Red Hat | Takebishi | Device Gateway

DeviceGateway streamlines data collection and analysis in factories for smarter decision-making

Technology used:

- Red Hat Ansible Automation Platform
- Red Hat Enterprise Linux for Edge
- Red Hat MicroShift

Key benefits:

- Integrates disparate tools and systems.
- Modernises legacy systems without wasting capital investment.
- Enables real-time factory floor insights.
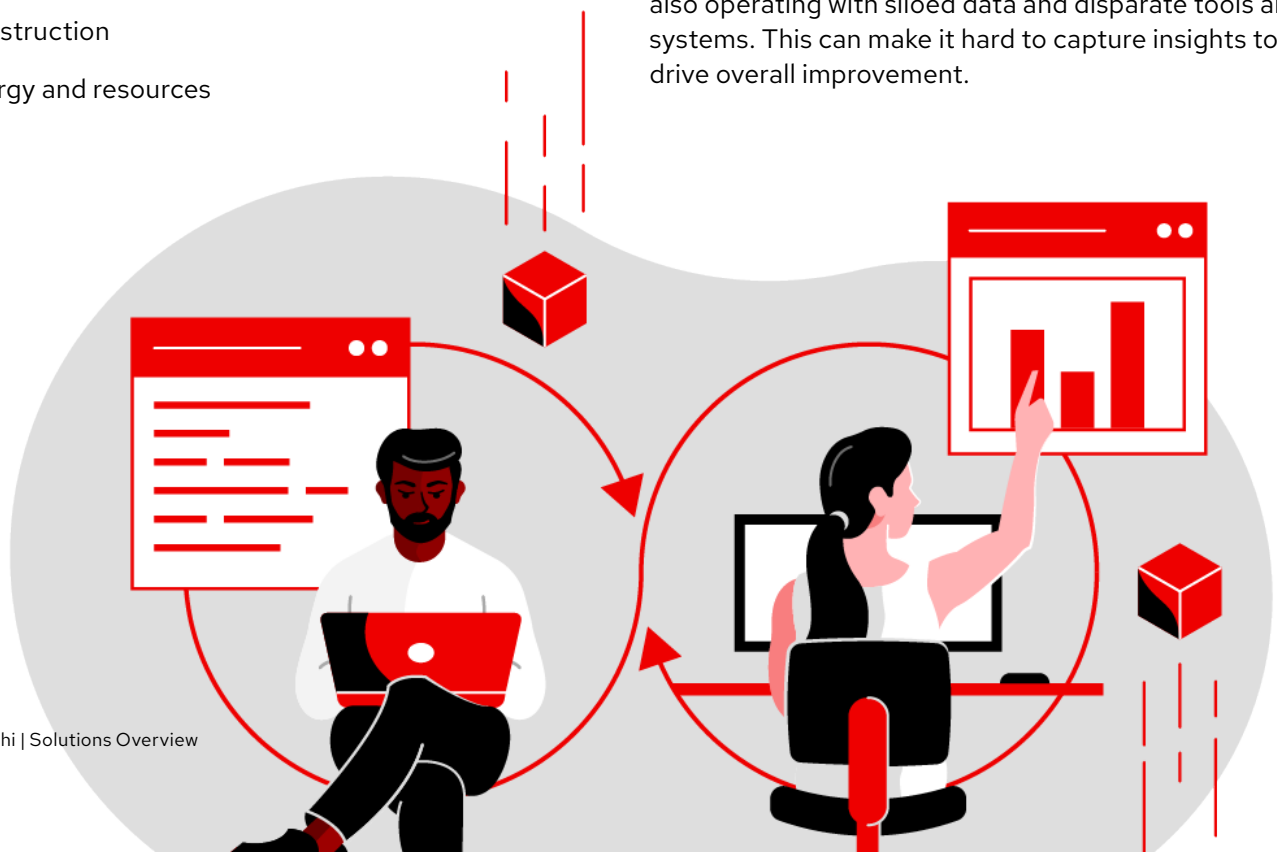- Enhances productivity and output, reducing maintenance and waste.

Ideal for organisations in:

- Manufacturing
- Construction
- Energy and resources

Proven to deliver up to a 30% improvement in productivity.

Is your organisation as productive as it could be?

Staying ahead in sectors like manufacturing, energy or construction requires agility and efficiency. To grow your market share, you need to be highly responsive to consumer demands, while optimising output and minimising waste at every stage of the production process. Yet many organisations are still relying on manual processes and paper-based systems which can slow production and drain resources. A lack of digital infrastructure means many organisations are also operating with siloed data and disparate tools and systems. This can make it hard to capture insights to drive overall improvement.

