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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7002750

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | RELEASE OF SECURITY INTEREST AT REEL 048825 FRAME 0489 |

CONVEYING PARTY DATA

| Name | Execution Date |
|---|----------------|
| CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH | 11/01/2021 |

RECEIVING PARTY DATA

| | |
|------------------------|----------------------------|
| Name: | DELL PRODUCTS L.P. |
| Street Address: | ONE DELL WAY |
| City: | ROUND ROCK |
| State/Country: | TEXAS |
| Postal Code: | 78682 |
| Name: | EMC CORPORATION |
| Street Address: | 176 SOUTH STREET |
| City: | HOPKINTON |
| State/Country: | MASSACHUSETTS |
| Postal Code: | 01748 |
| Name: | EMC IP HOLDING COMPANY LLC |
| Street Address: | ONE DELL WAY |
| City: | ROUND ROCK |
| State/Country: | TEXAS |
| Postal Code: | 78682 |

PROPERTY NUMBERS Total: 120

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16263501 |
| Application Number: | 29669207 |
| Application Number: | 29669212 |
| Application Number: | 29669204 |
| Application Number: | 16181728 |
| Application Number: | 29669209 |
| Application Number: | 29669206 |
| Application Number: | 29669203 |
| Application Number: | 29669211 |
| Application Number: | 29669210 |

PATENT

| Property Type | Number |
|----------------------------|---------------|
| Application Number: | 16182192 |
| Application Number: | 16182236 |
| Application Number: | 16183652 |
| Application Number: | 16183843 |
| Application Number: | 16185260 |
| Application Number: | 16186287 |
| Application Number: | 16185323 |
| Application Number: | 16188826 |
| Application Number: | 29670157 |
| Application Number: | 16191845 |
| Application Number: | 16191790 |
| Application Number: | 16191924 |
| Application Number: | 16192003 |
| Application Number: | 16193746 |
| Application Number: | 16192888 |
| Application Number: | 16193722 |
| Application Number: | 16193651 |
| Application Number: | 16195030 |
| Application Number: | 16194992 |
| Application Number: | 16196189 |
| Application Number: | 16196873 |
| Application Number: | 16196856 |
| Application Number: | 16197064 |
| Application Number: | 16197144 |
| Application Number: | 16201610 |
| Application Number: | 16204532 |
| Application Number: | 16205658 |
| Application Number: | 16205676 |
| Application Number: | 16205817 |
| Application Number: | 29671870 |
| Application Number: | 15318936 |
| Application Number: | 15395248 |
| Application Number: | 15634935 |
| Application Number: | 15068590 |
| Application Number: | 15523062 |
| Application Number: | 15581707 |
| Application Number: | 15954929 |
| Application Number: | 15971675 |

| Property Type | Number |
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| Application Number: | 16037609 |
| Application Number: | 16037756 |
| Patent Number: | 10120743 |
| Patent Number: | 10120421 |
| Patent Number: | 10120678 |
| Patent Number: | 10123214 |
| Patent Number: | 10122122 |
| Patent Number: | 10122739 |
| Patent Number: | 10120769 |
| Patent Number: | 10122585 |
| Patent Number: | 10128903 |
| Patent Number: | 10126806 |
| Patent Number: | 10127408 |
| Patent Number: | 10126798 |
| Patent Number: | 10127276 |
| Patent Number: | 10130014 |
| Patent Number: | 10129082 |
| Patent Number: | 10129131 |
| Patent Number: | 10126110 |
| Patent Number: | 10128924 |
| Patent Number: | 10146653 |
| Patent Number: | 10136395 |
| Patent Number: | 10135170 |
| Patent Number: | 10133637 |
| Patent Number: | 10135840 |
| Patent Number: | 10133743 |
| Patent Number: | 10133360 |
| Patent Number: | 10133313 |
| Patent Number: | 10133325 |
| Patent Number: | 10133648 |
| Patent Number: | 10133423 |
| Patent Number: | 10136558 |
| Patent Number: | 10133355 |
| Patent Number: | 10135823 |
| Patent Number: | 10132870 |
| Patent Number: | 10139929 |
| Patent Number: | 10143100 |
| Patent Number: | 10141884 |

