Eclipse, the IDE for IoT

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Outline

- Why Eclipse IDE for IoT Development
- Our Sample IoT Application
- Run-Time Platforms Used
- Tools Used
- Demo
- Future Directions
Why Eclipse for IoT

- IoT is an example, really about polygot multi-platform distributed applications
- Eclipse is the platform for everything and nothing in particular
- Only IDE that does C++, Java, Web well (or well enough)
  - As diverse as our community
Our “Contrived” Sample IoT Application

- MQTT Broker
- BeagleBone
- Arduino Uno
- Event Handler
- Analyzer
- DB
- Touch Screen
- Sensor
- Neo Pixels
- Web Server
- Browser Client
- Android Client
Run-Times Used

- AWS IoT
- MQTT Broker
- Event Handler
- AWS Lambda
- Plain Ol' Java
- Analyzer
- DB
- AWS DynamoDB
- Web Server
- Vert-x Web
- Browser Client
- React.js
- Android Client
- Android
- Neo Pixels
- Sensor
- Touch Screen
- BeagleBone
- Qt on QNX
- Arduino SDK
- Arduino Uno
- Doug
Tools Used – “Eclipse IDE for Doug”

- Arduino Uno
- BeagleBone
- Touch Screen
- Sensor
- Neo Pixels
- Arduino C++
- QNX Momentics, CDT for QT
- DB Analyzer
- Web Server
- Browser Client
- Android Client
- WTP
- Event Handler
- MQTT Broker
- AWS Tools for Eclipse
- JDT/m2e
Demo
Future Directions

- Improve Web development Tools
  - Especially with non J2EE platforms like vert.x, node.js
- Remote Java launching, debugging
  - Java microservices in the cloud
- Android Tools for Eclipse/Andmore
  - Needs Gradle support, right sizing of feature set
- Other mobile platforms that aren’t there at all
  - i.e. IoS
- Eclipse IDE for IoT?
  - Combine Eclipse projects for embedded and cloud
A different vision for the “Next Generation Eclipse IDE”

- Leverage the massive investment we’ve made up until now
  - World class plug-ins provide shoulders to build on
- Common language super-meta model
  - Make it easy to add new languages
- JavaFX based UI using existing cores
  - If Che can do a Web one, validates this is possible
  - Need to make sure core doesn’t depend on UI or is in UI
- Make it easy to support more platforms
  - iOS
  - React Native
Thank you!

- Thank you Eclipse!