

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

GINEGAR, LLC,

Plaintiff,

v.

ORACLE CORPORATION,

Defendant.

Case No. 6:21-cv-00134

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Ginegar LLC (“Ginegar”), by and through the undersigned counsel, brings this First Amended Complaint against Defendant Oracle Corporation (“Oracle”), alleging as follows:

I. INTRODUCTION

1. This is an action by Ginegar against Oracle for infringement of U.S. Patent Numbers 8,146,091 (the “’091 Patent”), 6,898,783 (the “’783 Patent”) and 7,533,366 (the “’366 Patent”), collectively referred to as “the Patents-in-Suit.”

II. THE PARTIES

2. Plaintiff Ginegar is a California corporation with its principal place of business at 2160 Century Park East #707, Los Angeles, California 90067. Ginegar is the assignee and owner of the Patents-in-Suit.

3. Upon information and belief, Defendant Oracle Corporation is a Delaware corporation with its principal place of business, and world headquarters, at 2300 Oracle Way, Austin, Texas 78741.

III. JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over Oracle because Oracle has a principal place of business in this District and because it continuously and systematically conducts business in this District, including the manufacture and distribution of the products at issue in this suit.

7. Venue is proper in the Western District of Texas under 28 U.S.C. §§ 1391(b) and 1400(b) because Oracle has its principal place of business in this District at 2300 Oracle Way, Austin, Texas 78741 and because a substantial part of the events and omissions giving rise to the claims at issue occurred here, including the use or sale of the infringing products.

IV. FACTUAL BACKGROUND

The '091 Patent

8. The '091 Patent, entitled "Expansion and Contraction of Logical Partitions on Virtualized Hardware," was issued by the United States Patent and Trademark Office on March 27, 2012. A true and correct copy of the '091 Patent is attached as Exhibit A.

9. Ginegar is the owner of the entire right, title and interest in and to the '091 Patent.

10. The '091 Patent claims methods, apparatuses, and a program product for managing the resources of a logically partitioned computing system with an application level administrative console.

11. Modern requirements for a computer system may require that a computer be utilized to run several operating environments at once. In a typical embodiment, a single computer can run a plurality of logical partitions.

12. In such a system, each operating environment, or operating system, resides in its own logical partition, with each logical partition using a part of a processor, an entire processor, or multiple processors of the computer. Additionally, a portion of the computer's memory is allocated to each logical partition.

13. In such a system, each operating system operates as if it were running on a separate physical machine having the processor and memory resources to which the logical partition has been allocated.

14. In such a system, all of the logical partitions in the computer are under the control of a partition manager. The partition manager typically runs underneath each partition's operating system and manages the allocation of resources to the operating environments and logical partitions.

15. The '091 Patent addresses a problem that existed with resource allocation in logically partitioned computing systems at the time of the invention.

16. At the time of the invention, the resources allocated to the logical partitions generally remained static after configuration. This would often result in an inefficient use of the resources in the computer. The needs of the different operating environments typically vary over time. This results in some operating environments having insufficient resources while others have excess resources.

17. Adjusting the resources allocated to the logical partitions was time consuming, laborious, and required an Information Technology professional. Adjusting the resources allocated to the logical partitions was also highly disruptive to the operation of the system as a whole.

18. The reason that adjusting the resources allocated to the logical partitions required the use of an Information Technology professional was the fact that, typically, the partition manager was located in the hypervisor which was under the control of the system administrator. Thus, only an Information Technology professional with administrator level privileges could adjust the resources allocated to the logical partitions.

19. The reason that the partition manager was typically restricted to Information Technology professionals is that adjusting the resources allocated to one logical partition necessarily has an effect on the resources allocated to the other logical partitions. A trained Information Technology professional was needed in order to ensure that all of the logical partitions had sufficient resources.

20. In addition to being time consuming, this was also extremely inefficient since it required the Information Technology professional to halt all data processing in the computer system, which would interrupt the functioning of all of the logical partitions. This could result in significant downtime for the system and its users.

21. The '091 Patent teaches, among other things, a novel software architecture and system that addresses the limitations of the prior art associated with adjusting the resources allocated to logically partitioned computer system.

22. The '091 Patent teaches an embodiment in which a logically partitioned computing system contains one or more administrative consoles that are located at the application level of the software stack. This novel software architecture allows users of applications that are located in a

logical partition to access the partition manager in order to adjust the resources allocated to the logical partitions.

23. Additionally, an embodiment of the '091 Patent teaches that the administrative console not only processes the user's request to adjust the resources allocated to the requested logical partition, but also ensures that there are still enough resources allocated to the other logical partitions.

24. The '091 Patent teaches a system and a method that overcome the limitation of the prior art by utilizing a novel system architecture that allows a user, who is not necessarily an Information Technology professional, to adjust the allocation of resources to logical partitions without needing the assistance of an Information Technology professional and without negatively affecting the allocation of resources to the other logical partitions.

25. The system taught in the '091 Patent is particularly useful, compared to the prior art, because it allows for the allocation of resources between logical partitions with minimal negative effect on the operation of the system and its logical partitions.

26. The novel software architecture taught in the '091 Patent was not well-understood, routine, or conventional in the industry at the time of invention.

The '783 and '366 Patents

27. The '783 Patent, entitled "Object Oriented Based Methodology for Modeling Business Functionality for Enabling Implementation in a Web Based Environment," was issued by the United States Patent and Trademark Office on May 24, 2005. A true and correct copy of the '783 Patent is attached as Exhibit B.

28. The '366 Patent, entitled "Object Oriented Based Methodology for Modeling Business Functionality for Enabling Implementation in a Web Based Environment," was issued by the United States Patent and Trademark Office on May 12, 2009. A true and correct copy of the '366 Patent is attached as Exhibit P.

29. Ginegar is the owner of the entire right, title and interest in and to the '783 Patent and the '366 Patent.

30. The inventions disclosed in the '783 Patent and the relate to a method for defining business functionality in an electronic format, and more particularly relate to an object-oriented methodology for modeling business functionality so as to generate hardware and software specific code therefrom for implementation in a web-based computing environment.

31. The inventions disclosed in the '366 Patent relate to computer implemented methods of modeling business activities using object-oriented methodology so as to generate hardware and software specific code for implementation in a web-based computing environment.

32. In the 1980's and 1990's, businesses began relying more and more heavily on computer software. At that time, the prevailing practice was to design business and software systems separately. It could take anywhere from two to five years to bring new business software systems online. This created major inefficiencies since the software applications that were

released had been designed to address problems that had existed years before when they began to be implemented rather than those existing at the time they became operational.

