

Department of Computer Science & Engg. Govt. Engg College Thrissur-9

Synopsis of work

Title: Securing GEC Intranet using Device authentication

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Area :	Networking	
ISO class :	Industrial / Internal	(tick mark applicable one)

Problem statement :

Today networks faces many security risks , whether wired or wireless. Most network authentication solutions presently identify the user through passwords , tokens , smart cards or biometrics . While these techniques can provide effective identification and authentication of individual users , a comprehensive security policy must also identify the device employed by that authenticated user. So here in our college we require to set up device authentication service that enables only the authorized device to connect to GEC network at any point.

Summary of work :

This project aims at providing security to services by adding an additional layer of security by implementing device authentication to which enables only the authorized user with the authorized device to access GEC network , or any services provided in the network. We have identified a Free Radius based solution for the project problem. Here we create a device identity profile which save device information. The concept of building a device identity profile is very similar to how we might establish a profile and meta data for a person. We store and retrieve the identity

information in a similar way, and attach meta data that describes it. Based on it server provides authentication , preventing unauthorized devices to access its services.

List of Equipments/Softwares required for development:

To accomplish our aim we require a network (GEC Intranet) that is running a sever program that implements device authentication .

Softwares :

Operating System	:	Ubuntu Server Edition 10.10
Server program	:	FreeRadius
Client program	:	Free Radius Client(JRadius Client)

Equipments :

Server	:
Switch	:

other Accessories for setting up a network such as cables,card etc.....

Reference :

1. <http://en.wikipedia.org/wiki/FreeRADIUS>
2. <http://www.ietf.org/rfc/rfc2865.txt>
3. http://en.wikipedia.org/wiki/AAA_protocol
4. <http://www.ietf.org/rfc/rfc3748.txt>
5. <http://e-articles.info/e/a/title/RADIUS-Vulnerabilities/>
6. <http://www.eff.org/deeplinks/2005/07/dangers-device-authentication>
7. <http://www.untruth.org/~josh/security/radius/radius-auth.html>