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December 10, 2012

/Timothy W. Lohse/
Timothy W. Lohse

Appl. No.	: 11/503,090	Confirmation No.	9855
Applicant	: Vipul Pabari		
Filed	: August 10, 2006		
TC/A.U.	: 2478		
Examiner	: Abdelnabi Musa		
Docket No.	: 367894-000003		
Customer No.	: 26379		

Title: VIRTUAL SYSTEMS MANAGEMENT

RESPONSE TO OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

In response to the office action, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 9 of this paper.

1. Listing of the claims:

1. (Currently Amended) A method for automatic management of a virtualization environment in a computer network, the method comprising:

providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment;

providing a controller coupled to the virtualization environment over a network;

determining, using the controller, an inventory of network resources and virtual assets available to the virtualization environment of the computer network;

assigning prioritization to members of the available inventory for the virtualization environment;

provisioning, by the controller, the virtual assets from among the available inventory, thereby establishing a provisioned virtualization environment, wherein the virtual assets comprise at least one virtual machines operating on a single physical host, and wherein the at least one virtual machine comprises virtual hardware assets, and wherein the provisioning the virtual assets from among the available inventory comprises creating a new virtual machine on the single physical host;

determining, at the controller, real time performance metrics for the provisioned virtualization environment;

automatically determining producing, for the provisioned virtualization environment under control of the controller, a reallocation of the virtual assets automatically in response to the real time performance metrics; and

initiating, by the controller, the reallocation of the virtual assets in the provisioned virtualization environment;

receiving user input that is a Knowledge Block that determines one or more of the reallocation parameters to be considered with the real time performance metrics in producing the reallocation of assets; and

~~wherein the Knowledge Block specifies parameters that identify a last known acceptable virtual machine image that includes one or more applications from the set of available inventory.~~

2. Cancelled.

3. Cancelled.

4. (Currently Amended) The method of claim 1 ~~2~~ [[,]] further comprising receiving user input that is a Knowledge Block that determines one or more of the reallocation parameters to be considered with the real time performance metrics in producing the reallocation of assets and wherein the received user input specifies parameters that detect operational degradation of a member of the available inventory.

5. (Original) The method of claim 4, wherein the available inventory member that is detected as degraded is removed from the available inventory.

6. (Original) The method of claim 4, wherein the available inventory that is detected as degraded is moved from the available inventory to a debug inventory pool.

7. (Original) The method of claim 4, wherein log files are retrieved from the available inventory that is detected as degraded.

8. (Original) The method of claim 7, wherein the log files are stored in an archive and an alert message is sent to a network administrator with an identification of the log file archive location.

9. (Original) The method of claim 4, wherein the available inventory that is detected as degraded is halted and is removed from the available inventory to a debug inventory pool.

10. (Original) The method of claim 9, wherein the halted available inventory is removed from the debug inventory pool.

11. (Currently Amended) The method of claim ~~4~~ 3, wherein the Knowledge Block specifies parameters that send an alert message to an administrator of the network in response to an alert condition.

12. (Currently Amended) The method of claim 4 3, wherein the Knowledge Block specifies parameters that receive an instruction from an administrator of the network in response to an alert condition.

13. Cancelled.

14. (Currently Amended) The method of claim 4 3, wherein the Knowledge Block specifies parameters that deploy an instance of an application selected from among the available inventory.

15. (Currently Amended) The method of claim 4 2, wherein the received user input specifies a priority for one or more of the available inventory.

16. (Currently Amended) The method of claim 4 2, wherein the user input specifies a time period during which the reallocation will be applied.

17. (Original) The method of claim 1, further comprising: providing a user interface through which user input can be received and wherein the user input adjusts scheduling of producing the reallocation.

18. (Original) The method of claim 1, wherein producing a reallocation comprises adding a new application instance to the available inventory.

19. (Original) The method of claim 1, wherein producing a reallocation comprises updating the available inventory to include any changes made by the reallocation.

20. (Original) The method of claim 1, wherein the inventory of available inventory includes one or more application programs.

21. (Original) The method of claim 20, wherein one of the application programs comprises a network load balancer.

22. (Original) The method of claim 20, wherein one of the application programs comprises a network server.

23. (Original) The method of claim 1, wherein: determining, by an Asset Manager Component, an inventory of available network resources and virtual assets; assigning prioritization to the available inventory and provisioning virtual assets from among the available inventory, performed by a Provisioning Manager component; determining, by a Performance Manager component, a real time performance metrics; and automatically producing and initializing, by an Optimizer component, a reallocation of the virtual assets.

24. (Original) The method of claim 23, wherein automatically producing a reallocation of the virtual assets comprises forecasting future system needs, which is performed by a Capacity Planning Manager component.