| Property Type | Number |
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| Patent Number: | 10139951 |
| Patent Number: | 10139973 |
| Patent Number: | 10139930 |
| Patent Number: | 10126946 |
| Patent Number: | 10101940 |
| Patent Number: | 10102078 |
| Patent Number: | 10103745 |
| Patent Number: | 10104104 |
| Patent Number: | 10120787 |
| Patent Number: | 10120797 |
| Patent Number: | 10122379 |
| Patent Number: | 10127156 |
| Patent Number: | 10127238 |
| Patent Number: | 10133513 |
| Patent Number: | 10133551 |
| Patent Number: | 10135755 |
| Patent Number: | 10135924 |
| Patent Number: | 10139508 |
| Patent Number: | 10140039 |
| Patent Number: | 10140053 |
| Patent Number: | 10140304 |
| Patent Number: | 10146446 |
| Patent Number: | 10146456 |
| Patent Number: | 10146574 |
| Patent Number: | 10146642 |
| Patent Number: | 10146648 |
| Patent Number: | 10146675 |
| Patent Number: | 10146696 |
| Patent Number: | 10146697 |
| Patent Number: | 10148619 |
| Patent Number: | 10148662 |
| Patent Number: | 9680812 |
| Patent Number: | 9940125 |
| Patent Number: | 9959049 |

CORRESPONDENCE DATA

Fax Number: (202)408-3141

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.

PATENT

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|---------------------------|---------------|
| NAME OF SUBMITTER: | JEAN PATERSON |
|---------------------------|---------------|

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|-------------------|-------|
| SIGNATURE: | /jep/ |
|-------------------|-------|

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|---------------------|------------|
| DATE SIGNED: | 11/02/2021 |
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Total Attachments: 9

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RELEASE OF SECURITY INTEREST IN PATENTS

This RELEASE OF SECURITY INTEREST IN PATENTS (this “Release”), dated as of November 1, 2021 (the “Effective Date”), is made by CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, in its capacity as Collateral Agent (the “Agent”), in favor of the grantor party identified on the signature page hereto (the “Grantor”).

WHEREAS, pursuant to that certain Collateral Agreement, dated as of September 7 2016, 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 “Collateral Agreement”), the Grantor granted to the Agent, in its capacity as Agent, a security interest in and to certain collateral;

WHEREAS, pursuant to the Collateral Agreement, the Grantor executed and delivered a Patent Security Agreement, dated as of April 5, 2019 (the “Patent Security Agreement”), for recordal with the United States Patent and Trademark Office;

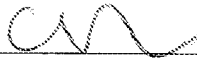
WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on April 8, 2019 at Reel/Frame 048825/0489;

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

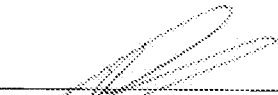
1. Defined Terms. All capitalized terms used, but not otherwise defined herein, shall have the respective meanings ascribed in or otherwise referenced in the Collateral Agreement or the Patent Security Agreement, as applicable.
2. Release. The Agent, without representation or warranty of any kind, hereby releases, discharges, terminates and cancels all of its security interest in and to the Patent Collateral, including the patents and patent applications set forth on Schedule A attached hereto, arising under the Collateral Agreement and the Patent Security Agreement. If and to the extent that the Agent has acquired any right, title or interest in and to the Patent Collateral under the Patent Security Agreement, the Agent, without representation or warranty of any kind, hereby re-transfers, re-conveys and re-assigns such right, title or interest to the Grantor.
3. Termination. The Agent, without representation or warranty of any kind, terminates and cancels the Patent Security Agreement.
4. Further Assurances. 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.
5. Governing Law. This Release shall be governed exclusively under the laws of New York, without regard to conflicts of law or choice of law principles.