33. As businesses demanded continued process optimization, business software developers had to rethink how business information systems were structured in order to be capable of change in response to evolving business needs.

34. Rather than the old way of business managers posing problems for software developers to solve, managers and programmers had to find a way to work together to create software which was facilitated by software tools.

35. This was the birth of model-based business systems, a new approach wherein business processes and software were designed together. The goal of this approach was to construct software models that represent the process and operations of a business simply and directly.

36. Because these business models are not tied to any particular problem, they can be used to address a wide range of problems, including problems that weren't anticipated when the models were constructed.

37. In order to implement these model-based solutions, software developers turned to object-oriented programming languages. In object-based modeling systems, each business process or concept is represented by a software object and all of the information and behavior associated with that process are reflected in its corresponding software object.

38. Typically, objects are organized into classes. A class is a specification for a group of objects. In essence, a class is a generic template from which similar objects can be built.

39. The models would then be used to create code for business software. Originally the business model would be used by a human software developer to write code for software solutions. This could be a highly time-consuming process.

40. At the time the '783 Patent and '366 Patent were invented, a technological problem had emerged for developers using object-oriented programming languages for modeling business functionality. While an object's attribute value could indicate a logical state of the object and an object's methods could contain the universe of functions which may be invoked pursuant to the operation of the object, there was nothing in the structure of existing objects for binding an object's state attribute values to its methods.

41. This lack of methodology by which an object-oriented software application could bind, within the structure of an object, an object's state to its methods was a serious shortcoming in the art. This shortcoming became more apparent as internet software applications became more common. This is because the internet is a "stateless" environment. Communications between a client and a server are perceived by the server to be unique events and not a part of a continuous dialogue.

42. The '783 Patent teaches a method that addresses this shortcoming. The method of the '783 Patent allows for the intuitive translation of business processes into a computer defined structure.

43. The '783 Patent teaches a method of defining Business Classes that permits the encoding of complete state diagrams for each Business Class. The resultant Business Classes contain all of the information necessary to automate, in a computer environment, the real-world functionality of the entity modeled in the business class.

44. The '783 Patent further teaches the use of a graphical user interface (GUI) for linking Business Classes to generate relationships between one or more Business Classes and storing in memory the Business Classes and these relationships.

45. The '366 Patent teaches a method of modeling business activity using Business Classes that are constructed in such a way that the complete state diagrams for each Business Class are encoded. The resultant models produced by this method contain all of the information necessary to automate, in a computer environment, the real-world functionality of each entity modeled in each business class.

46. The inventions disclosed in the '783 Patent and the '366 Patent help create a software system through which users can use business process modeling to automatically generate software code for business applications.

47. The novel methodology taught in the '783 Patent was not well-understood, routine, or conventional in the industry at the time of invention.

48. The novel methodology taught in the '366 Patent was not well-understood, routine, or conventional in the industry at the time of invention.

The Oracle VM Server for SPARC

49. Oracle provides the Oracle VM Server for SPARC, which enables server virtualization and partitioning technology for SPARC V9 processors.

50. The Oracle VM Server for SPARC is used to better utilize the SPARC servers by installing multiple operating system on multiple partitions (logical domains). It also manages the resources (i.e., CPU, Memory, etc.) that are allocated to various logical domains.

51. Use of the Oracle VM Server for SPARC infringes at least claim 1 of the '091 Patent.

The Oracle BPM Suite

52. Oracle also provides the Oracle Business Process Management (BPM)Suite.

53. The Oracle BPM Suite is a set of tools for creating, executing, and optimizing business processes.

54. These tools provide users a method of defining Business Classes and modeling business activity that infringes at least claim 1 of the '783 Patent.

CLAIM I
(INFRINGEMENT OF THE '091 PATENT)

55. Ginegar repeats and realleges the foregoing allegations as if fully set forth herein.

56. The '091 Patent is valid and enforceable.

57. Oracle has infringed and continues to infringe, both directly and indirectly, at least claims 1, 9, 11 and 19 of the '091 Patent, either literally or under the doctrine of equivalents.

58. Claim 1 of the '091 Patent recites:

A method of managing a plurality of resources of a logically partitioned computing system of the type that includes a plurality of logical partitions managed by a partition manager, wherein each logical partition is allocated at least a portion of the plurality of resources and has an operating system resident therein, the method comprising:

[1] maintaining resources that are not allocated to the plurality of logical partitions in a resource pool;

[2] receiving a user request to adjust the allocation of at least a portion of the plurality of resources using an application level administrative console that is resident within a logical partition in the logically partitioned computing system, that is disposed in an application level above that of an operating system resident in such logical partition, and that includes an interface with a user;

[3] determining resources of the logically partitioned computing system to adjust in order to satisfy the user request using the application level administrative console;
and

[4] utilizing the application level administrative console to access the partition manager through a resource allocation interface for the partition manager to adjust the determined resources of the logically partitioned computing system in order to satisfy the user request, wherein the user request is for the creation of a new logical partition and utilizing the application level administrative console further comprises:

[4A] identifying a logical partition profile to configure on the new logical partition;

[4B] allocating at least a portion of the resources in the resource pool to the new logical partition; and

[4C] migrating data from the logical partition profile to the new logical partition.

59. Claim 9 of the '091 Patent recites:

A method of managing a first plurality of resources of a first logically partitioned computing system of the type that includes a first plurality of logical partitions managed by a first partition manager, wherein each logical partition of the first plurality of logical partitions is allocated at least a portion of the first plurality of resources, and wherein at least one logical partition of the first plurality of logical partitions is configured as a member of a distributed computing environment, the method comprising:

[1] maintaining resources that are not allocated to the first plurality of logical partitions in a resource pool;

[2] receiving a user request with an application level administrative console resident in a logical partition on a second logically partitioned computer of the type that includes a second plurality of logical partitions managed by a second partition manager, wherein each of the second plurality of logical partitions has an operating system resident therein, wherein the application level administrative console is disposed in an application level above that of an operating system resident in such logical partition and includes an interface with a user, wherein the second logically partitioned computer includes a second plurality of resources, wherein each logical partition of the second plurality of logical partitions is allocated at least a portion of the second plurality of resources, wherein at least one logical partition of the second plurality of logical partitions is configured as a member of the distributed computing environment, wherein the first and second logically partitioned computing systems communicate with each other over a network, wherein the application level administrative console is disposed in a middleware application configured to manage the distributed computing environment, and wherein the user request includes a request to adjust the allocation of at least a portion of the first plurality of resources;

[3] determining the resources of the first logically partitioned computing system to adjust in order to satisfy the request using the application level administrative console; and

[4] utilizing the application level administrative console to access the first partition manager through a resource allocation interface for the first partition manager to adjust the determined resources of the first logically partitioned computing system,

wherein the user request is for the creation of a new logical partition and utilizing the application level administrative console further comprises:

[4A] identifying a logical partition profile to configure on the new logical partition;

[4B] allocating at least a portion of the resources in the resource pool to the new logical partition; and

[4C] migrating data from the logical partition profile to the new logical partition.

