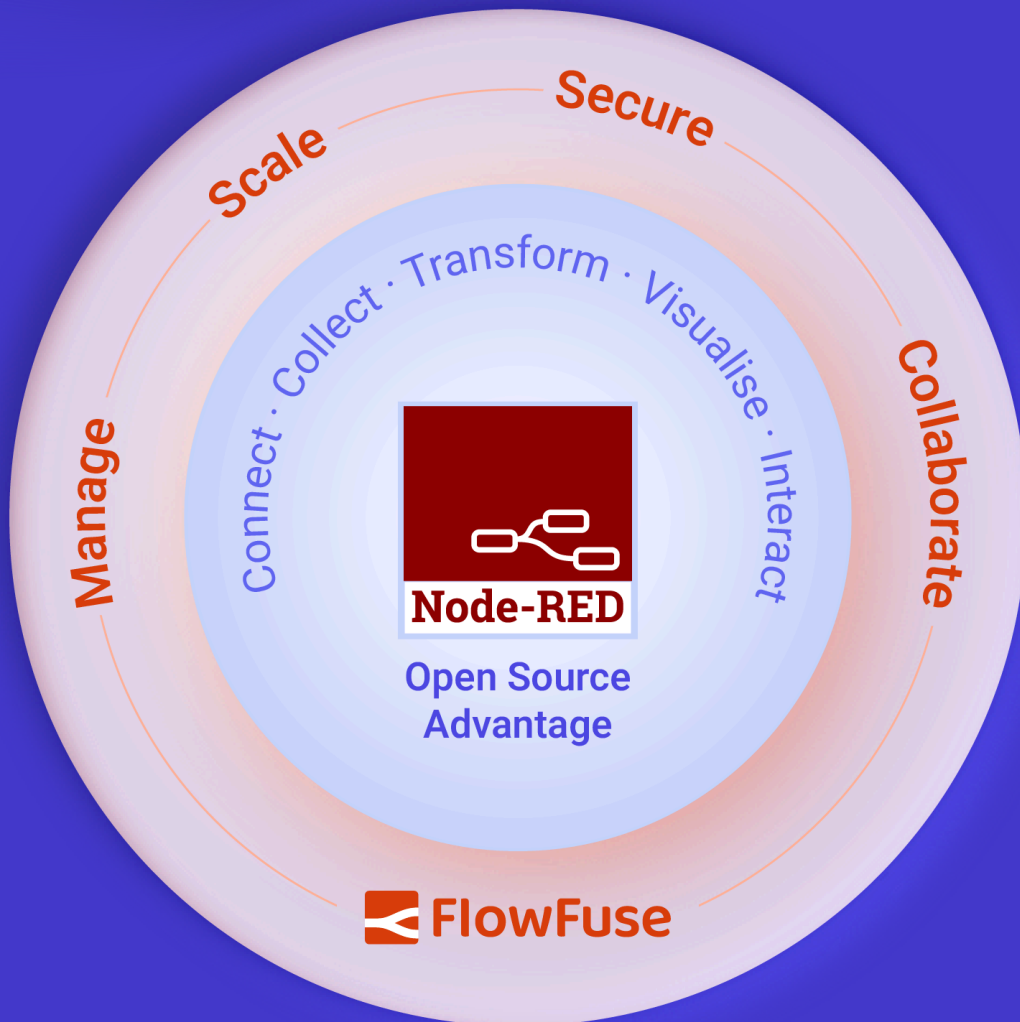


Node-RED in the Enterprise

Manage · Scale · Collaborate · Secure

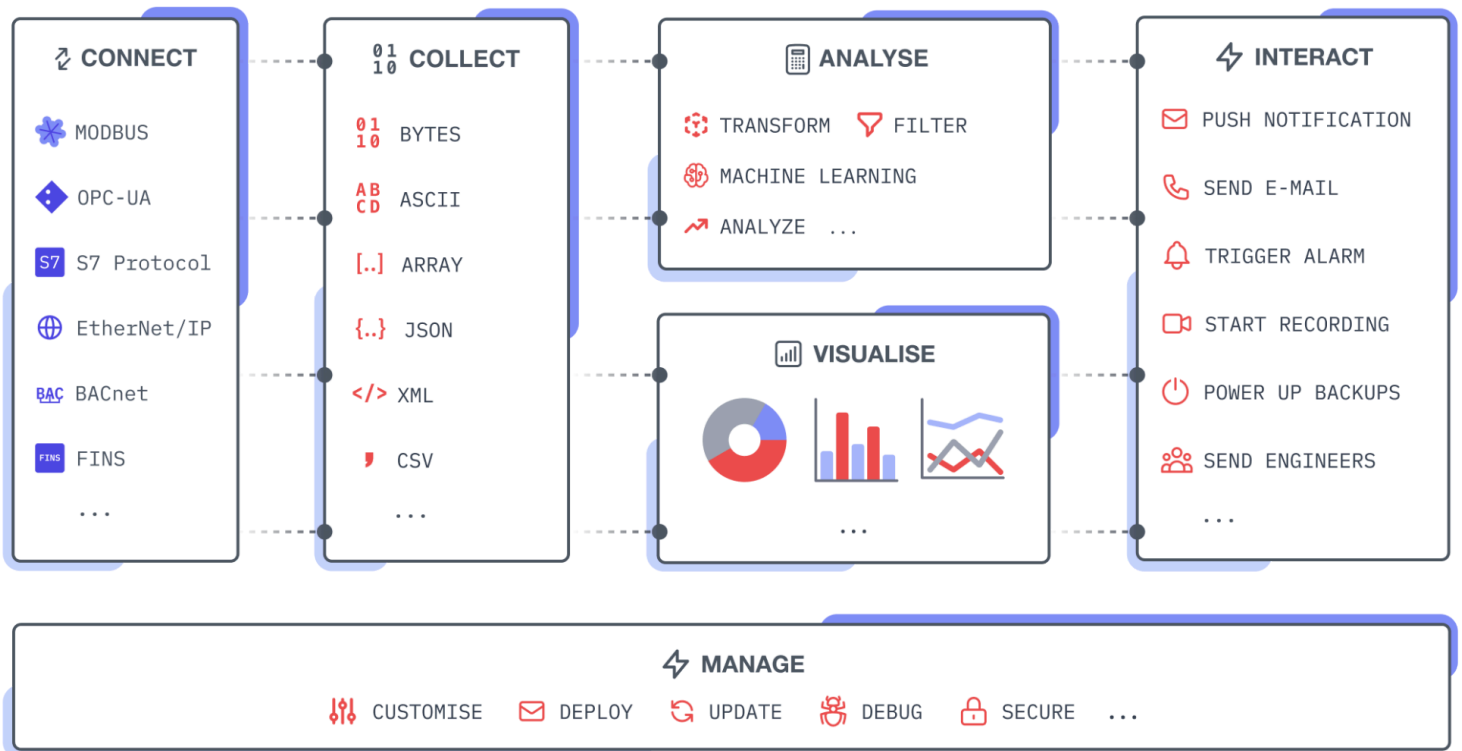
FlowFuse Platform Overview



In today's highly competitive industrial landscape, achieving growth and profitability demands a continuous commitment to process improvement. To fuel innovation, however, your team needs seamless access to data and the capability to quickly build applications that transform raw information into actionable operational insights. By rapidly collecting and transforming data directly from your operations, your team gains the agility to make timely process adjustments, driving real business value and boosting your bottom line.

FlowFuse is a comprehensive platform that empowers you to seamlessly connect, collect, transform, visualise, and interact with your industrial data, all in one place. At the core of FlowFuse is Node-RED, where you can break down data silos and unlock valuable insights with ease.

While Node-RED is a powerful tool, scaling it to meet the demands of a larger operation presents unique challenges. Key enterprise requirements like security, compliance, production-grade reliability, and effective team collaboration often require additional infrastructure or customisation to ensure success. This is where FlowFuse comes in.



