



PHOTONIX COMMUNICATIONS PTY. LTD. AUSTRALIA



Catalogue

2016

 PHOTONIX Wireless & Telecommunications www.photonix.com.au	PHOTONIX COMMUNICATION PTY LTD. AUSTRALIA (ABN. 671 071 756 37)	Training and Consultancy Services T: +61 2 9624 2316 F: +61 2 9620 8245 E: sales@photonix.com.au
		

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		<p>1. Understanding IP Technology (Basics)</p>

Understanding IP Basics as a Networking Technology is a 2 Days comprehensive training course intended for Telecom and Internet Service Providers.

Who should attend this Course?

This course is for Networking Engineers and Network Product Developers who need an overview and update on Carrier Grade IP Network Development and IP related Services.

Course Contents – Overview

1. **IP Addressing**
 - a. IP header IP Address Structure
 - b. IP Subnets and Public/Private addressing
 - c. Network Address Translation (NAT)
2. **Layer 2 Protocols**
 - a. Ethernet Frame and Address Resolution Protocol (ARP)
 - b. Common WAN Protocols – PPP, HDLC and Frame Relay
 - c. Ethernet Switches and Layer 2 Switching
3. **IP Routing**
 - a. Routing function (Static/Dynamic) and IP Routing Protocols
 - b. Routing Table and Forwarding Table
 - c. OSPF and RIP Routing Protocols
4. **TCP/UDP Session**
 - a. Connection Oriented and Connectionless Sessions
 - b. TCP / UDP Headers, Ports and Sockets
 - c. TCP Handshaking and Congestion Management
5. **DHCP (Dynamic Host Configuration Protocol)**
 - a. Manual and DHCP based Automatic IP Assignment
 - b. DHCP New Lease Acquisition (DORA) Process
 - c. DHCP Scopes and Options in DHCP based Routing Network

Certification: All Participants will receive a certificate attesting to your IP Knowledge

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		<p>2. Understanding IP Technology (Advanced)</p>

Understanding IP Advanced as a Networking Technology is a 3 Days comprehensive training course intended for Telecom and Internet Service Providers.

Who should attend this Course?

This course is for Networking Engineers and Network Product Developers who need an overview and update on Carrier Grade IP Network Development and IP related Services.

Course Contents – Overview

1. **IP QoS**
 - a. IP Packet Classification and Marking (ToS/DSCP)
 - b. IP Traffic Policing and Shaping
 - c. IP Queuing and Congestion Management
2. **MPLS (Multi Protocol Label Switching)**
 - a. MPLS Forwarding, Features, and Benefits
 - b. Label Distribution Protocol (LDP) and MPLS Control plan
 - c. MPLS Traffic Engineering
3. **IP-VPN**
 - a. Implementing MPLS Layer 3 VPN Backbones
 - b. Deploying Basic Routing in MPLS VPNs
 - c. Introducing Layer 2 VPNs
4. **IP-TV**
 - a. Multicast Addressing and Distribution
 - b. IPTV delivery system
 - c. Over the top (OTT) TV and Content Delivery Network (CDN)
5. **Mobile IP**
 - a. IP Services over Mobile Networks (3G/4G)
 - b. WCDMA PDP Context and LTE EPS bearer Services
 - c. Policy Control functions and IP QoS in Mobile Networks

Certification: All Participants will receive a certificate attesting to your IP Knowledge.



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3. Understanding WLAN (Wi-Fi) Technology

Understanding WLAN (Wi-Fi) Technology is a 2 day comprehensive training course intended for Telecom and Internet Service Providers and Enterprises deploying WLANs.

Who should attend this Course?

This course is for Sales and Marketing professionals and Networking Engineers who need an overview and update on Carrier Grade WLAN Network Development, WLAN user Authentication and Security Compliances, Mobility and Data offloading Services.

