5G & IOT MASTERCLASS: KEY TECHNOLOGY COMPONENTS, PRODUCT STRATEGY, ROI AND IOTS INTEGRATION

2017
September 10 - 11
DUBAI, UAE
Raffles Dubai, UAE

Key Insights In Fitting 5G And Iot Into Your Existing Network Topology And Functionality

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Clariden Global is the pre-eminent and influential global business leadership institution. Today, we host more than 200 global executive education and major conference events around the world. We have partnered with professional organizations such as the Association of Chartered Certified Accounts (ACCA) and thought leaders from prestigious universities such as Harvard University John F. Kennedy School of Government, Wharton School of the University of Pennsylvania and Stanford University.
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Contact Kevin Young, Program Director at +44 (0) 20 7129 1222 | kevin@claridenglobal.org
WHY CLARIDEN GLOBAL EXECUTIVE EDUCATION?

GLOBAL ENGAGEMENT

Clariden Global is the pre-eminent and influential global business leadership institution. Today, we host more than 200 Global Executive Education and major conference events across 15 countries and 17 cities, including Singapore, London, Hong Kong, Sydney, Melbourne, Perth, New Zealand, San Francisco, Toronto, Johannesburg, Shanghai, Beijing, Kuala Lumpur, Dubai, Toronto, The Netherlands, New York and Zurich.

INTERNATIONALLY DIVERSE, SENIOR-LEVEL PARTICIPANTS

Clariden Global Executive Education programs have attracted participants from more than 5,000 global MNCs, regional corporations, and FORTUNE 500 companies, from more than 40 countries. All applications are reviewed based on professional achievement and organizational responsibility. Designed for individuals at all levels, from top executives to emerging leaders, each intensive program is crafted to equip leaders with essential capabilities to improve corporate performance and position their organizations to thrive.

THOUGHT LEADERSHIP

To provide strategic insights and relevant world-class executive education to global organizations, Clariden Global engages the best thought leaders and leading authorities from around the world. These include professors and faculty leaders from Harvard University, Stanford University, University of Pennsylvania Wharton, London Business School and other premium institutions to deliver transformational knowledge.

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PROGRAM INFORMATION

DATES
10 - 11 September 2017

LOCATION
Raffles Dubai, UAE

TUITION FEES
Early Bird 1 (Register & pay by 17 July 2017): US$2,395
Early Bird 2 (Register & pay by 14 August 2017): US$2,495
Regular Tuition Fees: US$2,695

Group discount of 10% for 2nd participant from the same organization. For limited time only by 14 August 2017, register for 3 participants and the 4th participant will receive a complimentary seat (one discount scheme will apply).

PROGRAM ADVISOR
Kevin Young
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Phone: +44 (0) 20 7129 1222

FACULTY DIRECTOR
Dr. Spiros Louvros

• Authored several 5G Network related book such as “5G C-RAN uplink cross layer optimization to support massive M2M traffic Sensor Network Services” and “Distributed Data Aggregation and Compression for 5G Virtual RAN IoT Sensor Applications”
• More than 20 years of extensive experience in the telecommunication and mobile business such as LTE and 5G deployment
• More than 10 years of academic experience as a lecturer for the School of Technology and Application in the Supreme Technological Educational Institution of Western Greece; lecturer for the Master of Science (Msc) Program in Athens Tech College

PROGRAM ESSENCE

This interactive session will show you comprehensive roadmap of 5G technology deployment and strategy development in leveraging 5G technology in future of IoT services. By discovering the key network requirements, the RAN and C-RAN 5G technology driver, you will learn step-by-step to reach a game changing network with faster download speed, ultra-low latency and high capacity offering.

Led by one of the highly rated 5G Network Guru, Lecturer and Author, Dr. Spiros Louvros will share with you the key insights of the transition of 5G network deployment, while pinpoint the key challenges of 5G deployment such as grasping the emerging standards for 5G wireless in order to reach the standardization of 5G implementation. He will showcase you with case uses of 5G deployment and the necessity considerations that will compromise to shape the future of IoT integration.
KEY BENEFITS

By the end of this program, participants will be able to:

• Gain deep insight in the transition of 5G deployment from LTE for a faster download speeds, low latency and high capacity

• Understand the use cases of 5G deployment in shaping the future of IoT technology

