PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6262844

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
DELL PRODUCTS L.P.	08/17/2020
EMC IP HOLDING COMPANY LLC	08/17/2020

RECEIVING PARTY DATA

Name:	THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS NOTES COLLATERAL AGENT
Street Address:	601 TRAVIS STREET
Internal Address:	16TH FLOOR
City:	HOUSTON
State/Country:	TEXAS
Postal Code:	77002

PROPERTY NUMBERS Total: 656

Property Type	Number
Application Number:	16926188
Application Number:	16890622
Application Number:	16877470
Application Number:	16874380
Application Number:	16919791
Application Number:	16929364
Application Number:	16935560
Application Number:	16934244
Application Number:	16934999
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Application Number:	16889733
Application Number:	15930439
Application Number:	16906426
Application Number:	16901806
Application Number:	16938246
Application Number:	16889861
Application Number:	16905627
Application Number:	16884964

Property Type	Number
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Application Number:	16946700
Application Number:	16902093
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Application Number:	16927480
Application Number:	15929527
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Application Number:	16916426
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Application Number:	16946068
Application Number:	16901904
Application Number:	16871632
Application Number:	16883125
Application Number:	16868072
Application Number:	16946643
Application Number:	16908316

Property Type	Number
Application Number:	16884823
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Application Number:	16927359
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Application Number:	16905206
Application Number:	16965900
Application Number:	16921303
Application Number:	16890111
Application Number:	16906482

CORRESPONDENCE DATA

Fax Number: (212)455-2502

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: 2124552333

Email: jmull@stblaw.com

Correspondent Name: BOBBIE BURROWS

Address Line 1: 425 LEXINGTON AVENUE

Address Line 4: NEW YORK, NEW YORK 10017

ATTORNEY DOCKET NUMBER:	001909/0002
NAME OF SUBMITTER:	J. JASON MULL
SIGNATURE:	/J. Jason Mull/
DATE SIGNED:	08/21/2020

Total Attachments: 66

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PATENT SECURITY AGREEMENT dated as of August 17, 2020 (this "Agreement"), among Dell Products L.P. and EMC IP Holding Company LLC (each, a "Grantor" and collectively, the "Grantors") and The Bank of New York Mellon Trust Company, N.A., as Collateral Agent (in such capacity, the "Notes Collateral Agent").

Reference is made to (a) the Indenture, dated as of March 20, 2019, among Dell International L.L.C., a Delaware limited liability company ("Dell International"), EMC Corporation, a Massachusetts corporation ("EMC" and, together with Dell International, the "Issuers"), the Guarantors and The Bank of New York Mellon Trust Company, N.A., in its capacity as Trustee on behalf of the Holders of the Notes and Notes Collateral Agent (as from time to time amended, restated, supplemented or otherwise modified, the "Indenture") and (b) the Security Agreement, dated as of March 20, 2019 (as amended, supplemented or otherwise modified from time to time, the "Security Agreement"), among the Issuers, the other grantors from time to time party thereto and the Notes Collateral Agent. The Grantors are Affiliates of the Issuers and will derive substantial benefits from the execution, delivery and performance of the obligations under the Indenture and the Notes and each is, therefore, willing to enter into this Agreement. Accordingly, the parties hereto agree as follows:

SECTION 1. Terms. Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Security Agreement or the Indenture, as applicable. The rules of construction specified in Section 1.01(b) of the Security Agreement also apply to this Agreement.

SECTION 2. Grant of Security Interest. As security for the payment or performance, as the case may be, in full of the Secured Obligations, the Grantor hereby grants to the Notes Collateral Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest (the "Security Interest") in all of such Grantor's right, title and interest in, to and under any Patents now owned or at any time hereafter acquired by such Grantor, including those listed on Schedule I (the "Patent Collateral").

SECTION 3. Security Agreement. The Security Interest granted to the Notes Collateral Agent herein is granted in furtherance, and not in limitation, of the security interests granted to the Notes Collateral Agent pursuant to the Security Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of the Notes Collateral Agent with respect to the Patent Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Security Agreement, the terms of the Security Agreement shall govern.
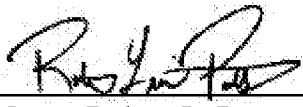
SECTION 4. Counterparts. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Agreement.

SECTION 5. Governing Law. This Agreement shall be construed in accordance with and governed by the law of the State of New York.
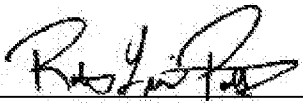
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IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

DELL PRODUCTS L.P.,

By: _____
Name: Robert L. Potts
Title: Senior Vice President & Asst. Secretary

EMC IP HOLDING COMPANY LLC,

By: _____
Name: Robert L. Potts
Title: Senior Vice President & Asst. Secretary

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A., as Notes Collateral Agent,

By: _____

Digitally signed by William L.
Wallace
Date: 2020.08.14 14:12:32
-05'00'

Name: William Wallace
Title: Vice President

[Signature Page to Patent Security Agreement – 2019 Indenture]

Schedule I

Owner	Application Title	Application Number	Filed Date
Dell Products L.P.	Method for Reducing Execution Jitter in Multi-Core Processors Within an Information Handling System	16/926188	2020-07-10
Dell Products L.P.	MULTILAYER GLASS COMPOSITE DISPLAY COVER (re-submit:Invention Ref 100536)	16/890622	2020-06-02
Dell Products L.P.	METHOD AND APPARATUS FOR OPTIMIZING SELECTION OF RADIO CHANNEL FREQUENCY AND GEOGRAPHIC LOCATION FOR WLAN ACCESS POINTS	16/877470	2020-05-18
Dell Products L.P.	System and Method to Dynamically Increase Memory Channel Robustness at High Transfer Rates	16/874380	2020-05-14
Dell Products L.P.	METHOD, APPARATUS AND COMPUTER PROGRAM PRODUCT FOR MANAGING INPUT/OUTPUT	16/919791	2020-07-02
Dell Products L.P.	Power-Subsystem-Monitoring-Based Graphics Processing System	16/929364	2020-07-15
Dell Products L.P.	INTER-PROCESS COMMUNICATION FAULT DETECTION AND RECOVERY SYSTEM	16/935560	2020-07-22
Dell Products L.P.	Information Handling System with High Current Battery Planar Tab Interconnect	16/934244	2020-07-21
Dell Products	Method and Apparatus for Blue Light Management	16/934999	2020-07-21

L.P.	via a Variable Light Emitting Diode Input		
Dell Products L.P.	LINK DOWNGRADE DETECTION SYSTEM	15/929994	2020-06-02
Dell Products L.P.	CONTROL SYSTEM AND METHOD FOR TRAINING A RECONFIGURABLE ANTENNA	16/889733	2020-06-01
Dell Products L.P.	AN ADAPTABLE GRAPHICS BOARD WITH A RECONFIGURABLE I/O MODULE BOARD FOR USE IN INFORMATION HANDLING SYSTEMS	15/930439	2020-05-12
Dell Products L.P.	Method and Apparatus for Predictive Failure Handling of Interleaved Dual In-Line Memory Modules	16/906426	2020-06-19
Dell Products L.P.	Multiform factor mobile computer with flip out keyboard	16/901806	2020-06-15
Dell Products L.P.	MODULAR FLOATING MECHANISM DESIGN FOR CABLE BLIND MATING AT SERVER INFRASTRUCTURE	16/938246	2020-07-24
Dell Products L.P.	Method and System of Content Based Dynamic Data Compression	16/889861	2020-06-02
Dell Products L.P.	System and Method of Rerouting an Inter-Processor Communication Link Based on a Link Utilization Value	16/905627	2020-06-18
Dell Products L.P.	World wide pin support in adapter	16/884964	2020-05-27
Dell Products L.P.	Keyboard position on screen	16/901621	2020-06-15
Dell Products L.P.	Augmented halo display with convertible cover design	16/865791	2020-05-04
Dell Products	SOFTWARE CODE TESTING SYSTEM	16/946700	2020-07-01

L.P.			
Dell Products L.P.	POWER BACKUP DEVICE CHARGING SYSTEM	16/902093	2020-06-15
Dell Products L.P.	POWER DELIVERY SYSTEM	16/902014	2020-06-15
Dell Products L.P.	SYSTEMS AND METHODS OF FORMING A VIDEO DISPLAY	16/927480	2020-07-13
Dell Products L.P.	OPTICAL TRANSCEIVER SYSTEM	15/929527	2020-05-07
Dell Products L.P.	OPTICAL TRANSCEIVER SYSTEM	15/929525	2020-05-07
Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING PLATFORM APPLICATIONS WITH INFORMATION HANDLING SYSTEMS	16/906126	2020-06-19
Dell Products L.P.	SYSTEM AND METHOD FOR DYNAMIC SWITCHING BETWEEN BATTERIES IN A DUAL BATTERY SYSTEM	16/866299	2020-05-04
Dell Products L.P.	NETWORKING AGGREGATION SYNCHRONIZATION SYSTEM	15/929858	2020-05-26
Dell Products L.P.	CLUSTER DEPLOYMENT AND MANAGEMENT SYSTEM	15/929859	2020-05-26
Dell Products L.P.	Information Handling System Partial Spectrum Camera Shutter	16/880603	2020-05-21
Dell Products L.P.	Intelligent detection and prevention of anomalies in interface protocols	16/925951	2020-07-10
Dell Products L.P.	SYSTEMS AND METHODS FOR DETECTING SHORT-TERM CHANGES TO BIOS SETUP	16/884985	2020-05-27
Dell Products L.P.	Information Handling System Stylus with Integrated Push Button and	16/916376	2020-06-30

	Charging Port		
Dell Products L.P.	Virtual Media Performance Improvement	16/925991	2020-07-10
Dell Products L.P.	Prediction of Failure Recovery Timing in Manufacturing Process	16/944393	2020-07-31
Dell Products L.P.	HYBRID ELECTRICAL/OPTICAL DATA/POWER CABLING SYSTEM	15/929602	2020-05-12
Dell Products L.P.	HYBRID ELECTRICAL/OPTICAL DATA/POWER CABLING SYSTEM	15/929654	2020-05-14
Dell Products L.P.	HYBRID ELECTRICAL/OPTICAL DATA/POWER CABLING SYSTEM	15/929605	2020-05-12
Dell Products L.P.	MULTI-LAYER VENT FOR INCREASED AIRFLOW AND EMI SHIELDING IN AN INFORMATION HANDLING SYSTEM	16/866325	2020-05-04
Dell Products L.P.	Wide Range Power Mechanism for Over-Speed Memory Design	16/883554	2020-05-26
Dell Products L.P.	Intelligent fan identification system	16/868649	2020-05-07
Dell Products L.P.	Symbolic Names for Non-Volatile Memory Express (NVME) Elements in an NVME-OVER-FABRICS (NVME-OF) System	16/925131	2020-07-09
Dell Products L.P.	Implicit Discovery Controller Registration of Non-Volatile Memory Express (NVME) Elements in an NVME-Over-Fabrics (NVME-OF) System	16/898216	2020-06-10
Dell Products L.P.	Target Driven Zoning for Ethernet in Non-Volatile Memory Express Over-Fabrics (NVME-oF) Environments	16/898191	2020-06-10
Dell	COOLING SYSTEM	16/890590	2020-06-02

