

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5508016

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
	VIRTUSTREAM, INC.	09/06/2016
RECEIVING PARTY DATA		
Name:	VIRTUSTREAM IP HOLDING COMPANY LLC	
Street Address:	800 MONTGOMERY LANE, SUITE 1100	
City:	BETHESDA	
State/Country:	MARYLAND	
Postal Code:	20814	
PROPERTY NUMBERS Total: 1		
	Property Type	Number
	Application Number:	16403264
CORRESPONDENCE DATA		
Fax Number:	(631)393-6271	
<i>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.</i>		
Phone:	(631) 393-6270	
Email:	nyoffice@rml-law.com	
Correspondent Name:	JOSEPH B. RYAN	
Address Line 1:	RYAN, MASON & LEWIS, LLP	
Address Line 2:	48 SOUTH SERVICE ROAD, SUITE 100	
Address Line 4:	MELVILLE, NEW YORK 11747	
ATTORNEY DOCKET NUMBER:	EMC-15-0779.08	
NAME OF SUBMITTER:	JOSEPH B. RYAN	
SIGNATURE:	/Joseph B. Ryan/	
DATE SIGNED:	05/06/2019	
Total Attachments: 6		
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PATENT ASSIGNMENT AGREEMENT

THIS PATENT ASSIGNMENT AGREEMENT ("Assignment") is made as of September 6, 2016 by and between Virtustream, Inc., a Delaware corporation, with its principal place of business at 800 Montgomery Lane Suite 1100 Bethesda MD 20814 ("Assignor") and Virtustream IP Holding Company LLC, a Delaware limited liability company, with its principal place of business at 800 Montgomery Lane Suite 1100 Bethesda MD 20814 ("Assignee"), each individually referred to as a "Party" and collectively referred to as "Parties."

WHEREAS, Assignor and Assignee are parties to the License Agreement effective as of the Effective Date between Assignor and Assignee ("Patent License");

WHEREAS, Assignor owns certain United States and foreign patents and patent applications, including which are listed on attached Schedule 1; and

WHEREAS, Assignee desires to receive from Assignor assignments to the Assigned Patents;

NOW THEREFORE, for good and valuable consideration, Assignor hereby assigns to Assignee, all of Assignor's entire right, title and interest, including the right to sue for and collect past damages and any other remedies, in and to all United States and foreign patents and patent applications owned by Assignor, including but not limited to those listed on attached Schedule 1 (the "Assigned Patents"), and any and all reissue, substitutions, division, continuation patents and re-examination certificates based on any of the foregoing patents or patent applications, and all pending applications therefor, which claim priority from any application from which Assigned Patents are derived, as well as, all foreign counterparts of Assigned Patents. Notwithstanding anything to the contrary herein, if and to the extent there are any immaterial transcription, typographical or other similar errors in the information provided on Schedule 1, any such errors shall not affect the assignment of the Assigned Patents hereunder.

Assignor hereby authorizes the Commissioner of Patents and Trademarks of the United States Patent and Trademark Office, and the empowered officials of any other applicable offices, authorities, authorized agents, and governments to issue or transfer all said Assigned Patents to Assignee, as assignee thereof, or otherwise as Assignee may direct.

Assignor hereby agrees to execute all documents and take all other actions as may be necessary to effect the assignments and transfers set forth in this Assignment.

Without limiting the foregoing, during the term of the License Agreement, the Parties hereby agree that Assignee shall be the beneficial and record owner of any and all patents and patent applications claiming inventions made by or on behalf of Assignor, and Assignor shall and hereby does assign and transfer to Assignee all of its rights, title and interest in and to such inventions, and the Parties shall reasonably cooperate with respect to Assignee filing for patent applications claiming such inventions in its own name, in each case notwithstanding anything to the contrary in employee invention assignment agreements or similar agreements entered into by Assignor, it being understood and agreed that any such applications, and any patents issuing therefrom, shall be subject to the terms and conditions of the License Agreement.

[Signature Page Follows]

Signed by Assignor and Assignee on the date first written above:

VIRTUSTREAM, INC.

