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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/074,500	10/19/2020	Vipul Pabari	367894-991102	4116

26379 7590 09/09/2022

DLA PIPER LLP (US)
2000 UNIVERSITY AVENUE
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EXAMINER	
MUSA, ABDELNABI O	

ART UNIT	PAPER NUMBER
2472	

NOTIFICATION DATE	DELIVERY MODE
09/09/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

paloaltopatentdocket@us.dlapiper.com

Office Action Summary	Application No. 17/074,500	Applicant(s) Pabari, Vipul	
	Examiner ABDELNABI O MUSA	Art Unit 2472	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 08/16/2022.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-14 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-14 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 10/19/2020 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

2. Acknowledgment is made for the applicant's response and amendment filed on 08/16/2022.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/17/2022 has been entered.

Remarks

4. The claims are presented as follows:

- Claims 1 and 11 are amended.
- Claims 15-19 are withdrawn.
- Claims 1-14 are pending.

Response to Argument

5. Applicant's arguments with respect to the amended claim have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper time-wise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to:

www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

7. **Claims 1-14** are rejected on the ground of nonstatutory double patenting as being unpatentable over **claims 1-16** of **U.S. Patent No. 10,810,050 B2 [application No.15/201,087],** Although the claims at issue are not identical, they are not patentably distinct from each other because the independent claims and their dependent claims of the instant application contain similar limitations of the independent and their dependent claims of the patented application, which lead to the same claimed invention, thus they are not patentably distinct from each other.

The independent claims and their dependent claims of the instant application contain similar limitations of the independent claims and their dependent claims of the co-pending application.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the language of the claims presented contain the same limitations claimed. It would have been obvious to one of ordinary skilled in the art to modify the patented application to create the instant application since both applications

providing a virtualization system that includes physical resources and virtual assets managed by a virtualization layer running on the physical resources through a control computer or controller.

8. **Claims 1-14** are rejected on the ground of nonstatutory double patenting as being unpatentable over **claims 1-37** of **U.S. Patent No. 9,444,762 B2 [application No.14/450,765],** Although the claims at issue are not identical, they are not patentably distinct from each other because the independent claims and their dependent claims of the instant application contain similar limitations of the independent and their dependent claims of the patented application, which lead to the same claimed invention, thus they are not patentably distinct from each other.

The independent claims and their dependent claims of the instant application contain similar limitations of the independent claims and their dependent claims of the co-pending application.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the language of the claims presented contain the same limitations claimed. It would have been obvious to one of ordinary skilled in the art to modify the patented application to create the instant application since both applications providing a virtualization system that includes physical resources and virtual assets managed by a virtualization layer running on the physical resources through a controller.

Claim Rejections - 35 USC § 103

9. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any

correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over **Vasilevsky et al. Publication No. (US 2005/0044301 A1)** in view of **Singh et al. Publication No. (US 2006/0069761 A1).**

Regarding **claim 1**, **Vasilevsky** teaches a method for access to one or more virtualization system resources over a network, the method comprising:

implementing a virtualization system **(virtualization environment 100 FIG.1 [0058])** that has a control computer **(Manager 212 FIG.2)** and one or more physical

resources **(data center provides network resources [0058] FIG.1)** and virtual assets **(operating system layer 103 FIG.1)** connected to the control computer **(a single copy of the operating system (OS) exists in the virtual machine architecture (VMA) that is run by any processor to virtualize resources through an abstraction layer (e.g., DVMM) to perform providing isolation between the operating system/application and the underlying hardware [0022-25] the virtual server presents a single system image while executing across one or more nodes [0038] each of the plurality of processors executes a respective instance of a microkernel program, and wherein each of the respective instances of the microkernel program are adapted communicate to cooperatively share the plurality of resources of the computer system [0043-44] FIG.7),** and the virtual assets are managed by virtualization layer instances running on each of the physical resources **(the virtualization layer managing the execution of the operating system, which includes a distributed virtual machine monitor that provides a single system abstraction based upon coordinated, cooperating systems and thereby controls access to physical resources underlying the virtual serves [0017] see examples of management of the application layer [0041-42] FIG.1);**

connecting an end user to the control computer **(the manager 212 is connected to end user nodes 107A-107C [0058] FIG.1);** and

accessing, through the control computer connection, the virtual assets by the end user **(the management agent 815 residing within the virtualization environment is responsible for handling dynamic reconfiguration functions by receiving commands from the administrator (the end user through manager 212) is used for**

accessing virtual assents for adding, deleting, and reallocating of resources from virtual servers [0150-0154] FIG.2).

