

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI – 15

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COURSE REPORT

1	Subject Code	T2B / 14IT2B0
2	Subject Name	Secure Network Management
3	No. of Students Participated	44 Nos.
4.	Name & Organization of the Resource Person	Mr. Manigandan S, Symantec Corporation
5.	Date and Duration of the Programme	8th, 9th, 10th, & 11th, October, 2016 & 4 - Days Programme.
6.	Objective of the Course	This course provides the fundamental knowledge to analyze risks to the system and implement a workable security policy that protects the information assets from potential intrusion, damage or theft. Topics include secure routing and switching, Firewall technologies, VPN Technology, Intrusion Prevention/Detection systems.
6.	Contents covered in Day 1	Fundamentals of Network Security: Objectives - Cost benefit analysis - Classifying Assets, Vulnerabilities, Countermeasures - Recognizing Network Threats - Applying Security Principles to Network Design - Good security practices - Security methodology. Securing Networking Devices: Authentication and Authorization controls - Accounting - Logging files - NTP.
7.	Contents covered in Day 2	Secure Routing and Switching: Network design considerations - Network Hardening. Secure routing infrastructure - Secure Switching Infrastructure (VLAN, STP & Port security) - IP Spoofing prevention - DHCP Snooping - Dynamic ARP Inspection.
8.	Contents covered in Day 3	Firewall Technologies: Objectives - Justifications - The Defense-in-Depth Approach - Methodologies - NAT. Firewall Technologies - Design Considerations - Access Rules - Packet-Filtering Access Rule Structure - Rule Design Guidelines - Rule Implementation Consistency.

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9.	Contents covered in Day 4	<p>VPN Technology: Types - Benefits - Protocols - Vulnerabilities and Threats - IPsec and SSL - PKI - IP Security. IPSec site to site VPNs: Planning and Preparing - Implementing and Verifying - Troubleshooting. Remote access VPN Services.</p> <p>Intrusion Prevention/Detection System (IPS/IDS): Types - Detection Models - Features - Deployment considerations. IPS Versus IDS: What Sensors Do - Difference Between IPS and IDS - Sensor Platforms - True/False Negatives/Positives - Positive/Negative Terminology. Identifying Malicious Traffic on the Network - Managing Signatures - Monitoring and Managing Alarms and Alerts.</p>
10.	Outcomes of the Course	<p>Students able to,</p> <ul style="list-style-type: none">• Infer the need of security for network management.• Identify the preventive measures to secure routing and switching.• Examine the design of firewall, VPN and IDS / IPS for the given network.
11.	Name and Address of the expert	Mr. S. Manigandan, Symantec, Chennai sendmanigandan@gmail.com
12.	Financial Support Availed	Yes, Rs. 30,031.00/-

Forwarded to the Dean (TL &FD)

Signature of the Coordinator

Prof. & Head, Dept. of IT

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COURSE REPORT

Event Name	One credit course on Enterprise Mobility
Name & Organization of the Resource Person	Mr.P.Arun Kumar, Zebra Technologies, Bengaluru.
Date and Duration of the Programme	23 - 24 July 2016 & 2 - Days Programme.
Objective of the Course	This Course will provide an up-to-date view on enterprise mobile application development. Emphasis will be given for developing mobile apps using mobile application development framework (MADP/MEAP) - RhoMobileSuite (RMS) and also to give exposure on app development with necessary components used by the enterprise applications such as Scanner, RFID reader, Camera, Accelerometer, Magnetometer etc. compatible with all mobile OS.
Contents covered in Day 1	Mobile AppFramework: Definitions – Types – Native App development – Hybrid App development – Major components – Challenges RhoMobileSuite (RMS): Suite -Rho framework,RhoStudio, RhoHub, RhoConnect, RhoGallery – Installation & Configuration RhoMobile APIs: User Interface – Database
Contents covered in Day 2	RhoMobile APIs: Bar code scanning – Signature capture – Printing – File transfer - Locationing Enterprise App Development: Native/ Hybrid App development using RhoStudio– Build the App using RhoHub – usage of Camera, Scanner – Testing - Case study/ Demo.
Outcomes of the Course	Students able to, <ul style="list-style-type: none">• Develop Mini Projects, experiments in mobile devices• Explain the various APIs for mobile app development• Explore the technologies that will support mobile app development

Thiagarajar College of Engineering, Madurai

Department of Information Technology

Industry supported course (1C): Hadoop Eco System Tools – 14IT1E0

EXPERT: Mr.Vijay kumar, Senior Engineer, CDAC Chennai.