Products L.P.	WITH ACOUSTIC NOISE CONTROL IN AN INFORMATION HANDLING SYSTEM		
Dell Products L.P.	Information Handling System Variable Torque Hinge	16/916444	2020-06-30
Dell Products L.P.	Electro-Permanent Magnet Thermal Protection	16/916426	2020-06-30
Dell Products L.P.	Variable Fin Stack	16/893719	2020-06-05
Dell Products L.P.	POWER-AVAILABILITY-BASED POWER DELIVERY CONFIGURATION SYSTEM	16/946068	2020-06-04
Dell Products L.P.	Method for user control of System Performance vs. Battery Charging Power Optimization	16/901904	2020-06-15
Dell Products L.P.	System and Method to Selectively Reduce USB-3 Interference with Wireless Communication Devices	16/871632	2020-05-11
Dell Products L.P.	Method to Optimize System Boot Time of Modules/Driver's Execution in UEFI Pre-Boot Environment	16/883125	2020-05-26
Dell Products L.P.	System and Method for Enabling a Peripheral Device Expansion Card without Sideband Cable Connection	16/868072	2020-05-06
Dell Products L.P.	HEAT DISSIPATION WALL SYSTEM	16/946643	2020-06-30
Dell Products L.P.	COMPUTING DEVICE REMOTE CONTROL SYSTEM	16/908316	2020-06-22
Dell Products L.P.	Passive package to enable low cost 5Gb rated footprint compatible solution for 10Gb USB 3.1 gen2 retimers to optimize PCB board leverage	16/884823	2020-05-27
Dell Products	INDEPENDENTLY-ROTATING	16/946535	2020-06-25

L.P.	COMPUTING DEVICE DISPLAY MOUNTING SYSTEM		
Dell Products L.P.	COMPUTING DEVICE SUPPORT SURFACE MOUNTING SYSTEM	16/946639	2020-06-30
Dell Products L.P.	SYSTEM AND METHOD FOR STATE MANAGEMNT OF DEVICES	16/877253	2020-05-18
Dell Products L.P.	SYSTEM AND METHOD FOR MITIGATING LIQUID DAMAGE TO AN INFORMATION HANDLING SYSTEM	16/889476	2020-06-01
Dell Products L.P.	Intelligent and predictive optimization of power needs across virtualized environments	15/931956	2020-05-14
Dell Products L.P.	System and Method for Firmware Image Integrity Verification	16/881250	2020-05-22
Dell Products L.P.	METHOD AND APPARATUS FOR CALCULATING A SOFTWARE STABILITY INDEX	15/931035	2020-05-13
Dell Products L.P.	Information Handling System Stylus with an Automated Power Switch Based on Writing Tip Position	16/927359	2020-07-13
Dell Products L.P.	System and Method for Optimizing Non-Volatile Random Access Memory Usage	16/884566	2020-05-27
Dell Products L.P.	CARTRIDGE-BASED COMPUTING SYSTEM	16/946641	2020-06-30
Dell Products L.P.	Additional monitor recommendation by watching overlapping foreground applications	16/880388	2020-05-21
Dell Products L.P.	FABRIC LEVEL UPLINK FAILURE DETECTION	16/946910	2020-07-10
Dell Products L.P.	MULTI-FABRIC VLAN CONFIGURATION SYSTEM	16/946909	2020-07-10

Dell Products L.P.	AUTOMATED MULTI-FABRIC LINK AGGREGATION SYSTEM	16/946908	2020-07-10
Dell Products L.P.	PORT CONFIGURATION MIGRATION SYSTEM	16/946907	2020-07-10
Dell Products L.P.	e-privacy adaptive brightness control	16/916970	2020-06-30
Dell Products L.P.	Method to Suggest Most Secure System Configuration Based on OS Device Usage	16/927541	2020-07-13
Dell Products L.P.	CLOUD RESOURCE AUDIT SYSTEM	16/929860	2020-05-26
Dell Products L.P.	MICRO-STRAND HEAT DISSIPATION SYSTEM	16/929657	2020-05-14
Dell Products L.P.	System and method for automated overdrive LUT settings for display device's response time compensation	16/871601	2020-05-11
Dell Products L.P.	STORAGE DEVICE ENUMERATION IN INFORMATION HANDLING SYSTEMS	16/868193	2020-05-06
Dell Products L.P.	Orchestrating optimal multicast forwarding in VLT fabric using BIER	16/902898	2020-06-16
Dell Products L.P.	Auto transformation of Network Data models using Neural Machine Translation	16/923044	2020-07-07
Dell Products L.P.	Method to Test All Computer Memory While an Operating System is Running	16/916871	2020-06-30
Dell Products L.P.	System and Method for Pre-Boot Dynamic Video Rendering and Graphics Interpretation by a Virtual Graphics Browser	16/891590	2020-06-03
Dell Products L.P.	System and Method for Predictive Battery Power Management	16/894070	2020-06-05
Dell Products	Method to Integrate Leak Sensor with Air Shroud	16/896720	2020-06-09

L.P.	and Drip Collection		
Dell Products L.P.	Predicting Web Application Programming Interface Call Operations Using Machine Learning Techniques	16/911512	2020-06-25
Dell Products L.P.	SYSTEMS AND METHODS FOR CLOUD-CENTRIC OPERATING SYSTEM DEPLOYMENT THROUGH SERVICE OPERATING SYSTEM	16/886217	2020-05-28
Dell Products L.P.	MULTI-STORAGE DEVICE LIFECYCLE MANAGEMENT SYSTEM	16/944837	2020-07-31
Dell Products L.P.	Method to compensate battery health readings at low temperatures	16/898869	2020-06-11
Dell Products L.P.	Ultra Thin Information Handling System Housing with Hybrid Assembly	16/898759	2020-06-11
Dell Products L.P.	System and Method for Parsing Visual Information to Extract Data Elements From Randomly Formatted Digital Documents	16/890159	2020-06-02
Dell Products L.P.	CERTIFICATE AUTHORIZATION POLICY FOR SECURITY PROTOCOL AND DATA MODEL CAPABLE DEVICES	16/879058	2020-05-20
Dell Products L.P.	MANAGEMENT OF A THERMALLY REGULATED STRUCTURE OF AN INFORMATION HANDLING SYSTEM	16/889366	2020-06-01
Dell Products L.P.	SYSTEMS AND METHODS FOR SUPPORTING BIOS ACCESSIBILITY TO TRADITIONALLY NONADDRESSABLE READ-ONLY MEMORY SPACE	16/869262	2020-05-07
Dell Products	Adaptive Intelligence Enabled Software	16/909226	2020-06-23

L.P.	Providing Extensibility and Configuration for Light Projection Technology Based Keyboards		
Dell Products L.P.	Semantic Verbal NLP and mapping CLI & PERC commands to associated mapped vSAN commands by iDRAC	16/924433	2020-07-09
Dell Products L.P.	Method to improve availability of VM irrespective of VM size	16/928835	2020-07-14
Dell Products L.P.	"One touch migration from one type of cluster to another (Hyper-V to VMWare/Nutanix or vice versa) through iDRAC group managerOne touch migration from vSAN to S2D and vice versa through AVAMAR and iDRAC group manager"	16/932484	2020-07-17
Dell Products L.P.	VARIABLE HEIGHT FAN	16/931027	2020-07-16
Dell Products L.P.	ADJUSTING AN EDGE USER INTERFACE DISPLAY OF AN INFORMATION HANDLING SYSTEM	16/889423	2020-06-01
Dell Products L.P.	DEVICE CONFIGURATION USING ARTIFICIAL INTELLIGENCE-BASED PROFILING	16/867847	2020-05-06
Dell Products L.P.	Systems and Methods For Virtual Desktop User Placement in a Multi-Cloud Environment	16/867508	2020-05-05
Dell Products L.P.	Information Handling System Edge-to-Edge Display	16/938322	2020-07-24
Dell Products L.P.	Information Handling System Display Narrow Border Assembly	16/938019	2020-07-24
Dell Products L.P.	ENABLING A PRE-BOOT SCREEN TO BE ACCESSED REMOTELY	16/889258	2020-06-01
Dell	Server Blind-Mate Power	16/874463	2020-05-14

Products L.P.	and Signal Connector Dock		
Dell Products L.P.	System and Method for Power and Thermal Management of Disaggregated Server Subsystems	16/880204	2020-05-21
Dell Products L.P.	Classification of New IHS Network Traffic to 5G network slices based on Application Traffic Parameters	16/888312	2020-05-29
Dell Products L.P.	Deploying and managing non-telco Mobile Virtual Network Operator over multiple NSPs.	16/867536	2020-05-05
Dell Products L.P.	Method for Real-Time Modalities Assist in VOIP	16/943994	2020-07-30
Dell Products L.P.	FLEXIBLE PRODUCT DELIVERY MODEL	15/931113	2020-05-13
Dell Products L.P.	SYSTEMS AND METHODS OF TRANSMITTING DATA OVER A COMMUNICATION NETWORK USING QUALITY OF SERVICE TAGGING	16/891904	2020-06-03
Dell Products L.P.	Display device including porous layers	16/893755	2020-06-05
Dell Products L.P.	Display Device Having a Uni-Body Integrated Housing	16/887088	2020-05-29
Dell Products L.P.	Display	29/734254	2020-05-11
Dell Products L.P.	KERNEL-BASED PROACTIVE ENGINE FOR MALWARE DETECTION	16/865665	2020-05-04
Dell Products L.P.	SOFTWARE CONTAINER IMAGE QUALITY RANKING BASED ON PERFORMANCE OF INSTANCES OF THE SOFTWARE	16/866792	2020-05-05

	CONTAINER IMAGES		
Dell Products L.P.	Crowdsourced Identification and Switching with Smartconnect for WiFi/Cellular	16/898812	2020-06-11
Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING PLATFORM APPLICATIONS WITH INFORMATION HANDLING SYSTEMS	16/910928	2020-06-24
Dell Products L.P.	Method To Prioritize Pre-load Context Set with Constrained Memory Budget on IHS	16/905589	2020-06-18
Dell Products L.P.	ADAPTIVE STATE DETECTION FOR CONFERENCING SOLUTIONS	16/884214	2020-05-27
Dell Products L.P.	INTELLIGENTLY MANAGING RESOURCE UTILIZATION IN DESKTOP VIRTUALIZATION ENVIRONMENTS	16/891226	2020-06-03
Dell Products L.P.	Identifying Interoperabilty status between discrete components within a Converged Infrastructure System	16/882417	2020-05-22
Dell Products L.P.	Method to predictively set IHS system parameters based on learned meeting attributes	16/909729	2020-06-23
Dell Products L.P.	Automated Configuration Determinations for Data Center Devices Using Artificial Intelligence Techniques	16/867718	2020-05-06
Dell Products L.P.	DEPLOYING SOFTWARE UPDATES IN COORDINATION WITH END-USER PRODUCTIVITY	16/904293	2020-06-17
Dell Products L.P.	SYSTEM AND METHOD OF CONFIGURING POWER CONSUMPTION OF A PROCESSOR AND	16/929601	2020-07-15