Vasilevsky does not explicitly teach wherein each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems

Singh teaches wherein each of the one or more physical resources execute at least two virtual assets that each comprise software instantiations of computer systems **(Singh: A system and method for balancing the load of virtual machines among the physical servers of a network is disclosed. When a server of the network is identified as exceeding its total resource utilization, a virtual machine within the server is selected for migration to another physical server within the network, server Node 24A includes and executes two virtual machines 24A, each virtual machine contains virtual system software that runs on the operating system of the server and supports each virtual machine of the server [0012-114] FIG.1).**

Therefore, it would have been obvious to one of ordinary skilled in the art before the effective filling date of the claimed invention to have modified **Vasilevsky** by the teaching of **Singh** to have the physical resources execute at least two virtual assets that each contains software instantiations of computer systems in order to supports the virtual machines running on the server **(Singh: [0018-19] FIG.3).**

Regarding **claim 2**, **Vasilevsky** teaches the method of claim 1, wherein connecting the end user to the control computer further comprises connecting the end user to the control computer over one of a network, a wide area network or the Internet **(System 101 may be coupled to one or more external communication networks (e.g., network**

106) for the purpose of sharing resources with one or more systems (e.g., systems 107A-107C) [0061] FIG.2).

Regarding **claim 3**, **Vasilevsky** teaches the method of claim 2, wherein connecting the end user to the control computer further comprises using, by the end user, a desktop, a laptop or a personal digital assistant (PDA) and client resources **(one or more client computers coupled through a communication network (e.g., enterprise network, Internet, combination of both) [0003] FIG.1).**

Regarding **claim 4**, **Vasilevsky** teaches the method of claim 3, wherein accessing the virtual assets further comprising accessing an application server by the end user **(providing computing resources through servers, these servers provide a single function (e.g., file server, application server, backup server, etc.) to one or more client computers [0003] FIG.1).**

Regarding **claim 5**, **Vasilevsky** teaches the method of claim 3, wherein accessing the virtual assets further comprising using a browser **(applications operate in a data center environment that provides resources to other systems (e.g., systems 107A-107C) may be executed on system 101, such applications include a web-based application, e-mail server, file server, or other application [0058-59] FIG.1).**

Regarding **claim 6**, **Vasilevsky** teaches the method of claim 1, wherein the virtual asset is providing end user access to one of an application server, to a middleware server

and to a database **(system 101 that may be used to execute one or more data center applications, for example, any application program that may operate in a data center environment. For instance, a database server application, web-based application, e-mail server, file server, or other application that provides resources to other systems (e.g., systems 107A-107C) may be executed on system 101 [0058-59] FIG.1).**

Regarding **claim 7**, **Vasilevsky** teaches the method of claim 6, wherein providing the virtual assets further comprise providing a virtual storage resource (**a database server application, web-based application, e-mail server, file server, or other application that provides resources to other systems [0058-59] FIG.1).**

Regarding **claim 8**, **Vasilevsky** teaches the method of claim 7, wherein providing the virtual storage resource further comprises mapping a logical storage unit to a physical storage disk **(an application is scaled horizontally across at least one virtual server, comprised of a set of virtual processors, each of which is mapped to one or more physical nodes [0057-58] FIG.1).**

Regarding **claim 9**, **Vasilevsky** teaches the method of claim 1, wherein providing the virtual assets further comprise providing a logical network resource **(the distributed memories of each node associated with the distributed server may be made available to a virtual server as logical memory 604 and to the operating system**

(GOS), as if it were a physical memory. Memory 604 is then made available (as process virtual memory 605) to applications [0103] FIG.6).

Regarding **claim 10**, **Vasilevsky** teaches the method of claim 9, wherein providing the logical network resource further comprises mapping a logical network unit to a physical network device **(an application is scaled horizontally across at least one virtual server, comprised of a set of virtual processors, each of which is mapped to one or more physical nodes [0057-58] FIG.1).**

Regarding **claims 11-14**, the independent claim and each dependent claim are related to the same limitation set for hereinabove in **claims 1-10**, where the difference used is the limitations were presented from a **"method"** side and the wordings of the claims were interchanged within the claim itself or some of the claims were presented as a combination of two or more previously presented limitations. **This change does not affect the limitation of the above treated claims.** Adding these phrases to the claims and interchanging the wording did not introduce new limitations to these claims. **Therefore, these claims were rejected for similar reasons as stated above.**

Claims 15-19 (withdrawn).

