



(51) International Patent Classification:

H04L 29/06 (2006.01) H04W 4/00 (2009.01)
H04L 29/08 (2006.01) H04L 12/28 (2006.01)
H04L 12/46 (2006.01) H04W 12/08 (2009.01)

(21) International Application Number:

PCT/US2016/066408

(22) International Filing Date:

13 December 2016 (13.12.2016)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14/968,697 14 December 2015 (14.12.2015) US

(71) Applicant: **AMAZON TECHNOLOGIES, INC.**
[US/US]; Amazon Technologies, Inc., PO Box 8102,
Reno, NV 89507 (US).

(72) Inventors: **YANACEK, David, Craig**; 410 Terry Avenue
North, Seattle, WA 98109-5210 (US). **LOLADIA,
Rameez**; 410 Terry Avenue North, Seattle, WA 98109-
5210 (US).

(74) Agents: **LOHR, Jason et al.**; Hogan Lovells US LLP,
Three Embarcadero Center Suite 1500, San Francisco, CA
94111 (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, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN,

KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA,
MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG,
NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS,
RU, RW, SA, 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,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- 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:

17 August 2017

(54) Title: DEVICE MANAGEMENT WITH TUNNELING

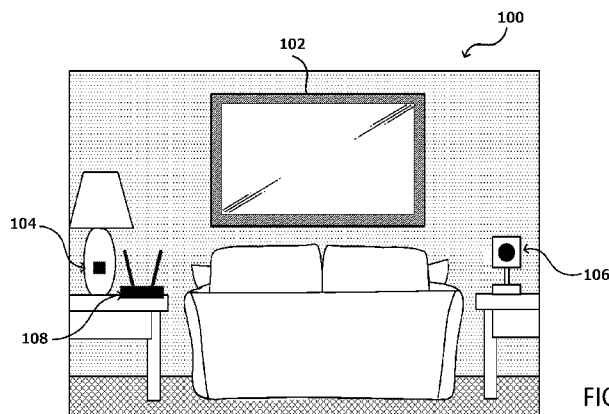


FIG. 1

(57) Abstract: A device management service provide a centralized credential provisioning system which can instantiate a proxy device that facilitates remote connections between various computing devices and various client devices. The device management service can manage instances of proxy devices in a resource provider environment that are associated with various computing devices. When a client device requests to access a computing device, the device management service can identify an instance of a proxy device associated with the computing device. The instance of the proxy device and the computing device can be configured to securely connect using credentials exchanged through, and managed by, the device management service. The computing device can be instructed to connect to the instance of the proxy device, and the client device can be provided with access information for the instance of the proxy device.



INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/066408

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04L29/06 H04L29/08 H04L12/46
ADD. H04W4/00 H04L12/28 H04W12/08

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 H04W

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

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

EPO-Internal, COMPENDEX, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 659 732 A2 (TOSHIBA KK [JP]) 24 May 2006 (2006-05-24) paragraphs [0023], [0025] - paragraphs [0027], [0045], [0055], [0062], [0067], [0068], [0070], [0082], [0085], [0092], [0093], [0105], [0149], [0169]; figures 1, 9A -----	1-15
X	US 2002/144128 A1 (RAHMAN MAHFUZUR [US] ET AL) 3 October 2002 (2002-10-03)	1,8
A	paragraphs [0014], [0022] - paragraphs [0023], [0028], [0033]; figure 2 -----	2-7,9-15
X	US 2013/183932 A1 (LEMILAINEN JUSSI [FI] ET AL) 18 July 2013 (2013-07-18)	1,8
A	paragraphs [0030], [0037], [0043], [0046], [0047], [0051]; figures 4,5,6 -----	2-7,9-15



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 another 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

14 July 2017

Date of mailing of the international search report

26/07/2017

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Schumann, Elena

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/066408

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1659732	A2	24-05-2006	CN 1780219 A	31-05-2006
			EP 1659732 A2	24-05-2006
			JP 2006148661 A	08-06-2006
			KR 20060056845 A	25-05-2006
			US 2006126603 A1	15-06-2006

US 2002144128	A1	03-10-2002	NONE	

US 2013183932	A1	18-07-2013	GB 2498531 A	24-07-2013
			US RE45363 E	03-02-2015
			US 2013183932 A1	18-07-2013
			WO 2013108232 A1	25-07-2013