25. (Currently Amended) A method for automatic management of a virtualization environment in a computer network, the method comprising:

providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment;

providing a controller coupled to the virtualization environment over a network;

performing one or more functions by the controller from the group of functions consisting of

- (1) identification and management of network resources and virtual assets,
- (2) provisioning of virtual assets in response to network workflow demands,
- (3) dynamic deployment of virtual assets across the computer network,
- (4) performance measurement and reporting of resources and virtual assets, and
- (5) planning and forecasting of resource demands 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 ~~and, wherein~~

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~~the virtual assets comprise at least one virtual machines operating on a single physical host, and wherein the at least one virtual machine comprises virtual hardware assets;~~

~~wherein provisioning virtual assets from among the available inventory further comprises creating a new virtual machine on the single physical host; and~~

~~receiving user input that is a Knowledge Block that determines one or more of the reallocation parameters to be considered with the real time performance metrics in producing the reallocation of assets, wherein the Knowledge Block specifies parameters that identify a last known acceptable virtual machine image that includes one or more applications from the set of available inventory.~~

26. Cancelled.

27. (Currently Amended) An apparatus that performs automatic management of a virtualization environment in a computer network comprising:

a network communications unit that enables communications between the apparatus and a virtualization environment over a ~~the~~ computer network;

an operating system of the apparatus that supports a virtualization environment in communication with the apparatus over the computer network; and

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, wherein the virtual assets comprise ~~at least one virtual machine operating on a single physical host, and wherein the at least one virtual machine comprises virtual hardware assets~~ at least one software instantiations of equipment objects in the virtualization environment; and

~~a provisioning component~~ controller ~~that creates a new virtual machine on the single physical host, the provisioning component receives user input that is a Knowledge Block that determines one or more of the reallocation parameters to be considered with the real time performance metrics that identify a last known acceptable virtual machine image that includes one or more applications from the set of available inventory~~ provisions the virtual assets from

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among the available inventory, thereby establishing a provisioned virtualization environment, determines real time performance metrics for the provisioned virtualization environment, automatically determines for the provisioned virtualization environment under control of the controller, a reallocation of the virtual assets automatically in response to the real time performance metrics and initiates the reallocation of the virtual assets in the provisioned virtualization environment.

28. (Previously Presented) The apparatus of claim 27, further comprising one or more components that receive the inventory of available resources and assets from the Virtual Mapping layer and perform one or more functions from the group of functions consisting of:

- identification and management of network resources and virtual assets,
- 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 and 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.

29. (Original) The apparatus of claim 27, further comprising a component selected from a group consisting of: an Asset Manager component that determines an inventory of available network resources and virtual assets;

- a Provisioning Manager component that assigns a prioritization to the available inventory and provisions virtual assets from among the available inventory;

- a Performance Manager component that determines real time performance metrics; and

- an Optimizer component that automatically produces a reallocation of the virtual assets and initiates the reallocation.

30. (Previously Presented) The method of claim 1 wherein the virtual assets further comprise a second virtual machine which comprises virtual assets, and the at least one virtual machine and the second virtual machine each run their own respective operating systems which are a different type of operating system from each other.

31. -35. Canceled

36. (Previously Presented) The method of claim 1 wherein provisioning virtual assets from among the available inventory further comprises routing an application running on a first virtual machine to run on a second virtual machine.

37. Cancelled.

38. Cancelled.

39. (Previously Presented) The method of claim 25 wherein provisioning virtual assets from among the available inventory further comprises creating a new virtual machine on the single physical host.

40. (Previously Presented) The method of claim 1 wherein provisioning virtual assets from among the available inventory further comprises communicating provisioning instructions from a control agent comprising at least one virtualization platform adapter to a virtualization layer in the single physical host.

REMARKS

Applicant thanks the examiner for the courtesy of the telephone interview with Applicant's undersigned Attorney and the patent applicant on December 6, 2012. During the interview, Applicant presented an amended claim to the examiner (claim 1 above) and the examiner indicated that claim 1 distinguished over the combination of prior art currently relied on by the examiner.

SUPPORT FOR AMENDED CLAIMS

The amended claims are fully supported by the specification and drawings. For example, "providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment" and "providing a controller coupled to the virtualization environment over a network" is supported, for example, by Figure 1 and paragraphs 0043-0050 of the published patent application. Specifically, paragraph 0044 supports the virtual asset definition that now appears in the claims. The other claim elements are all supported by various portions of the drawings and specification that disclose that the claimed controller/control center connected over a network to the virtual environment performs the virtual environment management set forth in the claims.

PRIOR ART REJECTIONS

In response to the rejection of claims 1, 4-6 and 9-12, 14-25, 27-30, 36 and 39-40 under 35 U.S.C. 103 as being unpatentable over US Patent Application 2008/0086731 to Trossman et al. ("Trossman") in view of U.S. Patent 7,512,769 to Lowell et al. ("Lowell") and further in view of US Patent No. 7,577,722 to Khandekar et al. ("Khandekar") and the rejection of claims 7-8 under 35 U.S.C. 103 as being obvious under Trossman, Lowell, Khandekar and further in view of the alleged admitted prior art, Applicant respectfully traverses the rejections since the combination of prior art cited by the examiner does not disclose or suggest each claim element of the amended claims.