Conclusion

10. When responding to this office action, Applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of the

art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections See 37 CFR 1.111 (c).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDELNABI O MUSA whose telephone number is (571)270-1901, and email address is abdelnabi.musa@uspto.gov 'preferred'. The examiner can normally be reached on M-F 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kizou, Hassan can be reached on 571-2723088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ABDELNABI O MUSA/
Primary Examiner, Art Unit 2472

Notice of References Cited	Application/Control No. 17/074,500	Applicant(s)/Patent Under Reexamination Pabari, Vipul	
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U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20060149842-A1	07-2006	Dawson; Christopher James	G06F9/5072	709/226
*	B	US-20060069761-A1	03-2006	Singh; Sumankumar A.	H04L67/1008	709/222
*	C	US-20050044301-A1	02-2005	Vasilevsky, Alexander David	G06F9/45533	711/1
	D					
	E					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
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	R					
	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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	Examiner	**Art Unit**
	ABDELNABI O MUSA	2472

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/29/2021	01/06/2022	05/12/2022	08/30/2022					
	1	÷	✓	✓	✓					
	2	÷	✓	✓	✓					
	3	÷	✓	✓	✓					
	4	÷	✓	✓	✓					
	5	÷	✓	✓	✓					
	6	÷	✓	✓	✓					
	7	÷	✓	✓	✓					
	8	÷	✓	✓	✓					
	9	÷	✓	✓	✓					
	10	÷	✓	✓	✓					
	11	÷	✓	✓	✓					
	12	÷	✓	✓	✓					
	13	÷	✓	✓	✓					
	14	÷	✓	✓	✓					
	15	÷	N	N	N					
	16	÷	N	N	N					
	17	÷	N	N	N					
	18	÷	N	N	N					
	19	÷	N	N	N					

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	17/074,500	Pabari, Vipul
	Examiner	Art Unit
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CPC - Searched*		
Symbol	**Date**	**Examiner**
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08	01/06/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12	05/12/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12	08/30/2022	AM

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/074,500	Pabari, Vipul
	Examiner	Art Unit
	ABDELNABI O MUSA	2472

Search Notes		
Search Notes	**Date**	**Examiner**
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08 search is limited by text, see attached search history report.	01/06/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	01/06/2022	AM
H04L 41/00, 41/147, 47/78, 41/064, 41/12, 41/18, 41/22, 43/08 search is limited by text, see attached search history report.	05/12/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	05/12/2022	AM
PE2E SEARCH (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	08/30/2022	AM
H04L 41/00, 41/147, 47/78, 41/064 search is limited by text, see attached search history report.	08/30/2022	AM

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

/ABDELNABI O MUSA/ Primary Examiner, Art Unit 2472	

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Report Information from Dialog

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Search Strategy

Databases: ABI/INFORM® Professional Advanced, Abstracts in New Technology & Engineering, AdisInsight: Drugs, AdisInsight: Trials, Adis Pharmacoeconomics & Outcomes News, AGRICOLA, AGRIS, Allied & Complementary Medicine™, Analytical Abstracts, APA PsycInfo®, Aqualine, Aquatic Science & Fisheries Abstracts (ASFA), Australian Education Index, BIOSIS® Toxicology, BIOSIS Previews®, British Library Inside Conferences, British Nursing Index, Business & Industry, CAB ABSTRACTS, Chemical Business Newsbase, Chemical Engineering & Biotechnology Abstracts, Chemical Safety Newsbase, Civil Engineering Abstracts, ClinicalTrials.gov, Current Contents® Search, Derwent Drug File, Derwent Drug Registry, DH-DATA: Health Administration, Medical Toxicology & Environmental Health, DIOGENES® FDA Regulatory Updates, Drug Information Fulltext, Earthquake Engineering Abstracts, EconLit, Ei Compendex®, Ei EnCompassLIT, Embase®, Embase® French Local Literature, Embase Preprints, EMCare®, ERIC, ESPICOM Pharmaceutical & Medical Device News, FDAnews, FLUIDEX (Fluid Engineering Abstracts), Foodline®: MARKET, Foodline®: PRODUCT, Foodline®: SCIENCE, FSTA®, Gale Group Computer Database™, Gale Group Health Periodicals Database, Gale Group New Product Announcements / Plus®, Gale Group Newsletter Database™, Gale Group PharmaBiomed Business Journals, Gale Group PROMT®, Gale Group Trade & Industry Database™, GEOBASE, GeoRef, Global Health, HSELINE: Health and Safety, ICONDA - International Construction Database, IMS Company Profiles, IMS New Product Focus, IMS Pharma Trademarks, IMS R&D Focus, IMS R&D Focus Drug News, Inspec®, International Pharmaceutical Abstracts, Jane's Defense & Aerospace News, King's Fund, KOSMET: Cosmetic Science, Lancet Titles, Mechanical & Transportation Engineering Abstracts, MEDLINE®, Meteorological & Geoastrophysical Abstracts, Morressier Life Science Conference Abstracts and Posters, New England Journal of Medicine, Northern Light Life Sciences Conference Abstracts, NTIS: National Technical Information Service, Oceanic Abstracts, PAIS International, Paperbase, PAPERCHEM, ProQuest Advanced Tech & Aerospace Professional, ProQuest Biological & Health Science Professional, ProQuest Dissertations and Theses Professional, ProQuest Environmental Science Professional, ProQuest Materials Research Professional, ProQuest Newsstand Professional, ProQuest Technology Research Professional, Prous Science Daily Essentials, Prous Science Drug Data Report, Prous Science Drugs Of The Future™, Publicly Available Content, Registry of Toxic Effects of Chemical Substances (RTECS®), SciSearch®: a Cited Reference Science Database, Social SciSearch®, ToxFile®, Transport Research International Documentation, TULSA™ (Petroleum Abstracts), UBM Computer Full Text, Weldasearch®, Zoological Record

