

# REMS Qualified Professional (RQP) Course For The IP Suite (TCP/IP)

## COURSE SCHEDULE

- **4 day intensive course**  
Either at REMS Training Facilities or at your location
- **Call +44 (0) 1727 848800** for details on all REMS courses

## ON THIS COURSE YOU WILL LEARN HOW TO:

- **Understand the IP network topology and architecture, including functional elements, standards, protocols, and connectivity**
- **Appreciate the technologies, protocols and applications that are included within the IP suite, and the role they play in the Internet**
- **Understand IP addressing and routing, protocols, benefits and standards**

## COURSE BENEFITS:

- **Comprehensive guide to IP networks**
- **Recognise the strategic issues and direction for the Internet**
- **Hands on experience of IP Network capabilities**
- **Practical experience of Installing, configuring and administering IP networks**
- **Provide the knowledge and skills you need to design and implement a IP solution**

## WHO SHOULD ATTEND:

- **Technical Engineers from Incumbent and Competitive Telecoms Operators, Carriers and Service Providers (ILEC and CLEC)**
- **Engineers from Internet and Application Service Providers (ISP and ASP) and large organisations wishing to deploy or support IP networks**
- **Sales, Marketing and Planning Managers wishing to understand the strategic issues and directions of IP networks plus their benefits to many organisations, large and small**
- **System and Network Administrators responsible for the installation, commissioning and maintenance of IP**
- **All delegates are preferred to be PC literate and have an appreciation for the Internet to achieve maximum benefit from this course**

## HANDS ON PRACTICAL

Throughout this course, under the guidance of an expert instructor, you will gain practical, hands on experience of IP. Exercises include:

- **Configuring Routers**
- **Using Protocol Analysers**
- **Implementing DHCP**
- **Designing VLANS**
- **Troubleshooting IP Networks**
- **Using Telnet, FTP and TFTP**

## COURSE CONTENT:

- **Introduction**  
What is IP? History of the Internet Standards, RFC's, IETF and OSI
- **IP Addressing**  
Subnets, Netmasks, ARP and RARP Broadcasts, Multicasts, Unicasts Classes, addressing, NAT
- **Internet Protocol (IP)**  
Ports and Sockets  
IP Protocol Structure and Format
- **User Datagram Protocol (UDP)**  
UDP Protocol Structure and Format  
UDP Benefits and restrictions
- **Transmission Control Protocol (TCP)**  
Protocol Structure and Format  
TCP Benefits and restrictions
- **IP Routing & IP Quality of Service (QoS)**  
Routing IP packets  
RIP and Distance Vector Routing  
OSPF and Link State Routing  
QoS; FIFO, WFQ, CBQ, WRED, ToS
- **IP Applications**  
Standards and operation for SMTP, POP3, DNS, HTTP, FTP, TFTP, Telnet, SNMP, DHCP
- **Design Options/Considerations**  
Suitable Routing Technology for particular networks  
Methods of implementing technology
- **IP VPN's**  
Overview of VPN's  
Overview of L2TP  
Overview of IPSec
- **VoIP**  
Overview of VoIP  
Overview of H.323  
Overview of SIP
- **IPv6**  
Difference/Benefits IPv4 and IPv6  
Deployment of IPv6
- **Future Developments**  
What the future holds for IP