What is claimed is:

1. A system for routing packets, the system comprising:

a first level of a hierarchy of physical routing components comprising one or more first level physical routing components, wherein each of the one or more first level physical routing components is configured to:

receive a packet for routing, wherein the packet comprises at least a destination address, and wherein the destination address comprises a first subset of the destination address and a second subset of the destination address;

identify at least one second level physical routing component based at least in part on the first subset of the destination address, wherein the identified at least one second level physical routing component is associated with the first subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual second level physical routing components of the second level; and

transmit the packet to the identified at least one second level physical routing component; and

a second level of the hierarchy of physical routing components comprising one or more second level physical routing components, wherein each of the one or more second level physical routing components is configured to:

receive the packet from a first level physical routing component;

identify an outgoing transit path based at least in part on the second subset of the destination address, wherein the identified outgoing transit path is associated with the second subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual outgoing transit paths; and

transmit the packet to the identified outgoing transit path.

2. The system of claim 1, wherein the destination address corresponds to an IP address.

3. The system of claim 2, wherein the first subset of the destination address corresponds to the eight most significant bits of the IP address.

4. The system of claim 1, wherein at least two routing physical components corresponding to at least one of the first level or the second level of the hierarchy of physical routing components are implemented in a physical router device.

5. The system of claim 1, wherein each physical routing component corresponding to at least one of the first level or the second level of the hierarchy of physical routing components is allocated a portion of destination addresses of packets based at least in part on traffic volume associated with one or more destination addresses of the packets.

6. The system of claim 1 further comprising a router management device configured to dynamically allocate the individual portions of the set of potential destination addresses to the individual second level physical routing components.

7. A computer-implemented method for routing packets, the method comprising:

receiving, at a router component of a first level of a routing component hierarchy, a packet comprising a first subset of a destination address and a second subset of the destination address;

identifying a second level routing component of a second level of the routing component hierarchy based at least in part on the first subset of the destination address, wherein the identified second level routing component is associated with the first subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual second level routing components of the second level of the routing component hierarchy;

causing the packet to be routed to the second level routing component;

identifying, at the second level router component, an outgoing transit path based at least in part on the second subset of the destination address, wherein the identified outgoing transit path is associated with the second subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual outdoing transit paths; and

causing the packet to be routed to the outgoing transit path.

8. The computer-implemented method of claim 7, wherein the destination address corresponds to an IP address.

9. The computer-implemented method of claim 8, wherein the second subset of the destination address corresponds to at least one of the sixteen or twenty four most significant bits of the IP address.

10. The computer-implemented method of claim 7, wherein the dynamic allocation of individual portions of a set of potential destination addresses to individual second level routing components of the second level of the routing component hierarchy is based at least in part on traffic volume associated with the set of potential destination addresses.

11. The computer-implemented method of claim 7, wherein identifying a second level routing component of a second level of the routing component hierarchy comprises:

attempting to identify the second level routing component from address information persisted in a first memory, and

if the address information is not available in the first memory component, attempting to identify the second level routing component from address information persisted in a second memory; wherein the first memory is associated with a faster access time than the second memory.

12. A system for routing packets, the system comprising one or more physical routing devices configured with specific computer-executable instructions that, when executed by the physical routing devices, cause the physical routing devices to implement at least:

a first level of a routing component hierarchy comprising one or more first level routing components, wherein the first level of the routing component hierarchy is configured to:

in response to reception of a packet comprising a destination address, identify a second level routing component based at least in part on a first subset of the destination address, wherein the identified second level routing component is associated with the first subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual second level routing components; and

transmit the packet to the identified second level routing component;

a second level of the routing component hierarchy comprising one or more second level routing components, wherein the second level of the routing component hierarchy is configured to:

in response to reception of the packet from the first level of the routing component hierarchy, identify an external routing path based at least in part on a second subset of the destination address, wherein the identified external routing path is associated with the second

subset of the destination address based at least in part on a dynamic allocation of individual portions of a set of potential destination addresses to individual outgoing transit paths; and

transmit the packet to the identified external routing path.

13. The system of claim 12, wherein the destination address corresponds to an IP address.

14. The system of claim 13, wherein the first subset of the destination address corresponds to at least one of the eight, the sixteen, or the twenty four most significant bits of the IP address.