Set#	Searched for	Results
S1	(((physical near/15 resources) near/15 execut[*4]) near/15 virtual) near/15 assets	2°
S2	physical near/15 resources and virtual near/15 assets	1372°
S3	virtual near/15 physical and manage[*5] near/15 virtualization pre/0 layer	299°
S4	manage[*5] near/15 virtualization pre/0 layer	799°
S5	S3 AND S2	11°
S6	S4 AND S2	14°
S7	S4 AND S3	299°
S8	S4 AND S3 AND S2	11°

° Duplicates are removed from the search and from the result count.

Patent Owner, ToutVirtual - Ex. 2022, p. 20

Document 1 of 16

HOW TO Mitigate the Risks of a Multi-Location Workforce

Author: Chatterton, Deon

Publication info: Security Technology Executive 31.2: 24-26. Endeavor Business Media. (May/Jun 2021)

ProQuest document link

Databases: ABI/INFORM® Professional Advanced (1971 - current)

Document 2 of 16

ToutVirtual Inc Seeks Patent for Virtual Systems Management

Publication info: Global IP News. Information Technology Patent News [New Delhi] 04 Feb 2021.

ProQuest document link

Databases: ProQuest Newsstand Professional

Document 3 of 16

VMware Class A (VMW) issued new U.S. patent [9,934,067]

Publication info: News Bites - Computing & Information [Melbourne] 05 Apr 2018.

ProQuest document link

Databases: ABI/INFORM® Professional Advanced, ProQuest Newsstand Professional

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Document 4 of 16

VMware Class A (VMW) issued new U.S. patent [9,933,832]

Publication info: News Bites - Computing & Information [Melbourne] 05 Apr 2018.

ProQuest document link

Databases: ABI/INFORM® Professional Advanced, ProQuest Newsstand Professional

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Document 5 of 16

VMware Class A (VMW) issued new U.S. patent [9,934,060]

Publication info: News Bites - Computing & Information [Melbourne] 05 Apr 2018.

ProQuest document link

Databases: ABI/INFORM® Professional Advanced, ProQuest Newsstand Professional

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Document 6 of 16

Patent Owner, ToutVirtual - Ex. 2022, p. 21

Advancing Security Services for Cloud Applications

Author: Elsayed, Marwa Abdelhafiz Mohamed Afifi
Publication info: Queen's University (Canada). ProQuest Dissertations Publishing, 2018. 11010671.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 7 of 16

U.S. Patent and Trademark Office Receives Toutvirtual Inc's Patent Application for Virtual Systems Management

Publication info: Global IP News. Software Patent News [New Delhi] 27 Oct 2016.
ProQuest document link

Databases: ProQuest Newsstand Professional

Document 8 of 16

Live-Migration in Cloud Computing Environment

Author: Alselek, Mohammad; Leite, Jorge Pinto
Publication info: Instituto Politecnico do Porto (Portugal), ProQuest Dissertations Publishing, 2016. 28991897.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 9 of 16

Effective Resource Management and Quality of Service in Virtualized Environment of Cloud Computing

Author: Chandra, Jadala Vijaya; Ranjith, Gyaderla; Ravali, Chindam
Publication info: International Journal of Advanced Research in Computer Science 6.7 International Journal of Advanced Research in Computer Science. (Sep 2015)
ProQuest document link

Databases: ProQuest Advanced Tech & Aerospace Professional, Publicly Available Content, ProQuest Technology Research Professional

Document 10 of 16

Integrated Management of Cloud Computing Resources

Author: Meireles, Fernando Miguel Dias

Patent Owner, ToutVirtual - Ex. 2022, p. 22

Publication info: Instituto Politecnico do Porto (Portugal), ProQuest Dissertations Publishing, 2014. 28992291.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 11 of 16

Digital Forensics for Infrastructure-as-a-Service Cloud Computing

Author: Dykstra, Josiah Alexander Bradford Spoor
Publication info: University of Maryland, Baltimore County. ProQuest Dissertations Publishing, 2013. 3563315.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 12 of 16

