

# CONFIGURATION AND VERIFICATION BY TRUSTED PROVIDER

## CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Patent Application No. 13/784,276, filed March 4, 2013, the disclosure of which is incorporated herein by reference in its entirety.

## BACKGROUND

[0002] A data center is a facility that houses computer systems and various networking, storage, and other related components. Data centers may, for example, provide computing services to businesses and individuals as a remote computing service or to provide “software as a service” (e.g., cloud computing). The computing resources provided by a data center may include various types of resources, such as data processing resources, data storage resources, data communication resources, and the like.

[0003] To facilitate increased utilization of data center resources, virtualization technologies may allow a single physical computing machine to host one or more instances of virtual machines that appear and operate as independent computer machines to a connected computer user. With virtualization, the single physical computing device can create, maintain, or delete virtual machines in a dynamic manner. When a customer of a data center requests a new virtual machine instance, the data center may provide a virtual machine management service that identifies a “slot” for executing the new instance. Customers may sometimes request a virtual machine instance with a particular configuration. In some cases, the configuration may include software and data that is provided by the customer or by a third party supplier.

## SUMMARY OF INVENTION

[0003a]According to a first aspect of the present invention, there is provided a computing system comprising: at least one computing device; and at least one memory in communication with the at least one computing device, the at least one memory having stored thereon computer readable instructions that, when executed by the computing system, cause the computing system to at least: receive a request for an instance; in response to receiving the request for the instance, instantiating the requested instance, wherein instantiating the requested instance includes loading operating system software or data; auditing the instance to generate a record of the loaded operating system software or data; computing a configuration integrity verifier based on the record of loaded operating system software or data and a configuration for the instance; and in

response to a request for verification of the operating system software or data, providing the configuration integrity verifier, information regarding the audited instantiated instance, and the record of loaded operating system software or data as a trusted third party verification that the operating system software or data were used to instantiate the instance.

[0003b]According to a second aspect of the present invention, there is provided a method for verifying a computing configuration, the method comprising: receiving a request for a computing resource, wherein providing the computing resources includes loading of code or data; in response to receiving the request for the computing resource, instantiating the requested computing resource by loading said code or data; auditing said loaded code or data to generate a record of the loaded code or data; computing a configuration integrity verifier based on the record of the loaded code or data; and sending the configuration integrity verifier in response to a request for verification of the loaded code or data, the configuration integrity verifier being usable as a trusted verification of the loaded code or data.

## **BRIEF DESCRIPTION OF DRAWINGS**

[0004] Throughout the drawings, reference numbers may be reused to indicate correspondence between referenced elements. The drawings are provided to illustrate example embodiments described herein and are not intended to limit the scope of the disclosure.

[0005] Figure 1 is a diagram illustrating a mechanism for providing a configuration verification service in accordance with the present disclosure;

[0006] Figure 2 is a diagram illustrating an example computer system that may be used in some embodiments.

[0007] Figure 3 is a diagram illustrating a mechanism for providing a configuration verification service in accordance with the present disclosure;