Specifically, Trossman is a data center resources management system that manages computing resources such as a computing unit with CPUs and memory. *See Trossman at 0034-0036.* Trossman does not disclose or suggest managing virtual assets generally, managing a virtual environment or the claimed virtual assets which are "at least one software instantiations of equipment objects in the virtualization environment." Furthermore, Trossman does not disclose

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or suggest the management of a virtual environment over a network by a controller as set forth in the claim. Thus, Trossman does not disclose or suggest several elements of the claims.

Lowell is a process migration method and system and thus also does not disclose or suggest the elements missing from Trossman.

Khandekar discloses a typical virtual environment in which virtual machines are being provisioned. *See Khandekar at Abstract.* However, Khandekar does not disclose or suggest the claimed virtual assets which are “at least one software instantiations of equipment objects in the virtualization environment.” Furthermore, Khandekar does not disclose or suggest the management of a virtual environment over a network by a controller as set forth in the claim. Thus, Khandekar does not disclose or suggest several elements of the claims.

In summary, the combination of Trossman, Khandekar and Lowell does not disclose or suggest each claim element and therefore the obviousness rejection based on Trossman, Khandekar and Lowell should be withdrawn.

CONCLUSION

In view of the above, it is respectfully submitted that the claims are allowable over the prior art cited by the Examiner and early allowance of these claims and the application is respectfully requested.

The Examiner is invited to call Applicant’s attorney at the number below in order to speed the prosecution of this application.

The Commissioner is authorized to charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 07-1896.

Respectfully submitted,

Dated: December 10, 2012

DLA PIPER US LLP
By /Timothy W. Lohse/
Timothy W. Lohse
Reg. No. 35,255
Attorney for Applicant

DLA PIPER US LLP
2000 University Avenue
East Palo Alto, CA 94303
Telephone: (650) 833-2055

Electronic Acknowledgement Receipt	
EFS ID:	14430086
Application Number:	11503090
International Application Number:	
Confirmation Number:	9855
Title of Invention:	Virtual systems management
First Named Inventor/Applicant Name:	Vipul Pabari
Customer Number:	26379
Filer:	Timothy W. Lohse
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Attorney Docket Number:	367894-000003
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Filing Date:	10-AUG-2006
Time Stamp:	18:50:46
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment		no			
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		367894-000003_Response_to_NFOA.pdf	42832 4a62c24fef8597caf152a4a22c12475c3334f46e	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	10
Warnings:			
Information:			
Total Files Size (in bytes):		42832	
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 11/503,090		Filing Date 08/10/2006		☐ To be Mailed	
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APPLICATION AS FILED – PART I						OTHER THAN SMALL ENTITY			
(Column 1)		(Column 2)		SMALL ENTITY ☒ OR		OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)		
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A			
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$ =		OR	X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =			X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))			If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL			

APPLICATION AS AMENDED – PART II						OTHER THAN SMALL ENTITY				
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	12/10/2012	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 29	Minus	** 35	= 0	X \$31 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 4	= 0	X \$125 =	0	OR	X \$ =	
☐ Application Size Fee (37 CFR 1.16(s))										
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								OR		
						TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR		OTHER THAN SMALL ENTITY	
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		OR	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								OR	
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/TRACIE ROBERTSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/503,090	08/10/2006	Vipul Pabari	367894-000003	9855
26379 7590 03/27/2013 DLA PIPER LLP (US) 2000 UNIVERSITY AVENUE EAST PALO ALTO, CA 94303-2248			EXAMINER MUSA, ABDELNABI O	
			ART UNIT 2478	PAPER NUMBER
			NOTIFICATION DATE 03/27/2013	DELIVERY MODE 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):

PatentDocketingUS-PaloAlto@dlapiper.com

DETAILED ACTION

1. Acknowledgment is made for the applicant's response and amendment filed on 12/10/2012.

Remarks

2. The claims are presented as follows:

- Claims 1, 4, 11-12, 14-16, 25, 27 amended.
- Claims 2-3, 13, 26, 31-35, 37-38 canceled.
- Claims 1, 4-12, 14-25, 27-30, 36, 39-40 pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 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 of this title, 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.

Claims 1,4-6, 9-12, 14-25, 27-30, 36, 39-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Trossman et al. (US 2008/0086731) in view of Dawson et al. Pub. No. (US 2006/0149842 A1).

