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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 EAST PALO ALTO, CA 94303-2248			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.

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5a) Of the above claim(s) ____ is/are withdrawn from consideration.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

3) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date ____.

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

4) ☐ Other: ____.

Paper No(s)/Mail Date ____.

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(I)(1) - 706.02(I)(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-l.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 negated 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



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palloaltopatentdocket@us.dlapiper.com

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 04/18/2022.

Remarks

3. The claims are presented as follows:
 - Claims 1, 3, 11-12 are amended.
 - Claims 15-19 are withdrawn.
 - Claims 1-14 are pending.

Response to Amendment

4. Applicant's arguments filed 04/18/2022 have been fully considered but they are not persuasive. The amendment submitted by the applicant does not overcome the rejection made by the examiner in the last office action. The applicant's argument has been considered carefully and does not provide the evidence for lack of motivation.

Applicant recites that the reference does not disclose, teach or suggest wherein one or more of the virtual assets are capable of being executed by any of the one or more physical resources, the virtual assets are managed by virtualization layer instances running on each of the physical resources.

Vasilevsky teaches a virtualization layer that allows operating systems (OSs) and their applications to be executed on a virtual server that spans more than one physical node, the virtualization layer isolates the operating system (OS) and their applications from the underlying physical nodes, resources may be managed without changes at the

application or operating system interface levels **[009-10]**. A single copy of the 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)**. The virtualization layer managing the execution of the operating system and 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 serve **[0017]** the virtualization layer is adapted to schedule tasks associated with at least one of the one or more virtual processors as a thread that is executed on at least one of the plurality of processors, and to schedule a plurality of virtual processor tasks for execution substantially in parallel. The virtualization layer adapted to map one or more virtual resources to one or more physical resources **([0041-43] FIG.1)**.

Therefore, Vasilevsky teaches one or more of the virtual assets are capable of being executed by any of the one or more hardware elements, the virtual assets are managed by virtualization layer instances running on each of these hardware elements.

Applicant's arguments with respect to the rejection made under 35 U.S.C. 112 have been fully considered and are persuasive in light of the amendment made to the claims. Therefore, the 35 U.S.C. 112 rejection has been withdrawn.

Double Patenting

5. 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(I)(1) - 706.02(I)(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-l.jsp.

6. **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.

7. **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 § 102

8. 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 the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 are rejected under pre-AIA 35 U.S.C. 102(e) as being unpatentable by **Vasilevsky et al. Publication No. (US 2005/0044301 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, wherein one or more of the virtual assets are capable of being executed by any of the one or more physical resources (**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).

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

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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



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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	01/18/2022		
DLA PIPER LLP (US) 2000 UNIVERSITY AVENUE EAST PALO ALTO, CA 94303-2248			EXAMINER MUSA, ABDELNABI O	
			ART UNIT	PAPER NUMBER
			2472	
			NOTIFICATION DATE	DELIVERY MODE
			01/18/2022	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):

palloaltopatentdocket@us.dlapiper.com

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. This action is responsive to the application filed on 10/19/2020 has a total of 19 claims pending in the application; there are 3 independent claims and 16 dependent claims, all of which are ready for examination by the examiner.

Remarks

3. Applicant has elected GROUP-1, which contains claims 1-14, for examination. Therefore, claims 1-14 are pending.

Double Patenting

4. 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(I)(1) - 706.02(I)(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-1.jsp.

Claims 1-15 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, see table below:

Instant Application	US. Patent No. 10,810,050 B2
Claim 1. A method for access to one or more virtualization system resources over a network, the method comprising: implementing a virtualization system that has a control computer and one or more physical resource and virtual assets connected to the control wherein the virtual assets are managed by a virtualization layer running on the physical resources; wherein virtual assets are software instantiations of computer systems; connecting an end user to the control computer; and accessing, through the control computer connection, the virtual assets by the end user.	Claim 1. A method for on demand provisioning of virtual asset via a self-service portal in a virtualization system, the method comprising: providing a virtualization system that has an inventory that includes physical resources and virtual assets managed by a virtualization layer running on the physical resources; wherein virtual assets are software instantiations of computer systems; receiving a virtual asset provisioning request that specifies parameters to be considered for the virtual asset provisioning request; receiving data on inventory available in the virtualization system; automatically provisioning of a particular virtual asset to a particular physical resource in the virtualization system that matches the parameters in the virtual asset

	provisioning request; assigning the provisioned virtual asset to the virtual asset provisioning request; and providing user access to the provisioned virtual asset.
Claim 11. A method, comprising: communicating, by a user, over a network to access one or more virtual assets running in a virtualization system; requesting, by the user, provisioning of a virtual asset in the virtualization system; and wherein the provisioned virtual asset is virtual storage and the virtual storage comprises one or more logical storage units mapped to one or more physical storage drives.	Claim 9. An apparatus that performs automatic management of a virtualization environment in a computer network comprising: a virtualization environment having a computer device with a processor and memory and a control center computer coupled to the computer device, the virtualization environment having an inventory that includes network resources and virtual assets being software instantiations of computer systems hosted on the computer device and a virtualization layer executed by the computer device that manages the virtual assets; the control center computer executing a virtual mapping layer that determines an inventory of network resources and

