PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST IN PATENTS PREVIOUSLY RECORDED AT REEL/FRAME (058014/0560)

CONVEYING PARTY DATA

Name	Execution Date
THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS NOTES COLLATERAL AGENT	03/29/2022

RECEIVING PARTY DATA

Name:	DELL PRODUCTS L.P.
Street Address:	ONE DELL WAY
City:	ROUND ROCK
State/Country:	TEXAS
Postal Code:	78682
Name:	EMC IP HOLDING COMPANY LLC
Street Address:	ONE DELL WAY
City:	ROUND ROCK
State/Country:	TEXAS
Postal Code:	78682

PROPERTY NUMBERS Total: 627

Property Type	Number
Application Number:	17390538
Application Number:	17390502
Application Number:	17390532
Application Number:	17390114
Application Number:	17389607
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Application Number:	17388214
Application Number:	17388864
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Application Number:	17443962
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Application Number:	17388849
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Application Number:	17386984
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Property Type	Number
Application Number:	17306424
Application Number:	17306601
Application Number:	17246815
Application Number:	17246807
Application Number:	17246600

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.

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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:	085706/0586
NAME OF SUBMITTER:	J. JASON MULL
SIGNATURE:	/J. Jason Mull/
DATE SIGNED:	06/10/2022

Total Attachments: 46

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NOTICE OF TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS

This NOTICE OF TERMINATION AND RELEASE (this "Release"), dated as of March 29, 2022 (the "Effective Date"), is made by THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., in its capacity as Notes Collateral Agent (the "Agent"), with respect to the grantor parties identified on the signature page hereto (each individually, a "Grantor," collectively the "Grantors").

WHEREAS, pursuant to the Indenture, dated as of March 20, 2019 (as amended and/or supplemented to the date hereof), among the Agent, the Grantor and certain other parties thereto (the "Indenture") and that certain Security Agreement, dated as of March 20, 2019 by and among the Agent, the Grantor and certain other parties thereto (as amended, amended and restated, or otherwise modified from time to time, the "Security Agreement"), the Grantor granted to the Agent a security interest in and to certain collateral, including Patents;

WHEREAS, pursuant to the Security Agreement, the Grantor executed and delivered a Patent Security Agreement, dated as of September 8, 2021 (the "Patent Security Agreement"), for recordal with the United States Patent and Trademark Office;

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on October 6, 2021 at Reel 58014 and Frame 0560;

WHEREAS, the security interest was terminated and released by the Agent on November 1, 2021, in accordance with the terms of the Indenture and the Security Agreement;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agent hereby agrees as follows:

Defined Terms. All capitalized terms used, but not otherwise defined herein, shall have the respective meanings ascribed in or otherwise referenced in the Patent Security Agreement or the Security Agreement, as applicable.

Release. The Agent, without recourse, representation or warranty of any kind, hereby disclaims, releases, discharges, terminates and cancels any security interest in and to the Patent Collateral, including the Patents set forth in Schedule 1 attached hereto (the "Released Patents") arising from the Security Agreement and the recordation of the Patent Security Agreement and reassigns all right, title and interest it has in the Released Patents to the Grantor.

Further Assurances. Promptly upon request by the Grantor from time to time, the Agent agrees to take all further actions, and provide to the Grantor and its successors, assigns or other legal representatives, all such cooperation and assistance (including, without limitation, the execution and delivery of any and all documents or other instruments), reasonably requested by the Grantor, at the Grantor's sole cost and expense, to more fully and effectively effectuate the purposes of this Release.

Governing Law. This Release shall be governed by and construed in accordance with the laws of the State of New York, and shall be binding on the Grantor's and the Agent's representatives, successors, assigns and transferees.

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IN WITNESS WHEREOF, the Agent has caused this Release to be executed by its duly authorized representative as of the Effective Date:

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., not in its individual capacity but solely acting in its capacity as Agent for the Secured Parties

By: William L. Wallace
    Digitally signed by William L. Wallace
    Date: 2022.02.08 19:39:33 -06'00'

Name: William Wallace
Title: Vice President

**PATENT
REEL: 062022 FRAME: 0494**

GRANTOR(s)

Dell Products L.P.

By: _____

    Name: Christopher Garcia
    Title: Senior Vice President &
    Assistant Secretary

EMC IP Holding Company LLC

By: _____

    Name: Christopher Garcia
    Title: Senior Vice President &
    Assistant Secretary

**PATENT
REEL: 062022 FRAME: 0495**

Schedule I

Owner	Application Title	Application Number	Filed Date
Dell Products L.P.	Information Handling System Thermal and EMI Enclosures	17/390538	7/30/2021
Dell Products L.P.	Information Handling System Coaxial Cable Grounding	17/390502	7/30/2021
Dell Products L.P.	Information Handling System Thermal Management for Dense Structuresa	17/390532	7/30/2021
Dell Products L.P.	System and Method for LCD Display Panel Failure Diagnostics	17/390114	7/30/2021
Dell Products L.P.	Hub Driven Variable Height Fan	17/389607	7/30/2021
Dell Products L.P.	Smart Selection of Test Scripts For Commodity Testing On Manufacturing Floor	17/426975	7/29/2021
Dell Products L.P.	SYSTEM AND METHOD FOR GENERATION OF CONFIGURATION DESCRIPTORS FOR A CHIPSET	17/389162	7/29/2021
Dell Products L.P.	SYSTEM AND METHOD FOR BOOTING USING HSM INTEGRATED CHAIN OF TRUST CERTIFICATES	17/443979	7/29/2021
Dell Products L.P.	In-Situ Common-Mode Noise Measurement in High-Speed Data Communication Interfaces	17/388421	7/29/2021
Dell Products L.P.	Staggered Fish-eye Press Fit Connector	17/388214	7/29/2021
Dell Products L.P.	PROPENSITY MODELING PROCESS FOR CUSTOMER TARGETING	17/388864	7/29/2021
Dell Products L.P.	MAINTAINING A COUPLING GAP USING AN ANTENNA CARRIER IN AN INFORMATION HANDLING SYSTEM	17/443999	7/29/2021
Dell Products L.P.	SYSTEM AND METHOD OF FORECASTING AN AMOUNT OF TIME A SOLID STATE DRIVE CAN BE UNPOWERED	17/443962	7/29/2021
Dell Products L.P.	LCD Display for Pixel Level Local Dimming and Dynamic Privacy	17/388468	7/29/2021

Dell Products L.P.	METHOD AND APPARATUS FOR WI-FI CONCURRENT DUAL HIGH BAND WITH ANTENNA SHARING	17/388849	7/29/2021
Dell Products L.P.	AUTOMATED ZONING SET SELECTION TRIGGERED BY SWITCH FABRIC NOTIFICATIONS	17/387520	7/28/2021
Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING THERMAL PROFILES ASSOCIATED WITH WORKLOAD EXECUTING ON INFORMATION HANDLING SYSTEMS	17/443918	7/28/2021
Dell Products L.P.	SYSTEM AND METHOD FOR POWER SUPPLY CONTROLS FOR SELECTION OF VOLTAGE OPERATION	17/443896	7/28/2021
Dell Products L.P.	System Management Mode Emulation of the Real Time Clock	17/387745	7/28/2021
Dell Products L.P.	Resource Selection for Complex Solutions	17/386984	7/28/2021
Dell Products L.P.	Managing Composition Service Entities with Complex Networks	17/386956	7/28/2021
Dell Products L.P.	Temperature Based Decision Feedback Equalization Retraining	17/386799	7/28/2021
Dell Products L.P.	Crosstalk Suppression Microstrip Line	17/387406	7/28/2021
Dell Products L.P.	Temperature-Adjusted Power-On Data Retention Time Tracking for Solid State Drives	17/387092	7/28/2021
Dell Products L.P.	System and Method for Maintaining Trusted Execution in an Untrusted Computing Environment using a Secure Communication Channel	17/386826	7/28/2021
Dell Products L.P.	Trust Verification System and Method for a Baseboard Management Controller (BMC)	17/386779	7/28/2021
Dell Products L.P.	SYSTEM AND METHOD FOR AUTOMATIC IDENTIFICATION AND BIOS CONFIGURATION OF DRIVES IN A BACKPLANE	17/386925	7/28/2021
Dell Products L.P.	DUAL PARALLEL PATH COOLING SYSTEM FOR DUAL	17/443889	7/28/2021

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	SOCKET INFORMATION HANDLING SYSTEMS		
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Dell Products L.P.	Information Handling System with an Integrated Wireless Charger	17/386864	7/28/2021
Dell Products L.P.	DELEGATED AUTHORIZATION VIA CHASSIS MANAGEMENT CONTROLLER	17/386182	7/27/2021
Dell Products L.P.	SYSTEM AND METHOD OF WEAR LEVELING INFORMATION HANDLING SYSTEMS OF A STORAGE CLUSTER	17/443587	7/27/2021
Dell Products L.P.	ENABLING DISPLAY FILTERS IN COLLABORATIVE ENVIRONMENTS	17/386311	7/27/2021
Dell Products L.P.	Method and System for Managing Warranty Claims Associated With Information Handling System	17/386398	7/27/2021
Dell Products L.P.	Unified, Generic and Policy-driven Device Firmware and Driver Lockdown for Secure Device Management of PLDM/FMP/Custom Devices	17/386449	7/27/2021
Dell Products L.P.	Secure High-Speed Communication Interface Between a Basic Input and Output System and a Service Processor	17/385972	7/27/2021
Dell Products L.P.	Protection of I/O Paths Against Network Partitioning and Component Failures in NVMe-OF Environments	17/386428	7/27/2021
Dell Products L.P.	Systems and Methods for NVMe Over Fabric (NVMe-oF) Namespace-Based Zoning	17/386305	7/27/2021
Dell Products L.P.	Quad-Trace for High-Speed Signals	17/443742	7/27/2021
Dell Products L.P.	Paddle Card for Crosstalk Cancellation in High-Speed Signaling	17/443719	7/27/2021
Dell Products L.P.	Parallel Chassis Bootup sequence	17/386473	7/27/2021
Dell Products L.P.	Non-Volatile Memory Express Over Fabric (NVMe-oF) Zone Subsets for Packet-by-Packet Enforcement	17/386120	7/27/2021

