NETWORK TROUBLE SHOOTING, MANAGEMENT & OPTIMIZATION

October, 08th – 11th, 2012
Sheraton Inn Hotel Bandung

KEY REASONS TO ATTEND:

- Gain Project management skills to guarantee availability, reliability and scalability of your network
- Bullet-proof your networking infrastructure to support growing business demands for data transmission including Internet usage, e-business, CRM and ERP
- Learn how to deploy network management systems for maximum effectiveness
- Gain access to industry best practices of performance engineering and management
- Understand and apply modelling techniques that help you simulate real life scenarios
- Improve the reliability of your network using appropriate techniques, tools and software
- Decrease your network downtime through the implementation of best practices in network
- Understand typical causes of problems caused by hubs, bridges, routers and switches
- Isolate problems methodically and eliminate “finger pointing”
- Develop troubleshooting skills to guarantee availability and scalability of your network
- Learn how to troubleshooting the latest converged technologies such as: QoS, VoIP, and IP Multicast
- Troubleshoot your network with confidence

COURSE OBJECTIVES

On successful completion, participants will have gained the knowledge required to deal with the most network problems and the different ways to monitor diagnose and troubleshoot them also have gained the knowledge to manage, optimise and test high standards compliant networks in both LAN and WAN environments to improve up time and QoS.

COURSE OUTLINE

Network Measurements
- Measurement techniques
- Ping, Traceroute
- SNMP overview
- RMON
- Synthetic transactions
- Measurement tools
- Protocol analysis

Traditional IP Network Management
- Statistics and trending – capacity management
- Technology based network management
- Network discovery tools

TMN FCAPS Model
- Review the FCAPS model and how it is applied
- Fault management
- Configuration management
- Accounting management
- Performance management
- Security management

NMS Tools Overview
- Event correlations techniques
- HP Openview, CiscoWorks, CA Unicenter, Tivoli
- BMC Patrol, NerveCenter, NetCool, Remedy, and others

NOC Best Practices
- Methods, processes, and procedures
- Change management and control
- Trouble ticketing and hand-offs
- Proactive network management
- NOC staffing
- Documentation techniques

Performance Engineering
- Contributors to system performance
- How to measure network performance
- Response time, path latency, efficiency, network utilisation, anomalies
- Communities of interest/traffic
- Gathering statistics
- Long term trending and prediction
- What tools are available?

**Network Application readiness**
- Network baseline measurements
- Assessment methodology
- Application response times
- Optimising transaction-based systems
- Overview of assessment tools

**Modelling / Simulation**
- Comparing technique
- Available tools and software

**Deploying and Managing QoS to improve performance**

**SLA Management And Monitoring**
- SLA metrics
- Vendor/service provider monitoring
- SLA techniques

**Improving Reliability Of Network Systems**
- Mathematics behind reliability – MTBF, MTTR
- Load balancing and redundancy
- Challenges with making host fault-tolerant
- Techniques for clustering
- LAN-based load balancing – hardware and software options
- Geographical server load balancing
- Disaster recovery – business continuity

**Basic Troubleshooting Methodologies**
- Troubleshooting process flow
- Best practices tips and techniques

**Troubleshooting LANs/Ethernet**
- Ethernet 10/100/1000Mbps review
- Typical problems with Hubs, Bridges, Switches, and VLANs
- 802.1d Spanning Tree Issues
- Troubleshooting case studies

**Wireless LAN Issues**
- Review of Wireless LAN technologies (TDM, ISDN, Frame Relay, ATM)
- Common problems with design and implementation
- Operational problems
- Security concerns

**Troubleshooting WAN Connectivity**
- TDM-based WAN services
- Frame Relay troubleshooting
- ATM troubleshooting

**Routing And Switching Troubleshooting**
- Review of IP routing protocols (RIP, OSPF, IGRP, EIGRP, BGP-4)
- Methods and procedures for troubleshooting

**Troubleshooting Internet Systems**
- Internet connection steps
- Putting the layers together
- What can go wrong with Internet connections?

**Troubleshooting QoS And VoIP In Converged Networks**
- Converged architectures and designs
- Review of IP QoS techniques
- Review of VoIP techniques, standards, and protocols
- Troubleshooting soft-slate protocols
- Troubleshooting QoS
- Troubleshooting VoIP systems
- Methods and procedures for troubleshooting converged networks
- Troubleshooting case studies

**Troubleshooting QoS**
- Review of QoS techniques
- Review of VoIP techniques, standards, and protocols
- Troubleshooting soft-slate protocols
- Troubleshooting QoS
- Troubleshooting VoIP systems
- Methods and procedures for troubleshooting converged networks
- Troubleshooting case studies

**Multimedia Troubleshooting (Videoconferencing And IP Multicast)**
- IP multicast review
- Multicast troubleshooting techniques
- Videoconferencing techniques and protocols
- Troubleshooting multimedia systems

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Investment fee per delegate:

IDR. 8.250.000, net
Includes: training materials, bag, stationeries, 2x coffee breaks, luncheon, and gimmick
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