

## PATENT ASSIGNMENT

Electronic Version v1.1  
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SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Kumar Kanteti</td> <td>05/22/2013</td> </tr> <tr> <td>William Davenport</td> <td>05/09/2013</td> </tr> <tr> <td>Philippe Armangau</td> <td>05/10/2013</td> </tr> </tbody> </table>		Name	Execution Date	Kumar Kanteti	05/22/2013	William Davenport	05/09/2013	Philippe Armangau	05/10/2013		
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Philippe Armangau	05/10/2013										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>EMC Corporation</td> </tr> <tr> <td>Street Address:</td> <td>176 South Street</td> </tr> <tr> <td>City:</td> <td>Hopkinton</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01748</td> </tr> </table>		Name:	EMC Corporation	Street Address:	176 South Street	City:	Hopkinton	State/Country:	MASSACHUSETTS	Postal Code:	01748
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PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13834385</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13834385						
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CORRESPONDENCE DATA											
Fax Number: 5083664688 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> 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:	1003-204										
NAME OF SUBMITTER:	David Suhl										
Signature:	/David Suhl/										
Date:	05/24/2013										

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**Total Attachments: 9**

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**ASSIGNMENT**

**WHEREAS**, I, Kumar Kanteti, 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 METADATA SYNCHRONIZATION FOR REDUCING HOST SYSTEM  
LATENCY IN A STORAGE SYSTEM**

which is further identified by Attorney Docket Number 1003-204;

**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 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 ( 13/834,385 filed 03/15/2013 ) 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:

Date: 5/22/13

K. N. K. H. L.

Inventor's Signature

Legal name of inventor: Kumar Kanteti  
Residence: 15 Pratt Street  
South Grafton, MA 01560  
Citizenship: US  
Mailing Address: Same as above

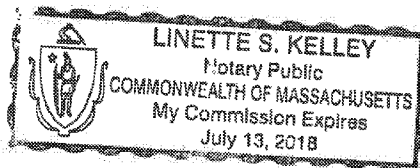
STATE/COMMONWEALTH OF Massachusetts  
COUNTY OF Middlesex

On this 22<sup>nd</sup> day of May, 2013, then personally appeared before me the above-named Kumar Kanteti 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.

Linette S. Kelley  
Notary Public

Print Name:

Linette S. Kelley  
My Commission expires 07/13/2018



**ASSIGNMENT**

**WHEREAS**, I, William Davenport, 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 METADATA SYNCHRONIZATION FOR REDUCING HOST SYSTEM  
LATENCY IN A STORAGE SYSTEM**

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**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 expense and charges, including the execution of applications for patents in foreign

PATENT ASSIGNMENT  
Attorney Docket No.: 1003-204  
EMC Docket No.: EMC-12-893

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;

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

PATENT ASSIGNMENT  
Attorney Docket No.: 1003-204  
EMC Docket No.: EMC-12-893

Date: 5/9/2013

William Davenport  
Inventor's Signature

Legal name of inventor: William Davenport  
Residence: 28 Cedar Street  
Burlington, MA 01803  
Citizenship: US  
Mailing Address: Same as above

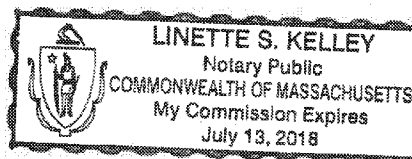
STATE/COMMONWEALTH OF Massachusetts  
COUNTY OF Middlesex

On this 9<sup>th</sup> day of May, 2013, then personally appeared before me the above-named **William Davenport** 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.

Linette S. Kelley  
Notary Public

Print Name:

Linette S. Kelley  
My Commission expires 07/13/2018





**ASSIGNMENT**

**WHEREAS**, I, Philippe Armangau, 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 METADATA SYNCHRONIZATION FOR REDUCING HOST SYSTEM  
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**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;

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PATENT ASSIGNMENT  
Attorney Docket No.: 1003-204  
EMC Docket No.: EMC-12-893

Date: 5/10/13

[Signature]  
Inventor's Signature

Legal name of inventor: Philippe Armangau  
Residence: 51 Seminole Road  
Acton, MA 01720  
Citizenship: US  
Mailing Address: Same as above

STATE/Commonwealth of Massachusetts  
COUNTY OF Middlesex

On this 10<sup>th</sup> day of May, 2013, then personally appeared before me the above-named **Philippe Armangau** 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.

[Signature]  
Notary Public

Print Name: Linette S. Kelley  
My Commission expires 07/13/2018

