IEEE CLOUD COMPUTING for Emerging Markets Conference

16 & 18 OCTOBER 2013 • BANGALORE, INDIA

IEEE CLOUD COMPUTING

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WELCOME MESSAGE

It gives me great pleasure to welcome you to the Second IEEE International Conference on Cloud Computing for Emerging Markets (CCEM)!

This is our second conference on this topic and is unique in addressing the issues of Cloud Computing in Emerging Markets. Building upon the experiences from last year, we have an even more exciting conference this year.

Cloud technology has truly come of age and has picked up tremendous momentum as the new model of how IT services are delivered. This is not only true for emerging markets, but everywhere. What makes it even more important for emerging markets is that (a) it gives a tremendous opportunity to leapfrog ahead of all the legacy of how we do things today. In emerging markets, since so much IT is new, they can directly go to the cloud model, just as emerging markets have bypassed land line phones and gone directly to mobile phones. It accelerates the pace of moving into the new world of services on demand and gives huge opportunities for leadership. Also, there's an opportunity to do things at a scale that is not possible before. In a country like India, you can have a national-scale cloud that brings together the governance of the country making the latest data, information, and services accessible to people and encouraging eParticipation of citizens in the governance of the country. The other big opportunity is for the talented young people in these emerging economies to get skilled in this new technology and lead the rest of the globe.

While preserving the essential structure of the conference from 2012 -- including peer reviewed presentations of papers in oral and poster format, several invited talks and a panel -- we also made a few changes in CCEM 2013 with the goal of having a more interesting, engaging, and valuable conference with increased participation.

1. We extended the conference to three days, with tutorials being offered on the first day followed by two days of technical program like last year. We heard a lot of interest in tutorials last year and wanted to attract more students and professionals in cloud computing who would benefit from these tutorials.

2. We are having a startup showcase this year where several cloud start-up companies get to exhibit and demo their capabilities and also give an elevator pitch about their startup in a session dedicated for this purpose. We have invited prominent VC's to kick off this startup showcase. This session should give participants a sense of the tremendous new business activity and innovation that is emerging in the Cloud Computing space.

3. For the technical program, we asked full paper submissions for review rather than abstract submissions that we asked for last year. We did this to increase the quality of submissions and the rigor of the review process. We strengthened and expanded the technical program committee with strong technical leaders around the world to review the paper submissions.

4. One of the most exciting sessions we have this year is the one on the Cloud Computing Innovation Council for India where the council will release a white paper on "A Roadmap for Cloud Computing Innovation in India" by Dr. Sam Pitroda, who is the Chairman of Public Information Infrastructure and the National Innovation Council for the Government of India. The session will include a readout on status and progress of the Cloud Computing Innovation Council, release of the white paper , and interactive Q&A session with all the members of the Council. We are really excited about this as it shows the progress from the year-long activity launched at the last conference and continues to orient this conference towards action and impact.

The call for technical papers resulted in a good response of close to hundred submissions, each of which was reviewed by the technical program committee. After a rigorous review process, only eight papers were accepted for oral presentation and only fourteen for poster presentation, maintaining high standards for acceptance of papers in this conference. We are privileged to have some of the leaders across business, government, and academia of the highest caliber and reputation as keynote speakers and panelists at this event. The end result is a program of high quality providing an excellent snapshot of the state of art today in Cloud computing, especially as related to emerging markets.

I would specially like to thank all the sponsoring organizations for their support, backing, and enthusiasm for CCEM.

We have been fortunate to have a diverse organizing and program committee of technology leaders, who showed great enthusiasm and support for the conference. I would like to express my deep gratitude to all the members of the organizing committee for efforts over many months, culminating in this conference. I would particularly likely to call out the tremendous leadership of Ms. Pamela Kumar in setting up the Cloud Computing Innovation Council for India and her advisory role in this conference, the tireless efforts of Dr. T.S. Mohan who applied the highest standards to the role of Technical Program Committee Chair, the passion of Rohan Joshi in putting together the startup and demo showcase, the dedication of Sai Dattathrani in planning and tracking actions for many months as Program Manager for the conference, and exemplary professionalism of the IEEE team of Kathy Grise, Beth Surmont, Dillian Waldron, Christopher Franzino, and Sri Chandrasekharan who have worked since last year to ensure CCEM is a world class event with a high class venue, proceedings, website, brochures, and arrangements.

I welcome you again and urge you to take full advantage of the rich opportunities to participate, learn, and network at CCEM 2013!

Dr. Gopal Pingali
Chair, IEEE International Conference on Cloud Computing for Emerging Markets

WELCOME FROM THE IEEE CLOUD COMPUTING INITIATIVE CHAIR

On behalf of the IEEE Cloud Computing Initiative, welcome to the 2013 IEEE Cloud Computing for Emerging Markets (CCEM) conference in Bangalore, India!

The last few years have seen the cloud computing marketplace explode like a high-tech Wild West—exciting, fast-growing, chaotic, and full of opportunity. Cloud computing offers the promise of ubiquitous, scalable, on-demand computing resources provided as a service for everything from mobile devices to supercomputers. Holding this conference in India provides a great forum for discussion on the unique challenges and opportunities around emerging markets as they pertain to cloud computing. I invite you to enjoy the program and its offerings. This year we've added tutorials to the conference — please check them out.

We hope you have an excellent conference!

Steve Diamond
IEEE Cloud Computing Initiative Chair

ORGANIZING COMMITTEE

Conference Chairs	**Dr. Gopal Pingali,** IBM **Dr. D. Janakiram,** IIT Chennai
Finance Chair	**Beth Surmont,** IEEE, USA
Industry Liaison Chairs	**Debu Nayak,** Huawei **Raghavan Subramanian,** Infosys
Local Arrangements Chair	**Dr. Prahlada Rao,** C-DAC
Publicity Chairs	**Kathy Grise,** IEEE, USA
Registration Chairs	**Sri Chandra,** IEEE **Dileep Paruchuri,** Intel

ORGANIZING COMMITTEE

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Proceedings Chairs	**Dr. J Lakshmi,** IISc, Bangalore **Dr. Geetha Manjunath,** Xerox, Bangalore	
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Demo Program Chairs	**Nitin Upadhyay,** Samsung **Rohan Joshi,** Wolken Software	
Technical Program Committee	**Prabhakar Attaluri,** IBM USA **Rushi Bhatt, Amazon,** India **Dr. Rajdeep Bhowmik,** Cisco, USA **Dr. Rong Chang,** IBM, USA **Dr. Manish Gupta,** IBM **Dr. V. Kamakoti,** IIT Chennai **Dr. Prithwis Mukerjee,** IIT Kharagpur	**Dr. San Murugesan,** University of Western Sydney, Australia **Dr. Maitreya Natu,** Tata Consultancy Services **Venkat Padmanaban,** Microsoft **Dr. T. V. Prabhakar,** IIT Kanpur **Madhusudana Rao,** C-DAC **Dr. Akshat Verma,** IBM
Advisory Committee	**Pamela Kumar,** IEEE, India **Harish Mysore,** IEEE, India **Steve Diamond,** EMC	**Doug Zuckerman,** Telcordia **Mark Karol,** IEEE **Masum Hasan,** Cisco

EVENT VENUE

SHERATON BANGALORE HOTEL AT BRIGADE GATEWAY
26/1 Dr. Rajkumar Road
Bangalore, KA 560055
INDIA

photo courtesy of: www.starwoodmeeting.com

A PRIME SPOT IN AN IT MECCA

Centrally located in India's IT capital near Bangalore International Exhibition Centre, the hotel is set in an upscale lifestyle enclave beside a hospital, with skyway access to the World Trade Center and Orion Mall, the city's largest shopping mall.

Over 1,950 square metres of event space comprise 11 unique venues, while six restaurants and lounges offer casual or fine dining. Stay fit with our 24-hour Sheraton Fitness Programmed by Core Performance, infinity pool, and sumptuous Angsana Spa.

CHECK ACCEPTANCE POLICY

No personal checks are accepted.

CREDIT CARD POLICY

All major credit cards are accepted for payment; however, we do not offer cash advances on credit cards.

EARLY DEPARTURE POLICY

Please notify the hotel of early departures 48 hours prior, to avoid the early departure charges of one night's accommodation rate. Certain rate plans may require a minimum number of nights' stay to qualify for the rate and inclusions.