	A GRAPHICS PROCESSING UNIT		
Dell Products L.P.	GENERATING SOFTWARE TEST PLANS BASED AT LEAST IN PART ON MONITORED TRAFFIC OF A PRODUCTION APPLICATION	16/875146	2020-05-15
Dell Products L.P.	Recommendation Engine for Application Programming Interface (API) in a Multi-Cloud Environment	16/924992	2020-07-09
Dell Products L.P.	System and Method for Intelligent Power Management of Firmware Updates	16/905668	2020-06-18
Dell Products L.P.	Network Fabric Analysis	16/920345	2020-07-02
Dell Products L.P.	PHYSICAL STORAGE DRIVE WITH INFINITE STORAGE CAPACITY	16/944567	2020-07-31
Dell Products L.P.	BLOWER FAN WITH THROUGH HOLE AND FAN SUPPORT ROD	16/931114	2020-07-16
Dell Products L.P.	Systems and Methodsfor Improving Broadcast, Unknown-Unicast, and Multicast Traffic in Multihomed Virtual Extensible Local Access Network Ethernet Virtual Private Networks	16/882423	2020-05-22
Dell Products L.P.	Display	29/734250	2020-05-11
Dell Products L.P.	Method for Configuring Device Resources Based on Network Identification and System Therefor	16/896626	2020-06-09
Dell Products L.P.	Information Handling System Kickstand Hinge	16/934435	2020-07-21
Dell Products L.P.	SYSTEM FOR PARALLEL COOLING OF COMPONENTS ON A CIRCUIT BOARD	16/923760	2020-07-08
Dell	SYSTEM AND METHOD	16/938548	2020-07-24

Products L.P.	OF OPERATING AN INFORMATION HANDLING SYSTEM		
Dell Products L.P.	Electronic camera shutter with variable transmissivity, color matching, and narrow bezel design	16/928315	2020-07-14
Dell Products L.P.	DYNAMIC REDFISH QUERY URI BINDING FROM CONTEXT ORIENTED INTERACTION	16/928584	2020-07-14
Dell Products L.P.	A Method To Support PCIe Auto-Bifurcation on Desktop Systems	16/935058	2020-07-21
Dell Products L.P.	Information Handling System with a Battery Tab Mechanism to Optimize Battery Flexibility	16/887655	2020-05-29
Dell Products L.P.	Systems and methods to provide lawful interception of infrastructure state in a manner known only to law enforcement	16/920343	2020-07-02
Dell Products L.P.	SYSTEMS AND METHODS FOR GENERATING HARD DRIVE VIBRATION THRESHOLDS	16/926607	2020-07-10
Dell Products L.P.	SYSTEMS AND METHODS FOR PREDICTING HARD DRIVE PERFORMANCE	16/926612	2020-07-10
Dell Products L.P.	SYSTEMS AND METHODS FOR MANAGEMENT OF ORGANIC LIGHT-EMITTING DIODE DISPLAY DEGRADATION	16/910571	2020-06-24
Dell Products L.P.	System and method for Publishing and Configuring a Management Service Interface	16/901462	2020-06-15
Dell Products L.P.	DETECTING BEHAVIOR PATTERNS UTILIZING MACHINE LEARNING MODEL	16/877631	2020-05-19

	TRAINED WITH MULTI-MODAL TIME SERIES ANALYSIS OF DIAGNOSTIC DATA		
Dell Products L.P.	System and Method for Providing Remote Site Security for Information Handling Systems in a Protected Network	16/869118	2020-05-07
Dell Products L.P.	Virtual Reality Goggles	29/734253	2020-05-11
Dell Products L.P.	Display	29/736639	2020-06-02
Dell Products L.P.	Information Handling System Display Support for Viewing and Inclined Orientations	16/890040	2020-06-02
Dell Products L.P.	AUTOMATIC MEDIA CONTROL	16/936206	2020-07-22
Dell Products L.P.	System and Method for System-Wide Firmware Downgrade Control	16/939809	2020-07-27
Dell Products L.P.	Remote Server Management using a Power Line Network	16/867550	2020-05-05
Dell Products L.P.	Determining Transaction-Related User Intentions Using Artificial Intelligence Techniques	16/874815	2020-05-15
Dell Products L.P.	Systems and Methods for Determining Real-Time Workload Power Supply Units and Enhanced Redundancy Reporting	16/870551	2020-05-08
Dell Products L.P.	Threat Indicator System and Application Integration	16/928695	2020-07-14
Dell Products L.P.	Determine a Trusted Dynamic Host Configuration Protocol (DHCP) Server in a DHCP Snooping environment	16/883798	2020-05-26
Dell Products L.P.	SYSTEM AND METHOD FOR NETWORK INITIATED EMBEDDED	16/942730	2020-07-29

	SUBSCRIBER IDENTITY MODULE PROFILE CHANGES		
Dell Products L.P.	STATISTICAL DETECTION OF FIRMWARE-LEVEL COMPROMISES	16/918791	2020-07-01
Dell Products L.P.	Method for Monitoring Cooling Fan Performance and System Therefor	16/877914	2020-05-19
Dell Products L.P.	SYSTEM AND METHOD OF BACKING UP DATA FROM A VOLATILE MEMORY MEDIUM TO A NON-VOLATILE MEMORY MEDIUM	16/938225	2020-07-24
Dell Products L.P.	Enhanced User Interface Using Touch Gestures	16/916403	2020-06-30
Dell Products L.P.	Lightweight host multihoming	16/888577	2020-05-29
Dell Products L.P.	System and Method for Tracking Memory Corrected Errors by Frequency of Occurrence While Reducing Dynamic Memory Allocation	16/918621	2020-07-01
Dell Products L.P.	PREVENTING DISCOVERY OF UNIQUE IDENTIFIERS IN FIRMWARE	16/920188	2020-07-02
Dell Products L.P.	System and Method for Hardware Offloading of Nested Virtual Switches	16/876703	2020-05-18
Dell Products L.P.	FLOATING MULTI-CONNECTOR BLIND MATING SYSTEM	16/946702	2020-07-01
Dell Products L.P.	System and Method for Context-Based Performance Optimization of an Information Handling System	16/932210	2020-07-17
Dell Products L.P.	Migration of Guest Operating System Optimization Tool Settings in a Multi-Hypervisor Data Center Environment	16/898300	2020-06-10
Dell Products	Cabling-Based Airflow Routing System	16/936751	2020-07-23

L.P.			
Dell Products L.P.	Plated PADs and Leads For Surface Mount Technology Connections	16/882427	2020-05-22
Dell Products L.P.	System and Method for Short Circuit Detection	16/916619	2020-06-30
Dell Products L.P.	SYSTEMS AND METHODS FOR ENABLING POWER BUDGETING IN AN INFORMATION HANDLING SYSTEM COMPRISING A PLURALITY OF MODULAR INFORMATION HANDLING SYSTEMS	16/907965	2020-06-22
Dell Products L.P.	METHOD AND APPARATUS FOR SEAMLESS AND SECURE REDFISH OVER BLE FOR MANAGEMENT CONSOLES	16/939275	2020-07-27
Dell Products L.P.	Surface Mount PADs For Next Generation Speeds	16/888644	2020-05-29
Dell Products L.P.	SYSTEMS AND METHODS FOR VERIFYING AND PRESERVING THE INTEGRITY OF BASIC INPUT/OUTPUT SYSTEM BEFORE POWERING ON OF HOST SYSTEM AND MANAGEMENT ENGINE	16/886300	2020-05-28
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Dell Products L.P.	Proactively Addressing Fan or Fan Tray Failures	16/900964	2020-06-14
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Dell Products L.P.	SYSTEMS AND METHODS FOR DYNAMICALLY RESOLVING HARDWARE FAILURES IN AN INFORMATION HANDLING SYSTEM	16/910660	2020-06-24
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Dell Products L.P.	SYSTEM AND METHOD FOR SECURING COMPONENTS IN A CHASSIS	16/903340	2020-06-16
Dell Products L.P.	Pwer-Over-Ethernet (POE) Breakout Module	16/900967	2020-06-14
Dell Products L.P.	Knowledge Base for Predicting Success Rate of Life Cycle Management	16/892115	2020-06-03
Dell Products L.P.	IMPROVED LIFE CYCLE MANAGEMENT SUCCESS RATE	16/915453	2020-06-29
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Dell Products L.P.	System and Method for Compression Dual In-Line Memory Module Scalability	16/934686	2020-07-21
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Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING DOCUMENT SECURITY	16/936652	2020-07-23
Dell Products L.P.	CONFIGURATION OPTIMIZATION WITH PERFORMANCE PREDICTION	16/916582	2020-06-30
Dell Products L.P.	PERSISTENT MEMORY PASSPHRASE MANAGEMENT	16/916614	2020-06-30
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Dell Products L.P.	An event based method to dynamically generate context aware metric report	16/931166	2020-07-16
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Dell Products L.P.	DUAL-TREE BACKPLANE	16/917580	2020-06-30
Dell Products L.P.	Method, System, and Apparatus for Automated Dispensing of Labels in a Production Environment	16/894530	2020-06-05
Dell Products L.P.	Hard Disk Drive Carrier Installation System	16/889985	2020-06-02
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Dell Products L.P.	CONFIGURING HCI MANAGEMENT NETWORK VIA MANAGEMENT CONTROLLER	16/898885	2020-06-11
Dell Products L.P.	ATOMIC GROUPS FOR CONFIGURING HCI SYSTEMS	16/915788	2020-06-29
Dell Products L.P.	Self-regulating datacenter zones/racks infrastructure from telemetry Inlet/Exhaust Temperatures metric stream with configurable OEM extensions for system identifiers.	16/930987	2020-07-16
Dell Products L.P.	Floating Device Location Identification System	16/937726	2020-07-24
Dell Products L.P.	AUTOMATED MANAGEMENT OF POWER DISTRIBUTION DURING A POWER CRISIS	16/906409	2020-06-19
Dell Products L.P.	Cloud-Based Remote Management Interface	16/926032	2020-07-10
Dell Products L.P.	SYSTEM AND METHOD FOR COMMUNICATING TARGET INFORMATION TO USERS	16/883739	2020-05-26
Dell Products L.P.	Methods to humanize metadata for the existing online customer facing resources using edge optimized APIs	16/896627	2020-06-09
Dell Products L.P.	Methods to identify low performing parameters to develop better content for next generation audience	16/896670	2020-06-09
Dell Products L.P.	System and Method to initiate Inducive Search across multiple products using embedded help files	16/900493	2020-06-12

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Dell Products L.P.	Novel Inverted Cable Concept for Next Generation	16/933639	2020-07-20
Dell Products L.P.	POWER DISTRIBUTION UNITS FOR EQUIPMENT	16/922559	2020-07-07
Dell Products L.P.	SYSTEM AND METHOD FOR FACILITATING MOVEMENT OF COMPONENTS IN A CHASSIS	16/903359	2020-06-16
Dell Products L.P.	SYSTEM AND METHOD FOR COMPENSATING FOR THERMAL EXPANSION CAUSED BY SOLDERING PROCESS	16/890658	2020-06-02
Dell Products L.P.	System and Method to Ensure UEFI Protocol Traceability and Trustworthiness	16/946912	2020-07-10
Dell Products L.P.	Remote Access Controller Device Update System	16/936641	2020-07-23
Dell Products L.P.	AUTOMATICALLY TAILORED USER EXPERIENCE FOR PRODUCT CONFIGURATION	16/944593	2020-07-31
Dell Products L.P.	Adaptive FRU Interconnection Mechanism	16/925791	2020-07-10
Dell Products L.P.	Gear Train Side Latch Mechanism for Modular Information Handling Resource	16/924548	2020-07-09
Dell Products L.P.	SYSTEMS AND METHODS FOR THERMAL CONTROL OF AN INFORMATION HANDLING RESOURCE USING THERMOELECTRIC EFFECT	16/886157	2020-05-28
Dell Products L.P.	AUTOMATED GENERATION OF TITLES AND DESCRIPTIONS FOR ELECTRONIC	16/914916	2020-06-29

