

MindSphere

Visual Flow Creator Getting Started

Getting Started

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

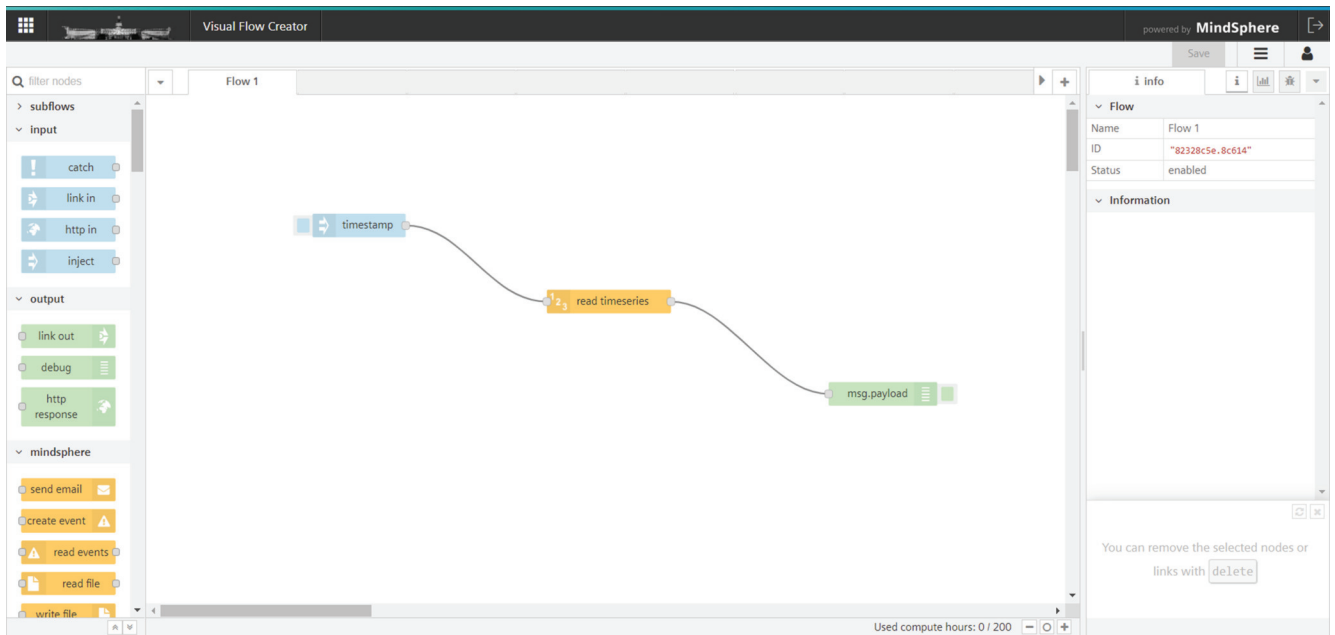
We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Front Page

Visual Flow Creator is an application used to create a visual representation of data processing workflows.



Document History

Version	Date	Changes	Link
V1801.Jun/2020.1	30-06-2020	New document	-

Creating a first flow

Overview

Visual Flow Creator is an application for visual data flow programming in IoT (Internet of Things). Nodes are predefined blocks of functionality. You can interlink and add nodes in the working area and combine them to produce a "**Flow**". This document introduces Visual Flow Creator editor and creates a flow that displays the Inject and Debug nodes.

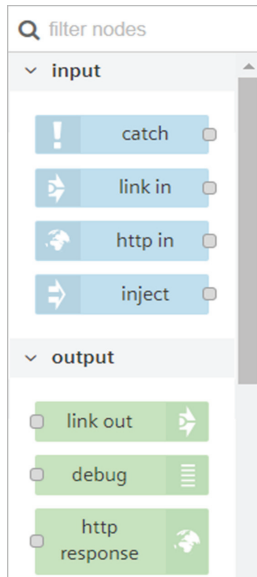
Working with Editor

You can drag nodes from the palette and wire them to develop the flows in the working area. You can add the rows of tabs for the editor for the other flows.



Working with Node Palette

In the node palette, all nodes are available for creating the flow as per the requirement. From the palette drag and drop the nodes to the editor. You can search the node by typing the name in the filter node bar.

