You are called by the “Wayen Corporation” to build a network for famous bilinear Bruce Wayen. After meeting with you, he has given you the following instructions.   
  
1) Bruce wants you to create a router in each of the given location. They must be configured in such way that, they support twice the numbers of hosts currently assigned to each location.   
i) Gotham (256)  
ii) Metropolis (128)  
iii) Amazonia (512)  
iv) Star City (64)  
v) Coast City (32)  
vi) Atlantis (1024)

2) He wants Metropolis, Star City and Coast City to be connected with each other securely so that they can route among each other with 100% certainty. (STATIC ROUTING) (EACH ROUTER MUST KNOW OTHER 2)  
  
3) He also wants the network to be built in such a way that, Amazonia and Atlantis can communicate with each other without a human manually mentioning the path. (DYNAMIC ROUTING NEEDS TO BE DONE)

4) Gotham should work as a bridge to connect this two differently connected sub networks. (AMAZONIA AND ATLANTIS SHOULD BE CONNECTED BY GOTHAM)

5) In any case, if Joker, Bane or Penguin, takes over Gotham, Bruce Wayne wants you to build a secondary connection between Metropolis and Amazonia. However, this connection should only be activated if Gotham falls. (IF JOKER,BANE AND PENGUIN WANTS TO HACK ,THAT’S WHY WE MUST CREATE A BACKUP ROUTE AMONG METROPOLIS AND AMAZONIA).( BASICALLY THIS IS BACKUP ROUTE BUT HAS A NAME)

6) As Amazonian are not so good with technology, Bruce wants you to build a server, only for Amazonia, which you automatically provide ip addresses for the hosts. (IMPLEMENT DHCP SERVER FOR AMAZONIA,WE WON’T PROVIDE ANYTHING.THE DHCP SERVER WILL AUTOMATICALLY PROVIDE EVERYTHING)

7) Finally, Bruce wants to see if any host devices are transmitting packets to unknown ip addresses. So forward them towards Gotham. (DEFAULT ROUTE HOCCHE GOTHAM)

8) You need to show at least two end devices for each network.(ADD TWO PC)

**Deliverables**

* The network mentioned above should be implemented in packet tracer, with necessary devices and full configuration.
* After completion you should be able to test the conditions imposed.
* As hardcopies, you will have to submit the followings:
  + Network topology diagram with proper labels
  + The configurations of all the routers that you have implemented.
  + VLSM/Network address table.
  + IP address table