EARLY ARRIVAL POLICY

Early arrivals are subject to additional charges based on the following categories: arrivals before 6:00 will be charged the full room rate for the previous night. Arrivals between 6:00 and 12:00 will be charged 50% of the room rate. Please contact the hotel for further information.

LATE CHECKOUT POLICY

Guests checking out after 12:00 but before 18:00 will be charged for half a day. Guests checking out after 18:00 will be charged a full night's charge. Late checkout without charge is only permitted subject to availability.

PARKING POLICY

Hotel parking is available on a first come, first serve basis. Oversized vehicles are not permitted.

PAYMENT POLICY

A valid credit card is required at check-in for payment of the room, tax, and incidentals. For debit card users, an immediate hold will be placed on the card that is equal to the room rate and tax, plus an additional 50% of the total room rate and tax for incidentals. If a guest is paying cash, a deposit equal to the room rate, tax and $50 USD per day will be collected at check-in.

To arrange payment via a third-party credit card, please contact the hotel's accounting department at least 72 hours prior to guest's arrival.

SMOKING POLICY

At Sheraton Bangalore Hotel at Brigade Gateway, guest are permitted to smoke in designated areas. We offer smoking areas in our Feast and Durbar restaurants as well as designated smoking guest rooms.

USEFUL INFORMATION

Here are some general conventions to follow in order to enjoy the scenic beauty, rich culture and engrossing traditions of India.

1. Do remember to check your travel documents before starting the journey and update all important telephone numbers in your diary, apart from storing emergency numbers (Police assistance, Ambulance service, local contact person etc.) in your cell-phone, if you choose to carry one.
2. If you are on prescription medication, please ensure you have adequate supply of both prescription/s and pills for the entire duration of your India tour and perhaps a little extra to cover unforeseen delay periods during travel etc. Do remember to carry a doctor's certificate along with you to avoid possible problems with any customs checking procedures in India.
3. First-time travelers to India may well be fascinated by the exotic array of spices, cuisines and affordability of street and hotel food, but it is inadvisable to eat spicy Indian food without sampling a bit first or affirming the extent of spice-blends used with the chef/service attendant.
4. Mineral water is your best companion while in India's tropical climate and is your safest bet for keeping various contaminated-water related ailments at bay.
5. Hotel water is treated to brush teeth and shower.
6. All foreign nationals can use credit cards, traveler's cheques or foreign currency for the payment of all their bills, though they may use Indian rupees in case they can furnish proof of having exchanged money legally.
7. Please remember that banks in India function from Monday to Friday from 1000 hours to 1230 hours (some also function post-lunch, but you may need to consult your tour operator for specific bank details) while Government and administrative offices in India function from 0930 to 1700 hours on weekdays. So, please make arrangements for bank transactions and business dealings with either group keeping these timings in mind.
8. Change money only at Authorized Foreign Exchange Outlets / Banks / Hotels and insist on receipt.
9. USD 1 = approx INR (Indian Rupees) 68/- to 69/-. Presently there is daily fluctuation in rate.
10. Best and safest is to exchange at airport / hotel. Keep the certificate of exchange that will help you in reconverting into your original currency when leaving India.
11. There are ATM machines – remember your access code for withdrawal of funds.
12. India has many banks in each city.

GRATUITY

- Driver who is with you for the full day – tip approx Rs 1200/- per car
- Half day guide service – INR 400/- per person
- Restaurant tipping if not included in invoice – 15% of the bill.

PHOTOGRAPHY

Attendance at, or participation in, this conference constitutes consent to the use and distribution by IEEE of the attendee's image or voice for informational, publicity, promotional and/or reporting purposes in print or electronic communications media. No flash photography will be used.

Video recording by participants and other attendees during any portion of the conference is not allowed without special prior written permission of IEEE.

Photographs of copyrighted PowerPoint or other slides are for personal use only and are not to be reproduced or distributed. Do not photograph any such images that are labeled as confidential and/or proprietary.

NON DISCRIMINATION POLICY

IEEE is committed to the principle that all persons shall have equal access to programs, facilities, services, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by IEEE policy and/or applicable laws.

For more information on the IEEE policy visit, www.ieee.org/about/corporate/governance/p9-26.html

CONFERENCE INFORMATION

Badges must be worn for admission to all events.

Internet Access

Complimentary wifi provided for in-house guests as well as conference attendees.

Food and beverage

Coffee, tea, assorted beverages and light snacks will be served a both the morning and afternoon scheduled break times and will be one half-hour in length to allow attendees ample time for networking.

Lunch will be served on Thursday and Friday ONLY as part of the attendee registration fee

Welcome Dinner — Thursday, 17 October from 19:30 – 21:30

The Welcome Dinner will be located in the Grand Ballroom. All IEEE Member, Non-member, and Life member registration catagories are welcome as part of the conference registration fee. Student and Guest catagories may purchase a banquet ticket for US $50/3,383INR at the registration desk.

Conference URL:

To find out more about the conference, visit: ewh.ieee.org/ieee/ccem/index.html.

REGISTRATION

On-site registration for the 2013 IEEE CCEM Conference will be available in the Grand Ballroom Pre-function Area of the Sheraton Bangalore Hotel at Brigade Gateway.

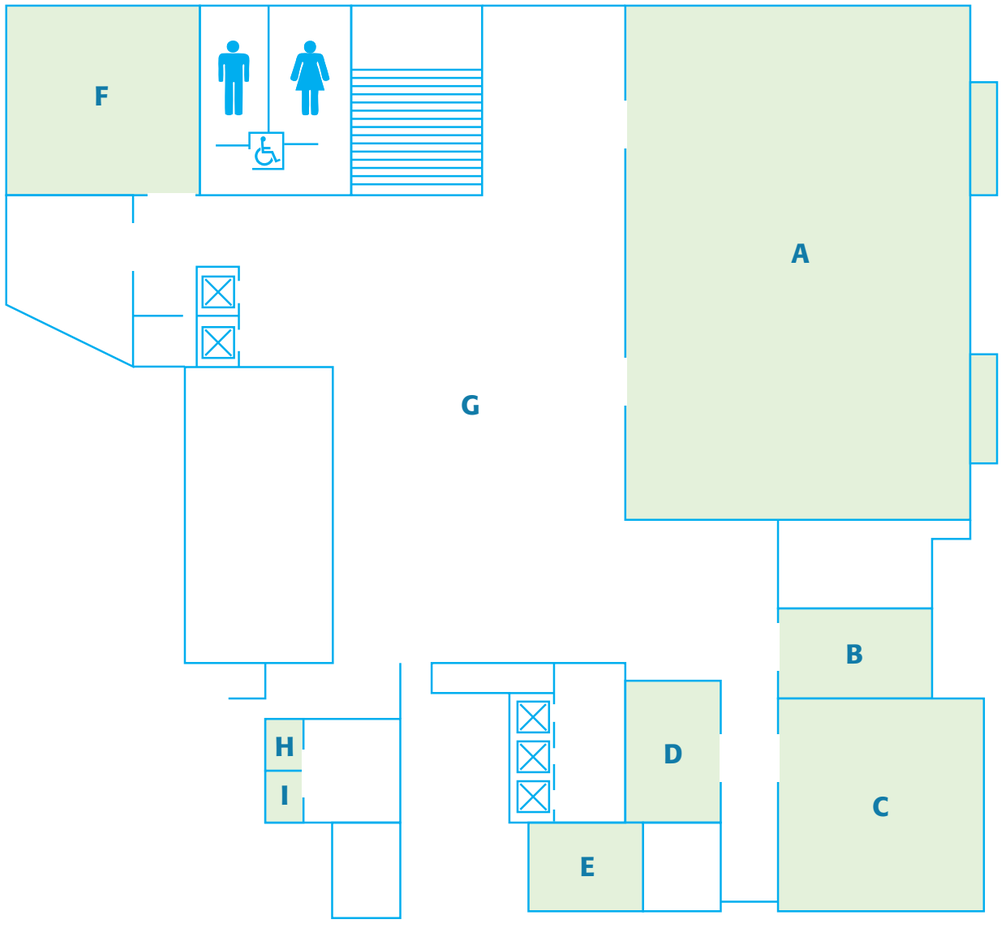
REGISTRATION HOURS

Wednesday, 16 October	11:00 to 18:00
Thursday, 17 October	--8:00 to 18:00
Friday, 18 October	--8:00 to 14:00

