

Distance Vector Routing with RIP

1. (Single Choice) Which of the following routing protocols involves simple configuration and low-speed convergence and is generally used in medium- and small-sized networks?

- A.BGP
- B.OSPF
- C.ISIS
- D.RIP

2. (Multiple Choice) Router A runs RIP routing and its interface serial 0 with IP address 10.0.0.1/24 is enabled with RIP routing protocol as well. Which of the following commands must be configured? (Select 2 Answers)

- A.Rip
- B.Rip 10.0.0.0
- C.Network 10.0.0.1
- D.Network 10.0.0.0

3. (Single Choice) Which of the following parameters is used by RIP to calculate the value of cost?

- A.MTU
- B.Delay
- C.Bandwidth
- D.Hop count

4. (Multiple Choice) Which of the following statements regarding RIP are correct? (Select 2 Answers)

- A.RIP is an IGP.
- B.RIP is an EGP.
- C.RIP is a distance vector routing protocol.
- D.RIP is a link-state routing protocol.

5. (Single Choice) Which of the following protocol is used by RIP to encapsulate the messages?

- A.UDP
- B.TCP
- C.ICMP
- D.Raw IP

6. (Single Choice) Which of the following cost values indicates that the route learned from RIP is unreachable?

- A.8
- B.10
- C.15
- D.16

7. (Single Choice) Which of the following statements regarding the function of holddown mechanism used by RIP is correct?

- A.Save the bandwidth

- B. Loop-avoidance
- C. Propagate the unreachable routing information throughout the network.
- D. Advertise the local route information to the RIP's neighbor

8. (Single Choice) Which of the following numbers is the maximum hop count in RIP?

- A. 12
- B. 15
- C. 16
- D. Infinity

9. (Single Choice) Which of the following values is the update interval for RIP?

- A. 5s
- B. 30s
- C. 60s
- D. 180s

10. (Single Choice) Routing Information Protocol (RIP) uses () to exchange routing information and sends out updated packets at a certain interval.

- A. TCP
- B. UDP
- C. RSVP
- D. LDP

11. (Single Choice) Routing Information Protocol (RIP) is available in the RIPv1, RIPv2, and RIPv3 versions.

- T. True
- F. False

12. (Single Choice) How many hops from a router to the directly connected network does the RIP protocol specify?

- A. 0
- B. 1
- C. Infinite
- D. None of the above

13. (Single Choice) By default, RIPv2 sends packet by means of ().

- A. Unicast
- B. Multicast
- C. Broadcast
- D. Multicast and broadcast

14. (Multiple Choice) What features does RIPv2 provide? (Select 3 Answers)

- A. Extension of subnet mask (VLSM)
- B. Large scale network
- C. Plain text authentication
- D. MD5 encrypted text authentication

15. (Multiple Choice) Which of the following methods are used by RIP to avoid routing loop? (Select 3 Answers)

- A.Split-horizon
- B.Holddown
- C.Rebooting routers
- D.Defining the maximum routing metric

16. (Single Choice) Which of the following statements regarding distance vector algorithm are incorrect? (Select 2 Answers)

- A.Distance vector algorithm does not generate routing loops.
- B.Distance vector routing protocol is implemented by exchanging routing information.
- C.The routes are advertised as vectors of (destination, cost).
- D.Routers running distance vector protocols obtain routing information from its own neighbors only.

17. (Multiple Choice) Which of the following are main functions of split horizon used by distance vector routing protocols? (Select 3 Answers)

- A.Prevent the routing loops between two adjacent routers.
- B.Ensure the routing updates not being sent back to the direction from which it was received.
- C.Work together with holddown mechanism to prevent the routing loops.
- D.Replace the poison reverse algorithm

18. (Multiple Choice) Which of the following statements regarding Bellman-Ford algorithm are correct? (Select 2 Answers)

- A.RIP is based on Bellman-Ford algorithm.
- B.Bellman-Ford is essentially a Dijkstra algorithm.
- C.When Bellman-Ford algorithm is used to calculate the routes, it does not need to know the whole topology of network.
- D.Bellman-Ford algorithm is a link-state algorithm.