Time	Topics
23-July-16 9.00 to 11.00 am	<ul style="list-style-type: none">• Understanding Big Data - Big Data Applications – Big Data stack – Big Data technologies – Real Time analytics
23-July-16 11.15 to 1.15 pm	<ul style="list-style-type: none">• Hadoop Framework Hadoop Components – Hadoop architecture – YARN – Hadoop I/O – Hadoop operations
23-July-16 2.00 to 4.00 pm	<ul style="list-style-type: none">• Column oriented database HBase architecture – Data analysis using HBase, HBase examples• Hands on training on Hadoop, HBase, Yarn
23-July-16 4.15 to 5.15 pm	
24-July-16 9.00 to 11.00 am	<ul style="list-style-type: none">• Data warehousing Hive architecture – Data analysis using Hive – Hive examples• Data flow language Pig basics – Pig commands – Data analysis using Pig – Pig examples
24-July-16 11.15 to 1.15 pm	<ul style="list-style-type: none">• Data Loader Sqoop overview – Flume overview – Loading data into hadoop• Coordination service Zookeeper overview
24-July-16 2.00 to 4.00 pm	<ul style="list-style-type: none">• Hands on training on Hive, Pig, Scoop and industry related examples
24-July-16 4.15 to 5.15 pm	

Benefits of the programme:

- Exposure to Hadoop technologies like Pig, Hive, HBase
- Opportunities for internship at CDAC Chennai. Need to work on this through Industry interface team.

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WORKSHOP REPORT

1	Workshop Title	TEQIP - II Sponsored One-Week Short Term Hands-On Training Programme on " Cloud Computing Technologies"
2	No. of External Participants	25 Faculties & 6 Research Scholars / Students
3	No. of Internal Participants	19 Nos (19 Faculties)
4	Co-ordinators	Ms. K. Indira, Assistant Professor, IT Dept, TCE. Mr. M. Thangavel, Assistant Professor, IT Dept., TCE.
5.	Name & Organization of the Resource Person	Mr. E. Mahendran & Team, CDAC. Dr. M. Mahendran, Physics, TCE, Dr. S. Jeyabharathi, Maths, TCE, Dr. P. Chitra, CSE, TCE, Dr. M.K. Kavitha Devi, CSE, TCE, Ms. R. Leenasri, IT, TCE, Ms. M. Nirmala Devi, IT, TCE, Ms. C.V. Nisha Angeline, IT, TCE, Mr. M. Thangavel, Assistant Professor, IT Dept., TCE. Ms. K. Indira, Assistant Professor, IT Dept, TCE.
6.	Date and Duration of the Programme	November 29 - 4 December, 2016 & 6 - Days Programme (9.30 AM to 5.30 PM).
7.	Objective of the Workshop	Cloud Computing Technologies Short Term Hands-On Training Programme will make participants adept at various cloud computing architectures. Live hands-on will help participants keep up with Cloud technologies, tools and methodologies required to understand and work on cloud computing principles used in the IT industry. The objective of this workshop is to give a practical exposure in the domain of Cloud to the research community.
8.	Contents covered in Day 1	FN: Introduction to Cloud Computing Cloud Sim M. Thangavel, TCE R. Leenasri, TCE

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WORKSHOP REPORT

		AN: Virtualization – VmWare & Oracle Virtual Box : Configuration, VM Creation M. Thangavel, TCE Internet of Things C.V. Nisha Angeline, TCE
9.	Contents covered in Day 2	FN: Intel Single Chip Cloud Computer Dr. P. Chitra TCE OpenMP K. Indira, TCE AN: Wherever you step-in your research follows Dr. M. Mahendran, TCE Who is the Owner: Copyright & Plagiarism Dr. M. Mahendran, TCE
10.	Contents covered in Day 3	FN: Oracle Software in Silicon Cloud Dr. M. K. Kavitha Devi Data analysis by R-Statistical approach M. Nirmala Devi, TCE AN: Hadoop – Pseudo Node & Fully Distributed Installation & Configuration-Hands On M. Thangavel, TCE Hadoop – Map Reduce (Grep & Word Count) Hands On M. Thangavel, TCE
11.	Contents covered in Day 4	FN: Research Tool Box Dr.S.Jeyabharathi, TCE Mongo DB + Programming M. Thangavel, TCE

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		AN: Mongo DB + Programming M. Thangavel, TCE Eucalyptus - Hands-On M. Thangavel, TCE
12.	Contents covered in Day 5	FN: Hadoop Eco System Tools - PIG, HIVE & HBASE : Theory Mr. E. Mahendran & Team, CDAC Hadoop Eco System Tools – PIG Installation & Configuration Map Reduce Execution in PIG Mr. E. Mahendran & Team, CDAC AN: Hadoop Eco System Tools - HIVE Installation & Configuration Mr. E. Mahendran & Team, CDAC Hadoop Eco System Tools - HBase Installation & Configuration. Mr. E. Mahendran & Team, CDAC
13.	Contents covered in Day 6	FN: KVM Introduction, Installation & Configuration, VM Creation in KVM Mr. E. Mahendran & Team, CDAC Introduction to Openstack + Openstack Single Node, Installation & Configuration Mr. E. Mahendran & Team, CDAC FN: Working on Openstack + Openstack Demo & Discussions Mr. E. Mahendran & Team, CDAC
14.	Certifications	SoloLearn, Big Data University, Spoken Tutorial, & Microsoft Virtual Academy.