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

**CREDIT SUISSE AG, CAYMAN ISLANDS
BRANCH, acting in its capacity as Collateral
Agent for the Lenders**

By:  _____

Name: William O'Daly
Title: Authorized Signatory

By:  _____

Name: Jessica Gavarkovs
Title: Authorized Signatory

GRANTORS:
DELL PRODUCTS L.P.
EMC CORPORATION
EMC IP HOLDING COMPANY LLC

SCHEDULE A
Release of Reel/Frame 048825/0489

Patent Applications

| Owner | Title | App. Date | App. No. |
|--------------------|--|------------------|-----------------|
| Dell Products L.P. | Dynamic Evaluation of Event Participants Using a Smart Context-Based Quiz System | 1/31/2019 | 16/263501 |
| Dell Products L.P. | Portable Information Handling System | 11/6/2018 | 29/669207 |
| Dell Products L.P. | Ruggedized Information Handling System | 11/6/2018 | 29/669212 |
| Dell Products L.P. | Convertible Information Handling System | 11/6/2018 | 29/669204 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR COOLING WITH VARIABLE-LOCATION AIR MOVER | 11/6/2018 | 16/181728 |
| Dell Products L.P. | Portable Information Handling System | 11/6/2018 | 29/669209 |
| Dell Products L.P. | Monitor Stand Mount | 11/6/2018 | 29/669206 |
| Dell Products L.P. | Dual Monitor Stand | 11/6/2018 | 29/669203 |
| Dell Products L.P. | Portable Information Handling System Housing | 11/6/2018 | 29/669211 |
| Dell Products L.P. | Server Rack Handle | 11/6/2018 | 29/669210 |
| Dell Products L.P. | Control Flow integrity using Page Tables in SMM | 11/6/2018 | 16/182192 |
| Dell Products L.P. | Key Based Isolation of SMI Function and Data | 11/6/2018 | 16/182236 |
| Dell Products L.P. | Accessories protected FW Update | 11/7/2018 | 16/183652 |
| Dell Products L.P. | Method to Optimize XR Wireless Render Video Encode Using SLAM | 11/8/2018 | 16/183843 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR SUPPORT OF SELECTIVE PROCESSOR MICROCODE UPDATES | 11/9/2018 | 16/185260 |
| Dell Products L.P. | Hyper-Converged Infrastructure (HCI) Distributed Monitoring System | 11/9/2018 | 16/186287 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR BUOYANCY-ASSISTED IMMERSION SERVER MAINTENANCE | 11/9/2018 | 16/185323 |
| Dell Products L.P. | SYSTEM AND METHOD OF SUPPORTING A POINTING DEVICE | 11/13/2018 | 16/188826 |
| Dell Products L.P. | Foldable Monitor Hood | 11/14/2018 | 29/670157 |
| Dell Products L.P. | Pen and Touch Continuity Across Gap/Seam | 11/15/2018 | 16/191845 |
| Dell Products L.P. | HW Keyboard placement triggers application switcher on opposite screen | 11/15/2018 | 16/191790 |
| Dell Products L.P. | Method to enable posture-sensitive hardware keys | 11/15/2018 | 16/191924 |
| Dell Products L.P. | Fixed position detection via Hall Sensors | 11/15/2018 | 16/192003 |

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|--|---|------------|-----------|
| Dell Products L.P. | SUPPORT INFORMATION PROVISIONING SYSTEM | 11/16/2018 | 16/193746 |
| Dell Products L.P. | Smart and Interactive Book Audio Services | 11/16/2018 | 16/192888 |
| Dell Products L.P. | Method to Remediate No Power/No POST Laptop | 11/16/2018 | 16/193722 |
| Dell Products L.P. | Method to Select Ownership and Share Hardware Watchdog | 11/16/2018 | 16/193651 |
| Dell Products L.P. | Virtual Burn Rack Monitor | 11/19/2018 | 16/195030 |
| Dell Products L.P. | Dynamic Burn Slot Allocator | 11/19/2018 | 16/194992 |
| Dell Products L.P. | Backlight Compensation for a Computing Device with Two or More Display Devices | 11/20/2018 | 16/196189 |
| Dell Products L.P. | Intelligent Dual system hybrid charger management | 11/20/2018 | 16/196873 |
| Dell Products L.P. | SYSTEM AND METHOD FOR DYNAMIC BACKLIGHT AND AMBIENT LIGHT SENSOR CONTROL MANAGEMENT WITH SEMI-SUPERVISED MACHINE LEARNING FOR DIGITAL DISPLAY OPERATION | 11/20/2018 | 16/196856 |
| Dell Products L.P. | Method of Adaptive Distributed Inside-Out EKF SLAM on N IHSs for Co-located Multi-User XR | 11/20/2018 | 16/197064 |
| Dell Products L.P. | Proximity and Context Based Telepresence Scale | 11/20/2018 | 16/197144 |
| Dell Products L.P. | Method to Secure Publicly Hosted Cloud Applications To Run Only in a Trusted UWP Context | 11/27/2018 | 16/201610 |
| Dell Products L.P. | Method to Reduce File Download Time with Integrity Checking | 11/29/2018 | 16/204532 |
| Dell Products L.P. | Portable Information Handling System Stylus Dock | 11/30/2018 | 16/205658 |
| Dell Products L.P. | Portable Information Handling System Low Height Mono Barrel Hinge | 11/30/2018 | 16/205676 |
| Dell Products L.P. | Dock Administration Using A Token | 11/30/2018 | 16/205817 |
| Dell Products L.P. | Information Handling System Stylus Dock | 11/30/2018 | 29/671870 |
| EMC IP Holding Company LLC and EMC Corporation | Virtual Machine Storage Management Queue | 12/14/2016 | 15318936 |
| EMC IP Holding Company LLC | Method And System For Online Program/Erase Count Estimation | 12/30/2016 | 15395248 |
| EMC IP Holding Company LLC | Data Protection With Erasure Coding And XOR | 06/27/2017 | 15634935 |