19. (Single Choice) Which of the following commands is used to disable automatic route aggregation for RIP?

- A.Undo rip
- B.Summary
- C.Undo summary
- D.Undo network 10.0.0.0

20. (Multiple Choice) Which of the following statements regarding RIP v1 and RIP v2 are correct? (Select 2 Answers)

- A.RIP v1 supports VLSM.
- B.RIP v2 supports VLSM.
- C.RIP v2 uses route aggregation by default.
- D.RIP v1 supports simple password authentication only, while RIP v2 supports MD5 authentication.

21. (Multiple Choice) Which of the following messages can be processed by the interface working in RIPv2 Broadcast mode? (Select 2 Answers)

- A.RIPv1 broadcast messages

- B.RIPv1 multicast messages
- C.RIPv2 broadcast messages
- D.RIPv2 multicast messages

22. (Single Choice) Which of the following statements regarding routing loops in RIP is correct?

- A.Distance Vector algorithm can calculate the shortest path to the destination according to the given topology.
- B.Split horizon can prevent the routing loop between two neighboring routers only.
- C.Although Holddown mechanism results in slow convergence, it can completely prevent the routing loop.
- D.Maximum hop count mechanism can solve the problem caused by routing loop.

23. (Multiple Choice) Which of the following statements regarding RIP v1 and RIP v2 are correct? (Select 2 Answers)

- A.RIP v1 does not support multicast. By default, it does not advertise the information about subnet.
- B.RIPv2 supports multicast. It can choose not to advertise the information about subnet.
- C.RIPv1 can advertise information about subnet by disabling the automatic route aggregation.
- D.RIPv2 broadcasts message by default. The command "rip version 2 multicast" must be configured to make RIPv2 send message with multicast address.

24. (Multiple Choice) Which of the following statements regarding RIP network scale are correct? (Select 3 Answers)

- A.Bellman-Ford algorithm used by RIP can accurately calculate the shortest path of a large scale network.
- B.The maximum hop count of RIP is 16 and it can be used to prevent the packets from circulate infinitely in the network.
- C.It is recommended to use other routing protocols such as OSPF instead of RIP when the network topology is more complicated even though the hop count is less than 16.
- D.RIP is not suitable for large scale network because it advertises the whole routing table periodically and this consumes a lot bandwidth. So, RIP is suitable for small scale network only.

25. (Multiple Choice) Which of the following statements regarding RIP routing information are correct? (Select 2 Answers)

- A.User can specify the route preference of RIP higher than that of static routes.
- B.If the route calculated by other routing protocol which is imported by RIP does not specify the cost value, the cost value will be set as 1 by default
- C.User can specify the route preference value of RIP lower than that of direct routes.
- D.The route preference of RIP can not be configured manually.

26. (Multiple Choice) Which of the following statements regarding split horizon used by RIP are correct? (Select 3 Answers)

- A.Split horizon is used to avoid routing loop. The main idea of Split Horizon is that the information can not be sent back in the direction from which the data was received.

- B.Split horizon will not prevent the routing loop between 2 routers.
- C.Split horizon might cause some of the routers not able to obtain the accurate routing information.
- D.On the VRP platform, split horizon is enabled by default. It can be disabled when necessary.

27. (Multiple Choice) Which of the following statements regarding RIP route aggregation are correct? (Select 3 Answers)

- A.RIP v1 supports route aggregation by default and it can be disabled when necessary.
- B.We can disable the route aggregation on RIP V2.
- C.RIPv1 does not support CIDR
- D.RIPv2 supports CIDR.

28. (Single Choice) After a command for displaying RIP route information is entered on a router, peer 192.169.1.3 on ethernet1/0/1 is displayed in the returned result. What does ethernet1/0/1 stand for?