Regarding **claim 1**, Trossman teaches a method for automatic management of a virtualization environment in a computer network, the method comprising:

providing a controller coupled to the virtualization environment over a network (Trossman: a controller 102 coupled to the data storage and controls the data acquisition from each layer of the application environment [0045] [0052] FIG.2)

determining, using the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), an inventory of network resources (Trossman: [0022-0023]) and virtual assets available to the virtualization environment (Trossman: “The data storage 20 contains information on the groupings and poolings of resources in the resource system 12 for management purposes.” [0042], [0034-0036]);

provisioning, by the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), the virtual assets from among the available inventory, thereby establishing a provisioned virtualization environment (Trossman: “Given the differing resource requirements for each application environment using and requiring resources in the resource system 12, the resource change mechanism 18 decides where the resources will be allocated.” [0031]);

determining, at the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), real time performance metrics for the provisioned virtualization environment (Trossman: [0021-0024]);

automatically determining, for the provisioned virtualization environment under the control of the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), a reallocation of the virtual assets in response to the real time performance metrics (Trossman: [0021-0024], [0034-0036]);

initiating, by the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), the reallocation of the virtual assets in the provisioned virtualization (Trossman: [0021-0024], [0034-0036]).

Trossman does not explicitly teach providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment.

However, Dawson teaches a virtualization environment that includes multiple resource nodes [0012-14] as illustrated in FIG.3 multiple layers of functionality are implemented that includes network resources (via servers, storage media and networks) and software such as operating systems and other resource assets that includes multiple services that interact with other management systems ([0042-45] FIG.3) in order to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the modified Trossman by the teaching of Dawson to provide a virtualization environment that includes a virtualization layer, network resources and virtual assets that has at least one software instantiations of equipment objects to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

Regarding **claim 4**, the modified Trossman teaches the method of claim 1 as described above. Trossman further discloses receiving user input that is a Knowledge Block that determines one or more of the reallocation parameters to be considered with the real time performance metrics in producing the reallocation of assets ([0033] 702-FIG.8A) wherein the received user input specifies parameters that detect operational degradation of a member of the available inventory (Trossman:[0033],[0056-0057]).

Regarding **claim 5**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the available inventory member that is detected as degraded is removed from the available inventory (Trossman: [0119]).

Regarding **claim 6**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the available inventory that is detected as degraded is moved from the available inventory to a debug inventory pool (Trossman[0119-0120]).

Regarding **claim 9**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the available inventory that is detected as degraded is halted and is removed from the available inventory to a debug inventory pool (Trossman: [0119-0120]).

Regarding **claim 10**, the modified Trossman reference teaches the method of claim 9 as described above. Trossman further discloses wherein the halted available inventory is removed from the debug inventory pool (Trossman: [0119-0120]).

Regarding **claim 11**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the Knowledge Block specifies parameters that send an alert message to an administrator of the network in response to an alert condition (Trossman: [0033], [0040], [0119-0120]).

Regarding **claim 12**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the Knowledge Block specifies parameters that receive an instruction from an administrator of the network in response to an alert condition (Trossman: [0033], [0040], [0119-0120]).

Regarding **claim 14**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the Knowledge Block specifies parameters that deploy an instance of an application selected from among the available inventory (Trossman: [0033]).

Regarding **claim 15**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the received user input specifies a priority for one or more of the available inventory (Trossman: [0033]).

Regarding **claim 16**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman further discloses wherein the user input specifies a time period during which the reallocation will be applied (Trossman: [0030]-0033).

Regarding **claim 17**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further teaches providing a user interface

through which user input can be received and wherein the user input adjusts scheduling of producing the reallocation (Trossman: [0033]).

Regarding **claim 18**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further teaches wherein producing a reallocation comprises adding a new application instance to the available inventory (Trossman: [0119]).

Regarding **claim 19**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further teaches wherein producing a reallocation comprises updating the available inventory to include any changes made by the reallocation (Trossman: [0104], [0118-0119]).

Regarding **claim 20**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further discloses wherein the inventory of available inventory includes one or more application programs (Trossman: [0119]).

Regarding **claim 21**, the modified Trossman reference teaches the method of claim 20 as described above. Trossman further discloses wherein one of the application programs comprises a network load balancer (Trossman: [0024]).

Regarding **claim 22**, the modified Trossman reference teaches method of claim 20 as described above. Trossman further discloses wherein one of the application programs comprises a network server (Trossman: [0022]).

Regarding **claim 23**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further discloses wherein: determining, by an

Asset Manager Component, an inventory of available network resources and virtual assets (Trossman: [0022-0023]);

assigning prioritization to the available inventory and provisioning virtual assets from among the available inventory, performed by a Provisioning Manager component (Trossman: [0042], [0023]);

determining, by a Performance Manager component, a real time performance metrics (Trossman: [0022-0023]); and

automatically producing and initializing, by an Optimizer component, a reallocation of the virtual assets (Trossman: [0022-0023]).

Regarding **claim 24**, the modified Trossman reference teaches the method of claim 23 as described above. Trossman further discloses wherein automatically producing a reallocation of the virtual assets comprises forecasting future system needs, which is performed by a Capacity Planning Manager component (Trossman: [0022-0023]).