Create a seamless flow of data across your factory with DeviceGateway

Built on the Red Hat Ansible Automation Platform, DeviceGateway is an intelligent technology solution which seamlessly connects disparate devices and data across your organisation. This can include data from programmable logic controllers (PLCs), measurement instruments, recorders, and machine tools. By facilitating a smooth and automated flow of data, DeviceGateway provides operators with the overarching insights they need to inform decision-making, speed up production and optimise maintenance.

- **Monitor production in real-time:**
  Get accurate, comprehensive data at every stage of the production lifecycle, including from the factory floor.

- **Operate more efficiently:**
  Eliminate the time and effort required to manually extract and consolidate data from multiple sources.

- **Reduce waste:**
  Easily identify where resources are not being used at their most efficient, or where components are being wasted.

- **Minimise equipment outages:**
  Automatically track equipment performance to reduce the risk of costly outages and fine-tune your maintenance schedules.

- **Centralise and streamline processes:**
  Use data to identify where production methods can be unified to eliminate repetition and optimise efficiency.

- **Innovate:**
  Create a robust platform that enables the seamless introduction of new technologies, and digital systems.

- **Maintain your legacy systems:**
  Make the most of your investments in existing equipment and maintain competitive production.

Accelerate your digital transformation

By connecting disparate systems and ensuring a seamless flow of data across your organisation, DeviceGateway lays the foundation for effective, ongoing digital transformation. It can help you modernise your existing legacy equipment, reduce data silos and extract crucial insights at every step.

Increase productivity by up to 30%

DeviceGateway can enable significant productivity gains by:

- Seamlessly connecting with third-party business intelligence solutions to deliver real-time insights on the status of your equipment and outputs, ensuring any inefficiencies can be quickly rectified.

- Unifying the methods and types of data used to measure operating status, making it easier to compare the performance of every piece of machinery, as well as to introduce new equipment or tools.

- Ensuring equipment is only serviced or taken 'offline' when required, reducing the costs and time associated with unnecessary maintenance.

Modernise legacy equipment without wasting capital investment

A major advantage of DeviceGateway is that it integrates seamlessly with your existing tools and equipment, ensuring you can make the most of your existing investments. It can also integrate smoothly with new tools and equipment, meaning you can keep pace with market trends and innovations.

Built on the trusted Red Hat platform

DeviceGateway is built on a suite of Red Hat products including Red Hat Ansible Automation Platform, Red Hat Enterprise Linux (RHEL) for Edge, and Red Hat MicroShift. This combination of solutions delivers unparalleled flexibility, security, and automation.