Dell Products L.P.	Battery Connector in an Information Handling System	17/386066	7/27/2021
Dell Products L.P.	EXTENDED THERMAL BATTERY FOR COOLING PORTABLE DEVICES	17/443560	7/27/2021
Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING MULTIPLE INFORMATION HANDLING SYSTEM FIRMWARE ON AN INFORMATION HANDLING SYSTEM	17/443697	7/27/2021
Dell Products L.P.	Multi-Tenant Firmware and hardware update exchange using BDAT schema	17/385598	7/26/2021
Dell Products L.P.	DELEGATED AUTHORIZATION VIA SINGLE ACCESS TOKEN	17/385656	7/26/2021
Dell Products L.P.	System and Method for Tracking Memory Corrected Errors by Frequency of Occurrence While Reducing Dynamic Memory Allocation	17/385116	7/26/2021
Dell Products L.P.	SYSTEM AND METHOD OF CONFIGURING NON-VOLATILE MEMORY MEDIA	17/385539	7/26/2021
Dell Products L.P.	Secure VSAN Cluster Using Device Authentication and Integrity Measurements	17/384962	7/26/2021
Dell Products L.P.	Detachable Information Handling System Game Controller Management	17/385337	7/26/2021
Dell Products L.P.	SYSTEM AND METHOD FOR REMOTELY BOOTING A SYSTEM	17/385386	7/26/2021
Dell Products L.P.	SYSTEMS AND METHODS FOR OPERATING DATA PROCESSING UNITS	17/385717	7/26/2021
Dell Products L.P.	COMPOSITE CARBON FIBER LAMINATE FOR AN INFORMATION HANDLING SYSTEM	17/385202	7/26/2021
Dell Products L.P.	Negotiated Bridge Assurance in a Stacked Chassis	17/384843	7/26/2021
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Dell Products L.P.	EFFICIENT UPDATES OF INFORMATION HANDLING SYSTEMS WITH LOCALIZED AGGREGATED TRANSFER AND STORAGE OF UPDATE PACKAGES	17/384705	7/23/2021
Dell Products L.P.	Method and System For Business Yield Aware Workload Distribution	17/384428	7/23/2021
Dell Products L.P.	METHOD TO CONFIGURE A COMPLEX COLLECTION OF INFORMATION HANDLING SYSTEMS	17/383924	7/23/2021
Dell Products L.P.	High-Speed Trace Breakout Methods and Systems	17/384675	7/23/2021
Dell Products L.P.	System and Method for Image File Generation using a Web Browser	17/383834	7/23/2021
Dell Products L.P.	ORDER DELIVERY TIME PREDICTION	17/383866	7/23/2021
Dell Products L.P.	Orchestrating and Automating Product Deployment Flow and Lifecycle Management	17/384554	7/23/2021
Dell Products L.P.	Creating Product Orchestration Engines	17/384540	7/23/2021
Dell Products L.P.	Method and System for Performing Application Programming Interface Calls Between Heterogeneous Applications and Cloud Service Providers	17/384184	7/23/2021
Dell Products L.P.	Centralized Security Policy Administration Using NVMe-oF Zoning	17/384639	7/23/2021
Dell Products L.P.	Multi-functional Illuminated Dynamic Pull-Tag and Service Interface Module	17/383570	7/23/2021
Dell Products L.P.	Persistent error display method which includes service instructions regardless of power state	17/383565	7/23/2021
Dell Products L.P.	Dynamic branding solution" – (an agile method to allow different branding solutions to be presented on a common compute device without the use of multiple purchase parts/badges, labels, OEM rebrand cover up labels)	17/383561	7/23/2021

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Dell Products L.P.	Smart Product Recommendation for Optimizing Asset Recycling and Sustainability	17/383843	7/23/2021
Dell Products L.P.	Adaptive Data Upload	17/384027	7/23/2021
Dell Products L.P.	Simulated Datacenter	17/384021	7/23/2021
Dell Products L.P.	IoT Signals to VR Designs	17/384011	7/23/2021
Dell Products L.P.	System for Dynamic Technology Setup Based on Solution Needs	17/383995	7/23/2021
Dell Products L.P.	Communication Efficiency via Broker	17/383986	7/23/2021
Dell Products L.P.	Method and System for Determining Application Migration Eligibility in Execution Environments	17/384223	7/23/2021
Dell Products L.P.	Information Handling System with Operating System Dependent Battery Management	17/384456	7/23/2021
Dell Products L.P.	Camera Electrical Mechanical Privacy Shutter with Shutter Lock mechanism	17/383778	7/23/2021
Dell Products L.P.	MIGRATION OF VIRTUAL COMPUTING STORAGE RESOURCES USING SMART NETWORK INTERFACE CONTROLLER ACCELERATION	17/384459	7/23/2021
Dell Products L.P.	AUTHORIZING APPLICATION ACCESS VIA CUSTOM UWP SID	17/384548	7/23/2021
Dell Products L.P.	Content-Based Dynamic Hybrid Data Compression	17/383555	7/23/2021
Dell Products L.P.	ROLE-BASED ACCESS CONTROL ENABLED CORPORATE EMAIL	17/382798	7/22/2021
Dell Products L.P.	Shadow Live Migration Over a Smart Network Interface Card	17/383023	7/22/2021
Dell Products L.P.	Method to Erase Data from Decomposed Resources in a Composable Infrastructure (combined with Default State Aware Composition Service)	17/382886	7/22/2021
Dell Products L.P.	METHOD AND SYSTEM FOR AUTOMATED HEALING OF HARDWARE RESOURCES IN A COMPOSED INFORMATION HANDLING SYSTEM	17/382964	7/22/2021

Dell Products L.P.	METHOD AND SYSTEM FOR A UTILIZING A PROXY SERVICE TO GENERATE A COMPOSED INFORMATION HANDLING SYSTEM	17/382994	7/22/2021
Dell Products L.P.	METHOD TO SECURELY TRANSFER ROOT OF TRUST RESPONSIBILITIES ON A COMMON SHARED MOTHERBOARD	17/383041	7/22/2021
Dell Products L.P.	Dynamic Input Device Surface Texture Coordinated with Information Handling System Operations	17/382573	7/22/2021
Dell Products L.P.	Method of Creating mechanical strength & ID on Notebook Hinge components.	17/382673	7/22/2021
Dell Products L.P.	ACCELERATOR SCHEDULING	17/383375	7/22/2021
Dell Products L.P.	Cable Connection Information Display System	17/382913	7/22/2021
Dell Products L.P.	Workspace-Based Fixed Pass-Through Monitoring System and Method for Hardware Devices using a Baseboard Management Controller (BMC)	17/381641	7/21/2021
Dell Products L.P.	Communication Path Obfuscation System and Method	17/381456	7/21/2021
Dell Products L.P.	Command Authority Extension System and Method for Security Protocol and Data Model (SPDM) Secure Communications	17/381584	7/21/2021
Dell Products L.P.	Hardware Device Mutual Authentication System and Method for a Baseboard Management Controller (BMC)	17/381508	7/21/2021
Dell Products L.P.	System and Method for Device Authentication using a Baseboard Management Controller (BMC)	17/381399	7/21/2021
Dell Products L.P.	SYSTEM FOR EXTENDED KEY ACTIONS AND HAPTIC FEEDBACK AND OPTIMIZED KEY LAYOUT FOR A SOLID-STATE KEYBOARD AND TOUCHPAD	17/382097	7/21/2021
Dell Products L.P.	INFORMATION HANDLING SYSTEM SUPPORTING	17/382112	7/21/2021

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Dell Products L.P.	Add-In Card Connector Contact Optimization for High-Speed Signaling	17/382243	7/21/2021
Dell Products L.P.	Automated Issue Detection and Remediation Across Multiple User System Using Healing-as-a-Service Techniques	17/381629	7/21/2021
Dell Products L.P.	Transmit and Receive Channel Swap for Information Handling Systems	17/443125	7/21/2021
Dell Products L.P.	High Availability Combined Data/Power Provisioning System	17/381542	7/21/2021
Dell Products L.P.	SYSTEM AND METHOD OF MANAGING ACOUSTICS OF INFORMATION HANDLING SYSTEMS	17/381967	7/21/2021
Dell Products L.P.	Optimizing System Alerts Using Dynamic Location Data	17/381751	7/21/2021
Dell Products L.P.	ADAPTIVE REMEDIATION FOR MODERN STANDBY	17/380675	7/20/2021
Dell Products L.P.	ONLINE CONFERENCING WITH FOOD SERVICE	17/380364	7/20/2021
Dell Products L.P.	DETERMINING COMPRESSION LEVELS TO APPLY FOR DIFFERENT LOGICAL CHUNKS OF COLLECTED SYSTEM STATE INFORMATION	17/380187	7/20/2021
Dell Products L.P.	Secure Boot Policy for Platform Security Using Neutral Processors in an Information Handling System	17/443101	7/20/2021
Dell Products L.P.	In-Flight Detection of Server Telemetry Report Drift	17/443082	7/20/2021
Dell Products L.P.	System and Method for Cooling a Computing Device	17/380314	7/20/2021
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Dell Products L.P.	Immersion Cooling of Information Handling Systems with On-Node Boost Pumps	17/380944	7/20/2021
Dell Products L.P.	Chassis Layout Monitoring and Analysis to Enhance Temperature Management	17/443074	7/20/2021
Dell Products L.P.	Multi-Axial, Thin Wall, Blow-Molded Plastic Structures, Systems and Methods for the Packaging Cushioning	17/381013	7/20/2021
Dell Products L.P.	Enhanced Information Handling System Component Immersion Cooling via Pump Return Connection	17/380457	7/20/2021
Dell Products L.P.	Port Protection System	17/380528	7/20/2021
Dell Products L.P.	Heatsink Installaion	17/380959	7/20/2021
Dell Products L.P.	Enforcing Correct Sequencing of Firmware Updates	17/380979	7/20/2021
Dell Products L.P.	Dynamic Multiple Antenna Sensor and Wireless Power Management for Multiple Radio Types and Multiple Wireless Configurations	17/380626	7/20/2021
Dell Products L.P.	Capacitive Detection of Antenna Configuration Using a Proximity Sensor	17/380188	7/20/2021
Dell Products L.P.	SYSTEM AND METHOD OF GROUPING INFORMATION HANDLING SYSTEMS FOR SOFTWARE UPDATES	17/443031	7/20/2021
Dell Products L.P.	SYSTEM AND METHOD FOR USING A HANDLE LUG STRUCTURAL ELEMENT AS AN ELECTROMAGNETIC INTERFERENCE GROUNDING ELEMENT AND AN ANTENNA RADIATOR	17/379311	7/19/2021
Dell Products L.P.	Containerized Firmware Services	17/379290	7/19/2021
Dell Products L.P.	Autonomic Detection and Correction of Artificial Intelligence Model Drift	17/378844	7/19/2021
Dell Products L.P.	CONTROLLING DEPLOYMENT OF SOFTWARE APPLICATIONS BASED ON EVALUATING DEPENDENCIES OF THE SOFTWARE APPLICATIONS	17/379259	7/19/2021