60. Claim 11 of the '91 Patent Recites:

An apparatus comprising:

[1] at least one physical processor; and

[2] program code configured to be executed by the at least one processor to manage a plurality of resources of a logically partitioned computing system that includes a plurality of logical partitions managed by a partition manager, wherein each logical partition is allocated at least a portion of the plurality of resources and has an operating system resident therein, the program code further configured to receive a user request to adjust the allocation of at least a portion of the plurality of resources using an application level administrative console that is resident within a logical partition in the logically partitioned computing system, that is disposed in an application level above that of an operating system resident in such logical partition, and that includes an interface with a user, determine resources of the logically partitioned computing system to adjust in order to satisfy the user request using the application level administrative console, and utilize the application level administrative console to access the partition manager through a resource allocation interface for the partition manager to adjust the determined resources of the logically partitioned computing system in order to satisfy the user request, wherein the program code is further configured to maintain resources that are not allocated to the plurality of logical partitions in a resource pool, wherein the user request is for the creation of a new logical partition and wherein the program code is further configured to identify a logical partition profile to configure on the new logical partition, allocate at least a portion of the resources in the resource pool to the new logical partition, and migrate data from the logical partition profile to the new logical partition.

61. Claim 19 of the '091 Patent recites:

A program product, comprising:

[1] a recordable computer readable medium; and

[2] program code stored on the recordable computer readable medium and configured to be executed by at least one processor to manage a plurality of resources of a logically partitioned computing system that includes a plurality of logical partitions managed by a partition manager, wherein each logical partition is allocated at least a portion of the plurality of resources and has an operating system resident therein, the program code further configured to receive a user request to adjust the allocation of at least a portion of the plurality of resources using an application level administrative console that is resident within a logical partition in the logically partitioned computing system, that is disposed in an application level above that of an operating system resident in such logical partition, and that includes an interface with a user, determine resources of the logically partitioned computing system to adjust in order to satisfy the user request using the application level administrative console, and utilize the application level administrative console to access the partition manager through a resource allocation interface for the partition manager to adjust the determined resources of the logically partitioned computing system in order to satisfy the user request, wherein the program code is further configured to maintain resources that are not allocated to the plurality of logical partitions in a resource pool, wherein the user request is for the creation of a new logical partition and wherein the program code is further configured to identify a logical partition profile to configure on the new logical partition, allocate at least a portion of the resources in the resource pool to the new logical partition, and migrate data from the logical partition profile to the new logical partition.

62. By way of example, at least use of the Oracle VM Server for SPARC directly infringes at least claim 1 of the '091 Patent.

63. Regarding the preamble of claim 1, to the extent the preamble is determined to be limiting, use of the Oracles VM Server meets it. The preamble recites “[a] method of managing a plurality of resources of a logically partitioned computing system of the type that includes a plurality of logical partitions managed by a partition manager, wherein each logical partition is allocated at least a portion of the plurality of resources and has an operating system resident therein.”

64. According to information in the Enterprise Manager Ops Center User’s Guide available on Oracle’s website, the Oracle VM Server for SPARC technology “enables server virtualization on SPARC platforms. You can create and manage multiple virtual machine instances

simultaneously on a single SPARC machine. Each virtual machine, or guest, can run a different operating system.” *See, e.g.,* Exhibit C (https://docs.oracle.com/cd/E18440_01/doc.111/e18415/chapter_vm_sparc.htm#OPCUG342, last accessed February 1, 2021). It thus provides a way to “create and manage” a plurality of resources of a logically partitioned computing system of the type that includes a plurality of logical partitions managed by partition managers (multiple virtual machine instances that exist simultaneously on a single SPARC machine), wherein each logical partition is allocated at least a portion of the plurality of resources and has an operating system resident therein. Further, as described in the User Guide, Oracle’s technology “allows you to allocate a system’s various resources, such as memory, CPU threads, and devices” to create “discrete systems” with “their own operating system, resources, and identity within a single system.”

11 Oracle VM Server for SPARC

Oracle Solaris VM Server for SPARC technology, formerly known as Logical Domains or LDoms, enables server virtualization on SPARC platforms. You can create and manage multiple virtual machine instances simultaneously on a single SPARC machine. Each virtual machine, or guest, can run a different operating system.

With Enterprise Manager Ops Center, you can monitor and manage all of the virtual machines from a single browser user interface. You can use virtual pool technology to maximize capacity without overloading a server. To balance the load, you can move a virtual machine from one physical system to another system either automatically or manually, from the user interface.

In this release you can perform the following tasks:

- Provision the system to create Control Domain
- Reboot, and shut down the Oracle VM Server
- Monitor and interpret the performance of Oracle VM Server
- Create and provision logical domains
- Manage logical domains, including editing, migrating, starting, rebooting, and shutting down domains
- Monitor and interpret the performance of logical domain

About Oracle VM Server for SPARC

You use hardware virtualization to create multiple virtual machines on a single piece of physical hardware. Unlike Oracle Solaris Zones, where the operating system is the same for each non-global zone, virtual machines can run on full instances of different operating systems, or different versions of the same operating system. These instances are called logical domains.

Oracle VM Server for SPARC technology, formerly known as Logical Domains or LDoms, is virtualization of SPARC servers. This technology is part of a suite of methodologies for consolidation and resource management for SPARC Chip Multi Threading (CMT) systems. This technology allows you to allocate a system's various resources, such as memory, CPU threads, and devices, into logical groupings and create multiple discrete systems. These discrete systems have their own operating system, resources, and identity within a single system. By careful architecture, an Oracle VM Server for SPARC environment can help you achieve greater resource usage, better scaling, and increased security and isolation.

When Oracle VM Server for SPARC software is installed, a domain called the control domain is created. From this control domain, you create virtual machines called logical domains that each run an independent OS. A logical domain is a virtual machine with resources, such as a boot environment, CPU threads, memory, I/O devices, and its own operating system. The control domain manages the logical domains. Each logical domain can be created, destroyed, reconfigured, and rebooted independently of other logical domains.

See, e.g., Exhibit C. Thus, to the extent the preamble of claim 1 is limiting, it is met.