	virtual assets available to the virtualization environment, wherein the virtual mapping layer determines the inventory without regard to processors, operating systems, virtualization platforms, and application software of the virtualization environment; and the control center computer executing a provisioning manager that communicates with the virtual mapping layer, the processor being configured to receive a virtual asset provisioning request that specifies parameters to be considered for the virtual asset provisioning request, automatically provision a particular virtual asset to a particular physical resource in the virtualization system that matches the parameters in the virtual asset provisioning request, assign the provisioned virtual asset to the virtual asset provisioning request and provide
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	user access to the provisioned virtual asset.
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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.

Claims 1-15 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, see table below:

Instant Application	US. Patent No. 9,444,762 B2
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Claim 1. A method for access to one or more virtualization system resources over a network, the method comprising: implementing a virtualization system that has a control computer and one or more physical resource and virtual assets connected to the control wherein the virtual assets are managed by a virtualization layer running on the physical resources; wherein virtual assets are software instantiations of computer systems; connecting an end user to the control computer; and accessing, through the control computer connection, the virtual assets by the end user.	Claim 1. A method for automatic management of a virtualization environment in a computer network, the method comprising: providing a virtualization environment that has physical resources, virtual assets and a virtualization layer running on a specific physical resource that manages the virtual assets, each virtual asset being a software instantiation of a computer system and one or more virtual assets managed by the virtualization layer running on the specific physical resource; providing a physical controller coupled to the virtualization environment over a network that communicates with the virtualization layer; determining, using the controller that communicates with the virtualization layer, an inventory of network resources and virtual assets available to the virtualization environment; provisioning, by the controller that communicates with the virtualization layer, the virtual assets from
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	among the available inventory, thereby establishing a provisioned virtualization environment; determining, at the controller, a metric for the provisioned virtualization environment; receiving user input that specifies Knowledge Block parameters to be considered in producing the reallocation of assets; automatically determining at the controller, for the provisioned virtualization environment under control of the controller, a reallocation of the virtual assets based on the metric and the user input parameters; and initiating, by the controller that communicates with the virtualization layer, the reallocation of the virtual assets in the provisioned virtualization environment.
Claim 11. A method, comprising: communicating, by a user, over a network to access one or more virtual assets running in a virtualization system; requesting, by the user, provisioning of a virtual asset in the	Claim 20. A method for automatic management of a virtualization environment in a computer network, the method comprising: providing a virtualization environment that has physical resources, virtual assets and a virtualization layer running on a

virtualization system; and wherein the provisioned virtual asset is virtual storage and the virtual storage comprises one or more logical storage units mapped to one or more physical storage drives.	specific physical resource that manages the virtual assets, each virtual asset being a software instantiation of a computer system and one or more virtual assets managed by the virtualization layer running on the specific physical resource; providing a physical controller coupled to the virtualization environment over a network; performing one or more functions by the controller that communicates with the virtualization layer from the group of functions consisting of identification and management of network resources and virtual assets, provisioning of virtual assets using Knowledge Block parameters in response to network workflow demands, automatic dynamic deployment of virtual assets across the computer network, performance measurement and reporting of resources and virtual assets, and planning and forecasting of resource demands
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	and virtual asset utilization of the virtualization environment; wherein such functions are carried out without regard to processors, operating systems, virtualization platforms, and application software of the virtualization environment.
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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.

Title

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner suggests the title **“a system for management of computer network virtualization”**

Claim Rejections - 35 USC § 112

6. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, and 12 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

Claim 1, recite the phrase “.....virtual assents connected to the control control wherein...” the “control” word is repeated and the limitation makes the claim unclear and indefinite once the repeated word is deleted. The phrase “.....virtual assents connected to the control wherein...” is not clear what applicant is trying to claim. The examiner took the claim as best understood. Appropriate correction is required.

Claim 3, recite the acronym “PDA” without a corresponding meaning to each letter, which makes the limitation indefinite.

Claim 12, recite the acronym “API” without a corresponding meaning to each letter, which makes the limitation indefinite.

Claim Rejections - 35 USC § 102

7. 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 the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 are rejected under pre-AIA 35 U.S.C. 102(e) as being unpatentable by **Vasilevsky et al. Publication No. (US 2005/0044301 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 resource (**data center provides network resources [0058] FIG.1**) and virtual assets (**operating system layer 103 FIG.1**) connected to the control control wherein the virtual assets are managed by a virtualization layer running on the physical resources (**the virtualization layer managing the execution of the operating system [0017] [0042] FIG.1**); wherein virtual assets are software instantiations of computer systems (**the operating system (OS) execute software instructions to create a single instance [0059] 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**).

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 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).**

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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).**

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Claims 15-19 (withdrawn).

Conclusion

8. 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).

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/ABDELNABI O MUSA/
Primary Examiner, Art Unit 2472