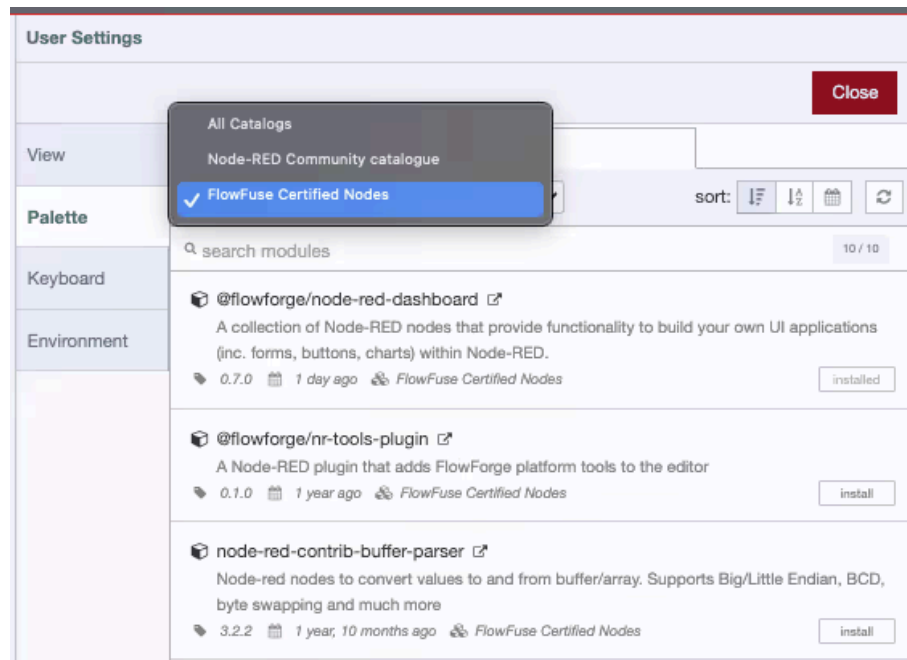
Build

FlowFuse simplifies the process of starting with Node-RED and keeping it updated. Compared to traditional methods, which involve manually installing Node.js and Node-RED and keeping track of version changes, FlowFuse offers a streamlined solution. By creating an account on [FlowFuse Cloud](#), users get an automatically created Node-RED instance with specified versions of Node-RED and Node.js. This eliminates the time-consuming and complex installation process, allowing users to start programming with Node-RED in less than a minute. FlowFuse also enables users to change Node-RED and Node.js versions easily, making it a hassle-free way to stay up-to-date.

FlowFuse strives to be the best place to build Node-RED applications by providing tools to help users build applications with more confidence:

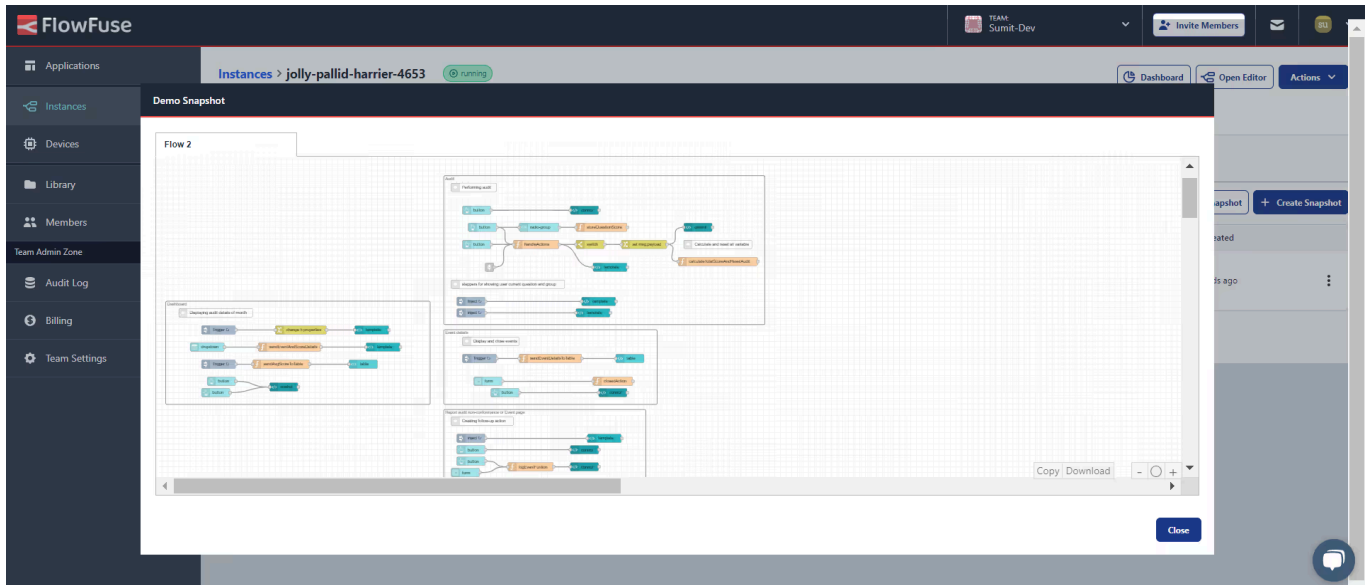


Trust: [Certified Nodes](#) ensure Node-RED developers can trust the reliability, quality and security of third-party nodes they use in applications.

