# 506669154 05/18/2021

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6715969

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
DAVID W. COSBY	03/31/2021
THEODORE B. VOJNOVICH	05/18/2021
MANJUNATHA HEBBAR	04/21/2021
ANTHONY C. YU	04/13/2021
PATRICK L. CAPORALE	04/02/2021

### **RECEIVING PARTY DATA**

Name:	LENOVO ENTERPRISE SOLUTIONS (SINGAPORE) PTE. LTD.
Street Address:	151 LORONG CHUAN, #02-01 NEW TECH PARK
City:	SINGAPORE
State/Country:	SINGAPORE
Postal Code:	556741

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	17219212

### **CORRESPONDENCE DATA**

Fax Number:

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:** 281-732-1945

**Email:** jstreets@streetsiplaw.com

Correspondent Name: STREETS LAWFIRM, PC - LENOVO (SINGAPORE)

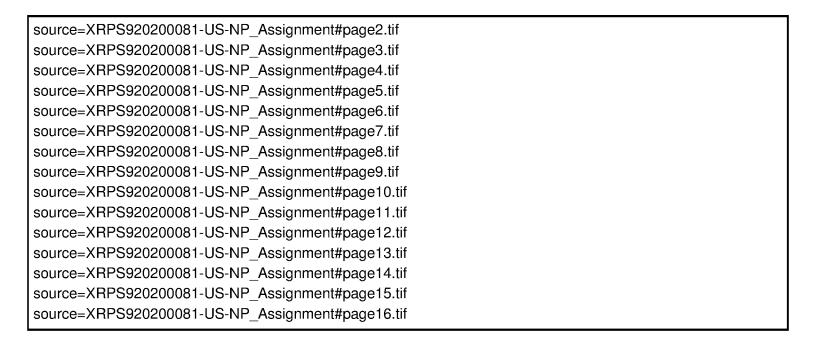
Address Line 1: 20319 CORBIN CREEK DRIVE Address Line 4: CYPRESS, TEXAS 77433

ATTORNEY DOCKET NUMBER:	XRPS920200081-US-NP	
NAME OF SUBMITTER:	JEFFREY L. STREETS	
SIGNATURE:	/Jeffrey L. Street, Reg. No. 37453/	
DATE SIGNED:	05/18/2021	

**Total Attachments: 16** 

source=XRPS920200081-US-NP\_Assignment#page1.tif

PATENT REEL: 056276 FRAME: 0847



THIS ASSIGNMENT, made by David W. Cosby, Theodore B. Vojnovich, Manjunatha Hebbar, Anthony C. Yu and Patrick L. Caporale hereinafter referred to as Assignors); who have a mailing address at c/o Lenovo, 8001 Development Drive, Morrisville, NC, 27560 USA;

WHEREAS, Assignors have invented certain new and useful improvements in AUTOMATIC FAILOVER OF A SOFTWARE-DEFINED STORAGE CONTROLLER TO HANDLE INPUT-OUTPUT OPERATIONS TO AND FROM AN ASSIGNED NAMESPACE ON A NON-VOLATILE MEMORY DEVICE, set forth in a Patent application for Letters Patent in a national patent office or international receiving office, for which an application for patent has been concurrently filed herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

CN Application No.:		Filing Date:	_
JP Application No.:		Filing Date: -	
PCT Application No.:		Filing Date:	
US Application No.:	17/219,212	Filing Date:	03-31-2021

WHEREAS, Lenovo Enterprise Solutions (Singapore) Pte. Ltd. (hereinafter referred to as Assignee), a Corporation organized under and pursuant to the laws of Singapore, having its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore 556741 is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, People's Republic of China and all foreign countries, and in and to any Letters Patent of the United States, People's Republic of China and all foreign countries to be obtained therefore and thereon.

