505174398 11/05/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AKASH AGRAWAL	10/22/2018
TIMOTHY JOHNSON	10/30/2018
JIAHUI WANG	10/22/2018
PENG YIN	10/22/2018
STEPHEN RICHARD IVES	10/30/2018
MICHAEL GARVEY	10/31/2018
CHRISTOPHER MONTI	10/30/2018

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16176188

CORRESPONDENCE DATA

Fax Number: (978)264-9119

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: 7813631728

Email: jgorecki@andersongorecki.com

Correspondent Name: JOHN GORECKI

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Address Line 4: ANDOVER, MASSACHUSETTS 01810

ATTORNEY DOCKET NUMBER:	112034.01 / 130-185-JCG
NAME OF SUBMITTER:	JOHN C GORECKI
SIGNATURE:	/John C Gorecki/
DATE SIGNED:	11/05/2018

505174398 PATENT REEL: 047407 FRAME: 0942

Total Attachments: 9 source=130_185_Assignment_signed#page1.tif source=130_185_Assignment_signed#page2.tif source=130_185_Assignment_signed#page3.tif source=130_185_Assignment_signed#page4.tif source=130_185_Assignment_signed#page5.tif source=130_185_Assignment_signed#page6.tif source=130_185_Assignment_signed#page7.tif source=130_185_Assignment_signed#page8.tif source=130_185_Assignment_signed#page9.tif

PATENT REEL: 047407 FRAME: 0943

ASSIGNMENT

WHEREAS, we, Akash Agrawal, Timothy Johnson, Jiahui Wang, Peng Yin, Stephen Richard Ives, Michael Garvey, and Christopher Monti, 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

System and Method for Managing Recovery of Multi-Controller NVMe Drives,

the specification of which:

[X]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[]	was filed on as U.S. Application No;
[]	was patented under U.S. Patent Noon

WHEREAS, EMC IP HOLDING COMPANY LLC (hereinafter "ASSIGNEE"), a Delaware limited liability company 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;

PATENT REEL: 047407 FRAME: 0944

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 do hereby appoint as our attorneys Holmes W. Anderson and John C. Gorecki of Anderson Gorecki LLP, whose full office address is 2 Dundee Park, Suite 301A, Andover, MA 01810, and authorize them to prosecute the patent application(s) and correct errors in this Assignment and to insert any further identification and other information necessary or desirable to make this Assignment suitable for recording in a domestic or foreign Patent Office.

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

Date: 22 October 2018	Mask
	Inventor's Signature
Print full name of inventor	Akash Agrawal
Residence	House 929 Ward 10, Deoria-274001 (U.P.)
	India
Citizenship	India
Mailing Address	176 South Street
	Hopkinton, MA 01748
I karan Majdapani	(name of first witness), whose residential address is
RIM Konank Campus, V.	man Magor, Purps - Willally mahamakan Gal
who is personally known to me, execu	kash Agrawal (name of person signing the assignment), the the above assignment. (signature of first witness) (location of witness signature) , 2018 (date of signature).
	, 2018 (date of signature).
1. Tustor Kaurans RI4 Konank (ampie , Vim	(name of second witness), whose residential address is
was personally present and the see Aka	sh Agrawal (name of person signing the assignment)
who is personally known to me, execute	the above assignment.
TUSHARK	(signature of second witness)
orgineral rune, Andro	(signature of second witness) (location of witness signature)
on this day, 22 000601 2018	, 2018 (date of signature).

Date: 10/30/18	Lottershoon
- openinkelsen Misses blive en openinkelsen op	Inventor's Signature
Print full name of inventor	Timothy Johnson
Residence	12 Mount Pleasant Ave.
	Leicester, MA 01524
Citizenship	United States
Mailing Address	176 South Street
	Hopkinton, MA 01748
I, MICHAEL MCDONAGU	(name of first witness), whose residential address is
24 SHAMER LANE	61772E70N NA 01460
was personally present and did see Tin	nothy Johnson (name of person signing the assignment).
who is personally known to me, execut	e the above assignment.
	(signature of first witness)
	10/4//704 MA (location of witness signature)
on this day,	, 2018 (date of signature).
1 Dale Elliott	(name of second witness), whose residential address is
22 Trocky Crefe North	TV 1
``	othy Johnson (name of person signing the assignment),
who is personally known to me, execut	e the above assignment.
Della Master	(signature of second witness)
Signed at 176 South St Hop	KMAN MA (location of witness signature)
on this day, 4/30/18	, 2018 (date of signature).