Regarding **claim 25**, Trossman discloses a method for automatic management of a virtualization environment in a computer network, the method comprising:

providing a controller coupled to the virtualization environment over a network (Trossman: a controller 102 coupled to the data storage and controls the data acquisition from each layer of the application environment [0045] [0052] FIG.2)

performing one or more functions by the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2) from the group of functions consisting of (1) identification and management of

network resources and virtual assets, (2) provisioning of virtual assets in response to network workflow demands, (3) dynamic deployment of virtual assets across the computer network, (4) performance measurement and reporting of resources and virtual assets, and (5) planning and forecasting of resource demands and virtual asset utilization of the virtualization environment (Trossman: [0022-0023],[0031-0036],[0042]);

wherein such functions are carried out without regard to processors, operating systems, virtualization platforms, and application software of the virtualization environment (Trossman: [0031-0036]).

Trossman does not explicitly teach providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment.

However, Dawson teaches a virtualization environment that includes multiple resource nodes [0012-14] as illustrated in FIG.3 multiple layers of functionality are implemented that includes network resources (via servers, storage media and networks) and software such as operating systems and other resource assets that includes multiple services that interact with other management systems ([0042-45] FIG.3) in order to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the modified Trossman by the teaching of Dawson to provide a virtualization environment that includes a virtualization layer, network resources and

virtual assets that has at least one software instantiations of equipment objects to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

Regarding **claim 27**, Trossman discloses an apparatus that performs automatic management of a virtualization environment in a computer network comprising:

a network communications unit that enables communications between the apparatus and a virtualization environment over the computer network (Trossman:[0023-0024]);

an operating system of the apparatus that supports a virtualization environment in communication with the apparatus over the computer network (Trossman:[0026]);
and

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 (Trossman: "The data storage 20 contains information on the groupings and poolings of resources in the resource system 12 for management purposes." [0042], [0034-0036]), virtualization platforms, and application software of the virtualization environment (Trossman: [0034-0038]).

a controller that provisions the virtual assets from among the available inventory (Trossman: a controller 102 coupled to the data storage and controls the data acquisition from each layer of the application environment [0045] [0052] FIG.2), thereby establishing a provisioned virtualization environment (Trossman: "Given the differing

resource requirements for each application environment using and requiring resources in the resource system 12, the resource change mechanism 18 decides where the resources will be allocated.” [0031]); determines real time performance metrics for the provisioned virtualization environment (Trossman: [0021-0024]), automatically determines for the provisioned virtualization environment under control of the controller (Trossman: a controller 102 that controls the data acquisition from each layer of the application environment [0045] FIG.2), a reallocation of the virtual assets automatically in response to the real time performance metrics (Trossman: [0021-0024], [0034-0036] and initiates the reallocation of the virtual assets in the provisioned virtualization environment (Trossman: [0021-0024], [0034-0036]).

Trossman does not explicitly teach providing a virtualization environment that has a virtualization layer, network resources and virtual assets, the virtual assets including at least one software instantiations of equipment objects in the virtualization environment.

However, Dawson teaches a virtualization environment that includes multiple resource nodes [0012-14] as illustrated in FIG.3 multiple layers of functionality are implemented that includes network resources (via servers, storage media and networks) and software such as operating systems and other resource assets that includes multiple services that interact with other management systems ([0042-45] FIG.3) in order to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the modified Trossman by the teaching of Dawson to provide a virtualization environment that includes a virtualization layer, network resources and virtual assets that has at least one software instantiation of equipment objects to efficiently achieve an automatic and efficient virtualization management of a resource/computer network.

Regarding **claim 28**, the modified Trossman reference teaches the apparatus of claim 27 as described above. Trossman further discloses comprising one or more components that receive the inventory of available resources and assets from the Virtual Mapping layer and perform one or more functions from the group of functions consisting of:

identification and management of network resources and virtual assets, 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 and asset utilization of the virtualization environment (Trossman: [0022-0023] [0031-0036] [0042]);

wherein such functions are carried out without regard to processors, operating systems, virtualization platforms, and application software of the virtualization environment (Trossman: [0031-0036]).

Regarding **claim 29**, the modified Trossman reference teaches the apparatus of claim 27 as described above. Trossman further discloses comprising a component

selected from a group consisting of: an Asset Manager component that determines an inventory of available network resources and virtual assets;

a Provisioning Manager component that assigns a prioritization to the available inventory and provisions virtual assets from among the available inventory (Trossman: “The data storage 20 contains information on the groupings and poolings of resources in the resource system 12 for management purposes.” [0042], [0034-0036]);

a Performance Manager component that determines real time performance metrics Trossman: [0022-0024]; and

an Optimizer component that automatically produces a reallocation of the virtual assets and initiates the reallocation (Trossman: [0021-0024], [0034-0036]).

Regarding **claim 30**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman does not explicitly disclose wherein the virtual assets further comprise a second virtual machine which comprises virtual assets, and the at least one virtual machine and the second virtual machine each run their own respective operating systems which are the a different type of operating system from each other.

