

# News Release

**FOR IMMEDIATE RELEASE**

## **Technology development to enhance the functionality of the Node-RED programming tool for easier system collaboration**

*To contribute to the Node-RED community and utilization for the Lumada IoT platform*

**Tokyo, August 9, 2017** --- Hitachi, Ltd. (TSE: 6501, Hitachi) today announced the development of a technology that facilitates processing and data cooperation between multiple systems. The technology will enhance the functionality of the Node-RED programming tool<sup>(1)</sup> which enables programming without the need to write source code. This technology will be contributed by Hitachi - as a new feature to the Node-RED community. Another contribution to the user community is a reference book in Japanese written by Hitachi engineers and researchers for novice Node-RED users. Hitachi plans to use Node-RED on the Lumada IoT platform, to speed up the development and provision of applications to customers.

As IoT<sup>(2)</sup> technology evolves, developers need to quickly develop applications that cooperate between many different systems. To achieve this, developers require technologies for code-less programming, which enables intuitive development of systems, and technologies that can connect data across multiple systems. An increasing number of enterprises have been using Node-RED as this tool allows programmers to create programs easily by placing and connecting components called nodes on the computer display, and to develop or customize applications without writing code. However, one of the difficulties with Node-RED lies in the need to develop different processing nodes for different systems to enable processing and data cooperation between multiple systems.

To address this need, Hitachi has developed technology to simplify processing and data cooperation between multiple systems. Specifically, Hitachi has developed the Flow Connection Gateway technology which manages the connection interfaces (API<sup>(3)</sup>) for multiple systems in an integrated manner, taking advantage of the fact that the cooperation between Node-RED and other systems can be generalized into patterns. Flow Connection Gateway provides built-in functionality for system connections, simplifies the required configuration tasks by providing functionality to reference the APIs of connected systems, and thereby speeds up the development of nodes and applications.

Hitachi will continue to contribute to the Node-RED community and move forward with Social Innovation Business by using Node-RED on Lumada for agile development and delivery of applications that resolve challenges faced by society and customers.

### **Hitachi's contributions to the Node-RED community**

Focusing on the future potential of Node-RED, Hitachi joined the Node-RED User Group Japan in October 2015 when the community was established, and has contributed to the community by developing technologies such as multilingual support. In the latest version of Node-RED (version 0.17) released in June 2017, Hitachi was recognized as the second largest contributor following IBM (International Business Machines Corp).

### **Comments from Mr. Kris Borchers, executive director of the JS Foundation<sup>(4)</sup>**

“The JS Foundation is very excited that Hitachi has incorporated Node-RED into their IoT platform, Lumada. We also look forward to the contributions and new features Hitachi will bring to Node-RED and continued collaboration with Hitachi to bring long-term sustainability to the project.”

- (1) Node-RED: Node-RED is a “coding-less” programming tool developed by IBM which was donated to the JS Foundation, a project of the Linux Foundation, a non-commercial organization that provides support for a variety of open-source activities. The Node-RED website is <https://nodered.org>.
- (2) IoT: Internet of Things
- (3) API: Application Programming Interface
- (4) JS Foundation: <https://js.foundation/>

### **About Hitachi, Ltd.**

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society’s challenges. The company’s consolidated revenues for fiscal 2016 (ended March 31, 2017) totaled 9,162.2 billion yen (\$81.8 billion). The Hitachi Group is a global leader in the Social Innovation Business, and it has approximately 304,000 employees worldwide. Through collaborative creation, Hitachi is providing solutions to customers in a broad range of sectors, including Power / Energy, Industry / Distribution / Water, Urban Development, and Finance / Government & Public / Healthcare. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.

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