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WORKSHOP REPORT

15.	Budget	Rs. 83,325/- Requested. Rs. 69,374/- Utilized
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COURSE REPORT

1	Subject Code	14IT2A0
2	Subject Name	Malware Analysis
3	No. of Students Participated	51 Nos.
4.	Name & Organization of the Resource Person	Mr. J. Reegun Richard, Symantec Corporation
5.	Date and Duration of the Programme	March 11,12,25 & 26, 2017 & 4 - Days Programme.
6.	Objective of the Course	This course provides a introduction to the tools and methodologies used to perform malware analysis on executables found on Windows / Linux systems using a practical, hands-on approach. Students will be able to learn how to extract host and network-based indicators from a malicious program using dynamic and static analysis techniques.
6.	Contents covered in Day 1	Introduction Malware – Definition, Types, Goals. Malware Analysis – Definition, Requirements, Essentials, Goals and Objectives. Dynamic Analysis PE structure, Tools for malware analysis, Procedure to protect the host, Procedure to analyze a file and giving reputation, Analyze DLL files, Network traffic analysis, Creating YARA rules. Analyzing Non-PE files File structures of non-PE file, Importance of non-PE files
7.	Contents covered in Day 2	Analyzing Non-PE files Tools to analyse non-PE files, Analysis of Microsoft document file, PDF files, Flash files. Static Analysis Importance of PE structures, Packers, Compilers, Crypters, Tools for static analysis, Debuggers, Disassemblers, packing and unpacking a malware.

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COURSE REPORT

8.	Contents covered in Day 3	Static Analysis Introduction to virustotal, Hashing, Need of Antivirus, Working principle of Antivirus, Create signature for a malware to support antivirus. Web Exploits analysis Severity of web exploits, Why & How web exploits carried on, Tools to analyse web exploits, Environment setup, Exploit kit analysis, Vulnerabilities used in Exploit kits, Vulnerabilities used to create exploit kits.
9.	Contents covered in Day 4	Hands-On Practice FakeAV malware, ZeroAccess Rootkit, Ransomware for trainees, DLL malware samples, Trojan.RATdll file for trainees, Microsoft document file embedded with malware, PDF file embedded with malware, Static analysis of a malware sample (PlugX rat), Web exploits, and YARA rules creation.
10.	Outcomes of the Course	Students able to, <ul style="list-style-type: none">• Explain the characteristics of Malware and its effects on Computing systems .• Demonstrate the procedure of Malware analysis performed against the given scenario.• Practice the given system scenario using the appropriate tools to Identify the vulnerabilities and to perform Malware analysis.
11.	Name of the expert	Mr. Reegun Richard J, Symantec Chennai reegun.it21@gmail.com
12.	Financial Support Availed	Yes, Rs.28500/-

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WORKSHOP REPORT

1	Co-ordinators	C.V.NISHA ANGELINE RAJALAVANYA
2	Workshop Title	TWO DAYS TEQIP SPONSORED WORKSHOP ON IOT USING OPENCV PLATFORM AND RASPBERRY PI
3	Date and Duration of the Programme	22-02-2017 TO 23-02-2017, 2 DAYS
4	Name & Organization of the Resource Person	Mr.P.Arun Rajkumar NIT, Puducherry Mr.Garvit Khandenwal Ms. Ramalakshmi, IoT Engineers Honeywell Technoloy Solutions, Madurai Mr.S.Parthasarathi, Asst Prof, ECE,TCE Pantech Solutions: Mr.Pitchaimuthu Mr.Kumarasamy and two more faculty from Pantech
6	Contents covered	Day1 Session 1 Research issues in IoT Privacy and Security in IoT Session 2 OpenCV an Introduction. Session 3 & 4 Hands- On session Raspberry pi with c++, python, mathematica Day2 Session 1,2,3,4 Hands- On session Programming with OpenCV for IoT application
2	No. of External Participants	13 Faculties & Research Scholars / Students
3	No. of Internal Participants	19 Nos (19 Faculties)

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COURSE REPORT

1	Subject Code	14IT1L0
2	Subject Name	SPM using MSF and Agile Scrum Methodology
3	No. of Students Participated	53 Nos.
4.	Name & Organization of the Resource Person	Mr.V.Muthu Kumar of Dell, Bengaluru
5.	Date and Duration of the Programme	1 st – 2 nd April, 2017 & 2 - Days Programme.
6.	Objective of the Course	This course provides a practical line for planning, Delivery, Operating and Managing software using Microsoft Solutions Framework and Agile Scrum methodology. It also provides a real time scenario on successful development of software project.
7.	Contents covered in Day 1	1) Microsoft Solutions Framework – 6 hr 2) Introduction to Agile Scrum methodology -30 min 3) Criteria for opting Agile Scrum methodology- 30 min 4) Agile Scrum Roles and responsibilities-1 hr
8.	Contents covered in Day 2	1) Agile Scrum – Meetings -1 hr 2) Agile Scrum sprints – 2 hrs 3) Agile Scrum to MSF mapping – 1 hr 4)A Real Time Project Scenario – 3 hr
9.	Outcomes of the Course	Students able to, <ul style="list-style-type: none">• Explain the various APIs for mobile app development with real time examples• Recognise the need of MSF and agile scrum framework for project management• Demonstrate the knowledge of applying project management principles in software development, maintenance, and enhancements using agile scrum methodology
10	Expenses	Rs.19000/-

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