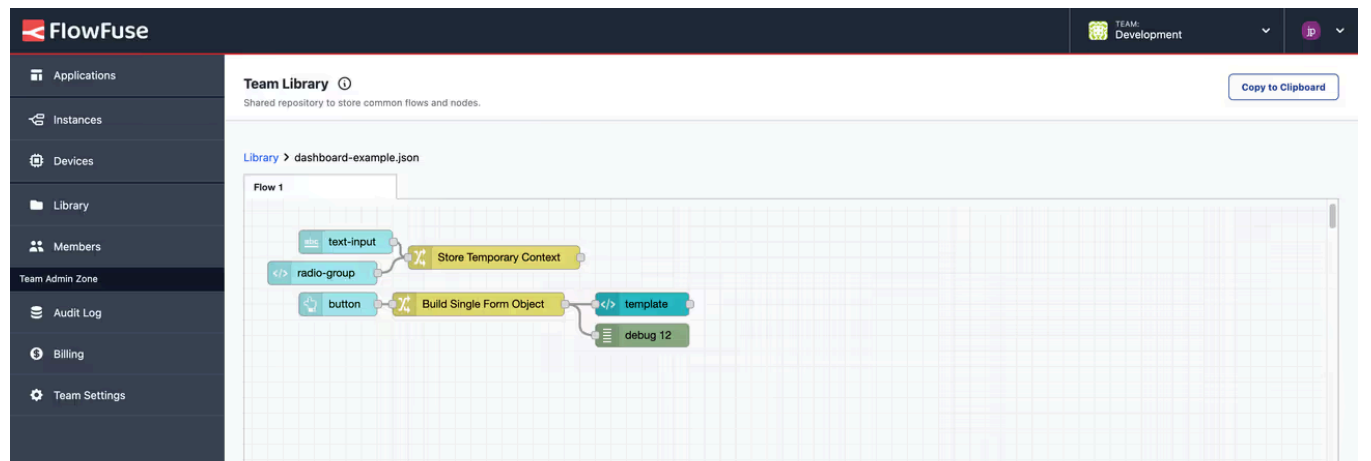




Version Control: [Snapshots](#) capture point-in-time views of Node-RED flows, environment variables and other configuration settings. We even capture automatic snapshots of your flows every time you deploy, so you can always be confident you have a backup.



Collaborative Development: We are building FlowFuse to be a platform that enables teams to work seamlessly together on Node-RED applications. From the [Team Library](#), through to [Node-RED Multiplayer](#), we want to make sure that FlowFuse is the best platform for collaborative development in Node-RED.





Remote Access: FlowFuse provides a secure way to access your Node-RED instances and devices from anywhere in the world, so that you can build and debug your applications with ease.

FlowFuse
TEAM: FlowFuse Team
Invite Members
24
YE

- Applications
- Instances
- Devices
- Broker
- Library
- Members
- Team Admin Zone
- Audit Log
- Billing
- Team Settings

Devices ⓘ

A list of all edge devices registered in your team. Assign them to applications or instances in order to deploy Node-RED remotely.

Last Seen ⓘ

2 17
 < 1.5 Mins > 3 Mins

Last Known Status ⓘ

18 1
 Running Updating

Search Devices Actions ▾ + Add Device

<input type="checkbox"/>	Device	Type	Last Seen	Last Known Status	Assigned To
<input type="checkbox"/>	TestVM1 <small>id: 9f11111111111111</small>	VM	1 year, 1 week, 3 days ago	running	Marian-Demo ⋮
<input type="checkbox"/>	NickTest <small>id: 1111111111111111</small>		2 days ago	running	Nicks Playground ⋮
<input type="checkbox"/>	Ctrx <small>id: 1111111111111111</small>	Ctrx	9 months, 3 weeks, 5 days ago	running	Marian-Demo ⋮
<input type="checkbox"/>	Greys-UbuntuServer <small>id: 1111111111111111</small>	Greys New Ubuntu Server for Testing out	3 seconds ago	running	Unassigned ⋮
<input type="checkbox"/>	Edge Device <small>id: 1111111111111111</small>		9 months, 1 week, 6 days ago	running	OKRsQ4 ⋮
<input type="checkbox"/>	steve-local-1 <small>id: 1111111111111111</small>		7 months, 3 weeks, 4 days ago	running	Unassigned ⋮

