505892495 01/30/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5939196

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AAKASH CHAKRAVARTHY VIJAYAKUMAR	04/28/2017
SURYA PRAKASH RAMACHANDRAN	05/03/2017
PRASANNA KUMAR THOPPE RAVINDRAN	04/28/2017
GANESH KUMAR SUBRAMANIAN	04/28/2017
PAVAN KUMAR REDDY BEDADALA	04/27/2017
NEHA MATHUR	04/26/2017
SHILPA NAGENDRA	04/28/2017
SUPREETH SANUR	04/28/2017
JUGPREET SINGH TALWAR	04/28/2017
JIE CHEN	04/28/2017
PRIYA SUNDARESAN	04/28/2017
RAJESH POLIMERA	04/28/2017
HARI PRASAD RAVULA	04/28/2017
VINAY K. PAMARTHI	05/01/2017

RECEIVING PARTY DATA

Name:	COMMVAULT SYSTEMS, INC.
Street Address:	1 COMMVAULT WAY
City:	TINTON FALLS
State/Country:	NEW JERSEY
Postal Code:	07724

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15976770

CORRESPONDENCE DATA

Fax Number: (206)359-9398

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: 2063598000

Email: patentprocurement@perkinscoie.com

PATENT REEL: 051762 FRAME: 0001

505892495

Correspondent Name: PERKINS COIE LLP
Address Line 1: P.O. BOX 1247

Address Line 2: PATENT-SEA

Address Line 4: SEATTLE, WASHINGTON 98111

ATTORNEY DOCKET NUMBER:	060692-8148.US01
NAME OF SUBMITTER:	ANNDREYA PEREZ
SIGNATURE:	/Anndreya Perez/
DATE SIGNED:	01/30/2020

Total Attachments: 80

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> PATENT REEL: 051762 FRAME: 0003

Assignes Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of india, having a mailing address of 143/19.
 Amsar Krishne Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, india;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, Iyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu , PIN Code- 600071 India;
- Presenna Kumar Thoppe Ravindran, a citizen of India, having a meiling address of 11/147,
 Chinne Kenmai 7th Street, C M R Road, Medural City, Pincode: 625009, Tamil Nedu, India;
- Genesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottal, Tirunelvell - 627007 India;
- Pavan Kumer Reddy Bedadels, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a cilizen of India, having a mailing address of 65 Rio Robies E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, Celifornia 98132 USA;
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Presed Revula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 28 Eatontown, New Jersey 07724 USA;

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Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060892-8148.US00

> Vinay K. Pernarthi, a citizen of India, having a mailing address of 158 Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May }11,2017}$, as U.S. Application No. $\underline{\text{62/504,978}}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all relsaues, reexaminations, *Inter partes* reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e);
- (g) the right to file foreign and United States applications on the invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100,572,USP1.150 Altorney Docket No.: 080892-8148,US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible property embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deams reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filing of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful caths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of tealimony) in any litigation, interference, derivation, interpartes review, post-grant review, covered business method patent review, supplemental examination, experte reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assignor will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assigner acknowledges that there may be no adequate remedy at law for Assigned Patent Rights. Assigner acknowledges that there may be no adequate remedy at law for Assigner's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor-

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Page 3 of 8

kssignee Docket No.: ktomey Docket No.:	100.572.USP1.150 080692-8148.US00	
	Assignor's Signature:	V gdykindy.
Attorney's Signature: Attorney's Name: JØ pursuent to N.J.S.A. 4 who affirmed executio	SEPHINE A. PALTIN, an Attorn 11:2-1, having identified the per	AAKASH CHAKRAVARTHY VIJAYAKUMAR Date: 25 10 10 17 Date: 25 10 10 10 10 10 10 10 10 10 10 10 10 10
	Assignor's Signature:	
	v.	SURYA PRAKASH RAMACHANDRAN
Attomey's Signature:	,	Date:
Attawants Blamer 15	SEPHINE A. PALTIN, an Attor 41:2-1, having identified the pe	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
	*	PRASANNA KUMAR THOPPE RAVINDRAN
Attorney's Signature		
Attamaila Maria: {	OSEPHINE A. PALTIN, an Alto 41:2-1, having identified the p	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Page 4 of 8

Attorney Docket No.;	080082-8148	.U800					

	Accions	or's Signature;					
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			GANE	SH KUMAR :	Subramai	NIAN	
Attomey's Signature:				Date:			
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	Assigno	r's Signature:					
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Page 5 of 8

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Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		Oate:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor 1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attorney's Signature:		Date:
Attomey's Name: JO	SEPHINE A. PALTIN, an Alto 11:2-1, having identified the pe	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
		ar and a second
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attomey's Name: JC	SEPHINE A. PALTIN, an Atto 41:2-1, having identified the p	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Page 6 of 8