• Grasp the emerging standards for 5G wireless that would define the future of 5G implementation in 2020

• Recognize the necessity for new technologies and leverage 5G innovation into it

• Establish the roadmap in fitting 5G and IoT into your existing LTE-A topology

Free Takeaway: Whitepaper for 5G and IoT deployment by Dr. Louvros

WHO WILL ATTEND THIS PROGRAM

This highly interactive program is designed for Executives, Managers, Directors, Head of Departments, C-Suite Level in, but not limited to, telecommunication strategies, network engineering, product development, 3G/4G/LTE/5G network management, as well as practitioners that involved in telecommunication finance management and business development and marketing of the organization.
Dr. Spiros Louvros has extensive experience in Telecommunication and Mobile Business sector over the last 20 years. Since 2004, he has started a consultancy firm, Mobile Cloud & Network Services (MCNS) for LTE-A and 5G deployment, providing technology consultancy to worldwide operators and firms. He also holds the position as a senior system architect and competence consultant-instructor Engineer with Teledrom A.B. in consulting Ericsson Radio Access Network Technology on issues related to GSM, 3G/WCDMA/HSPA, LTE/LTE-A and lately on 5G technologies and C-RAN architectures. Prior to that, Dr. Louvros has hold several roles in the network operational and maintenance responsibility with Cosmote S.A, Vodafone and Siemens TELE S.A.

Dr. Louvros has also extensive experience in the academic industry. He has spent more than 10 years as an Assistant Professor in the Computer & Informatics Engineering Department (CIED), School of Technology & Applications and Supreme Technological Educational Institution of Western Greece. Since 2014, Dr. Louvros is an invited lecturer in the Department of Electronics and Informatics. He provides technical lectures on 5G technologies and M2M/IoT services over cellular networks for network operators. He also involves in the innovation of 5G technologies and Machine Learning algorithms for Web applications. At most recent stint, Dr. Louvros has served as Invited Lecturer in the Master of Science (Msc) Program, Athens Tech College, teaching the course Wireless & Mobile Telecommunications. He has also authored several telecommunication and networking related book such as “LTE Network – From Basic Principles to cell Planning”, “GSM Network”, “5G C-RAN uplink cross layer optimization to support massive M2M traffic Sensor Network Services” and ”Distributed Data Aggregation and Compression for 5G Virtual RAN IoT Sensor Applications”.

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According to a study by Accenture Strategy, it predicted that 5G deployment would be able to yield an increase of 3 million new jobs as well as direct or indirectly contribute to about USD500 billion economic boost. With speed of up to 100 times faster than 4G, 5G is bringing us closer to reality of remote surgery and flawless VR experiences. Despite we are closer towards the deployment of next generation 5G wireless network, there are plenty of aspect that telecommunication and network professionals need to take into account before we could fully rollout 5G into reality.

Led by one of the highly rated 5G Network Guru, Lecturer and Author, Dr. Spiros Louvros will enlighten you with the insights of the present and future of 5G deployment that would give you a clearer direction in fitting your existing LTE-A topology to the next-generation of 5G and IoT integration. You will learn the core challenges of 5G deployment which is standardization of 5G and discover the emerging standards for 5G wireless that is crucial in defining the future of 5G network. You will also grasp the key use cases of 5G in shaping the future of IoT which is the critical infrastructure of smart cities.

By the end of this program, you will be geared up with good understanding of 5G and IoT best theoretical knowledge as well as best practice to establish a concise roadmap in transiting your existing LTE-A topology to the future of 5G and IoT in your workplace.
DAY 1: 5G Masterclass

Session 1: 5G overview
- What is 5G?
- Why 5G?
- Roadmap to 5G – The standards behind 3GPP and 5G PPP
- 5G/LTE-A Features and technical proposals
- 5G Americas
- Chinese alliance
- IEEE approach
- ETSI
- ITU-T
- LPWAN approach
- European Union FP7

Session 2: 5G Business Vision
- 5G business landscape
- Expectations and predictions
- How 5G, M2M, and IoT tie together
- 5G technology drivers: Major equipment vendor proposals (Ericsson, Huawei, Nokia, Samsung, etc.)
- 5G technology drivers: Major operator perspective (Vodafone, Telia, Docomo, Verizon, AT&T etc.)
- Return of Investment expectations

