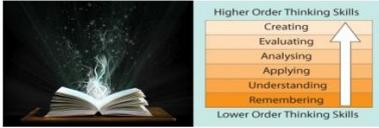




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Internet of Things (IOT)

The Internet of Things Training Course covers What the IoT is about, technology trends, deployments and convergence. Learn how to work with Building Connected Devices.

The Internet of Things Training Course attendees will learn about the dynamics of the IoT markets, technology, trends, planning, design and the convergence of platforms and services, with a special focus on the product design, architecture and implementation.

This is a fundamental IoT course covering the technologies behind the Internet of Things and connected devices.

Course Content

What is the Internet of Things (IoT)?

- Concepts and Definitions of The Internet of Things (IoT)
- History of IoT
- Applications
- IoT standards
- Requirements
- Functionalists and structure
- IoT enabling technologies
- IoT Architecture
- Major component of IoT
- Hardware, sensors, Systems-on-a-Chip, firmware, device drivers, application software, connectivity, cloud, and security
- Role of wired and wireless communication
- IoT communication and networking protocols
- IoT services and applications
- Security
- Cloud Computing and the Internet of Things
- Semantic Web 3.0 Standard for M2M and IoT
- IoT Platforms
- Challenges of adapting the concepts

Overview of IoT Connectivity Methods and Technologies

- Wireless 101
- RF 101
- ZigBee PRO, ZigBee 3.0 and ZigBee IP
- 6LowPAN
- RFID
- Bluetooth LE or Bluetooth Smart Technology
- Z-Wave
- Home Automation (HA) Profile
- Smart Energy (SE) Profile
- Health Care
- IEEE 802.15.4, IEEE 802.15.4e, 802.11ah
- 802.11ah, Wi-Fi HaLow
- Relay Access Point (AP)
- Grouping of stations
- Target Wake Time (TWT)
- Speed Frame Exchange
- Sectorization
- GSM, CDMA, GPRS, 3G, LTE, small cells, SATCOM
- Sensors and sensor networks
- Serial communication
- Power consumption and optimization
- MIPI, M-PHY, UniPro, SPMI, BIF, SuperSpeed USB Inter-Chip (SSIC), Mobile PCIe (M-PCIe) and SPI
- Wired connectivity
- IPv4/IPv6
- Ethernet/GigE
- Real-time systems and embedded software
- Cloud computing and storage
- Augmented Reality

Evaluation of The Internet of Things

- Platforms
- Mobile integration
- Deployment
- Data Visualization
- Convergence with Social Networks
- Value chain and Business models
- User centric cloud based services
- Analytical Hierarchy Process for technology selection
- End-to-end security
- Integration with IT systems
- Cost/benefit constraints
- End-to-end compatibility
- Application Architecture
- Lifecycle solution management
- Real-time response and delay

IEEE SA IoT: It is predicted that 50 to 100 billion things will be electronically connected by the year 2020. This Internet of Things (IoT) will fuel technology innovation by creating the means for machines to communicate many different types of information with one another. With all objects in the world connected, lives will be transformed. But the success of IoT depends strongly on standardization, which provides interoperability, compatibility, reliability, and effective operations on a global scale.

Recognizing the value of IoT to industry and the benefits this technology innovation brings to the public, the IEEE Standards Association (IEEE-SA) has a number of standards, projects and events that are directly related to creating the environment needed for a vibrant IoT.

For registration

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