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Date: 10/22/2018	Kahulan
	Inventor's Signature
Print full name of inventor	Jiahui Wang
Residence	180 Newbury Street
	Framingham, MA 01701
Citizenship	US
Mailing Address	176 South Street
	Hopkinton, MA 01748
was personally present and did see Jiahui Wa is personally known to me, execute the above Signed at 176 Sadust	ne of first witness), whose residential address is with 1213
and a second	e of second witness), whose residential address is
was personally present and did see Jiahui Wa	ing (name of person signing the assignment), who
is personally known to me, execute the above	assignment.
Sound O de Co. S. S.	(signature of second witness)
Signed at 176 5349 14. 11246	নিক্স <u>প</u> ঠি (location of witness signature)
on this day, <u>0 (1, 22</u> ,	2018 (date of signature).

Date: 10/22/18	Dr-
	Inventor's Signature
Print full name of inventor	Peng Yin
Residence	1 Whistler Ln.
	Southborough, MA 01772
Citizenship	US
Mailing Address	176 South Street
	Hopkinton, MA 01748
16 Brooks st Brig	ne of first witness), whose residential address is Low MA 02/35 (name of person signing the assignment), who is ssignment. (signature of first witness) Low Kinton M tocation of witness signature) 2018 (date of signature).
1. Doshon Wang (no) 446 Broskline St. New	me of second witness), whose residential address is
was personally present and did see Peng Yin	(name of person signing the assignment), who is
personally known to me, execute the above a	assignment.
Signed at 176 South St. Hoplant	(signature of second witness) (location of witness signature)
on this day, $19/22$., 2018 (date of signature).

PATENT REEL: 047407 FRAME: 0949

Date: October 30, 2018	Inventor's Signature
Print full name of inventor	Stephen Richard Ives
Residence	"
	26 Shrewshury Street
	West Boylston, MA 01583-2104
Citizenship	US
Mailing Address	176 South Street
	Hopkinton, MA 01748
I, MONA VES (nam ZL SHREWSBURY ST. WEST P	e of first witness), whose residential address is
was personally present and did see Stephen R	ichard Ives (name of person signing the
assignment), who is personally known to me, or	execute the above assignment.
<u>Quisous</u>	signature of first witness)
	(location of witness signature)
on this day, Ocopsez 20 ,	2018 (date of signature).
1, NADIN SALEM (nam 26 strewskurg of th	e of second witness), whose residential address is ルシナ Bのひらずの, M A のくろう
was personally present and did see Stephen R	
assignment), who is personally known to me, or	xecute the above assignment.
1	
<u> </u>	signature of second witness)
Signed at West Bon)	(location of witness signature)
on this day, oct 30,	signature of second witness) (Iocation of witness signature) 2018 (date of signature).

Date: 10/3//8	L.S.D.C.
š	Inventor's Signature
Print full name of inventor	Michael Garvey
Residence	1499 Dunhamtown Road
	Brimfield, MA 01010
Citizenship	US
Mailing Address	176 South Street
•	Hopkinton, MA 01748
i, Eric Jacqex	(name of first witness), whose residential address is
1497 Dunhantan	1 Brindield My DIDIO
was personally present and did see \mathbf{M}	ichael Garvey (name of person signing the assignment),
who is personally known to me, execu	ute the above assignment.
	(signature of first witness)
Signed at Sof M (ic)	(location of witness signature)
on this day, $\frac{3-3}{}$, 2018 (date of signature).
I, Kathleen Garvey	(name of second witness), whose residential address is
1499 Dunhamtown Rd Bc	intield, UA 01010
was personally present and did see M	ichael Garvey (name of person signing the assignment),
who is personally known to me, execu	ute the above assignment.
Lathban Kaway	(signature of second witness)
Signed at Brinds Id	(location of witness signature)
on this day, 10-31	, 2018 (date of signature).

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$D_{ate:} /0/30/20/8$	Ovatopler mente
	Inventor's Signature
Print full name of inventor	Christopher Monti
Residence	7 Mackey Drive
	Tyngsboro, MA 01879
Citizenship	US
Mailing Address	176 South Street
	Hopkinton, MA 01748
I, MICHAEL MCDONAGU (1) 24 SHAKER LN, L	ame of first witness), whose residential address is
was personally present and did see Christo who is personally known to me, execute the	pher Monti (name of person signing the assignment), e above assignment.
Signed at $\frac{176.50774.57}{10.30//3}$	HNKINION M (location of witness signature)
I. Debra diBenedettyn 7 Blueberry Lane, Hi	ame of second witness), whose residential address is
	pher Monti (name of person signing the assignment),
who is personally known to me, execute the	e above assignment.
Meq. degree Symbol Sym	(signature of second witness) <u>OP (Control of MA)</u> (location of witness signature), 2018 (date of signature).

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