		Assignor's	Signature					
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Assignee Docket No.:

Attorney Docket No.:

Page 7 of 8

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who affirmed execution of same:

PATENT REEL: 051762 FRAME: 0010

Assignee Docket No.:		
Attorney Docket No.:	060892-8148.US00	
	Assignor's Signature:	
4		HARI PRASAD RAVULA
Attornev's Signature:		Dale:
	1:2-1, having identified the po	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
	e e	VINAY K. PAMARTHI
Attorney's Signature:		Date:
•	1:2-1, having identified the p	erney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Page 8 of 8

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 080882-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (Individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/18 Amear Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Channal, 800091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, lyappan nagar, Kamaraj Nagar, Avadi, Chennal, Tamil Nadu, PIN Code- 600071 India;
- Presence Kumer Thoppe Revindren, a citizen of India, having a mailing address of 11/147,
 Chinna Kanmai 7th Street, C M R Road, Madurai City, Pincode: 625009, Tamil Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 8 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottal, Tirunelveli - 627007 India;
- Pavan Kumar Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Bivd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilps Negendre, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt. 128, Santa Ciara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
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- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Rajesh Pollmera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Harl Prased Revula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt. 26 Satontown, New Jersey 07724 USA;

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Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 158 Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor Invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on May 11, 2017, as U.S. Application No. 62/504,978 (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and international Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, *inter partes* reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e);
- (g) the right to file foreign and United States applications on the invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Page 2 of 8

Assignes Docket **No.:** 16 Attorney Docket No.: 06

100.572.USP1.150 060892-6148.US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible property embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deems reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filing of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful paths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interpartor review, post-grant review, covered business method patent review, supplemental examination, exparte reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assignor will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assignor's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor.

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016:

Page 3 of 8

	Assignor's Signatura:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Altorney's Signature:		Date:
Attornev's Name: JOSE	PHINE A. PALTIN, an Alto 2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
Attorney's Signature	Z Karalizi (A	SURVA PRAKASH RAMACHANDRAN
Allomei/s Name: 305	:2-1, having identified the p	omey-at-Law of the State of New Versey, authorized person(s) who executed the foregoing document and
who affirmed execution		
who affirmed execution	Assignor's Signature:	
who affirmed execution	Assignor's Signature:	PRASANNA KUMAR THOPPE RAVINORAN

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Page 5 of 8

Assignee Docket No.: - Attorney Docket No.: -	100,572,USP1,150 060692-8148,US00	
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	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		
Attorney's Name: JO pursuant to N.J.S.A. 4 who affirmed execution	11:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attornev's Signature:		
Attorney's Name: JC	SEPHINE A. PALTIN, an Att 41:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
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Attomey's Name: JC	SEPHINE A. PALTIN, an At 41:2-1, having identified the	torney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Page 6 of 8

		Assign	or's Signature	š:				
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Page 7 of 8

	Assignor's Signature:	
		HARI PRASAD RAVULA
Attomey's Signature:		
uttomey's Name: JOSEF oursuant to N.J.S.A. 41:2	-1, having identified the person	y-at-Law of the State of New Jersey, autr in(e) who executed the foregoing docume
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uttomey's Name: JOSEF oursuant to N.J.S.A. 41:2	-1, having identified the personance. Assignor's Signature:	y-at-Law of the State of New Jersey, autron(s) who executed the foregoing docume
Attomey's Name: JOSEF	-1, having identified the personance. Assignor's Signature:	y-at-Law of the State of New Jersey, autron(s) who executed the foregoing docume

Page 8 of 8

135203654.1

who affirmed execution of same.

PATENT REEL: 051762 FRAME: 0019 Assignes Docket No.: 100,572,USP1,150 Attorney Docket No.: 060692-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19
 Amear Krishne Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, lyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu , PIN Code- 600071 India;
- Prasanna Kumar Thoppe Ravindran, a citizen of India, having a mailing address of 11/147, Chinna Kanmai 7th Street, C M R Road, Madural City, Pincode: 625009, Tamil Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tirunelveli - 627007 India;
- Pavan Kumar Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt. 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robies E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, Celifornia 95132 USA;
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Prasad Ravula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt. 26 Eatontown, New Jersey 07724 USA;

135303654,1

Page 1 of 8

PATENT REEL: 051762 FRAME: 0020 Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 158 Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on May 11, 2017, as U.S. Application No. 62/504,978 (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvauit Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvauit Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, inter partes reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e);
- (g) the right to file foreign and United States applications on the Invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 060692-8148,US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

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- (b) executing and making all rightful ceths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interparter review, post-grant review, covered business method patent review, supplemental examination, exparter reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assigner will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assignor's breach of the terms set forth herein, and accordingly. Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

