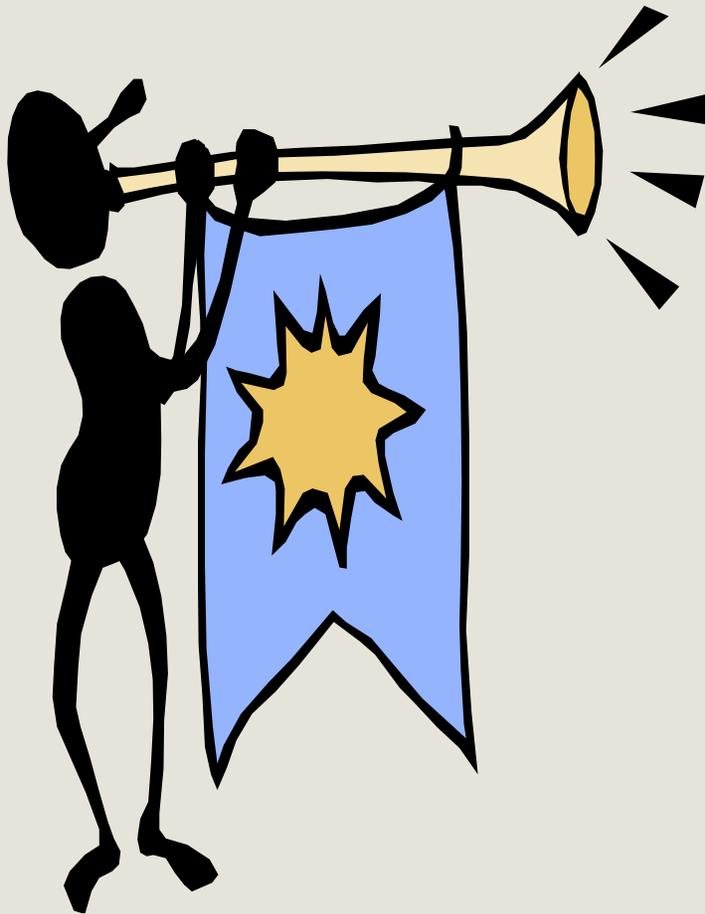


Addendum to Lecture 4: Authentication, Authorization and Accounting (AAA)

INSE 7110 – Winter 2009

**Value Added Services Engineering in Next Generation Networks
Week 5**

Outline



1. Informal definitions
2. AAA in Internet
3. AAA in IMS

Informal definitions

- **Authentication**
 - Means of verifying that an entity is really what it claims to be
- **Authorization**
 - Means of ensuring that an entity does only what it is allowed to do
- **Accounting**
 - Means of keeping track of what an entity does for auditing, billing and other purposes

AAA in Internet

Remote Authentication Dial In User Service (RADIUS) protocol

- RFC 2058, then 2138, 1997
- RFC 2865, 2000
 - Possibility for a Network Access Server (NAS) to get authentication, authorization and accounting (AAA) services from a RADIUS server
 - Client/server
 - Runs on top of UDP
 - Example: Computer with a modem, connected to a NAS and NAS connected to a RADIUS server
 - » Very useful when there are several NAS
 - Issues
 - Lack of scalability
 - Lack of functionality (e.g. no possibility for unsolicited messages from RADIUS server to NAS)

AAA in Internet

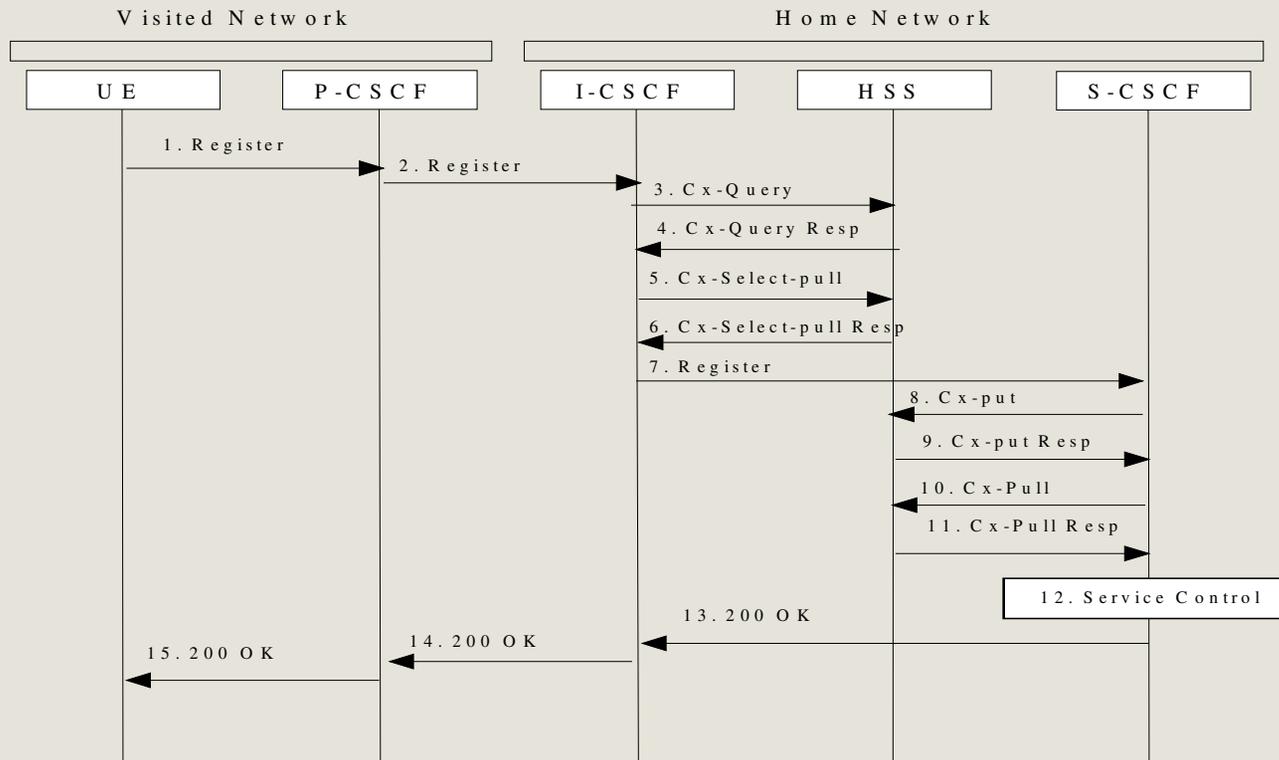
Diameter

- **Addresses RADIUS shortcomings**
 - **Scales**
 - **More functionality**
- **Much more complex**
 - Base protocol, RFC 33588, 2003
 - Basic commands (e.g. Re-Auth-Request, Re-Auth-Answer, Accounting-Request)
 - Application protocols
 - Extend the basic commands

AAA in IMS

- **Interfaces**
 - Cx: I-CSCF / HSS and S-CSCF/HSS
 - Dx: I-CSCF / SLF and S-CSCF / SLF
 - Sh: HSS/SIP AS and HSS/OSA SCS
- **Protocol**
 - Diameter with IMS specific applications

IP Multimedia portion – Registration



IP Multimedia portion – De-Registration