- A.Port connected to the RIP neighbor with the IP address of 192.169.1.3
- B.Port corresponding to the RIP transmission address
- C.Port with the broadcast protocol enabled
- D.Port with the multicast protocol enabled

29. (Single Choice) What does the value 1 of cost in the RIP route information mean?

- A.The route cost is 0.
- B.The priority of the RIP protocol is 1.
- C.Only one hop exists between the router and the destination network segment.
- D.The route progress number is 1.
- E.The route weight is 1.

30. (Multiple Choice) Which of the following statements about RIP protocol priorities are true? (Select 3 Answers)

- A.With routing protocol priorities, a route obtained by a certain routing protocol can be selected as the optimal route according to the specified routing policy.
- B.A greater value of the RIP routing protocol priority means a higher priority.
- C.The RIP protocol priority can be set manually on a router.
- D.By default, the RIP protocol priority of Huawei router is 100.

31. (Multiple Choice) What are the rip metricout value and rip metricin value commands used to set in the interface view? (Select 2 Answers)

- A.Metric increased by sending RIP route information on the interface
- B.Metric increased by receiving RIP route information on the interface
- C.Metric contained in the transmitted RIP route information on the interface
- D.Metric contained in the received RIP route information on the interface

32. (Multiple Choice) The RIP packet version is set in the interface view. Which of the following statements are true in the case of version RIPv1? (Select 2 Answers)

- A.The interface receives only RIPv1 and RIPv2 broadcast packets.
- B.The interface does not receive RIPv2 multicast packets

- C.The interface receives only RIPv1 broadcast packets.
- D.The interface does not receive RIPv2 broadcast packets.

33. (Single Choice) When an RIP route is unavailable, the router deletes this RIP route from the routing table if it fails to receive a packet updating this RIP route information after a period of ().

- A.120s
- B.180s
- C.240s
- D.300s

34. (Single Choice) After receiving a Response packet from a neighbor, the RIP protocol calculates the routing metric. The calculated routing metric must be equal to or greater than ().

- A.The metric contained in the packet
- B.The metric contained in the packet plus 1
- C.The metric contained in the packet plus the cost of the destination network
- D.The cost of the destination network

Link State Routing with OSPF

1. (Single Choice) Which of the following routing protocols are the link state routing protocols?

- A.RIP
- B.BGP
- C.IP
- D.OSPF

2. (Multiple Choice) Which of the following statements regarding the comparison between OSPF and RIP are correct? (Select 3 Answers)

- A.OSPF is more appropriate for large networks than RIP.
- B.RIP is more appropriate for small networks than OSPF.
- C.RIP is more appropriate for flat network design while OSPF is more appropriate for hierarchical network design.
- D.In the same network, RIP will consume more bandwidth than OSPF.

3. (Multiple Choice) Which of the following statements regarding OSPF are correct? (Select 3 Answers)

- A.Support CIDR (Classless Inter-Domain Routing)
- B.Use the distance vector algorithm
- C.Use the triggered updates to immediately notify the neighbors about the topology changes so that the changes are synchronized in the AS.
- D.Use the reserved multicast addresses to transmit protocol packets.

4. (Multiple Choice) Which of the following statements regarding OSPF are correct? (Select 3 Answers)

- A.OSPF is an EGP.

- B.OSPF calculates the shortest path tree based on the link state information and OSPF itself will not generate the routing loop
- C.Supporting authentication of the messages and this enhanced the security
- D.Supporting ECMP (Equal Cost Multi-Path)

5. (Multiple Choice) Which of the following statements regarding the OSPF router types are incorrect? (Select 3 Answers)

- A.ABR can be ASBR at the same time.
- B.ABR is the router connecting any two OSPF areas and it can be used to transmit the routing information between them.
- C.The router inside an OSPF area can not be ASBR.
- D.An OSPF router can belong to two or more areas but can be the ABR for a “single” area only.