**NOW, THEREFORE**, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) have sold,

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office, the People's Republic of China National Intellectual Property Administration and/or any other receiving entity for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

Date:	3/3//2/	Signature:	David W. Cosby
Date:		Signature:	Theodore B. Vojnovich
Date:		Signature:	Manjunatha Hebbar
Date:		Signature:	Anthony C. Yu
Date:		Signature:	Patrick L. Caporale

THIS ASSIGNMENT, made by David W. Cosby, Theodore B. Vojnovich, Manjunatha Hebbar, Anthony C. Yu and Patrick L. Caporale hereinafter referred to as Assignors); who have a mailing address at c/o Lenovo, 8001 Development Drive, Morrisville, NC, 27560 USA;

WHEREAS, Assignors have invented certain new and useful improvements in AUTOMATIC FAILOVER OF A SOFTWARE-DEFINED STORAGE CONTROLLER TO HANDLE INPUT-OUTPUT OPERATIONS TO AND FROM AN ASSIGNED NAMESPACE ON A NON-VOLATILE MEMORY DEVICE, set forth in a Patent application for Letters Patent in a national patent office or international receiving office, for which an application for patent has been concurrently filed herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

CN Application No.:		Filing Date:	
JP Application No.:		Filing Date:	
PCT Application No.:		Filing Date:	
US Application No.:	17/219,212	Filing Date:	03-31-2021

WHEREAS, Lenovo Enterprise Solutions (Singapore) Pte. Ltd. (hereinafter referred to as Assignee), a Corporation organized under and pursuant to the laws of Singapore, having its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore 556741 is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, People's Republic of China and all foreign countries, and in and to any Letters Patent of the United States, People's Republic of China and all foreign countries to be obtained therefore and thereon.

**NOW, THEREFORE**, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) have sold,

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

**AND** Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office, the People's Republic of China National Intellectual Property Administration and/or any other receiving entity for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

Date:		Signature:	David W. Cooky
Date:	_5/18/2021	Signature:	David W. Cosby  Theodore B. Vojnovich
Date:		Signature:	Manjunatha Hebbar
Date:		Signature:	Anthony C. Yu
Date:		Signature:	Patrick L. Caporale

Date:	Signature:	
		Lenovo Enterprise Solutions (Singapore)
		Pte. Ltd.
		Name:
		Title:
	end of doc	ument

THIS ASSIGNMENT, made by David W. Cosby, Theodore B. Vojnovich, Manjunatha Hebbar, Anthony C. Yu and Patrick L. Caporale hereinafter referred to as Assignors); who have a mailing address at c/o Lenovo, 8001 Development Drive, Morrisville, NC, 27560 USA;

WHEREAS, Assignors have invented certain new and useful improvements in AUTOMATIC FAILOVER OF A SOFTWARE-DEFINED STORAGE CONTROLLER TO HANDLE INPUT-OUTPUT OPERATIONS TO AND FROM AN ASSIGNED NAMESPACE ON A NON-VOLATILE MEMORY DEVICE, set forth in a Patent application for Letters Patent in a national patent office or international receiving office, for which an application for patent has been concurrently filed herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

CN Application No.:	_	Filing Date:	
JP Application No.:		Filing Date:	
PCT Application No.:		Filing Date:	
US Application No.:	17/219,212	Filing Date:	03-31-2021

WHEREAS, Lenovo Enterprise Solutions (Singapore) Pte. Ltd. (hereinafter referred to as Assignee), a Corporation organized under and pursuant to the laws of Singapore, having its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore 556741 is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, People's Republic of China and all foreign countries, and in and to any Letters Patent of the United States, People's Republic of China and all foreign countries to be obtained therefore and thereon.