However Lowell discloses a second virtual machine which comprises virtual assets (Lowell: Col. 2, line 25-Col. 3, line 5), and the at least one virtual machine and the second virtual machine each run their own respective operating systems which are the a different type of operating system from each other (Lowell: Col. 2, line 25-Col. 3, line 5; Col. 1, lines 31-37) in order to efficiently make use of computer resources by encapsulating and isolating a guest operating systems from the underlying system

hardware resources of host in order to allow the use of multiple guest OS (Lowell: Col. 1, line 5- Col. 2, lines 66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the virtual machines and virtual hardware resource management system of the modified Trossman reference to include the use of a second virtual machines and second virtual hardware asset as taught by Lowell in order to allow multiple guest computer operating systems to function like normal and unaware of the other operating systems executing on the single physical host computer system (Lowell: Col. 1, line 5- Col. 2, lines 66).

Regarding **claim 36**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman discloses routing/allocating resources to an application (Trossman: [0025]; [0031-0033])

Trossman does not explicitly disclose wherein provisioning virtual assets from among the available inventory further comprises routing an application running on a first virtual machine to run on a second virtual machine. However Lowell discloses provisioning virtual assets from among the available inventory further comprises routing an application running on a first virtual machine to run on a second virtual machine (Lowell: Col. 3, lines 6-65) in order migrate a processes to a different operating system or virtual machine (Lowell: Col. 3, lines 6-8 and lines 51-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the virtual machines and virtual hardware resource management system of the modified Trossman reference to include the use of creating a duplicate of

a virtual machine as taught by Lowell in order migrate a processes to a different operating system or virtual machine (Lowell: Col. 3, lines 6-8 and lines 51-53).

Regarding **claim 39**, the modified Trossman teaches the method of claim 25 but does not explicitly disclose wherein provisioning virtual assets from among the available inventory further comprises creating a new virtual machine on the single physical host.

However, Khandekar teaches a provisioning server automatically creates, configures and deploys physical hosts or physical systems to an application of virtual Machine technology (see Abstract, 940-FIG.3) presenting to the user an optional dialog where he can query the details of the model VM, such as its OS, applications, etc.) When the user makes the selections, he submits the request to the provisioning engine, which creates a new Virtual Machine on the same physical host or the requested computer system (col.15, line 29-col.16, line 30; FIG.3) in order to efficiently satisfy the user's request by either provisioning a new virtual machine or by creating a replica in the physical machine (col.1, line 52-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the modified Trossman by Khandekar to create a new virtual machine on the same physical host by the provisioning manager to efficiently satisfy the user's request by either provisioning a new virtual machine or by creating a replica in the physical machine.

Regarding **claim 40**, the modified Trossman reference teaches the method of claim 1 as described above. Trossman further discloses wherein provisioning virtual assets from among the available inventory further comprises communicating

provisioning instructions from a control agent comprising at least one virtualization platform adapter to a virtualization layer in the single physical host (Trossman: [0023], [0033]).

4. Claims 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Trossman et al. (US 2008/0086731) in view of Dawson et al. Pub. No. (US 2006/0149842 A1) further in view of applicants admitted prior art.

Regarding **claim 7**, the modified Trossman reference teaches the method of claim 4 as described above. Trossman does not explicitly disclose wherein log files are retrieved from the available inventory that is detected as degraded.

Applicant admitted prior art teaches logging computer system performance, faults and errors and alerting an administrator of the logged events is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to create the resource management system with multiple virtual machines operating on a single physical server in a virtual computing environment of the modified Trossman reference to include of the use of logging data and alerting an administrator as taught by applicant admitted prior art in order to provide diagnostic data and alerts to properly manage the system.

Regarding **claim 8**, the modified Trossman reference teaches the method of claim 7 as described above. Trossman does not explicitly disclose wherein the log files are stored in an archive and an alert message is sent to a network administrator with an identification of the log file archive location.

Applicant admitted prior art teaches logging computer system performance, faults and errors and alerting an administrator of the logged events is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the resource management system with multiple virtual machines operating on a single physical server in a virtual computing environment of the modified Trossman reference to include of the use of logging data and alerting an administrator as taught by applicant admitted prior art in order to provide diagnostic data and alerts to properly manage the system.

Response to Arguments

5. Applicant's arguments with respect to the above treated claim(s) have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). 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 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 571-2701901. and email address is abdelnabi.musa@uspto.gov 'preferred'. The examiner can normally be reached on Monday thru Friday: 7:30am to 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ferris Derrick W. can be reached on 571-2723123. 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.

Application/Control Number: 11/503,090
Art Unit: 2478

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/A. O. M./
Examiner, Art Unit 2478

/Kenny S Lin/
Primary Examiner, Art Unit 2478

Notice of References Cited	Application/Control No. 11/503,090	Applicant(s)/Patent Under Reexamination PABARI, VIPUL	
	Examiner ABDELNABI MUSA	Art Unit 2478	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0149842	07-2006	Dawson et al.	709/226
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*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.