Session 3: 5G Technology Enablers
- 3GPP LTE-A optional features for enabling 5G
- Machine-to-Machine (M2m) communications
- Device-to-Device (D2D) communications
- System on Chip (SOC)
- Cloud Radio Access Networks (C-RAN)
- Li-Fi for 5G indoor
- mmWave (Millimeter Wave) approach

Session 4: 5G Deployment
- 5G technical objectives
- How 5G will differ from 4G?
- 5G requirements for RAN: Bandwidth, power, spectral efficiency, new technology adaptation, latency, signaling load, capacity, coverage, interference, mobility
- 5G services
- Planning for 5G Cloud RAN – hints and case studies
Day 2: IoT Masterclass

Session 5: Introduction to Internet of Things in Depth
- What is IoT?
- Why IoT?
- IoT business trends
- IoT benefits and barriers

Session 6: IoT Standardization
- ITU
- IEEE
- IETF
- 3GPP
- 5GPPP
- IoT Forum

Session 7: Key IoT Technologies
- Sensors for IoT
- Sensor networks
- Zigbee
- Z-wave
- Bluetooth
- RFID
- Cloud computing

Session 8: Network Infrastructure and IoT
- Power over Ethernet (PoE)
- IoT over cellular: GPRS
- IoT over cellular: LTE
- IoT over cellular: LTE-U
- IoT over cellular: LTE-M
- IoT over WiFi
- IoT and 5G standards
- IoT and Mesh Networks
- IoT and Wireless Ad Hoc Networks (WANET)
- IoT and White Space
- IoT over satellite
- NFC: Near Field Communication (mm-wave technologies)
Session 9: IoT Enablers and Applications

- SigFox
- LoRA alliance
- KNX association
- IoT applications
- Case studies based on real-world projects

Session 10: IoT and Network Planning

- IoT requirements on coverage
- IoT requirements on capacity
- IoT requirements on accessibility
- GPRS network planning for IoT services
- HSPA network planning for IoT services
- LTE-A network planning for IoT services
- 3GPP LTE-A pro optional features for IoT services
- Case study: LTE-A radio planning for IoT deployment
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Ernst & Young
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Tesco

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Canon
Dell
Hewlett Packard
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TELECOMMUNICATIONS
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Nokia
Olive Communications
Singtel
Starhub
Tata Communications
Telstra
Verizon
Vodafone

TRANSPORTATION
Auckland Transport
Cathay Pacific Airways
Dubai Air Navigation Services
New Zealand Transport Agency
Fiji Airways
Metro Trains Melbourne
NSW Trains
SBS Transit

Contact Kevin Young, Program Director at +44 (0) 20 7129 1222 | kevin@claridenglobal.org
Great, condensed overview in two days enabling me to have a broad understanding of key topics and theories and a repository to go back to if more details are needed. Great facilitators!

Finance Director, TE Connectivity Germany GmbH

This was an excellent session. Very informative and a very knowledgeable presenter. Really good and would like to see what other courses are available.

Commercial and Finance Officer, TDSi2
Clariden Global delivers custom learning programs for organizations all around the world. Whatever your business challenges are, we create focused learning experience that enables your organization to achieve success. Through partnerships with the most renowned thought leaders, industry experts and professors from around the world, these in-house custom executive programs will equip you with essential skills and capabilities to develop and implement strategies more effectively at your organization.

Engage with our thought leader today:

**Dr. Spiros Louvros**

*5G Network Technologies Consultant*

*Mobile Cloud & Network Services*

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We encourage you to learn more about Clariden Global Executive Education custom and open-enrollment programs. Our staff will be happy to answer your questions and help you determine the programs work best for you and your organization.

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## PROGRAM FEES

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<thead>
<tr>
<th>Program</th>
<th>1st Early Bird Fee (if payment &amp; registrations are received by 17 July 2017)</th>
<th>2nd Early Bird Fee (if payment &amp; registrations are received by 14 August 2017)</th>
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### 4 WAYS TO REGISTER

- Email: admissions@claridenglobal.com
- Fax: +44 (0) 84 3218 0413
- Call: +44 (0) 20 7129 1222
- Website: www.claridenglobal.com

### GROUP DISCOUNTS

Group discount of 10% for the 2nd participant from the same organization. For limited time only by 14 August 2017 register 3 participants and the 4th participant will receive a complimentary seat.

*One discount scheme applies.

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