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This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 080692-8148.US00	
Assignor's Signature:	
	AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attorney's Signature:	
Attorney's Name: JOSEPHINE A. PALTIN, an Atto	mey-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
Assignor's Signature:	
	SURYA PRAKASH RAMACHANDRAN
Attorney's Signature.	0819:
Attorney's Name: JOSEPHINE A. PALTIN, an Atto	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
Assignor's Signature:	r.e. Par U-1
	PRASANNA KUMAR THOPPE RAVINDRAN 28 400 00 00 00 00 00 00 00 00 00 00 00 00

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	Ass	ignor's Signature					
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Page 5 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		Cate:
₹*	1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized reon(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attomey's Signature:		Oate:
	11:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor I1:2-1, having identified the pe	mey-at-Law of the State of New Jersey, authorized irson(s) who executed the foregoing document and

Assignes Docket No.: Attorney Docket No.:	100.572.U -060692-81									
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Page 7 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature:		Cate:
	1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		VINAY K. PAMARTHI
Attorney's Signature:		Casto:
-	1:2-1, having identified the pe	mey-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and

Assignee Docket No.: 100.572,USP1.150 Attorney Docket No.: 050592-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19.
 Amear Krishne Apis, 3rd Main Road Lic Negar, Madipakkam, Chennal, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, Iyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamii Nadu , PIN Code- 600071 India:
- Presenne Kumar Thoppe Ravindren, a citizen of India, heving a mailing address of 11/147,
 Chinna Kanmai 7th Street, C M R Road, Madurai City, Pincode: 625009, Tamii Nadu, India;
- Ganesh Kumar Subrementen, a citizen of Indie, heving a mailing address of 9 Ayyappa
 Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tirunelveli 627007
 India;
- Pavan Kumer Reddy Bededele, a citizen of India, having a mailing address of 9 Mesters Bivd. Piscetaway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilps Nagendra, a citizen of India, having a mailing address of 1578 Visia Ciub Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
- Jugprest Singh Taiwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, California 95132 USA:
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Reject Polimers, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Heri Presed Revole, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Eatontown, New Jersey 07724 USA;

Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May }11,2017}$, as U.S. Application No. $\underline{\text{ }62/504,978}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the invention(s), the Application, and all related rights to Commvault Systems, inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, inter partes reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e):
- (g) the right to file foreign and United States applications on the invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 060662-8148,US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible property embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee Immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deems reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filling of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful caths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interperference, derivation, interperference, parties review, post-grant review, covered business method patent review, supplemental examination, exparte reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assigner will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assignor's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actualty spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor-

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or walver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Page 3 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 080892-8148.US00	
	Assignor's Signature:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attornev's Signature:		Date:
Attornavie Name: JO	SEPHINE A. PALTIN, an At 11:2-1, having identified the	torney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature	
		SURYA PRAKASH RAMACHANDRAN
Attornev's Signature:		Date:
II. :email a'verrotté	SEPHINE A. PALTIN, an A 41:2-1, having identified the	ttorney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature	3:
		PRASANNA KUMAR THOPPE RAVINDRAN
AttorneVs Signature:		Date:
il. :emal s'vannet	OSEPHINE A. PALTIN, an A 41:2-1, having identified the	uttorney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Page 4 of 8

Assignee Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signeture:	Gymallumar
Attorney's Signature,	January 1	GANESH KUMAR SUBRAMANIAN 28 April 2019
Altomey's Name: JOS pursuant to N.J.S.A.41 who affirmed execution	ETHINE A. PALLIN, an Attornet :2-1, having identified the pers	ey-at-Law of the State of New Jersey, authorized on(s) who executed the foregoing document and
	Assignor's Signature:	
		PAVAN KUMAR REDDY BEDADALA
Attorney's Signature:		Cete:
Altorney's Name: JOS pursuant to N.J.S.A. 41 who affirmed execution	EPHINE A. PALTIN, an Attorne :2-1, having identified the perso	y-at-Law of the State of New Jersey, authorized on(s) who executed the foregoing document and
	Assignor's Signature:	
		NЕНА МАТНUR
Attorney's Signature:		
Attorney's Name: JOSI	EPHINE A. PALTIN, an Attorne 2-1, having identified the perso	y-al-Law of the State of New Jersey, authorized m(s) who executed the foregoing document and

Page 5 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	

	Assignor's Signature:	
		SHILPA NAGENDRA
Attornev's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor 11:2-1, having identified the pe	rney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attorney's Signature:		Cate:
Attomey's Name: JO	SEPHINE A. PALTIN, an Atto 41:2-1, having identified the pe	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attorney's Name: JC	DSEPHINE A. PALTIN, an Atto 41:2-1, having Identified the p	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Page 6 of 8

