

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5266176

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------------|----------------|
| SANATH KUMAR | 11/08/2018 |
| SRI KARTHIK BHAGI | 11/08/2018 |
| PARAG GOKHALE | 10/29/2018 |
| RAHUL S. PAWAR | 11/08/2018 |
| ARUN PRABU DURAISAMY | 11/08/2018 |
| MANOJ KUMAR PRADHAN | 11/08/2018 |
| DMITRIY BORISOVICH ZAKHARKIN | 11/08/2018 |
| PROSENJIT SINHA | 11/08/2018 |
| VIPUL PAWALE | 11/08/2018 |
| JAYA RAMA RAJU INAVOLU | 11/08/2018 |
| MANAS BHIKCHAND MUTHA | 11/08/2018 |
| PUSHPENDRA SINGH | 11/08/2018 |

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: 3

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16130843 |
| Application Number: | 16130874 |
| Application Number: | 16130873 |

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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: (949)760-0404

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Correspondent Name: KNOBBE, MARTENS, OLSON & BEAR, LLP
Address Line 1: 2040 MAIN STREET
Address Line 2: 14TH FLOOR
Address Line 4: IRVINE, CALIFORNIA 92614

NAME OF SUBMITTER: VIKAS BHARGAVA

SIGNATURE: /Vikas Bhargava/

DATE SIGNED: 12/04/2018

Total Attachments: 84

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ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, C/JN Sai Enclave, 2nd Cross, Satya Sai Layout, Whitefield, Bengaluru 560088 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07761, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masabanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1617 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitriy Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
- Manas Bhikchand MUTHA, a citizen of INDIA, and having a mailing address of 2 Saint Paul Ct, Tinton Falls, NJ 07712, USA;
- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

Assignee Docket Nos.: 100.584.US1.150, 100.584.US2.150, 100.584.US3.150
Attorney Docket Nos.: COMMV.355A1, COMMV.355A2, COMMV.355A3

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.584.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.584.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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 clause (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.

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, *inter partes* 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 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.

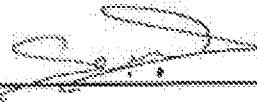
Assignor's obligation to assist Assignee in obtaining, defending, and enforcing the Assigned Patent Rights shall continue beyond the termination of employment by Assignee for whatever reason, but Assignee shall compensate Assignor at a reasonable rate after the termination of employment for time actually 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: June 12, 2017

Assignor's Signature: _____



Sanath KUMAR

Attorney's Signature: _____



Date: _____

Nov. 08, 2018

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____

Date: _____

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: _____

Parag GOKHALE

Attorney's Signature: _____

Date: _____

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.

Assignee Docket Nos.: 100.584.US1.150, 100.584.US2.150, 100.584.US3.150
Attorney Docket Nos.: COMMV.355A1, COMMV.355A2, COMMV.355A3

Assignor's Signature: _____

Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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: _____

Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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: _____

Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Prosenjit SINHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Attorney Docket Nos.: COMMV.355A1, COMMV.355A2, COMMV.355A3

Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manee Bhikohand MUTHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Pushpandra SINGH

Attorney's Signature: _____ Date: _____

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- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, USA.

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|--|------------------------|--------------------|---------------------|---------------------|
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| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
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- (b) all provisional patent applications relating to the Invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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);
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- (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.

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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(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, *inter partes* 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 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.

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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: June 12, 2017

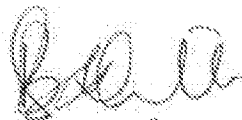
Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

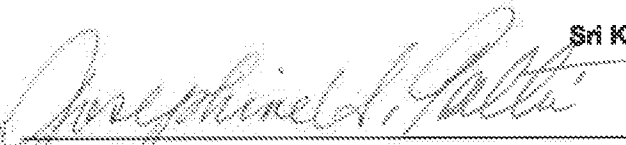
Attorney's Name: JOSEPHINE A. PALTIN, an Attorney-at-Law of the State of New Jersey, authorized pursuant to N.J.S.A. 41:2-1, having identified the person(s) who executed the foregoing document and who affirmed execution of same.

Assignor's Signature: _____



Sri Karthik BHAGI

Attorney's Signature: _____



Date: _____

Nov. 08, 2018

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: _____

Parag GOKHALE

Attorney's Signature: _____ Date: _____

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: _____

Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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: _____

Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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.

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Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Prosenjit SINHA

Attorney's Signature: _____ Date: _____

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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: _____

Pushpandra SINGH

Attorney's Signature: _____ Date: _____

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.

ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masidbanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitriy Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
- Manas Bhikchand MUTHA, a citizen of INDIA, and having a mailing address of 2 Saint Paul Ct, Tinton Falls, NJ 07712, USA;
- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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.

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, *inter partes* 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.