POSTER SESSION HOURS

Thursday, 17 October	13:30-14:30

HOTEL CONFERENCE FLOOR PLAN



A	Grand Ballroom	**F**	Neptune
B	Mars	**G**	Prefunction Area
C	Jupiter	**H**	Meeting Room 1
D	Pluto	**I**	Meeting Room 2
E	Venus		

CONFERENCE AGENDA

DAY ONE: **16 OCTOBER 2013**

TIME	TOPIC/SPEAKER(S)	ROOM
13:00 – 17:30	**TUTORIALS**	Jupiter 1 Jupiter 2

DAY TWO: **17 OCTOBER 2013**

TIME	TOPIC/SPEAKER(S)	ROOM
09:00 – 09:30	**Conference introduction, welcome, and inauguration**	Grand Ballroom
09:30 – 10:30	**Inaugural Talk followed by Q&A** **Kris Gopalakrishnan,** Executive Vice-Chairman of Infosys	Grand Ballroom
10:30 – 11:00	BREAK	Ballroom Pre-function Area
11:00 – 11:45	**Professor Rajkumar Buyya,** Director Cloud Computing and Distributed Systems (CLOUDS) Lab, Department of Computing and Information Systems, The University of Melborne	Grand Ballroom
11:45 – 12:30	**Dr. Anurag Srivastava,** Senior Vice President and CTO, Wipro	Grand Ballroom
12:30 – 13:30	LUNCH	Ballroom Pre-function Area/ Grand Ballroom
13:30 – 14:30	**Poster Sessions**	Ballroom Pre-function Area

DAY TWO: **17 OCTOBER 2013**

14:30 – 16:30	**ORAL PRESENTATIONS:** **Amarnath—Cloud-enabled Search for Disparate Healthcare Data: A Case Study** **Sabishaw Bhaskaran and Girish Suryanarayana,** Siemens Corporate Research and Technologies, India **Monetizing the Cloud: Pricing Model Governance** **Atul Gohad and Nanjangud C. Narendra,** IBM India Software Lab, Bangalore., India **Parathasarthy Ramachandran,** Indian Institute of Science, Bangalore., India **Quality Assessment of Software as a Service on Cloud using Fuzzy Logic** **Niyati Baliyan and Sandeep Kumar,** Indian Institute of Technology Roorkee, India **An Approach to Measure Security of Cloud Hosted Application** **Nitin Singh Chauhan and Ashutosh Saxena,** Infosys Limited, India; **JVR Murthy,** Jawaharlal Nehru Technological University, Kakinada, India	Grand Ballroom
16:30 – 17:00	BREAK	Ballroom Pre-function Area
17:00 – 18:30	**Release of White Paper "A Roadmap for Cloud Computing Innovation in India"** **Sam Pitroda,** Chairman of the National Innovation Council for India	Grand Ballroom
18:30 – 19:30	**Start-up Showcase and Demo Session** **Shailesh Lakhani,** Principal, Sequoia Capital India	Ballroom Pre-function Area
19:30 – 21:30	CONFERENCE NETWORKING DINNER	Ballroom Pre-function Area/ Grand Ballroom

DAY THREE: **18 OCTOBER 2013**

TIME	TOPIC/SPEAKER(S)	ROOM
09:00 – 09:45	**Plenary Session** **Dr. Fausto Bernardini,** Vice President and Distinquished Engineer. Cloud Managed Services, IBM USA	Grand Ballroom
09:45 – 10:15	BREAK	Ballroom Pre-function Area
10:15 – 12:15	**ORAL PRESENTATIONS:** **Cryptography Challenges for Computational Privacy in Public Clouds** **Sashank Dara,** Cisco Systems Pvt Ltd, India **Resource Demand Prediction in Multi-tenant Service Clouds** **Manish Verma, G R Gangadharan, and V Ravi,** IDRBT, India **Nanjangud Narendra,** IBM India, India **A Threshold Band Based Model for Automatic Load Balancing in Cloud Environment** **Akshay Jain, Anagha Yadav, Lohit Namboodiri, and Jibi Abraham,** College of Engineering, Pune, India **Virtual CPU scheduling techniques for Kernel Based Virtual Machine (KVM)** **Raghavendra K T,** IBM India, India	Grand Ballroom
12:15 – 13:15	LUNCH	Ballroom Pre-function area/ Grand Ballroom
13:15 – 14:00	**Invited Talk** **Manish Israni,** Infrastructure Head, Vodaphone India	Grand Ballroom
14:00 – 14:30	**Invited Talk** **Steve Diamond,** GM Industry Standards Office, EMC	

DAY THREE: **18 OCTOBER 2013**

14:30 – 15:00	**Invited Talk** **Sethumadhavan Srinivasan,** Director – Strategy & Corporate Marketing Huawei Telecommunications (India) Co. Pvt. Ltd	
15:00 – 15:30	**Invited Talk** **Dr. Horacio Gonzalez-Velez,** Associated Professor and Head, Cloud Competency Centre, National College of Ireland	
15:30 – 16:00	BREAK	
16:00 – 17:15	**PANEL SESSION:** **How do we propel Cloud Based innovation in emerging markets?** **PANELISTS:** **Dr. C.S.R. Prabhu,** Deputy Director General, National Informatics Center, India **Dr. Anand Deshpande,** Founder, Chairman and Managing Director, Persistent Systems **Prof. Sadagopan,** Director, Institute of Information Technoloogy, Bangalore **Mr. Perraju Bendapudi,** Former Partner Architect, Microsoft Development Center, Hyderabad **Renu Budhiraja,** Sr. Director & HoD State Data Centers, e-Commerce Division, DeitY **MODERATOR:** **Dr. Dharanipragada Janakiram, Ph.D** Professor, Department of Computer Science and Engineering Indian Institute of Technology Madras, Chennai	Grand Ballroom
17:15 – 17:45	CONFERENCE CONCLUSION	

Note: Exhibits will be set up by 09:00 and available for browsing throughout the day.

POSTER SESSION LIST

1. "Performance Analysis of Cloud Databases Handling Social Networking Data" - **Niladri Dey and Dr. Sujoy Bhattacharya,** BVRIT, India
2. "Architecture of Cloud-Based Advanced Medical Image Visualization Solution" - **Vladyslav Ukis and Thomas Friese,** Siemens AG, Germany; **Srividya Tirunellai Rajamani and Bijesh Balachandran,** Siemens Technology and Services Pvt. Ltd., India
3. "SciInterface:A Web-Based Job Submission Mechanism for Scientific Cloud Computing" - **Vineeth Simon Arackal, Aman Arora, Deepanshu Saxena, Arunachalam B and Prahlada Rao B B**, C-DAC, India
4. "Accessing E-Infrastructures using C-DAC Scientific Cloud (CSC) Services" - **Shivay Sharma, Anil Bhargava, Payal Saluja and Prahlada Rao B B,** Center For DevelopmentAdvance Computing (C-DAC), India;
5. "Temperature Aware Resource Scheduling in Green Clouds" - **Amritpal Kaur and Supriya Kinger**
6. "Detection of Economic Denial of Sustainability using Time Spent on a Web Page in Cloud" - **Anusha Koduru, TulasiRam Neelakantam, and Mary Saira Bhanu S,** National Institute of Technology Trichy, India
7. "OBM - An Optimal Bandwidth Management Strategy to Virtual Machines in Cloud Environment using Predictive Analytics" - **Rohit Damkondwar, Abhijay Patne, Shahzeb Patel and Jibi Abraham,** College of Engineering Pune, India
8. "An Efficient Inter-VM Communication Model Supporting Live Migration" - **Mrugani Kurtadikar, Pooja Toshniwal, Apurva Patil and Jibi Abraham**
9. "Fault Aware Honey Bee Scheduling Algorithm for Cloud Infrastructur" - **Punit Gupta, Mayank Kumar Goyal and Sakshi Agarwal**
10. "Cloud Pricing Models: A Survey and Position Paper" - **Atul Gohad, Nanjangud C. Narendra, and Parathasarthy Ramachandran,** Indian Institute of Science, Bangalore., India
11. "Benchmarking Joyent SmartDataCenter for Hadoop MapReduce and MPI Operations" - **Weiliang Luo, Nima Golpavar, and Anthony Chronopoulos,** University of Texas at San Antonio, United States; **Carlos Cardenas,** Joyent, Inc, United States
12. "Service Provisioning Based on Advanced Reservation and Deadline Sensitive Leases in IaaS Clouds" - **Tajunnisha N, Jaya Nirmala S and Mary Saira Bhanu S,** National Institute of Technology, India
13. "Portable service management deployment over cloud platforms to support production workloads" - **Suresh Durairajan and Parthasarathy Sundararajan,** IBM, India
14. "Load Balancing in Cloud Computing Using Modified Throttled Algorithm" - **Shridhar G Domanal, and G Ram Mohana Reddy,** National Institute of Technology Karnataka Surathkal, Mangalore, India

1. IBM SMARTCLOUD COMPUTING WORKSHOP

Cloud Commuting s an emerging paradigm for consumption and delivery of IT based services, based on concepts derived from consumer internet services, like self-service, apparently unlimited or elastic resources and flexible sourcing options. This course addresses the technical foundations of cloud computing, and the business models associated with it. This workshop will introduce you to the technical foundations of cloud computing, business models and discuss these emerging trends in cloud solutions, architecture, workloads, infrastructure, technologies, challenges and opportunities. This engaging workshop covers the following major topics.