6. (Single Choice) In OSPF protocol, most of the packets are sent by using reserved multicast address and this can reduce the impact on non-OSPF speaking devices.

- T.True
- F.False

7. (Single Choice) On VRP platform, which of the following is the default route preference value for OSPF routing protocol?

- A.10
- B.1
- C.100
- D.120

8. (Multiple Choice) Which of the following network types are supported by OSPF? (Select 3 Answers)

- A.Point-to-Point
- B.Point-to-Multipoint
- C.Bus Topology
- D.Broadcast

9. (Multiple Choice) In OSPF protocol, an ABR can also function as () (Select 2 Answers)

- A.IR (Internal Router)
- B.BR (Backbone Router)
- C.ASBR
- D.Stub Router

10. (Single Choice) In an OSPF area, routers exchange information about (). This type of information forms an information library.

- A.Link status
- B.Distance vector
- C.Route cost
- D.Route priority

11. (Single Choice) A router with OSPF enabled calculates the shortest route to the destination by using () algorithm.

- A.OSPF

- B.SPF
- C.SRC
- D.OPF

12. (Single Choice) OSPF can generate a loop-free shortest route tree by using a routing protocol algorithm. Thus, the OSPF routing protocol has no loop problem.

- T.True
- F.False

13. (Single Choice) OSPF runs over the IP protocol and the IP protocol No. used by OSPF is ().

- A.89
- B.80
- C.512
- D.2328

14. (Single Choice) OSPF has experienced several versions. Which of the following versions is experimental and has never been deployed?

- A.OSPFv1
- B.OSPFv2
- C.OSPFv3
- D.OSPFv4

15. (Single Choice) Which of the following OSPF versions is specific to the IPv6 technology?

- A.OSPFv1
- B.OSPFv2
- C.OSPFv3
- D.OSPFv4

16. (Multiple Choice) Which of the following statements about the features of the OSPF protocol are true? (Select 3 Answers)

- A.The OSPF protocol supports area division.
- B.The OSPF protocol is quick in route convergence when routes change.
- C.The OSPF protocol supports “multiple” equal-cost routes.
- D.The OSPF protocol supports encrypt protocol packets.

17. (Multiple Choice) The link state database (LSDB) on an OSPF router is formed based on (). (Select 2 Answers)

- A.local LSA
- B.LSA advertised by a neighboring router
- C.RSVP packet advertised to a neighboring router
- D.RSVP packet advertised by a neighboring router

18. (Single Choice) Each router calculates the shortest path tree based on the LSDB with itself as a () node.

- A.Root
- B.leaf
- C.Specified root

D.Backup

19. (Multiple Choice) The shortest path tree calculated by a router in an OSPF area provides () on the path from this router to other nodes in the network.

- A.All link states
- B.Routing table
- C.MAC address table
- D.ARP table

20. (Multiple Choice) Which of the following statements about an OSPF neighboring router are true? (Select 2 Answers)

- A.An OSPF interface broadcasts Hello packets to discover a neighbor.
- B.After a router receives a Hello packet from the peer router, it becomes the neighbor of the peer router.
- C.After an OSPF router receives a Hello packet from the peer OSPF router, it checks the parameters in the packet. If the parameters in the packet from the peer OSPF router are consistent with the parameters of this OSPF router, the two OSPF routers become neighbors of each other.
- D.Neighbor discovery is equivalent to adjacency establishment.

21. (Single Choice) Two OSPF routers become neighbors only after they successfully exchange () packets and LSAs.

- A.Hello
- B.DD
- C.LSR
- D.LSU

22. (Single Choice) When two routers synchronize their LSDBs, they use () packets to describe their own LSDBs.