	Å	\esignor's S	ignature:					
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						507500 5075 5300	a N	
itomey's Signature:					8	ista:		
tomey's Name: JOS insuant to N.J.S.A. 4 no affirmed execution	1:2-1, h	aving Identi	fied the pa	∍rson(s) w	ho execu	ited the fo	regoing do	cument (
	А	ssignor's S	ignature:					
					PRIY	'A SUNDA	RESAN	
						388 8		
torney's Signature: _		······································				ata:		
tomey's Signature: tomey's Name: JOS reuant to N.J.S.A. 4 no affirmed execution	1:2-1, ha of same	aving identil i.	lied the pe	mey-at-La irson(s) wi	w of the	State of National State	regoing do:	cument a
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Page 7 of 8

who affirmed execution	n of same. Assignor's Signature: 	VINAY K. PAMARTHI
•	n of same. Assignor's Signature:	
•	n of same. Assignor's Signature:	
•		on(s) who executed the foregoing document and
Attorney's Name: JO	SEPHINE A. PALTIN, an Altorn	ey-at-Law of the State of New Jersey, authorized
Attomovie Slanatura		Date:
		HARI PRASAD RAVULA
	ω u	
	Assignor's Signature:	
Attorney Docket No.:	AAAAA	

Page 8 of 8

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 080892-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19
 Amaar Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, lyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu , PIN Code- 600071 India:
- Presente Kumar Thoppe Revindran, a citizen of India, having a mailing address of 11/147, Chinna Kanmai 7th Street, C M R Road, Madural City, Pincode: 625009, Tamil Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tirunelveli - 627007 India;
- Pavan Kumar Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, California 95132 USA;
 - Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
 - Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Presad Ravula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Estontown, New Jersey 07724 USA;

135203654.1

Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\frac{\text{May }11,2017}{\text{May }11,2017}$, as U.S. Application No. $\frac{62/504,978}{\text{May }11,2017}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

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- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
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Assignes Docket No.: 100.572,USP1,150 Afterney Docket No.: 060692-8148.US00

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This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016,

Assignee Docket No.: Attorney Docket No.:	100,572,USP1,150 060692-8148,US00	
	Assignor's Signature:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto i1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SURYA PRAKASH RAMACHANDRAN
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto \$1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		PRASANNA KUMAR THOPPE RAVINDRAN
Attornev's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atte	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Page 4 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		GANESH KUMAR SUBRAMANIAN
Attorney's Signature: _		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Attor 1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized recn(s) who executed the foregoing document and
	Assignor's Signature:	Maulay
Attorney's Signature/_	Jagaline S.	PAVAN KUMAR REDDY BEDADALA Dete: 27/p///2019
Attorney's Name: JGS pursuant to N.J.S.A/# who affirmed execution	1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		NEHA MATHUR
Attorney's Signature:		Date:
		nsy-at-Law of the State of New Jersey, authorized

Page 5 of 8

pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and

Page 6 of 8

pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and

Assignee Docket No.: Attorney Docket No.:	060692-8148.US00	
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature: _		Date:
Attorney's Name: JOS	SEPHINE A. PALTIN, an At 1:2-1, having identified the	torney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature	
		VINAY K. PAMARTHI
Attorney's Signature:		Date:
Attorney's Name: JOS	SEPHINE A. PALTIN, an At	torney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060892-8148.US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19
 Amaar Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
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- Prasanna Kumar Thoppe Ravindran, a citizen of India, having a mailing address of 11/147, Chinna Kanmai 7th Street, C M R Road, Medurai City, Pincode: 625009, Tamil Nadu, India;
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- Hari Prasad Revula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Eatontown, New Jersey 07724 USA;

135203654.1

Page 1 of 8

PATENT REEL: 051762 FRAME: 0044 Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on May 11, 2017 as U.S. Application No. 62/504,978 (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

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- (b) all provisional patent applications relating to the Invention(s) and Application;
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- (g) the right to file foreign and United States applications on the Invention(s), including filing directly in the name of Assignee; and
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Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100.572,USP1.150 Attorney Docket No.: 060692-6148,US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

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- (b) executing and making all rightful caths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interparter review, post-grant review, covered business method patent review, supplemental examination, ex parter reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assigner will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assigner's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary demages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor-

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Assignes Docket No.: Attorney Docket No.:		
	Assignor's Signature:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto I1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SURYA PRAKASH RAMACHANDRAN
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Att 41:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		PRASANNA KUMAR THOPPE RAVINDRAN
Attorney's Signature:		Date:
Attorney's Name: JC	SEPHINE A. PALTIN, on Att	orney-at-Law of the State of New Jersey, authorized

pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and who affirmed execution of same.