Course Contents – Overview

1. **WLAN Fundamentals**
 - a. WLAN Network Protocols and Standards (Dual Band, Dual Carrier)
 - b. IEEE 802.11a/b/g/n/ac Physical Layer Technologies
2. **WLAN Network Elements**
 - a. Access Points, Repeaters, Gateways, WLAN Routers and Bridges
 - b. Direct and Distribute connected WLAN Network Topologies
3. **WLAN Security Compliances**
 - a. Encryption and Authentication Standards (TKIP/CCMP, WPA/WPA2, 802.1X/EAP)
 - b. Wireless Intrusion Protection Systems (WIPS)
4. **WLAN Site Implementation**
 - a. WLAN Network Design and Planning and Site Surveying
 - b. AP Installation for Range, Capacity and Coverage Optimization
5. **WLAN Operational Support**
 - a. Active and Passive Channel scanning and Power saving operation
 - b. Wi-Fi Mobility, Roaming and Hotspot 2.0
6. **Carrier Grade Wi-Fi Deployment**
 - a. WLAN Controllers and Wireless Access Gateway Operations
 - b. Wi-Fi Mobile Data offloading with Mobile Operators

Certification: All Participants will receive a certificate attesting to your WLAN Knowledge



4. Understanding VoIP and SIP Technology

Understanding Voice over IP (VoIP) and SIP (Session Initiate Protocol) is a 2 day comprehensive training course intended for Telecom and Internet Service Providers.

Who should attend this Course?

This course is for Sales and Marketing professionals and Project Managers who need an overview and update on VoIP fundamentals, PBX replacements, Convergence and Integration, SIP Trunks, VoIP productizing, Business case Development and Investment.

Course Contents – Overview

1. VOIP Fundamentals

- a. Understand the fundamental components and implementations of VoIP
- b. Understand IP voice Packetization, Codecs, Softswitches and Gateways

2. SIP Fundamentals

- a. Understand how SIP works and its capabilities
- b. **SIP architectures:** UA client, UA server, Proxy servers, Redirect servers, registrars.

3. Understand VoIP services and Carrier networks

- a. Carrier networks: MPLS, VPNs and Session Border Controllers
- b. IP vs. TDM connection to carriers, QoS and Service Level Agreements

4. Understanding SIP Supplementary services

- a. SIP Trunks, IP-PBX and PBX Hosting
- b. Supplementary Service features: Call control and Home and away scenarios

5. Understanding Convergence and Integration

- a. Converged networks and Converged applications
- b. Presence, mixed-media group communications and unified messaging

6. Carrier Business Cases and Project Management

- a. Evaluate PBX replacement, IP Centrex, multi-location IP Telephony services
- b. Revenue models and cost benefits for Enterprises and SMBs

Certification: All Participants will receive a certificate attesting to your VoIP and SIP Knowledge

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		<p>5. Telecom Billing Sub Systems Technology</p>

Understanding the principles and capabilities of billing systems is a one day training course intended for Telecom and Internet Service Provider management.

Who should attend this Course?

This course is for Sales, Marketing and technical professionals who want to become more educated on the Billing Sub Systems (BSS).

Course Contents – Overview

1. **BSS Fundamentals**
 - a. Understand the difference between rating, charging, and billing
 - b. Know the key components of the BSS, and how they interact
2. **Converged billing, what is it, and what does it mean?**
 - a. Different definitions of converged
 - b. CRM and billing combined
3. **Why have billing systems?**
 - a. What does a billing system give you?
 - b. Operators business needs that BSS can solve
4. **Complimentary Solutions to Billing**
 - a. What can you do with the data?
 - b. How can you support your customers better?
5. **What do Operators want from a BSS?**
 - a. What Operators tell us
 - b. Where is the industry going?
6. **What challenges can BSS solve?**
 - a. Revenue leakage Control
 - b. Single bill Concept

Certification: All Participants will receive a certificate attesting to your BSS Knowledge

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6. ICT Strategic Planning and Management

It is important to consider the direction your business is heading because your ICT choices will affect the journey. When you develop ICT strategic Plan in line with your business plans, it's easier to understand your options and make the right decisions to get the best results.

Who should attend this Course?

This course is suitable for IT Managers and Team leaders directly responsible for development of policies, procedures and strategic planning. It is equally important for executives involved with developing or approving project proposals that have a significant ICT component to have a high-level understanding of strategic planning, including an executive perspective of ICT architecture. This will assist them to make informed judgments on high-level ICT aspects of proposals.

