CLAIMS

What is claimed is:

1. A software platform for network communications comprising computer-executable instructions configured to generate a global overlay network, which enables an application to determine a network path through an underlying access network for data generated by the application.

2. The platform of claim 1, further comprising computer-executable instructions configured to enable an owner or user of the application to set end-to-end policies, independent of the underlying access network.

3. The platform of claim 1, further comprising computer-executable instructions configured to enable an owner or user of the application to set policies for end-to-end desired business results, independent of the underlying access network.

4. The platform of claim 3, further comprising computer-executable instructions configured to generate an API that enables the owner or user of the application to set at least one of the end-to-end policies and the policies for end-to-end desired business results.

5. The platform of claim 4, wherein the policies can be set or changed according to at least one of real-time conditions, triggers and events.

6. The platform of claim 1, further comprising computer-executable instructions configured to generate an API and instrumentation which provides an

application with end-to-end data, analytics and visibility of the application, regardless of networks traversed in the underlying access network.

7. The platform of claim 1, further comprising computer-executable instructions configured to generate one or more APIs and one or more portals, that enable the global overlay network to communicate with the application in real-time, such that the application may change its behavior in order to meet application owner policies.

8. The platform of claim 4, wherein the one or more APIs enables the owner of the application to share policies with one or more other systems.

9. The platform of claim 8, wherein the one or more APIs enables the owner of the application to at least one of accept policies from the one or more other systems and distribute policies to the one or more other systems.

10. The platform of claim 1, wherein the global overlay network is integrated with the platform and comprises a plurality of software nodes.

11. The platform of claim 10, wherein the nodes are connected as traditional networked nodes, as peer-to-peer mesh nodes, or any combination thereof.

12. The platform of claim 10, wherein the nodes are agnostic to at least one of network technology and network ownership of the underlying access network.

13. The platform of claim 12, wherein the nodes are located in a public cloud, a private cloud, an Internet backbone environment, or on end user devices.

14. The platform of claim 10, wherein the nodes are applications, VNFs, standalone devices running on commodity computers, purpose built appliances, or services embedded in network infrastructure.

15. The platform of claim 14, wherein the services embedded in the network infrastructure comprise gateways and session border controllers.

16. A method for routing data generated by an application to a destination under the control of the application, the method comprising:

a) instructing, with the application, a software node of a global overlay network to initially route the data to a policy-defined target node of an underlying access network;

b) at the target node, analyzing needs of the application and a real time status of candidate next hop nodes and associated paths of the underlying network with another software node of the global overlay network or a routing engine;

c) selecting, with the another software node or routing engine, one of the candidate next hop nodes of the underlying network, which best meets the needs of the application;

d) causing the data to be routed to the selected one of the candidate next hop nodes of the underlying network; and

repeating steps b)-d) until the data reaches the destination.

17. The method of claim 16, wherein the application is selected from the group comprising an enterprise application, a software as a service (SaaS), a platform as a service (PaaS), an internet of things (IoT), a cognitive computing application, an artificial intelligence (AI) application, a virtual reality application, an augmented reality application, a gaming application and an entertainment application.

18. The method of claim 16, wherein the needs of the application include end-to-end policies of the application.

19. The method of claim 16, wherein the needs of the application include policies for end-to-end desired business results of the application.

20. The method of claim 18 or claim 19, wherein the policies can be set or changed according to at least one of real-time conditions, triggers and events.

21. The method of claim 16, wherein the software nodes are connected as traditional networked nodes, as peer-to-peer mesh nodes, or any combination thereof.

22. The method of claim 16, wherein the software nodes are agnostic to at least one of network technology and network ownership of the underlying access network.

23. The method of claim 16, wherein the software nodes are located in a public cloud, a private cloud, an Internet backbone environment, or on end user devices.

24. The method of claim 16, wherein the software nodes are applications, VNFs, standalone devices running on commodity computers, purpose built appliances, or services embedded in network infrastructure.

25. The method of claim 24, wherein the services embedded in the network infrastructure comprise gateways and session border controllers.