504597273 10/17/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT4643985

CONVEYING PARTY DATA

Name	Execution Date
BING LIU	06/26/2017
MAN LV	06/26/2017
ERIC YANG SONG	06/26/2017

RECEIVING PARTY DATA

Name:	EMC IP HOLDING COMPANY LLC
Street Address:	176 SOUTH STREET
City:	HOPKINTON
State/Country:	MASSACHUSETTS
Postal Code:	01748

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15628776

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: amanda.bernier@emc.com

Correspondent Name: EMC IP HOLDING COMPANY LLC

Address Line 1: 176 SOUTH STREET

Address Line 4: HOPKINTON, MASSACHUSETTS 01748

ATTORNEY DOCKET NUMBER:	EMC-16-0221(CN1)US
NAME OF SUBMITTER:	AMANDA M. BERNIER
SIGNATURE:	/Amanda M. Bernier/
DATE SIGNED:	10/17/2017

Total Attachments: 5

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PATENT 504597273 REEL: 043882 FRAME: 0330

ASSIGNMENT

WHEREAS, we, Bing Liu, Man Lv and Eric Yang Song, have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled *METHOD AND APPARATUS FOR A VIRTUAL MACHINE* (Application), the specification of which:

[]	is being executed on even date herewith and is about States Patent Office;	out to be filed in the United
[X]	was filed on June 21, 2017 as U.S. Application No	o. 15/628,776;
[]	was patented under U.S. Patent No.	on

WHEREAS, EMC IP HOLDING COMPANY LLC (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the State of Delaware and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the

PATENT REEL: 043882 FRAME: 0331 giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives;

AND, we hereby authorize our attorneys, EMC IP HOLDING COMPANY LLC, to insert here in parenthesis (15/628,776 filed June 21, 2017) the application number and filing date of said Application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: 2017/6/26	Bing Liu Inventor's Signature
	Inventor's Signature
Print full name of inventor	Bing Liu
Residence	Tianjin Kunwei Street, Kunpuli 4-35
	300140 Tianjin, CN
Citizenship	CN
Mailing Address	Same as above
I, <u>FeliX Wong</u> (nar	me of first witness), whose residential address is
Tamp Jialing Haidian Beijing	
was personally present and did see Bing Liu	(name of person signing the assignment), who is
personally known to me, execute the above a	ssignment.
_ Felix Wong	(Signature of first witness) (AYK (location of witness signature) (30 / (date of signature).
Signed at Ring Hua Science P	(location of witness signature)
on this day,	, 20 <u>/</u> (date of signature).
	1
I, <u>Jian liang liu</u> (nar XI CHeng Beiling (me of second witness), whose residential address is
was personally present and did see Bing Liu	(name of person signing the assignment), who is
personally known to me, execute the above a	ssignment.
Jian loang Liu	(Signature of second witness)
Signed at Tging Hua Science	(Signature of second witness) Pork, Hai Dian, (location of witness signature) , 2017 (date of signature).
on this day,	, 20 <u>17</u> (date of signature).

PATENT REEL: 043882 FRAME: 0333

Date: 2017/6/26	Man Lu
1	Inventor's Signature
Print full name of inventor	Man Lv
Residence	Tsinghua Science Park, 100084 Beijing, CN
Citizenship	CN
Mailing Address	Same as above
I, Jelix Wang (nam Jangjialing Haidian Beijing	e of first witness), whose residential address is
was personally present and did see Man Lv (n.	ame of person signing the assignment), who is
personally known to me, execute the above as	
Telix Wong	Signature of first witness) (location of witness signature) 20 (date of signature).
Signed at <u>Ping Hua</u> Science Park	(location of witness signature)
on this day, <u>06.26</u> ,	20 <u>/ /</u> (date of signature).
	1
I, <u>Sian làong liu</u> (nam	e of second witness), whose residential address is
Xi Cheng, Beiling, Chin	a
was personally present and did see Man Lv (n	ame of person signing the assignment), who is
personally known to me, execute the above as	signment.
,	
Jian liang (in	Signature of second witness)
Signed at <u>King Hua Science Pork</u>	Hailian, Bel (location of witness signature)
on this day,	Signature of second witness) <u>Hai Dian</u> , Bei (location of witness signature) 20 <u>17</u> (date of signature).

PATENT REEL: 043882 FRAME: 0334

Date:	Eti'c Yang Song Inventor's Signature
	Inventor's Signature
Print full name of inventor	Eric Yang Song
Residence	Changping District, Beijing, CN
Citizenship	CN
Mailing Address	Same as above
I, <u>Felix Wong</u> Tang Jialing Haidian Beit	(name of first witness), whose residential address is
was personally present and did see \underline{Y}	ang Song (name of person signing the assignment), who is
personally known to me, execute the	above assignment.
Telix Wang	(Signature of first witness)
Signed at Ning Hun Scie	(location of witness signature)
on this day,	(Signature of first witness) Pure Powk (location of witness signature) , 20 1 (date of signature).
	1
I, <u>Jian liang liu</u> Vi Chang bailine	(name of second witness), whose residential address is
,,	ang Song (name of person signing the assignment), who is
personally known to me, execute the	
·	5
Trein liang lin	(Signature of second witness)
Signed at Tinhua Science F	Ook . Usi Dian, Beiling Chocation of witness signature)
on this day,	(Signature of second witness) ONE. Uni Dian, Beiling (Rocation of witness signature) , 20 17 (date of signature).
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PATENT REEL: 043882 FRAME: 0335

RECORDED: 10/17/2017