As Assignor

By: Stw 2

Name: Stephen J. Webber

Title: Chief Financial Officer

VIRTUSTREAM IP HOLDING COMPANY LLC

By its sole member, Virtustream, Inc.

As Assignee

By: Stw 2

Name: Stephen J. Webber

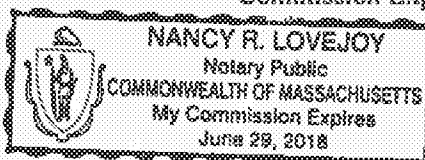
Title: Chief Financial Officer

COMMONWEALTH OF MASSACHUSETTS)

COUNTY OF Worcester) ss.

Subscribed and sworn to before me on this 31st day of August 2016

Nancy R. Lovejoy
Notary Public
Commission Expires:



SCHEDULE 1 TO PATENT ASSIGNMENT AGREEMENT
ASSIGNED PATENTS

United States

<u>TITLE</u>	<u>APP. NO.</u>	<u>PATENT NO.</u>	<u>OWNER</u>
METHODS AND APPARATUS FOR MOVEMENT OF VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	12709943	9027017	Virtustream
METHODS AND APPARATUS RELATED TO MIGRATION OF CUSTOMER RESOURCES TO VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	12709954	8473959	Virtustream
METHODS AND APPARATUS RELATED TO MANAGEMENT OF UNIT-BASED VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	12709962	9122538	Virtustream
METHODS AND APPARATUS FOR DATA CENTER MANAGEMENT INDEPENDENT OF HYPERVISOR PLATFORM	13031847	8615759	Virtustream
SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	13595955	8799920	Virtustream
SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	14318251		Virtustream
METHODS AND APPARATUS RELATED TO MANAGEMENT OF UNIT-BASED VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	14812817		Virtustream
SYSTEMS AND METHODS FOR SECURELY PROVIDING THE GEOGRAPHIC LOCATION OF PHYSICAL INFRASTRUCTURE ELEMENTS IN CLOUD COMPUTING ENVIRONMENTS	14843776		Virtustream
REMOVING INFORMATION FROM DATA	15008608		Virtustream
VIRTUALIZED CAPACITY MANAGEMENT	15093548		Virtustream
MULTI-LAYER APPLICATION MANAGEMENT ARCHITECTURE FOR CLOUD-BASED INFORMATION PROCESSING SYSTEMS	15195159		Virtustream
SYSTEMS AND METHODS RELATING TO IMPLEMENTING A VARIABLE CPU WEIGHTING FACTOR FOR HOST CONFIGURATION OPTIMIZATION IN A DATA CENTER ENVIRONMENT	15198966		Virtustream
METHODS AND APPARATUS FOR DATA CENTER MANAGEMENT	61306752		Virtustream

INDEPENDENT OF HYPERVISOR PLATFORM			
SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	61527472		Virtustream
SYSTEMS AND METHODS FOR SECURELY PROVISIONING THE GEOGRAPHIC LOCATION OF PHYSICAL INFRASTRUCTURE ELEMENTS IN CLOUD COMPUTING ENVIRONMENTS	62045434		Virtustream
SYSTEMS AND METHODS RELATING TO IMPLEMENTING A VARIABLE CPU WEIGHTING FACTOR FOR HOST CONFIGURATION OPTIMIZATION IN A DATA CENTER ENVIRONMENT	62192503		Virtustream
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	13641340*	9081989	Virtustream
SYSTEMS AND METHODS INVOLVING VIRTUAL MACHINE HOST ISOLATION OVER A NETWORK	13772006*	9152441	Virtustream
SYSTEMS INVOLVING FIREWALL OF VIRTUAL MACHINE TRAFFIC AND METHODS OF PROCESSING INFORMATION ASSOCIATED WITH SAME	13772090*	9264402	Virtustream
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	14732352*		Virtustream
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	61317464*		Virtustream
SYSTEMS INVOLVING FIREWALL OF VIRTUAL MACHINE TRAFFIC AND METHODS OF PROCESSING INFORMATION ASSOCIATED WITH SAME	61600816*		Virtustream
SYSTEMS AND METHODS INVOLVING VIRTUAL MACHINE HOST ISOLATION OVER A NETWORK	61600888*		Virtustream

