IoT Developer Survey

Thank you for participating in the IoT Developer Survey. For the purpose of this survey, an IoT solution is defined as a solution that includes devices, sensors or actuators connected via the Internet. It does not include typical mobile applications or traditional desktop solutions.

1. What is your job title?

Developer

Architect

Testing

Development Manager

Product Manager

Role in sales and/or business development

Executive

Student

Researcher

Other

1. What is your current technology focus within your organization?

Embedded Software

Hardware Design

Networking Infrastructure

Enterprise Software

Web Development

Mobile

Big data, data analytics

Cloud Computing

Other

1. How large is the organization you work for?
   1. 1-49 employees
   2. 50-500
   3. 501-5000
   4. Greater than 5000
   5. Student
   6. Independent Consultant
2. What is your experience with building IoT? NOTE: For the purpose of this survey, an IoT solution is defined as an application that connects devices, sensors or actuators via the Internet. It does not include typical mobile applications or traditional desktop solutions.
   1. I develop IoT solutions for my company
   2. I am researching IoT technology for my company
   3. I develop IoT solutions in my spare time
   4. I am learning about IoT technology in my spare time
   5. No experience
3. What is your company’s plan for IoT solutions?
   1. My company develops and deploys IoT solutions today
   2. My company plans to develop and deploy IoT solutions in the next 6 months
   3. My company plans to develop and deploy IoT solutions in the next 6-18 months
   4. My company has no plans to develop IoT solutions
   5. Don’t know
4. What industry best describes the type of IoT solutions you have built or will build?
   1. Agriculture
   2. Automotive
   3. Building Automation
   4. Connected Cities
   5. Energy Management
   6. Fitness
   7. Healthcare
   8. Home automation
   9. Industrial Automation
   10. Public Utilities
   11. Retail
   12. Security / Defense
   13. Security / Public safety
   14. Transportation
   15. Utilities
   16. Vending
   17. Wearables
   18. Other
5. What are the top 2 concerns for developing IoT solutions? (Pick 2)
   1. Certification/Conformance
   2. Complexity
   3. Connectivity
   4. Cost
   5. Data Analytics
   6. Integration with Hardware
   7. Interoperability
   8. Maintenance
   9. Performance
   10. Privacy
   11. Security
   12. Don’t Know
   13. Other
6. What type of vendors will have the most influence in selecting IoT technology? (pick 2)
   1. All technology decisions are made in-house
   2. Cloud providers  (ex. Amazon, Google, etc.)
   3. Enterprise software vendors  (ex. IBM, SAP, Oracle, etc.)
   4. Hardware vendors  (ex. Eurotech, Sierra Wireless, etc)
   5. Industry Solution Providers
   6. Mobile device manufacturers (ex. Apple, Google, Samsung)
   7. Network operators  (ex. AT&T, Deutsche Telekom, Vodafone, etc)
   8. Semi-conductor manufacturers (ex. ARM, Intel, Qualcomm, etc)
   9. System Integrators (ex. Accenture, IBM, etc.)
   10. Don’t know
   11. Other, specify:
7. What is your company’s policy about using open source technology for your IoT solutions?
   1. Open source is not allowed in any part of our IoT solution
   2. Open source is not allowed on the device but allowed on the server-side
   3. Open source is used but we do not participate or contribute to open source projects
   4. Open source is used and we contribute bug fixes to open source projects
   5. Open source is used and we have developers who work on open source projects
   6. Don’t know
   7. Other
8. What programming language(s) do you use to build IoT solutions? (Multiple selection)
   1. Assembler
   2. C
   3. C++
   4. C#
   5. Go
   6. Java
   7. JavaScript
   8. Lua
   9. Node.js
   10. PHP
   11. Python
   12. Ruby
   13. SWIFT
   14. Other
9. What messaging protocol do you use for your IoT solution (Multiple selection)
   1. AMQP
   2. CoAP
   3. DDS
   4. HTTP
   5. In-house / proprietary
   6. MQTT
   7. Proprietary vendor protocol (specify)
   8. XMPP
   9. None
   10. Don’t know
   11. Other, please specify

11a What industrial protocol do you use in your IoT solution?

* 1. BACNet
  2. Common Industrial Protocol (EtherNet/IP, ControlNet, DeviceNet)
  3. CAN
  4. DNP3
  5. FOUNDATION fieldbus
  6. EtherCat
  7. IEC 60870, 61850
  8. KNX
  9. Modbus
  10. OPC-UA (IEC 62541)
  11. Profibus, Profinet
  12. Sercos
  13. None
  14. Don’t Know

1. What connectivity protocol(s) do you use for your IoT solution? (Multiple selection)
   1. Bluetooth / Bluetooth Smart
   2. Cellular
   3. Ethernet
   4. Satellite
   5. Wi-Fi
   6. Zigbee
   7. UPnP
   8. Serial RS-232/RS-485
   9. TCP/IP
   10. Thread
   11. 6LowPAN
   12. Don’t know
   13. Other, please specify
2. Which operating systems do you use for your IoT devices?
   1. Contiki
   2. FreeRTOS
   3. Linux
   4. mbed
   5. No OS / Bare-metal
   6. RIOT
   7. TinyOS
   8. Windows Embedded
   9. Don’t know
   10. Other
3. Have you ever used any open hardware platforms like Raspberry Pi, Arduino, BeagleBone, etc. ?
   1. Yes, my company deploys IoT solution using an open hardware platform.
   2. Yes, my company prototypes IoT solutions using an open hardware platform.
   3. Yes, I have experimented with open hardware in my spare time
   4. No, but I intent to experiment with open hardware in the next 6 months.
   5. Never used open hardware.
4. How would you rank your companies participation in the following:

Criteria – Very important, Important, Not Applicable, Never Heard of them

* 1. Standards organization
  2. Trade associations
  3. Vendor partner programs

1. How would you rank your organization’s perceived importance of the following IoT Consortiums to your IoT strategy?

Criteria – Very important, Important, Not Applicable, Never Heard of them

* 1. AllSeen Alliance
  2. Eclipse IoT
  3. IEC
  4. IEEE
  5. IETF
  6. Industrial Internet Consortium (IIC)
  7. OASIS
  8. Open Interconnect Consortium (OIC)
  9. OMA
  10. OneM2M
  11. Thread

1. What company or companies do you see as being a leader in IoT? [this would allow people to write in a company name]
2. Do you participate in any vendor partner programs? (ex. Work at Nest. Intel IoT Solutions Alliance) Please specify