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Dell Products L.P.	System for Electromagnetic Interference Shielding	17/379,634	7/19/2021
Dell Products L.P.	THERMALLY ISOLATING MOUNTING BOSS	17/378971	7/19/2021
Dell Products L.P.	Enhancing game performance based on key acoustic event profiles	17/379567	7/19/2021
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Dell Products L.P.	AUTOMATIC SWITCHING FABRIC ROLE DETERMINATION SYSTEM	17/378343	7/16/2021
Dell Products L.P.	REDUCING IMPACT OF COLLECTING SYSTEM STATE INFORMATION	17/377963	7/16/2021
Dell Products L.P.	Deep Learning in Virtual Reality Environment	17/378199	7/16/2021
Dell Products L.P.	Determining Candidates for Circuit Breaker Patterns in Cloud Applications Using Machine Learning Techniques	17/378348	7/16/2021
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Dell Products L.P.	Preemptive Protection Against Malicious Array Access	17/377845	7/16/2021
Dell Products L.P.	Unattended Deployment of Information Handling Systems	17/377000	7/15/2021
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Dell Products L.P.	Bezels for Foldable Displays	17/376491	7/15/2021
Dell Products L.P.	Assuring Faiilsafe Radio Transmit Power Level Control in Hardware	17/376428	7/15/2021
Dell Products L.P.	Information Handling System Docking Station Glass Housing Having an Integrated Antenna	17/376649	7/15/2021
Dell Products L.P.	Information Handling System Glass Housing Having an Integrated Antenna	17/376677	7/15/2021
Dell Products L.P.	SYSTEM AND METHOD OF APPLICATION TRANSITIONS BETWEEN INFORMATION HANDLING SYSTEMS	17/376857	7/15/2021
Dell Products L.P.	System And Method To Create Persistent Host Metadata Logs in NVMe SSD	17/375329	7/14/2021
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Dell Products L.P.	Corrosion Monitoring/Alert System	17/375181	7/14/2021
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Dell Products L.P.	Storage System Self-Healing and Failure Analysis Capability	17/374892	7/13/2021
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Dell Products L.P.	Adjusting Transmit Power Based on Physical Configuration Usage Mode Using Serial Interface Protocol to Radio	17/374862	7/13/2021

Dell Products L.P.	Failsafe Handoff Between System Embedded Controller and Radio Using Antenna Controller	17/374371	7/13/2021
Dell Products L.P.	HIGH-SPEED SIGNAL SUBSYSTEM TESTING SYSTEM	17/374119	7/13/2021
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Dell Products L.P.	Automatically Evicting an Owner of a Security Processor	17/372597	7/12/2021
Dell Products L.P.	Indicating a Type of Secure Boot to Endpoint Devices by a Security Processor	17/372587	7/12/2021
Dell Products L.P.	Deriving Independent Symmetric Encryption Keys Based upon a Type of Secure Boot using a Security Processor	17/372584	7/12/2021
Dell Products L.P.	Deriving Dependent Symmetric Encryption Keys Based Upon a Type of Secure Boot using a Security Processor	17/372582	7/12/2021
Dell Products L.P.	System and Methods for Authenticating the Identity of an Information Handling System	17/372806	7/12/2021
Dell Products L.P.	System and Methods for Authenticating Hardware of an Information Handling System	17/372779	7/12/2021
Dell Products L.P.	Systems and Methods for Importing Security Credentials for Use by an Information Handling System	17/372758	7/12/2021
Dell Products L.P.	Systems and Methods for Authenticating Configurations of an Information Handling System	17/372735	7/12/2021
Dell Products L.P.	Seamless integration of planar speaker glass diaphragm on laptop D glass bottom cover	17/372752	7/12/2021
Dell Products L.P.	Information Handling System Housing Integrated Wireless	17/372755	7/12/2021

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	Charging Coil in Housing Bottom Side		
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Dell Products L.P.	AUTOMATED SERVICE TIERING BETWEEN EDGE COMPUTING SITES AND A CORE DATA CENTER	17/371406	7/9/2021
Dell Products L.P.	Cryptographically Verifying a Firmware Image with Boot Speed in an Information Handling System	17/371417	7/9/2021
Dell Products L.P.	Browser Based Polling Mechanism	17/371209	7/9/2021
Dell Products L.P.	MESSAGE ORIENTED MIDDLEWARE CLUSTER SYNCHRONIZATION	17/370384	7/8/2021
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Dell Products L.P.	Edge-to-Edge Display with a Sensor Region	17/369616	7/7/2021
Dell Products L.P.	Edge-to-Edge Display Module	17/369632	7/7/2021
Dell Products L.P.	Edge-to-Edge Display with a Sensor Region	17/369639	7/7/2021
Dell Products L.P.	COMPUTING CARD SYSTEM WITH ACCESSIBLE INTERNAL LAYERS AND EDGE INTERCONNECTS FOR AN INFORMATION HANDLING SYSTEM	17/367885	7/6/2021
Dell Products L.P.	COMPUTING CHASSIS INCLUDING REMOVEABLE MIDPLANES	17/367864	7/6/2021
Dell Products L.P.	Contextual Video Receive Performance Optimizations for Intelligent Collaboration	17/368118	7/6/2021
Dell Products L.P.	MAPPING CONTAINER USER AND GROUP IDS TO HOST	17/368300	7/6/2021
Dell Products L.P.	Systems and Methods for Using Pattern-Based Bit Flips for Faster	17/366955	7/2/2021

	Write and Consistent Error Recovery		
Dell Products L.P.	Automated Subscription Adjustments	17/366345	7/2/2021
Dell Products L.P.	TEMPERATURE MANAGEMENT OF MEMORY ELEMENTS OF AN INFORMATION HANDLING SYSTEM	17/365095	7/1/2021
Dell Products L.P.	MANAGING A SMART NETWORK INTERFACE CONTROLLER (NIC) OF AN INFORMATION HANDLING SYSTEM	17/365091	7/1/2021
Dell Products L.P.	METHOD AND APPARATUS FOR MIMO ANTENNA SELECTION USING SPATIAL SWITCHED DIVERSITY FOR OPTIMAL COVERAGE AND BLOCKAGE MITIGATION	17/365961	7/1/2021
Dell Products L.P.	Loop Prevention System	17/365326	7/1/2021
Dell Products L.P.	Integrated Infrastructure Secure Communication System	17/363457	6/30/2021
Dell Products L.P.	DATABASE GATEWAY WITH MACHINE LEARNING MODEL	17/363737	6/30/2021
Dell Products L.P.	RE-INITIATION OF MICROSERVICES UTILIZING CONTEXT INFORMATION PROVIDED VIA SERVICE CALLS	17/363583	6/30/2021
Dell Products L.P.	Reworkable Borderless Display with Magnetic Glue and Foam Tape	17/363562	6/30/2021
Dell Products L.P.	SYSTEM AND METHOD FOR A REAL-TIME APPLICATION PROGRAMMING INTERFACE BROKER SERVICE ACROSS CLOUD SERVICE PROVIDERS	17/363603	6/30/2021
Dell Products L.P.	OPTICAL TRANSCEIVER MONITORING SYSTEM	17/362738	6/29/2021
Dell Products L.P.	Hybrid Deep Learning For Anomaly Detection	17/362970	6/29/2021
Dell Products L.P.	Automatically Adjusting Storage System Configurations in a Storage-as-a-Service Environment Using Machine Learning Techniques	17/362139	6/29/2021

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Dell Products L.P.	Automated Hyperparameter Tuning in Machine Learning Algorithms	17/362114	6/29/2021
Dell Products L.P.	Delivering Applications Over-the-Air While Supporting Original Equipment Manufacturer Markers	17/362571	6/29/2021
Dell Products L.P.	POWERING PATCH PANEL SYSTEM	17/361512	6/29/2021
Dell Products L.P.	SYSTEM FOR MODIFIED KEY ACTIONS AND HAPTIC FEEDBACK FOR SMART TYPING ASSIST WITH A SOLID-STATE KEYBOARD AND TOUCHPAD	17/361132	6/28/2021
Dell Products L.P.	Hardware/Resource Load Balance	17/359713	6/28/2021
Dell Products L.P.	System for Hardware Allocation of Software Solutions	17/359712	6/28/2021
Dell Products L.P.	System for a Hybrid Cloud Orchestrator	17/359707	6/28/2021
Dell Products L.P.	System and Method for Accelerator-Centric Workload Placement	17/360130	6/28/2021
Dell Products L.P.	Method for Retaining portable D-Cover Using External Cable Lock	17/359971	6/28/2021
Dell Products L.P.	Method for throughput and radiation coverage improvement using dynamic antenna aperture tuning mechanism	17/359705	6/28/2021
Dell Products L.P.	A System and Method for Performance-centric Workload Placement in a Hybrid Cloud Environment	17/360167	6/28/2021
Dell Products L.P.	System and Method for Network Services Based functionality Provisioning in a VDI Environment	17/360196	6/28/2021
Dell Products L.P.	System and Method for Edge Analytics in a Virtual Desktop Environment	17/360236	6/28/2021
Dell Products L.P.	Control of Thunderbolt/Displayport Multiplexor for Discrete USB-C Graphics Processor	17/359853	6/28/2021
Dell Products L.P.	Information Technology Environment for Supporting Organizational Sustainability Goals	63/214844	6/25/2021
Dell Products L.P.	Backplane Configuration and Management System	17/356952	6/24/2021

Dell Products L.P.	Post Package Repair Failure Memory Location Reporting System	17/356333	6/23/2021
Dell Products L.P.	Platform Framework Error Handling	17/355366	6/23/2021
Dell Products L.P.	Platform Framework Communications	17/355346	6/23/2021
Dell Products L.P.	Platform Framework Configuration State Management	17/355321	6/23/2021
Dell Products L.P.	Platform Framework Security State Management	17/355302	6/23/2021
Dell Products L.P.	Platform Framework Policy Management	17/355289	6/23/2021
Dell Products L.P.	Platform Framework Namespaces	17/355281	6/23/2021
Dell Products L.P.	Platform Framework Orchestration and Discovery	17/355265	6/23/2021
Dell Products L.P.	Platform Framework Standby Operation	17/355255	6/23/2021
Dell Products L.P.	Managing Compute Resources and Runtime Object Load Status in a Platform Framework	17/355246	6/23/2021
Dell Products L.P.	Platform Framework Authentication	17/355232	6/23/2021
Dell Products L.P.	Platform Framework Telemetry	17/355223	6/23/2021
Dell Products L.P.	Platform Framework Arbitration	17/355221	6/23/2021
Dell Products L.P.	MANAGING AUDIO DEVICES OF AN INFORMATION HANDLING SYSTEM	17/355794	6/23/2021
Dell Products L.P.	PROVIDING ACCESS CONTROL TO DISTRIBUTED RESOURCES TO AN INFORMATION HANDLING SYSTEM	17/355788	6/23/2021
Dell Products L.P.	Single surface non-glass top cover design	17/356222	6/23/2021
Dell Products L.P.	EXPRESS UPDATE DEPLOYMENT SYSTEM	17/354243	6/22/2021
Dell Products L.P.	Systems and Methods for Varying an Impedance of a Cable	17/354131	6/22/2021
Dell Products L.P.	Method to use Cryptographic Identityto associate attested devices to useraccounts	17/354654	6/22/2021
Dell Products L.P.	DISTRIBUTION OF VIDEO PROCESSING TASKS	17/354323	6/22/2021
Dell Products L.P.	CABLE CONNECTOR DISCONNECTION SYSTEM	17/354964	6/22/2021