Page 5 of 8

Attorney's Name: JØSEPHINE'A. PALTIN, an Attorney-st-Law of the State of New Yersey, authorized pursuant to N.J.S.A. //1:2-1, having identified the person(s) who executed the foregoing document and

Attorney's Signature: (

Assignee Docket No.: Attorney Docket No.:	000001_0149_E000	
	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor i1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attornev's Signature:		
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor I1:2-1, having identified the pe	mey-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
Attorney's Signature:		Oate:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attor	mey-at-Law of the State of New Jersey, authorized

Assignee Docket No.: Attorney Docket No.:	100.572.USP1,150 060692-8148.US00	
	Assignor's Signature:	
		JIE CHEN
Attorney's Signature:		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Atto 1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		PRIYA SUNDARESAN
Attorney's Signature: _		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Atto 1:2-1, having identified the pr	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		RAJESH POLIMERA
Attomey's Signature:		
		mev-at-Law of the State of New Jersey authorized

Assignee Docket No.: Attorney Docket No.:		
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature:		Date:
	1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		VINAY K. PAMARTHI
Attorney's Signature:		Date:
		omey-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Assignee Docket No.: 100.572,USP1,150 Attorney Docket No.: 060692-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- * Aakash Chekravethy Vijaykumar, a citizen of India, having a mailing address of 143/19 Amaer Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, Iyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu , PIN Code- 600071 India;
- Prasanna Kumar Thoppe Ravindran, a citizen of India, having a mailing address of 11/147,
 Chinna Kanmai 7th Street, C M R Road, Madural City, Pincode: 625009, Tamil Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tiruneiveli - 327007 India;
- Pavan Kumar Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, California 95132 USA:
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Praead Ravula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Eatontown, New Jersey 07724 USA;

135203654.1

Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 080692-8148.US00

Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace.
 Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May} 11,2017}$, as U.S. Application No. $\underline{\text{62/504,978}}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, inter partes reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e);
- (g) the right to file foreign and United States applications on the Invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100.572.USP1.150 Afformay Docket No.: 060692-8148.US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible property embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deems reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filing of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful caths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interpartes review, post-grant review, covered business method patent review, supplemental examination, exparte reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assignor will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assignor's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

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No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00	
Assignor's Signature:	
	AAKASH CHAKRAVATHY VIJAYKUMAR
Attorney's Signature;	Date:
Attorney's Name: JOSEPHINE A. PALTIN, an Attor pursuant to N.J.S.A. 41:2-1, having identified the pe who affirmed execution of same.	ney-at-Law of the State of New Jersey, authorized
Assignor's Signature:	
	SURYA PRAKASH RAMACHANDRAN
Attorney's Signature:	Date:
Attorney's Name: JOSEPHINE A. PALTIN, an Attor pursuant to N.J.S.A. 41:2-1, having identified the pe who affirmed execution of same.	rney-at-Law of the State of New Jersey, authorized
Assignor's Signature:	
	PRASANNA KUMAR THOPPE RAVINDRAN
Attorney's Signature:	Oate:
Attorney's Name: JOSEPHINE A. PALTIN, an Atto	

pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and who affirmed execution of same.

				Assig	anor's S	ignature:						
				`		w						
								GAI	NESH KUM	IAR SUBF	AINAMAS	N
lome	ay'a Signa	ture:										
o afi	firmed ex	cution	of sa	me.					petusexe c			men an
					jnor's S	ignature:						
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								PAVA	AN KUMAR	REDDY	BEDADAI	_A
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	ey's Signat ey's Name nt to N.J.: firmed exe	: JOS 3.A. 41	1:2-1,	having	PALTIN j identif	V, an Attried the p	orney-e erson(s) who	Date: of the Stat executed	e of New the forego	Jersey, a	authorize ment an
ua Mai												
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Page 5 of 8

pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and

Assignee Docket No. : 100.572.USY1.150 Attorney Docket No.: 060692-8148.US00
Assignor's Signature:
/ SHILPA NAGENDRA
Attorney's Signature:
Attorney's Name: JOSEPHINE A. PALTIN, an Attorney-at-Law of the State of New Jersey, authorized pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and who affirmed execution of same.
Assignor's Signature:
SUPREETH SANUR Attorney's Signature 1040/12 Date: 2840/2017
Attorney's Name: JØSEPHINE A. PALTIN, an Attorney-at-Law of the State of New Jersey, authorized pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and who affirmed execution of same.
Juggret.
Assignor's Signature:
JUGPREET SINGH TALWAR Attorney's Signature: 28 457 / 20 7
Attorney's Name: JOSEPHINE A. PALTIN, an Attorney-at-Law of the State of New Jersey, authorized pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and