15. The system of claim 12, wherein each of the second level routing components comprises a first memory and a second memory for storing destination address information, and wherein the first memory is associated with a faster access time than the second memory.

16. The system of claim 15, wherein each of the second level routing components are further configured to:

attempt to identify the third level routing component from address information persisted in the first memory, and

if the address information is not available in the first memory, attempt to identify the third level routing component from address information persisted in the second memory component.

17. The system of claim 12, wherein the dynamic allocation of individual portions of the set of potential destination addresses to individual second level routing components is based at least in part on traffic volume associated with the set of potential destination addresses.

18. The system of claim 12 further comprising a router management device configured to dynamically allocate the individual portions of the set of potential destination addresses to individual second level routing components.

19. The system of claim 12, wherein the dynamic allocation of the individual portions of the set of potential destination addresses to individual second level routing components of the

second level of the routing component hierarchy is based at least in part on an available memory capacity of the individual second level routing components.

WHAT IS CLAIMED IS:

1. A system for routing packets comprising:

a router management component, executed on a computing device, for associating destination address information to a router hierarchy;

one or more router components corresponding to a first level of the router hierarchy, the first level of the router hierarchy for receiving an incoming packet for routing;

one or more router components corresponding to a second level of a router hierarchy, the second level of the router hierarchy for processing an incoming packet for routing received from at least one of the one or more router components corresponding to the first level of a router hierarchy;

wherein the one or more router components corresponding to the first level of a router hierarchy identifies one or more router components from the one or more router components corresponding to the second level of a router hierarchy based on a first subset of a destination address associated with the incoming packet, wherein the first subset is assigned by the router management component;

wherein each of the one or more router components corresponding to the second level of a router hierarchy correspond to portions of the first subset of the destination address associated with the incoming packet; and

wherein the one or more router components corresponding to the second level of a router hierarchy identifies an outgoing transit path based on a second subset of a destination address associated with the incoming packet, wherein the second subset is assigned by the router management component and wherein the second subset of the destination address is greater than the first subset of the destination address.

2. The system as recited in Claim 1, wherein the one or more router components corresponding to the second level of a router hierarchy is allocated to correspond to approximately equal portions of the first subset of the destination addresses associated with the incoming packet.

3. The system as recited in Claim 1, wherein the one or more router components corresponding to the second level of a router hierarchy is allocated to correspond to portions of

the first subset of the destination address associated with the incoming packet based on traffic volumes attributed to the destination address.

4. The system as recited in Claim 1, wherein the one or more router components corresponding to a first level of a router hierarchy are selected in accordance with one of random selection, round robin selection, hashing and load balancing.

5. The system as recited in Claim 1, wherein the destination address corresponds to an IP address.

6. The system as recited in Claim 5, wherein first subset of the IP address corresponds to the eight most significant bits of the IP address.

7. The system as recited in Claim 5, wherein first subset of the IP address corresponds to at least one of the sixteen or twenty four most significant bits of the IP address.

8. The system as recited in Claim 1, wherein at least two of the one or more router components corresponding to the first level of the router hierarchy are implemented in a common physical router component.

9. The system as recited in Claim 1, wherein at least two of the one or more router components corresponding to the second level of the router hierarchy are implemented in a common physical router component.

10. The system as recited in Claim 1, wherein the destination address corresponds to an IP flow descriptor.

11. The system as recited in Claim 1, wherein at least a physical router component implements at least two of a first level router and a second level router.

12. The system as recited in Claim 1, wherein at least one logical router component corresponds to the first and second levels of the router hierarchy.

13. A system for routing packets comprising:

a first set of logical router components for receiving an incoming packet for routing;

a second set of logical router components for routing packet received from the first set of router components;

an external transit component for routing packets received from the second set of router components

wherein the first set of logical router components identify a router from the second set of logical router components based on a correlation by a router management component of a subset of the destination address associated with the incoming packet to the selected router;

wherein each of the one or more router components corresponding to the second set of logical router components is allocated by the router management component to correspond to portions of the first subset of the destination address associated with the incoming packet; and

wherein the second set of logical router components identify a routing path identified by the external transit component based on a correlation by the router management component of a second subset of a destination address associated with the incoming packet to the second selected router.

14. The system as recited in Claim 13, wherein the correlation of routers from the second set of router components is based on a substantially equal allocation of possible destination addresses.