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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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: _____

Parag GOKHALE

Attorney's Signature: Josephine A. Paltin Date: 10/29/18

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. NOV. 08, 2018

Assignor's Signature: _____

Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Prosenjit SINHA

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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Pushpendra SINGH

Attorney's Signature: _____ Date: _____

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ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, C/JN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masikbanda, Kondapur, Hyderabad 500084, INDIA;
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- Pushpandra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

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- (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);
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- (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.

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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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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.

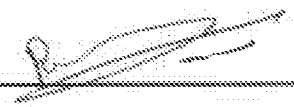
Assignor's Signature: _____

Parag GOKHALE

Attorney's Signature: _____ Date: _____

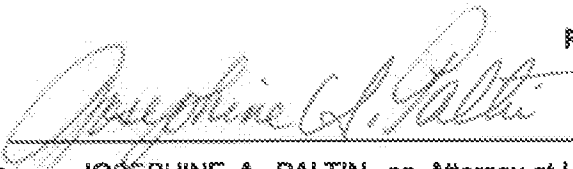
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Attorney's Signature: _____

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Nov. 08, 2013

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Arun Prabu DURAISAMY

Attorney's Signature: _____

Date: _____

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Assignor's Signature: _____

Manoj Kumar PRADHAN

Attorney's Signature: _____

Date: _____

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Assignor's Signature: _____

Dmitriy Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Prosenjit SINHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Pushendra SINGH

Attorney's Signature: _____ Date: _____

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.

ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, C/JN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masidbanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitry Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
- Manas Bhikchand MUTHA, a citizen of INDIA, and having a mailing address of 2 Saint Paul Ct, Tinton Falls, NJ 07712, USA;
- Pushpandra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as Inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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.

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, *inter partes* 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 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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Arin Prabu DURAISAMY

Attorney's Signature: _____ Date: Nov. 08, 2018

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: _____

Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Prosenjit SINHA

Attorney's Signature: _____ Date: _____

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Pushpendra SINGH

Attorney's Signature: _____ Date: _____

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ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJK Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560086 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
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| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

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- (d) all patents that may be granted on any of the foregoing in clauses (a) through (c);
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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.

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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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.

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Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Rahul S. PAWAR

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Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manoj Kumar Pradhan

Manoj Kumar PRADHAN

Attorney's Signature: _____

Josephine A. Paltin

Date: _____

Nov. 08, 2018

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: _____

Dmitriy Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Frosenjit SINHA

Attorney's Signature: _____ Date: _____

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Shikchand MUTHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Pushpendra SINGH

Attorney's Signature: _____ Date: _____

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ASSIGNMENT BY INVENTORS

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

- **Sanath KUMAR**, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- **Sri Karthik BHAGI**, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- **Parag GOKHALE**, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- **Rahul S. PAWAR**, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- **Arun Prabu DURAISAMY**, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masikbanda, Kondapur, Hyderabad 500084, INDIA;
- **Manoj Kumar PRADHAN**, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- **Dmitriy Borisovich ZAKHARKIN**, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
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- **Pushpendra SINGH**, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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.

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.

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(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, *inter partes* 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 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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

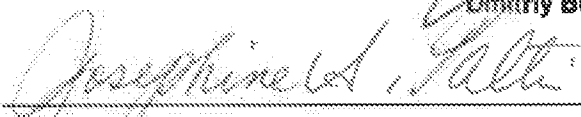
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Assignor's Signature: _____


Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____

Date: _____


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Nov. 08, 2018

Assignor's Signature: _____

Prosenjit SINHA

Attorney's Signature: _____

Date: _____

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Vipul PAWALE

Attorney's Signature: _____

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Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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Pushendra SINGH

Attorney's Signature: _____ Date: _____

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ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJNI Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masidbanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitriy Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
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This Assignment is effective: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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.

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Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

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Dmitry Borisovich ZAKHARKIN

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Prosenjit SINHA

Attorney's Signature: _____ Date: Nov, 08, 2018

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Vipul PAWALE

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Manas Bhikchand MUTHA

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Pushpendra SINGH

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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.

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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Dmitriy Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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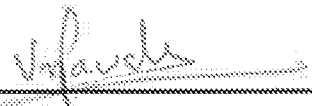
Assignor's Signature: _____

Prosenjit SINHA

Attorney's Signature: _____ Date: _____

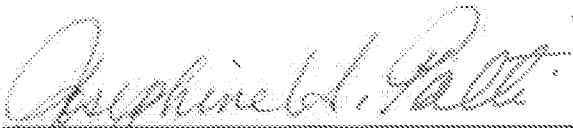
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Assignor's Signature: _____



Vipul PAWALE

Attorney's Signature: _____ Date: NOV. 08, 2018



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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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: _____

Pushpendra SINGH

Attorney's Signature: _____ Date: _____

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.

ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masidbanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitriy Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
- Manas Bhikchand MUTHA, a citizen of INDIA, and having a mailing address of 2 Saint Paul Ct, Tinton Falls, NJ 07712, USA;
- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 18/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 18/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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.

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, *inter partes* 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.

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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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.

