

## Basic Interview Questions

**NOTE:** For answers please refer particular notes or Interview questions folder. All answers are either covered in notes or in PDFs in interview question folder.

- What is Routing?
- What is Protocol?
- Explain difference between Router, Switch and Hub ?
- What is the difference between OSI and TCP/IP Model ?
- What is the size of IP Address?
- IEEE standard for wireless networking?
- What is the range of class A address?
- What is the range of class B address?
- What is the range of class C address?
- What is PoE (Power over Ethernet) ?
- What is a peer-peer process?
- What is the difference between broadcast domain and collision domain ?
- What is ping? Why you use ping?
- Explain difference between straight and cross over cable with examples ?
- What is the difference between tracert and traceroute
- What is Round Trip Time?
- Define the terms Unicasting, Multicasting and Broadcasting and Anycasting?
- Where do we use cross and standard cable?
- How many pins do serial ports of routers have?
- What are the differences between static ip addressing and dynamic ip addressing?
- Difference between CSMA/CD and CSMA/CA ?
- What is DHCP scope?
- What is Checksum?
- What is Redundancy ?
- What are the criteria necessary for an effective and efficient network?
- What is the key advantage of using switches?
- When does network congestion occur?
- Does a bridge divide a network into smaller segments?
- What are the different memories used in a CISCO router?
- What are the different types of passwords used in securing a CISCO router?
- What is the use of "Service Password Encryption" ?
- Briefly explain the conversion steps in data encapsulation.?
- In configuring a router, what command must be used if you want to delete the configuration data that is stored in the NVRAM?
- Differentiate Logical Topology from Physical Topology?
- what is AS (Autonomous System) ?
- What is the difference between Private IP and Public IP ?
- Explain different cable types ?
- How does RIP differ from EIGRP?

- Differentiate User Mode from Privileged Mode
- What is 100BaseFX?
- Differentiate full-duplex from half-duplex ?
- What does the show protocol display?

## **OSI Model Interview Questions**

- List the layers of OSI ?
- What are the responsibilities of Data Link Layer?
- What are the responsibilities of Network Layer?
- What are the responsibilities of Transport Layer?
- Routers work at which OSI layers?
- Switches work at which OSI layer ?
- In which layer term "Frames" is used ?
- In which layer term "Packets" is used ?
- In which layer term "Segments" is used ?
- Give some example for protocols work in Application layer ?
- What is CRC? Which layer CRC works ?
- What is the purpose of the Data Link?
- What is a Window in networking terms?
- What is the role of the LLC sublayer in datalink layer?
- What is the function of the Application Layer in networking?
- What are the difference between TCP and UDP?
- What is the port no of DNS and Telnet?
- Which service use both TCP and UDP ?
- What is the port no of SMTP and POP3?
- Which one is reliable – TCP or UDP ?

## **RIP Interview Questions**

- What is Route Poisoning?
- What is Split Horizon ?
- Utilizing RIP, what is the limit when it comes to number of hops?
- What is the difference between RIP V1 and V2 ?
- Multicast address of RIP v2 ?
- Administrative distance of RIP ?
- Can we use RIP in a scenario having more than 15 routers ?
- What is the difference between RIP and RIPng?

## **STP Interview Questions [Refer STP notes for answers]**

- What is Spanning tree aka STP ?
- How does STP maintain a loop-free network?

- What parameters can be tuned to influence the selection of a port as a Root or Designated Port?
- What is BPDU ? what is the basic function of BPDU?
- Using the default STP timers, how long does it take for a port to move from the Blocking state to the Forwarding state?
- What is the STP listening state?
- Which command enables RSTP on a switch?
- What is Per-VLAN Spanning Tree Protocol (PVST)?
- What is the default bridge priority in a Bridge ID for all Cisco switches?
- Which STP version runs default on Cisco switches?
- What is the purpose of Spanning Tree Protocol in a switched LAN?
- Difference between Spanning Tree Protocol (STP) and Rapid Spanning Tree Protocol (RSTP)?
- What is the STP blocking state?
- What is the STP Forwarding state?
- Difference between Root Port and Designated Port?
- What is the difference between path cost and root path cost?
- What is the difference between STP, MSTP, PVST and RSTP?
- What is path cost?
- Define selection criteria of STP root bridge.
- What are the four spanning tree port states?
- How do non-bridges decide which port will elect as root port?
- If a non-root bridge has two redundant ports with the same root path cost, how does the bridge choose which port will be the root port?
- Port states of spanning tree protocol.
- If the users face delay during initial login, what will you suggest to implement?
- Why is spanning tree BPDU filter used?
- Can I use BPDU filter on trunk ports?
- Which port state is introduced by Rapid-PVST?
- What is Spanning Tree Protocol (STP) PortFast?
- What does STP do when it detects a topology change in the network due to a bridge or link failure?

