

NAC

J. Scheerder*

jeroenscheerder@on2it.eu

L.J. Koning*

lieuwejankoning@on2it.eu

October 25, 2007

1 Introduction

Network Access Control technology is increasingly deployed.

2 Product

ON2IT carries Mirage NAC technology. It offers permanent control over networks, based upon real-time monitoring and behavioral assessment of systems on the network. In addition 'pre-admission' control facilities are offered, that allow to enforce both user authorization as well as integrity checks on systems prior to granting network access. The Mirage NAC technology operates out of band, and operates entirely stand-alone, independent of the (brand and flavour of the) network components used.

3 Goal

Definition of a complete scenario for fully transparent NAC-deployment in an existing network, with per-

manent monitoring and protection, full authentication, and full compliance enforcement. Fine-grained and (semi-)automated mitigation in case a system is out of compliance or otherwise violates the network access policy is an integral part of this scenario, as is the operational practice of alerting and reporting.

Scalability and fault tolerance are of specific relevance in this scenario-to-be, as are near-future technological developments such as IPv6, pervasive computing (increased significance of mobile computing), and the consequential blurring of the network perimeter.

4 Task

Design, describe and create a proof-of-concept implementation of an entirely platform-agnostic addition of NAC, including pre-admission authentication and compliance enforcement, to an existing and unaltered network, without any change to the configuration and/or installed software of the systems on the network.

*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.