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Topic 1

Generic Authentication Architecture (GAA)

Generic Authentication Architecture (GAA) is specified by the 3rd Generation Partnership Project (3GPP). GAA extends traditional GSM based authentication for external services, for example user can authenticate herself for a webserver using her cellular network operator account instead of traditional username and password.

In the paper, the student should describe how the architecture works.

Sources of information:

Pekka Laitinen et al; "Extending cellular authentication as a service", Proc. 3rd Annual Secure Mobile Communications Forum, September 2005.

http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1588703

3GPP TS 33.220; "Generic Authentication Architecture (GAA); Generic bootstrapping architecture", available from

<http://www.3gpp.org/ftp/Specs/html-info/33220.htm>, March 2005

Issues in initializing security Asokan, N. Tarkkala, L.

http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1577141

3GPP TS 29.109; "Generic Authentication Architecture (GAA); Zh and Zn Interfaces based on the Diameter protocol;", available from

http://www.3gpp.org/ftp/tsg_sa/WG3_Security/TSGS3_34_Acapulco/Docs/PDF/S3-040454.pdf

Topic 2

Authentication in eTKK

Authentication in eTKK is based on Shibboleth that federates identities. Using home university's computer center accounts, students and researchers can authenticate themselves to service providers such as library's Nelli that contains electronic journals and other sources of information. CSC provides meta data files and schemas for the federation.

In the paper, the student should describe how the architecture works.

Sources of information:

<http://www.csc.fi/suomi/funet/middleware/haka/index.phtml> (mostly in Finnish)

<http://shibboleth.internet2.edu/>