PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL ANTHONY	03/06/2020
ANURAG BHATNAGAR	03/03/2020
SHANMUGA ANAND GUNASEKARAN	03/02/2020
MARK ALDRED	03/06/2020
DAVID KING	03/09/2020

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16814471

CORRESPONDENCE DATA

Fax Number: (631)393-6271

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: (631)393-6270

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Correspondent Name: JOSEPH B. RYAN

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ATTORNEY DOCKET NUMBER:	118275.01
NAME OF SUBMITTER:	JOSEPH B. RYAN
SIGNATURE:	/Joseph B. Ryan/
DATE SIGNED:	03/11/2020
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Total Attachments: 7

PATENT REEL: 052078 FRAME: 0072

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PATENT REEL: 052078 FRAME: 0073

ASSIGNMENT

WHEREAS, we, Michael Anthony, Anurag Bhatnagar, Shanmuga Anand Gunasekaran, Mark Aldred and David King, 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 RECOVERING A STORAGE VOLUME ASSOCIATED WITH A SNAPSHOT LINEAGE FROM CLOUD STORAGE, the specification of which:

[X]	States Patent Office;
[]	was filed on as U.S. Application No;
[]	was patented under U.S. Patent No on

WHEREAS, EMC IP Holding Company LLC (hereinafter "ASSIGNEE"), a limited liability company 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.

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

Date: 03/06/2020	Inventor's Signature
Full name of first inventor:	Michael Anthony
Residence:	Wilmington, Massachusetts
Citizenship:	United States of America
Mailing Address:	9 Elm Street
	Wilmington, Massachusetts 01887
Date:	
	Inventor's Signature
Full name of second inventor:	Anurag Bhatnagar
Residence:	Bangalore, Karnataka, India
Citizenship:	India
Mailing Address:	PR501, Golden Blossom Apartment Belthur, Kadugodi Bangalore, Karnataka, India 560067
Date:	
	Inventor's Signature
Full name of third inventor:	Shanmuga Anand Gunasekaran
Residence:	Bangalore, Karnataka, India
Citizenship:	India
Mailing Address:	#27 GR Sun Villas Behind Prestige Tranquility Apt. Huskur Road, Nimbekaipura Bangalore, Karnataka, India 560049

Date:	
	Inventor's Signature
Full name of first inventor:	Michael Anthony
Residence:	Wilmington, Massachusetts
Citizenship:	United States of America
Mailing Address:	9 Elm Street
	Wilmington, Massachusetts 01887
Date: 03 - May'20	Januara B
-	Inventor's Signature
Full name of second inventor:	Anurag Bhatnagar
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Citizenship:	India
Mailing Address:	PR501, Golden Blossom Apartment Belthur, Kadugodi Bangalore, Karnataka, India 560067
Date:	
	Inventor's Signature
Full name of third inventor:	Shanmuga Anand Gunasekaran
Residence:	Bangalore, Karnataka, India
Citizenship:	India
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Date:	
	Inventor's Signature
Full name of first inventor:	Michael Anthony
Residence:	Wilmington, Massachusetts
Citizenship:	United States of America
Mailing Address:	9 Elm Street
	Wilmington, Massachusetts 01887
Date:	
	Inventor's Signature
Full name of second inventor:	Anurag Bhatnagar
Residence:	Bangalore, Karnataka, India
Citizenship:	India
Mailing Address:	PR501, Golden Blossom Apartment
	Belthur, Kadugodi Bangalore, Karnataka, India 560067
Date: <u>03/02/2020</u>	Lawfo J.J. Inventor's Signature
F-11 - 00-11	
Full name of third inventor:	Shanmuga Anand Gunasekaran
Residence:	Bangalore, Karnataka, India
Citizenship:	India
Mailing Address:	#27 GR Sun Villas Behind Prestige Tranquility Apt.
	Huskur Road, Nimbekaipura
	Bangalore, Kamataka, India 560049

Date: Narch 6, 2000	Ma Signature
Full name of fourth inventor:	Mark Aldred
Residence:	Franklin, Massachusetts
Citizenship:	United States of America
Mailing Address:	49 Acom Place
	Franklin, Massachusetts 02038
Date:	
	Inventor's Signature
Full name of fifth inventor:	David King
Residence:	Sudbury, Massachusetts
Citizenship:	United States of America
Mailing Address:	281 Goodman's Hill Road
	Sudbury, Massachusetts 01776

Date:	
	 Inventor's Signature

Full name of fourth inventor:

Mark Aldred

Residence:

Franklin, Massachusetts

Citizenship:

United States of America

Mailing Address:

49 Acom Place

Franklin, Massachusetts 02038

Date:

David King

Full name of fifth inventor:

Sudbury, Massachusetts

Residence:

United States of America

Citizenship:

281 Goodman's Hill Road

Mailing Address:

Sudbury, Massachusetts 01776