65. Use of the Oracle VM Server for SPARC also preforms the first listed step of claim 1, which requires “maintaining resources that are not allocated to the plurality of logical partitions in a resource pool.” The Oracle VM Server for SPARC 3.0 Administration Guide describes how the Oracle VM Server for SPARC implements dynamic resource management, which keeps record of resources that are free in a pool (i.e., CPU resources that are not allocated to the logical partitions).

Using Dynamic Resource Management

You can use policies to determine how to automatically perform DR activities. At this time, you can only create policies to govern the dynamic resource management of virtual CPUs.

* * *

The behavior of the `priority` property depends on the availability of a pool of free CPU resources, as follows:

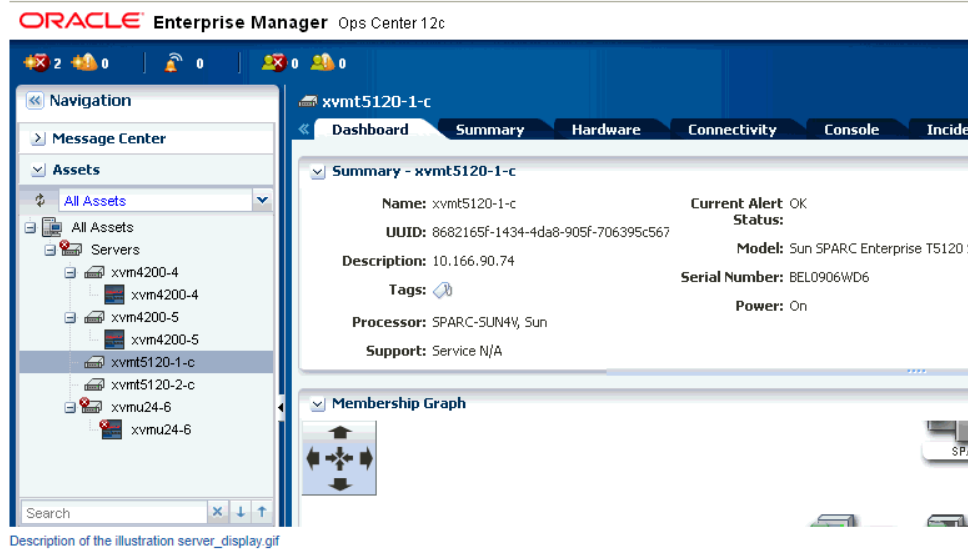
- **Free CPU resources are available in the pool.** In this case, the `priority` property determines which DRM policy will be in effect when more than one overlapping policy is defined for a single domain.
- **No free CPU resources are available in the pool.** In this case, the `priority` property specifies whether a resource can be dynamically moved from a lower-priority domain to a higher-priority domain on the same system. The priority of a domain is the priority specified by the DRM policy that is in effect for that domain.

See, e.g., Exhibit D

https://docs.oracle.com/cd/E37707_01/html/E29665/usingdynamicresourcemanagementpolicies.html, last accessed on February 1, 2021).

66. Use of the Oracle VM Server for SPARC also preforms the second listed step of claim 1, which requires “receiving a user request to adjust the allocation of at least a portion of the plurality of resources using an application level administrative console that is resident within a logical partition in the logically partitioned computing system, that is disposed in an application level above that of an operating system resident in such logical partition, and that includes an interface with a user.”

67. The Oracle VM Server allows one to monitor and manage all of the virtual machines from a single browser user interface.



The following steps define the procedure to successfully install Oracle VM Server for SPARC 2.1 version:

See, e.g., Exhibit E (https://docs.oracle.com/cd/E27363_01/doc.121/e27349/toc.htm#OPCTA130, last accessed on February 1, 2021). As explained in the Enterprise Manager Ops Center User's Guide (Exhibit C, above), “[w]ith Enterprise Manager Ops Center, you can monitor and manage all of the virtual machines from a single browser user interface.”

68. The Enterprise Manager Ops contains various options that enable the user to execute changes in the resource distribution among various domains. As described in Oracle's Enterprise Manager Cloud Control Cloud Administration Guide, users are able to “[s]pecify the resources they want to assign to a control domain.”

7. Specify the resources that you want to assign to the control domain, according to the recommended minimum configuration. The remaining resources are then available for the logical domains.

- **CPU Model:** Select Whole-core to allocate the CPU resource in cores.
- **CPU Cores:** Enter the number of CPU core to be allocated to the control domain.
- **Max CPU Cores:** Enter the number of CPU cores that must be assigned to control domain.
- **Memory:** Enter the amount of memory required for control domain.

See, e.g., Exhibit F (<https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/13.4/emclo/dynamic-resource-provisioning-oracle-vm-server-sparc.html#GUID-E377C038-9F9B-468C-8F95-75C5928EA4C5>, last accessed on February 1,

2021). Accordingly, the Enterprise Manager Ops Center is an application level administrative console, used to receive a user request to adjust the allocation of at least a portion of the plurality of resources, which includes an interface with a user.

69. As described in Oracle's Enterprise Manager Ops Center Virtualization Reference, the Enterprise Manager Ops Center is installed on the same server/system where the VM server agent is installed. Further it is installed in a Control Domain, which itself is a logical domain (partition) on the server (logically partitioned computer system).

For robust management, use the Oracle VM Server VC Agent to manage the domains. When you have an Oracle VM Server VC Agent installed on a managed system, you can use Oracle Enterprise Manager Ops Center or the Oracle VM Server for SPARC command line to perform configuration operations.

Metadata for all managed logical domains is stored in the Oracle VM Server's default local library. The agent runs on the control domain and monitors the configuration and reflects any changes on the configuration in its copy of the metadata. The Oracle VM Server VC Agent synchronizes the logical domain configuration defined on the control domain with the domain model view in .

* * *

You can install the agent during discovery, or at any time after discovery.

You have the following agent management options:

- **Oracle VM Server for SPARC Virtualization Controller Agent:** Manages the logical domains that are running on the Control Domain. The Oracle VM Server, Control Domain and operating system are reflected in the UI. Using this agent enables full monitoring and management actions for the Oracle VM Server system.

See, e.g., Exhibit G (<https://docs.oracle.com/cd/ops-center-12.4/doc.1240/e59972/GUID-11934399-9F77-4844-8C45-2943CE945B8F.htm#OCVRT8898>), last accessed on February 1, 2021). Accordingly, the application level administrative console “is resident within a logical partition in the logically partitioned computing system, that is disposed in an application level above that of an operating system resident in such logical partition.”

