

## Annex

1. A method for communicating with devices (121-123,131-133,141-143) in a decentralized network, comprising:

receiving a packet from a device (121) in a point of presence (111), ~~the point of presence (111) being remote from a centralized data center (101);~~

routing the packet according to a virtual circuit (220) from the point of presence to an application computer (261) of ~~a~~the centralized data center (101) wherein the virtual circuit is defined such that subsequently received packets in the point of presence (111) from the device are also routed according to the virtual circuit from the point of presence (111) to the application computer (261), ~~wherein routing the packet according to the virtual circuit includes rewriting a destination address in the packet from an original destination address to an address associated with the centralized data center (101), wherein the rewriting of the destination address is performed in accordance with re-write rules provided to the point of presence (111);~~

generating a reply packet by the application computer (261) processing information in the packet; ~~and characterized in~~

passing the reply packet to a remux computer (271) in a default gateway of the application computer (261); and

re-writing the source IP address of the reply packet so as to include the original destination address associated with the point of presence (111) according to re-write rules provided to the remux computer (271); and

transmitting the reply packet with the re-written source IP address back to the device from the remux computer (271).

2. The method according to claim 1, the method comprising sending the packet over the internet along a defined path of transmission from the point of presence to the address associated with the centralized data center.

3. The method according to claim 1 or 2, wherein a plurality of points of presence (111-

113) are distributed in the decentralized network, wherein the method is performed for each point of presence (111-113) which receives a packet from a device.

4. The method according to claim 1, 2 or 3, wherein the centralized data center (101) comprises multiple application computers (261-263), and wherein each point of presence has a virtual circuit (220) set up by a circuit keeper (230), wherein each virtual circuit (220) starts in one of the points of presence (111-113) and ends with one of the application computers (261-263) of the centralized data center (101), and wherein in establishing each virtual circuit (220), the circuit keeper (230) communicates re-write rules to each point of presence (111-113) and re-write rules to the remux computer (271) of the centralized data center (101).
3. The method according to claim 2, wherein the routing of the packet to the application computer (261) of the centralized data center includes rewriting a destination address in the packet from an original destination address to an address associated with the centralized data center (101).
4. The method according to claim 3, wherein the rewriting of the destination address is performed in accordance with re-write rules provided to the point of presence (111).
25. The method according to claim 1, 2, 3 or 4, wherein the reply packet indicates a destination IP address associated with the device.
36. The method according to claim 35, wherein the routing of the packet to the application computer (261) of the centralized data center (101) includes routing the packet to the centralized data center (101) according to a first static route defined in a routing table of a first computer (210) in the point of presence (111).
37. The method according to claim 1, 2, 3 or 4, wherein the routing of the packet to the application computer (261) of the centralized data center (101) comprises:  
  
rewriting the destination address in the packet from the address associated with the centralized data center (101) to an address associated with the application computer (261) in the centralized data center (101); and

routing the packet to the application computer (261);

and generation of the reply packet comprises:

processing the packet with an application program residing on the application computer (261) to generate the reply packet.

~~78.~~ The method according to claim 67, wherein the packet is routed to the application computer (261) according to a static route defined in a routing table of a second computer (240) in the centralized data center (101).

~~8.~~ The method according to claim 6, further comprising designating the original destination address as an alias on the loopback interface of the application computer (261).

~~9.~~ The method according to claim 8, wherein the address associated with the application computer (261) is the original destination address.

~~409.~~ The method according to claim 6, wherein a second computer in the centralized data center (101) and the application computer (261) communicate through an Ethernet network (250), and the address associated with the application computer (261) is an Ethernet address assigned to the application computer (261).

~~410.~~ The method according to claim 409, further comprising: determining the Ethernet address using information of a destination port indicated in the packet.

~~421.~~ A method as claimed in claim 1, ~~2, 3 or 4~~, further comprising:

receiving a request to establish the virtual circuit including a first computer (210) in the point of presence (111), a second computer (240) in the centralized data center (101), and the application computer (261) ~~initiating the request~~, and

sending first re-write rules to the first computer (210) and second re-write rules to the second computer (240) when establishing the virtual circuit so that the first re-write rules cause the first computer (210) to re-write a destination address included in a packet of information received from the device in the decentralized network to be re-

written from an original destination address to an address associated with the second computer (240), and the second re-write rules cause the second computer (240) to re-write the destination address from the address associated with the second computer (240) to an address associated with the application computer (261) after receiving the packet from the first computer (210).

~~43~~12. The method according to claim ~~42~~11, further comprising sending a first static route to the first computer (210) and a second static route to the second computer (240) when establishing the virtual circuit so that the first static route instructs the first computer (210) to route the packet received from the device to the second computer (240) and the second static route instructs the second computer (240) to route the packet to the application computer (261) after receiving the packet from the first computer (210).

~~44~~. ~~The method according to claim 12, further comprising designating the original destination address as an alias on a loopback interface of the application computer (261) so that the address associated with the application computer (261) is the original destination address.~~

~~45~~13. The method according to claim ~~42~~11, wherein the address associated with the application computer (261) is an Ethernet address, and further comprising sending third rewrite rules to a third computer (271) of a default gateway of the application computer (261) so that the third computer re-writes a source address in a reply packet generated by the application computer (261) from the Ethernet address associated with the application computer (261) to the original destination address.

~~46~~14. A method according to claim ~~1, 2, 3 or 4~~ wherein the generation of the reply packet by the application computer (261) processing information of the packet comprises:

receiving a packet from the point of presence (111) that has re-written a destination address in the packet from an original destination address associated with the point of presence (111) to an address associated with a first node (240) of the centralized network;

re-writing the destination address from the address associated with the first node (240) to an address associated with the application computer (261) of the centralized

data center (101);

routing the packet to the application computer (261) according to a static route defined in a routing table of the first node (240); and

generating a reply packet by processing information in the packet using an application program residing on the application computer (261).

~~47~~15. The method according to claim ~~46~~14, wherein the centralized data center (101) has an Ethernet network (250) and the address associated with the application computer (261) is an Ethernet address.

~~48~~16. The method according to claim ~~47~~15, further comprising: determining the Ethernet address using information included in a destination port indicated in the packet.

~~49~~17. The method according to claim ~~46~~14, wherein the receiving of the packet from the point of presence (111) is received by the first node (240) of the centralized data center (101) over the Internet, and the address associated with the first node (240) is an IP address.

~~20~~18. The method according to claim ~~46~~14, wherein the receiving of the packet from the point of presence (111) is received by the first node (240) of the centralized data center (101) through a virtual private network over the Internet, and the address associated with the first node (240) is an aliased address.