

## 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>Manoj Kumar JAIN</td> <td>07/30/2012</td> </tr> <tr> <td>Siju Viswanath Koodali EDATHIL</td> <td>07/30/2012</td> </tr> <tr> <td>Kottolli Vishweshwara ARUN</td> <td>07/30/2012</td> </tr> </tbody> </table>		Name	Execution Date	Manoj Kumar JAIN	07/30/2012	Siju Viswanath Koodali EDATHIL	07/30/2012	Kottolli Vishweshwara ARUN	07/30/2012
Name	Execution Date								
Manoj Kumar JAIN	07/30/2012								
Siju Viswanath Koodali EDATHIL	07/30/2012								
Kottolli Vishweshwara ARUN	07/30/2012								
RECEIVING PARTY DATA									
Name:	EMC CORPORATION								
Street Address:	176 South Street								
City:	Hopkinton								
State/Country:	MASSACHUSETTS								
Postal Code:	01748								
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>13561340</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13561340				
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Application Number:	13561340								
CORRESPONDENCE DATA									
Fax Number:	5088988602								
Phone:	(508) 898-8601								
Email:	Docketing@westboro-ip.com								
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>									
Correspondent Name:	Donald W. Muirhead								
Address Line 1:	Muirhead and Saturnelli, LLC								
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Address Line 4:	Westborough, MASSACHUSETTS 01581								
ATTORNEY DOCKET NUMBER:	EMS-464US; EMC-11-905								
NAME OF SUBMITTER:	Donald W. Muirhead								
<p>Total Attachments: 4</p> <p>source=EMS-464US, Executed Assignment#page1.tif</p> <p>source=EMS-464US, Executed Assignment#page2.tif</p> <p>source=EMS-464US, Executed Assignment#page3.tif</p> <p>source=EMS-464US, Executed Assignment#page4.tif</p>									

CH \$40.00 13561340

**ASSIGNMENT**

**WHEREAS**, we, Manoj Kumar JAIN, Siju Viswanath Koodali EDATHIL and Kottolli Vishweshwara ARUN 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 **SCALABLE CODEBOOK CORRELATION FOR CLOUD SCALE TOPOLOGY**, 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 July 30, 2012 as U.S. Application No. 13/561,340;
- was patented under U.S. Patent No. \_\_\_\_\_ on \_\_\_\_\_.

**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 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 attorneys of Muirhead and Saturnelli, LLC to insert here in parenthesis ( ) 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: July 30<sup>th</sup> 2012



Inventor's Signature

Print full name of first inventor: **Manoj Kumar JAIN**  
Residence: #305 B3, Viceroy Apt. Marthahalli  
Bangalore, Karnataka 560037 India  
Citizenship: India  
Mailing Address: Same

I, S. Vivekananda Venkateswaran (name) whose residential address is #308, Block B, Ishaa Lake Front Apt. Somasundra, HSR, BANGALORE 560103 was personally present and did see **Manoj Kumar JAIN** (name of person signing the assignment) who is personally known to me, execute the above assignment.

S. Vivekananda Venkateswaran (signature of first witness)

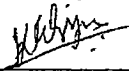
Signed at July 30<sup>th</sup> 2012, BANGALORE (location of witness signature)  
On this day July 30<sup>th</sup> of 2012. (date of signature)

I, EIRISH NADGER (name) whose residential address is #327, II<sup>nd</sup> main BSK III Stage, BANGALORE - 85 Was personally present and did see **Manoj Kumar JAIN** (name of person signing the assignment) who is personally known to me, execute the above assignment.

Eirish Nadger (signature of second witness)

Signed at BANGALORE (location of witness signature)  
On this day July 30<sup>th</sup> of 2012 (date of signature)

Date: July 30<sup>th</sup> 2012



Inventor's Signature

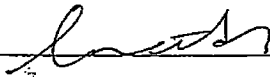
Print full name of second inventor: **Siju Viswanath Koodali EDATHIL**  
Residence: Flat 8-L, Lakeview County Apt, Singasandra  
Bangalore, Karnataka 560068 India  
Citizenship: India  
Mailing Address: Same

I, S. VIVEKANANDA VENKATESWARAN (name) whose residential address is #308, Block B, ISHA FRONT APT, SOMASUNDRA, HSR, BANGALORE, 560103 was personally present and did see **Siju Viswanath Koodali EDATHIL** (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of first witness)


Signed at BANGALORE (location of witness signature)  
On this day JULY 30<sup>th</sup> of 2012. (date of signature)

I, GIRISH NADGER (name) whose residential address is #327, II<sup>nd</sup> main BSK III Stage, BANGALORE - 85 Was personally present and did see **Siju Viswanath Koodali EDATHIL** (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at BANGALORE (location of witness signature)  
On this day JULY, 30<sup>th</sup> of 2012. (date of signature)

Date: July 30<sup>th</sup> 2012

  
Inventor's Signature

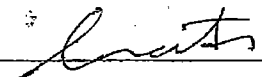
Print full name of third inventor: **Kottoli Vishweshwara ARUN**  
Residence: No. 86, 6A Main Road  
Tata Silk Farm  
Bangalore, Karnataka 560004 India  
Citizenship: India  
Mailing Address: Same

I, S. VIVEKANANDA VENKATESWARAN (name) whose residential address is #308, Block B, ISHAA LAKE APT, SOMASUNDRA, HSR, BANGALORE - 560103 was personally present and did see **Kottoli Vishweshwara ARUN** (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of first witness)

Signed at BANGALORE (location of witness signature)  
On this day JULY 30<sup>th</sup> of 2012 (date of signature)

I, ERISH NADGER (name) whose residential address is #327, II<sup>nd</sup> main, BSK III Stage, BANGALORE - 85 Was personally present and did see **Kottoli Vishweshwara ARUN** (name of person signing the assignment) who is personally known to me, execute the above assignment.

 (signature of second witness)

Signed at BANGALORE (location of witness signature)  
On this day JULY 30<sup>th</sup> of 2012 (date of signature)