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Dell Products L.P.	SYSTEM AND METHOD OF ARBITRATING SERIAL BUSES OF INFORMATION HANDLING SYSTEMS	17/354298	6/22/2021
Dell Products L.P.	Converged Smart Wireless Sub System	17/352410	6/21/2021
Dell Products L.P.	SYSTEM AND METHOD OF AUTHENTICATING UPDATED FIRMWARE OF AN INFORMATION HANDLING SYSTEM	17/351424	6/18/2021
Dell Products L.P.	Containerized Meta-Data with UEFI Firmware File System	17/350331	6/17/2021
Dell Products L.P.	DETECTING AND DEPLOYING SYSTEM RESOURCE COMPATIBLE UPDATE PACKAGES	17/350344	6/17/2021
Dell Products L.P.	HOT-SWAP CONTROLLER MONITORING CONFIGURATION SYSTEM	17/350196	6/17/2021
Dell Products L.P.	Systems and Methods for Dual Connectivity on an Optical Port	17/349679	6/16/2021
Dell Products L.P.	Peripheral Camera and Information Handling System Security System and Method	17/349402	6/16/2021
Dell Products L.P.	Cylindrical Camera Rotating Cap Shutter Mechanism with Enhanced Audio Security	17/349396	6/16/2021
Dell Products L.P.	Cylindrical Camera Dual Leaf Shutter	17/349407	6/16/2021
Dell Products L.P.	Intelligent Battery Power Discharge Management	17/349146	6/16/2021
Dell Products L.P.	Thick Adaptive Device Carrier	17/347855	6/15/2021
Dell Products L.P.	FAN MANAGEMENT SYSTEM	17/348405	6/15/2021
Dell Products L.P.	Safe Window for Creating a Firmware Update Package	17/346315	6/14/2021
Dell Products L.P.	PROACTIVE ASSET FAILURE REMEDIATION UTILIZING CONFORMAL ASSET STATE PREDICTION	17/346398	6/14/2021
Dell Products L.P.	TESTING FRAMEWORK WITH LOAD FORECASTING	17/346815	6/14/2021
Dell Products L.P.	Multi-Boot System and Method for a Baseboard Management Controller (BMC)	17/346931	6/14/2021

Dell Products L.P.	Data Sharing System and Method for a Multi-Boot Baseboard Management Controller (BMC)	17/347045	6/14/2021
Dell Products L.P.	Custom Baseboard Management Controller (BMC) Firmware Stack Monitoring System and Method	17/346802	6/14/2021
Dell Products L.P.	Out-of-Band Custom Baseboard Management Controller (BMC) Firmware Stack Monitoring System and Method	17/346721	6/14/2021
Dell Products L.P.	Custom Baseboard Management Controller (BMC) Firmware Stack Watchdog System and Method	17/346657	6/14/2021
Dell Products L.P.	Custom Baseboard Management Controller (BMC) Firmware Stack Monitoring System and Method	17/346595	6/14/2021
Dell Products L.P.	Dynamic USB-C Mode Configuration	17/346434	6/14/2021
Dell Products L.P.	HOT-SWAP CONTROLLER FAULT REPORTING SYSTEM	17/347200	6/14/2021
Dell Products L.P.	ADDRESS DISCOVERY SYSTEM	17/345661	6/11/2021
Dell Products L.P.	Server Classification Using Machine Learning Techniques	17/345453	6/11/2021
Dell Products L.P.	Packet Reflect System	17/345393	6/11/2021
Dell Products L.P.	SYSTEM AND METHOD OF UTILIZING A SYSTEM TO SECURE A DOCUMENT	17/344547	6/10/2021
Dell Products L.P.	FIRMWARE UPDATE SYSTEM	17/344292	6/10/2021
Dell Products L.P.	DYNAMICALLY ASSIGNING APPLICATIONS TO WORKSPACES BASED ON CONTEXT	17/343567	6/9/2021
Dell Products L.P.	Continuous Development / Continuous Integration for identified bugs along with Documentation updates	17/342572	6/9/2021
Dell Products L.P.	Board Damage Classification System	17/341680	6/8/2021
Dell Products L.P.	System Performance using Optimal Adapter Efficiency	17/342210	6/8/2021
Dell Products L.P.	SYSTEM AND METHOD FOR PROTECTING AGAINST	17/341567	6/8/2021
	ALTERATIONS IN CHAIN OF TRUST SEQUENCES		

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Dell Products L.P.	SYSTEM AND METHOD FOR FABRICATING AND EXECUTING A WIRELESS GAMING KEYBOARD AND MOUSE ADAPTER SYSTEM	17/342407	6/8/2021
Dell Products L.P.	Method to update the bookmarked document link hence diminishing the broken link	17/341451	6/8/2021
Dell Products L.P.	Hybrid Cable for Optic and Copper Port Connectivity	17/341010	6/7/2021
Dell Products L.P.	OPTIMIZING MEMORY USAGE TO ENABLE LARGER-SIZED DEPLOYMENTS AND CLIENT SERVICING	17/341055	6/7/2021
Dell Products L.P.	Integrated Safety Latch for Cold Swap Only Devices	17/340569	6/7/2021
Dell Products L.P.	5G Antenna above panel size reduction using a distributed, tunable A cover radiating element	17/340398	6/7/2021
Dell Products L.P.	SYSTEMS AND METHODS FOR OBJECT MIGRATION IN STORAGE DEVICES	17/339538	6/4/2021
Dell Products L.P.	Proactive Remediation Modes	17/337508	6/3/2021
Dell Products L.P.	Systems and Methods for Maximizing Signal Integrity on Circuit Boards	17/338369	6/3/2021
Dell Products L.P.	Systems and Methods for Context-Aware Firmware Update	17/338335	6/3/2021
Dell Products L.P.	Baseboard Management Controller (BMC) Test System and Method	17/337686	6/3/2021
Dell Products L.P.	Method to Dynamically set Backlight Local Dimming Algorithm between Static & Moving Graphics Image	17/337796	6/3/2021
Dell Products L.P.	HIGH-SPEED SIGNAL SYBSYSTEM TESTING SYSTEM	17/336659	6/2/2021
Dell Products L.P.	Methodology for enabling internal air intake ducting on a notebook bottom door to improve bottom skins without bottom venting and thermal feet	17/335315	6/1/2021
Dell Products L.P.	MANAGING VIRTUAL SERVICES IN AN INFORMATION HANDLING SYSTEM	17/335713	6/1/2021

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Dell Products L.P.	MULTIPLE METRIC-BASED WORKLOAD BALANCING BETWEEN STORAGE RESOURCES	17/335293	6/1/2021
Dell Products L.P.	SYSTEM AND METHOD FOR BEEMSTEERING ACQUISITION AND OPTIMIZATION USING BLUETOOTH PROTOCOLS	17/335038	5/31/2021
Dell Products L.P.	Cylindrical Camera with Integrated Tilt Stand	17/333367	5/28/2021
Dell Products L.P.	Minimizing Cost of Disk Fulfillment	17/334523	5/28/2021
Dell Products L.P.	Operating System Agnostic and Secure Bi-Directional Data Handling	17/333922	5/28/2021
Dell Products L.P.	System and Method of Validating One or More Components of an Information Handling System	17/333783	5/28/2021
Dell Products L.P.	SYSTEM AND METHOD FOR OPERATING AN APERATURE-COUPLED TUNABLE RING ANTENNA SYSTEM WITH A DETACHABLE METAL KEYBOARD AND INTEGRATED DUAL OPPOSITE OUTLET THERMAL VENT	17/333111	5/28/2021
Dell Products L.P.	FRAMEWORK FOR ANOMALY DETECTION AND RESOLUTION PREDICTION	17/332362	5/27/2021
Dell Products L.P.	ARTIFICIAL INTELLIGENCE-BASED DATA SECURITY MANAGEMENT	17/332467	5/27/2021
Dell Products L.P.	INTRUSION DETECTION USING MACHINE LEARNING	17/332346	5/27/2021
Dell Products L.P.	SYSTEM AND METHOD FOR BINDING APPLICATIONS TO A ROOT OF TRUST	17/332184	5/27/2021
Dell Products L.P.	SYSTEMS AND METHODS FOR DISCONNECTION OF BATTERY WHEN SERVICING INFORMATION HANDLING SYSTEM	17/330964	5/26/2021
Dell Products L.P.	Predicting Storage Array Capacity	17/330975	5/26/2021
Dell Products L.P.	Remediation Scheduling	17/329273	5/25/2021
Dell Products L.P.	Populating Search Results with Intent and Context-Based Images	17/329421	5/25/2021

Dell Products L.P.	Non-Volatile Memory Express Over Fabric (NVMe-oF) Zone Subsets for Packet-By-Packet Enforcement	63/192526	5/24/2021
Dell Products L.P.	A Method for Controlling Application Versions and Environments when Deploying from BIOS	17/328583	5/24/2021
Dell Products L.P.	Systems and Methods for Extending Boot Security Trust Chaining to State Changes between Boot Sessions	17/328466	5/24/2021
Dell Products L.P.	Unified Telemetry Data	17/327861	5/24/2021
Dell Products L.P.	THERMAL MODULE WITH A HYPERBARIC FAN SYSTEM FOR COOLING MULTIPLE FIN STACKS AND COMPONENTS IN A SEALED CHASSIS	17/328526	5/24/2021
Dell Products L.P.	Battery with Boost Performance Under Low Temperatures	17/326925	5/21/2021
Dell Products L.P.	Virtual Desktop Configuration System	17/327218	5/21/2021
Dell Products L.P.	Hyper-Converged Infrastructure (HCI) Log System	17/326152	5/20/2021
Dell Products L.P.	Cylindrical Camera Thermal Shield	17/325508	5/20/2021
Dell Products L.P.	Camera Stand with Integrated Tilt Hinge	17/325494	5/20/2021
Dell Products L.P.	Cylindrical Camera and Integrated Support	17/325518	5/20/2021
Dell Products L.P.	Hybrid Multiple Sensor Keyboard	17/325512	5/20/2021
Dell Products L.P.	Camera and Lens Cap	17/325501	5/20/2021
Dell Products L.P.	Camera and Mount	17/325503	5/20/2021
Dell Products L.P.	Peripheral Camera	29/784601	5/20/2021
Dell Products L.P.	HEAT PIPE TAPERED DOWN IN FIN STACK REGION AND OPPOSITELY TAPERED FIN STACK	17/324342	5/19/2021
Dell Products L.P.	RUN-TIME ATTESTATION OF A USER WORKSPACE	17/324381	5/19/2021
Dell Products L.P.	METHOD FOR CONTEXTUAL FIRMWARE UPDATE BASED ON HARDWARE STATE AND TELEMETRY	17/324356	5/19/2021
Dell Products L.P.	Keyboard with Isolated Key Haptics	17/324483	5/19/2021