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Dell Products L.P.	AUTOMATED GENERATION OF A VISUALIZATION OF A SYSTEM TOPOLOGY	16/927403	2020-07-13
Dell Products L.P.	Media Access Control Address Learning Limit on A Virtual Extensible Local Area Multi-Homed Network Ethernet Virtual Private Network Access Port	16/921615	2020-07-06
Dell Products L.P.	Customizable PCIe adapter retention mechanism	16/925577	2020-07-10
Dell Products L.P.	Address Range Mirroring System	16/940098	2020-07-27
Dell Products L.P.	Post Package Repair Failure Memory Location Reporting System	16/935365	2020-07-22
Dell Products L.P.	MACHINE LEARNING-BASED ISSUE CLASSIFICATION UTILIZING COMBINED REPRESENTATIONS OF SEMANTIC AND STATE TRANSITION GRAPHS	16/944414	2020-07-31
Dell Products L.P.	Virtual Non-Volatile Memory System	16/940516	2020-07-28
Dell Products L.P.	SYSTEM AND METHOD FOR CHANNEL OPTIMIZATION USING VIA STUBS	16/926621	2020-07-10
Dell Products L.P.	Mechanical cable release systems and methods	16/902199	2020-06-15
Dell Products L.P.	METHOD AND SYSTEM FOR OPTIMIZING LEARNING MODELS POST-DEPLOYMENT	16/917606	2020-06-30

Dell Products L.P.	Data Mover Selection System	16/940611	2020-07-28
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Dell Products L.P.	SYSTEMS AND METHODS FOR EMPLOYING FORMING AND PATTERNING FLEXIBLE MATERIAL	16/921347	2020-07-06
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Dell Products L.P.	System and Method for Dynamic Multi-Transmit Antenna and Proximity Sensor Reconfiguration for a Multi-Radio-Access-Technology Multi-Mode	16/916909	2020-06-30

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Dell Products L.P.	Proximity Sensing Using an Antenna Front End Module	16/915071	2020-06-29
Dell Products L.P.	System and Method for Dynamic Dual Transmit Diversity Switching for a Multi-Radio-Access-Technology Device	16/917068	2020-06-30
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Dell Products L.P.	Intelligent Scoring Model for Assessing the Skills of a Customer Support Agent	16/942296	2020-07-29
Dell Products L.P.	Likelihood Prediction Of Customer Engagement	16/942007	2020-07-29
Dell Products L.P.	Dynamically Creating A Contact Address To Customer Support Based on Information Associated with a Computing Device	16/932986	2020-07-20
Dell Products L.P.	SYSTEMS AND METHODS FOR MINIMIZING AIRFLOW BYPASS AND RECIRCULATION THROUGH A CABLE CHANNEL	16/914642	2020-06-29
Dell Products L.P.	Programmable Dynamic Information Handling System Rack Lighting System	16/931123	2020-07-16
Dell Products L.P.	Multi-RAT Dynamic Transmit Power Boost Using an Antenna Front End Module	16/915129	2020-06-29
Dell Products L.P.	REDUCING POWER CONSUMPTION OF A DATA CENTER UTILIZING REINFORCEMENT LEARNING FRAMEWORK	16/915133	2020-06-29
Dell Products	AUTOMATED AND CUSTOMIZED	16/917175	2020-06-30

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Dell Products L.P.	Automated Service Design Using AI/MI to Suggest Process Blocks for Inclusion in Service Design Structure	16/936513	2020-07-23
Dell Products L.P.	Using Machine Learning To Predict A Usage Profile and Recommendations Associated with a Computing Device	16/906062	2020-06-19
Dell Products L.P.	ENTERPRISE TAXONOMY MANAGEMENT FRAMEWORK FOR DIGITAL CONTENT MARKETING PLATFORM	16/917195	2020-06-30
Dell Products L.P.	Machine Learning Orchestrator	16/943873	2020-07-30
Dell Products L.P.	MACHINE LEARNING DATA CLEANING	16/943901	2020-07-30
Dell Products L.P.	Machine Learning Hyper Tuning	16/943922	2020-07-30
Dell Products L.P.	METHOD AND SYSTEM FOR OPTIMIZING ACCESS TO DATA NODES OF A DATA CLUSTER USING A DATA ACCESS GATEWAY	16/936559	2020-07-23
Dell Products L.P.	METHOD AND SYSTEM FOR OPTIMIZING ACCESS TO DATA NODES OF A DATA CLUSTER USING A DATA ACCESS GATEWAY AND BIDDING COUNTERS	16/936531	2020-07-23
Dell Products L.P.	DAG with MDM based bidding	16/936482	2020-07-23
Dell Products L.P.	METHOD AND SYSTEM FOR OPTIMIZING ACCESS TO DATA NODES OF A DATA	16/936469	2020-07-23

	CLUSTER USING A DATA ACCESS GATEWAY AND METADATA MAPPING BASED BIDDING IN AN ACCELERATOR POOL		
Dell Products L.P.	METHOD AND SYSTEM FOR A SEQUENCE AWARE DATA INGEST AND A SEQUENCE AWARE REPLICATION BETWEEN DATA CLUSTERS	16/936492	2020-07-23
Dell Products L.P.	Training A Machine Learning Algorithm to Predict When Computing Devices May Have Issues	16/944251	2020-07-31
Dell Products L.P.	System and Method for Monitoring for presence of active and/or unauthorized JTAG debug session, and Remediation.	16/919019	2020-07-01
Dell Products L.P.	AI Driven Content Correction Built on Personas	16/941651	2020-07-29
Dell Products L.P.	System and Method for Validating Cloud-Native Applications for a Production-Ready Deployment	16/928864	2020-07-14
Dell Products L.P.	System and Method for Integrated Thermal and Cable Routing for Server Rear Modules	16/939638	2020-07-27
Dell Products L.P.	Information Handling System with a Vibration Damping and Air Flow Recirculation Seal	16/919738	2020-07-02
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON LOCAL COOLING MANAGEMENT	16/938738	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BY ACTIVELY REDUCING CORROSIVE INTERACTIONS	16/938273	2020-07-24
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Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT USING CORROSION MANAGED CONNECTORS	16/938405	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON CONDENSATION REMOVAL	16/938453	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BY PASSIVELY REDUCING CORROSIVE INTERACTIONS	16/938491	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BY REUSING THERMAL ENERGY	16/938534	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON HUMIDITY CONTROL	16/938558	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON CHASSIS CORROSION RATE REDUCTION	16/938595	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON CORROSIVE MATERIAL REMOVAL	16/938653	2020-07-24
Dell Products L.P.	SYSTEM AND METHOD FOR SERVICE LIFE MANAGEMENT BASED ON CORROSION RATE REDUCTION	16/938677	2020-07-24
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Dell Products L.P.	Information Handling System Display	29/743858	2020-07-24
Dell Products L.P.	Information Handling System Display	29/743857	2020-07-24
Dell Products L.P.	Information Handling System Zero Bezel Display	16/938134	2020-07-24
Dell Products L.P.	Information Handling System Display	29/743855	2020-07-24
Dell Products L.P.	SYSTEMS AND METHODS FOR ASYNCHRONOUS JOB SCHEDULING AMONG A PLURALITY OF MANAGED INFORMATION HANDLING SYSTEMS	16/910532	2020-06-24
Dell Products L.P.	SYSTEMS AND METHODS FOR INSERTION AND REMOVAL OF INFORMATION HANDLING RESOURCE MODULE	16/933131	2020-07-20
Dell Products L.P.	Customer Experience Insights Model Architecture	16/917811	2020-06-30
Dell Products L.P.	Extraction and Enrichment Engine for Performing Extraction and Enrichment Operations within a Customer Experience Model Flow	16/917816	2020-06-30
Dell	Analysis Engine for	16/917820	2020-06-30

Products L.P.	Refining Enriched Insights within a Customer Experience Model Flow		
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Dell Products L.P.	COBOT for DIMM Serialization	16/930834	2020-07-16
Dell Products L.P.	Method and System for Labeling Components	16/944220	2020-07-31
EMC IP Holding Company LLC	DATA DEDUPLICATION ACCELERATION	16/865617	2020-05-04
EMC IP Holding Company LLC	Distributed Object Replication Architecture	16/931299	2020-07-16
EMC IP Holding Company LLC	EFFICIENT AND SECURE DISTRIBUTED LEDGER MAINTENANCE	16/933416	2020-07-20
EMC IP Holding Company LLC	Meeting backup window requirements while managing storage array backup IO load	16901388	2020-06-15
EMC IP Holding Company LLC	MANAGING DEDUPLICATION CHARACTERISTICS IN A STORAGE SYSTEM	16/906240	2020-06-19
EMC IP Holding Company LLC	Serverless Solution for Continuous Data Protection	16/868774	2020-05-07
EMC IP Holding Company LLC	NON-DISRUPTIVE MIGRATION OF A VIRTUAL VOLUME IN A CLUSTERED DATA STORAGE SYSTEM	16/939229	2020-07-27
EMC IP Holding Company LLC	client data driven smart backup scheduler	16/879863	2020-05-21
EMC IP Holding Company	STORAGE SYSTEM WITH SNAPSHOT GENERATION	15/930941	2020-05-13

LLC	CONTROL UTILIZING MONITORED DIFFERENTIALS OF RESPECTIVE STORAGE VOLUMES		
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR SECURELY REPLICATING ENCRYPTED DEDUPLICATED STORAGES	16/931582	2020-07-17
EMC IP Holding Company LLC	MANAGING PASSWORDS	16/942958	2020-07-30
EMC IP Holding Company LLC	METHOD FOR DETECTING DATA STORAGE SYSTEM, DEVICE AND DATA STORAGE SYSTEM	16/936709	2020-07-23
EMC IP Holding Company LLC	EXTENT LOCK RESOLUTION IN ACTIVE/ACTIVE REPLICATION	16/883024	2020-05-26
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EMC IP Holding Company LLC	METHOD FOR MANAGING DISKS, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT	16/876452	2020-05-18
EMC IP Holding Company LLC	METHOD, APPARATUS AND COMPUTER PROGRAM PRODUCT FOR MAINTAINING METADATA	16/876451	2020-05-18
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SYSTEM	16/876712	2020-05-18
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORING DATA	16/877871	2020-05-19
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Holding Company LLC	ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORAGE MANAGEMENT		
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING DISK ARRAY	16/877881	2020-05-19
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR NETWORK VALIDATION ARCHITECTURE FOR CLUSTERED AND FEDERATED STORAGE SYSTEMS	16/874981	2020-05-15
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM FOR STORAGE MANAGEMENT	16/877891	2020-05-19
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT OF BALANCE OF STORAGE SPACE FOR FILE SYSTEM	16/877910	2020-05-19
EMC IP Holding Company LLC	METHOD, DEVICE, AND PROGRAM PRODUCT FOR MANAGING STORAGE SPACE IN STORAGE SYSTEM	16/879094	2020-05-20
EMC IP Holding Company LLC	Search capability for a docker subsystem	16/899655	2020-06-12
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORAGE MANAGEMENT	16/878957	2020-05-20
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING FILE SYSTEM	16/879135	2020-05-20
EMC IP	METHOD, DEVICE AND	16/878954	2020-05-20

