PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5140709

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------------|----------------|
| ABHISHEK GUPTA | 12/15/2017 |
| RICHARD P. SPILLANE | 09/11/2018 |
| KAPIL CHOWKSEY | 12/12/2017 |
| ROB JOHNSON | 12/13/2017 |
| WENGUANG WANG | 12/12/2017 |

RECEIVING PARTY DATA

| Name: | VMWARE, INC. |
|-----------------|----------------------|
| Street Address: | 3401 HILLVIEW AVENUE |
| City: | PALO ALTO |
| State/Country: | CALIFORNIA |
| Postal Code: | 94304 |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 15844412 | |

CORRESPONDENCE DATA

Fax Number: (650)427-4818

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: 6504271126

Email: ipadmin@vmware.com, docketing@lozaip.com

Correspondent Name: VMWARE, INC.

Address Line 1: ATTN: JAMES KIRYAKOZA
Address Line 2: 3401 HILLVIEW AVENUE

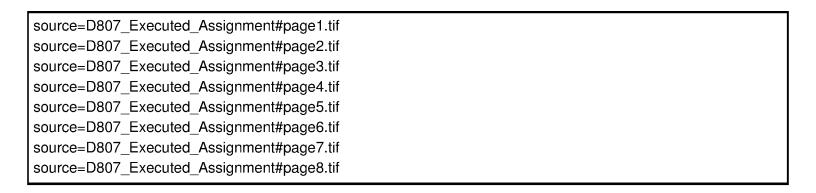
Address Line 4: PALO ALTO, CALIFORNIA 94304

| Tatal Alla alama anta o | |
|-------------------------|-----------------|
| DATE SIGNED: | 09/13/2018 |
| SIGNATURE: | /THOMAS H. HAM/ |
| NAME OF SUBMITTER: | THOMAS H. HAM |
| ATTORNEY DOCKET NUMBER: | D807 (VMW-1203) |

Total Attachments: 8

PATENT REEL: 046872 FRAME: 0817

505093949



PATENT REEL: 046872 FRAME: 0818

For good and valuable consideration, the receipt of which is hereby acknowledged, we, as ASSIGNORS named below,

| Abhishek GUPTA | of | Sunnyvale, CA |
|---------------------|----|-------------------|
| Richard P. SPILLANE | of | Mountain View, CA |
| Kapil CHOWKSEY | of | Cupertino, CA |
| Rob JOHNSON | of | Palo Alto, CA |
| Wenguang WANG | of | Santa Clara, CA |

hereby sell, assign, transfer and set over to

ASSIGNEE: VMware, Inc., a Delaware corporation, having a principal place of business at 3401 Hillview Avenue, Palo Alto, California 94304, U.S.A. (VMware), its successors, assigns and legal representatives,

Our entire right, title and interest throughout the world, including all rights to claim priority, in and to the invention(s) disclosed in:

| A | U.S. Patent Application executed on or about the date of this Assignment, | |
|--------------------|---|---|
| venten | U.S. Patent Application No.:, filed on | |
| er neuer nermener. | U.S. Provisional Application No.:, filed on; | |
| **** | International Application No.: PCT/, filed on | ? |
| and | | |

ENTITLED: MIRRORED WRITE AHEAD LOGS FOR DATA STORAGE SYSTEM

and identified by Attorney Docket Number: D807

and naming inventor(s) as follows:

INVENTOR(S): <u>GUPTA, Abhishek; SPILLANE, Richard P.; CHOWKSEY, Kapil; JOHNSON, Rob; WANG, Wenguang</u>

including without limitation, my entire right, title and interest in and to any and all United States and foreign applications (including any and all provisional, international, regional and foreign national applications) for said invention(s), including divisionals, continuations, continuations-in-part, renewals, substitutes and extensions thereof, and in and to any and all patents of every country or region that may be granted or have been granted for said invention(s), including any reissues and reexaminations thereof—the foreign applications including, without limitation, all applications for patents, utility models and designs which may hereafter be filed for the invention(s) in any country or countries foreign to the United States, and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs which may be granted for the invention(s) in any country or countries foreign to the United States and all extensions, renewals and reissues thereof.