Dell Products L.P.	VALIDATING AND ENUMERATING DEVICE PARTITIONS IN A COMPUTING ENVIRONMENT	17/324296	5/19/2021
Dell Products L.P.	Array Based Copy Mechanism for Migration, Replication and Backup	17/324709	5/19/2021
Dell Products L.P.	Proactive Alert Aggregation and Correlation Management with Automated Summarization	17/323489	5/18/2021
Dell Products L.P.	FRAME RATE OPTIMIZATION SYSTEM	17/322620	5/17/2021
Dell Products L.P.	Systems and Methods for Automating Pre-Boot Soft Keyboard Behavior Based on System Context	17/320675	5/14/2021
Dell Products L.P.	Discrete Haptics for Keyboard Palm Rest (Re-submit for 121928)	17/321152	5/14/2021
Dell Products L.P.	SLOTTED VIAS FOR CIRCUIT BOARDS	17/319577	5/13/2021
Dell Products L.P.	DIRECT MVNO RAN RESOURCE MANAGEMENT SYSTEM	17/319235	5/13/2021
Dell Products L.P.	MITIGATION OF SCREEN BURN-IN FOR A FOLDABLE IHS	17/318294	5/12/2021
Dell Products L.P.	Information Handling System Monitor with Selectively Curved and Flat Display Panel	17/318609	5/12/2021
Dell Products L.P.	Synchronized Hinges for Foldable Displays	17/318096	5/12/2021
Dell Products L.P.	DATA MOVEMENT BETWEEN STORAGE TIERS OF A CLUSTERED STORAGE SYSTEM BASED ON PREDICTED DATA ACCESS FREQUENCY TREND PATTERNS	17/316907	5/11/2021
Dell Products L.P.	CONFIGURABLE ALL-IN-ONE MODULAR DESKTOP COMPUTING SYSTEM	17/316491	5/10/2021
Dell Products L.P.	System and Method for Preventing Data Loss in Liquid Cooled Data Centers During Facility Fluid Failure	17/316127	5/10/2021
Dell Products L.P.	Information Handling System Articulating Display Stand	29/782883	5/10/2021

Dell Products L.P.	Information Handling System Motorized Hinge Dual Clutch	17/315924	5/10/2021
Dell Products L.P.	Information Handling System Camera with Automated Tilt, Pan and Shutter Functionality	17/315918	5/10/2021
Dell Products L.P.	Information Handling System and Keyboard Dual Mode Pairing	17/315912	5/10/2021
Dell Products L.P.	Flickering of a Liquid Crystal Display	17/316092	5/10/2021
Dell Products L.P.	MINIMIZING DATA EXPOSURE DURING SCREEN SHARING	17/314332	5/7/2021
Dell Products L.P.	GENERATING AND MANAGING FINGERPRINT TEMPLATES FOR FINGERPRINT SENSORS ACROSS INFORMATION HANDLING SYSTEMS	17/314235	5/7/2021
Dell Products L.P.	Information Handling System with Mechanism for Reporting Status of Persistent Memory Firmware Update	17/313507	5/6/2021
Dell Products L.P.	RAID STORAGE-DEVICE-ASSISTED PARITY UPDATE DATA STORAGE SYSTEM	17/313343	5/6/2021
Dell Products L.P.	SELECTIVELY OFFLOADING THE COMPRESSION AND DECOMPRESSION OF FILES TO A HARDWARE CONTROLLER	17/313893	5/6/2021
Dell Products L.P.	RAID STORAGE-DEVICE-ASSISTED DEFERRED PARITY DATA UPDATE SYSTEM	17/308390	5/5/2021
Dell Products L.P.	RESOLVING REGION-OF-INTEREST (ROI) OVERLAPS FOR DISTRIBUTED SIMULTANEOUS LOCALIZATION AND MAPPING (SLAM) IN EDGE CLOUD ARCHITECTURES	17/308090	5/5/2021
Dell Products L.P.	Adaptive Collection of Telemetry Data	17/308579	5/5/2021
Dell Products L.P.	System and Methods for Establishing and Managing Fast Data Channels Among Modern Workspaces	17/246880	5/3/2021
Dell Products L.P.	Systems and Methods for Managing an Information Handling System	17/246840	5/3/2021

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	(IHS) Based Upon a Proxy Calendar		
Dell Products L.P.	MICROSERVICES MEDIATION LAYER FOR CANONICAL MESSAGE ALIGNMENT IN COMPLEX MICROSERVICES ENVIRONMENTS	17/246859	5/3/2021
Dell Products L.P.	Intelligent Selection of Audio Signatures Based Upon Contextual Information to Perform Management Actions	17/246747	5/3/2021
EMC IP Holding Company LLC	Edge Data Distribution Cliques	17/333200	5/28/2021
EMC IP Holding Company LLC	System and Method for Efficient Implementation of XCopy Commands	17/389941	7/30/2021
EMC IP Holding Company LLC	System and Method for Storage Tiering Optimization	17/390220	7/30/2021
EMC IP Holding Company LLC	Storage Media Scrubber	17/389499	7/30/2021
EMC IP Holding Company LLC	HOST DEVICE COMPRISING LAYERED SOFTWARE ARCHITECTURE WITH AUTOMATED TIERING OF LOGICAL STORAGE DEVICES	17/388096	7/29/2021
EMC IP Holding Company LLC	Method and System for Determine System Upgrade Recommendations	17/388847	7/29/2021
EMC IP Holding Company LLC	Method and System for Variable level of logging based on (long term steady state) system error equilibrium.	17/388810	7/29/2021
EMC IP Holding Company LLC	Method and System for Intelligent Proactive Error Log Activation	17/388857	7/29/2021
EMC IP Holding Company LLC	Intelligent Log Detection and Aggregation	17/388755	7/29/2021
EMC IP Holding Company LLC	Resubmission 123921: A Dynamic Batch QAT Offload Method to Improve Performance for Data Protection Systems	17388644	7/29/2021
EMC IP Holding Company LLC	Intelligent Information Analysis	17/389268	7/29/2021
EMC IP Holding Company LLC	Data Protection Using Encryption and Inserted Execution Code	17/387046	7/28/2021
EMC IP Holding Company LLC	Auto scale backup orchestration for NAS workloads in PPDM	17/387190	7/28/2021

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EMC IP Holding Company LLC	TEST SYSTEM FOR DATA STORAGE SYSTEM PERFORMANCE TESTING	17/386837	7/28/2021
EMC IP Holding Company LLC	Memory Efficient Approach To Extending Cache	17/386974	7/28/2021
EMC IP Holding Company LLC	PER-SERVICE STORAGE OF ATTRIBUTES	17/386873	7/28/2021
EMC IP Holding Company LLC	A Smart Way to Continually Detect Potential Issue and Alert	17/387023	7/28/2021
EMC IP Holding Company LLC	AN APPLICATION-FOCUSED AND CONTAINER-BASED DATA PROTECTION SOLUTION	17/386961	7/28/2021
EMC IP Holding Company LLC	Intelligent Support Bundle Collection	17/387007	7/28/2021
EMC IP Holding Company LLC	Favorability of Upgrade Window	17/386439	7/27/2021
EMC IP Holding Company LLC	Method of Creating an Intelligent Upgrade Flow of a Heterogenous data center	17/386427	7/27/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR INTELLIGENT UPDATE FLOW ACROSS INTER AND INTRA UPDATE DEPENDENCIES	17/386414	7/27/2021
EMC IP Holding Company LLC	TECHNIQUES FOR ADAPTIVELY ORGANIZING WRITE PAGES IN CACHE USING HASH TABLES	17/386180	7/27/2021
EMC IP Holding Company LLC	Data Management Techniques Using Distributed Policy Agent	17/386359	7/27/2021
EMC IP Holding Company LLC	Application of Data Services Based on Services Policies	17/386352	7/27/2021
EMC IP Holding Company LLC	Method and System for Generating Documents Field Predictions	17/386386	7/27/2021
EMC IP Holding Company LLC	Method and System for Migrating Data Cluster Using Heterogeneous Data Infrastructures	17/386471	7/27/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR ESTIMATION OF TIME TO COMPLETION FOR HETEROGENEOUS APPLICATION UPGRADES IN A CUSTOMER ENVIRONMENT	17/386344	7/27/2021
EMC IP Holding Company LLC	Variable Sparing of Disk Drives in Storage Array based on VENN machines	17/386454	7/27/2021

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EMC IP Holding Company LLC	SYSTEM AND METHOD FOR AN ESTIMATION OF APPLICATION UPGRADES USING A DEVICE EMULATION SYSTEM OF A CUSTOMER ENVIRONMENT	17/386371	7/27/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR AN OPTIMAL TIME SLOT DETERMINATION FOR AN APPLICATION UPGRADE IN A CUSTOMER ENVIRONMENT	17/386389	7/27/2021
EMC IP Holding Company LLC	Method and System for Mapping Data Protection Services to Data Cluster Components	17/386457	7/27/2021
EMC IP Holding Company LLC	Method and System for Continuous Mapping Protection Policies to Data Cluster Components	17/386459	7/27/2021
EMC IP Holding Company LLC	Method and System for Mapping Protection Policies to Data Cluster Components	17/386465	7/27/2021
EMC IP Holding Company LLC	Leveraging File-Based Backups to Facilitate Bare-Metal and System-State Recover Operations	17/386334	7/27/2021
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR MANAGING UPDATES OF A DATA MANAGER	17/386402	7/27/2021
EMC IP Holding Company LLC	Method and System For Predicting Next Steps For Customer Support Cases	17/386370	7/27/2021
EMC IP Holding Company LLC	Ranking Tests Based on Code Change and Coverage	17/385692	7/26/2021
EMC IP Holding Company LLC	METHOD AND SYSTEM TO MANAGE TECH SUPPORT INTERACTIONS USING DYNAMIC NOTIFICATION PLATFORM	17/385771	7/26/2021
EMC IP Holding Company LLC	Ranking Tests Based on Code Change and Coverage	17/385671	7/26/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR A CONTENT-AWARE AND CONTEXT-AWARE COMPRESSION ALGORITHM SELECTION MODEL FOR A FILE SYSTEM	17/385744	7/26/2021
EMC IP Holding Company LLC	Source Versus Target Metadata-Based Data Integrity Checking	17/384975	7/26/2021