Cloud Reference Architecture (1 hour)

- Overview - Cloud Computing Technology, Delivery and Deployment Models
- Cloud Computing Reference Architecture
- 12 steps towards creating a Cloud service (Exercise)

Cloud Security

- Cloud Concerns / Challenges
- Security in the context of cloud adoption model and trends
- Use cases & Demonstration

IBM Open Cloud Architecture (IBM Bluemix) – Part I

- Concepts & Overview
- Bluemix (walk through)
- Actionable Analytics through Services Composition - Demo using Twitter, Cloudant, Flow & SendGrid services

IBM Open Cloud Architecture (IBM Bluemix) – Part II

- Open Cloud Innovation with Cloud Foundry
- Architecture Overview & BlueMix Components
- Using Key Services – IBM Elastic Caching, Deep Thunder, w3 Single Sign On, Hadoop in the application composition environment

DAY 1 16 OCTOBER 2013
½ DAY TUTORIALS

2. CLOUD COMPUTING TO REFORM THE HEALTHCARE INDUSTRY AND PATIENT EXPERIENCE

Innovation drives better patient care and outcomes, which is a primary objective of Healthcare industry. Huge storage capacity for online medical records, scalable resources to manage patient data, highly available patient information at anytime and anywhere, zero Capital Expenditure for on-site hardware infrastructure and maintenance in order to securely store patient medical records, and sharing of information are the main innovation enablers using Cloud computing for most healthcare providers. User-focused system built with collaboration removes redundancies in the flow of information and greatly reduces mistakes, increases the speed at which care is delivered, and improves patient experience. For patients, it will be easy to consult doctors, manage appointments, and to find better healthcare services. It increases the effectiveness of medical decision by patient-centered view and provides better access to care, increases speed of diagnosis, greater privacy and timely results. It enables patient engagement, wellness guidance and management, patient care collaboration through care communities which are wellness focused. For Doctors, it provides a knowledge sharing platform across boundaries, efficient collaboration with peers and patients, history of patients, diagnostic results of patients are easily available at single location etc.

Security and privacy concerns are the barriers healthcare organizations face while migrating to a Cloud solution. Cloud computing and infrastructure security are continually evolving to meet the growing security requirements of heavily-regulated industries like healthcare. Public Cloud providers are focusing on security and compliance matters that concerns Cloud consumers and address them. AWS provides a secure, scalable, and inexpensive computing platform "in the cloud" that can support health care customers' applications in a manner consistent with HIPAA and HITECH.

We intend to show how healthcare systems can be Cloud enabled to make patients' life easier by allowing them to manage their appointments and locate practices from anywhere anytime; how it improves various functional areas such as Administration, Financials, Clinical Support, Patient Management, and Decision Support; how concerns in adopting Cloud for the healthcare industry can be mitigated.

This tutorial will provide information on:

- How to deliver cost effective healthcare solution using one of the disruptive innovations of the decade—Cloud Computing
- How Cloud computing enables innovation in healthcare industry
- How Cloud helps in managing petabytes of digital data to drive business intelligence to better healthcare practices
- HIPAA standards surrounding the security and privacy of health information makes the healthcare industry cautious about adopting new technologies or environment such as Cloud. In such a scenario how to implement security measures in Cloud environment to meet HIPAA Compliance
- How patients' life will be easier due to increased accessibility and availability of various health reports and history made available to them

09:00 – 09:30

Conference Introduction, Welcome, and Inauguration

09:30 –10:30

Inaugural Talk by Kris Gopalakrishnan followed by Q&A

S. Gopalakrishnan,
Executive Vice-Chairman of Infosys

S. Gopalakrishnan (Kris), along with N.R. Narayana Murthy and five others, founded Infosys in 1981. Kris served as Director (Technical) and his initial responsibilities included the management of design, development, implementation, and support of information systems for clients in the consumer products industry in the U.S.

Between 1987 and 1994, Kris served as the Vice President for Technical Operations of KSA/Infosys, a joint venture between Infosys and KSA located in Atlanta, U.S. In 1994, he returned to India and was appointed Deputy Managing Director of Infosys.

Before becoming the CEO and Managing Director in July 2007, Kris served as the company's Chief Operating Officer, President and Joint Managing Director, responsible for customer services, technology, investments, and acquisitions. He took over as the Executive Co-Chairman on August 21, 2011.

Recognized as a global business and technology thought leader, Kris was recently voted the top CEO (IT Services category) in Institutional Investor's inaugural ranking of Asia's Top Executives and selected as one of the winners of the 2nd Asian Corporate Director Recognition Awards by Corporate Governance Asia in 2011. He was also selected to Thinkers 50, an elite list of global business thinkers compiled by Des Dearlove and Stuart Crainer, in association with the IE Business School, Madrid and the London Business School's Management Innovation Lab in 2009.

In January 2011, the Government of India awarded Kris the Padma Bhushan, the country's third highest civilian honor. He has also represented Infosys and the country in international forums such as: The Indo-US CEO Council; President's Council of New York Academy of Sciences; and Member of UNESCO High-Level panel on Women's Empowerment and Gender Equity. Kris was also the Chairman of The Business Action for Sustainable Development 2012 (BASD), a coalition of international business groups committed to sustainable development.

In April 2012, Kris was appointed as a member of the reconstituted United Nations Global Compact Board for three years. The Global Compact Board is the UN's highest level advisory body, involving business, civil society, labor and employers organizations. He is also a member of the China Europe International Business School (CEIBS) International Advisory Board and Fudan University School of Management International Advisory Board. Both CEIBS and Fudan University School of Management are prestigious business schools in China and the Asia region.

Kris is the President of the Confederation of Indian Industry (CII) National Council and on the Board of Governors at the Indian Institute of Management (IIM), Bangalore. He is also the Chairman of Indian Institute of Information Technology and Management (IIITM), Kerala and International Institute of Information Technology (IIIT) Bangalore. He is a member of ACM, IEEE and IEEE Computer Society.

Kris holds master's degrees in Physics and Computer Science from the Indian Institute of Technology, Madras.

10:30 – 11:00 BREAK

11:00 – 11:45

Market-Oriented Cloud Computing and the Aneka Platform

Professor Rajkumar Buyya,
Director, Cloud Computing and Distributed Systems (CLOUDS) Lab, Department of Computing and Information Systems, The University of Melborne

Dr. Rajkumar Buyya is Professor of Computer Science and Software Engineering, Future Fellow of the Australian Research Council, andDirector of the Cloud Computing and Distributed Systems (CLOUDS) Laboratory at the University of Melbourne, Australia. He is also serving as the founding CEO of Manjrasoft, a spin-off company of the University, commercializing its innovations in Cloud Computing. He has authored over 425 publications and four text books including "Mastering Cloud Computing" published by McGraw Hill and Elsevier/Morgan Kaufmann, 2013 for Indian and international markets respectively. He also edited several books including "Cloud Computing: Principles and Paradigms" (Wiley Press, USA, Feb 2011). He is one of the highly cited authors in computer science and software engineering worldwide (h-index=76, g-index=146, 26000+ citations). Microsoft Academic Search Index ranked Dr. Buyya as the world's top author in distributed and parallel computing between 2007 and 2012.