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|----------------------------|--|------------|----------|
| EMC IP Holding Company LLC | Identifying Insider-Threat Security Incidents Via Recursive Anomaly Detection Of User Behavior | 03/13/2016 | 15068590 |
| EMC IP Holding Company LLC | Arranging Ssd Resources Based On Estimated Endurance | 04/28/2017 | 15523062 |
| EMC IP Holding Company LLC | Method and System for Fast Ordered Writes with Target Collaboration | 04/28/2017 | 15581707 |
| EMC IP Holding Company LLC | Method And Device For Managing Disk Pool | 04/17/2018 | 15954929 |
| EMC IP Holding Company LLC | Deduplicating Snapshots Associated With A Backup Operation | 05/04/2018 | 15971675 |
| EMC IP Holding Company LLC | Storage Device Mounting System | 07/17/2018 | 16037609 |
| EMC IP Holding Company LLC | Method And System For Improving Datacenter Operations Utilizing Layered Information Model | 07/17/2018 | 16037756 |

Patents

| Owner | Title | Issue Date | Patent No. |
|--------------------|---|------------|------------|
| Dell Products L.P. | System and Method for Error Handling Based on a Boot Profile | 11/6/2018 | 10120743 |
| Dell Products L.P. | Flexible Information Handling System Display | 11/6/2018 | 10,120,421 |
| Dell Products L.P. | FIRMWARE UPDATE CONTROL MECHANISM USING ORGANIZATIONAL GROUPS | 11/6/2018 | 10120678 |
| Dell Products L.P. | METHOD AND APPARATUS FOR OPTIMIZING MULTI-PROTOCOL RADIO TECHNOLOGY USING LOCAL QOS ADVERTISING | 11/6/2018 | 10123214 |
| Dell Products L.P. | Printed Circuit Board Connector with Cross-Talk Mitigation | 11/6/2018 | 10122122 |
| Dell Products L.P. | ROOTKIT DETECTION SYSTEM AND METHOD | 11/6/2018 | 10122739 |
| Dell Products L.P. | RAID REBUILD ALGORITHM WITH LOW I/O IMPACT | 11/6/2018 | 10120769 |
| Dell Products L.P. | System and Method for Providing U-Space Aligned Intelligent VLAN and Port Mapping | 11/6/2018 | 10122585 |
| Dell Products L.P. | System and Method of Cancelling Floquet Mode Resonance and Far End Crosstalk, and Mitigating Crosstalk in a Printed Circuit Board | 11/13/2018 | 10128903 |