Statistical Characterization of Storage System Workloads for Data Deduplication and Load Placement in Heterogeneous Storage Environments

Author: Park, Nohhyun
Publication info: University of Minnesota. ProQuest Dissertations Publishing, 2013. 3605364.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 13 of 16

Cybersecurity protection: Design science research toward an Intercloud Transparent Bridge Architecture (ICTOBRA)

Author: Wilson, Joe M.
Publication info: Capella University. ProQuest Dissertations Publishing, 2013. 3600777.
ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 14 of 16

Cloud Infrastructure Service Management - A Review

Author: Innocent, A Anasuya Threse
Publication info: International Journal of Computer Science Issues (IJCSI) 9.2: 287-292. International Journal of Computer Science Issues (IJCSI). (Mar 2012)
ProQuest document link

Databases: ProQuest Advanced Tech & Aerospace Professional, ProQuest Technology Research Professional

Patent Owner, ToutVirtual - Ex. 2022, p. 23

Document 15 of 16

A Security Model for a Virtualized Information Environment

Author: Tolnai, Annette

Publication info: University of Johannesburg (South Africa). ProQuest Dissertations Publishing, 2012. 28333796.

ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Document 16 of 16

Virtualizing and sharing resources in High-Performance Reconfigurable Computing architectures

Author: Aly, Esam ElDin Mohamed

Publication info: The George Washington University. ProQuest Dissertations Publishing, 2010. 3413267.

ProQuest document link

Databases: ProQuest Dissertations and Theses Professional

Contact ProQuest

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Patent Owner, ToutVirtual - Ex. 2022, p. 24

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	7	("20050138165"|"20050155033"|"20060294238"|"20070067435"|"20080086731"|"7463648"|"7512769").PN.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 11:51 AM
L2	19897	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:10 PM
L3	16	pabari.in.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:10 PM
L4	0	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host).clm.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:12 PM
L5	1094	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host)	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:12 PM
L6	1	L3 L5	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:12 PM
L7	1	(virtual$ mange$4).ti.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:13 PM
L8	82	(manage$4 virtual$6 environment resource$4).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:14 PM
L9	13	L2 L8	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:14 PM
L10	2	(manage$4 virtual$6 environment resource$4 physical host).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/29 05:17 PM
L11	17572	(manage$4 virtual$6 environment (resource$4 or asset$2) physical host allocat$4)	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:10 PM
L12	19897	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:11 PM
L13	1084	L11 L12	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:11 PM
L14	468	L13 (load adj (shar$4 or balanc$4))	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:11 PM
L15	82	(manage$4 virtual$6 environment resource$4).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:13 PM
L16	4	L14 L15	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:13 PM
L17	143	((virtual adj machine) or	(US-PGPUB; USPAT;	AND	OFF	OFF	2010/10/30

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		VM) same new same physical same host	USOCR; IBM_TDB)				02:18 PM
L18	2	L15 L17	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:19 PM
L19	2	L17 L15	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:19 PM
L20	84	L17 L11	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:21 PM
L21	9	L20 L12	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2010/10/30 02:22 PM
L22	0	(knowledge near block re$allocat$4 (real$time or real near time) virtual$2 image application$2 (inventory or resource$2) prioriti$6 (peer$2 or member$2) physical).clm.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2012/04/10 02:21 PM
L23	2	(knowledge near block re$allocat$4 (real$time or real near time) virtual$2 image application$2 (inventory or resource$2) prioriti$6 (peer$2 or member$2) physical)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2012/04/10 02:21 PM
L24	156	(Automatic configuration management).ab.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2012/04/10 02:29 PM
L25	41755	709/223,224,226,229,220,221.ccls.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2012/04/10 02:31 PM
L26	29	L24 L25	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2012/04/10 02:31 PM
L27	0	(10/460518).APP.	(USPAT; USOCR)	OR	OFF	OFF	2012/04/10 02:34 PM
L28	7	("20050138165"|"20050155033"|"20060294238"|"20070067435"|"20080086731"|"7463648"|"7512769").PN.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L29	25092	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L30	20	pabari.in.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L31	0	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host).clm.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L32	1541	(manage$4 virtual$6 environment inventory resource$4 prioritiz$4 physical host)	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM

Patent Owner, ToutVirtual - Ex. 2022, p. 26

L33	1	L30 L32	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L34	1	(virtual$ mange$4).ti.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L35	122	(manage$4 virtual$6 environment resource$4).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L36	26	L29 L35	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L37	3	(manage$4 virtual$6 environment resource$4 physical host).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L38	22641	(manage$4 virtual$6 environment (resource$4 or asset$2) physical host allocat$4)	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L39	25092	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L40	1484	L38 L39	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L41	637	L40 (load adj (shar$4 or balanc$4))	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L42	122	(manage$4 virtual$6 environment resource$4).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L43	8	L41 L42	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L44	238	((virtual adj machine) or VM) same new same physical same host	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L45	7	L42 L44	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L46	7	L44 L42	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L47	141	L44 L38	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L48	18	L47 L39	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:36 PM
L49	166	(manage$4 virtual$6 resource$4 physical).ab.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:39 PM
L50	118867	"709".clas.	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:39 PM
L51	49	L50 L49	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:39 PM
L52	49	L51 not L26	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:39 PM
L53	0	real near time matrics virtual physical	(US-PGPUB; USPAT; USOCR; IBM_TDB)	SAME	OFF	OFF	2012/04/10 02:43 PM

L54	27	real near time metrics virtual physical	(US-PGPUB; USPAT; USOCR; IBM_TDB)	SAME	OFF	OFF	2012/04/10 02:43 PM
L55	1	L39 and real near time metrics virtual physical	(US-PGPUB; USPAT; USOCR; IBM_TDB)	SAME	OFF	OFF	2012/04/10 02:44 PM
L56	3	L50 L54	(US-PGPUB; USPAT; USOCR; IBM_TDB)	AND	OFF	OFF	2012/04/10 02:46 PM
L57	9	pabari.in.	(USPAT)	AND	OFF	OFF	2012/04/10 02:50 PM
L58	20	pabari.in.	(US-PGPUB; USPAT)	AND	OFF	OFF	2012/04/10 02:50 PM
L59	1	L23 L58	(US-PGPUB; USPAT)	AND	OFF	OFF	2012/04/10 02:50 PM
L60	0	L24 L58	(USPAT)	AND	OFF	OFF	2012/04/10 02:51 PM
L78	3	"11503090"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2013/03/12 03:19 PM
L79	8	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$).did.	(US-PGPUB; USPAT)	OR	OFF	OFF	2013/03/12 03:52 PM
L80	5	L79 and (virtual$7 environment layer network (resourc$2 or computer$2 or printer$2 or device$2) (asset$2 or sofware or program$2 or instruction$2))	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	OFF	OFF	2013/03/12 03:54 PM
L81	1	(11/031542).APP.	(USPAT; USOCR)	OR	OFF	OFF	2013/03/12 04:04 PM
L82	0	virtual$8 environment virtual$8 near2 laver$1 network resource$2d virtual asset$2 (software or instantiation$1) virtualization layer managing the virtual assets	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:45 AM
L83	0	virtual$8 environment virtual$8 near2 laver$1 network resource$2d virtual asset$2 (software or instantiation$1)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:45 AM
L84	0	virtual$8 environment virtual$8 near2 laver$1 network resource$2d	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:46 AM

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		virtual asset$2					
L85	0	virtual$8 environment virtual$8 near2 laver$1	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:46 AM
L86	1	virtual$8 virtual$8 near2 laver$1	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:46 AM
L87	858	virtualization layer manag$6 virtual (asset$2 or resourc$2)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:47 AM
L88	427	virtualization near layer manag$6 virtual (asset$2 or resourc$2)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:47 AM
L89	31	virtualization near layer near5 manag$6 near5 virtual (asset$2 or resourc$2)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:47 AM
L90	10	virtualization near layer near5 manag$6 near5 virtual (asset$2 or resourc$2) and ("709"/$.ccls.)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:48 AM
L91	3218	(virtual or virtualization) layer network (resourc$2 or assets)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:49 AM
L92	444	L91 and L87	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:49 AM
L93	287	L91 and L88	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:50 AM
L94	522	(virtual or virtualization) near layer network (resourc$2 or assets)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:50 AM
L95	259	L94 and L88	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:50 AM
L96	258	(virtual or virtualization) near layer near4 (resourc$2 or assets)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 10:54 AM
L97	10	virtualization near layer near5 manag$6 near5 virtual (asset$2 or resourc$2) and ("709"/$.ccls.)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:22 PM
L98	37	(virtual or virtualization) near layer near3 manag$6 near4 (resourc$2 or assets)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:22 PM
L99	33	L98 not L97	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:22 PM
L100	15	(virtualization near layer resourc$2).ab.	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:33 PM
L101	12	L100 not L99	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:33 PM
L102	29	virtualization near layer near2 manag$6 near4	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:36 PM