Holding Company LLC	COMPUTER PROGRAM PRODUCT TO BACKUP DATA		
EMC IP Holding Company LLC	OPTIMIZED ACCESS TO HIGH-SPEED STORAGE DEVICE	16/880271	2020-05-21
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER-READABLE STORAGE MEDIUM FOR BITMAP CONVERSION	16/880273	2020-05-21
EMC IP Holding Company LLC	THE CONTROL METHOD OF DISK FAILURE, ELECTRONIC DEVICE AND COMPUTER READABLE STORAGE MEDIUM	16/880154	2020-05-21
EMC IP Holding Company LLC	AN INTELLIGENT METHOD TO SIMULATE CUSTOMER DATA PATTERNS	16/866808	2020-05-05
EMC IP Holding Company LLC	METHODS FOR DATA WRITING AND FOR DATA RECOVERY, ELECTRONIC DEVICES, AND PROGRAM PRODUCTS	16/885947	2020-05-28
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT OF ALLOCATING STORAGE DISKS	16/885976	2020-05-28
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING DISKS	16/881400	2020-05-22
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING DISKS	16/880169	2020-05-21
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR SELECTING A REDUNDANT ARRAY OF INDEPENDENT DISKS (RAID) LEVEL FOR A STORAGE	16/882026	2020-05-22

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EMC IP Holding Company LLC	SYSTEM AND METHOD FOR AUTO-TIERING DATA IN A LOG-STRUCTURED FILE SYSTEM BASED ON LOGICAL SLICE READ TEMPERATURE	16/882116	2020-05-22
EMC IP Holding Company LLC	A new Compliance Rule with AI – Predict Backups Scattering Pattern and Alert when not match	16/867003	2020-05-05
EMC IP Holding Company LLC	Smart data backup schedule based on history activities record and liner regression	16/867260	2020-05-05
EMC IP Holding Company LLC	METHODS, ELECTRONIC DEVICES, AND COMPUTER PROGRAM PRODUCTS FOR ACCESSING A FILE	16/881429	2020-05-22
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR SHRINKING STORAGE SPACE	16/883029	2020-05-26
EMC IP Holding Company LLC	METHODS, DEVICES, AND COMPUTER PROGRAM PRODUCTS FOR STORAGE MANAGEMENT	16/883032	2020-05-26
EMC IP Holding Company LLC	LOGGING OF SCRIPTS EXECUTED IN AN INFORMATION TECHNOLOGY WORKFLOW ORCHESTRATION SYSTEM	16/934162	2020-07-21
EMC IP Holding Company LLC	A METHOD, A DEVICE, AND A COMPUTER PROGRAM PRODUCT FOR ADJUSTING A STORAGE SPACE	16/883159	2020-05-26
EMC IP Holding Company LLC	METHODS, ELECTRONIC DEVICES, STORAGE SYSTEMS, AND COMPUTER PROGRAM PRODUCTS	16/883182	2020-05-26

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EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR OVERWRITING DATA	16/885788	2020-05-28
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR PROVIDING INFORMATION	16/887197	2020-05-29
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SYSTEM	16/885891	2020-05-28
EMC IP Holding Company LLC	A METHOD TO ACCELERATE REST CALL RESPONSE BASED ON HISTORICAL REST CALL SEQUENCES	16/868260	2020-05-06
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR PROCESSING DATA	16/884226	2020-05-27
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING DISKS	16/887202	2020-05-29
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORAGE MANAGEMENT	16/887204	2020-05-29
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR REBUILDING DISK ARRAY	16/931605	2020-07-17
EMC IP Holding Company LLC	METHOD FOR STORAGE MANAGEMENT, ELECTRONIC DEVICE, AND COMPUTER	16/890345	2020-06-02

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EMC IP Holding Company LLC	METHOD FOR STORAGE MANAGEMENT, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT	16/890368	2020-06-02
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SYSTEM	16/890402	2020-06-02
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER READABLE STORAGE MEDIUM FOR DATA RELOCATION	16/884265	2020-05-27
EMC IP Holding Company LLC	METHOD, DEVICE, AND PROGRAM PRODUCT FOR MANAGING DEVELOPMENT JOB IN DEVELOPMENT ENVIRONMENT	16/930991	2020-07-16
EMC IP Holding Company LLC	MULTI-NODE STORAGE SYSTEM AND METHOD DATA DE-DUPLICATION METHOD FOR THE SAME	16/882593	2020-05-25
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR DATA BACKUP	16/882585	2020-05-25
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR RUNNING APPLICATION	16/888827	2020-05-31
EMC IP Holding Company LLC	A flexible way to dynamic adjust protection policy to get proper use of appliance resource	16/865818	2020-05-04
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR RECOVERING BASED ON REVERSE DIFFERENTIAL	16/888822	2020-05-31

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EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORAGE	16/934450	2020-07-21
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING BACKUP SYSTEM	16/888784	2020-05-31
EMC IP Holding Company LLC	METHOD OF MANAGING STORAGE SYSTEM, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT	16/934487	2020-07-21
EMC IP Holding Company LLC	A workload aware CPUQAT scheduler used for dedup system	16/885670	2020-05-28
EMC IP Holding Company LLC	A method of scheduling DDVE instance to reduce customer costs in public clouds	16/865918	2020-05-04
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR DETERMINING EXECUTION PROGRESS OF TASK	16/888791	2020-05-31
EMC IP Holding Company LLC	METHOD FOR MANAGING BACKUP JOBS, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT	16/888787	2020-05-31
EMC IP Holding Company LLC	METHOD, DEVICE, AND PROGRAM PRODUCT FOR SELECTING REBUILD DESTINATION IN STORAGE SYSTEM	16/936710	2020-07-23
EMC IP Holding Company LLC	A UNIFIED AND TRUSTED RETENTION LOCK MANAGEMENT SOLUTION FOR CLOUD INTEGRATED DATA PROTECTION PRODUCT	16/871846	2020-05-11
EMC IP	METHOD, DEVICE AND	16/935974	2020-07-22

Holding Company LLC	COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SPACES		
EMC IP Holding Company LLC	METHOD FOR UPGRADING SYSTEM, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT	16/888825	2020-05-31
EMC IP Holding Company LLC	Verification Microservice for a Deduplicated Object Storage System	16/912968	2020-06-26
EMC IP Holding Company LLC	Verification Microservice Controller Focusing on Similarity Groups for a Deduplicated Object Storage System	16/912990	2020-06-26
EMC IP Holding Company LLC	Estimation of Verification Microservice Worker Nodes for a Deduplicated Object Storage System	16/913086	2020-06-26
EMC IP Holding Company LLC	AUTOMATICALLY GENERATE DYNAMIC FILTER WHEN CREATING PROTECTION POLICY	16/866145	2020-05-04
EMC IP Holding Company LLC	METHOD FOR STORAGE MANAGEMENT, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT	16/936732	2020-07-23
EMC IP Holding Company LLC	A new crunching method to minimize SSD garbage collection data rewriting to extend SSD lifespan and improve efficiency	15/930210	2020-05-12
EMC IP Holding Company LLC	An intelligent method to push patches to VM backup clients in powered off state or without network configure	16/871506	2020-05-11
EMC IP Holding Company LLC	METHOD FOR MANAGING COMPUTING DEVICES, ELECTRONIC DEVICE AND COMPUTER STORAGE MEDIUM	16/935965	2020-07-22
EMC IP	DEALLOCATION OF	16/940758	2020-07-28

Holding Company LLC	DRIVE EXTENTS FOR MAPPED RAID (REDUNDANT ARRAY OF INDEPENDENT DISKS) EXTENTS		
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING A TASK IN AN APPLICATION NODE	16/888302	2020-05-29
EMC IP Holding Company LLC	Public REST API Maturity Model	16/874150	2020-05-14
EMC IP Holding Company LLC	A smart way to reduce RTO (Recovery Time Objective) by restoring from multiple replica	16/874338	2020-05-14
EMC IP Holding Company LLC	Multiple Data Labels within a Backup System	16/880285	2020-05-21
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING INDEX IN STORAGE SYSTEM	16/917843	2020-06-30
EMC IP Holding Company LLC	System and Method for Sharing Central Processing Unit (CPU) Resources with Unbalanced Applications	16/867613	2020-05-06
EMC IP Holding Company LLC	System and Method for Sustaining Single NVMe Subsystem by a Federated Storage array for NVMe-oF Connectivity.	16/934181	2020-07-21
EMC IP Holding Company LLC	A MMD model based method to automatically and quickly collect the error logs and report customer issues	16/872012	2020-05-11
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORING DATA	16/937870	2020-07-24

EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR BUILDING AND VERIFYING INDEX FILE	16/888788	2020-05-31
EMC IP Holding Company LLC	PREDICTING FAILURES WITH CODE FLOW TENSORS	16/916735	2020-06-30
EMC IP Holding Company LLC	An Efficient Way to Create Redundant Copies Using Dependency Based Scheduling	15/931207	2020-05-13
EMC IP Holding Company LLC	DATA MIGRATION OF STORAGE SYSTEM	16/888818	2020-05-31
EMC IP Holding Company LLC	A method to evaluate backup schedule setting for assets in data protection system	16/896435	2020-06-09
EMC IP Holding Company LLC	Systems and Methods for Searching Deduplicated Data	16/878516	2020-05-19
EMC IP Holding Company LLC	Micro Services Tests Constraints and Fail Likelihood	16/880108	2020-05-21
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR INSTALLING APPLICATION	16/884744	2020-05-27
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR PROBABILISTICALLY FORECASTING HEALTH OF HARDWARE IN A LARGE-SCALE SYSTEM	16/923007	2020-07-07
EMC IP Holding Company LLC	On-the-fly PiT selection in Cloud Disaster Recovery	16/880080	2020-05-21
EMC IP Holding	REGULATING STORAGE DEVICE	16/907560	2020-06-22

Company LLC	REBUILD RATE IN A STORAGE SYSTEM		
EMC IP Holding Company LLC	Data Masking in a Microservice Architecture	16/879077	2020-05-20
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR PRIORITIZING AND PREVENTING BACKUP FAILURES	16/930155	2020-07-15
EMC IP Holding Company LLC	USING MACHINE LEARNING TO DYNAMICALLY DETERMINE A PROTOCOL FOR COLLECTING SYSTEM STATE INFORMATION FROM ENTERPRISE DEVICES	16/867644	2020-05-06
EMC IP Holding Company LLC	Method and System for Tracking Storage Utilization	16/942919	2020-07-30
EMC IP Holding Company LLC	Design of Services Using AI/ML to Select Virtual Network Functions and Vendors for Supplying the Virtual Network Functions	16/941623	2020-07-29
EMC IP Holding Company LLC	Optimizing incremental backup for clients in a dedupe cluster to provide faster backup windows with high dedupe and minimal overhead	16/875155	2020-05-15
EMC IP Holding Company LLC	System and Method for survival forecasting of disk drives using semi-parametric transfer learning	16/893102	2020-06-04
EMC IP Holding Company LLC	Union formation of edge cloud-native clusters	16/885439	2020-05-28
EMC IP Holding Company LLC	Application Execution Path Tracing for Inline Performance Analysis	16/916219	2020-06-30
EMC IP Holding Company	SYSTEMS AND METHODS OF UPDATING	16/918357	2020-07-01