Manage

With FlowFuse, you can manage thousands of Node-RED instances in one place. We ensure a clear picture of what's happening across all of your instances and provide tools to help you manage them effectively.



Centralised Management: FlowFuse provides a single entry point to manage all of your Node-RED instances, no matter where they are hosted.

The screenshot shows the FlowFuse dashboard interface. On the left is a navigation sidebar with options like Applications, Instances, Devices, Broker, Library, Members, Team Admin Zone, Audit Log, Billing, and Team Settings. The main content area is titled 'Applications' and shows a list of applications. Two applications are visible: 'Hannover Fair 2024' and 'zj-scratchpad'. Each application has a search bar, a list of instances, and a list of devices. The 'Hannover Fair 2024' application has three instances: 'Multi-User-Dashboard', 'Dashboard-HMI', and 'DEV-Dashboard'. The 'zj-scratchpad' application has one instance named 'zj-scratchpad'. The interface includes a search bar at the top, a 'Create Application' button, and various status indicators for each instance and device.



Security: FlowFuse provides a range of security features to help you keep your Node-RED instances secure. From [Two-Factor Authentication](#) to [Role-Based Access Control](#), we're building FlowFuse to be the most secure way to manage your Node-RED instances.

Invite Team Member

Invite a user to join the team by username or email.

- Owner**
Owners can add and remove members to the team and create applications and instances
- Member**
Members can access the team instances
- Viewer**
Viewers can access the team instances, but not make any changes
- Dashboard Only**
Dashboard users can only access the dashboards or HTTP endpoints created by the Node-RED instances when FlowFuse authentication is enabled



Frictionless Maintenance: Whether you're updating your Node-RED version, or one of the many third-party dependencies that your applications depend upon, FlowFuse provides tools to make it easy to keep your instances up-to-date and running smoothly.

The screenshot shows the FlowFuse interface for a team named 'FlowFuse Team'. The left sidebar contains navigation options: Applications, Instances, Devices, Broker, Library, Members, Team Admin Zone, Audit Log, Billing, and Team Settings. The main content area is titled 'Instances' and features several sections:

- Custom domain:** A section explaining how to access instances from a custom subdomain, with a link to documentation and a note that custom domains require updating to the latest stack.
- Change Instance Node-RED Version:** A section indicating a new version is available. It includes two buttons: 'Update Node-RED Version' (highlighted in blue) and 'Change Node-RED Version'.
- Copy Instance:** A section explaining that creating a new instance requires a restart. It includes a 'Duplicate Instance' button.
- Import Instance:** A section for importing an existing Node-RED instance, with an 'Import Instance' button.



Observability: FlowFuse provides tools to help you keep an eye on your Node-RED instances and make sure they're running smoothly. Get alerts when something goes wrong, and use the [Audit Logs](#) to help you debug issues when they arise.

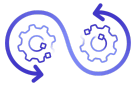
The screenshot shows the 'Audit Log' page for an instance named 'cheerful-black-duck-8719' (Application: yndira-scratchpad). The page is divided into several sections:

- Navigation:** Overview, Devices, Version History, Assets, **Audit Log** (selected), Node-RED Logs, and Settings.
- Audit Log Table:** A table listing events with columns for date, time, event type, and user.

Date	Time	Event Type	User
Mon Oct 21 2024	13:46:33	User Logged in	Yndira_Escobar
Fri Oct 18 2024	09:09:18	Node-RED has stopped	
Wed Oct 09 2024	09:38:43	User Logged in	Yndira_Escobar
Wed Oct 09 2024	09:34:08	Node-RED has crashed	
Tue Oct 08 2024	13:47:02	User Logged in	Yndira_Escobar
- Filters:** A section on the right side of the table with 'Event Type' and 'User' dropdown menus, both set to 'Show All'.