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		(asset$1 or resourc$2)					
L103	2	L102 not L99	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:37 PM
L104	10	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2013/07/24 02:40 PM
L105	2	L104 and (virtual or virtualization) near layer	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:40 PM
L106	37	(virtual or virtualization) near layer near3 manag$6 near4 (resourc$2 or assets)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/07/24 02:40 PM
L107	0	(10/831973).APP.	(USPAT; USOCR)	AND	OFF	OFF	2013/07/24 02:41 PM
L108	10	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2013/08/28 09:06 PM
L109	0	L108 and (virtualization with layer) controller (resourc$2 or inventory or assents) virtualization near4 environment$1 (allocat$4 or re$allocat$4)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:09 PM
L110	403	(virtualization with layer) controller (resourc$2 or inventory or assents) virtualization near4 environment$1 (allocat$4 or re$allocat$4)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:10 PM
L111	32	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:12 PM

		log$2 near4 fil$2					
L112	0	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) log$2 near4 fil$2 @ad<="20061218" and ("370"/$.ccls. or "455"/$.ccls.)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:13 PM
L113	1	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) log$2 near4 fil$2 @ad<="20061218" and ("370"/$.ccls. or "455"/$.ccls. or "709".clas.)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:13 PM
L114	1	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) log$2 near4 fil$2 @ad<="20061218"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:14 PM
L115	0	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) log$2 near4 fil$2 @ad<="200508/15"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:14 PM
L116	0	(virtualization with layer) controller (resourc$2 or inventory$1 or assent$2) virtualization near4 environment$1 (allocat$4 or	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:14 PM

		re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) log$2 near4 fil$2 @ad<="20050815"					
L117	7	((virtualization layer) (resourc$2 or inventory$1 or assent$2) (allocat$4 or re$allocat$4)).ab.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:18 PM
L118	2	L117 L110	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:18 PM
L119	11	((virtualiz$5 layer) (resourc$2 or inventory$1 or assent$2) (allocat$4 or re$allocat$4)).ab.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:19 PM
L120	4	L119 not L117	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:21 PM
L121	71	(virtualization near3 layer) (resourc$2 or inventory$1 or assent$2) (allocat$4 or re$allocat$4) (erorr$1 or debug$2 or degrad$3 or corrupt$4 or bad$2) @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:24 PM
L122	71	L121 not L119	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:24 PM
L123	16	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$ or US-20060184937-$ or US-20050223221-$ or US-20030236956-$ or US-20020166117-$ or US-20050198062-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$ or US-7330858-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2013/08/28 09:50 PM
L124	0	L123 and (virtualization with layer) controller (resourc$2 or inventory or assents) virtualization near4 environment$1 (allocat$4 or re$allocat$4)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:52 PM
L125	3	L123 and (virtualization with layer) controller	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/28 09:53 PM

		(resourc$2 or inventory or asset$2) virtualization (allocat$4 or re$allocat$4)					
L126	16	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$ or US-20060184937-$ or US-20050223221-$ or US-20030236956-$ or US-20020166117-$ or US-20050198062-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$ or US-7330858-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2013/08/29 06:33 PM
L127	2748	"l13" and automatic$5	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:33 PM
L128	9	l3and automatic$5	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:34 PM
L129	12	L126 and automatic$5	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:34 PM
L130	1	L126 and automatic$5 same (allocat$4 or re$allocat$4)	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:34 PM
L131	259	automatic$5 same (allocat$4 or re$allocat$4) and debug$4 and forecast$4	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:36 PM
L132	69	automatic$5 same (allocat$4 or re$allocat$4) and debug$4 same (inventory or resourc$2) and forecast$4 virtual$4	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:37 PM
L133	62	automatic$5 same (allocat$4 or re$allocat$4) and debug$4 same (inventory or resourc$2) and forecast$4 virtual$4 and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:38 PM
L134	3	automatic$5 near4 (allocat$4 or re$allocat$4) and debug$4 same (inventory or resourc$2) and forecast$4 virtual$4 and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2013/08/29 06:41 PM
L135	128	automatic$5 near4	(US-PGPUB; USPAT;	AND	OFF	OFF	2013/08/29

		(allocat$4 or re$allocat$4) and forecast$4 virtual$4 and @ad<="20050815"	USOCR)				06:42 PM
L136	0	automatic$4 (allocat$4 or reallocation) virtual (asset$2 or resourc$2 or inventory) (fore$cast$3 or futur$3) Capacity Planning Manager and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:44 PM
L137	1	automatic$4 (allocat$4 or reallocation) virtual (asset$2 or resourc$2 or inventory) (fore$cast$3 or futur$3) Capacity Planning and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:44 PM
L138	15	automatic$4 (allocat$4 or reallocation) virtual (asset$2 or resourc$2 or inventory) (fore$cast$3 or futur$3) and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:45 PM
L139	3	automatic$4 (allocat$4 or reallocation) virtual (asset$2 or resourc$2 or inventory) (fore$cast$3) and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:46 PM
L140	613	automatic$4 near4 (allocat$4 or reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:51 PM
L141	30	automatic$4 near4 (reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815"	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:51 PM
L142	0	automatic$4 near4 (reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815" and forcasting	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:51 PM
L143	1	automatic$4 near4 (reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815" and forecasting	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:51 PM
L144	27	automatic$4 near4	(US-PGPUB; USPAT;	SAME	OFF	OFF	2013/08/29