He is an "ISI Highly Cited Researcher". Software technologies for Grid and Cloud computing developed under Dr. Buyya's leadership have gained rapid acceptance and are in use at several academic institutions and commercial enterprises in 40 countries around the world. Dr. Buyya has led the establishment and development of key community activities, including serving as foundation Chair of the IEEE Technical Committee on Scalable Computing and five IEEE/ACM conferences. These contributions and international research leadership of Dr. Buyya are recognized through the award of "2009 IEEE Medal for Excellence in Scalable Computing" from the IEEE Computer Society, USA. Manjrasoft's Aneka Cloud technology developed under his leadership has received "2010 Asia Pacific Frost & Sullivan New Product Innovation Award" and "2011 Telstra Innovation Challenge, People's Choice Award". He is currently serving as the foundation Editor-in-Chief (EiC) of IEEE Transactions on Cloud Computing. For further information on Dr. Buyya, please visit his cyberhome: www.buyya.com

11:45 – 12:30

Dr. Anurag Srivastava,
Chief Technology Officer & Senior Vice President,
Wipro Global IT Business

Dr. Anurag Srivastava is the Chief Technology Officer & Senior Vice President for Wipro's Global IT Business. His responsibilities include technology strategy planning, technology incubation through Center's of Excellence, business Innovation using futuristic technologies, technical stream & IP management, technology alliances in advanced areas with industry and academic forums.

Prior to this role, he was head of the Wipro Energy and Sustainability Services business. This business includes sustainability advisory, connected infrastructure & energy managed services to deliver comprehensive GHG reduction and energy cost optimization for our customers.

He was also responsible for starting the Consulting business for Wipro Infotech and supported its scale to the current level. He additionally led key strategic business transformational initiatives for Telecom, Telecom Equipment, Infrastructure, and Government industry verticals to build newer services/business models.

Dr. Anurag brings with him rich industry and business experience and depth of technology to Wipro. His areas of work experience are process & technology integration, data modeling & analytics, pattern recognition, distributed computing, Internet security and machine to machine collaboration. He has strong

expertise in architectural frameworks, product life cycle management, incubation management and large transnational project management.

Prior to Wipro he has worked in IBM, Novell, HP-Verifone, Indian Institute of Science & Ness Technologies (Apar) in various technology & business leadership positions. He completed his PhD in Computer Science in the area of artificial intelligence and pattern recognition. He has several publications in international conferences and journals (IEEE SMC, Pattern Recognition and CC-AI). He holds a Bachelor's in Electrical Engineering and Master's in Computer Science & Engineering.

Dr. Anurag has been an invited speaker for various conferences by NASSCOM, Analysts fraternity, FICCI, CII, ASSOCHAM, Telematics, etc. and has several journal publications and articles.

12:30 – 13:30 LUNCH

13:30 – 14:30 POSTER SESSION

14:30 – 16:30

ORAL PAPER PRESENTATIONS

Amarnath—Cloud-enabled Search for Disparate Healthcare Data: A Case Study
Sabishaw Bhaskaran and Girish Suryanarayana,
Siemens Corporate Research and Technologies, India

Monetizing the Cloud: Pricing Model Governance
Atul Gohad and Nanjangud C. Narendra,
IBM India Software Lab, Bangalore., India
Parathasarthy Ramachandran,
Indian Institute of Science, Bangalore., India

Quality Assessment of Software as a Service on Cloud using Fuzzy Logic
Niyati Baliyan and Sandeep Kumar,
Indian Institute of Technology Roorkee, India

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An Approach to Measure Security of Cloud Hosted Application
Nitin Singh Chauhan and Ashutosh Saxena,
Infosys Limited, India;
JVR Murthy,
Jawaharlal Nehru Technological University, Kakinada, India

16:30 – 17:00 BREAK

17:00 – 18:30

Release of White Paper on "A Roadmap for Cloud Computing Innovation in India"

Dr. Sam Pitroda
Inventor, Entrepreneur, Development Thinker and Policy Shaper

Dr. Sam Pitroda is a an internationally respected development thinker, policy maker, telecom inventor and entrepreneur, who has spent over four decades in Information and Communications Technology and related human and national development initiatives.

Credited with having laid the foundation of India's technology and telecommunications revolution in the 1980s, Dr. Pitroda has been a leading campaigner in helping bridge the global digital divide.

During his tenure as Adviser to Prime Minister Rajiv Gandhi in the 1980s, Dr. Pitroda headed six technology missions related to telecommunications, water, literacy, immunisation, dairy and oil seeds. He was also the founder and first chairman of India's Telecom Commission. In these roles, he helped revolutionise India's development policies and philosophies with a focus on access to technology as the key to social change. Dr. Pitroda was Chairman of India's National Knowledge Commission (2005-2009), an advisory body to the Prime Minister of India, set up to provide a blueprint for reform of knowledge related institutions and infrastructure in the country. The Commission has offered a series of recommendations on various aspects of the knowledge paradigm to help India meet the challenges of the 21st century.

He is currently Adviser to the Prime Minister of India on Public Information Infrastructure and Innovations and is Chairman of the Expert Committee on the use of ICT in Railways. He is also the Chairman of the Smart Grid Task Force set up under the aegis of the Ministry of Power, Government of India. He has recently been appointed the founding Commissioner of the United Nations Broadband Commission for Digital Development. He holds close to 100 worldwide patents and has published and lectured widely in the US, Europe, Latin America and Asia.

18:30 – 19:30

Start up Showcase and Demo Session

Shailesh Lakhani, Principal,
Principal, Sequoia Capital India

Shailesh is a Principal with Sequoia Capital India. Prior to joining Sequoia Capital India, Shailesh worked at Redknee's India subsidiary as the Managing Director and previously was Head of the Global Professional Services Group and held Product Management leadership roles. Previously, he consulted for Microsoft India and Tata Sons. He received an MBA from the Harvard Business School, and a BASC in Computer Engineering from the University of Waterloo.

1. NanoBI Analytics: www.nanobianalytics.com

Mahesh Ramakrishnan
mahesh@nanobianalytics.com +91-98450-19896

nanobi is an cloud inspired analytics platform with a new approach on how analytics can be built, deployed and used. nanobi analytic platform lets you build analytic applications for use and consumption by consumers of information .

2. Impel CRM: www.impelcrm.in

Kishore Narasimhan Mandyam
kishore@impelcrm.in +91-99020-64413

What is Impel?

Impel Customer Relationship Management is the CRM that your salespeople will love to use. Free them from repetitive tasks and let them focus on closing sales. Qualify all your leads thoroughly and share complete customer information with your team. Impel CRM lets you tailor CRM to the way that you do business. Access Impel CRM anywhere, anytime with any device.

3. Cloud Munch: www.cloudmunch.com

Pradeep Prabhu
pradeep@cloudmunch.com +1-425-677-5767

CloudMunch is democratizing DevOps by providing a powerful, extensible, full stack platform to make continuous delivery of applications & infrastructure, fast & easy. Our service lets software teams spend 100% of their time focused on their application code and not managing dev/test environments, CI servers, Deployment, ongoing operations or trying to stitch together various tools for better quality & faster release cycles. Focus on Code. CloudMunch the rest.

4. i7 Networks: www.i7nw.com

Manjunath M. Gowda
manju.m@i7nw.com +91-80-4126 2999

i7 Networks is a product based company located out of Redmond (WA State USA), Amsterdam (Netherlands) & Bangalore (India). i7 offers Enterprises a suite of products that helps manage their security due to enable-meant of mobile in their enterprise under what is called the Bring Your Own Device or BYOD or even called the Consumerization of IT.

5. IDOS: www.myidos.com

C. Srikanth
csrikanth@myidos.com +91-77955 52666

idos is an application that enables business users to process financial transactions accurately and in compliance with relevant rules. idos ensures that financial data is validated, approved and correct before it is entered into an ERP for further processing, thereby ensuring authenticity of financial data at the very inception.

6. Researching Souls: www.researchingsouls.com

Sanjai Chhaunker
sanjai@researchingsouls.com +91-80-6793 5881

Citizen Security System called as "Secured Soul System" is an ICT enabled Unique and Patented Security Solution useful for every Citizen. This is a Mobile Application Software sitting on "any" type of Mobile Communication Device which "Empowers" a Citizen to use one of the two pre-configured buttons in the event of either a criminal event and / or a non-criminal event such as medical / fire / natural calamity and similar events. Upon the press of either of these buttons in case of an eventuality not only the citizen gets protected and is provided immediate assistance by the authorities they also assist

the authorities in return by way of transmitting the event in an encrypted manner to the nearest police station and seeking assistance from the law enforcement authorities. Our proprietary software protocol works in tandem with a proprietary hardware located at the receiving end. We have an "inclusive" logic that of involving and empowering every citizen who is a "Security Seeker" to assist and get assisted in return by the "Security Provider" which is the Government.