China

<u>TITLE</u>	<u>APP. NO.</u>	<u>PATENT NO.</u>	<u>OWNER</u>
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	201180015996.8*	ZL2011180015996.8	Virtustream
METHODS AND APPARATUS FOR MOVEMENT OF VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	201180020127.4	ZL2011180020127.4	Virtustream
METHODS AND APPARATUS RELATED TO MIGRATION OF CUSTOMER RESOURCES TO VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	201180020269.0	ZL2011180020269.0	Virtustream

SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	201280041498.5		Virtustream
SYSTEMS AND METHODS INVOLVING VIRTUAL MACHINE HOST ISOLATION OVER A NETWORK	201380010077*		Virtustream
SYSTEMS INVOLVING FIREWALL OF VIRTUAL MACHINE TRAFFIC AND METHODS OF PROCESSING INFORMATION ASSOCIATED WITH SAME	201380010256.4*		Virtustream
METHODS AND APPARATUS RELATED TO MANAGEMENT OF UNIT-BASED VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	201180020260.X		Virtustream
METHODS AND APPARATUS FOR DATA CENTER MANAGEMENT INDEPENDENT OF HYPERVISOR PLATFORM	201180020359.X	ZL2011180020359.X	Virtustream

Europe

TITLE	APP. NO.	PATENT NO.	OWNER
METHODS AND APPARATUS FOR DATA CENTER MANAGEMENT INDEPENDENT OF HYPERVISOR PLATFORM	11745416.5		Virtustream
METHODS AND APPARATUS FOR MOVEMENT OF VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	11745297.9		Virtustream
METHODS AND APPARATUS RELATED TO MANAGEMENT OF UNIT-BASED VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	11745300.1		Virtustream
METHODS AND APPARATUS RELATED TO MIGRATION OF CUSTOMER RESOURCES TO VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	11745299.5		Virtustream
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	11758705.5*		Virtustream
SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	12826290.4		Virtustream
SYSTEMS INVOLVING FIREWALL OF VIRTUAL MACHINE TRAFFIC AND METHODS OF PROCESSING INFORMATION ASSOCIATED WITH SAME	13751206.7*		Virtustream

SYSTEMS AND METHODS INVOLVING VIRTUAL MACHINE HOST ISOLATION OVER A NETWORK	13751256.2*		Virtustream
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TITLE	APP. NO.	PATENT NO.	STATUS
METHODS AND APPARATUS FOR DATA CENTER MANAGEMENT INDEPENDENT OF HYPERVISOR PLATFORM	PCTUS2011025657		Virtustream
METHODS AND APPARATUS FOR MOVEMENT OF VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	PCTUS2011025390		Virtustream
METHODS AND APPARATUS RELATED TO MANAGEMENT OF UNIT-BASED VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	PCTUS2011025393		Virtustream
METHODS AND APPARATUS RELATED TO MIGRATION OF CUSTOMER RESOURCES TO VIRTUAL RESOURCES WITHIN A DATA CENTER ENVIRONMENT	PCTUS2011025392		Virtustream
SYSTEM AND METHOD FOR SECURE CLOUD COMPUTING	PCTCA2011000283*		Virtustream
SYSTEMS AND METHODS OF HOST-AWARE RESOURCE MANAGEMENT INVOLVING CLUSTER-BASED RESOURCE POOLS	PCTUS2012052561		Virtustream
SYSTEMS INVOLVING FIREWALL OF VIRTUAL MACHINE TRAFFIC AND METHODS OF PROCESSING INFORMATION ASSOCIATED WITH SAME	PCTUS2013026929*		Virtustream
SYSTEMS AND METHODS INVOLVING VIRTUAL MACHINE HOST ISOLATION OVER A NETWORK	PCTUS2013026907*		Virtustream

*Currently owned by Virtustream Canada Holdings, Inc. All other patents and applications are owned by Virtustream, Inc.