	100.572.USP1.150 260692-8148.US00	
	Assignor's Signature:	Jie Chen
Attomey's Signature: Attorney's Name: JØSE pursuant to N.J.S.A. 41: who affirmed execution o	?~1, having identified the pe	JIE CHEN JECHEN Dete:
	Assignor's Signature:	Pi
Attorney's Signature:	<u>Januare</u>	PRIYA SUNDARESAN
Attomey's Name: JOSE pursuant to N.J.S.A. 41:2 who affirmed execution of	-1, having Identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature:	
		RAJESH POLIMERA
\ttorney's Signature:		Date:
uttorney's Name: JOSEF	PHINE A. PALTIN, an Attor	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature:		Date:
Attorney's Name: JOS	SEPHINE A. PALTIN, on Att 11:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		VINAY K. PAMARTHI
Attorney's Signature:		Oate:
		orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 060692-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19 Ameer Krishna Apts, 3rd Main Road Lic Neger, Madipakkam, Chennal, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, Iyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu , PIN Code- 600071 India:
- Presenne Kumar Thoppe Ravindran, a citizen of India, having a mailing address of 11/147, Chinna Kanmai 7th Street, C M R Road, Madurai City, Pincode: 625009, Tamii Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tirunelveli - 627007 India;
- Pavan Kumar Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Ciub Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, California 95132 USA;
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Elan Village Lane #222, San Jose, California 95134 USA;
- Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Prasad Ravula, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Estontown, New Jersey 07724 USA;

135203654,1

Page 1 of 8

PATENT REEL: 051762 FRAME: 0060 Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 080692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May} 11,2017}$, as U.S. Application No. $\underline{\frac{62}{504,978}}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, inter partes reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e);
- (g) the right to file foreign and United States applications on the Invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100.572.USP1,150 Attorney Docket No.: 060692-8148.US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible properly embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deems reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filing of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful ceths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interpartes review, post-grant review, covered business method patent review, supplemental examination, ex parte reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assignor will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assignor's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor.

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and inures to the benefit of Assignee and its successors and assigns:

This Assignment is effective: October 03, 2016;

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto I1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SURYA PRAKASH RAMACHANDRAN
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Att 41:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		PRASANNA KUMAR THOPPE RAVINDRAN
Attornev's Signature:		Date:
		orney-at-Law of the State of New Jersey, authorized

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		Daie:
Attornev's Name: JO	SEPHINE A. PALTIN, an Atto .1:2-1, having identified the po	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto \$1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attornev's Name: JC	SEPHINE A. PALTIN, an Atto 41:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Page 7 of 8

Attorney's Name: JØSÉPHINÉ A. PALTIN, an Attorney-st-Law of the State of New Yersey, authorized pursuant to N.J.S.A. 41:2-1, having identified the parson(s) who executed the foregoing document and

Attorney's Signature/

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature:		Date:
Attamasi'e Nama: IO	SEPHINE A. PALTIN, an Atto 11:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	.0
		VINAY K. PAMARTHI
Attornev's Signature:		Date:
Attorney's Name: JC	SEPHINE A. PALTIN, an Att	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19.
 Amaar Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
- Surya Prakash Ramachandran, a citizen of India, having a mailing address of No.1, 4th Street, lyappan nagar, Kamaraj Nagar, Avadi, Chennai, Tamil Nadu, PIN Code- 600071 India;
- Presenne Kumar Thoppe Ravindran, a citizen of India, having a mailing address of 11/147,
 Chinna Kanmai 7th Street, C M R Road, Madurai City, Pincode: 625009, Tamil Nadu, India;
- Ganesh Kumar Subramanian, a citizen of India, having a mailing address of 9 Ayyappa
 Nagar, State Bank Colony 2nd Street, NGO Colony, Palayamkottai, Tirunelveli 627007
 India;
- Paven Kumer Reddy Bedadala, a citizen of India, having a mailing address of 9 Masters Blvd. Piscataway, New Jersey 08854 USA;
- Neha Mathur, a citizen of India, having a mailing address of 84 Austin Street, Tinton Falls, New Jersey 07712 USA;
- Shilpa Nagendra, a citizen of India, having a mailing address of 1578 Vista Club Circle Apt.
 128, Santa Clara, California 95054 USA;
- Supreeth Sanur, a citizen of India, having a mailing address of 65 Rio Robles E, Apt. 3302, San Jose, California 95134 USA;
- Jugpreet Singh Talwar, a citizen of India, having a mailing address of 190 Ryland Street, San Jose, California 95110 USA;
- Jie Chen, a citizen of China, having a mailing address of 3077 Zion Lane, San Jose, California 95132 USA;
- Priya Sundaresan, a citizen of India, having a mailing address of 335 Eian Village Lane #222, San Jose, California 95134 USA;
- Rajesh Polimera, a citizen of India, having a mailing address of 81 Wood Duck Court, Freehold, New Jersey 07728 USA;
- Hari Presad Revute, a citizen of India, having a mailing address of 8 Country Club Rd. Apt.
 26 Eatontown, New Jersey 07724 USA;

Page 1 of 8

135203654.1

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May }11,2017}$, as U.S. Application No. $\underline{\text{ }62/504,978}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Application, and all related rights to Commvault Systems, Inc., a Delaware corporation having its principal place of business at 1 Commvault Way, Tinton Falls, New Jersey 07724, USA (the "Assignee") pursuant to this Assignment.