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| Dell Products L.P. | SYSTEMS AND METHODS FOR DETERMINING THE STATE OF HEALTH OF A CAPACITOR MODULE | 11/13/2018 | 10126806 |
| Dell Products L.P. | Computer Data Protection Lock | 11/13/2018 | 10127408 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR AUTONOMOUSLY ADAPTING POWERING BUDGETING IN A MULTI-INFORMATION HANDLING SYSTEM PASSIVE CHASSIS ENVIRONMENT | 11/13/2018 | 10126798 |
| Dell Products L.P. | METHOD AND SYSTEM FOR DYNAMICALLY OPTIMIZING CLIENT-QUERIES TO READ- MOSTLY SERVERS | 11/13/2018 | 10127276 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR THERMAL MANAGEMENT OF AN INFORMATION HANDLING SYSTEM USING CORRELATIONS BETWEEN FAN SPEED AND FLOW RATE BASED ON SYSTEM CONFIGURATION | 11/13/2018 | 10130014 |
| Dell Products L.P. | Method for intelligent leader determination in a remote server management controller group based management function | 11/13/2018 | 10129082 |
| Dell Products L.P. | System and Method for Device Optimization in a Network of Devices with Embedded Electronics | 11/13/2018 | 10129131 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR FREQUENCY SHIFTING RESONANCE OF AN UNUSED VIA IN A PRINTED CIRCUIT BOARD | 11/13/2018 | 10126110 |
| Dell Products L.P. | Proximity Activated Antenna Switch System and Method Therefor | 11/13/2018 | 10128924 |
| Dell Products L.P. | Automated System-Level Failure and Recovery | 11/14/2018 | 10146653 |
| Dell Products L.P. | SYSTEM AND METHOD FOR CO-LOCATED SAR CONTROL IN AN INFORMATION HANDLING SYSTEM | 11/20/2018 | 10136395 |
| Dell Products L.P. | Contact Geometry for Contacts in High Speed Data Connectors | 11/20/2018 | 10135170 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR SECURE RECOVERY OF HOST SYSTEM CODE | 11/20/2018 | 10133637 |
| Dell Products L.P. | SYSTEM AND METHOD FOR SPEED DIALING INFORMATION HANDLING SYSTEM CONFIGURATION CHANGES | 11/20/2018 | 10135840 |
| Dell Products L.P. | SYSTEMS AND METHODS FOR DATA MIGRATION USING MULTI-PATH INPUT/OUTPUT AND SNAPSHOT-BASED REPLICATION | 11/20/2018 | 10133743 |

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|----------------------------|--|------------|------------|
| Dell Products L.P. | Information Handling System Low Profile Keyboard | 11/20/2018 | 10,133,360 |
| Dell Products L.P. | Multi-Function Information Handling System With Multi-Orientation Stand | 11/20/2018 | 10,133,313 |
| Dell Products L.P. | Enhanced Convective Cooling System | 11/20/2018 | 10133325 |
| Dell Products L.P. | Power Over Ethernet Dynamic Power Allocation System | 11/20/2018 | 10133648 |
| Dell Products L.P. | Information Handling System Low Latency Touch Rejection Buffer | 11/20/2018 | 10,133,423 |
| Dell Products L.P. | Information Handling System Thermal Management Enhanced by Estimated Energy States | 11/20/2018 | 10,136,558 |
| Dell Products L.P. | Interactive Projected Information Handling System Support Input and Output Devices | 11/20/2018 | 10,133,355 |
| Dell Products L.P. | Cloud-Client Device | 11/20/2018 | 10135823 |
| Dell Products L.P. | Dynamic Discharging to Detect Derated Battery Cells | 11/20/2018 | 10132870 |
| Dell Products L.P. | Information Handling System Interactive Totems | 11/27/2018 | 10,139,929 |
| Dell Products L.P. | Modular Networking Device Connection System | 11/27/2018 | 10143100 |
| Dell Products L.P. | COOLING FAN FILTERING | 11/27/2018 | 10141884 |
| Dell Products L.P. | Information Handling System Variable Capacitance Totem Input Management | 11/27/2018 | 10,139,951 |
| Dell Products L.P. | Information Handling System Totem Tracking Management | 11/27/2018 | 10,139,973 |
| Dell Products L.P. | Information Handling System Capacitive Touch Totem Management | 11/27/2018 | 10,139,930 |
| EMC IP Holding Company LLC | Data Protection Object Store | 11/13/2018 | 10126946 |
| EMC IP Holding Company LLC | Data Retrieval System And Method | 10/16/2018 | 10101940 |
| EMC IP Holding Company LLC | Minimizing A Footprint Of Incremental Backups | 10/16/2018 | 10102078 |
| EMC IP Holding Company LLC | Content-Aware Compression Of Data Using Selection From Multiple Weighted Prediction Functions | 10/16/2018 | 10103745 |
| EMC IP Holding Company LLC | Security Alerting System with Network Blockade Policy Based on Alert Transmission Activity | 10/16/2018 | 10104104 |
| EMC IP Holding Company LLC | Automated Code Testing In A Two-Dimensional Test Plane Utilizing Multiple Data Versions From A Copy Data Manager | 11/06/2018 | 10120787 |