We authorize ASSIGNEE to apply for patents of foreign countries for said invention(s); to claim all rights of priority without further authorization from us, which priority rights include rights derived from any

United States application (provisional or otherwise) under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and to own in its own name all applications, all patents and inventor's certificates in all countries based on the invention(s).

We agree to execute any and all documents requested by ASSIGNEE, its successors, assigns, legal representatives, or nominees, at their reasonable expense, in connection with filing and prosecution of any and all United States and foreign applications (including international, regional, and foreign national applications), enforcement of all patents, and maintenance of all rights in the invention(s), patents, inventor's certificates and applications for patents or inventor's certificates based on any of the invention(s); and generally to do everything possible to aid ASSIGNEE, its successors, assigns, legal representatives, and nominees, at their request and reasonable expense, in obtaining, enforcing, and maintaining patents and inventor's certificates for said invention(s) in all countries. In particular, we agree to provide to ASSIGNEE, its successors, assigns, legal representatives, or nominees, at their request and at their reasonable expense, all information known to or ascertainable by me and all documents and other materials and objects pertaining to the invention(s) that are in the possession of or accessible to me; and further, at any trial, hearing, deposition or other legal proceeding where we are called as a witness by ASSIGNEE, its successors, assigns, legal representatives, or nominee, we agree to testify to all facts pertaining to the invention(s) for which we am competent to testify.

We hereby covenant that we have full right to convey the entire interest that is being assigned by this Assignment, and that no assignment, sale, license, agreement, or encumbrance has been or will be made or entered into that would conflict with this Assignment.

We authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue any U.S. Letters Patent or any other patent or property right that may be granted for said invention(s) to ASSIGNEE, its successors or assigns.

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|---------------|--|----------------------|---------------------|
| VALUE | Date | er gg son | Abhishek GUPTA |
| Executed on | | , by _ | |
| quodug | Date | s' _a l on | Richard P. SPILLANE |
| Executed on _ | [2-12-17] | , by _ | L CHOWKSEY |
| Executed on _ | Date | , by _ | Rob JOHNSON |
| Executed on _ | [2/12/17] | , by _ | Wenguang WANG |

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| \underline{X} U.S. Patent Application executed on o | or about the date of this Assignment, | |
|---|---------------------------------------|---|
| U.S. Patent Application No.: | , filed on | ; |
| U.S. Provisional Application No.: | ; filed on; | |
| International Application No.: PCT/ | , filed on | ; |
| and | | |

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and identified by Attorney Docket Number: D807

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| Executed on _ | 12/15/2017 | , by _ | KG. |
|---------------|------------|--------|---------------------|
| | Date | | Abhishek GUPTA |
| Executed on _ | | , by _ | |
| | Date | | Richard P. SPILLANE |
| Executed on _ | | , by _ | |
| | Date | | Kapil CHOWKSEY |
| Executed on _ | | , by _ | |
| | Date | | Rob JOHNSON |
| Executed on _ | | , by _ | |
| | Date | - | Wenguang WANG |

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| Executed on | | , by | |
|---------------|-------------------|---------|---------------------|
| _ | Date | - , - | Abhishek GUPTA |
| Executed on _ | | _, by _ | |
| | Date | | Richard P. SPILLANE |
| Executed on _ | | _, by _ | |
| | Date | - | Kapil CHOWKSEY |
| Executed on _ | December 13, 2017 | _, by _ | RL |
| | Date | • | Rob JOHNSON |
| Executed on | | , by | |
| _ | Date | | Wenguang WANG |

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| and | |
|-----|---|
| | International Application No.: PCT/, filed on: |
| | U.S. Provisional Application No.:, filed on; |
| X | U.S. Patent Application No.: 15/844,412, filed on December 15, 2017; |
| min | U.S. Patent Application executed on or about the date of this Assignment, |

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Page 1 of 2

REEL: 046872 FRAME: 0825

PATENT

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| Executed on | | by | |
|---------------|---------|------|-------------------|
| | Date | | Abhishek GUPTA |
| Executed on | 9/11/18 | ъу | ALM. Alle |
| | Date | , . | Richard PAPILLANE |
| Executed on | | by . | |
| | Date | | Kapil CHOWKSEY |
| Executed on _ | | by . | |
| | Date | | Rob JOHNSON |
| *** | | | |
| Executed on | | by . | |
| | Date | | Wenguang WANG |

Page 2 of 2