70. Use of the Oracle VM Server for SPARC also performs the third listed step of claim 1: “determining resources of the logically partitioned computing system to adjust in order to satisfy the user request using the application level administrative console.” As explained in the Oracle VM Server for SPARC 3.0 Administration Guide (Exhibit D), when a user provides instructions to issue a new partition, the Oracle VM Server determines and allocates the required resources for the creation of the new logical partition (or logical domain).

The behavior of the `priority` property depends on the availability of a pool of free CPU resources, as follows:

- Free CPU resources are available in the pool. In this case, the `priority` property determines which DRM policy will be in effect when more than one overlapping policy is defined for a single domain.
- No free CPU resources are available in the pool. In this case, the `priority` property specifies whether a resource can be dynamically moved from a lower-priority domain to a higher-priority domain on the same system. The priority of a domain is the priority specified by the DRM policy that is in effect for that domain.

71. Finally, use of the Oracle VM Server for SPARC also performs each of the limitations of the fourth listed step of claim 1, including those listed in 4A, 4B, and 4C. First, these limitations recite “utilizing the application level administrative console to access the partition manager through a resource allocation interface for the partition manager to adjust the determined resources of the logically partitioned computing system in order to satisfy the user request, wherein the user request is for the creation of a new logical partition and utilizing the application level administrative console.” Oracle VM Server allows a user to use the Oracle Enterprise manager Ops Centre (i.e., administrative console) to access the Logical Domains Manager (i.e., partition manager) that are responsible for creation of new logical domain and for allocating the resources (i.e., adjusting resources). With Enterprise Manager Ops Center, a user can monitor and manage all of the virtual machines from a single browser user interface, as it provides the user with an interface that contains various options/capabilities that enables the user to execute changes in the resource distribution among various domain.

Oracle VM Server for SPARC technology is virtualization of SPARC servers. This technology is part of a suite of methodologies for consolidation and resource management for SPARC Chip Multi Threading (CMT) systems. Using this technology, you can allocate the various resources of the system such as memory, CPU threads, and devices, into logical groupings and create multiple discrete systems. These discrete systems have their own operating system, resources, and identity within a single system. By careful architecture, an Oracle VM Server for SPARC environment can help you achieve greater resource usage, better scaling, and increased security and isolation.

See, e.g., Exhibit H

https://docs.oracle.com/cd/E27363_01/doc.121/e27511/ft_ovm_sparc_mgmt.htm#OPCFG3050

, last accessed on February 1, 2021).

72. Among other things, a user is able to request the creation of new logical partitions (i.e., logical domain/Guest domain).

How to Create and Start a Guest Domain

1. Create a logical domain.

The following command would create a guest domain named `ldg1`.

```
primary# ldm add-domain ldg1
```

See, e.g., Exhibit I

(https://docs.oracle.com/cd/E38405_01/html/E38406/createandstartguestdomaintask.html

, last accessed on February 1, 2021).

73. Once a request is issued by the user, the Oracle VM server in collaboration with the Enterprise Manager Ops Center adjusts the resources for a partition. Where a new domain (i.e., logical partition) is requested, the partition manager with the guidance of the user identifies a profile that contains the configuration for the new logical domain, then allocates resources and implements (i.e., migrates) the configuration settings (i.e., profile data) to the target new logical domain.

Creating Logical Domains

A logical domain is a virtual machine that has its own operating system and identity within a single server. Each logical domain can be created, destroyed, reconfigured, and rebooted independently, without requiring the server to be powered off. You can run a variety of applications in different logical domains to keep them independent for performance and security purposes.

Enterprise Manager Ops Center can create logical domains and install Oracle Solaris OS on them. Using profiles and deployment plans, you can create more than one domain simultaneously and then save the configuration for future logical domains.

To create logical domains:

- Create Logical Domain Profile and Plan – You create a profile which defines the configuration of the logical domain. Using the profile, you create a deployment plan. You apply the plan on an Oracle VM Server to create logical domains. The logical domains do not have the Oracle Solaris OS. You then select each logical domain and apply an OS provisioning plan to install the OS. See [Provisioning Logical Domains for provisioning OS on the logical domains](#).
- Configure and Install Logical Domains – This is a complex plan which contains deployment plans that create logical domains and install Oracle Solaris OS on them. You must have the required profiles and deployment plans available to create the complex plan.

Creating Logical Domain Profiles

A logical domain profile contains the requirements and configuration for an entire logical domain, including the CPU Threads, memory, storage, and network details. When a deployment plan applies the profile, you create a logical domain. You must provision Oracle Solaris OS on each domain separately. As an alternative, you can include the logical domain profile along with an OS provisioning profile in a complex plan.

See, e.g., Exhibit J

(https://docs.oracle.com/cd/E18440_01/doc.111/e18415/chapter_vmsharc.htm#OPCUG387, last

accessed on February 1, 2021). Accordingly, each of the limitations set forth in steps 4A, 4B, and

4C—“identifying a logical partition profile to configure on the new logical partition; allocating at least a portion of the resources in the resource pool to the new logical partitions; and migrating data from the logical partition profile to the new logical partition”—is met.

74. In violation of 35 U.S.C. § 271(a), Oracle has directly infringed the '091 Patent, either literally or under the doctrine of equivalents, by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States, without license or authority, the Oracle VM Server for SPARC.

75. In violation of 35 U.S.C. § 371(b), Oracle has also indirectly infringed the '091 Patent by actively inducing infringement of the '091 Patent by users of the Oracle VM Server for SPARC, knowing that their use of the Oracle VM Server for SPARC would and has directly infringed, either literally or under the doctrine of equivalents, the '091 Patent and specifically intending that its users infringe the '091 Patent.

76. In violation of 35 U.S.C. § 371(c), Oracle has also indirectly infringed the '091 Patent by offering to sell or license and/or selling or licensing with the United States its Oracle VM Server for SPARC for use in practicing one or more of the methods claimed in the '091 Patent, which constitutes a material part of the invention claimed by the '091 Patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use, for use in practicing one or more of the methods claimed in the '091 Patent, knowing that use of the Oracle VM Server for SPARC by users would directly infringe, either literally or under the doctrine of equivalents, the '091 Patent..

77. On information and belief, Oracle has known about the '091 Patent since at least about July 2014. On information and belief, Oracle and the inventors of U.S. Patent No. 9,317,329 knew of the '091 patent and its contents when the U.S. Patent Application Publication

No. 2009/027783 (the “‘783 publication”), which was the publication of the application that became the ‘091 patent was cited by the examiner during the prosecution of the patent application that became U.S. Patent No. 9,317,239.

78. On information and belief, Oracle has also been made aware of the ‘091 Patent at least by way of the ‘783 publication being cited by the examiner during the prosecution of the patent applications that became U.S. Patents Nos. 9,542,222 and 10,193,754.