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| EMC IP Holding Company LLC | Managing Mapping Metadata In Storage Systems | 11/06/2018 | 10120797 |
| EMC IP Holding Company LLC | Content-Aware Compression Of Data With Reduced Number Of Class Codes To Be Encoded | 11/06/2018 | 10122379 |
| EMC IP Holding Company LLC | Caching Techniques | 11/13/2018 | 10127156 |
| EMC IP Holding Company LLC | Methods and Apparatus for Filtering Dynamically Loadable Namespaces (DLNs) | 11/13/2018 | 10127238 |
| EMC IP Holding Company LLC and EMC Corporation | Cache Management System And Method | 11/20/2018 | 10133513 |
| EMC IP Holding Company LLC | Content-Aware Compression Of Data Using Multiple Parallel Prediction Functions | 11/20/2018 | 10133551 |
| EMC IP Holding Company LLC | Information Technology Infrastructure Discovery Utilizing Discovery Adapters | 11/20/2018 | 10135755 |
| EMC IP Holding Company LLC and Triad National Security, LLC | Computing Erasure Metadata and Data Layout Prior to Storage Using A Processing Platform | 11/20/2018 | 10135924 |
| EMC IP Holding Company LLC | Methods and Apparatus for Automatic Identification of Faults on Noisy Seismic Data | 11/27/2018 | 10139508 |
| EMC IP Holding Company LLC | I/O Alignment For Continuous Replication In A Storage System | 11/27/2018 | 10140039 |
| EMC IP Holding Company LLC | Load Balancing Of Multi-Copy Data Replication | 11/27/2018 | 10140053 |
| EMC IP Holding Company LLC and Triad National Security, LLC | Distributed Metadata Servers in a File System with Separate Metadata Servers for File Metadata and Directory Metadata | 11/27/2018 | 10140304 |
| EMC IP Holding Company LLC | Data Storage System With Port Congestion Hinting For Host Multipathing | 12/04/2018 | 10146446 |
| EMC IP Holding Company LLC | Data Storage System With Multi-Level, Scalable Metadata Structure | 12/04/2018 | 10146456 |
| EMC IP Holding Company LLC | Techniques For Scheduling Storage Operations On Virtual Disks Of A Virtual Machine | 12/04/2018 | 10146574 |
| EMC IP Holding Company LLC | Fault Resilient Distributed Computing Using Virtual Machine Continuous Data Protection | 12/04/2018 | 10146642 |
| EMC IP Holding Company LLC | Preserving Disaster Recovery Protection For A Data Storage Object | 12/04/2018 | 10146648 |

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| EMC IP Holding Company LLC | Automated Code Upgrade Testing Utilizing A Copy Data Manager | 12/04/2018 | 10146675 |
| EMC IP Holding Company LLC | Data Storage System With Cluster Virtual Memory On Non-Cache-Coherent Cluster Interconnect | 12/04/2018 | 10146696 |
| EMC IP Holding Company LLC | Numa-Aware Perfect Hash Algorithm | 12/04/2018 | 10146697 |
| EMC IP Holding Company LLC | Identity-Based Application-Level Filtering of Network Traffic | 12/04/2018 | 10148619 |
| EMC IP Holding Company LLC | De-Duplication of Access Control Lists | 12/04/2018 | 10148662 |
| EMC IP Holding Company LLC | Enrolling A User In A New Authentication Procedure Only If Trusted | 06/13/2017 | 9680812 |

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|----------------------------|--|------------|---------|
| EMC IP Holding Company LLC | Generating Upgrade Recommendations For Modifying Heterogeneous Elements Of Information Technology Infrastructure | 04/10/2018 | 9940125 |
| EMC IP Holding Company LLC | Aggregated Background Processing In A Data Storage System To Improve System Resource Utilization | 05/01/2018 | 9959049 |