

AAA

J. Scheerder*

jeroenscheerder@on2it.eu

L.J. Koning*

lieuwejankoning@on2it.eu

October 25, 2007

1 Introduction

Authentication, authorization and accounting – the so-called triple A services – are gaining ever more prominence in IT security. The holy grail of combining maximal strength on the one hand with minimal user grief on the other has not yet been found however.

2 Goal

Description and proof of concept realization of a practical authentication infrastructure which should ideally be totally platform-independent, but at least deeply platform-agnostic. Particularly interesting points of attention are:

- public key authentication (PKI) and the related technical and organisational challenges regarding key distribution and key revocation;
- single sign-on;
- multi-factored authentication, considering not only PKI-based approaches, but also one-time password (OTP) strategies, use of (hardware) tokens as aids for PKI or OTP, integration with ex-

isting authentication and directory services, and with potential use of biometry;

- authorization and delegation of authorization, technological and organisational;
- logging and reporting/auditing of access to restricted data.

3 Technology

ON2IT is an IBM ISS– as well as a RSA Security partner. In line with these partnerships IBM's Tivoli Identity Manager and Tivoli Access Manager offer enterprise-level single sign-on and permission control. RSA Security's portfolio comprises integration of directory services and challenge/response-based OTP, using hardware tokens. The entire range of open standards based technology is available as building blocks in addition.

4 Task

Design, describe and implement a platform-insensitive infrastructure for authentication, delegation, authorization and accounting.

*ON2IT b.v., Waardenburg, The Netherlands.

ON2IT Company Profile

J. Scheerder*

jeroenscheerder@on2it.eu

L.J. Koning*

lieuwejankoning@on2it.eu

October 25, 2007

1 Inleiding

ON2IT is a young, rapidly growing specialist in information security. It operates in close relation with a select few prominent security vendors. The product portfolio comprises Unified Threat Management solutions (i.e. next-generation firewall technology), Intrusion Detection and Intrusion Prevention Systems, Anomaly Detection Systems and Network Access Control.

The primary technology supplier is Internet Security Systems (ISS), recently acquired by IBM. ISS operates as an autonomous division within the IBM ISS Global Services group. ON2IT is one of only five worldwide Tier 1 technology partners, with direct access to ISS' researchers and developers in Atlanta.

Location: Waardenburg.

We seek students that

- have a passion for innovation;
- like living on the cutting edge;
- strive for excellence in the field.

We offer :

- a pleasant work environment;
- a possibility to get hands-on experience in the field with cutting edge security technology;
- great variety;
- a monthly fee;
- a position prospect;
- daily or weekly guidance, dependent on person and project.

2 Projects

Projects are defined in close cooperation between student and ON2IT, in a clear, precise and concise manner. Tasks vary from research into market trends to implementing integral security-related systems. Examples of typical tasks:

- developing extensions to security analysis software;
- portal development using AJAX, etc.;
- implementation of reporting mechanisms and technology for HIPAA, SOX, ...;
- advancing technical infrastructure for mail security, VPN, authentication, ...;
- impact-analysis of Intrusion Detection en Prevention in the context of Managed Security, with respect to SOX (ISO17799, BS7799, NEN27001), HIPAA (NEN7510/11/12), ...;
- examining aspects of desktop security management using common software mechanisms and packages in relation to structural Network Access Control;
- strengthening security by deploying Intrusion Detection en Prevention for entire network infrastructure, or partially – e.g. only for a web site of an E-commerce company.

3 We require

- basic skills and knowledge in general networking, TCP/IP, routing, VPN;
- solid command of Dutch and English;
- extensive hands-on familiarity with Unix/Linux and the usual bunch of scripting languages.

*ON2IT b.v., Waardenburg, The Netherlands.