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EMC IP Holding Company LLC	Threat Aware Data Protection	17/385128	7/26/2021
EMC IP Holding Company LLC	Write-back data cache management using multiple fully associative cache slot pools	17/385257	7/26/2021
EMC IP Holding Company LLC	Method and System for Managing Data Protection Feature Compatibility	17/385375	7/26/2021
EMC IP Holding Company LLC	IMAGE PROCESSING METHOD, COMPUTER SYSTEM, ELECTRONIC DEVICE, AND PROGRAM PRODUCT	17/385700	7/26/2021
EMC IP Holding Company LLC	MULTI-PATH LAYER CONFIGURED TO ACCESS STORAGE-SIDE PERFORMANCE METRICS FOR LOAD BALANCING POLICY CONTROL	17/383672	7/23/2021
EMC IP Holding Company LLC	System and Method for Storage Optimization Using Machine Learning-driven Application and Workload Identification	17/383627	7/23/2021
EMC IP Holding Company LLC	System and Methods for Peripheral Device Security	17/383881	7/23/2021
EMC IP Holding Company LLC	IO Request Flow Performance Analysis System and Method	17/383587	7/23/2021
EMC IP Holding Company LLC	System and Method for Polling-based Storage Command Processing	17/383604	7/23/2021
EMC IP Holding Company LLC	DETERMINING A SHARING RELATIONSHIP OF A FILE IN DIRECTORY SNAPSHOTS	17/384260	7/23/2021
EMC IP Holding Company LLC	Anomaly Detection for Services Pricing	17/384531	7/23/2021
EMC IP Holding Company LLC	Bottom-up Pre-emptive Cache Update in a Multi-level Redundant Cache System	17/383846	7/23/2021
EMC IP Holding Company LLC	Storage Assisted Virtual Machine Backups using Storage VMotion and XCOPY	17/384042	7/23/2021
EMC IP Holding Company LLC	Predictive Orchestration of Data Sets within Marketplace	17/384444	7/23/2021
EMC IP Holding Company LLC	Dynamic Access Control in Service Mesh with Service Broker	17/383657	7/23/2021
EMC IP Holding Company LLC	REDUCING WRITE DELAYS WHILE TAKING SNAPSHOTS	17/383752	7/23/2021

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EMC IP Holding Company LLC	INTELLIGENT CONTROL PLANE COMMUNICATION	17/383720	7/23/2021
EMC IP Holding Company LLC	METHOD AND APPARATUS FOR CONTRACT ANALYSIS	17/383537	7/23/2021
EMC IP Holding Company LLC	ONLINE ERROR RECOVERY	17/383732	7/23/2021
EMC IP Holding Company LLC	METHOD, DEVICE, AND PROGRAM PRODUCT FOR MANAGING COMPUTING SYSTEM	17/384041	7/23/2021
EMC IP Holding Company LLC	Method and System for Performing Data Protection Services Using a Subsystem Level Feedback Mechanism	17/384190	7/23/2021
EMC IP Holding Company LLC	METHOD AND DEVICE FOR MANAGING STORAGE SYSTEM	17/383354	7/22/2021
EMC IP Holding Company LLC	DYNAMICALLY REDISTRIBUTING I/O JOBS AMONG OPERATING SYSTEM THREAD	17/382416	7/22/2021
EMC IP Holding Company LLC	Granular Data Migration	17/382344	7/22/2021
EMC IP Holding Company LLC	MANAGING SYSTEM UPGRADES IN A NETWORK COMPUTING ENVIRONMENT	17/382440	7/22/2021
EMC IP Holding Company LLC	HARD LINK HANDLING WITH DIRECTORY SNAPSHOTS	17/382496	7/22/2021
EMC IP Holding Company LLC	Edge Function Bursting	17/383257	7/22/2021
EMC IP Holding Company LLC	Large Object Packing for Storage Efficiency	17/383255	7/22/2021
EMC IP Holding Company LLC	Method to Intelligently Manage the end to end Container Compliance in cloud environments	17/383252	7/22/2021
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR A PROACTIVE ASSIGNMENT OF VIRTUAL NETWORK FUNCTIONS IN LOCAL DATA SYSTEMS	17/383335	7/22/2021
EMC IP Holding Company LLC	K-Quant Gradient Compressor For Federated Learning	17/382584	7/22/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR INSTANT ACCESS AND MANAGEMENT OF DATA IN FILE BASED BACKUPS IN A	17/383100	7/22/2021

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	BACKUP STORAGE SYSTEM USING TEMPORARY STORAGE DEVICES		
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR A SPECIALIZED BACKUP OPERATION OF FILE BASED BACKUPS BASED ON A TARGET BACKUP STORAGE SYSTEM	17/383141	7/22/2021
EMC IP Holding Company LLC	EXPANDING RAID SYSTEMS	17/382905	7/22/2021
EMC IP Holding Company LLC	Test Data Verification for an Ordered Event Stream Storage System	17/383425	7/22/2021
EMC IP Holding Company LLC	Data Deduplication Latency Reduction	17/382447	7/22/2021
EMC IP Holding Company LLC	Blockchain-Enabled Storage Array	17/382435	7/22/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR INSTANT ACCESS OF DATA IN FILE BASED BACKUPS IN A BACKUP STORAGE SYSTEM USING METADATA FILES	17/383074	7/22/2021
EMC IP Holding Company LLC	ADAPTIVE SYSTEM FOR SMART BOOT SEQUENCE FORMATION OF VMS FOR DISASTER RECOVERY	17/382111	7/21/2021
EMC IP Holding Company LLC	ADAPTIVE SYSTEM FOR SMART BOOT SEQUENCE FORMATION OF VMS FOR DISASTER RECOVERY	17/382098	7/21/2021
EMC IP Holding Company LLC	DATACENTER IoT-TRIGGERED PREEMPTIVE MEASURES USING MACHINE LEARNING	17/382065	7/21/2021
EMC IP Holding Company LLC	DATA MIGRATION BETWEEN STORAGE SYSTEMS	17/381301	7/21/2021
EMC IP Holding Company LLC	In-Band Modification on Event Notification Preferences for Server Events	17/381722	7/21/2021
EMC IP Holding Company LLC	VM Protection with True Zero RTO	17/382037	7/21/2021
EMC IP Holding Company LLC	System and Method for Multi-Node Buffer Transfer	17/381738	7/21/2021
EMC IP Holding Company LLC	Request Processing for Configurable Information Technology Solutions	17/381667	7/21/2021

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EMC IP Holding Company LLC	Efficient explorer for recorded meetings	17/443113	7/21/2021
EMC IP Holding Company LLC	Continuous Video Generation from Voice Data	17/443121	7/21/2021
EMC IP Holding Company LLC	Continuous Integration and Continuous Delivery Pipeline Data for Workflow Deployment	17/381469	7/21/2021
EMC IP Holding Company LLC	Multi-Level Workflow Scheduling Using Meta-Heuristic and Heuristic Algorithms	17/381452	7/21/2021
EMC IP Holding Company LLC	AUTONOMOUS STORAGE PROVISIONING	17/381329	7/21/2021
EMC IP Holding Company LLC	TECHNIQUES FOR USER INTERFACE LAYOUTS	17/381265	7/21/2021
EMC IP Holding Company LLC	WEIGHTED RESOURCE COST MATRIX SCHEDULER	17/380164	7/20/2021
EMC IP Holding Company LLC	System for Query-based Interactive Risk Model Analysis for Secure Software Development	17/380918	7/20/2021
EMC IP Holding Company LLC	SOFTWARE UPGRADE MANAGEMENT FOR HOST DEVICES IN A DATA CENTER	17/380177	7/20/2021
EMC IP Holding Company LLC	Restore Assistant: Using Augmented Backup Metadata for Step-by-Step Restore Guide	17/380926	7/20/2021
EMC IP Holding Company LLC	File System Agnostic Content Retrieval from Backups using Disk Extents	17/443084	7/20/2021
EMC IP Holding Company LLC	TECHNIQUES FOR METADATA UPDATING AND RETRIEVAL	17/380610	7/20/2021
EMC IP Holding Company LLC	DIGITAL TWIN ARCHITECTURE FOR MULTI-ACCESS EDGE COMPUTING ENVIRONMENT	17/380372	7/20/2021
EMC IP Holding Company LLC	Boosting Sales productivity using personalized content generator for online sales	17/443087	7/20/2021
EMC IP Holding Company LLC	Just in time removal of corrupted info and files from backups on restore	17/380920	7/20/2021
EMC IP Holding Company LLC	Method and system for improved sentiment analysis	17/443054	7/20/2021
EMC IP Holding Company LLC	AIML-based Continuous Delivery for Networks	17/443041	7/20/2021

EMC IP Holding Company LLC	TRANSIENT CACHING TO SUPPORT SHORT-TERM RECALL OF TIERED FILES	17/378930	7/19/2021
EMC IP Holding Company LLC	Automated Services Exchange	17/379387	7/19/2021
EMC IP Holding Company LLC	True Secure Airgap	17/305968	7/19/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR PROVIDING DIRECT HOST-BASED ACCESS TO BACKUP DATA	17/379319	7/19/2021
EMC IP Holding Company LLC	Selecting Surviving Storage Node Based On Environmental Conditions	17/379668	7/19/2021
EMC IP Holding Company LLC	SCALABLE GARBAGE COLLECTION FOR DEDUPLICATED STORAGE	17/378690	7/17/2021
EMC IP Holding Company LLC	Efficient transfer to and from a deduplicated cloud storage system	17/378494	7/16/2021
EMC IP Holding Company LLC	Data security classification for Storage Systems Using Security Level Descriptors	17/377859	7/16/2021
EMC IP Holding Company LLC	Journal Parsing for Object Event Generation	17/378278	7/16/2021
EMC IP Holding Company LLC	Write-in-Place Multipart Uploads	17/378255	7/16/2021
EMC IP Holding Company LLC	File System Content Obfuscation in High Security Environments	17/378216	7/16/2021
EMC IP Holding Company LLC	Distributed / Multi-Level Server Authentication	17/376376	7/15/2021
EMC IP Holding Company LLC	Multiple Virtual Namespaces on a single Physical Namespace to avoid File System restarts and improve availability	17/376916	7/15/2021
EMC IP Holding Company LLC	Method and apparatus for phased transition of legacy systems to a next generation backup infrastructure	17/376898	7/15/2021
EMC IP Holding Company LLC	Word Aware Content Defined Chunking	17/376954	7/15/2021
EMC IP Holding Company LLC	Reducing Bandwidth During Synthetic Restores from a Deduplication File System	17/376964	7/15/2021
EMC IP Holding Company LLC	Method to select network path automatically to achieve maximum bandwidth in Global Scale environment	17/377038	7/15/2021

