

RED HAT AND THE INTERNET OF THINGS

BROCHURE

BUILDING AN IOT SOLUTION WITH RED HAT

Find out how transit ticketing system manufacturer Genfare transformed from an equipment supplier to an industry solution provider by building an IoT platform using technology solutions and consulting services from Red Hat.

View the video:

<https://www.youtube.com/watch?v=uzHjw2Yzd-g&feature=youtu.be>

Read the case study:

<https://www.redhat.com/en/resources/genfare-case-study>

“By partnering with Red Hat, all of the tools and resources were immediately available to Genfare to begin the development of the project.”

TIM GIOMETTI
DIRECTOR OF ENGINEERING
AT GENFARE

THE BENEFITS AND CHALLENGES OF THE IOT

The Internet of Things connects the physical world of “things” to the digital world of IT infrastructure to gather data never previously available. Taking advantage of the benefits of the IoT enables businesses to:

- improve and automate processes.
- gain insights.
- make informed decisions.
- transform digital environments.

However, the massive volume of raw data generated by hundreds, thousands, even millions of endpoint devices has created challenges for enterprises. Red Hat helps enterprises and partners make use of both new and existing data streams to create unique value, improve customer engagement, and generate new business opportunities. Our technology solutions help enterprises and partners collect, communicate, transform, store, and act on critical data generated by the Internet of Things.

OVERCOME IOT OBSTACLES

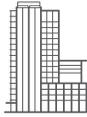
IoT projects can be complex. These are some areas where Red Hat can help you overcome IoT challenges:

- seamlessly manage and connect disparate devices.
- integrate and transform data reliably and securely.
- connect operational technology to enterprise information technology.
- store and manage data.
- act on analyzed data.

Red Hat provides an extensible, secure, consistent foundation for IoT that is:

- easily managed, mature, flexible, scalable.
- enables connectivity, interoperability, services.
- supports open standards.
- assists with regulatory compliance.

From edge devices to gateways, the datacenter, and the cloud, our foundation assists across the lifecycle from development to production.



ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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SOLUTIONS

Building on our experience as the world's largest open source company, we deliver trusted solutions which capture community innovation, eliminate vendor lock-in, and prevent cost escalation.

Start with a solid foundation: Red Hat Enterprise Linux provides the security, reliability, and performance needed for IoT environments. You can reduce IoT implementation complexity and simplify the deployment and operation of your IoT system by standardizing on a single operating system for datacenter, cloud, gateway, and x86 or Atom-based devices.

Enterprise integration: IoT implementations require data, devices, applications, and processes to be integrated with each other and with back-end systems. Red Hat JBoss Fuse drives data transformation, handles the large volumes of data being generated at the edge of the network, and processes summary data to send back to the data center for deep analysis.

Data transport middleware: Red Hat JBoss A-MQ enables real-time messaging to integrate applications, endpoints, and devices. It's important that the messaging platform also makes it both easy and safe for enterprise applications to exchange information and, at the device tier, to be contained in a small footprint.

Business rules middleware: Red Hat JBoss BRMS determines the triggers for field level information analysis, prompting action based on pre-defined parameters. In conjunction with Red Hat JBoss Data Grid **real-time data caching middleware**, summary data is culled, avoiding transmittal of extraneous device information and only sending streamlined data to the datacenter.

Data storage: IoT solutions require a data storage layer to intermediately store data that may be needed for tactical analysis and regulatory requirements, as well as storing that data for long-term analysis. Red Hat Storage solutions manage data in physical, virtual, and cloud environments, combining file and object storage with a scale-out architecture to cost-effectively manage petabyte-scale data growth.

Design modularity: Container technology allows you to host multiple applications on a single device, gateway, or in the cloud, and repurpose those applications across architecture tiers. OpenShift by Red Hat is a flexible container application platform-as-a-service that lets you quickly develop, host, and scale IoT applications in a cloud environment.

Mobile applications: Often a component of IoT projects, mobile applications are built to bring IoT closer to users, providing visibility to the IoT system and enhancing the user experience (including the ability to control IoT devices). Red Hat Mobile Application Platform allows developers to develop and deploy mobile apps in an agile and flexible manner with open technologies and standard toolkits.

CONCLUSION

Far before the broad use of the term IoT, Red Hat has been helping customers and partners envision their IoT future. Our open source solutions keep you current in the changing environment that is the IoT, avoiding locking into proprietary technology now that may lock you out of innovation and flexibility in the future.

Red Hat solutions can help in several areas;

- bringing intelligence to the edge for real-time decision making.
- bridging the gap that exists between IT and operational technology.
- building an IoT platform to deliver internal or external services.
- providing an open source foundation on which to build your IoT solution.

Visit www.redhat.com/iot to learn more about Red Hat and IoT or contact our global sales team at iotquestions@redhat.com.

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