79. On information and belief, Oracle has also demonstrated its knowledge of the ‘091 Patent at least by citing the ‘783 publication during the prosecution of the patent applications that became U.S. Patents Nos. 9,916,153; 9,961,001; 10,250,519; 10,318,280; 10,394,550; 10,742,568; 10,853,055; and 10,853,056.

80. Specifically, during the prosecution of U.S. Patent No. 10,193,754, the ‘783 publication was the basis of rejection under 35U.S.C. § 103 in an office action dated April 20, 2017. Moreover, in its response to the office action, Oracle amended its claims in an attempt to distinguish its invention from the invention disclosed in the ‘783 publication in a reply dated August 18, 2017.

81. Alternatively, Oracle knew of the ‘091 patent at least as early as the date it was served with the original Complaint in this lawsuit.

82. Oracle, having learned the likelihood of infringement of the ‘091 Patent, nevertheless acted in way that infringed and that continues to infringe.

83. Oracle’s infringement of the ‘091 Patent has been and continues to be willful.

84. As a result of Oracle’s infringement of the ‘091 Patent, Ginegar has suffered and continues to suffer substantial injury and is entitled to recover all damages caused by Oracle’s

infringement to the fullest extent permitted by the Patent Act, together with prejudgment interest and costs for Oracle's wrongful conduct.

CLAIM II
(INFRINGEMENT OF THE '783 PATENT)

85. Ginegar repeats and realleges the foregoing allegations as if fully set forth herein.

86. The '783 Patent is valid and enforceable.

87. Oracle has infringed and continues to infringe, both directly and indirectly, at least claims 1, 2, and 3 of the '783 Patent, either literally or under the doctrine of equivalents.

88. Claim 1 of the '783 Patent recites:

A method of defining Business Classes for modeling a business activity comprising the steps of:

[1] representing said business activity as an interaction between one or more Business Classes, wherein each Business Class is a generic definition of a Business Object and the Business Object is an instance of the Business Class;

[2] providing a graphical user interface (GUI) for linking desired ones of said Business Classes to generate relationships existing between said one or more Business Classes; and

[3] storing in a digital electronic format said one or more Business Classes as well as the relationships existing between said one or more Business Classes.

89. Claim 2 of the '783 Patent recites:

The method of claim 1 further comprising entering into a computer said one or more Business Classes comprising the steps of:

[1] entering Business Attributes related to each of said one or more Business Classes;

[2] defining Business Processes related to each of said one or more Business Classes; and

[3] entering Business Rules associated with one or more Business Attributes.

90. Claim 3 of the '783 Patent recites:

The method of claim 2 wherein defining Business Processes comprises the additional steps of:

[1] defining one or more Business States indicative of the status of a Business Classes; and

[2] defining one or more Business Methods to logically define the steps required to move a Business Class between one or more Business States.

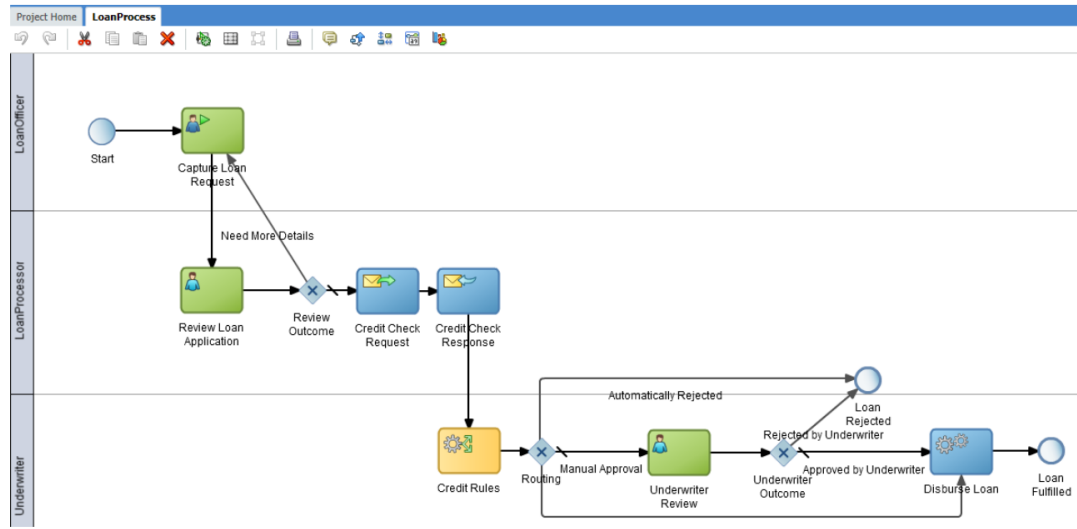
91. By way of example, at least use of the Oracle BPM Suite directly infringes at least claim 1 of the '783 Patent.

92. Oracle BPM Suite consists of Business Process Composer for modeling processes and Business Process Management Studio for implementing the process. *See, e.g.*, Exhibit K <https://docs.oracle.com/middleware/1213/bpm/bpm-develop/GUID-2D5EA36C-0BDC-4718-948D-EF33B072E28E.htm>, last accessed on February 1, 2021).

93. The below snapshot shows an example of modeling a loan approval process in Oracle BPM Suite. The Oracle BPM Suite provides a method of defining Business Classes, which are referred to by Oracle as “swimlanes.” In the below example, the swimlanes are Loan Officer, Loan Processor, and Underwriter. Each Business Class is a generic definition of a Business Object (flow objects, such as “capture loan request” and “review loan application” in the below example) and the Business Object is an instance of the Business Class. The Oracle BPM Suite represents a business activity as an interaction between Business Classes (i.e., Swimlanes).

The LoanProcess example, shown in Figure 7-7 defines the following roles:

Figure 7-7 BPM Process Editor - Swimlanes



Description of "Figure 7-7 BPM Process Editor - Swimlanes"

- **Loan Officer:** Loan officers are responsible for creating the loan request and forwarding it to the loan processor.
- **Loan Processor:** Loan processors are responsible for reviewing the loan application and checking the credit history of the loan applicant before forwarding the application to the underwriter for approval.
- **Underwriter:** This role represents users who are responsible for reviewing and approving the loan application.
Additionally, they disburse the loan if it is approved.

See,

e.g., Exhibit L (<https://docs.oracle.com/middleware/12211/bpm/bp-composer-user/GUID-5FD09D39-9EB9-49FA-9F16-5B4E0BC3D603.htm#BPMCU87304>, last accessed on February 1, 2021).

