505518946 06/11/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN S. HARWOOD	06/10/2019
ASSAF NATANZON	12/23/2018

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:	16179531

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.

631-393-6270 Phone:

Email: nyoffice@rml-law.com **Correspondent Name:** JOSEPH B. RYAN

Address Line 1: 48 SOUTH SERVICE ROAD, SUITE 100

Address Line 2: RYAN, MASON & LEWIS, LLP Address Line 4: MELVILLE, NEW YORK 11747

ATTORNEY DOCKET NUMBER: 112263.01 NAME OF SUBMITTER: JOSEPH B. RYAN SIGNATURE: /joseph b. ryan/ **DATE SIGNED:** 06/11/2019

Total Attachments: 7

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> **PATENT** REEL: 049432 FRAME: 0607

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> PATENT REEL: 049432 FRAME: 0608

ASSIGNMENT

WHEREAS, we, John S. Harwood and Assaf Natanzon, 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 DYNAMIC REALLOCATION OF RESOURCES IN ACCELERATOR-AS-A-SERVICE COMPUTING ENVIRONMENT the specification of which:

[]	is being executed on even date herewith a States Patent Office;	and is about to be filed in the United
[X]	was filed on November 2, 2018 as U.S. A	application No. <u>16/179,531;</u>
[]	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

PATENT REEL: 049432 FRAME: 0609

PATENT/Joint Assignment Attorney Docket No.: 112263.01

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:

PATENT/Joint Assignment Attorney Docket No.: 112263.01

Date: 6/10/19	- Alata)
	Inventor's Signature
Full name of first inventor:	John S. Harwood
Residence:	Boston, Massachusetts
Citizenship:	United States of America
Mailing Address:	26 Marlborough Street, Apt. 5
	Boston, Massachusetts 02116
Date:	
Date.	
	Inventor's Signature
Full name of second inventor:	Assaf Natanzon
Residence:	Tel Aviv, Israel
Citizenship:	Israel
Mailing Address:	Levanon 95

Tel Aviv, Israel 69395

ASSIGNMENT

WHEREAS, we, Jack S. Harwood and Assaf Natanzon, 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 DYNAMIC REALLOCATION OF RESOURCES IN ACCELERATOR-AS-A-SERVICE COMPUTING ENVIRONMENT the specification of which:

[]	is being executed on even date herewith and is about to be filed in the United States Patent Office;
[X]	was filed on November 2, 2018 as U.S. Application No. 16/179,531;
[]	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

PATENT/Joint Assignment Attorney Docket No.: 112263.01

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:	
	Inventor's Signature
Print full name of first inventor:	Jack S. Harwood
Residence:	Paxton, Massachusetts
Citizenship:	United States of America
Mailing Address:	155 Marshall Street
	Paxton, Massachusetts 01612
I	(name) whose residential address is
who is personally known to me, exec	
	(signature of first witness)
Signed at	(location of witness signature)
on this day	of 20 (date of signature)
I	(name) whose residential address is
was personally present and did see Ja who is personally known to me, exec	ack S. Harwood (name of person signing the assignment) cute the above assignment.
	(signature of second witness)
Signed at	(location of witness signature)
on this day	of 20 (date of signature)

Date: 23/2/20/1	
	Inventor's Signature
Print full name of second inventor:	Assaf Natanzon
Residence:	Tel Aviv, Israel
Citizenship:	Israel
Mailing Address:	Levanon 95
	Tel Aviv, Israel 69395
I <u>al Ila Nega</u>	(name) whose residential address is
16 Taski S., Ramat-bar, I.	(* « t)
was personally present and did see As who is personally known to me, execu	saf Natanzon (name of person signing the assignment)
	(signature of first witness)
Signed at H	(location of witness signature)
on this day $\frac{23}{12}$	of 20 \iint (date of signature)
*	
I Peray tal	(name) whose residential address is
<u>早くたい 4家 presc のも。</u> was personally present and did see Assaf Natanzon (name of person signing the assignment)	
who is personally known to me, execu	ite the above assignment.
<u> </u>	(signature of second witness)
Signed at Here's A	(location of witness signature)
on this day 23 17 70 8	of 20 (date of signature)