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Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Rahul S. PAWAR

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Arun Prabu DURAISAMY

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Nanoj Kumar PRADHAN

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Dmitriy Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Frosenjit SINHA

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju

Jaya Rama Raju INAVOLU

Attorney's Signature: _____

Josephine A. Paltin

Date: _____

Nov. 08, 2018

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: _____

Manee Bhikchand MUTHA

Attorney's Signature: _____

Date: _____

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Pushpendra SINGH

Attorney's Signature: _____

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ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJNI Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 319 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
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- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

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- (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.

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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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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.

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Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

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Dmitry Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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: _____

Prosenjit SINHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Jaya Rama Raju INAVOLU

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: NOV. 08, 2018

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: _____

Pushpendra SINGH

Attorney's Signature: _____ Date: _____

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.

ASSIGNMENT BY INVENTORS

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

- Sanath KUMAR, a citizen of INDIA, and having a mailing address of 205, 2nd Floor, CJN Sai Enclave, 2nd Cross, Satya Sai Layout, WhiteField, Bengaluru 560066 INDIA;
- Sri Karthik BHAGI, a citizen of INDIA, and having a mailing address of 318 Devon Place, Morganville, NJ 07751, USA;
- Parag GOKHALE, a citizen of USA, and having a mailing address of 7 Breton Court, Marlboro, NJ 07746, USA;
- Rahul S. PAWAR, a citizen of USA, and having a mailing address of 99 Stevenson Drive, Marlboro, NJ 07746, USA;
- Arun Prabu DURAISAMY, a citizen of INDIA, and having a mailing address of D3010, Luxor Apartments, Prabhupada Township, Masidbanda, Kondapur, Hyderabad 500084, INDIA;
- Manoj Kumar PRADHAN, a citizen of INDIA, and having a mailing address of 1517 Forest Haven Boulevard, Edison, NJ 08817, USA;
- Dmitriy Borisovich ZAKHARKIN, a citizen of USA, and having a mailing address of 406 Culver Road, Monmouth Junction, NJ 08852, USA;
- Prosenjit SINHA, a citizen of INDIA, and having a mailing address of 18 Deepwater Circle, Manalapan, NJ 07726, USA;
- Vipul PAWALE, a citizen of INDIA, and having a mailing address of 23 Willow Drive Apt 10, Ocean, NJ 07712, USA;
- Jaya Rama Raju INAVOLU, a citizen of INDIA, and having a mailing address of 6B Lakeview Terrace, Eatontown, NJ 07724, USA;
- Manas Bhikchand MUTHA, a citizen of INDIA, and having a mailing address of 2 Saint Paul Ct, Tinton Falls, NJ 07712, USA;
- Pushpendra SINGH, a citizen of INDIA, and having a mailing address of 2816 Forest Haven Blvd., Edison, NJ 08817, 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 listed in the table below (the "Applications"), each of which list the Assignor as inventors. The Assignor authorizes the Assignee, identified below, or its representatives to insert the application numbers and filing dates of the Applications after they are known.

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH COMBINED BACKUP AND CONTENT INDICES | 16/130,843 | September 13, 2018 | 100.564.US1.150 | COMMV.355A1 |

| Title | Application Serial No. | Filing Date | Assignee Docket No. | Attorney Docket No. |
|--|------------------------|--------------------|---------------------|---------------------|
| DISTRIBUTED CONTENT INDEXING ARCHITECTURE WITH SEPARATELY STORED FILE PREVIEWS | 16/130,874 | September 13, 2018 | 100.564.US2.150 | COMMV.355A2 |
| DISTRIBUTED ARCHITECTURE FOR CONTENT INDEXING EMAILS | 16/130,873 | September 13, 2018 | 100.564.US3.150 | COMMV.355A3 |

Assignor desires to assign the entire right, title and interest in and to the Invention(s), the Applications, 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 Applications;
- (b) all provisional patent applications relating to the Invention(s) and Applications;
- (c) all patent applications claiming direct or indirect priority to the Applications and/or any patents issuing from the Applications 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.

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, *inter partes* 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 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: June 12, 2017

Assignor's Signature: _____

Sanath KUMAR

Attorney's Signature: _____ Date: _____

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: _____

Sri Karthik BHAGI

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Parag GOKHALE

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____

Rahul S. PAWAR

Attorney's Signature: _____ Date: _____

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Arun Prabu DURAISAMY

Attorney's Signature: _____ Date: _____

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Manoj Kumar PRADHAN

Attorney's Signature: _____ Date: _____

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Dmitriy Borisovich ZAKHARKIN

Attorney's Signature: _____ Date: _____

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Prosenjit SINHA

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Vipul PAWALE

Attorney's Signature: _____ Date: _____

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Jaya Rama Raju INAVOLU

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Manas Bhikchand MUTHA

Attorney's Signature: _____ Date: _____

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Assignor's Signature: _____



Pushpendra SINGH

Attorney's Signature: Josephine A. Paltin Date: Nov. 08, 2018

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.