Building secure IoT solutions with Red Hat

Featuring Red Hat Enterprise Linux, Red Hat JBoss A-MQ, Fuse, BRMS, Red Hat Mobile Application Platform, and Ansible

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Red Hat

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Let's imagine ...
Enterprise IoT Requirements
Enterprise Class Foundation

- Minimize Risk
- Automated deployment, configuration and update
- Long Lifecycle

- Secure and Trusted Platform
Demo - Setup: Secure and Trusted Platform
Device Diversity

- Device protocols
- Reliable data delivery over unreliable media

- Multi-protocol support
- Multiple messaging paradigms
- Deployment flexibility

Enables real time integration everywhere
Demo - Setup: Reliable Data Delivery

MQTT
- Topic: 'iotdemo/<type>/<cpu-id>'
- Payload: '<value>,<count>'

Intelligent Gateway

Sensor
Device Data

- Data Volume
- Integrating IoT datastream with enterprise data

- Apache Camel Routing
- Enterprise Integration
- Distributed
- Hybrid deployment
Demo - Setup: Integrating IoT Datastream

**MQTT**
- Topic: 'iotdemo/<type>/cpu-id'
- Payload: '<value>,<count>'

**JMS**
- Queue: 'to.datacenter'
- Payload:
  `<dataset>`
  `<deviceType/>`
  `<deviceID/>`
  `<timestamp/>`
  `<payload/>`
  `<count/>`
  `<dataset>`
Intelligence at Edge

- Real time/critical decisions
- Hard coding business logic

- Intelligence at the edge
- Separate business rules from applications
  - Express rules in terms that business can easily understand
Demo - Setup: Intelligence at the Edge

- Topic: 'iotdemo/<type>/<cpu-id>'
- Payload: '<value>,<count>'

Intelligent Gateway

MQTT

Sensor
Mobile and JBoss BPM Suite
Questions

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THANK YOU

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Intelligent IoT Gateway
Transforming device data into actionable information

INTELLIGENT GATEWAY

Red Hat Enterprise Linux®

Data capture

1

Aggregation
Transformation
Summarization
Routing

Red Hat JBoss Fuse
Red Hat JBoss A-MQ (Work stream)

Fast data

Slow data

2a

2b

5a

5b

4

Red Hat®
JBoss® BRMS
(Rules-based actions)

Temperature
Speed
Vibration
Location

Sensors and actuators

Mobile
Database
Management
Applications

Cloud

Datacenter