PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3728125

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BINBIN LIU LIN	12/22/2015
NATASHA GAURAV	12/28/2015

RECEIVING PARTY DATA

Name:	EMC CORPORATION
Street Address:	176 SOUTH STREET
City:	HOPKINTON
State/Country:	MASSACHUSETTS
Postal Code:	01748

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14980510

CORRESPONDENCE DATA

Fax Number: (508)366-4688

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.

Phone: 508-616-2900

Email: Docket@BainwoodHuang.com

Correspondent Name: BAINWOOD, HUANG & ASSOCIATES, LLC

Address Line 1: 2 CONNECTOR ROAD

Address Line 4: WESTBOROUGH, MASSACHUSETTS 01581

ATTORNEY DOCKET NUMBER:	1003-394	
NAME OF SUBMITTER: DAVID E. HUANG, ESQ.		
SIGNATURE:	/David E. Huang/	
DATE SIGNED:	02/05/2016	

Total Attachments: 6

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PATENT REEL: 037671 FRAME: 0394

PATENT ASSIGNMENT Attorney Docket No.: 1003-394

EMC Docket No.: EMC-14-0256

ASSIGNMENT

WHEREAS, I, Binbin Liu Lin, as the original inventor or an original joint inventor 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

MANAGING A POOL OF STORAGE SLICES VIA CONSUMPTION ESTIMATION BASED ON HISTORICAL DATA

which is further identified by Attorney Docket Number 1003-394;

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts, 01748, USA, desires to acquire an interest therein in accordance with agreements duly entered into with me:

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, I 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 me had this assignment and sale not been made; I 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. I 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, I hereby further agree for myself and my 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

PATENT ASSIGNMENT Attorney Docket No.: 1003-394

EMC Docket No.: EMC-14-0256

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, I 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 I hereby authorize the attorneys at Bainwood Huang & Associates LLC to insert here in parentheses (14/980.50 -6.1ed /3/38/30.5) the application number and filing date of said application (or foreign counterpart application) to facilitate the recording or other official processing of this Assignment.

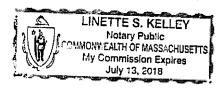
IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal as set forth below:

PATENT ASSIGNMENT Attorney Docket No.: 1003-394

EMC Docket No.: <u>EMC-14-0256</u>

Date: 12/22/2015 Inventor's Signature Legal name of inventor: Binbin Liu Lin Residence: 18 Trailside Circle Sudbury, MA 01776 United States of America US Citizenship: Mailing Address: Same as above STATE/COMMONWEALTH OF Massachusetts

COUNTY OF Middle sex On this <u>22</u> day of <u>December</u>, 20/5, then personally appeared before me the above-named <u>Binbin Liu Lin</u> known to me through satisfactory evidence of identification [__] employee identification card; [X] driver's license; [__] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Print Name:



My Commission expires 07/18/20/8

PATENT ASSIGNMENT Attorney Docket No.: 1003-394

EMC Docket No.: EMC-14-0256

ASSIGNMENT

WHEREAS, I, Natasha Gaurav, as the original inventor or an original joint inventor 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

MANAGING A POOL OF STORAGE SLICES VIA CONSUMPTION ESTIMATION BASED ON HISTORICAL DATA

which is further identified by Attorney Docket Number 1003-394;

WHEREAS, EMC Corporation (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts, 01748, USA, desires to acquire an interest therein in accordance with agreements duly entered into with me:

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, I 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 me had this assignment and sale not been made; I 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. I 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, I hereby further agree for myself and my 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

PATENT ASSIGNMENT Attorney Docket No.: 1003-394 EMC Docket No.: EMC-14-0256

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, I 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 I hereby authorize the attorneys at Bainwood Huang & Associates LLC to insert here in parentheses (14 980,510 6160 12/28/20/5 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, I have hereunto set my hand and affixed my seal as set forth below:

PATENT ASSIGNMENT

Attorney Docket No.: 1003-394 EMC Docket No.: EMC-14-0256

Residence: Natasha Gaurav Residence: 33 Pinecrest Village Hopkinton, MA 01748 United States of America Litizenship: National States of America National States of Am	Date: 12/28/15	Nataski	
Residence: 33 Pinecrest Village Hopkinton, MA 01748 United States of America Citizenship: IN Mailing Address: Same as above STATE/COMMONWEALTH OF COUNTY OF Middle Sex On this 28th day of December, 2015, then personally appeared before me the above-named Natasha Gaurav known to me through satisfactory evidence of identification employee identification card; I driver's license; (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Notary Public Print Name:		¹ Inventor's Signature	
Hopkinton, MA 01748 United States of America Citizenship: IN Mailing Address: Same as above STATE/COMMONWEALTH OF Massachusetts COUNTY OF Middle Sex On this 28th day of December, 2015, then personally appeared before me the above-named Natasha Gaurav known to me through satisfactory evidence of identification [] employee identification card; [] driver's license; [] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Print Name: Linute S. Kelley	Legal name of inventor:	Natasha Gaurav	
United States of America Citizenship: Mailing Address: Same as above STATE/COMMONWEALTH OF Massachusetts COUNTY OF Middle Sev On this 28th day of December 2015, then personally appeared before me the above-named Natasha Gaurav known to me through satisfactory evidence of identification employee identification card; driver's license; (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Print Name: Linette 5. Kelley	Residence:	33 Pinecrest Village	
Citizenship: IN Mailing Address: Same as above STATE/COMMONWEALTH OF Massachusetts COUNTY OF Middle Sev On this 18th day of December, 2015, then personally appeared before me the above-named Natasha Gaurav known to me through satisfactory evidence of identification [] employee identification card; [] driver's license; [] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Notary Public Print Name: Linctle 5. Kelley		Hopkinton, MA 01748	
STATE/COMMONWEALTH OF Massachusetts COUNTY OF Middle Sex On this 28th day of December, 2015, then personally appeared before me the above-named Natasha Gauray known to me through satisfactory evidence of identification [] employee identification card; [] driver's license; [] (other) to be the person whose name is subscribed to the foregoing Assignment and acknowledged that he/she executed the same as his/her free act and deed for the purposes therein contained. Print Name: Print Name:		United States of America	
STATE/COMMONWEALTH OF	Citizenship:	IN The second se	
On this	Mailing Address:	Same as above	
Notary Public Print Name: Linette S. Kelley	On this, day of, 20_/5_, then personally appeared before me the above-named Natasha Gaurav known to me through satisfactory evidence of identification [] employee identification card; [_] driver's license; [] (other) to be the person whose name is subscribed to		
Notary Public Print Name: Lingto S. Kelley	free act and deed for the purposes therein contained.		
Notary Public Print Name: Lingto S. Kelley		Swett Steller	
Linette S. Kelley		Notary Public	
My Commission expires <u>07</u> / <u>13</u> / <u>20</u> /8			

