

[ABSTRACT]

The present invention provides a distributed and associative container platform system, comprising: a high performance security container unit having a security enhancement container module, an ultra-light virtual machine module, a virtual isolation execution module, a performance enhancement container module, a direct resource allocation module, a virtual network configuration module, a hierarchical storage interworking module, and an integrated storage interworking module; a distributed cluster federation unit classified into a multi-cluster federation unit and a container-based multi-cluster unit, wherein the multi-cluster federation unit comprises a cross cluster integrated resource · service template association module, a cross cluster integrated resource orchestration module, a single view-based integrated resource monitoring module, a cross cluster integrated resource · service mesh association module, a cross cluster service module, a policy-based load balancing/auto scaling, a multi-cluster service distribution/integration/movement module, a cross cluster integrated resource · service · integrated authentication association module, a cluster federation API server, and a cluster federation manager, and wherein the container-based multi-cluster unit comprises a multi-cluster resource abstraction module, a multi-cluster connecting structure module, an inter-cluster abstract resource service interworking module, a multi-cluster configuration/control module, a multi-cluster-based failover module, an inter-multi-cluster integrated storage application module, and a container orchestration and cluster management module; a policy-based service mesh unit comprising a service mesh policy algorithm module, a cross cluster service template module, a service configuration lightweight agent module, a policy algorithm-based service mesh engine module, an inter-cluster service interworking control module, a multi-cluster service detection module, a

service mesh engine advancement module, a cross cluster service integrated authentication module, and a cluster service single authentication module, the policy-based service mesh unit being suitable for distributed cluster federation; and a distributed and associative service application · verification unit for providing cloud-based distributed and associative service application and verification utilizing the high performance security container unit, the distributed cluster federation unit, and the policy-based service mesh unit. The distributed and associative container platform system according to the present invention has an advantage of providing flexible movement of services and infinite extension of computing resources by interconnecting regionally distributed multiple container platforms and enhancing security.