For good and valuable consideration, the receipt and sufficiency of which Assignor acknowledges, Assignor hereby presently and irrevocably assigns to Assignee the entire right, title, and interest throughout the world in and to the following (collectively, the "Assigned Patent Rights"):

- (a) the Invention(s) and Application;
- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
 - (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
- (e) all rights of priority under United States law and International Conventions relating to any of the foregoing in clauses (a) through (d);
- (f) all reissues, reexaminations, inter partes reviews, post-grant reviews, covered business method patent reviews, supplemental examinations, renewals, substitutes, and extensions of any of the foregoing in clauses (a) through (e):
- (g) the right to file foreign and United States applications on the Invention(s), including filing directly in the name of Assignee; and
- (h) all past, present, and future: claims, causes of action, and enforcement rights for infringement or violation of any of the foregoing in clauses (a) through (f), including the right to sue and collect damages, royalties, and other remedies.

Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country, whose duty it is to issue patents on applications, to issue all patents subject to this Assignment to the Assignee.

Assignor represents that he or she has not previously assigned or licensed, or promised to assign or license, the Assigned Patent Rights to anyone other than Assignee, or taken any other action that conflicts with this Assignment or grants any immunities or rights under the Assigned Patent Rights to anyone other than Assignee.

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 060692-8148,US00

Assignor acknowledges that he or she has been fully compensated for this Assignment and is not entitled to any future compensation or other remuneration for the Assigned Patent Rights.

Assignor agrees to communicate any facts known about the Invention(s) and promptly provide to Assignee any tangible property embodying or describing the Invention(s), which, if not presently in Assignor's possession, will be delivered to Assignee immediately upon creation thereof.

Assignor agrees to sign all documents and do such additional acts as Assignee deems reasonably necessary or desirable to file, prosecute, perfect, defend, and enforce the Assigned Patent Rights, including:

- (a) assisting in the preparation of and authorizing the filing of any other applications relating to the Assigned Patent Rights and any improvements made thereto by Assignor;
- (b) executing and making all rightful oaths, declarations, and affirmations relating to the Assigned Patent Rights; and
- (c) assisting (including by giving of testimony) in any litigation, interference, derivation, interparter review, post-grant review, covered business method patent review, supplemental examination, ex parter reexamination, and any other pre-issuance or post-issuance proceedings in any jurisdiction relating to the Assigned Patent Rights.

Assigner will not in the future make any commitments or do any act conflicting with or impairing the Assigned Patent Rights, including, without limitation, raising any controversy, contesting, or challenging, either directly or indirectly, the validity, enforceability, or alleged infringement of any Assigned Patent Rights or assisting any third party in doing so, serving as an expert, a witness, or as a consultant in any cause of action or for any third party that is adverse to the Assigned Patent Rights, or providing a written opinion, or any other written work product, in any cause of action or for any third party that is adverse to the Assigned Patent Rights. Assignor acknowledges that there may be no adequate remedy at law for Assigner's breach of the terms set forth herein, and accordingly, Assignor grants to Assignee in addition to the right to seek monetary damages, the right to have any such breach remedied by equitable relief including, but not limited to, a temporary restraining order, preliminary injunction, permanent injunction, and such other alternative relief as may be appropriate without the necessity of Assignee posting any bond or proving any damages.

Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually spent at Assignee's request providing such assistance. Assignor hereby irrevocably designates and appoints Assignee as its duly authorized agent and attorney-in-fact to act for and in Assignor's behalf to execute and file any document and to do all other lawfully permitted acts to further the prosecution, defense, and enforcement of the Assigned Patent Rights with the same legal force and effect as if executed by Assignor-

No amendment to this Assignment shall be valid unless signed in writing by the party to be bound. No course of conduct or dealing by Assignee will act as an amendment, modification, or waiver of any provision of this Assignment.

This Assignment may be executed in counterparts. This Assignment is enforceable by and incres to the benefit of Assignee and its successors and assigns.

This Assignment is effective: October 03, 2016.

