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Q: I = means the ID of the person within the group compared to the blackboard. • Activate the necessary number of network adapters in the case of each VM. • Select the necessary network interface modes in the case of each VM. Configure VM2 so that it can receive IP address automatically from the local university network. • Configure the network interface of the VM-s based on the specified network addresses/prefix lengths. Both VM-s should be in a separate logical network on the host. • Configure the necessary static routes. • Allow the transfer of IP packets at the intermediate node. • Host k/VM1 i = 1, 2, 3, (4) should reach each other via IPv4 address. Aim: is to send IP packets from VM1 on our host to VM1 on our neighbour’s host in the group. Step 1: The default gateway should be set in the routing table of VM1 on the host. Then the static routes should be configured in the routing table of VM2 in both directions on the hosts used by the neighbours who sit next to each other in a given group. For example if there are 4 persons in a group, each group member has to configure 3 static routes because there will be (n-1) router in the group. Step 2: After completing step 1, the group members should allow the transfer of IP packets on VM2. Step 3: Reduce the number of static routes in the routing table of VM2 to configure only 1 static route there. Before that delete the previous static routes that you configured from the routing table of VM2. In that case there will be only one router in the group and its routing table will not contain any static route. In the routing table of their own VM2, the other group members will configure the aggregated network address of the group and on which the default gateway will be the bridged IPv4 address of the southern network adapter of VM2 on the router. Step 4: If we connect the network of 2 groups, then one out of their selected routers will configure the aggregated network address of the other group and on which the default gateway will be the bridged IPv4 address of the southern network adapter of VM2 on the other router. We have to perform the same configuration in the case of the other router as well.

**ANS:**

**Step 1:**

**Set Default Gateway for VM1 on the Host:**

**Configure the default gateway for VM1 on the host machine.**

**Configure Static Routes for VM2:**

**On the hosts used by the neighbors who sit next to each other in a given group, configure static routes in both directions for VM2.**

**For example, if there are 4 persons in a group, each group member should configure 3 static routes because there will be (n-1) routers in the group.**

**Step 2:**

**Allow Transfer of IP Packets on VM2:**

**Enable the transfer of IP packets on VM2.**

**Step 3:**

**Reduce the Number of Static Routes for VM2:**

**Delete the previous static routes configured for VM2.**

**Configure only 1 static route for VM2.**

**Configure the aggregated network address of the group in the routing table of VM2.**

**Set the default gateway as the bridged IPv4 address of the southern network adapter of VM2 on the router.**

**Step 4:**

**Connect the Network of 2 Groups:**

**One of the selected routers will configure the aggregated network address of the other group.**

**Set the default gateway as the bridged IPv4 address of the southern network adapter of VM2 on the other router.**

**Perform the same configuration on the other router.**

**Additional Notes:**

**Ensure that both VMs are in a separate logical network on the host.**

**Configure the network interface of VM2 to receive an IP address automatically from the local university network.**

**Configuration Summary:**

**VM1:**

**Set Default Gateway.**

**VM2:**

**Initially, configure static routes in both directions.**

**Later, reduce static routes to only 1 route.**

**Allow transfer of IP packets.**

**Configure the aggregated network address of the group.**

**Set default gateway to bridged IPv4 address of southern network adapter of VM2.**

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