Course Contents – Overview

This two days course in ICT Policy and Strategic Planning offers essential skills required to develop ICT Policies, procedures and development of ICT strategic plans. The course includes detail discussion of development, implementation and management of ICT strategic plans including e-readiness assessment and benchmarking.

- Organisational ICT strategy and management,
- Align business plan with ICT
- Organisational transformation
- governance models for organisational information systems
- processes of strategy formulation and implementation
- skills and knowledge required for ICT management
- investigation, evaluation and implementation of current trends for IT management
- contemporary management and planning strategies

Certification: Participants who satisfy the course requirements will receive a Certificate of Attendance.

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7. Data Storage, Backup and Recovery

Sound knowledge and understanding of data storage has become essential for large organizations and especially those applying Enterprise Architecture and Management for organizational expanded benefit.

Who should attend this Course?

This training intended to assist ICT and Telecommunication Managers and technical staff dealing with the enterprise storage with the knowledge and understanding to provide value to their employer in their enterprise level storage systems.

Course Contents – Overview

This is a two days course and focuses on the planning and implementation and continuous improvement considerations associated with establishing and maintaining enterprise data storage including SAN / NAS infrastructure, Big Data and Cloud based storage. Storage Fundamentals including storage attachment architectures, the SCSI protocol, disk and tape drive concepts, RAID and JBOD, IP-based SANs, and Storage Networking Issues will be discussed with real-world examples.

- Information Storage and Management
- Storage Architectures and Application
- Defining the Storage Requirement
- Storage Area Network (SAN)
- Network Attached Storage (NAS)
- Cloud Infrastructure and Virtualization
- Fibre Channel standards & Structure
- Storage requirement for Video/Audio streaming & Archiving
- Big data Vs Small data
- Availability, Security and integrity
- Storage Consolidation
- Backup and Recovery including Disaster recovery

Certification: Participants who satisfy the course requirements will receive a Certificate of Attendance.

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		<p>8. Streaming Video via IPTV and OTT Technology</p>

Internet penetration is on the rise and customers are dropping their DSL Internet and shifting to high speed broadband connections. The growth in broadband subscriptions is one of the factors that will drive the demand for video consumption over the Internet. Video streaming via IPTV/OTT services is a rapidly growing business for telecommunication and media companies

Who should attend this Course?

Telecommunications professionals working within the broadcasting environment and Technical managers and decision makers in Media industry wishing to understand the technologies and protocols involved in the transmission of video over an IP network.

Course Contents – Overview

This is a Two day course and will deliver an understanding of streaming video technologies such as the IPTV and OTT technology, covering major aspects of the IPTV and OTT standard from a business, network, service, architecture, hardware, software, protocols and platforms perspective.

- IPTV/OTT Network Distribution Technologies
- Standards and Protocols
- Multicasting techniques
- IPTV/OTT implementation
- Real-Time Encoding and Transportation
- Broadcasting Linear Programming over IPTV
- IPTV/OTT Consumer Devices
- Video-on-Demand (VoD) over IP Delivery Networks
- IP Based High Definition TV
- Interactive IPTV Applications
- IPTV Network Administration
- Customer Access

Certification: Participants who satisfy the course requirements will receive a Certificate of Attendance.

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		<p>9. Managing Information Security</p>

Managing Information Security is a two day comprehensive training course, will provide the participants with an overview of the field of Information Security from a management perspective.

Who should attend this Course?

This course is suitable for ICT and Telecommunication personal responsible for day to management of information assets. Information security awareness and cybersecurity training can significantly reduce the odds of your business experiencing a serious information security breach.

Course Contents – Overview

This is a two days course and to provide you with a background, foundation, and insight into the many dimensions of information security. Participants will be exposed to the spectrum of security activities, methods, methodologies, and procedures.

