PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 1/00, 13/00, H04L 9/00, 29/06, 12/56, G06F 9/46

A2

(11) International Publication Number: WO 00/02114

(43) International Publication Date: 13 January 2000 (13.01.00)

(21) International Application Number: PCT/SE99/01202

(22) International Filing Date: 2 July 1999 (02.07.99)

(30) Priority Data:
9802415-1 2 July 1998 (02.07.98) SE

(71) Applicant *(for all designated States except US)*: EFFNET GROUP AB [SE/SE]; Gustavslundsvägen 151 B, S-167 51 Bromma (SE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: SUNDSTRÖM, Mikael [SE/SE]; Södra Kungsgatan 24, S-972 35 Luleå (SE). JOHANSSON, Olof [US/US]; 10 B Queen Circle, Newark, DE 19702 (US). LINDHOLM, Joel [SE/SE]; Kårhusvägen 5:407, S-977 54 Luleå (SE). BRODNIK, Andrej [SI/SI]; Gotska 6, 1000 Ljubljana (SI). CARLSSON, Svante [SE/SE]; Gnejsstigen 4, S-977 53 Luleå (SE).

(74) Agents: PETRI, Stellan et al.; Ström & Gulliksson AB, P.O. Box 4188, S-203 13 Malmö (SE).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
Without international search report and to be republished upon receipt of that report.

(54) Title: FIREWALL APPARATUS AND METHOD OF CONTROLLING NETWORK DATA PACKET TRAFFIC BETWEEN INTERNAL AND EXTERNAL NETWORKS

(57) Abstract

A firewall (3) for controlling network data packet traffic between internal and external networks (1, 5, 4), comprising filtering means selecting from a total set of rules, in dependence of the contents in data fields of a data packet being transmitted between said networks, a rule applicable to the data packet, in order to block said packet or forward said packet through the firewall (3). A 2-dimensional address lookup means (8) performs a 2-dimensional lookup of the source and destination addresses of the packet in a set of address prefixes, each prefix having a subset of rules of the total set of rules, in order to find a prefix, via its representation, associated with said source and destination addresses, and rule matching means (10) for rule matching, on the basis of the contents of said data fields, in order to find the rule applicable to the data packet.