15. The system as recited in Claim 13, wherein the correlation of routers from the second set of logical router components is based on an association of traffic volumes for destination addresses.

16. The system as recited in Claim 13, wherein the correlation of routers from the second set of logical router components is based on a combination of an association of traffic volumes for destination addresses and an equal allocation of remaining destination addresses.

17. The system as recited in Claim 13, wherein each of the routers from the second set of logical router components are associated with a threshold number of destination addresses and wherein the correlation of routers from the second set of logical router components is based on allocation of a number greater than the threshold number of destination addresses associated with the second set of logical router components.

18. The system as recited in Claim 13, wherein the correlation of routers from the second set of logical router components is based on an association of low traffic volumes for destination addresses.

19. The system as recited in Claim 13, wherein the correlation of routers from the second set of logical router components includes an allocation of a plurality of routers for the same subset of destination addresses.

20. The system as recited in Claim 13, wherein first set of router components are selected in accordance with one of random selection, round robin selection, hash selection and load balancing.

21. The system as recited in Claim 13, wherein the destination address corresponds to an IP address.

22. The system as recited in Claim 21, wherein first subset of the IP address corresponds to the eight most significant bits of the IP address.

23. The system as recited in Claim 22, wherein first subset of the IP address corresponds to at least one of the sixteen or twenty four most significant bits of the IP address.

24. The system as recited in Claim 13, wherein each of the first set of logical router components corresponds to a physical router component.

25. The system as recited in Claim 13, wherein two or more of the first set of logical router components correspond to a single physical router component.

26. The system as recited in Claim 13, wherein each of the second set of logical router components corresponds to a physical router component.

27. The system as recited in Claim 13, wherein two or more of the second set of logical router components correspond to a single physical router component.

28. The system as recited in Claim 13, wherein at least one of the set of first logical components and at least one of the second set of logical components correspond to a single physical router component.

29. The system as recited in Claim 13, wherein at least one logical routing component corresponds to at least one of the first and second set of logical components.

30. A method for routing packets comprising:

obtaining a routing request corresponding to a data packet received from a first communication network;

identifying a first router corresponding to a first level of a router hierarchy, the first level of the router hierarchy corresponding to one or more router components;

forwarding the received data packet to the identified first router;

identifying a second router corresponding to a second level of the router hierarchy, the second level of the router hierarchy corresponding to one or more router components;

forwarding the received data packet to the identified second router; and

identifying a transit path corresponding to a communication network;

wherein identifying the second router corresponding to a second level of the router hierarchy is based on a correlation of a subset of the destination address associated with the received data packet to the selected router; and

wherein identifying the transit path is based on a correlation of a second subset of a destination address associated with the incoming packet to the second selected router.

31. The method as recited in Claim 30, wherein each of the one or more router components corresponding to the second level of the router hierarchy is allocated to correspond to portions of the first subset of the destination address associated with the incoming packet.

32. The method as recited in Claim 31, wherein the correlation of routers from the second level of the router hierarchy is based on at least a substantially equal allocation of possible destination addresses.

33. The method as recited in Claim 31, wherein the correlation of routers from the second level of the router hierarchy is based on an association of traffic volumes for destination addresses.

34. The method as recited in Claim 31, wherein the correlation of routers from the second level of the router hierarchy is based on a combination of an association of traffic volumes for destination addresses and an equal allocation of remaining destination addresses.

35. The method as recited in Claim 31, wherein each of the routers from the second level of the router hierarchy are associated with a threshold number of destination addresses and wherein the correlation of routers from the second level of the router hierarchy is based on allocation of a number greater than the threshold number of destination addresses associated with the second level of the router hierarchy.

36. The method as recited in Claim 31, wherein the correlation of routers from the second level of the router hierarchy is based on an association of low traffic volumes for destination addresses.

37. The method as recited in Claim 31, wherein the correlation of routers from the second set of router components includes an allocation of a plurality of routers for the same subset of destination addresses.

38. The method as recited in Claim 30, wherein first set of router components are selected in accordance with one of random selection, round robin selection, hash selection and load balancing.

39. The method as recited in Claim 30, wherein the destination address corresponds to an IP address.

40. The method as recited in Claim 30, wherein the transit path corresponds to an external transit component.

41. The method as recited in Claim 30, wherein the transit path corresponds to a communication network.