LLC	PERSISTENT STATISTICS ON A MULTI-TRANSACTIONAL AND MULTI-NODE STORAGE SYSTEM		
EMC IP Holding Company LLC	Controlling Search Access to Assets in a Data Protection Product	16/909263	2020-06-23
EMC IP Holding Company LLC	Key Rollover Client Side Encryption in Deduplication Backup Systems	16/888343	2020-05-29
EMC IP Holding Company LLC	Cold Tiering Microservice for Deduplicated Data	16/880216	2020-05-21
EMC IP Holding Company LLC	PARTITION UTILIZATION AWARENESS OF LOGICAL UNITS ON STORAGE ARRAYS USED FOR BOOTING	16/868087	2020-05-06
EMC IP Holding Company LLC	Finding the optimum time to prestart container running functions using events	16/887660	2020-05-29
EMC IP Holding Company LLC	Efficient method to build a backup scheduling plan for a server	16/886178	2020-05-28
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR CREATING SNAPVIEW BACKUP	16/917834	2020-06-30
EMC IP Holding Company LLC	A dedup specific QAT QoS framework used in virtualization environment	16/916562	2020-06-30
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR TRACKING LOCK	16/937891	2020-07-24
EMC IP Holding	STORAGE SYSTEM CONFIGURED TO	16/902890	2020-06-16

Company LLC	GUARANTEE SUFFICIENT CAPACITY FOR A DISTRIBUTED RAID REBUILD PROCESS		
EMC IP Holding Company LLC	System and Method for Storage Array Enclosure Discovery	16/887134	2020-05-29
EMC IP Holding Company LLC	System and Method to Process Archival Job Via Secondary Cluster	16/911814	2020-06-25
EMC IP Holding Company LLC	Artificial Intelligence-Based Redundancy Management Framework	16/910212	2020-06-24
EMC IP Holding Company LLC	System and Method for Parallel Journaling in a Storage Cluster	16/916330	2020-06-30
EMC IP Holding Company LLC	TEST PLATFORM EMPLOYING TEST-INDEPENDENT FAULT INSERTION	16/874131	2020-05-14
EMC IP Holding Company LLC	Automated Alert Augmentation for Deployments of Software-Defined Storage	16/886982	2020-05-29
EMC IP Holding Company LLC	DCF Node Configuration for Device Data	16/886203	2020-05-28
EMC IP Holding Company LLC	Method of Granting Access to Upgrade Resources with Existing Authorization Infrastructure	16/906881	2020-06-19
EMC IP Holding Company LLC	A Method of Extensible Version History and Comparison Within a Backup	16/914773	2020-06-29
EMC IP Holding Company LLC	Automatically Orchestrating Deployments of Software-Defined Storage Stacks	16/935490	2020-07-22
EMC IP Holding Company LLC	Selective Snapshot Creation Using Source Tagging of Input-Output Operations	16/888668	2020-05-30

EMC IP Holding Company LLC	A similarity index for data chunk in data protection systems with neural network	16/916693	2020-06-30
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER STORAGE MEDIUM FOR INFORMATION PROCESSING	16/875506	2020-05-15
EMC IP Holding Company LLC	PRIORITIZATION AND QUALITY-OF-SERVICE CONTROL FOR NEAR-ZERO-ADDED-LATENCY ANY POINT IN TIME VIRTUAL REPLICATION	16/878942	2020-05-20
EMC IP Holding Company LLC	Scaling Out Data Protection Infrastructure	16/881233	2020-05-22
EMC IP Holding Company LLC	Linking Individual Biometric Data to Protected Resources Accessed Via User Devices	16/876313	2020-05-18
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM FOR MIGRATING BACKUP SYSTEM	16/917812	2020-06-30
EMC IP Holding Company LLC	METHODS AND SYSTEMS FOR RESILIENT ENCRYPTION OF DATA IN MEMORY	16/944892	2020-07-31
EMC IP Holding Company LLC	METHODS AND SYSTEMS FOR DATA BACKUP AND RECOVERY ON POWER FAILURE	16/944930	2020-07-31
EMC IP Holding Company LLC	COST-OPTIMIZED TRUE ZERO RECOVERY TIME OBJECTIVE FOR MULTIPLE APPLICATIONS	16/878184	2020-05-19

EMC IP Holding Company LLC	DYNAMIC COST-OPTIMIZED TRUE ZERO RECOVERY TIME OBJECTIVE FOR MULTIPLE APPLICATIONS	16/878206	2020-05-19
EMC IP Holding Company LLC	COVER INTERLOCK MECHANISM	16/885769	2020-05-28
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR DETERMINING OUTPUT OF NEURAL NETWORK	16/892796	2020-06-04
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING APPLICATION ENVIRONMENT	16/882870	2020-05-26
EMC IP Holding Company LLC	Mechanism for Ransomware detection in backup copies	16/876274	2020-05-18
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR BACKUP	16/917851	2020-06-30
EMC IP Holding Company LLC	A method of optimizing SSD usage for DDVE in public cloud	16/915440	2020-06-29
EMC IP Holding Company LLC	System and Method for Cooperative Tail Promotion in a Log Buffer	16/897463	2020-06-10
EMC IP Holding Company LLC	System and Method for Early Tail-Release in a Log Structure Log Using Multi-Line PLB Structure Supporting Multiple Partial Transactions	16/926106	2020-07-10
EMC IP Holding	DCF Decentralized Ids and Verifiable Credentials for	16/887698	2020-05-29

Company LLC	Product Delivery into Data Confidence Fabrics		
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR PROCESSING DATA	16/886131	2020-05-28
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR DATA MANAGEMENT	16/874301	2020-05-14
EMC IP Holding Company LLC	DATA MIGRATION IN HETEROGENEOUS STORAGE ENVIRONMENT	16/926918	2020-07-13
EMC IP Holding Company LLC	System and Method for Near -Instant Unmapping and Write-Same in a Log-Structured Storage Cluster	16/903709	2020-06-17
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR PROCESSING COMPUTING JOB	16/887573	2020-05-29
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR STORING AND PROVIDING VIDEO	16/917801	2020-06-30
EMC IP Holding Company LLC	A mechanism to determine optimal source for BaaS peer-based backup recovery	16/891374	2020-06-03
EMC IP Holding Company LLC	DATA PLACEMENT METHOD BASED ON HEALTH SCORES	16/887666	2020-05-29
EMC IP Holding Company LLC	HOST DEVICE WITH AUTOMATED WRITE THROTTLING RESPONSIVE TO STORAGE SYSTEM WRITE PRESSURE CONDITION	16/878678	2020-05-20
EMC IP Holding Company	Generating Data Replication Configurations Using Artificial	16/884622	2020-05-27

LLC	Intelligence Techniques		
EMC IP Holding Company LLC	Registering Storage Hosts for Use in Automating Software-Defined Storage Deployments	16/938143	2020-07-24
EMC IP Holding Company LLC	Systems and Methods to Decrease the Size of a Compound Virtual Appliance File	16/909740	2020-06-23
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR PROCESSING DATA	16/917471	2020-06-30
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MONITORING STORAGE SYSTEM	16/888324	2020-05-29
EMC IP Holding Company LLC	Private Edge-station Auction House	16/885476	2020-05-28
EMC IP Holding Company LLC	SNAPSHOT METADATA MANAGEMENT	16/885662	2020-05-28
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR INFORMATION PROCESSING	16/917493	2020-06-30
EMC IP Holding Company LLC	System and Method for Smart User Polling	16/898657	2020-06-11
EMC IP Holding Company LLC	SNAPSHOT METADATA DEDUPLICATION	16/885702	2020-05-28
EMC IP Holding Company LLC	Ability to maintain RPO in clustered environment with failed nodes/disks	16/930675	2020-07-16
EMC IP Holding Company LLC	DYNAMIC RESTRUCTURING OF USER INTERFACE BASED ON USAGE	16/877822	2020-05-19

	DATA		
EMC IP Holding Company LLC	EFFICIENT TOKEN MANAGEMENT IN A STORAGE SYSTEM	16/938272	2020-07-24
EMC IP Holding Company LLC	Workload-Oriented Prediction of Response Times of Storage Systems	16/865465	2020-05-04
EMC IP Holding Company LLC	System and Method for Non-Disruptive Storage Protocol Conversion	16/914651	2020-06-29
EMC IP Holding Company LLC	ADDITION OF DATA SERVICES TO AN OPERATING SYSTEM RUNNING A NATIVE MULTI-PATH INPUT-OUTPUT ARCHITECTURE	16/881086	2020-05-22
EMC IP Holding Company LLC	LATCHING MECHANISM	16/881130	2020-05-22
EMC IP Holding Company LLC	Predictive Scheduled Backup System and Method	16/909953	2020-06-23
EMC IP Holding Company LLC	Improved Scaling of an Ordered Event Stream	16/881556	2020-05-22
EMC IP Holding Company LLC	Time progress support for stream storage systems with highly dynamic event streams	16/884647	2020-05-27
EMC IP Holding Company LLC	STORAGE SYSTEM WITH MODULE AFFINITY LINK SELECTION FOR SYNCHRONOUS REPLICATION OF LOGICAL STORAGE VOLUMES	16/889299	2020-06-01
EMC IP Holding Company LLC	TECHNIQUES FOR SELECTION OF A DATA REDUCTION TECHNIQUE WHEN PERFORMING DATA REPLICATION	16/885844	2020-05-28

EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR PROCESSING DATA	16/883088	2020-05-26
EMC IP Holding Company LLC	INTELLIGENT DATASTORE DETERMINATION FOR MICROSERVICE	16/865631	2020-05-04
EMC IP Holding Company LLC	Distributed Consistency Group At Splitter	16/910482	2020-06-24
EMC IP Holding Company LLC	System and Method to Process Antivirus Scan Job on Secondary Cluster.	16/911843	2020-06-25
EMC IP Holding Company LLC	INPUT / OUTPUT LOAD BALANCING IN A DATA STORAGE SYSTEM	16/887159	2020-05-29
EMC IP Holding Company LLC	Verifiable Intra-Cluster Migration for a Chunk Storage System	16/888144	2020-05-29
EMC IP Holding Company LLC	Secure method of authenticating a service account to a system	16/910403	2020-06-24
EMC IP Holding Company LLC	MANAGING DATAPATH VALIDATION ON PER-TRANSACTION BASIS	16/887697	2020-05-29
EMC IP Holding Company LLC	REBUILDING DATA PREVIOUSLY STORED ON A FAILED DATA STORAGE DRIVE	16/944395	2020-07-31
EMC IP Holding Company LLC	SHARING BLOCKS OF NON-VOLATILE DATA STORAGE TO SUPPORT CACHE FLUSHES IN A MULTI-NODE DATA STORAGE SYSTEM	16/945383	2020-07-31
EMC IP Holding Company LLC	DYNAMIC MODIFICATION OF IO SHAPING MECHANISMS OF MULTIPLE STORAGE NODES IN A DISTRIBUTED	16/894973	2020-06-08