94. In the Oracle BPM Suite, swimlanes (i.e., Business Classes) help organize a process and appear as a horizontal line across the process editor and flow objects (i.e., Business Objects) must be placed in a swimlane. A business activity, in turn (such as loan processing), can be represented as the interaction between one or more Business Classes (this interaction being depicted by arrows in the above snapshot). Thus, the Oracle BPM Suite provides a method of defining Business Classes for modeling a business activity that performs the first listed step of claim 1 of the '783 Patent: "representing said business activity as an interaction between one or more Business Classes, wherein each Business Class is a generic definition of a Business Object and the Business Object is an instance of the Business Class."

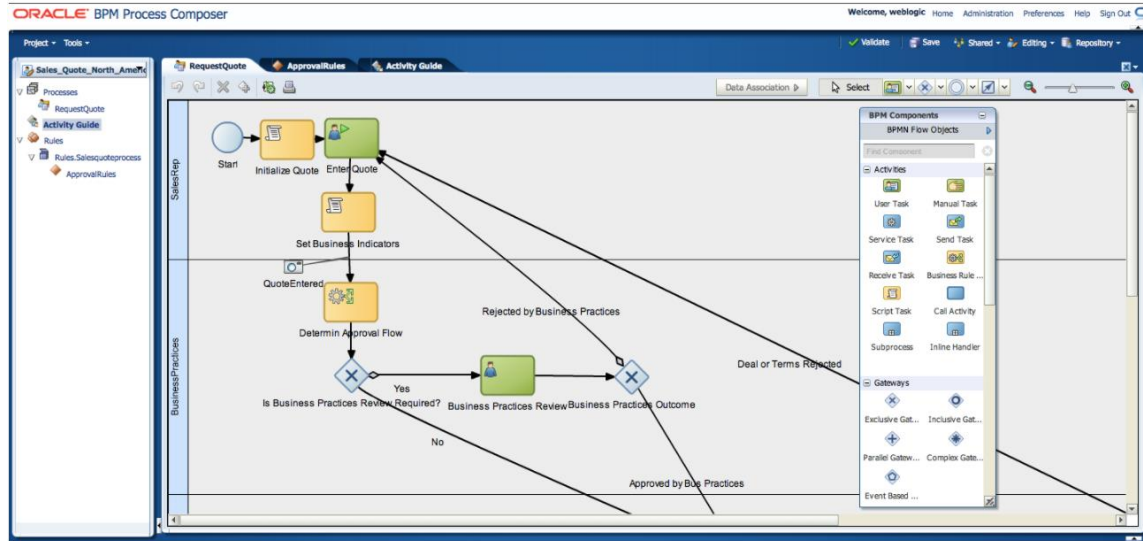
95. The Oracle BPM Suite also performs the second required step of claim 1, as it provides a graphical user interface (GUI):

3.5 Introduction to the Oracle Business Process Composer Interface

The Business Process Composer application contains a single window that provides access to all of the product functionality necessary to create and edit business processes.

Figure 3-6 shows the Business Process Composer application user interface.

Figure 3-6 The Oracle Business Process Composer Application User Interface

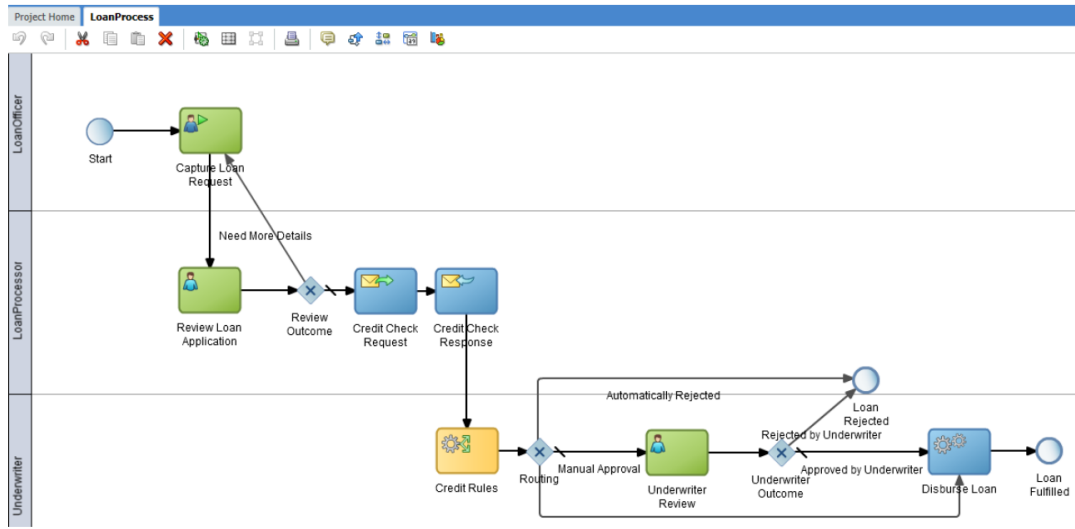


Description of "Figure 3-6 The Oracle Business Process Composer Application User Interface"

See, e.g., Exhibit M (last accessed on February 1, 2021). And the GUI allows linking desired ones of said Business Classes to generate relationships existing between said one or more Classes.

The LoanProcess example, shown in Figure 7-7 defines the following roles:

Figure 7-7 BPM Process Editor - Swimlanes



Description of "Figure 7-7 BPM Process Editor - Swimlanes"

- **Loan Officer:** Loan officers are responsible for creating the loan request and forwarding it to the loan processor.
- **Loan Processor:** Loan processors are responsible for reviewing the loan application and checking the credit history of the loan applicant before forwarding the application to the underwriter for approval.
- **Underwriter:** This role represents users who are responsible for reviewing and approving the loan application. Additionally, they disburse the loan if it is approved.

See, e.g., Exhibit L. In this snapshot, three Business Classes (i.e., swimclasses) are shown, which are linked (as shown by the arrows) and work together and are dependent on each other (i.e., relationship) to complete the modeled business activity (approving a loan).

96. The Oracle BPM Suite also performs the third step of claim 1’s method, as it stores in a digital format said one or more Business Classes as well as the relationships existing between said one or more Business Classes. Oracle BPM model projects are compiled and stored in the Oracle BPM MDS Repository as a .EXP file. These models contain the relationship (the BPMN process), as well as the Business Classes (components).

Oracle BPM Studio enables you to create a BPM project based on a BPMN process stored in a BPA repository.

You can create and implement a BPMN process in BPA and then import it to Oracle BPM. This creates a BPM Project that contains the BPMN process and all of the components used to implement it, such as Human Tasks, Service Adapters and Mediators.

