



(51) International Patent Classification:

H04L 12/24 (2006.01) G06F 15/16 (2006.01)
H04L 29/06 (2006.01)

(21) International Application Number:

PCT/US2011/052225

(22) International Filing Date:

19 September 2011 (19.09.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/894,142 30 September 2010 (30.09.2010) US

(71) Applicant (for all designated States except US):

NETWORKS INC. [US/US]; 2309 Bering Drive, San Jose, California 95131 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only):

KANNAN, Lalgudi Narayanan [US/US]; 511 San Luis Avenue, Los Altos, California 94024 (US). **SZETO, Ronald Wai Lun** [US/US]; 546 Campbell Avenue, San Francisco, California

94134 (US). **CHEN, Lee** [US/US]; 19752 Versailles Way, Saratoga, California 95070 (US). **XU, Feilong** [CN/US]; 122 Mohave Terrace, Fremont, California 94539 (US). **JALAN, Rajkumar** [US/US]; 19805 Versailles Way, Saratoga, California 95070 (US).

(74) Agent: **BAILLIE, Michele Liu**; North Shore Patents, P.C., P.O. Box 683, Marblehead, Massachusetts 01945 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on nextpage]

(54) Title: SYSTEM AND METHOD TO BALANCE SERVERS BASED ON SERVER LOAD STATUS

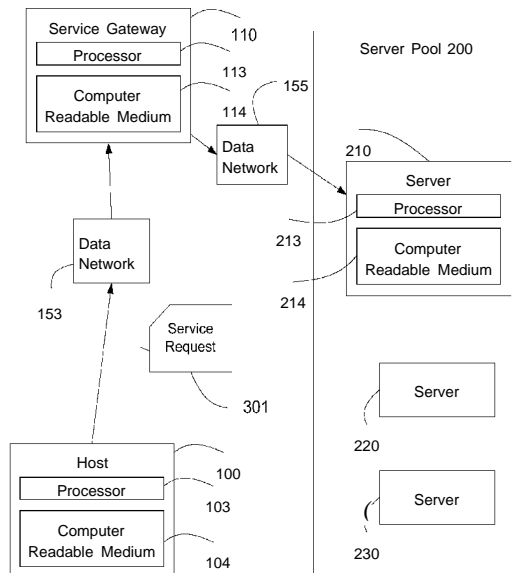


FIG. 1

(57) Abstract: A method, system, and computer program product for balancing servers based on server load status, include: receiving from a server a service response to a service request, the service response including a result from a processing of the service request and a server status indicating a computing load status of the server; obtaining the server status from the service response; receiving a next service request from a host, the next service request comprising a Uniform Resource Locator (URL); determining that the server is configured to process the URL; determining whether the server status indicates that the server is available to process the next service request; and in response to determining that the server status indicates that the server is available to process the next service request, sending the next service request to the server.



GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
31 May 2012

Published:

— *with international search report (Art. 21(3))*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US20 11/052225**A. CLASSIFICATION OF SUBJECT MATTER***H04L 12/24(2006.01)i, H04L 29/06(2006.01)1, G06F 15/16(2006.01)1*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04L 12/24; H04J 1/16; G06F 15/16; G06F 15/00; H04L 12/28

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: load, status, balance, client, server, gateway, request, response, and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7236457 B2 (ROBERT JOE) 26 June 2007 See the abstract , figures 1,2 and claims 1,5,7.	1-24
A	US 2008-0250099 A1 (SHEN JINMEI et al.) 09 October 2008 See the abstract , figure 4 and claims 1-17 .	1-24
A	US 2008-0101396 A1 (MIYATA HIROAKI) 01 May 2008 See the abstract , figure 2 and paragraphs [0019] -[0020] .	1-24
A	US 2003-0195962 A1 (SATOSHI KIKUCHI et al.) 16 October 2003 See the abstract , figures 4,5 and claims 1-7 .	1-24
A	KR 10-0830413 B1 (CDNETWORKS) 20 May 2008 See the abstract , figures 1,3 and paragraphs [0041] -[0050] .	1-24

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

21 MARCH 2012 (21.03.2012)

Date of mailing of the international search report

10 APRIL 2012 (10.04.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsu-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

HA, Eun Ju

Telephone No. 82-42-481-5707



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/052225

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7236457 B2	26.06.2007	US 2004-066745 A1	08.04.2004
us 2008-0250099 A1	09.10.2008	AT 5 13407 T CN 101652977 A EP 2 137944 A1 EP 2 137944 B1 KR 10-1091250 B1 KR 10-2009-0 132594 A Wo 2008-1225 14 A1	15.07.2011 17.02.2010 30.12.2009 15.06.2011 07.12.2011 30.12.2009 16.10.2008
us 2008-0101396 A1	01.05.2008	CN 101 175034 A0 JP 04-680866 B2 JP 2008-1 13260 A US 201 1-0170555 A1 US 7929543 B2	07.05.2008 10.02.2011 15.05.2008 14.07.2011 19.04.2011
us 2003-0195962 A1	16.10.2003	JP 2004-005360 A	08.01.2004
KR 10-0830413 B1	20.05.2008	KR 10-2007-0 113600	29.11.2007