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EMC IP Holding Company LLC	Mapping Telemetry Data to States for Efficient Resource Allocation	17/376249	7/15/2021
EMC IP Holding Company LLC	Handling Configuration drift in Backup Storage Systems	17/376488	7/15/2021
EMC IP Holding Company LLC	METHODS, SYSTEMS, AND COMPUTER READABLE MEDIUMS FOR PERFORMING METADATA-DRIVEN DATA COLLECTION	17/375444	7/14/2021
EMC IP Holding Company LLC	LOGICAL STORAGE DEVICE ACCESS USING PER-VM KEYS IN AN ENCRYPTED STORAGE ENVIRONMENT	17/375641	7/14/2021
EMC IP Holding Company LLC	non-disruptive and efficient migration of data across cloud providers	17/375968	7/14/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR PROCESSING REQUESTS IN A MULTITHREADED SYSTEM	17/375499	7/14/2021
EMC IP Holding Company LLC	Managing Objects Subject to a Periodic Backup Expiration	17/374653	7/13/2021
EMC IP Holding Company LLC	Leveraging Metadata to Re-Tier Objects Storing File-based Backup Data	17/374688	7/13/2021
EMC IP Holding Company LLC	Application Optimized Direct to Cloud	17/374604	7/13/2021
EMC IP Holding Company LLC	Space Efficient Direct to Cloud Workflows Using File Based Backup (FBB) for Modern Workloads	17/374552	7/13/2021
EMC IP Holding Company LLC	READ STREAM IDENTIFICATION IN A DISTRIBUTED STORAGE SYSTEM	17/372737	7/12/2021
EMC IP Holding Company LLC	MANAGING DRIVE SPACE AMONG DIFFERENT DATA SERVICES ENVIRONMENTS WITHIN A STORAGE SYSTEM	17/372824	7/12/2021
EMC IP Holding Company LLC	Forwarding incoming IO to SCM namespaces	17/305630	7/12/2021
EMC IP Holding Company LLC	Automated Testing of Functionality of Multiple NVRAM Cards	17/373648	7/12/2021
EMC IP Holding Company LLC	Automated Validation of a REST Application Programming Interface	17/370816	7/8/2021
EMC IP Holding Company LLC	Feature Resource Self-tuning and Rebalancing	17/370300	7/8/2021

EMC IP Holding Company LLC	Request Manager Framework	17/370195	7/8/2021
EMC IP Holding Company LLC	Using drive compression in uncompressed tier	17/367669	7/6/2021
EMC IP Holding Company LLC	N-WAY ACTIVE-ACTIVE STORAGE CONFIGURATION TECHNIQUES	17/368087	7/6/2021
EMC IP Holding Company LLC	Method for secure authentication of backup clients	17/368093	7/6/2021
EMC IP Holding Company LLC	BALANCED WINNER ASSIGNMENT FOR DEADLOCK RESOLUTION	17/364937	7/1/2021
EMC IP Holding Company LLC	META DATA DRIVEN UPGRADES	17/364927	7/1/2021
EMC IP Holding Company LLC	SPACE-EFFICIENT STORAGE OF SYSTEM-MONITORING DATA	17/363108	6/30/2021
EMC IP Holding Company LLC	Allow multiple cache slots to destage single BE track in RAID subsystem to improve whole system efficiency	17/363167	6/30/2021
EMC IP Holding Company LLC	"Replication Time Estimator or Calculator a space efficient and accurate estimation of total time required for replication to complete in a deduplication-based system.	17/305115	6/30/2021
EMC IP Holding Company LLC	Reducing false positive failure events in a health monitoring system using directional graphs	17/363595	6/30/2021
EMC IP Holding Company LLC	Asynchronous Edge-Cloud Machine Learning Model Management With Unsupervised Drift Detection	17/363235	6/30/2021
EMC IP Holding Company LLC	Methods and Systems for Identifying Breakpoints in Variable Impact on Model Results	17/363692	6/30/2021
EMC IP Holding Company LLC	Classifying Data and Enforcing Data Access Control Using a Context-Based Hierarchical Policy	17/364131	6/30/2021
EMC IP Holding Company LLC	Early-warning data-informed business spend and actuation	17/305104	6/30/2021
EMC IP Holding Company LLC	Probabilistic Model for File-Specific Compression Selection under SLA-Constraints	17/305112	6/30/2021
EMC IP Holding Company LLC	Environment Assessment Capture via Data Confidence Fabrics	17/305097	6/30/2021

EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR FILE ANNOTATION	17/364814	6/30/2021
EMC IP Holding Company LLC	A METHOD FOR PROCESSING DATA, AN ELECTRONIC DEVICE, AND A COMPUTER PROGRAM PRODUCT	17/364803	6/30/2021
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER PROGRAM PRODUCT FOR PROCESSING DATA	17/364784	6/30/2021
EMC IP Holding Company LLC	Automated Recovery from RAID double failure	17/361401	6/29/2021
EMC IP Holding Company LLC	TRACKING UTILIZATION OF DATA BLOCKS IN A STORAGE SYSTEM	17/361666	6/29/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR DECENTRALIZED DISTRIBUTED MODEL ADAPTATION	17/361605	6/29/2021
EMC IP Holding Company LLC	TRAINING DATA PROTECTION FOR ARTIFICIAL INTELLIGENCE MODEL IN PARTITIONED EXECUTION ENVIRONMENT	17/362107	6/29/2021
EMC IP Holding Company LLC	Malicious data access as highlighted graph visualization	17/362700	6/29/2021
EMC IP Holding Company LLC	Informed Labeling of Records for Faster Discovery of Business Critical Information	17/362702	6/29/2021
EMC IP Holding Company LLC	Immutable Edge Devices	17/362696	6/29/2021
EMC IP Holding Company LLC	STRIPE DEFRAGMENTATION AND REBUILD BASED ON STRIPE ACCESS FREQUENCY	17/359774	6/28/2021
EMC IP Holding Company LLC	Method for Bandwidth Optimized Delta Restores from a Deduplication File System	17/359,916	6/28/2021
EMC IP Holding Company LLC	Objective Process Update: Continuous Remote Environment Assessment	17/304812	6/25/2021
EMC IP Holding Company LLC	Identifying and Recovering Unused Storage Resources on a Storage System	17/355324	6/23/2021

EMC IP Holding Company LLC	ONE PATH METADATA PAGE RECONSTRUCTION WITH NO DYNAMICAL MEMORY ALLOCATION FOR DELTA-LOG BASED STORAGE	17/355548	6/23/2021
EMC IP Holding Company LLC	DATA STORAGE SYSTEM MANAGEMENT TECHNIQUES AND METRICS	17/355242	6/23/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR IDENTIFYING AND REMEDIATING UNANSWERED QUERIES IN APPLICATION RESOLUTION REPORTS	17/355341	6/23/2021
EMC IP Holding Company LLC	5G Zero Client Monitor	17/355353	6/23/2021
EMC IP Holding Company LLC	Contextual Replication Profile Creation Based on Data Criticality	17/355541	6/23/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR SELF-HEALING OF UPGRADE ISSUES ON A CUSTOMER ENVIRONMENT AND SYNCHRONIZATION WITH A PRODUCTION HOST ENVIRONMENT	17/355333	6/23/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR RANKING DATA STORAGE DEVICES FOR EFFICIENT PRODUCTION AGENT DEPLOYMENT	17/355326	6/23/2021
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SYSTEM	17/352458	6/21/2021
EMC IP Holding Company LLC	TRAINING DATA PROTECTION IN ARTIFICIAL INTELLIGENCE MODEL EXECUTION ENVIRONMENT	17/352653	6/21/2021
EMC IP Holding Company LLC	DATA DEDUPLICATION IN A DISAGGREGATED STORAGE SYSTEM	17/351733	6/18/2021
EMC IP Holding Company LLC	Organizational Awareness for Automating Data Protection Policies With Social Graph Integration	17/351461	6/18/2021
EMC IP Holding Company LLC	Privacy Preserving Ensemble Learning as a Service	17/351569	6/18/2021

EMC IP Holding Company LLC	An Optimized Splitting Offload Method to Improve QAT Compression Efficiency for De-dup Systems	17/351442	6/18/2021
EMC IP Holding Company LLC	Dynamic Selective Filtering of Persistent Tracing	17/350053	6/17/2021
EMC IP Holding Company LLC	ANTI-PIRACY PROTECTION SERVICE-BASED SOFTWARE LICENSE MANAGEMENT SYSTEM TO PREVENT USAGE OF UNLICENSED SOFTWARE AFTER THE TRIAL PERIOD	17/350295	6/17/2021
EMC IP Holding Company LLC	BUFFER ALLOCATION TECHNIQUES	17/350502	6/17/2021
EMC IP Holding Company LLC	System and Method for Self-Encrypting Drive Reversion During Re-Initialization of a Storage Array	17/350072	6/17/2021
EMC IP Holding Company LLC	A method to provide SLA based access to cloud data in backup servers with multi cloud storage	17/350203	6/17/2021
EMC IP Holding Company LLC	A Method to Improve Sequential IO Performance of Physical-Extent-Based RAID for Data Protection Systems	17/349735	6/16/2021
EMC IP Holding Company LLC	Method and system to detect grey storage issue	17/349112	6/16/2021
EMC IP Holding Company LLC	EXTREME PERFORMANCE AND EFFICIENCY ENHANCEMENT IN DATA RECOVERY	17/349031	6/16/2021
EMC IP Holding Company LLC	"Physical Capacity Calculator for Logical Space Unit (Mtrees)", a space efficient and accurate estimation of true physical capacity of a logical space unit (M-tree) in de-duplication-based system.	17/304106	6/14/2021
EMC IP Holding Company LLC	Non-Disruptive Firmware Upgrade of Asymmetric Hardware Accelerator Systems	17/347232	6/14/2021
EMC IP Holding Company LLC	INTERFACE TO MOUNT VIRTUAL DISKS FROM MULTIPLE SOURCES	17/304054	6/14/2021
EMC IP Holding Company LLC	Analyzing disk configuration from dynamic virtual disks	17/304052	6/14/2021
EMC IP Holding Company LLC	Non-Disruptive Firmware Upgrade of Symmetric Hardware Accelerator Systems	17/347141	6/14/2021