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		(reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815" and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4)	USOCR)				06:54 PM
L145	3	automatic$4 near4 (reallocation) near4 (asset$2 or resourc$2 or inventory) and @ad<="20050815" and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4) virtual$4	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:55 PM
L146	0	L126 and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4) virtual$4	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:56 PM
L147	7	L126 and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4)	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:57 PM
L148	2	L126 and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4) automatic$6	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:58 PM
L149	7	L126 and (forecast$4 or predict$4 or estimat$4 or project$4 or anticipat$4 or guess$4) and automatic$6	(US-PGPUB; USPAT; USOCR)	SAME	OFF	OFF	2013/08/29 06:58 PM
L150	16	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$ or US-20060184937-$ or US-20050223221-$ or US-20030236956-$ or US-20020166117-$ or US-20050198062-$ or US-20030236882-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2015/04/30 01:43 PM
L151	0	L150 and day same metric	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/04/30 01:43 PM
L152	0	L150 and day and	(US-PGPUB; USPAT;	AND	OFF	OFF	2015/04/30

		metric	USOCR)				01:44 PM
L153	2	L150 and time same day	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/04/30 01:44 PM
L154	0	"2008248817".did.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/01 12:39 AM
L155	1	"20080248817".did.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/01 12:39 AM
L156	1	"20040203828".did.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/01 12:45 AM
L157	1	"13639190"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/01 08:35 PM
L158	16	(US-20080086731-$ or US-20050155033-$ or US-20060149842-$ or US-20050125537-$ or US-20040015600-$ or US-20060069761-$ or US-20050044301-$ or US-20060184937-$ or US-20050223221-$ or US-20030236956-$ or US-20020166117-$ or US-20050198062-$ or US-20030236882-$).did. or (US-7512769-$ or US-7577722-$ or US-6490620-$).did.	(US-PGPUB; USPAT)	AND	OFF	OFF	2015/05/14 02:39 PM
L159	1	"14450765"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/14 02:53 PM
L160	4	"11509030"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/14 03:19 PM
L161	4	"11503090"	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2015/05/14 03:22 PM
L162	1	"10326552".pn.	(US-PGPUB; USPAT; USOCR)	AND	OFF	OFF	2021/10/14 01:31 PM
L163	17	(Vipul WITH Pabari).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/01/06 11:56 AM
L164	17683752	(virtualization system resources AND physical resource AND virtual assets).clm.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/01/06 11:57 AM

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			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))				
L165	8	L164 AND L163	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/01/06 11:57 AM
L166	7	L164 AND L163	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/06 11:57 AM
L167	17683752	(virtualization layer AND virtualization system resources AND physical resource AND virtual assets).clm.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/01/06 11:59 AM
L168	4549107	(virtualization layer AND virtualization system resources AND physical resource AND virtual assets).clm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/06 11:59 AM
L169	7	L168 AND L163	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/01/06 11:59 AM
L170	1	(15/201087).APP.	(USPAT; USOCR)	OR	ON	ON	2022/01/06 12:07 PM
L171	0	(17/074500).APP.	(USPAT; USOCR)	OR	ON	ON	2022/01/06 12:27 PM
L172	2	"17074500"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/04/12 12:56 PM

			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))				
L173	16	((US-20080086731-A1 OR US-20050155033-A1 OR US-20060149842-A1 OR US-20050125537-A1 OR US-20040015600-A1 OR US-20060069761-A1 OR US-20050044301-A1 OR US-20060184937-A1 OR US-20050223221-A1 OR US-20030236956-A1 OR US-20020166117-A1 OR US-20050198062-A1 OR US-20030236882-A1 OR US-20210034432-A1).did. AND PGPB.dbnm.) OR ((US-7577722-B1 OR US-6490620-B1).did. AND USPT.dbnm.)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/12 09:50 AM
L174	281493	virtual ADJ asset$2 physical ADJ resource$2 virtualization ADJ layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/05/12 09:51 AM
L175	7	virtual ADJ asset$2 physical ADJ resource$2 virtualization ADJ layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	WITH	ON	ON	2022/05/12 09:51 AM

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			MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L176	1	L175 AND L173	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/05/12 09:51 AM
L177	16	virtual asset$2 physical resource$2 virtualization layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/05/12 09:52 AM
L178	1	L177 AND L173	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	WITH	ON	ON	2022/05/12 09:53 AM
L179	59	virtual assets manage$5 virtualization layer	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	WITH	ON	ON	2022/05/12 10:00 AM

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