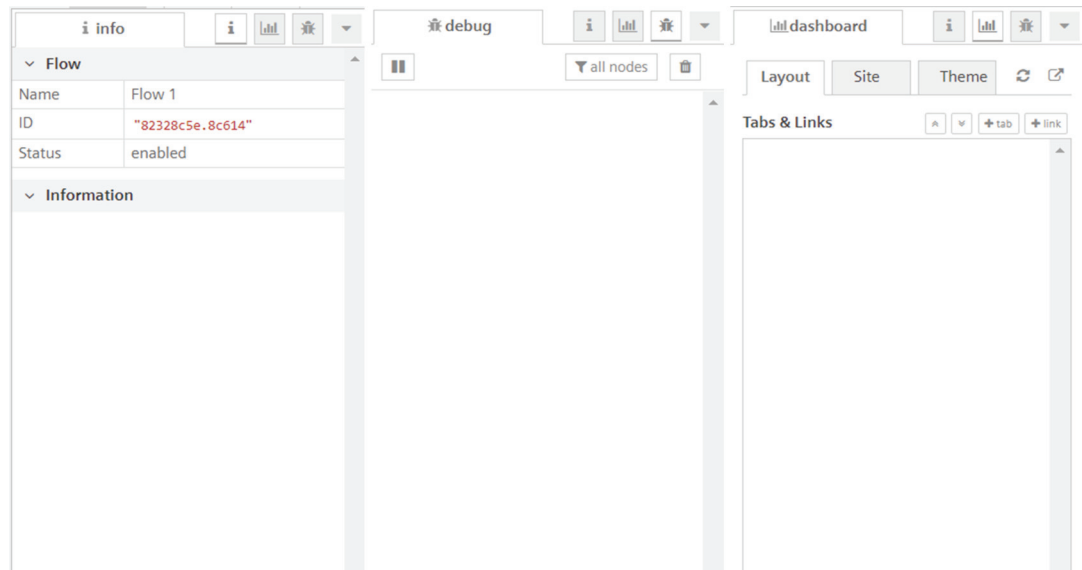


In the node palette, the following nodes are available:

- Input nodes
- Output nodes
- MindSphere nodes
- Function nodes
- Analytics nodes
- Storage nodes
- Array nodes
- Simple anomaly nodes
- MindSphere dashboard nodes
- Dashboard nodes
- Data Lake and SDI nodes
- Signal Validation nodes
- Custom nodes

Working with Sidebar

The sidebar contains different tabs to view information and outputs of the flow from the editor.



The tabs available in the sidebar:

Info tab: Node information will be displayed.

Debug tab: Output information will be displayed

Dashboard tab: Arrange and adjust the dashboard settings and display the dashboard output in the Visual Flow Creator dashboard.

Drag Inject node to Editor

Inject nodes trigger data to the flow. Each inject node has one output. Use inject nodes to inject user defined data. They generate messages for downstream nodes.

Drag Debug node to Editor

Debug nodes send the data from the flow to the debug tab. Debug nodes have one input. Debug nodes can be configured to show whole message or just a payload.

Interconnect the nodes

The nodes will be interconnected together by clicking the port and drag from the inject node to debug node port. This will interconnect the nodes to produce a flow. For example, edit the node properties by double clicking the inject node and input the string value as “Welcome to MindSphere” as shown below:

Dialog box titled "Edit inject node" showing configuration options for an inject node. The "Payload" field is set to "Welcome to MindSphere".

Processing input and output data

Visual Flow Creator nodes exchange the data by either receiving a message from the previous node in a flow or by getting the data from the external event, such as an incoming HTTP request, a timeseries data or display the event in the Visual Flow Creator dashboard. They process the message or event to transfer the data to the next nodes in the flow.

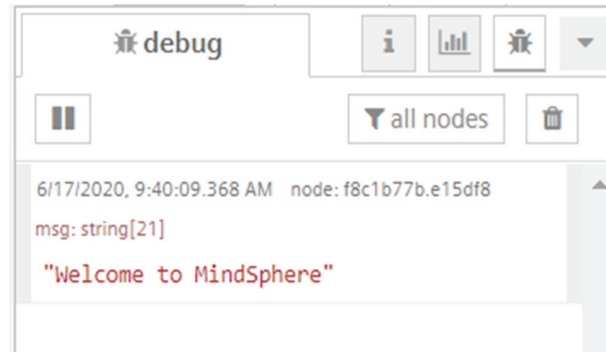
Save the flow

The nodes available in the editor are interconnected together and saved to produce a flow.



Result

You have successfully created and executed your first flow in Visual Flow Creator. By clicking the inject node, the flow gets executed and generates output in the debug tab:



For more information about Visual Flow Creator, refer the below links:

- Visual Flow Creator System Manual (<https://documentation.mindsphere.io/resources/html/visualflow-creator/en-US/index.html>)
- Visual Flow Creator Tutorial (<https://siemens.mindsphere.io/en/docs/tutorials/visual-flow-creator-KPI>)