See, e.g., Exhibit N

https://docs.oracle.com/cd/E14571_01/doc.1111/e15176/bpa_bpel_bpmpd.htm#BPMPD419,

accessed on February 1, 2021); see also Exhibit O

<https://docs.oracle.com/middleware/1221/bpm/bp-composer-user/GUID-285906C6-F9FF-48B4-AC8D-CAE4A5352DD2.htm#BPMCU285>, last accessed on February 1, 2021) (noting that one “can import a BPM 12c project that was previously exported and saved as a .EXP file”).

97. In violation of 35 U.S.C. § 271(a), Oracle has directly infringed the '783 Patent, either literally or under the doctrine of equivalents, by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States, without license or authority, the Oracle BPM Suite.

98. In violation of 35 U.S.C. § 371(b), Oracle has also indirectly infringed the '783 Patent by actively inducing infringement of the '783 Patent by users of the Oracle BPM Suite, knowing that their use of the Oracle BPM Suite would and has directly infringed, either literally or under the doctrine of equivalents, the '783 Patent and specifically intending that its users infringe the '783 Patent.

99. In violation of 35 U.S.C. § 371(c), Oracle has also indirectly infringed the '783 Patent by offering to sell or license and/or selling or licensing with the United States its Oracle BPM Suite, which constitutes a material part of the invention claimed by the '783 Patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use, for use in practicing one or more of the methods claimed in the '783 Patent, knowing that use of the Oracle BPM Suite by users would directly infringe, either literally or under the doctrine of equivalents, the '783 Patent.

100. On information and belief, Oracle has known about the '783 Patent since at least about June 2009. On information and belief, Oracle and the inventors of U.S. Patent Application No. 10/750,046 knew of the '783 Patent and its contents when the '783 Patent was cited in an Information Disclosure Statement dated June 3, 2009 during the prosecution of Application No.

10,750,046. Further, on information and belief, the '783 Patent was cited during the prosecution of U.S. Patent Nos. 9,704,120 and 9,846,849, both of which were assigned to Oracle at the time the '783 Patent was cited.

101. Alternatively, Oracle knew of the '783 patent at least as early as the date it was served with the original Complaint in this lawsuit.

102. Oracle, having learned the likelihood of infringement of the '783 Patent, nevertheless acted in way that infringed and that continues to infringe.

103. Oracle's infringement of the '783 Patent has been and continues to be willful.

104. As a result of Oracle's infringement of the '783 Patent, Ginegar has suffered and continues to suffer substantial injury and is entitled to recover all damages caused by Oracle's infringement to the fullest extent permitted by the Patent Act, together with prejudgment interest and costs for Oracle's wrongful conduct.

CLAIM III
(INFRINGEMENT OF THE '366 PATENT)

105. Ginegar repeats and realleges the foregoing allegations as if fully set forth herein.

106. The '366 Patent is valid and enforceable.

107. Oracle has infringed and continues to infringe, both directly and indirectly, at least claims 1, 2, and 5 of the '366 Patent, either literally or under the doctrine of equivalents.

108. Claim 1 of the '366 Patent recites:

A computer method of modeling a business activity, comprising the steps of:

[1] defining one or more business classes including storing in a digital electronic format said one or more business classes as well as the relationships existing between said one or more business classes;

[2] representing a Subject business activity as an interaction between one or more business classes; and

[3] tying business rules having states or tying methods which function as rules required to carry out a business rule to a next logical state, said tying of rules or methods being to individual instances of the business classes such that two instances of a same class can respond differently to a given business activity.

109. Claim 2 of the '366 Patent recites

A method as claimed in claim 1 wherein the step defining includes the steps of:

- [1] defining one or more business states indicative of the status of a business class; and
- [2] defining one or more business methods to logically define the steps required to move a business class between one or more business states.

110. Claim 5 of the '366 Patent recites

A method as claimed in claim 1 wherein the business classes form templates of run-time business objects, each business object being an instance of a respective business class.

111. At least the use of the Oracle BPM Suite directly infringes at least claims 1, 2 and 5 of the '783 Patent.

112. Oracle has known about the '366 Patent since at least the date of this Amended Complaint.

113. Oracle, having learned the likelihood of infringement of the '366 Patent, nevertheless acted in way that infringed and continues to infringe.

114. In violation of 35 U.S.C. § 271(a), Oracle has directly infringed the '366 Patent, either literally or under the doctrine of equivalents, by making, using, selling, and/or offering to sell in the United States, and/or importing into the United States, without license or authority, the Oracle BPM Suite.

115. In violation of 35 U.S.C. § 371(b), Oracle has also indirectly infringed the '366 Patent by actively inducing infringement of the '366 Patent by users of the Oracle BPM Suite, knowing that their use of the Oracle BPM Suite would and has directly infringed, either literally

or under the doctrine of equivalents, the '366 Patent and specifically intending that its users infringe the '366 Patent.

116. In violation of 35 U.S.C. § 371(c), Oracle has also indirectly infringed the '366 Patent by offering to sell or license and/or selling or licensing with the United States its Oracle BPM Suite, which constitutes a material part of the invention claimed by the '366 Patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use, for use in practicing one or more of the methods claimed in the '783 Patent, knowing that use of the Oracle BPM Suite by users would directly infringe, either literally or under the doctrine of equivalents, the '366 Patent.

PRAYER FOR RELIEF

WHEREFORE, Ginegar respectfully requests that this Court enter judgment in its favor and grant the following relief against Oracle:

- A. That the Court enter judgment for Ginegar on all causes of actions asserted in this First Amended Complaint;
- B. That the Court enter judgment in favor of Ginegar and against Oracle for monetary damages to compensate it for Oracle's infringement of the Patents-in-Suit pursuant to 35 U.S.C. § 284, including costs and prejudgment interest as allowed by law;
- C. That the Court enter judgment in favor of Ginegar and against Oracle for accounting and/or supplemental damages for all damages occurring after any discovery cutoff and through the Court's entry of final judgment;
- D. That the Court award Ginegar treble damages in light of the Oracle defendants' willful infringement;

- E. That the Court enter judgment that this case is exceptional under 35 U.S.C. § 285 and enter an award to Ginegar of its costs and attorneys' fees; and
- F. That the Court award Ginegar all further relief as the Court deems just and proper.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38, Ginegar respectfully demands a jury trial on all issues and claims so triable.

Dated: May 10, 2021

/s/ Jon B. Hyland

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CERTIFICATE OF SERVICE

A true and correct copy of the foregoing instrument was served or delivered electronically via U.S. District Court [LIVE] – Document Filing System, to all counsel of record, on this 10th day of May, 2021.

/s/ Jon B. Hyland