

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YUAN LUO	12/20/2016
NING XU	12/20/2016
MAXIM SICHAO MA	12/20/2016
QIU SHANG	12/20/2016
SHAOCONG LIANG	12/20/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EMC IP HOLDING COMPANY LLC
<b>Street Address:</b>	176 SOUTH STREET
<b>City:</b>	HOPKINTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	01748
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16443344
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
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<b>ATTORNEY DOCKET NUMBER:</b>	113454.00331CON
<b>NAME OF SUBMITTER:</b>	TIMOTHY PENG
<b>SIGNATURE:</b>	/Timothy Peng/
<b>DATE SIGNED:</b>	06/17/2019
<b>Total Attachments: 7</b>	
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## ASSIGNMENT

**WHEREAS**, we, Yuan Luo, Ning Xu, Maxim Sichao Ma, Qiu Shang and Shaocong Liang 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 *METHODS AND DEVICES FOR MULTI-LEVEL DATA PROTECTION IN A STORAGE SYSTEM* (Application), the specification of which:

☐ is being executed on even date herewith and is about to be filed in the United States Patent Office;

☒ was filed on December 19, 2016 as U.S. Application No. 15/382,830;

☐ 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 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 (15/382,830) 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: Dec. 20th, 2016

Yuan Luo  
Inventor's Signature

Print full name of inventor

Yuan Luo

Residence

Level 2 & 3, KIC Plaza  
200333 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Liao Zexian (name of first witness), whose residential address is  
Room 502, No. 19, Lane 94, Yongye Road, Shanghai  
was personally present and did see Yuan Luo (name of person signing the assignment), who is  
personally known to me, execute the above assignment.

Liao Zexian (Signature of first witness)

Signed at KIC 1, 3rd floor, Songhu Road 252, Shanghai (location of witness signature)  
on this day, Dec 20th, 20 16 (date of signature).

I, Xu Hongru (name of second witness), whose residential address is  
Room 401, Building 24, NO. 410 Shanghai Road, Shanghai, China  
was personally present and did see Yuan Luo (name of person signing the assignment), who is  
personally known to me, execute the above assignment.

Xu Hongru (Signature of second witness)

Signed at KIC 1, 3rd floor, Songhu Road 252, Shanghai (location of witness signature)  
on this day, Dec. 20th, 20 16 (date of signature).

Date: Dec, 20th 2016

Ning Xu

Inventor's Signature

Print full name of inventor

Ning Xu

Residence

Nong, 428, ChangPing Road, Unit 2, Room 601

Jing'an District

200040 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Liao Zexian (name of first witness), whose residential address is

Room 502, No. 19, Lane 94, Yong Ye Road, Shanghai

was personally present and did see Ning Xu (name of person signing the assignment), who is personally known to me, execute the above assignment.

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Xu Hongru (Signature of second witness)

Signed at KIC 1, 3rd floor, NO. 252 Songhu Road, Shanghai (location of witness signature)

on this day, Dec. 20th, 20 16 (date of signature).

Date: Dec 20th, 2016 Maxim Sichao Ma  
Inventor's Signature

Print full name of inventor Maxim Sichao Ma  
Residence 2<sup>nd</sup> Floor, KIC2, No.252, Songhu Road  
Shanghai, CN  
Citizenship CN  
Mailing Address Same as above

I, Liao Zexian (name of first witness), whose residential address is  
Room 502, No.19, Lane 94, YangYe Road, Shanghai  
was personally present and did see Maxim Sichao Ma (name of person signing the assignment),  
who is personally known to me, execute the above assignment.

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who is personally known to me, execute the above assignment.

Xu Hongru (Signature of second witness)  
Signed at KIC 1, 3rd floor, Songhu Road 252, Shanghai (location of witness signature)  
on this day, Dec. 20th, 20 16 (date of signature).

Date: Dec, 20th, 2016

Qiu Shang  
Inventor's Signature

Print full name of inventor

Qiu Shang

Residence

Songhu Road #252, Building #2, Yangpu District  
200433 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Liao Zexian (name of first witness), whose residential address is  
Room 502, No. 19, Lane 94, Yangye Road, Shanghai  
was personally present and did see Qiu Shang (name of person signing the assignment), who is  
personally known to me, execute the above assignment.

Liao Zexian (Signature of first witness)  
Signed at KIC 1, 3rd floor, Songhu Road 252, Shanghai (location of witness signature)  
on this day, Dec 20th, 20 16 (date of signature).

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personally known to me, execute the above assignment.

Xu Hongru (Signature of second witness)  
Signed at KIC 1, 3rd floor, No. 252 Songhu Road, Shanghai (location of witness signature)  
on this day, Dec. 20th, 20 16 (date of signature).



Date: 2016 12/20

Shaocong Liang

Inventor's Signature

Print full name of inventor

Shaocong Liang

Residence

2F, Building #2, KIC Plaza, No. 252

200433 Shanghai, CN

Citizenship

CN

Mailing Address

Same as above

I, Liao Zexian (name of first witness), whose residential address is

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who is personally known to me, execute the above assignment.

Liao Zexian

(Signature of first witness)

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Xu Hongru

(Signature of second witness)

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