Scale

With FlowFuse, we aim to provide the best way to deploy Node-RED applications to production environments, whether that be to hundreds of remote devices, or via staging environments to ensure you can deploy with confidence.



DevOps: Test your applications in development and staging environments, ensuring you can deploy them with confidence to production.

Applications > Devops Demo

Instances Devices Devices Groups Snapshots DevOps Pipelines Logs Audit Log Dependencies Settings

DevOps Pipelines Configure automated deployments between your Instances + Add Pipeline

Demo Pipeline

Development	Staging	Production	
Instance: test-development Last Deployed: 2 days ago Status: running URL: https://test-development.flowfuse.cloud Deploy Action: Create new snapshot	Instance: test-staging Last Deployed: 2 days ago Status: running URL: https://test-staging.flowfuse.cloud Deploy Action: Create new snapshot	Instance: test-production Last Deployed: 2 days ago Status: running URL: https://test-production.flowfuse.cloud	+ Add Stage



Remote Deployments: Deploy your applications to hundreds of remote devices with a single click, ensuring you can get your applications running in production quickly and easily.



Reliability: FlowFuse users can have trust that their applications will run without issues with features like [High Availability](#). FlowFuse makes sure users have the tools to monitor and manage the reliability of their applications, including being alerted when things go wrong, and making the recovery as easy as possible.

FlowFuse

Instances > dashboard-demos running Dashboard Open Editor Actions

Application: Public Demos

Overview Devices Version History Assets Audit Log Node-RED Logs Settings

Settings

General	High Availability
Environment	High Availability mode allows you to run multiple copies of your Node-RED instance, with incoming work distributed between them.
High Availability	This feature is currently free to use, but will become a chargeable feature in a future release.
Protect Instance	When HA mode is enabled the following restrictions apply:
Editor	<ul style="list-style-type: none"> Enabling or disabling HA mode requires a restart of the instance. Flows cannot be directly modified in an HA instance; the editor is disabled. A DevOps Pipeline should be created to deploy new flows to the instance. Any internal state of the flows is not shared between the HA copies.
Security	Check the documentation for more information about High Availability .
Palette	
Launcher	
Alerts	Enable HA mode

Why Enterprises Choose FlowFuse

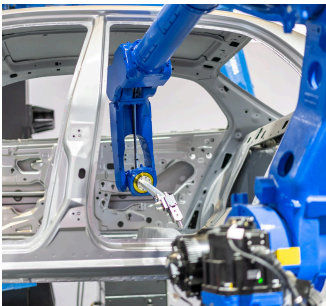
In a short period, FlowFuse has helped several companies transform their Node-RED solutions from a prototyping tool into an enterprise-grade solution, dispelling the notion that it's merely a toy. Here are some ways enterprises are putting FlowFuse into action



A major US manufacturer, leveraging Node-RED since 2018 for digital transformation, faced challenges in managing large-scale deployments. **FlowFuse enabled them to efficiently manage over 1000 edge devices with a streamlined process requiring minimal effort.** This allowed their team of only 5 to focus on flow improvements, rapidly delivering new features and showcasing the power of FlowFuse in accelerating development and innovation.



A leading life sciences company needed to streamline compliance and auditing processes while maintaining a secure audit trail. **FlowFuse provided the platform to achieve this by enabling the development of applications with built-in audit logging and compliance features.** This ensured data integrity, simplified regulatory compliance, and facilitated effortless audits, allowing the company to focus on research and development while maintaining the highest standards of data security and accountability.



An automotive manufacturer wanted to better utilise UNS data to improve operations. **FlowFuse enabled them to build an application that collects, interprets, and reports on factory data from multiple facilities.** This empowers both factory staff and management with real-time insights, driving efficient decision-making and accelerating innovation through centralised data management.



A media company facilitating the distribution of digital content sought to empower its development team to rapidly iterate and improve the data delivered to customers. Hampered by a legacy system and traditional coding languages, they turned to FlowFuse. **The FlowFuse platform enabled them to transform their data workflows, resulting in faster, and more efficient data delivery.** This empowered developers to quickly implement improvements and accelerate innovation, ultimately enhancing the customer experience.



Contact: sales@flowfuse.com