

# AppleTalk: Zone Design Issues

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TOPIC----------

This article discusses technical advantages exist for communications within a zone:

1) Is there a simplified routing algorithm used within a zone?

2) How much performance difference is there between intra-zone and inter-zone transmission (for a given physical Internet)?

3) Are there any downside tradeoffs to grouping several networks as a zone?

   We have been told that it is generally best to assign each network to its own zone. However, the Kinetics FastPath 4 manual (page 1-13) says that "...it is fastest to communicate with devices that are within one's own zone", and "...zones should be based on network traffic patterns". Which is correct?

DISCUSSION----------

1) There is no simplified routing algorithm used within a zone as compared to routing to another zone. This is because all routing depends on node IDs, socket numbers, and network numbers.

2) In most situations, there is very little difference. NBP lookups are faster when communicating within a single zone. Other than this, there are no performance difference.

3) It depends: the Kinetics FastPath 4 manual is correct saying that "zones should be based on network traffic patterns". It is not a good idea to put several saturated networks within the same zone. Nor is it a good idea to have all the file servers for one Internet within a single zone. It is best to balance the Internet by leveling the traffic

across zones so that a single zone does not contain the majority of the network traffic.

The Kinetics FastPath 4 manual is not completely correct saying "...it is fastest to communicate with devices that are within one's own zone". This statement is correct if each network is its own zone and incorrect if several networks are within a single zone. This is the true because it is necessary to go through a router if Network A is communicating with Network B, whether or not they are in the same zone.

For more information, we recommend reading chapters 7 and 8 of "Inside AppleTalk".



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