CLAIMS

1. A method comprising:

sending, by a container executed by processing circuitry of a host computing device and to a cloud exchange via an application programming interface exposed by an interconnection platform of the cloud exchange, container registration data for the container, the container registration data comprising a network address for the host computing device that executes the container and a container identifier for the container.

2. The method of claim 1, wherein the container identifier comprises one of a Transmission Control Protocol (TCP) port and a User Datagram Protocol (UDP) port.

3. The method of claim 1, wherein the container comprises a user-space instance from a plurality of user-space instances that share an operating system executing on the host computing device.

4. The method of claim 1, wherein the container executes at an enterprise network coupled to the cloud exchange to receive, via one or more virtual circuits, cloud services from one or more cloud service providers coupled to the cloud exchange.

5. The method of claim 4, wherein the sending the container registration data comprises sending the container registration data via the one or more virtual circuits.

6. The method of claim 1, wherein the container executes at a cloud service provider network coupled to the cloud exchange to provide, via one or more virtual circuits, a cloud service to one or more customers coupled to the cloud exchange.

7. The method of claim 6, wherein the sending the container registration data comprises sending the container registration data via the one or more virtual circuits.

8. The method of claim 1,

wherein the container comprises a first container, and

wherein the container registration data comprises first container registration data, the method further comprising:

receiving, by the first container from the cloud exchange, second container registration data for a second container; and

sending, by the first container to the second container based on the second container registration data, a data communication.

9. The method of claim 8,

wherein the first container executes at a first private network coupled to the cloud exchange, and

wherein the second container executes at a second private network coupled to the cloud exchange.

10. The method of claim 9,

wherein the first private network comprises an enterprise network for an enterprise customer of a cloud exchange provider for the cloud exchange, and

wherein the second private network comprises a cloud service for a cloud service provider customer of the cloud exchange provider for the cloud exchange.

11. The method of claim 9,

wherein the first private network comprises a cloud service for a first cloud service provider customer of a cloud exchange provider for the cloud exchange, and

wherein the second private network comprises a cloud service for a second cloud service provider customer of the cloud exchange provider for the cloud exchange.

12. The method of claim 8, further comprising:

determining, by the first container, a health of the second container at least in part by sending the data communication; and

redirecting application traffic from the second container to a third container in response to determining the health of second container.

13. A method comprising:

receiving, by a cloud exchange executed by processing circuitry of at least one computing device and from a container executing at a private network coupled to the cloud exchange, container registration data for the container, the container registration data comprising a network address for a host computing device that executes the container and a container identifier for the container; and

storing, by the cloud exchange, the container registration data.

14. The method of claim 13,

wherein the container comprises a first container, and

wherein the private network comprises a first private network, the method further comprising:

sending, by the cloud exchange to a second container executing at a second private network, the container registration data.

15. The method of claim 14, further comprising:

storing data indicating an association between the first container and the second container,

wherein sending the container registration data comprises sending the container registration data based on data indicating the association.

16. The method of claim 14, further comprising:

receiving, by the cloud exchange, an indication of the association from an enterprise.

17. The method of claim 13, further comprising:

determining, by the cloud exchange, a health of the container at least in part by sending a data communication to the container, the data communication including the container registration data.

18. The method of claim 17, further comprising:

in response to determining the container is not healthy, migrating the container to another private network.

19. The method of claim 17, further comprising:

in response to determining the container is not healthy, redirecting application traffic from the container to another container executing at a different private network.

20. The method of claim 17, further comprising:

storing, by the cloud exchange, state for the container indicating a state of one or more applications executing on the container,

wherein migrating the container to another private network comprising sending the state for the container to the another private network.

21. The method of claim 13, further comprising:

configuring, by the cloud exchange, a virtual circuit to the private network, wherein receiving the container registration data comprises receiving the container registration data via the virtual circuit.

22. The method of claim 13, further comprising:

sending, by the cloud exchange to the container based on the container registration data, a data communication.

23. A host computing device comprising:

at least one processor operably coupled to a memory;

a kernel configured for execution by the at least one processor; and

a container configured for execution by the kernel, wherein the container comprises a network module configured to output container registration data to a cloud exchange via an application programming interface exposed by an interconnection platform of the cloud exchange, the container registration data comprising a network address for the host computing device that executes the container and a container identifier for the container.

24. A cloud exchange comprising:

at least one computing device comprising processing circuitry;

at least one memory operably coupled to the processing circuitry;

a network; and

an interconnection platform configured for execution by the processing circuitry to configure the network to interconnect a plurality of private networks,

wherein the cloud exchange is configured for execution by the processing circuitry to receive, from a container executing at a private network of the plurality of private networks and via the interconnection platform, container registration data for the container, the container registration data comprising a network address for a host computing device that executes the container and a container identifier for the container, and

wherein the cloud exchange is configured for execution by the processing circuitry to store the container registration data in the memory.

25. A method comprising:

transmitting, by a first container of a first private network of a plurality of private networks coupled to a cloud exchange, the first container executed by processing circuitry of a host computing device, and to a router of the cloud exchange, a first data communication to request an indication of a health of a second container of a second private network of the plurality of private networks coupled to the cloud exchange; and

receiving, by the first container and from the router, a second data communication originated by the second container of the second private network of the plurality of private networks coupled to the cloud exchange, the second data communication indicating the health of the second container.

26. The method of claim 25, further comprising:

determining, by the first container based on the second data communication, the health of the second container; and

deploying, by the first container, a third container upon determining that the second container is unhealthy.

27. The method of claim 26, wherein:

the first data communication comprises an echo request packet;

the second data communication comprises an echo response packet; and

determining, by the first container, the health of the second container comprises determining, by the first container, that the second container is unhealthy if the first container does not receive the echo response packet within a pre-determined time.

28. The method of claim 25, wherein the first data communication comprises:

a container identifier of the second container; and

a network address for the host computing device executing at the second private network and hosting the second container.