EMC IP Holding Company LLC	PERSISTENT METADATA STORAGE IN A STORAGE SYSTEM	17/345828	6/11/2021
EMC IP Holding Company LLC	Intelligent Alert Reduction in a Backup and Recovery Activity Monitoring System	17/346015	6/11/2021
EMC IP Holding Company LLC	Method for File System, DDBoost, and Replication Protocols to Form Groups of Segments and Consistently Route	17/345772	6/11/2021
EMC IP Holding Company LLC	System and Method for Snapshot Rule Time Zone Value	17/344284	6/10/2021
EMC IP Holding Company LLC	Fast Failover of a Deduplicated File System Through Huge Memory Pages	17/344614	6/10/2021
EMC IP Holding Company LLC	Persistent Memory Tiering Supporting Fast Failover in a Deduplicated File System	17/344568	6/10/2021
EMC IP Holding Company LLC	Using INQ to optimize End-to-End Encryption Management with Backup Appliances	17/343532	6/9/2021
EMC IP Holding Company LLC	Restricted Data Transfer	17/343531	6/9/2021
EMC IP Holding Company LLC	Managing Initiator Identities	17/341626	6/8/2021
EMC IP Holding Company LLC	Random Forest Classifier Class Association Rule Mining	17/338985	6/4/2021
EMC IP Holding Company LLC	Continuous Data Protection in Cloud Using Streams	17/303610	6/3/2021
EMC IP Holding Company LLC	Continuous Data Protection in Cloud Using Streams	17/303608	6/3/2021
EMC IP Holding Company LLC	Scaling of an Ordered Event Stream based on a Writer Group Characteristic	17/337940	6/3/2021
EMC IP Holding Company LLC	Continuous Data Protection in Cloud Using Streams	17/303605	6/3/2021
EMC IP Holding Company LLC	Method to provide recommendations for cloud storage providers and storage classes based on backup server's usage patterns for lowering overall cloud costs	17/337975	6/3/2021
EMC IP Holding Company LLC	Dynamically selecting optimal instance type for disaster recovery in the cloud	17/303565	6/2/2021

EMC IP Holding Company LLC	Algorithm to Deploy Containerized Microservices with Business Dependency	17/336714	6/2/2021
EMC IP Holding Company LLC	Method and Apparatus for Creating Recovery Point Objectives in Persistent Memory	17/303506	6/1/2021
EMC IP Holding Company LLC	METHOD, DEVICE AND PROGRAM PRODUCT FOR GENERATING CONFIGURATION INFORMATION OF STORAGE SYSTEM	17/335503	6/1/2021
EMC IP Holding Company LLC	Efficient Data Access Operations via a Mapping Layer Instance for a Doubly Mapped Redundant Array of Independent Nodes	17/333815	5/28/2021
EMC IP Holding Company LLC	Erasure Coding in a Large Geographically Diverse Data Storage System	17/333793	5/28/2021
EMC IP Holding Company LLC	Method to implement and enforce a cost-based quota for cloud operations in backup servers based on allowed cloud budget	17/333966	5/28/2021
EMC IP Holding Company LLC	Access Control Using User Behavior Profile and Storage System-Based Multi-Factor Authentication	17/332115	5/27/2021
EMC IP Holding Company LLC	LOGICAL STORAGE DEVICE ACCESS USING DEVICE-SPECIFIC KEYS IN AN ENCRYPTED STORAGE ENVIRONMENT	17/331041	5/26/2021
EMC IP Holding Company LLC	Adding single disks to an array by relocating RAID members	17/330974	5/26/2021
EMC IP Holding Company LLC	SYSTEM AND METHOD FOR FILE SYSTEM METADATA FILE REGION SEGMENTATION FOR DEDUPLICATION	17/330074	5/25/2021
EMC IP Holding Company LLC	System and Method for virtualizing Hot-Swappable PCIe Devices for Virtual Machines	17/330000	5/25/2021
EMC IP Holding Company LLC	WRITE PRESSURE THROTTLING BASED ON SERVICE LEVEL OBJECTIVES	17/326452	5/21/2021
EMC IP Holding Company LLC	A smart garbage collection method to reduce WAF (Write	17/327356	5/21/2021

	Amplification Factor) in SSD backup system		
EMC IP Holding Company LLC	A Workload-aware Online Drive Firmware Upgrade Method for Data Protection System	17/327166	5/21/2021
EMC IP Holding Company LLC	An Adaptive QAT Scheduling Protocol Used in Cluster Storage Systems	17/326804	5/21/2021
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING ACCESS WORKLOAD OF STORAGE SYSTEM	17/324565	5/19/2021
EMC IP Holding Company LLC	LOG DATA MANAGEMENT IN A STREAMING DATA STORAGE SYSTEM	17/323417	5/18/2021
EMC IP Holding Company LLC	ARTICLE PROCESSING METHOD, ELECTRONIC DEVICE, AND PROGRAM PRODUCT	17/323142	5/18/2021
EMC IP Holding Company LLC	STORAGE MANAGEMENT METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT	17/323268	5/18/2021
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND PROGRAM PRODUCT IMPLEMENTED AT AN EDGE SWITCH FOR DATA ENCRYPTION	17/321720	5/17/2021
EMC IP Holding Company LLC	ENCODING METHOD, ELECTRONIC DEVICE, AND PROGRAM PRODUCT	17/322303	5/17/2021
EMC IP Holding Company LLC	METHOD, DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING FILE SYSTEM	17/321821	5/17/2021
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING MACHINE LEARNING MODEL	17/320392	5/14/2021
EMC IP Holding Company LLC	Accessing using UUIDs Storage Units of a Protection Pool of a RAID System	17/321164	5/14/2021
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE, AND COMPUTER	17/318568	5/12/2021

	PROGRAM PRODUCT FOR DATA DISTILLATION		
EMC IP Holding Company LLC	METHOD, DEVICE, AND PROGRAM PRODUCT FOR CREATING EXTENT ARRAY IN STORAGE SYSTEM	17/318359	5/12/2021
EMC IP Holding Company LLC	System and Method for LACP Enhancements	17/318472	5/12/2021
EMC IP Holding Company LLC	CROSS-STREAM TRANSACTIONS IN A STREAMING DATA STORAGE SYSTEM	17/316842	5/11/2021
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR STORAGE MANAGEMENT	17/316960	5/11/2021
EMC IP Holding Company LLC	Data-Driven Index for Identification and Ranking of Companies for a Selected Technology	17/314315	5/7/2021
EMC IP Holding Company LLC	A RAID Storage System with a Protection Pool of Storage Units	17/314403	5/7/2021
EMC IP Holding Company LLC	Storage Layout of Protection Pool of a RAID System	17/314381	5/7/2021
EMC IP Holding Company LLC	Method for Processing IO Requests of a RAID System having a Protection Pool of Storage Units	17/314805	5/7/2021
EMC IP Holding Company LLC	STORAGE MANAGEMENT METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT	17/314416	5/7/2021
EMC IP Holding Company LLC	ADAPTIVE REPLICATION MODES IN A STORAGE SYSTEM	17/313103	5/6/2021
EMC IP Holding Company LLC	Optimizing Backup Performance with heuristic configuration selection	17/313623	5/6/2021
EMC IP Holding Company LLC	Initialization of a RAID System having a Protection Pool of Storage Units	17/313395	5/6/2021
EMC IP Holding Company LLC	Method for Adding Disks of a RAID System having a Protection Pool of Storage Units	17/313999	5/6/2021
EMC IP Holding Company LLC	Method for Migrating PE Data on a RAID System	17/313996	5/6/2021

EMC IP Holding Company LLC	Method for Full Reconstruction of PE's of a RAID System when a disk failed	17/313960	5/6/2021
EMC IP Holding Company LLC	Data Reconstruction of a RAID System having a Protection Pool of Storage Units	17/313959	5/6/2021
EMC IP Holding Company LLC	Method for Managing Extents of a RAID System having a Protection Pool	17/313390	5/6/2021
EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING STORAGE SYSTEM	17/313170	5/6/2021
EMC IP Holding Company LLC	System and Method for Autonomous and Dynamic Resource Allocation in Storage Systems	17/308915	5/5/2021
EMC IP Holding Company LLC	Access Control of Protected Data Using Storage System-Based Multi-Factor Authentication	17/308114	5/5/2021
EMC IP Holding Company LLC	Detection of Anomalous Quantities in Data Records Using Predicted Quantities of Similar Entities	17/308531	5/5/2021
EMC IP Holding Company LLC	JOURNAL BARRIER CONSISTENCY DETERMINATION	17/308166	5/5/2021
EMC IP Holding Company LLC	MAINTAINING REPLICATION CONSISTENCY DURING DISTRIBUTION INSTANCE CHANGES	17/308520	5/5/2021
EMC IP Holding Company LLC	Detection of Anomalous Backup Files Using Known Anomalous File Fingerprints	17/308113	5/5/2021
EMC IP Holding Company LLC	METHOD, ELECTRONIC DEVICE AND COMPUTER PROGRAM PRODUCT FOR MANAGING DATA BLOCKS	17/308481	5/5/2021
EMC IP Holding Company LLC	Determining Migrations Between Geographically Distributed Data Centers	17/307565	5/4/2021
EMC IP Holding Company LLC	Tracking Data Mirror Differences	17/307558	5/4/2021
EMC IP Holding Company LLC	METHOD AND SYSTEM FOR BACKING UP AND RESTORING DATA	17/307227	5/4/2021

EMC IP Holding Company LLC	METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT FOR MANAGING ADDRESS OF DEVICE IN NETWORK	17/307204	5/4/2021
EMC IP Holding Company LLC	Mechanism of automatic recovery of locking filesystem shared between Virtual Tape Library nodes	17/246761	5/3/2021
EMC IP Holding Company LLC	Modifying Data of Activated Target-Less Point-In-Time Images of Storage Volumes	17/306424	5/3/2021
EMC IP Holding Company LLC	MANAGING REPLICATION JOURNAL IN A DISTRIBUTED REPLICATION SYSTEM	17/306601	5/3/2021
EMC IP Holding Company LLC	MULTI-PATH LAYER CONFIGURED TO DE-OBFUSCATE LOGS PRODUCED BY MULTI-PATH INPUT-OUTPUT DRIVERS	17/246815	5/3/2021
EMC IP Holding Company LLC	MULTI-PATH LAYER CONFIGURED TO PROVIDE ACCESS AUTHORIZATION FOR SOFTWARE CODE OF MULTI-PATH INPUT-OUTPUT DRIVERS	17/246807	5/3/2021
EMC IP Holding Company LLC	Automated Algorithmic Verification in an Embedded Complex Distributed Storage Environment	17/246600	5/1/2021