7. Cloud Byte Inc.: www.cloudbyte.com

(Srivibhavan Balaram) Vibhav
srivibhavan.balaram@cloudbyte.com +91 9845037743

Our vision is to build the next-generation storage technology that enables intelligent, grid-like, and software-defined storage, making it dramatically easier to afford and manage storage for thousands of applications in today's virtualized datacenter. We're not enthused by the idea of building a management layer or building a performance-boosting layer on top of current storage.

8. Wolken Software Private Limited: www.wolkensoftware.com

Sudhir Prabhu
sudhir@wolkensoftware.com +91-98450-31562

An enterprise class fully integrated service desk tool which adheres to the ITIL framework. Product is deployed in a SaaS mode. The product is certified by Pink Elephant for ITIL compliance.

19:30 – 21:30 CONFERENCE NETWORKING DINNER

9:00 –9:45

Opening Plenary Session

Dr. Fausto Bernardini,
Vice President and Distinguished Engineer,
Global Cloud Managed Services, IBM

Fausto leads the portfolio of SmartCloud Infrastructure-as-a-Service and Managed Application Services products, designed to host and manage production-grade enterprise applications in a dynamic, scalable, resilient, standardized environment. His responsibilities include setting the product strategy and managing its roadmap, interlocking with the execution of development and delivery activities, and overseeing the global deployment of the offering.

Prior to this role Fausto led global sales enablement and support for Cloud Managed Services, working closely with clients to support them in their own transformation to leverage cloud computing. Fausto is a frequent speaker on cloud computing at client events and conferences.

Earlier in his career, Fausto led worldwide research projects to develop new technologies and methods to improve the efficiency and value of application development and infrastructure management services. Examples include Cloud Computing, Service Oriented Architecture (SOA) design methodology, enterprise architecture modeling, project risk and quality management, software lifecycle process automation, business-driven infrastructure monitoring and optimization. Fausto holds a PhD in Computer Science from Purdue University, IN, USA and a Laurea degree in Electrical Engineering from Universita' La Sapienza of Rome, Italy. Fausto is an IBM Distinguished Engineer, a Master Inventor and a member of the IBM Academy of Technology.

9:45 – 10:15 BREAK

10:15 –12:15

ORAL PRESENTATIONS

Cryptography Challenges for Computational Privacy in Public Clouds
Sashank dara, Cisco Systems Pvt Ltd, India

Resource Demand Prediction in Multi-tenant Service Clouds
Manish Verma, G R Gangadharan, and V Ravi,
IDRBT, India
Nanjangud Narendra, IBM India, India

A Threshold Band Based Model for Automatic Load Balancing in Cloud Environment
Akshay Jain, Anagha Yadav, Lohit Namboodiri, and
Jibi Abraham, College of Engineering, Pune, India

Virtual CPU scheduling techniques for Kernel Based Virtual Machine (KVM)
Raghavendra K T, IBM India, India

12:15 – 13:15 LUNCH

13:15 –14:00

Manish Israni,
Vice President - IT Infrastructure, Vodafone India

Manish has 23+ years of experience in Banking / Telecom / IT Service providers in Global and Indian Market. He started his career with IT Integrators and worked with Digital Equipment Corporation (DEC), CSC, HCL, Infosys, JP Morgan and IBM in area of IT Infrastructure – Design, implementation and operations and Data Center Design build.

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His areas of expertise include IT Management, Outsourcing, Large and complex Migration/Transformations and so on.

Manish Israni is working as Vice President – IT Infrastructure Vodafone India, where he is leading their cloud initiative, among his other responsibilities.

14:00 – 14:30

Steve Diamond,
GM Industry Standards Office, EMC

Steve Diamond is a IEEE Senior Member and IEEE Computer Society past president. He is the general manager of the Industry Standards Office at EMC Corp., in San Francisco. Steve Diamond draws his expertise from 30 years of senior management, marketing, business development, and engineering in semiconductors, software, systems, and standards. Prior to his job at EMC, he was director of product management for intercloud computing at Cisco Systems,in San Jose, Calif., and vice president of marketing at Equator Technologies, a VLIW signal processor semiconductor company later sold to Pixelworks, also in San Jose. Before that, he did mergers and acquisitions at National Semiconductor and ran Sparc architecture marketing at Sun Microsystems, both in Santa Clara, Calif. He currently is leading the IEEE Cloud Computing Initiative (CCI), which is an IEEE wide focus being applied to help accelerate the development of cloud computing. He was convinced that IEEE was uniquely positioned to play a major role in accelerating and shaping that future. So he brought together a team of experienced colleagues, and, with the support of the IEEE Future Directions Committee and seed funding from the IEEE New Initiatives Committee, developed the IEEE Cloud Computing Initiative. "Much as we saw with the development of the Internet, cloud computing will impact the entire information and communications ecosystem, from embedded controllers, smartphones, tablets, laptops, and personal computers, to enterprise data centers and supercomputers," he says. "The smartphone is the fastest growing consumer technology in history, having reached 50 percent penetration of U.S. households in just 7 years. It took the home computer nearly 20 years to do the same thing," he continues. "Cloud computing will give smartphone users infinite computing resources at their mobile beck and call. The implications of this transition are huge."

14:30 –15:00

Invited Talk: Monetization of Mobile Broadband and Enablement of Multi-sided Business Model through Carrier Cloud Computing

Sethumadhavan Srinivasan,
Director – Strategy & Corporate Marketing
Huawei Telecommunications (India) Co. Pvt. Ltd

Sethu is leading the Strategic & Corporate Marketing function in Huawei India, and has over 23 years' experience in managing strategic telecom and ICT projects covering R&D, Networks Engineering, Services, Sales & Marketing.

Prior to joining Huawei in early 2008, he served Alcatel-Lucent for 12 years where he headed Sales and Marketing activities for Radio & Wire-line business divisions for South Asia, besides serving European 3G carriers and Enterprises during his stint at Alcatel HQ in Paris. He has been extensively involved in development of Codecs for Radio & Optical systems in his previous stint at Philips/PKI Germany.

In his present role, he focuses on strategic marketing and consulting activities. He is also a solution architect, anchoring promotion of new wireless technologies and collaborative new business models for telecom markets besides leading consulting activities for monetization of mobile data using cloud computing.

15:00 –15:30

Invited Talk: Elastic Parallel Patterns for Distributed Heterogeneous Architectures

Dr. Horacio Gonzalez-Velez,
Associated Professor and Head, Cloud Competency Centre,
National College of Ireland

As associate professor and head of Cloud Competency Centre at the National College of Ireland (NCI) in Dublin, Horacio González-Vélez directs the NCI's cloud infrastructure, postgraduate programmes, and research with a clear emphasis on innovation, education inclusion, and industrial partnerships.

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With a PhD in Informatics from the University of Edinburgh, he spent over a decade working in engineering and product marketing for innovation-driven companies such as Silicon Graphics and Sun Microsystems. He is an accredited expert on cloud computing for the BCS, the UK Chartered Institute for IT, and the executive editor of Inderscience's International Journal of Grid and Utility Computing.

15:30 – 16:00 BREAK

16:00 – 17:15

PANEL SESSION:

How do we propel Cloud based innovation in emerging markets like India?

PANELISTS:

Chivukula Sree Rama Prabhu,
Deputy Director General, National Informatics Centre (NIC), Hyderabad
(Ministry of Communications and Information Technology)

Chivukula Sree Rama Prabhu is the Deputy Director General (Scientist "G"), National Informatics Centre (NIC), Hyderabad (Ministry of Communications and Information Technology). As Deputy Director General (since 2004) in charge of new technology induction at the national level, he is steering the NIC Cloud Initiative of implementing Eucalyptus based IaaS (Infrastructure as a Service) Cloud overlapping PaaS (Platform as a Service) and SaaS (Software as a Service) layers and has research publications in International Journals in this regard.

He is engaged in the implementation of SOA (Service Oriented Approach) based e-Governance grid of India including virtualization and cloud computing, covering all State and District Centres of NIC.

C.S.R. Prabhu obtained his Masters Degree in Electrical Engineering with specialization in Computer Science from the Indian Institute of Technology, Bombay in 1978 after a Bachelors Degree in Electronics and Communication Engineering from Jawaharlal Nehru Technological University, Hyderabad in 1976. He has worked in various capacities at Tata Consultancy Services (TCS), CMC, TES and TELCO (now Tata Motors) before joining NIC, and is well published and received numerous awards.