	STORAGE SYSTEM		
EMC IP Holding Company LLC	Method and Apparatus for Adjusting Host QOS Metrics Based on Storage System Performance	16/865458	2020-05-04
EMC IP Holding Company LLC	GARBAGE COLLECTION IN A STORAGE SYSTEM AT SUB-VIRTUAL BLOCK GRANULARITY LEVEL	16/897388	2020-06-10
EMC IP Holding Company LLC	MITIGATING IO PROCESSING PERFORMANCE IMPACTS IN AUTOMATED SEAMLESS MIGRATION	15/931849	2020-05-14
EMC IP Holding Company LLC	Sequence thrashing avoidance via fall through estimation	16/888258	2020-05-29
EMC IP Holding Company LLC	Flexible RAID Disk Sparing	16/901413	2020-06-15
EMC IP Holding Company LLC	BALANCING RESILIENCY AND PERFORMANCE BY SELECTIVE USE OF DEGRADED WRITES AND SPARE CAPACITY IN STORAGE SYSTEMS	16/888742	2020-05-31
EMC IP Holding Company LLC	SHARING MEMORY RESOURCES BETWEEN ASYNCHRONOUS REPLICATION WORKLOADS	16/918654	2020-07-01
EMC IP Holding Company LLC	Preparation of vehicle bulk data for high speed Terahertz offloading	16/915226	2020-06-29
EMC IP Holding Company LLC	REMOTELY REPLICATING DUPLICATED DATA	16/885587	2020-05-28
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR AN APPLICATION CONTAINER EVALUATION BASED ON CONTAINER	16/925598	2020-07-10

	EVENTS		
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR AN APPLICATION CONTAINER BACKUP PRIORITIZATION BASED ON CONTAINER INFORMATION AND RESOURCE AVAILABILITY	16/925615	2020-07-10
EMC IP Holding Company LLC	Container prioritization for an effective restore window of kubernetes data	16/925621	2020-07-10
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR SECURING THE MOVEMENT OF VIRTUAL MACHINES BETWEEN HOSTS	16/936465	2020-07-23
EMC IP Holding Company LLC	Adaptive Stochastic Rotated Gradient Compression for Federated Learning in Infrastructure Domains	16/892746	2020-06-04
EMC IP Holding Company LLC	Peer-to-Peer based Global Namespace for DataIQ Federations	16/944250	2020-07-31
EMC IP Holding Company LLC	Personal Data Platform	16/917268	2020-06-30
EMC IP Holding Company LLC	Techniques for Correcting Errors in Cached Pages	16/901520	2020-06-15
EMC IP Holding Company LLC	Techniques for Managing Cores for Storage	16/945387	2020-07-31
EMC IP Holding Company LLC	HOST DEVICE WITH MULTI-PATH LAYER DISTRIBUTION OF INPUT-OUTPUT OPERATIONS ACROSS STORAGE CACHES	16/884148	2020-05-27
EMC IP Holding	Data Mover Microservice for Performing	16/915548	2020-06-29

Company LLC	Deduplication on Object Storage		
EMC IP Holding Company LLC	PRE-GENERATING SECURE CHANNEL CREDENTIALS	16/886854	2020-05-29
EMC IP Holding Company LLC	ANY POINT IN TIME BACKUP ON SECONDARY STORAGE FOR DISTRIBUTED CONSISTENCY GROUPS	16/909613	2020-06-23
EMC IP Holding Company LLC	Framework for preventing software piracy in virtual machines (VMs) by using Virtual Hardware Encryption verification	16/915248	2020-06-29
EMC IP Holding Company LLC	Disk blocks allocation scheme	16/944316	2020-07-31
EMC IP Holding Company LLC	Variable DCF Security Scores and Data Threat Portfolio Views	16/917042	2020-06-30
EMC IP Holding Company LLC	End-to-end protection of data using checksums in Trident data path	16/945358	2020-07-31
EMC IP Holding Company LLC	True Zero RTO: Planned Failover	16/910694	2020-06-24
EMC IP Holding Company LLC	Using Reinforcement Learning to Dynamically Tune Cache Policy Parameters	16/889104	2020-06-01
EMC IP Holding Company LLC	Assigning Workloads in a Multi-Node Processing Environment Using Feedback From Each Node	16/886912	2020-05-29
EMC IP Holding Company LLC	IDENTIFYING POINT-IN-TIME ASYNCHRONOUS APPLICATION DATA	16/884561	2020-05-27
EMC IP Holding Company LLC	Method and System to protect, 0365 metadata (time stamps , isDraft).-->extended property	16/886488	2020-05-28
EMC IP	Method and System to	16/886466	2020-05-28

Holding Company LLC	Protect and Preserve original changeable metadata in o365 exchange.		
EMC IP Holding Company LLC	Method and System to Backup 0365 attachment and nested attachmentMethod and System to Backup 0365 attachment and nested attachment	16/886456	2020-05-28
EMC IP Holding Company LLC	Method and System to perform incremental back-ups with scheduled triggers and web-hooks in o365 Exchange.	16/886435	2020-05-28
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING A MOBILE TERMINAL	16/907405	2020-06-22
EMC IP Holding Company LLC	ON THE FLY PIT SELECTION IN CLOUD DISASTER RECOVERY	16/910393	2020-06-24
EMC IP Holding Company LLC	System and Method for Synchronous Replication Write Handling	16/926051	2020-07-10
EMC IP Holding Company LLC	METHOD, DEVICE, AND STORAGE MEDIUM FOR DEPLOYING MACHINE LEARNING MODEL	16/936813	2020-07-23
EMC IP Holding Company LLC	DATA PLACEMENT FOR RAID GROUPS OF HETEROGENEOUS STORAGE DEVICE CAPACITIES	16/877739	2020-05-19
EMC IP Holding Company LLC	Cache Memory Management	16/942864	2020-07-30
EMC IP Holding Company LLC	Methods and system for protecting Microsoft Office 365 Data	16/886410	2020-05-28
EMC IP Holding Company	CACHING AND DATA PROMOTION TECHNIQUES	16/883215	2020-05-26

LLC			
EMC IP Holding Company LLC	Automated Storage Capacity Provisioning Using Machine Learning Techniques	16/876323	2020-05-18
EMC IP Holding Company LLC	STORAGE ARRAY WITH DYNAMIC CACHE MEMORY CONFIGURATION PROVISIONING BASED ON PREDICTION OF INPUT-OUTPUT OPERATIONS	15/931867	2020-05-14
EMC IP Holding Company LLC	Information Uniqueness Assessment Using String-Based Collection Frequency	16/887046	2020-05-29
EMC IP Holding Company LLC	REUSING OVERWRITTEN PORTION OF WRITE BUFFER OF A STORAGE SYSTEM	16/879459	2020-05-20
EMC IP Holding Company LLC	System and Method for Managing Storage Space Usage on a Storage System	16/884363	2020-05-27
EMC IP Holding Company LLC	DYNAMIC BANDWIDTH MANAGEMENT ON A STORAGE SYSTEM	16/887344	2020-05-29
EMC IP Holding Company LLC	ENCAPSULATED FICON COMMUNICATION	16/885811	2020-05-28
EMC IP Holding Company LLC	RECONSTRUCTION OF LINKS BETWEEN LOGICAL PAGES IN A STORAGE SYSTEM	16/916763	2020-06-30
EMC IP Holding Company LLC	Automated Key Management for Remote Devices Using Single Sign-On Techniques	16/886907	2020-05-29
EMC IP Holding Company LLC	RECONSTRUCTION OF LOGICAL PAGES IN A STORAGE SYSTEM	16/916621	2020-06-30
EMC IP Holding Company LLC	RECONSTRUCTION OF LINKS TO ORPHANED LOGICAL PAGES IN A STORAGE SYSTEM	16/917090	2020-06-30

EMC IP Holding Company LLC	Fast disaster recovery in the cloud for virtual machines with significant media content	16/910728	2020-06-24
EMC IP Holding Company LLC	Deleting Orphan Archived Files From Storage Array Using A Time-Based Decision Algorithm	16/878246	2020-05-19
EMC IP Holding Company LLC	Determining Storage System Configuration Recommendations Based on Vertical Sectors and Size Parameters Using Machine Learning Techniques	16/929271	2020-07-15
EMC IP Holding Company LLC	MAINTAINING COMPONENTS OF NETWORKED NODES WITH DISTRIBUTED DATA DEPENDENCIES	16/878062	2020-05-19
EMC IP Holding Company LLC	Method and Apparatus for Hierarchical Generation of a Complex Object	16/901428	2020-06-15
EMC IP Holding Company LLC	Efficient Synchronization Of Cloud Enabled File System Database During Snapshot Restore Operation	16/878256	2020-05-19
EMC IP Holding Company LLC	Dynamic Display of Operation Timing and Success Rate	16/911126	2020-06-24
EMC IP Holding Company LLC	TECHNIQUES FOR RESOURCE ALLOCATION	16/887196	2020-05-29
EMC IP Holding Company LLC	Smart Contract Mapping to Trusted Hardware in a Data Confidence Fabric	16/910423	2020-06-24
EMC IP Holding Company LLC	Techniques For Cross-Validating Metadata Pages	16/944549	2020-07-31
EMC IP Holding Company LLC	END-TO-END QUALITY OF SERVICE MECHANISM FOR STORAGE SYSTEM USING PRIORITIZED	16/915380	2020-06-29

	THREAD QUEUES		
EMC IP Holding Company LLC	NAMESPACE REPRESENTATION AND ENHANCED BROWSABILITY FOR REPLICATED FILE SYSTEMS	16/905256	2020-06-18
EMC IP Holding Company LLC	Targetless Snapshot Virtual Replication Data Pointer Table (V4 LREP SDMA)	16885495	2020-05-28
EMC IP Holding Company LLC	Method and Apparatus for Performing Atomic Operations on Local Cache Slots of a Shared Global Memory	16/879831	2020-05-21
EMC IP Holding Company LLC	Quantum Compute Estimator and Intelligent Infrastructure	16/917036	2020-06-30
EMC IP Holding Company LLC	Method and Apparatus for Cache Slot Allocation Based on Data Origination Location or Final Data Destination Location	16/881100	2020-05-22
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR INFORMATION DISPLAY	16/934258	2020-07-21
EMC IP Holding Company LLC	Grouping of Multiple Concurrent Schedules of Point-In-Time Snapshots for Consistently Defined Data Image Protection	16/886840	2020-05-29
EMC IP Holding Company LLC	Compliance Recycling Algorithm for Scheduled Targetless Snapshots	16/886848	2020-05-29
EMC IP Holding Company LLC	CONFIGURING A FILE SERVER	16/925678	2020-07-10
EMC IP Holding Company LLC	Detecting Security Threats in Storage Systems Using Artificial Intelligence Techniques	16/914599	2020-06-29
EMC IP Holding	SYSTEM AND METHOD FOR EFFICIENT	16/940952	2020-07-28