**NOW, THEREFORE**, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) have sold,

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

Docket no. XRPS920200081-US-Np. or any reissue, reexamination or

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office, the People's Republic of China National Intellectual Property Administration and/or any other receiving entity for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

Date:	Signature:	David W. Cosby
Date:	Signature:	Theodore B. Vojnovich
Date: 21 April 2021	Signature:	Manjunalha Hebbar
Date	Signature:	Anthony C. Yu
Date:	Signature	Patrick L. Caporale

THIS ASSIGNMENT, made by David W. Cosby, Theodore B. Vojnovich, Manjunatha Hebbar, Anthony C. Yu and Patrick L. Caporale hereinafter referred to as Assignors); who have a mailing address at c/o Lenovo, 8001 Development Drive, Morrisville, NC, 27560 USA;

WHEREAS, Assignors have invented certain new and useful improvements in AUTOMATIC FAILOVER OF A SOFTWARE-DEFINED STORAGE CONTROLLER TO HANDLE INPUT-OUTPUT OPERATIONS TO AND FROM AN ASSIGNED NAMESPACE ON A NON-VOLATILE MEMORY DEVICE, set forth in a Patent application for Letters Patent in a national patent office or international receiving office, for which an application for patent has been concurrently filed herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

CN Application No.:		Filing Date: —	
JP Application No.:		Filing Date:	
PCT Application No.:	_	Filing Date:	_
US Application No.:	17/219,212	Filing Date:	03-31-2021

WHEREAS, Lenovo Enterprise Solutions (Singapore) Pte. Ltd. (hereinafter referred to as Assignee), a Corporation organized under and pursuant to the laws of Singapore, having its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore 556741 is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, People's Republic of China and all foreign countries, and in and to any Letters Patent of the United States, People's Republic of China and all foreign countries to be obtained therefore and thereon.

**NOW, THEREFORE**, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) have sold,

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office, the People's Republic of China National Intellectual Property Administration and/or any other receiving entity for recordation of this document, including the power to insert on this assignment the application number and filling date of said application when known.

Date:	Signature:	
	Oignature.	David W. Cosby
Date:	Signature:	
		Theodore B. Vojnovich
Date:	Signature:	
		Manjunatha Hebbar
Date: 4/13/2021	Signature:	apt >
		Anthony C. Yu
Date:	Signature:	
		Patrick L. Caporale

THIS ASSIGNMENT, made by David W. Cosby, Theodore B. Vojnovich, Manjunatha Hebbar, Anthony C. Yu and Patrick L. Caporale hereinafter referred to as Assignors); who have a mailing address at c/o Lenovo, 8001 Development Drive, Morrisville, NC, 27560 USA;

WHEREAS, Assignors have invented certain new and useful improvements in AUTOMATIC FAILOVER OF A SOFTWARE-DEFINED STORAGE CONTROLLER TO HANDLE INPUT-OUTPUT OPERATIONS TO AND FROM AN ASSIGNED NAMESPACE ON A NON-VOLATILE MEMORY DEVICE, set forth in a Patent application for Letters Patent in a national patent office or international receiving office, for which an application for patent has been concurrently filed herewith. Where this Assignment is not filed concurrently with the application, the following identifying information may be added after execution:

CN Application No.:		Filing Date: —	
JP Application No.:		Filing Date:	
PCT Application No.:	_	Filing Date:	_
US Application No.:	17/219,212	Filing Date:	03-31-2021

WHEREAS, Lenovo Enterprise Solutions (Singapore) Pte. Ltd. (hereinafter referred to as Assignee), a Corporation organized under and pursuant to the laws of Singapore, having its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore 556741 is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, People's Republic of China and all foreign countries, and in and to any Letters Patent of the United States, People's Republic of China and all foreign countries to be obtained therefore and thereon.

**NOW, THEREFORE**, to all whom it may concern, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor(s) have sold,

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or

continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

I hereby grant Assignee(s), the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark office, the People's Republic of China National Intellectual Property Administration and/or any other receiving entity for recordation of this document, including the power to insert on this assignment the application number and filing date of said application when known.

Date:		Signature:	David W. Cosby
			Danie ve. Cosoy
Date:		Signature	
			Theodore B. Vojnovich
Date:		Signature:	
			Manjunatha Hebbar
Date	,,,,,	Signature:	Anthony C. Yu
			Anthony C. Yu
Date:	4/2/21	Signature:	
the state of		and the second of the second	Patrick L. Caporale