Dr. Anand Deshpande,
Founder, Chairman & MD, Persistent Systems Ltd.

Anand Deshpande is the Founder, Chairman and Managing Director of Persistent Systems (BSE & NSE: PERSISTENT), a Company that he founded in 1990. Anand has a B. Tech (1984) in Computer Science and Engineering from IIT Kharagpur, a Masters (1986) and a Ph.D. (1989) in Computer Science from Indiana University, Bloomington (USA). Anand worked as MTS at Hewlett-Packard Laboratories in Palo Alto, California from 1989 to 1990.

At Persistent, he is responsible for overall leadership and management of the company and drives the sales and technology efforts. As an active member of the database community Anand was responsible for hosting VLDB 1996 in Mumbai and ICDE 2003 in Bangalore. He has actively participated in program committees of international conferences like member of Industrial Program Committee: VLDB 2003 in Berlin, VLDB 2004 in Toronto, IEEE 2005, ICDE 2005 in Tokyo, VLDB 2007 in Vienna; Program Committee Chair for Annual Convention CSI 2009 in Pune; General Chair for COMAD 2008 in Mumbai; Industrial Program Committee Chair for DASFAA 2008 in New Delhi; Organizing Committee Chair for ISEC 2009 in Pune; launched the ACM India Council, 2009.

Anand is also a member of the Association of Computing Machinery (ACM), Institute of Electrical and Electronics Engineers (IEEE), Institution of Engineers (India), Computer Society of India. He is currently a member of the Association of Computing Machinery (ACM) India Council as a Past President, member of the Executive Committee of NASSCOM, serves on the Board of Trustees of the Computer History Museum in Mountain View, California, serves on the Dean's Advisory Council of the School of Informatics of Indiana University, is on the Executive Committee of MCCIA and is Chairman of the IT Committee of MCCIA. In the past, Anand was the President of SEAP from 2005-07 and Chairman of the Pune Chapter of CSI from 2003-05 and was the Chairman of CII, Pune Zonal council in 2009-10.

In recognition of his contribution to the Information Technology sector he was awarded the Entrepreneur Award at the Brihan Maharashtra Mandal Convention held in Atlanta, USA, 2005. He is the recipient of the CSI Fellowship Award in 2007 for outstanding achievement in the field of Information Technology. He was awarded the career achievement award of the School of Informatics at Indiana University, Bloomington in 2009 and serves on the Dean's Advisory Council of the School of Informatics of Indiana University. He was awarded the IIT Kharagpur Distinguished Alumni Award in 2012.

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Prof. S. Sadagopan,
IIIT, Bangalore

Professor Sadagopan, Director of IIIT-Bangalore, is a product of Madras University, India and Purdue University, USA. He taught for 25+ years at IIT Kanpur, IIM Bangalore, IIT Madras and IIIT-Bangalore in addition to short teaching assignments at RUTGERS, USA and AIT, Bangkok.

He has authored seven books, several book chapters and papers.

He is a Fellow of IEE (UK) and Computer Society of India. He is a Senior Member of IEEE, ACM and AIS. He consults widely and lectures extensively on all aspects of IT.

He serves on the boards of Bharat Electronics, Neyveli Lignite Corporation and Indian Renewable Energy Agency as well as several Universities / Institutes - IBAB, ISIM, IIIT Bhubaneshwar and IIIT-Delhi.

He serves as a Member of Karnataka Knowledge Commission, Chief Minister's Vision Group on IT, NASSCOM Regional Council, Indian Semiconductor Association (ISA) Executive Council and ACM India Council. He is the Chair of IEEE Computer Society, Bangalore Chapter.

Perraju Bendapudi,
Former Partner Architect, Microsoft India Development Centre

Perraju Bendapudi has been with Microsoft India Development Centre for the past 12 years. He is currently the Partner Architect of the Analytics Team. Perraju started his career at Microsoft as a Senior Developer in Microsoft Operations Manager reporting. Subsequently, he became the Developer Lead to Service for Unix. He has also been the Development Manager for the Windows group at MSIDC. As the Principle Architect, he worked on the verification platform and binary based static driver verifier. As a partner Development director Perraju for the last four years worked on server and high scale services of Live mesh and azure caching and integration services.

Perraju has more than 30 patents and publications. He is a lead mentor in Microsoft Azure accelerator mentoring ~20 companies for azure.

His area of expertise is High Scale Services and runtimes, Cloud Computing, Big Data and Machine Learning and Compilers.

Before Joining Microsoft Perraju worked as staff engineer for Verilog compiled simulation in Synopsys. Perraju graduated from IIT Kanpur in 1993.

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Renu Budhiraja,
Sr. Director & HoD State Data Centers, e-Governance Division, DeitY

Mrs. Renu Budhiraja, Sr. Director & HoD State Data Centers, e-Governance Division, DeitY, has done her Engineering in Electronics and Communications from Delhi College of Engineering.

She started her career with Hindustan Computers Limited in their R&D division and contributed to the design and development of Networking Protocols & Data concentrator. Subsequently, shifted to Department of Electronics & Information Technology and worked in ERNET. With wide exposure on Networking Protocols, Services, Operations and development, she was responsible for introduction of Internet in Schools in India and first to setup and successfully run the OSI based messaging, directory and file transfer services across ERNET. Subsequently, shifted to E-Governance division in 1999 and since then has been actively involved in various e-Governance initiatives. Currently, she is looking at State Data Centers, National Cloud initiative, Citizen Contact Centers, Rapid replication of egovernance applications, National Appstore etc.

MODERATOR:

Dr. Dharanipragada Janakiram, Ph.D

Professor, Department of Computer Science and Engineering
Indian Institute of Technology Madras, Chennai

Dharanipragada Janakiram obtained his Ph.D degree from IIT, Delhi. He is currently a professor in the Department of Computer Science and Engineering, Indian Institute of Technology (IIT) Madras, India, where he heads and coordinates the research activities of the Distributed and Object Systems Lab. His current research focus is on building large scale distributed systems focusing on design pattern based techniques, measurements, peer-peer middleware based grid systems etc. He is currently the SIG Chair of Distributed Computing of Computer Society of India and is also the founder of the Forum for Promotion of Object Technology in India. He was awarded the Boyscast Fellowship in 1997. He was awarded the IBM Faculty Award in 2007 and Yahoo Faculty Grant in 2009. He has guided 10 Ph.D, over 30 M.S (Research), 60 M.Tech. He is the Board of Studies member in JNTU, Hyderabad, JNTU, Kakinada, Andhara University, SV University, Cochin University, VIT University and Anna Univerity. He has authored over a hundred research papers and is the editor for six books. His book on Grid Computing has been brought out by Tata McGraw Hill Publishers. He is the principal investigator for a number of projects which include the MobiTel: Mobile Telemedicine for rural India, Peer-to-peer Concept Search (Indo-Italian Collaborative project), Service Oriented Architecture for Linux Kernel (DIT) and Cloud Bursting Architecture for Document workflow (Xerox).

17:15 – 17:45 CONFERENCE CONCLUSION

ACKNOWLEDGEMENTS

On behalf of the IEEE Board of Directors, the organizers wish to express their heartfelt appreciation of the immense contributions made by the following individuals and establishments to the IEEE 2013 Cloud Computing for Emerging Markets Conference:

KEYNOTE SPEAKERS

Kris Gopalakrishman,
CEO and Managing Director, Infosys

Dr. Sam Pitroda,
Chairman of the National Innovation Council for India

Dr. Fausto Barnardini,
Vice President and Distinquished engineer, Cloud Managed Services, IBM USA

SPECIAL INVITED SPEAKERS

Dr. Anurag Srivastava. Senior
Vice President and CTO, Wipro

Shailesh Lakhani, Principal,
Sequoia Capital India

Sethumadhavan Srinivasan,
Director – Strategy & Corporate Marketing
Huawei Telecommunications (India) Co. Pvt. Ltd

Dr. Horacio Gonzalez-Velez,
Associated Professor and Head, Cloud Competency Centre, National College of Ireland

Manish Israni,
Infrastructure Head, Vodafone India

Steve Diamond,
GM Industry Standards Office, EMC

Professor Rajkumar Buyya,
Director Cloud Computing and Distributed Systems (CLOUDS) Lab, Department of Computing and Information Systems, The University of Melborne

MODERATOR:

Dr. Dharanipragada Janakiram, Ph.D
Professor, Department of Computer Science and Engineering, Indian Institute of Technology Madras, Chennai

PANELISTS

Dr. C.S.R. Prabhu,
Deputy Director General, national Informatics Center, India

Dr. Anand Deshpande,
Founder Chairman and Managing Director, Persistent Systems

Prof. Sadagopan, Director,
Indian Institute of Information Technology, Bangalore

Perraju Bendapudi,
Former Partner Architect, Microsoft India Development Centre

Renu Budhiraja,
Sr. Director & HoD State Data Centers, e-Governance Division, DeitY

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Beth Surmont, IEEE Meetings, Conferences, & Events (MCE), Piscataway, NJ

IEEE CLOUD COMPUTING

IEEE

Overview

Cloud Computing already has widespread impact across how we access today's applications, resources, and data. The IEEE Cloud Computing Initiative (CCI) intends to lead the way by collaborating across the interested IEEE societies and groups for a well-coordinated and cohesive plan in the areas of big data, conferences, education, publications, standards, testbed, and dedicated web portal.