<i>Index of Claims</i> 	Application/Control No. 11503090	Applicant(s)/Patent Under Reexamination PABARI, VIPUL
	Examiner ABDELNABI MUSA	Art Unit 2478

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

☐ Claims renumbered in the same order as presented by applicant											☐ CPA	☐ T.D.	☐ R.1.47
CLAIM		DATE											
Final	Original	05/27/2008	12/31/2008	05/14/2009	12/08/2009	10/31/2010	07/15/2011	06/06/2012	03/15/2013				
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	3	✓	✓	✓	✓	✓	✓	-	-				
	4	✓	✓	✓	✓	✓	✓	✓	✓				
	5	✓	✓	✓	✓	✓	✓	✓	✓				
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	32		✓	-	-	-	-	-	-				
	33		✓	✓	-	-	-	-	-				
	34		✓	✓	-	-	-	-	-				
	35		✓	✓	-	-	-	-	-				
	36				✓	✓	✓	✓	✓				

<i>Index of Claims</i> 	Application/Control No. 11503090	Applicant(s)/Patent Under Reexamination PABARI, VIPUL
	Examiner ABDELNABI MUSA	Art Unit 2478

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

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	05/27/2008	12/31/2008	05/14/2009	12/08/2009	10/31/2010	07/15/2011	06/06/2012	03/15/2013	
	37				✓	✓	-	-	-	
	38				✓	✓	-	-	-	
	39				✓	✓	✓	✓	✓	
	40				✓	✓	✓	✓	✓	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	7	("20050138165" "20050155033" "20060294238" "20070067435" "20080086731" "7463648" "7512769").PN.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 11:51
S2	19897	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:10
S3	16	pabari.in.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:10
S4	0	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host).clm.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:12
S5	1094	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host)	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:12
S6	1	S3 S5	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:12
S7	1	(virtual\$ mange\$4).ti.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:13
S8	82	(manage\$4 virtual\$6 environment resource\$4).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:14
S9	13	S2 S8	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:14
S10	2	(manage\$4 virtual\$6 environment resource\$4 physical host).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/29 17:17
S11	17572	(manage\$4 virtual\$6 environment (resource\$4 or asset\$2) physical host allocat\$4)	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:10
S12	19897	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:11

S13	1084	S11 S12	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:11
S14	468	S13 (load adj (shar\$4 or balanc\$4))	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:11
S15	82	(manage\$4 virtual\$6 environment resource\$4).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:13
S16	4	S14 S15	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:13
S17	143	((virtual adj machine) or VM) same new same physical same host	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:18
S18	2	S15 S17	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:19
S19	2	S17 S15	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:19
S20	84	S17 S11	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:21
S21	9	S20 S12	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2010/10/30 14:22
S22	0	(knowledge near block re\$allocat\$4 (real\$time or real near time) virtual\$2 image application\$2 (inventory or resource\$2) priorit\$6 (peer\$2 or member\$2) physical).clm.	US-PGPUB; USPAT; USOCR	AND	OFF	2012/04/10 14:21
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S24	156	(Automatic configuration management).ab.	US-PGPUB; USPAT; USOCR	AND	OFF	2012/04/10 14:29
S25	41755	709/223,224,226,229,220,221.ccls.	US-PGPUB; USPAT; USOCR	AND	OFF	2012/04/10 14:31
S26	29	S24 S25	US-PGPUB; USPAT; USOCR	AND	OFF	2012/04/10 14:31
S27	0	(10/460518).APP.	USPAT; USOCR	OR	OFF	2012/04/10 14:34
S28	7	("20050138165" "20050155033"	US-PGPUB;	AND	OFF	2012/04/10

		"20060294238" "20070067435" "20080086731" "7463648" "7512769").PN.	USPAT; USOCR; IBM_TDB			14:36
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S30	20	pabari.in.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S31	0	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host).clm.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S32	1541	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host)	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S33	1	S30 S32	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S34	1	(virtual\$ mange\$4).ti.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S35	122	(manage\$4 virtual\$6 environment resource\$4).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S36	26	S29 S35	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S37	3	(manage\$4 virtual\$6 environment resource\$4 physical host).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S38	22641	(manage\$4 virtual\$6 environment (resource\$4 or asset\$2) physical host allocat\$4)	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S39	25092	709/223.ccls. or 709/226.ccls. or 709/229.ccls.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S40	1484	S38 S39	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S41	637	S40 (load adj (shar\$4 or balanc\$4))	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S42	122	(manage\$4 virtual\$6 environment resource\$4).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36