- A.Hello
- B.DD
- C.LSR
- D.LSU

23. (Multiple Choice) In a () network, DRs and BDRs are used to prevent the problem with route convergence at a low speed. (Select 2 Answers)

- A.Point-to-point
- B.Broadcast
- C.NBMA
- D.Point-to-multipoint

24. (Multiple Choice) Which of the following statements regarding Autonomous System Boundary Router are correct? (Select 2 Answers)

- A.ASBR is the router that imports the routes calculated by other protocols into OSPF.
- B.ASBR is not always on the border of AS but it can be set anywhere in the AS except Stub area.
- C.ABR can not be ASBR at the same time.
- D.ASBR must belong to two OSPF areas.

25. (Single Choice) Which of the following statements regarding the routing loop in OSPF is correct?

- A. Routing loop is eliminated within an OSPF area.
- B. Routing loop is not eliminated between two OSPF areas.
- C. Routing loop is not eliminated within an OSPF Autonomous Systems.
- D. No routing loop exists outside the OSPF autonomous system.

26. (Multiple Choice) Which of the following statements regarding OSPF area are incorrect? (Select 2 Answers)

- A. Without manual configuration, an OSPF area is a backbone area with area ID 0 by default.
- B. OSPF supports area division.
- C. Every OSPF area is identified by a 32-bit Area ID number.
- D. Area ID must be assigned by IANA and we can not simply assign it.

27. (Multiple Choice) Which of the following statements regarding adjacencies of OSPF routers are correct? (Select 4 Answers)

- A. After two routers have been received the Hello packets from each other, they will form the adjacency automatically.
- B. IF two routers are fully adjacent, the network type between them may be Point-to-Point network.
- C. IF two routers are fully adjacent, the network type between them may be Point-to-Multipoint network.
- D. IF two routers are fully adjacent and the network type between them is broadcast network, then one of routers must be either DR or BDR.
- E. Only two adjacent routers can exchange LSAs.

28. (Single Choice) In broadcast network of OSPF protocol, any two DR Others will neither exchange routing information nor send Hello packet to each other due to the existence of DR.

- T. True
- F. False

29. (Single Choice) OSPF is an application layer protocol and it runs on ()

- A. UDP, port number 520
- B. TCP, port number 179
- C. IP, Protocol Number 89
- D. Data Link layer

30. (Single Choice) OSPF takes the precedence to select () as a router ID unless you specify a router ID manually.

- A. the biggest IP address of all the loopback port addresses
- B. the biggest IP address of the physical port IP addresses
- C. 127.0.0.1
- D. the IP address of a port connected to an OSPF neighbor

31. (Single Choice) After OSPF divides an AS into different areas, what is communicated between these areas?

- A. Abstract route information for each area
- B. Link state information for each area

- C.Topology information for each area
- D.Link bandwidth information for each area

32. (Single Choice) A backbone OSPF area is responsible for releasing the information collected by each border router to non-backbone OSPF areas. Which of the following represents the ID of a backbone OSPF area?

- A.area 0
- B.area 1
- C.area 0.0.0.1
- D.area 0.0.0.2

33. (Multiple Choice) Which of the following statements regarding the backbone area in OSPF protocol are correct? (Select 3 Answers)

- A.The area ID of the backbone area is 0.0.0.1.
- B.Each area must be connected to the backbone area.
- C.Backbone area is responsible for advertising the aggregated routing information generated by ABR between non-backbone areas.
- D.ABR connects to different areas and at least one of the connected area is backbone area.

34. (Single Choice) Assume that a non-backbone area and backbone area can not be directly connected. Which of the following ways can be used to solve this problem?

- A.Configuring ABR
- B.Configuring ASBR
- C.Configuring Virtual-link
- D.Configuring Stub area

35. (Single Choice) presentation [A router runs OSPF and its interface Serial 0 with IP address 10.0.0.1/30 belongs to the backbone area, which of the following commands is used to enable OSPF at this interface?