- Understanding the Business Driver for Information Security
- Define an information security strategy and architecture;
- Information Security Best Practices
- Security Principles for IT and Communication System Owners
- Define risk management and its role in the organisation;
- Fundamentals of Cryptography/Security certificate
- describe the various access control approaches including authentication, authorisation, and biometric access controls
- Cyber Security
- Understanding Threats: Hackers, Malware and Insiders
- Network Attacks and Remediation Steps
- Host Attacks and Remediation Steps
- Wireless Insecurity and Remediation
- Describe legal and public relations implications of security and privacy issues

Certification: All Participants will receive a certificate attesting to your Information Security Knowledge.

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		<p>10. Social Media and Mobile Marketing</p>

Future of Media and Mobile Marketing is a comprehensive training course intended for technical and marketing personal in ICT and Telecommunication sector.

Who should attend this Course?

This is a Two days course and suitable for all media personal. It is particularly useful for technical and marketing people involved in Sales Promotions, Direct Marketing, Digital Marketing, Advertising and PR. Understanding of the technology will enable telecommunication organisations to provide value add services and revenue share services to their clients.

Course Contents – Overview

Mobile marketing has now evolved beyond a simple text message, so we will be using best practice examples and hand-on exercises to help you get to grips with this emerging medium. This course tells you about mobile marketing, from SMS to sponsorship, mobile games to moblogging and WAP advertising to mobile TV, QR codes, short codes to breakthrough mobile technologies such as 3D coding technology and everything in between.

- Understanding new media and using it to generate leads, connect with customers
- The key to social and mobile media success
- Developing mobile and social media policy for organisations
- Technology/Tools (SMS Marketing)
- Using coding technology (QR code, 3D barcode)
- Web/Search engine optimisation
- Managing online reputation
- Which mobile/social media platforms to use
- Tips and tricks to implement mobile into your existing marketing
- Mobile transaction including mobile payment

Certification: All Participants will receive a certificate attesting to your understanding of Social Media & Mobile Marketing.

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		<p>11. Knowledge Management</p>

Organizations that allow knowledge to go unmanaged may be giving their competitors the upper hand in the market. Possessing knowledge gives advantages in making the right decision or strategy to implement. Therefore knowledge management is an essential requirement for any organisation.

Who should attend this Course?

This is a Two days course and suitable for Managers and team leaders in a position to apply best knowledge management practices and initiatives in their organization including senior and middle management, IT / Telecommunication professionals and marketing and product managers.

Course Contents – Overview

This comprehensive course examines how organizations learn and manage knowledge. The course examines how organisations create and manage knowledge and the link between superior learning and knowledge. Participants in this course will have the opportunity to study the theory and practical applications of knowledge management within organisations.

- Understand the basic concept of knowledge management (KM)
- Identify the KM live cycle
- Knowledge management Tools, Skills and Strategies
- Understand how to build a KM rational for your company
- Identify tips for success
- Knowledge management models
- Understand the knowledge management lifecycle
- Identify the knowledge management paradigm
- Learn about the knowledge management models
- Learn how to build rationale for KM in a company

Certification: Participants who satisfy the course requirements will receive a Certificate of Attendance.



12. Understanding Software Testing

Understanding Software testing concept is a two-day comprehensive training course intended for students and graduates who want to make career in software testing.

Who should attend this Course?

This course is a step by step guide to understand software testing process since from how application gets developed till all types of testing. The course mainly talks about the manual testing. This course is for students, graduates and people with thorough knowledge of their respective non IT domain and wants to do functional testing.

Course Contents – Overview

- 1. Software Application and its Development.**
 - a. Application Component and Characteristics, SDLC
- 2. Introduction to Software Testing and Process of Testing**
 - a. Types of testing, different of testing ,V model and STLC
- 3. Test Design for Functional Testing and Test Execution**
 - a. Test Scenario, test case, test data ,RTM ,Entry and Exit criteria
- 4. Defect Management and Other Testing Types**
 - a. Defect Attribute, Severity, Priority, defect life cycle ,Non functional testing
- 5. Quality and Process improvement**
 - a. Quality in software application , QA, QC, Tester contribution to Quality

Certification: All Participants can appear for ISTQB (International Software Testing Qualifications Board) foundation certification.