

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
DAVID DUNN	11/20/2016
ALOK NEMCHAND KATARIA	08/17/2016
WEI XU	09/07/2016
JEFFREY W. SHELDON	08/19/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	VMWARE, INC.
<b>Street Address:</b>	3401 HILLVIEW AVENUE,
<b>Internal Address:</b>	ATTN: JAMES D. KIRYAKOZA
<b>City:</b>	PALO ALTO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94304
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15402243
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(650)427-4818
<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>	
<b>Phone:</b>	650-427-4267
<b>Email:</b>	ipadmin@vmware.com
<b>Correspondent Name:</b>	VMWARE, INC.
<b>Address Line 1:</b>	3401 HILLVIEW AVENUE,
<b>Address Line 2:</b>	ATTN: JAMES D. KIRYAKOZA
<b>Address Line 4:</b>	PALO ALTO, CALIFORNIA 94304
<b>ATTORNEY DOCKET NUMBER:</b>	C881
<b>NAME OF SUBMITTER:</b>	PRAKASH NAMA
<b>SIGNATURE:</b>	/Prakash Nama/
<b>DATE SIGNED:</b>	01/10/2017
<b>Total Attachments: 5</b>	

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ASSIGNMENT

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

DAVID DUNN	of	Bellevue, Washington
ALOK NEMCHAND KATARIA	of	Punc, India
WEI XU	of	Palo Alto, California
JEFFREY W. SHELDON	of	Palo Alto, California

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, CA 94304, United States of America (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 disclosed in:

- U.S. Patent Application executed on 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

ENTITLED: "TREE STRUCTURE FOR STORING MONITORED MEMORY PAGE DATA"

and identified by Attorney Docket Number: C881

and naming inventors as follows:

INVENTORS: DAVID DUNN, ALOK NEMCHAND KATARIA, WEI XU and  
JEFFREY W. SHELDON

including without limitation, our 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, 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, 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 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 in any country or countries foreign to the United States and all extensions, renewals and reissues thereof.


ASSIGNMENT

We authorize ASSIGNEE to apply for patents of foreign countries for said invention; 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.

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, 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 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 us and all documents and other materials and objects pertaining to the invention that are in the possession of or accessible to us; 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 for which we are 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 to ASSIGNEE, its successors or assigns.

Executed on Nov 20, 2016, by   
Date DAVID DUNN

Executed on \_\_\_\_\_, by \_\_\_\_\_  
Date ALOK NEMCHAND KATARIA

ASSIGNMENT

We authorize ASSIGNEE to apply for patents of foreign countries for said invention; 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.

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, 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 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 us and all documents and other materials and objects pertaining to the invention that are in the possession of or accessible to us; 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 for which we are competent to testify.

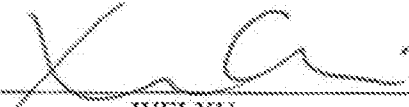
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Executed on \_\_\_\_\_ by \_\_\_\_\_  
Date DAVID DUNN

Executed on 17<sup>th</sup> Aug 2016 by \_\_\_\_\_  
Date ALOK NEMCHAND KATARIA


ASSIGNMENT

Executed on Sept. 7, 2016, by   
Date WEI XU

Executed on \_\_\_\_\_, by \_\_\_\_\_  
Date JEFFREY W. SHELDON

ASSIGNMENT

Executed on \_\_\_\_\_, by \_\_\_\_\_  
Date WEI XU

Executed on 19-Aug-16, by   
Date JEFFREY W. SHELDON