- A.[Quidway-ospf -1-area-0.0.0.0]network 10.0.0.0
- B.[Quidway-ospf -1-area-0.0.0.0]network 10.0.0.0 0.0.0.3
- C.[Quidway-serial0]ospf area 0 enable
- D.[Quidway-ospf -1]network 10.0.0.0 255.255.255.252

36. (Multiple Choice) In an OSPF network, an ASBR router advertises the information about the routes outside an AS to the AS. Which of the following routers can function as an ASBR? (Select 3 Answers)

- A.IR
- B.ABR
- C.A router that belongs to the backbone OSPF area
- D.A router that does not belong to the backbone OSPF area

37. (Multiple Choice) Which of the following statements about the configuration of OSPF areas are true? (Select 2 Answers)

- A.All non-backbone OSPF areas must be connected to a backbone OSPF area, either physically or logically.
- B.An ABR generates LSDBs separately for backbone OSPF areas and non-backbone OSPF areas.

C.The same network segment on an ABR must be enabled in both backbone OSPF areas and non-backbone OSPF areas.

D.An ABR generates a uniform LSDB for all OSPF areas.

38. (Multiple Choice) What advantages does hierarchical routing defined by OSPF have? (Select 3 Answers)

A.Extend the interval of SPF calculation.

B.Decrease the size of a routing table.

C.Reduce the number of link state update packets.

D.Reduce the number of network layers.

39. (Multiple Choice) OSPF routers are classified into four types. Which of the following statements about interior routers (IRs) are true? (Select 2 Answers)

A.The ports on an IR belong to a same area.

B.An IR is located in the center of a physical area.

C.Only one port on an IR connects to a backbone area.

D.If all the ports on an IR belong to area 0, this IR functions as a backbone router.

40. (Multiple Choice) Which of the following areas fall into the OSPF area group? (Select 3 Answers)

A.Standard area

B.Stub area

C.Totally stubby area

D.Boundary area

41. (Multiple Choice) Which of the following statements about the functions of an ABR are true? (Select 3 Answers)

A.An ABR is a gateway in the case of communication between different areas.

B.An ABR collects the topology information about an area that is connected to the ABR and sends the information to the backbone area.

C.An ABR maintains one LSDB for every area connected to the ABR.

D.An ABR provides at least two port for connecting to a backbone area.

42. (Single Choice) Which of the following is the metric of OSPF?

A.Number of hops

B.COST

C.Priority

D.LSA

43. (Multiple Choice) Each OSPF router floods LSAs to advertise link status information, including (). (Select 3 Answers)

A.Ports

B.Available neighbors

C.Information about adjacent network segments

D.Local link status information

44. (Single Choice) According to the OSPF protocol, a router floods LSAs. In this context, what does "flood" mean?

A.An action sending a link state database

B.An action synchronizing a link state database

C.An action sending and synchronizing a link state database

D.An action deleting a link state database from a port

45. (Multiple Choice) Which of the following statements about the information contained in a DD packet are true? (Select 3 Answers)

A.A DD packet contains all information about each LSA.

B.A DD packet contains only the header of an LSA.

C.The header of an LSA is the unique identifier of the LSA.

D.The header of an LSA is only a small portion of all the data of the LSA.

DHCP Protocol Principles

1. (Single Choice) Which of the following is the abbreviation for DHCP?

A.Dynamic Host Configuration Protocol

B.Dynamic Host Connection Protocol

C.Dynamic Hot Connection Protocol

D.Denial Host Configuration Protocol

2. (Single Choice) Which layer of OSI reference model does DHCP belong to?

A.Physical layer

B.Data-link layer

C.Network layer

D.Application layer

3. (Single Choice) What is the main function of DNS?

A.Sender

B.Receiver

C.Harddisk

D.Message

E.Protocol

4. (Single Choice) What is the underlying protocol used by DHCP to send messages?

A.TCP

B.UDP

C.RTP

D.SIP

5 (Single Choice) In Window XP system, which of the following commands is used to release the IP address assigned by the DHCP Server?

A.ipconfig /all

B.ipconfig /renew

C.ipconfig /release

D.ipconfig