S43	8	S41 S42	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S44	238	((virtual adj machine) or VM) same new same physical same host	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S45	7	S42 S44	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S46	7	S44 S42	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S47	141	S44 S38	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S48	18	S47 S39	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:36
S49	166	(manage\$4 virtual\$6 resource\$4 physical).ab.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:39
S50	118867	"709".clas.	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:39
S51	49	S50 S49	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:39
S52	49	S51 not S26	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:39
S53	0	real near time metrics virtual physical	US-PGPUB; USPAT; USOCR; IBM_TDB	SAME	OFF	2012/04/10 14:43
S54	27	real near time metrics virtual physical	US-PGPUB; USPAT; USOCR; IBM_TDB	SAME	OFF	2012/04/10 14:43
S55	1	S39 and real near time metrics virtual physical	US-PGPUB; USPAT; USOCR; IBM_TDB	SAME	OFF	2012/04/10 14:44
S56	3	S50 S54	US-PGPUB; USPAT; USOCR; IBM_TDB	AND	OFF	2012/04/10 14:46
S57	9	pabari.in.	USPAT	AND	OFF	2012/04/10 14:50

S58	20	pabari.in.	US-PGPUB; USPAT	AND	OFF	2012/04/10 14:50
S59	1	S23 S58	US-PGPUB; USPAT	AND	OFF	2012/04/10 14:50
S60	0	S24 S58	USPAT	AND	OFF	2012/04/10 14:51
S78	3	"11503090"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/03/12 15:19
S79	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	2013/03/12 15:52
S80	5	S79 and (virtual\$7 environment layer network (resourc\$2 or computer\$2 or printer\$2 or device\$2) (asset\$2 or software or program\$2 or instruction\$2))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2013/03/12 15:54
S81	1	(11/031542).APP.	USPAT; USOCR	OR	OFF	2013/03/12 16:04

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S61	10106	(manage\$4 virtual\$6 environment (resource\$4 or asset\$2) physical host allocat\$4)	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S62	76	((virtual adj machine) or VM) same new same physical same host	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S63	206	"S13" (load adj (shar\$4 or balanc\$4))	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S64	10106	(manage\$4 virtual\$6 environment (resource\$4 or asset\$2) physical host allocat\$4)	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S65	45876	"S2" "S8"	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S66	78	(manage\$4 virtual\$6 resource\$4 physical).ab.	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S67	23872	709/223,224,226,229,220,221.ccls.	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S68	21589	"I3" "I4"	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S69	593	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host)	USPAT; UPAD	AND	OFF	2012/04/10 14:47
S70	2	("20050138165" "20050155033" "20060294238" "20070067435" "20080086731" "7463648" "7512769").PN.	USPAT; UPAD	AND	OFF	2012/04/10 14:48

EAST Search History

S71	0	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host).clm.	USPAT; UPAD	AND	OFF	2012/04/10 14:48
S72	593	(manage\$4 virtual\$6 environment inventory resource\$4 prioritiz\$4 physical host)	USPAT; UPAD	AND	OFF	2012/04/10 14:48
S73	497	"L26" "L18"	USPAT; UPAD	AND	OFF	2012/04/10 14:48
S74	0	S73 S72	USPAT; UPAD	AND	OFF	2012/04/10 14:48
S75	463	S69 S64	USPAT; UPAD	AND	OFF	2012/04/10 14:49
S76	0	S62 S72	USPAT; UPAD	AND	OFF	2012/04/10 14:49
S77	9	pabari.in.	USPAT; UPAD	AND	OFF	2012/04/10 14:49

3/12/2013 5:50:41 PM

H:\ EAST\ Workspaces\ 11503090.wsp

Search Notes 	Application/Control No. 11503090	Applicant(s)/Patent Under Reexamination PABARI, VIPUL
	Examiner Abdelnabi Musa	Art Unit 2478

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
709	223, 226	5/27/2008	DA
709	223,224,226	12/31/2008	DA
709	223	12/8/2009	DA
709	223, 226, 229	10/31/2010	AM
709	223, 226, 229	7/15/2011	AM
709	223,224,226,229,220,221	6/6/2012	AM
709	223,224,226,229,220,221	3/15/2013	AM

SEARCH NOTES		
Search Notes	Date	Examiner
Text searched EAST databases	5/27/2008	DA
Updated EAST text search	12/31/2008	DA
limited class/subclass search (709/201-202,223-224,226; 718/100-108)	12/31/2008	DA
Inventor name searched	12/31/2008	DA
Updated EAST text search	5/14/2009	DA
Updated Text search of East (USPat, USPG_Pub, JPO, EPO, Derwent, IBM_TDB) and Inventor search	12/8/2009	DA
Limited classification search 709/201,202,223,224,226 and 718/1,100-108	12/8/2009	DA
EAST (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	10/31/2010	AM
EAST (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	7/15/2011	AM

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SEARCH NOTES		
Search Notes	Date	Examiner
EAST (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	6/6/2012	AM
EAST (USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB), see attached; NPL: IEEE; Inventor Search/DP	3/15/2013	AM

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
709	223,224,226,229,220,221	6/6/2012	AM

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Examiner.Art Unit 2478