Our partnership with Red Hat ensures DeviceGateway can be utilised in global markets, and rapidly rolled-out across different regions and segments.
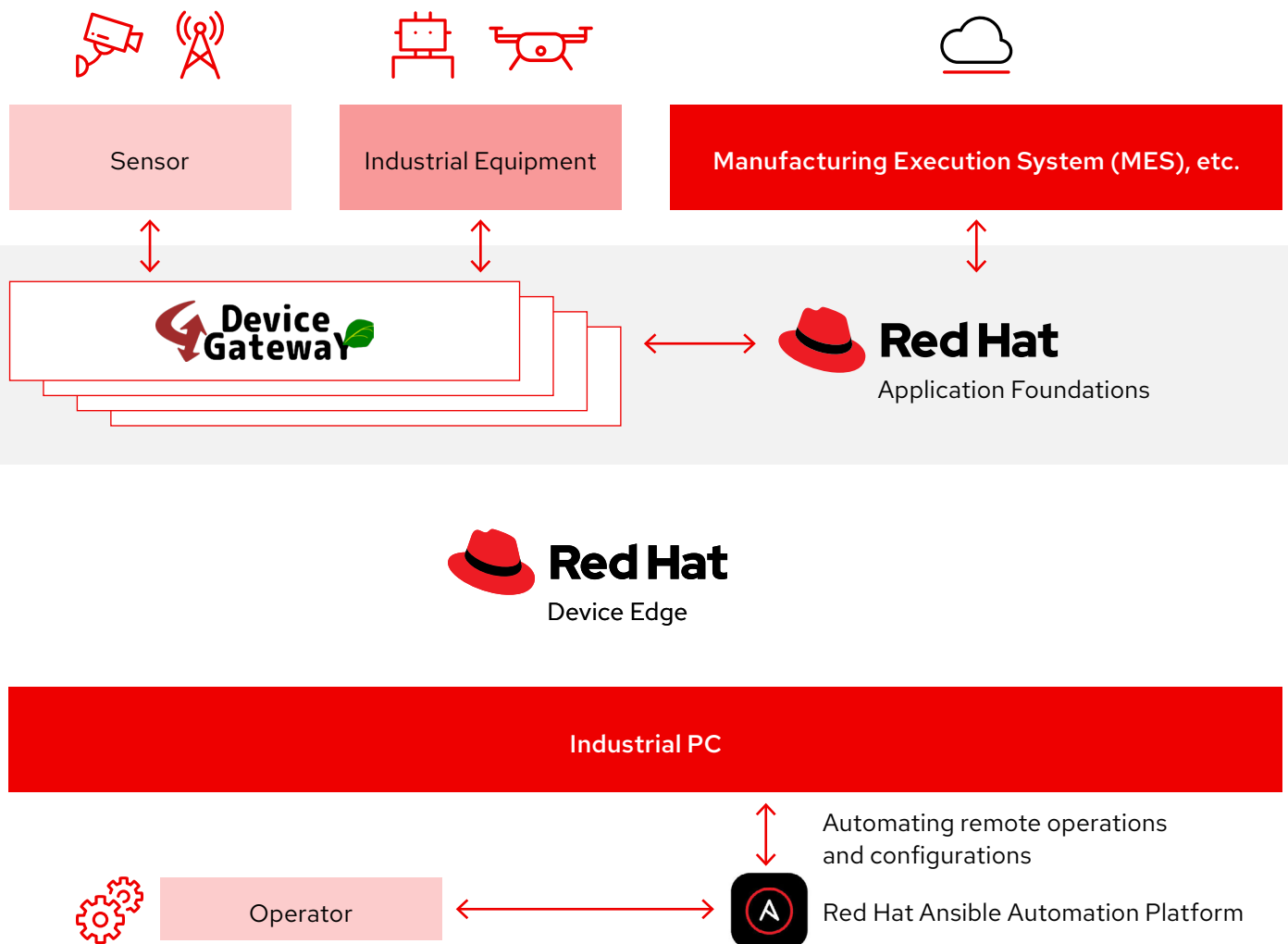

| Sensor | Industrial Equipment | Manufacturing Execution System (MES), etc. |

Device Gateway

Red Hat
Application Foundations

Red Hat
Device Edge

Industrial PC

Automating remote operations and configurations

Operator

Red Hat Ansible Automation Platform

Figure 1: System Configuration Diagram

Key features of the solution

Rich connectivity and bi-directional integration

DeviceGateway supports two-way connectivity between facilities, equipment, and higher-level systems. It is interoperable with more than 320 Series/80 vendors of equipment used in the manufacturing, construction, and power industries, including:

- PLCs

- Various machine tools (e.g. injection moulding machines, laser processing machines, machining centres)

- CNC equipment

- Drive equipment (e.g. robots and sliders)

- Distributed control devices (e.g. temperature controllers)

- Ammeters, paperless recorders

- Remote I/O devices, environmental sensors, and water leakage sensors

- Sensing equipment (e.g. unmanned analogue meter readers)

The solution can even be linked with non-production equipment and devices such as air conditioning and lighting equipment, by ethernet communication, serial communication or BLE wireless communication.

Real-time data collection and IoT integration

DeviceGateway collects data from a wide variety of devices, including IoT, in real-time. It seamlessly connects devices, data, and analytics services (such as dashboards and business intelligence tools) to support rapid, accurate, data-led decision making.

Two-way information transfer

In addition to transmitting information to the cloud, DeviceGateway can control and write to production equipment (such as PLCs) based on instructions from the host system, enabling bidirectional cooperation. By connecting other machine learning and AI solutions, it can support predictive maintenance and anomaly detection at the edge. Detecting issues as close as possible to the equipment optimises efficiency and ensures more rapid resolutions.

Quick and easy to implement

No programming work is required to use DeviceGateway. With an easy-to-understand and simple setup process using the WebUI, you can complete the connection to a device within just a few hours. By leveraging Red Hat MicroShift and the Red Hat Ansible Automation Platform, it is possible to remotely manage edge terminals.

Find out more:

- **Takebishi product special site** (faweb): https://www.faweb.net
- **Product introduction page:** https://www.faweb.net/product/devicegateway
- **Contact:** https://www.faweb.net/support/contact

- **Red Hat Ecosystem Catalogue:** https://catalog.redhat.com/software/container-stacks/detail/64b78a22c9f380494e648f67

For more information or to request a free trial, please contact **Takebishi (fa-support@takebishi.co.jp)**.

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