CLAIMS

1. A method for detecting a software application installed in a computing environment, the method comprising:

~~obtaining a catalog of signatures;~~

obtaining a catalog of signatures and constructing at least one signature for the catalog of signatures based on configuration information of installed software by a machine learning system trained with a training set of signatures from the catalog of signatures;

scanning configuration objects of the computing environment to obtain ~~information about~~ configuration parameters corresponding to software applications provisioned in the computing environment, wherein the configuration parameters include volumes in which to place configuration files, environmental variables placed inside a container, and configuration maps; and

comparing the catalog of signatures ~~with~~to the ~~information comprising~~ configuration parameters to determine the software applications provisioned in the computing environment.

2. The method ~~according to~~ of claim 1, wherein the computing environment is a cluster-based computing environment comprising one or more clusters.

3. The method ~~according to the preceding~~ of claim 2, wherein the method further comprises:

redistributing the determined software applications across different clusters to optimize processing.

4. The method ~~according to any~~ of ~~the preceding claims and with features of~~ claim 2, further comprising:

determining which pods in the one or more clusters use objects associated with particular configuration parameters; and

comparing outputs of the pods to the catalog of signatures to identify the software ~~application~~applications.

5. The method of ~~according to any of the preceding claims and with features of~~ claim 2, wherein the cluster-based computing environment comprises a ~~Kubernetes~~kubernetes cluster or a ~~Nomad~~nomad cluster.

6. The method ~~according to any of the preceding claims~~of claim 1, wherein the software ~~application is~~applications are packaged in a container.

7. The method ~~according to any of the preceding claims~~of claim 1, wherein the catalog of signatures includes information comprising ~~at least one of~~ volumes, commands, configuration parameters, ~~and~~or secrets corresponding to the software ~~application~~applications.

8. A system for detecting a software application installed in a computing environment comprising one or more processors configured to:

~~obtain a catalog of signatures;~~

obtain a catalog of signatures and construct at least one signature for the catalog of signatures based on configuration information of installed software by a machine learning system trained with a training set of signatures from the catalog of signatures;

scan configuration objects of the computing environment to obtain ~~information about~~ configuration parameters corresponding to software applications provisioned in the computing environment, wherein the configuration parameters include volumes in which to place configuration files, environmental variables placed inside a container, and configuration maps; and

compare the catalog of signatures ~~with~~to the ~~information comprising~~ configuration parameters to determine the software applications provisioned in the computing environment.

9. The system ~~according to the preceding~~ of claim 8, wherein the computing environment is a cluster-based computing environment comprising one or more clusters.

10. The system ~~according to the preceding~~ of claim 9, wherein the ~~processor is~~one or more processors are further configured to:

redistribute the determined software applications across different clusters to optimize processing.

11. The system ~~according to any~~ of ~~the preceding claims 8 to 10 and with features of~~ claim 9, wherein the ~~processor is~~one or more processors are further configured to:

determine which pods in the one or more clusters use objects associated with particular configuration parameters; and

~~determine which pods in the one or more clusters use objects associated with particular configuration parameters; and~~

compare outputs of the pods to the catalog of signatures to identify the software ~~application~~applications.

12. The system ~~according to any~~ of ~~the preceding claims 8 to 11 and with features of~~ claim 9, wherein the cluster-based computing environment comprises a ~~Kubernetes~~kubernetes cluster or a ~~Nomad~~nomad cluster.

13. The system ~~according to any of the preceding claims 8 to 12~~of claim 8, wherein the software ~~application is~~applications are packaged in a container.

14. The system ~~according to any of the preceding claims 8 to 13~~of claim 8, wherein the catalog of signatures includes information comprising ~~at least one of~~ volumes, commands, configuration parameters, ~~and~~or secrets corresponding to the software ~~application~~applications.

15. A computer program product for detecting a software application installed in a computing environment, the computer program product comprising ~~a~~one or more computer readable storage ~~medium~~media collectively having program instructions embodied therewith, the program instructions executable by a processor to:

~~obtain a catalog of signatures;~~

obtain a catalog of signatures and construct at least one signature for the catalog of signatures based on configuration information of installed software by a machine learning system trained with a training set of signatures from the catalog of signatures;

scan configuration objects of the computing environment to obtain ~~information about~~ configuration parameters corresponding to software applications provisioned in the computing environment, wherein the configuration parameters include volumes in which to place

configuration files, environmental variables placed inside a container, and configuration maps; and

compare the catalog of signatures ~~with~~to the ~~information comprising~~ configuration parameters to determine the software applications provisioned in the computing environment.

16. ~~—~~ The computer program product ~~according to the preceding~~ of claim 15, wherein the computing environment is a cluster-based computing environment comprising one or more clusters.

17. ~~—~~ The computer program product ~~according to the preceding~~ of claim 16, wherein the program instructions are executable to:

redistribute the determined software applications across different clusters to optimize processing.

18. ~~—~~ The computer program product ~~according to any~~ of ~~the preceding claims 15 to 17 and with features of~~ claim 16, wherein the program instructions are executable to:

~~determine which pods in the one or more clusters use objects associated with particular configuration parameters; and~~determine which pods in the one or more clusters use objects associated with particular configuration parameters; and

compare outputs of the pods to the catalog of signatures to identify the software ~~application~~applications.

19. ~~—~~ The computer program product ~~according to any~~ of ~~the preceding claims~~ claim 15 ~~to 18~~, wherein the software ~~application is~~applications are packaged in a container.

20. ~~—~~ The computer program product ~~according to any~~ of ~~the preceding claims~~ claim 15 ~~to 19~~, wherein the catalog of signatures includes information comprising volumes, commands, configuration parameters, or secrets corresponding to the software ~~application.~~

applications.