## **VLAN Interview Questions [Refer VLAN notes for answers]**

- Which switching technology reduces the size of a broadcast domain?
- Which protocols are used to configure trunking on a switch?
- What is SVI?
- What is meant by "router on stick"?
- Which is the default mode in switch ports?
- Difference between 802.1Q and ISL?
- Which are the two trunking protocols?

- Which Protocol encapsulate Etherframes ?
- Which is the Vlan not tagged by 802.1Q ?
- How to delete vlan information from switch ?
- Difference between access and trunk mode ?
- Difference between dynamic auto and dynamic desirable ?
- what is the use of nonegotiate command in switch ?
- Explain different switch port modes ?
- what is DTP ?
- Can we see trunk interfaces in show vlan command ?
- which is the command used to see trunk interfaces ?
- what is the maximum number of vlans permitted in 802.1Q and ISL
- what is the header size of 802.1Q ?

## **VTP Interview Questions [Refer VTP notes for answers]**

- what are different Vlan modes ?
- What happens to interfaces when you delete a VLAN?
- What is the difference between VTP Transparent and VTP Client mode ?
- Which is the default mode of VTP ?
- what is VTP Pruning ?
- What are two benefits of using VTP in a switching environment?
- Which VTP mode is capable of creating only local VLANs and does not synchronize with other switches in the VTP domain?

## **Passive Interface Interview Questions**

- What is passive interface ?
- Explain effect of Passive interface on RIP,EIGRP and OSPF ?
- What is the effect of default passive interface command ?
- Why does the EIGRP passive-interface command remove all neighbors for an interface?
- How do I stop individual interfaces from developing adjacency in an OSPF network?
- What command is used to stop RIP routing updates from exiting out an interface but still allow the interface to receive RIP route updates?
- How Does the Passive Interface Feature Work in EIGRP?

## **EIGRP Interview Questions [Refer EIGRP notes for answers]**

- What is EIGRP?
- What are the different tables in EIGRP?
- Why EIGRP is called hybrid protocol

- What are the different packets in EIGRP?
- What are the advantages of EIGRP over other routing protocols?
- What type of Authentication is supported by EIGRP?
- What is the use of "variance" Command in EIGRP?
- Internal and external Administrative distance in EIGRP?
- What is Feasible successor?
- What is Advertised distance?
- What is successor?
- What is the multicast address used by EIGRP to send Hello packets?
- What is "Stuck in Active"?
- What is "Graceful shutdown"?
- What is "Goodbye" message received in EIGRP?
- Maximum path load balanced by EIGRP?
- How EIGRP supports unequal load balancing?
- What happens when we enable passive interface in EIGRP?
- Conditions for EIGRP neighbours
- What is meant by active and passive states in EIGRP?
- What are the different K-values used in EIGRP?

## **Wireless Interview Questions [Refer Wireless notes for answers]**

- What is Wi-Fi?
- What is a Wi-Fi Hotspot?
- What is IBSS, BSS and ESS?
- Why WPA encryption is preferred over WEP?
- What is 802.1x and EAP?
- Name two devices that can interfere with the operation of a wireless network because they operate on similar frequencies?
- What are three basic parameters to configure on a wireless access point?
- What is the maximum data rate specified for IEEE 802.11b WLANs?
- Which encryption type does WPA2 use?
- When two laptops directly communicate wirelessly, what type of topology has been created?
- Which Spread spectrum technology does the 802.11b standard define for operation?
- Which two wireless encryption methods are based on RC4 encryption algorithm?
- Which is the minimum parameter needed on the access point in order to allow a wireless client to operate on it?
- What is the frequency range of the IEEE 802.11g standard?
- What is the maximum data rate for the 802.11a standard?
- What is the maximum data rate for the 802.11g standard?