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
	~ ~	
		SHILPA NAGENDRA
Attorney's Signature:		Date:
Attorney's Name: JOS	SEPHINE A. PALTIN, an Atto 1:2-1, having identified the po	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto i1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto 11:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Page 6 of 8

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060682-8148.US00	
Attorney's Signature Attorney's Name: JØS	1:2-1, having identified the pe	HARI PRASAD RAVULA 28 April 20 / 7 The state of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		VINAY K. PAMARTHI
Attorney's Signature:		Date:
•		rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and

Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 080692-8148,US00

ASSIGNMENT BY INVENTORS

This Assignment is by the following individuals (individually and together, the "Assignor"):

- AAKASH CHAKRAVARTHY VIJAYAKUMAR, a citizen of India, having a mailing address of 143/19
 Amaar Krishna Apts, 3rd Main Road Lic Nagar, Madipakkam, Chennai, 600091, India;
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135203654.1

Page 1 of 8

Assignee Docket No.: 100.572.USP1.150 Attorney Docket No.: 060692-8148.US00

> Vinay K. Pamarthi, a citizen of India, having a mailing address of 15B Lakeview Terrace, Eatontown, New Jersey 07724 USA.

The Assignor invented and/or co-invented one or more inventions, contributions, concepts, ideas, developments, discoveries, processes, formulas, methods, compositions, techniques, technology, articles, machines, improvements, and all related know-how (collectively "Invention(s)") described or claimed in an application for Patent of the United States, which is currently entitled NATURAL LANGUAGE INTEGRATED WITH DATABASE MANAGEMENT and naming Assignor as the sole inventor(s), and filed on $\underline{\text{May }11,2017}$, as U.S. Application No. $\underline{\text{ }62/504,978}$ (the "Application"). The Assignor authorizes the Assignee, identified below, or its representatives to insert the application number and filing date of the Application after they are known.

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- (b) all provisional patent applications relating to the Invention(s) and Application;
- (c) all patent applications claiming direct or indirect priority to the Application and/or any patents issuing from the Application that have been or may be filed or issued in the future, including divisions, continuations, and continuations-in-part;
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Assignee Docket No.: 100,572,USP1,150 Attorney Docket No.: 060692-8148,US00

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Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		AAKASH CHAKRAVARTHY VIJAYAKUMAR
Attorney's Signature:		Date:
	1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		SURYA PRAKASH RAMACHANDRAN
Attorney's Signature:		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Att 1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		PRASANNA KUMAR THOPPE RAVINDRAN
Attorney's Signature:		
***	MANAGEMENT OF MANAGEMENT CO	an one coar r

Assignee Docket No.: Attorney Docket No.:		
	Assignor's Signature:	
	····	
		GANESH KUMAR SUBRAMANIAN
Attorney's Signature:		minimum (2016)
Attorney's Name: JOS pursuant to N.J.S.A. 4 who affirmed execution	1:2-1, having identified the pers	ey-at-Law of the State of New Jersey, authorized on(s) who executed the foregoing document and
	Assignor's Signature:	
		PAVAN KUMAR REDDY BEDADALA
Attomey's Signature: _		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Attorne 1:2-1, having identified the persi	ry-at-Law of the State of New Jersey, authorized on(s) who executed the foregoing document and
	Assignor's Signature:	
		NEHA MATHUR
Attorney's Signature:		
		v-at-Law of the State of New Jersey, authorized

Assignee Docket No.: Attorney Docket No.:	100.572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		SHILPA NAGENDRA
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Atto 1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		SUPREETH SANUR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Attr i1:2-1, having identified the p	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and
	Assignor's Signature:	
		JUGPREET SINGH TALWAR
Attorney's Signature:		Date:
Attorney's Name: JO	SEPHINE A. PALTIN, an Att	orney-at-Law of the State of New Jersey, authorized person(s) who executed the foregoing document and

Page 6 of 8

Assignee Docket No.: Attorney Docket No.:		
	Assignor's Signature:	
		JIE CHEN
Attorney's Signature:		
	1:2-1, having identified the po	rney-at-Law of the State of New Jersey, authorized erson(s) who executed the foregoing document and
	Assignor's Signature:	
		PRIYA SUNDARESAN
Attorney's Signature:		
Attorney's Name: JOS	SEPHINE A. PALTIN, an Attor 1:2-1, having identified the pe	rney-at-Law of the State of New Jersey, authorized irson(s) who executed the foregoing document and
	Assignor's Signature:	
		RAJESH POLIMERA
Attornev's Signature:		
Attorney's Name: JOS	EPHINE A. PALTIN, an Attor	mey-st-Law of the State of New Jersey, authorized

Assignee Docket No.: Attorney Docket No.:	100,572.USP1.150 060692-8148.US00	
	Assignor's Signature:	
		HARI PRASAD RAVULA
Attorney's Signature:		Date:
	1:2-1, having identified the pe	ney-at-Law of the State of New Jersey, authorized rson(s) who executed the foregoing document and
	Assignor's Signature.	Pray -
Attorney's Signature: (Josephine S.	VINAY K. PAMARTHI Allle Date: May 01, 2017

Page 8 of 8

RECORDED: 01/30/2020