Company LLC	BACKGROUND DEDUPLICATION DURING HARDENING		
EMC IP Holding Company LLC	MULTI-DIMENSIONAL I/O SERVICE LEVELS	16/925629	2020-07-10
EMC IP Holding Company LLC	Hardware Virtualization	16/939157	2020-07-27
EMC IP Holding Company LLC	GENERATING AND AGGREGATING TEST RESULT DATA OF A DISTRIBUTED SYSTEM OF DEVICES INTO A TEST CASE RESULT FOR FACILITATING ACCESS OF THE TEST CASE RESULT VIA A SINGLE ITERATOR	16/917516	2020-06-30
EMC IP Holding Company LLC	Power Disruption Protection	16/939133	2020-07-27
EMC IP Holding Company LLC	TECHNIQUES FOR PROVIDING CLIENT INTERFACES	16/934171	2020-07-21
EMC IP Holding Company LLC	Efficient Compressed Track Size classification to reduce disk fragmentation and increase probability of IN place compressed WRITES	16/881107	2020-05-22
EMC IP Holding Company LLC	A method to establish an Application level SSL certificate hierarchy between Master node and Capacity nodes based on hardware level certificate hierarchy	16/919526	2020-07-02
EMC IP Holding Company LLC	INCREMENTAL REPLICATION BETWEEN FOREIGN SYSTEM DATASET STORES	16/915117	2020-06-29
EMC IP Holding Company	SEPARATION OF DATASET CREATION FROM MOVEMENT IN	16/916810	2020-06-30

LLC	FILE REPLICATION		
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR PRE-ALLOCATION OF COMPUTING RESOURCES PRIOR TO PREPARATION OF PHYSICAL ASSETS	16/913386	2020-06-26
EMC IP Holding Company LLC	Method and Apparatus for Processing Test Execution Logs to Determine Error Locations and Error Types	16/892347	2020-06-04
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MONITORING FIELD DEVICE	16/934646	2020-07-21
EMC IP Holding Company LLC	TECHNIQUES FOR EFFICIENT DATA DEDUPLICATION	16/927257	2020-07-13
EMC IP Holding Company LLC	Method and Apparatus for Determining Feature Usage on a Set of Storage Systems Deployed Across Multiple Customer Sites	16/901510	2020-06-15
EMC IP Holding Company LLC	Effective Security Testing in Cloud Environments	16/944233	2020-07-31
EMC IP Holding Company LLC	Performing incremental backups of Cluster Shared Volumes	16/886522	2020-05-28
EMC IP Holding Company LLC	Point in Time Restore and Complete File information Versioning for a Block based Filesystem backup	16/886534	2020-05-28
EMC IP Holding Company LLC	Application Level Granularity for Containerized Recovery from a Filesystem Asset	16/886549	2020-05-28
EMC IP Holding Company LLC	AUTOMATED DATA ROUTING IN A DATA CONFIDENCE FABRIC	16/910451	2020-06-24
EMC IP Holding Company LLC	Persistent Memory Adaptation	16/939146	2020-07-27

EMC IP Holding Company LLC	Multi-site legal profiling for backup data in PPDM	16/925938	2020-07-10
EMC IP Holding Company LLC	Job prioritization using a distance function for effective usage of backup window	16/925672	2020-07-10
EMC IP Holding Company LLC	A Novel Approach Based on Dual-Flash for Automatically Recovering Corrupted Storage Appliance	16/877761	2020-05-19
EMC IP Holding Company LLC	MANAGING ARTIFICIAL INTELLIGENCE MODEL PARTITIONS FOR EDGE COMPUTING ENVIRONMENT	16/925864	2020-07-10
EMC IP Holding Company LLC	Data Protection for Networking Devices	16/912512	2020-06-25
EMC IP Holding Company LLC	Growing and Splitting a Disk Array by Moving RAID Group Members	16/891116	2020-06-03
EMC IP Holding Company LLC	Autonomous Snapshot Reclamation in a Cloud Archive Environment	16/923376	2020-07-08
EMC IP Holding Company LLC	Supporting Multiple Operations In Transaction Logging For A Cloud Enabled File System	16/878269	2020-05-19
EMC IP Holding Company LLC	Resubmit - Enhanced intelligence to manage power distribution for needy servers on priority basis using AI/ML	16/943757	2020-07-30
EMC IP Holding Company LLC	SNAPSHOTS WITHOUT SUSPENDING WRITES	16/924532	2020-07-09
EMC IP Holding Company LLC	STORAGE SYSTEM JOURNAL OWNERSHIP MECHANISM	16/872749	2020-05-12
EMC IP Holding	Auditing Individual Object Operations as Multiple File	16/874860	2020-05-15

Company LLC	System Operations		
EMC IP Holding Company LLC	EXECUTION OF MULTIPATH OPERATION TRIGGERED BY CONTAINER APPLICATION	16/925543	2020-07-10
EMC IP Holding Company LLC	Watermarking of Events of an Ordered Event Stream	16/915762	2020-06-29
EMC IP Holding Company LLC	MANAGING STORAGE DEVICE SCRUBBING	16/928155	2020-07-14
EMC IP Holding Company LLC	AUTOMATED PROCESSING OF UNSTRUCTURED TEXT DATA IN PAIRED DATA FIELDS OF A DOCUMENT	16/906232	2020-06-19
EMC IP Holding Company LLC	A new flag added to an IFS inode to flag the inode for later deletion on delete lock contention	16/939872	2020-07-27
EMC IP Holding Company LLC	MANAGING IO PATH BANDWIDTH	16/927045	2020-07-13
EMC IP Holding Company LLC	Targetless Snapshot System Replication Data Pointer Table (V4 LREP SDMA)	16/885542	2020-05-28
EMC IP Holding Company LLC	FRONT-END OFFLOAD OF STORAGE SYSTEM PROCESSING	16/884133	2020-05-27
EMC IP Holding Company LLC	OBJECT-LEVEL REPLICATION INCLUDING BULK-MODE REPLICATION IN A DATA STORAGE SYSTEM	16/898669	2020-06-11
EMC IP Holding Company LLC	Data Exchange Platform from Personal Data Platform	16/945480	2020-07-31
EMC IP Holding	Ordered Event Stream Event Retention	16/944094	2020-07-30

Company LLC			
EMC IP Holding Company LLC	Exclusive local locks on a distributed system implemented using a null lock type	16/938586	2020-07-24
EMC IP Holding Company LLC	Upgrade Automation framework	16/888223	2020-05-29
EMC IP Holding Company LLC	Abstracting Storage & Deployment Complexities for Certifying Data Protection Applications in a Virtual Environment	16/891332	2020-06-03
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR MIRRORING A FILE SYSTEM JOURNAL	16/943576	2020-07-30
EMC IP Holding Company LLC	Dynamically-Guided Problem Resolution Using Machine Learning	16/944860	2020-07-31
EMC IP Holding Company LLC	Ordered Event Stream Merging	16/944089	2020-07-30
EMC IP Holding Company LLC	Keeping Object Access on a File Store Consistent With Other File Protocols	16/909170	2020-06-23
EMC IP Holding Company LLC	COST-OPTIMIZED TRUE ZERO RECOVERY TIME OBJECTIVE FOR MULTIPLE APPLICATIONS USING FAILURE DOMAINS	16/878231	2020-05-19
EMC IP Holding Company LLC	COST-OPTIMIZED TRUE ZERO RECOVERY TIME OBJECTIVE FOR MULTIPLE APPLICATIONS BASED ON INTERDEPENDENT APPLICATIONS	16/878297	2020-05-19
EMC IP Holding Company LLC	Algorithm for Deduplication Hit Ratio Generation	16/939166	2020-07-27

EMC IP Holding Company LLC	Verify Data and Snapshot Integrity at Scale using Orchestration and a Distributed Hash Store	16/930915	2020-07-16
EMC IP Holding Company LLC	MACHINE LEARNING-BASED RECOMMENDATIONS FOR MODIFYING DELIVERY OF NOTIFICATIONS	16/944429	2020-07-31
EMC IP Holding Company LLC	Data Masking in a Microservice Architecture	16/879084	2020-05-20
EMC IP Holding Company LLC	Data Masking in a Microservice Architecture	16/879096	2020-05-20
EMC IP Holding Company LLC	Data Masking in a Microservice Architecture	16/879111	2020-05-20
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR MONITORING AND CORRECTING HARDWARE AND SOFTWARE FIALURES IN A DUAL-FLASH DEVICE	16/877958	2020-05-19
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR DETECTING AN UPGRADE HANG ERROR AND PERFORMING OPERATING SYSTEM RECOVERY USING A DUAL-FLASH DEVICE	16/877790	2020-05-19
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR DETECTING OPERATING SYSTEM HANG ERROR AND PERFORMING OPERATING SYSTEM RECOVERY USING A DUAL-FLASH DEVICE	16/877794	2020-05-19
EMC IP Holding Company LLC	Systems and Methods for Controller-Worker Architecture for Searching a Storage System	16/878501	2020-05-19
EMC IP	Verification Microservice	16/912953	2020-06-26

Holding Company LLC	Worker Nodes Focusing on Slice Recipes for a Deduplicated Object Storage System		
EMC IP Holding Company LLC	Verification Microservice Worker Nodes Focusing on Similarity Groups for a Deduplicated Object Storage System	16/913025	2020-06-26
EMC IP Holding Company LLC	Testing a Verification Microservice for a Deduplicated Object Storage System	16/913109	2020-06-26
EMC IP Holding Company LLC	ANALYSIS OF SMART METER DATA BASED ON FREQUENCY CONTENT	16/872131	2020-05-11
EMC IP Holding Company LLC	DIRECT ACCESS TO BACKUP COPY	16/891815	2020-06-03
EMC IP Holding Company LLC	LEARNING CLIENT PREFERENCES TO OPTIMIZE EVENT-BASED SYNCHRONIZATION	16/886343	2020-05-28
EMC IP Holding Company LLC	DATA DRIVEN BACKUP POLICY FOR DATA-CENTERS AND APPLICATIONS	16/872105	2020-05-11
EMC IP Holding Company LLC	DATA DEDUPLICATION ON A DISTRIBUTED FILE SYSTEM USING CONDITIONAL WRITES	16/899199	2020-06-11
EMC IP Holding Company LLC	SECRETS AS A SERVICE	16/870084	2020-05-08
EMC IP Holding Company LLC	METHOD AND MECHANISM FOR OPTIMAL SCOPE EVALUATION IN SCOPE BASED HIERARCHICAL CONFIGURATION USING EVALUATED SCOPE PROPAGATION TECHNIQUE	16/875209	2020-05-15
EMC IP	METHODS AND	16/912892	2020-06-26

Holding Company LLC	APPARATUS FOR AUTOMATIC MEDIA FILE TRANSCODING		
EMC IP Holding Company LLC	USING DOUBLE HASHING SCHEMA TO REDUCE SHORT HASH HANDLE COLLISIONS AND IMPROVE MEMORY ALLOCATION IN CONTENT-ADDRESSABLE STORAGE SYSTEMS	16/905206	2020-06-18
EMC IP Holding Company LLC	HANDLING DATA WITH DIFFERENT LIFETIME CHARACTERISTICS IN STREAM-AWARE DATA STORAGE EQUIPMENT	16/965900	2020-07-29
EMC IP Holding Company LLC	DISTRIBUTED DATA ANALYTICS	16/921303	2020-07-06
EMC IP Holding Company LLC	METHODS, DEVICES AND COMPUTER READABLE MEDIUMS FOR MANAGING STORAGE SYSTEM	16/890111	2020-06-02
EMC IP Holding Company LLC	DETECT AND TRIAGE DATA INTEGRITY ISSUE FOR VIRTUAL MACHINE	16/906482	2020-06-19