Big Data

- **Handling of large datasets**

Conferences

- **Asian Pacific Cloud Congress**, 22-26 July 2013, Kyoto, Japan (compsac.cs.iastate.edu), co-located with COMPSAC
- **Cloud Computing for Emerging Markets (CCEM)**, 16-18 October 2013, Bangalore, India (cloudcomputing.ieee.org/ccem)
- **Latin America Cloud Congress**, 9-10 December 2013, Maceió-Alagoas, Brazil (www.ieee-latincloud.org/2013)
- **European Cloud Congress**, 2-5 December 2013, Bristol, UK (2013.cloudcom.org), co-located with CloudCom
- **North America Cloud Congress**, 9-13 December 2013, Atlanta, Georgia, US (www.ieee-globecom.org), co-located with GLOBECOM

Education

- Continuing education opportunities

Publications

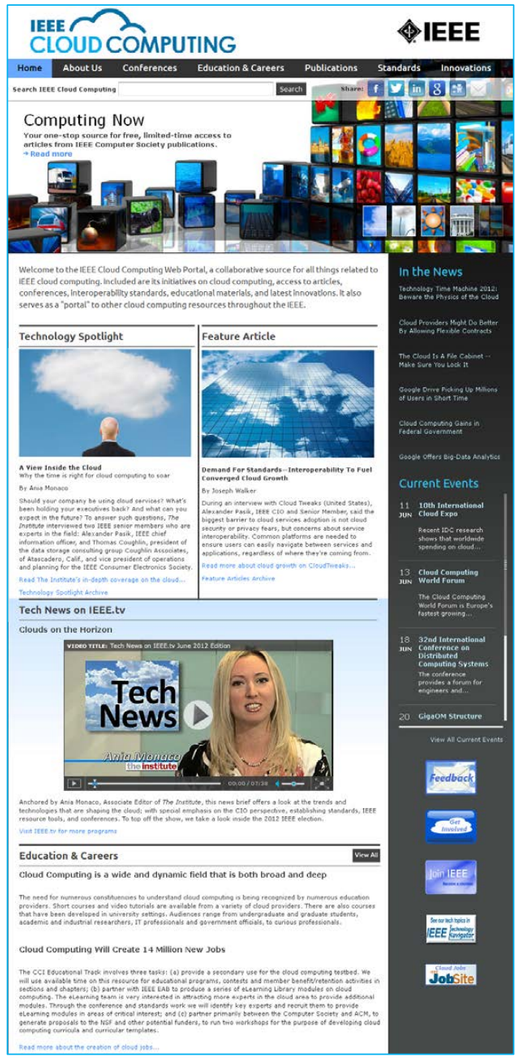
- **Transactions on Cloud Computing**, launch 2013
- **Magazine**, sample issue June 2012, launch 2014
- **Transactions on Big Data**, proposed
- **Big Data Magazine**, proposed

Standards

- **P2302** working group for intercloud interoperability and federation
- **P2301** for cloud portability and interoperability profiles

Intercloud Testbed

- Executive committee created
- Supports intercloud interoperability
- Drives conferences, education, publications



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cloudcomputing.ieee.org

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A service desk, at your service.

iServiceHub, an Enterprise class fully integrated service desk tool.

We, at Wolken build enterprise solutions incorporated with ITIL Best practices that comprise of Incident Management, Service Request Management, Change Request Management, CMDB, Problem Management and Release Management that can be rolled out on-cloud or on-premise; are portable on multiple devices; secure and scalable.

We make all this possible with zero capital expenditure, low implementation cost and reduced operational expenditure. What's better, we have the PinkVERIFY™ certificate for your comfort.

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Flexible Networking

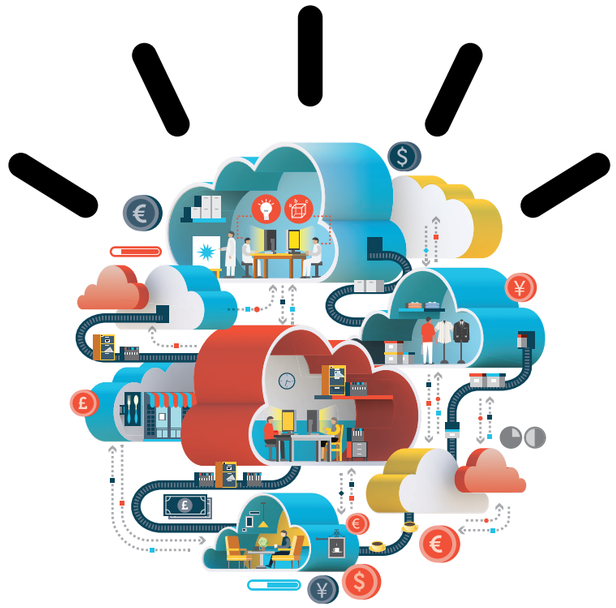
Huawei provides a full series of network infrastructure products and solutions such as routers, switches, Wi-Fi, WLAN, network security, optical transmission, microwave PON, and network management. Huawei can help enterprise customers build their network infrastructure platforms for campus, branch offices, wide area connectivity, and data centers, to provide comprehensive enterprise network solutions.

Currently, the global shipment of Huawei switches has exceeded 6.5 million units. In 2012, Huawei launched the world's first enterprise-class WLAN AP prototype that complies with 802.11AC and CloudEngine Series data center switches which have the industry's highest performance.

Data center Switch: No. 1 Performance

WLAN throughput 20-47% higher than industry standard

Source: Miercom



The greater promise of a greater cloud.

By next year, 41 percent of enterprises are projected to have substantially implemented cloud technology into their practices—up from 13 percent in 2011.

Only 16 percent of companies say they use the cloud for significant innovations, such as entering new lines of business or reshaping their industry.

Today's public, private and hybrid cloud platforms aren't just changing computing models. They're changing *business* models.

On a Smarter Planet, a few bold thinkers are seeing the cloud not just as a platform for optimization, efficiency, storage and security, but as an incubator of ideas. They're using the cloud to test, adjust and deploy new innovations, serving their customers better as they develop new services and revenue streams with less effort and expense.

After efficiency lies innovation. Enterprises that use the cloud can build their reach at a lower cost. After the United States Tennis Association migrated its predictive analytics and mobile infrastructure to a private IBM Smart-Cloud, millions more users of USOpen.org could easily access its news, analytics and live streaming.

And innovating in the cloud can help a business learn in real time. When produce company Blattwerk prepared to launch food trucks, it planned to use mobile scanners to monitor distribution. Building this system in the cloud helped Blattwerk launch its trucks in just three months.

Extending infrastructure to extend ideas. Forward-thinking enterprises that link their infrastructures to the cloud can focus on new ideas. When a software provider for hotels, PassportScan, enabled its technology on a public cloud platform, it found it could enter a new market. Last year, PassportScan expected its cloud-platform revenues to double.

The cloud beyond the cloud. When a smarter enterprise uses the cloud to support Big Data and analytics, mobile and social solutions, it can reimagine how it thinks, works and serves customers. Today's enterprise cloud is about more than expanding reach. It's about expanding possibility. To find out more, visit us at ibm.com/cloud

By 2015, revenues from cloud-enabled innovations are expected to exceed $1.1 trillion—half of it generated by small businesses.

LET'S BUILD A SMARTER PLANET.

IBM

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IEEE CLOUD COMPUTING

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