THINGWORX FLOW

Integrate and Orchestrate

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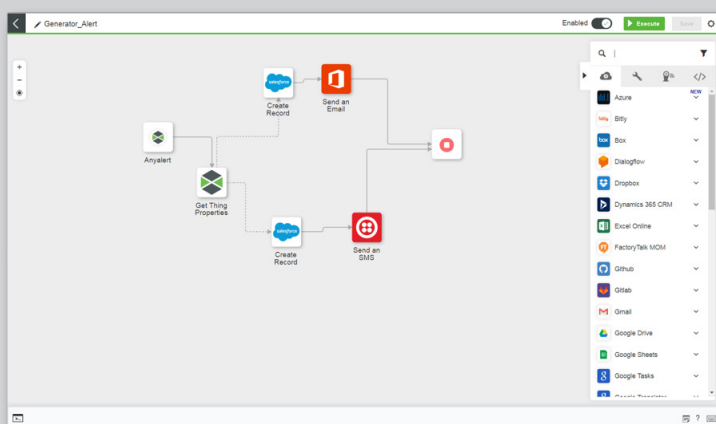
ThingWorx Flow enables a flexible, configurable approach to connecting systems and facilitating flows of information between those systems. Its visual environment enhances usability, enabling developers and business users alike to easily understand, modify, copy, and repurpose flows to react quickly to evolving business needs and opportunities.
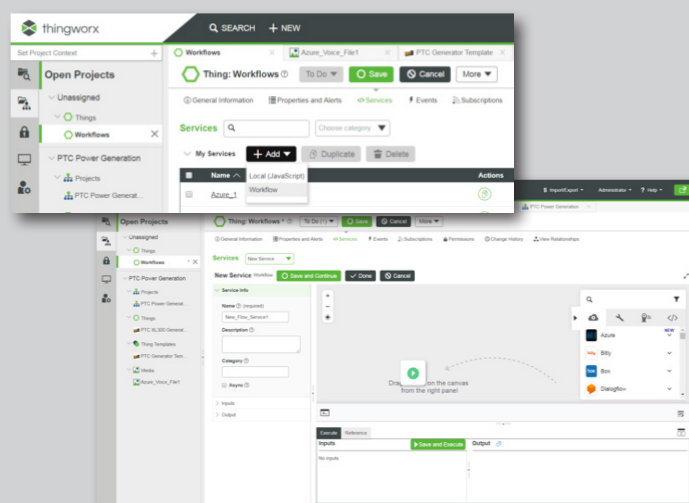
thingworx®

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ThingWorx Flow

ThingWorx Flow enables users to establish connections between ThingWorx applications and enterprise systems that enable end-to-end IIoT use cases and yield more meaningful data insights. The visual, codeless environment of ThingWorx Flow makes it possible for users in any role to orchestrate flows of information among systems, automating critical business processes and accelerating time-to-value.

ThingWorx Flow Connections

ThingWorx Composer Flow Initiation

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Simple Integration

- Dramatically reduce time and effort required to connect and interact with enterprise systems
- Integrate cloud and on-premise systems with ease
- Connect multiple versions of the same system and easily adapt with version changes
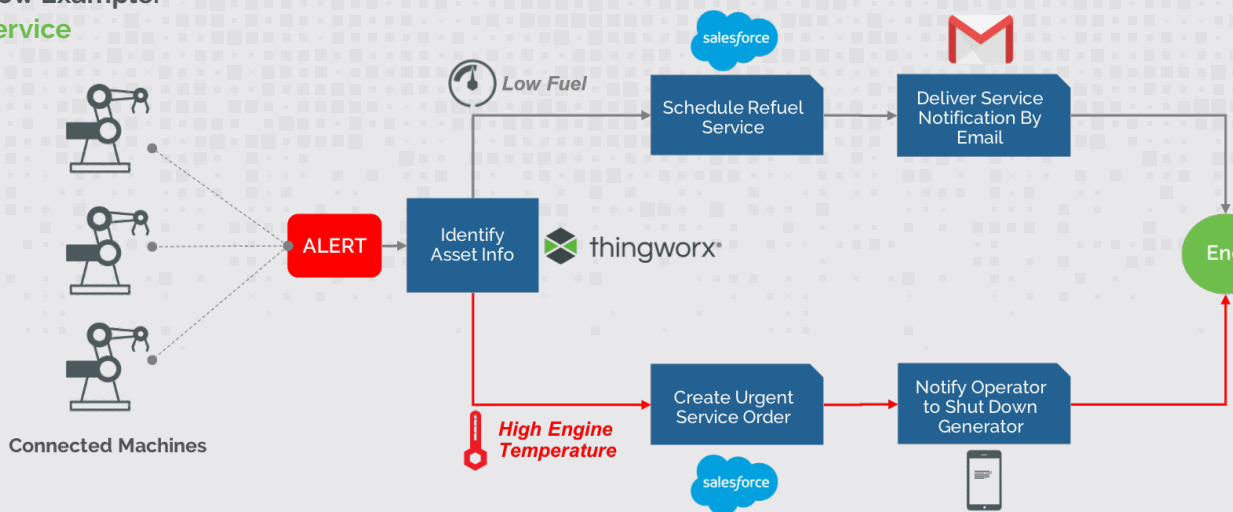
Seamless Orchestration

- Intuitively wire together data flows between connected devices and systems
- Share data across systems more transparently
- Modify and repurpose previously-built applications to extend value

Executing Information Flows

ThingWorx Flow is integrated with the ThingWorx Composer and Mashup Builder application development environments, which enables the creation of connections and flows via drag-and-drop visual linking. Flows are ThingWorx services that are triggered by device alerts or system events. They can also be invoked programmatically either from within ThingWorx or externally via webhook invocation.

Once a flow is triggered, connectors retrieve information from connected systems to facilitate the flow's branching logic that selects the appropriate path based on particular triggers. The execution of a flow is dynamically displayed, to make evident which paths are taken and which system inputs or outputs are provided at each connection. This visual environment enables rapid development of working flows as well as efficient diagnosis of any problems that might occur during execution.

ThingWorx Flow Example:
Connected Service

Connected Machines

ALERT → Identify Asset Info → thingworx

Low Fuel → Schedule Refuel Service → Deliver Service Notification By Email → End

High Engine Temperature → Create Urgent Service Order → Notify Operator to Shut Down Generator → End

Connectors

Connectors identify and define the information needed to connect with specific systems to enable the execution of a rich set of common enterprise application capabilities in the context of ThingWorx flows.

System-Specific Connectors
ThingWorx includes a broad selection of OOTB connectors for supported systems, including Microsoft Azure, Google, SAP, Salesforce, Windchill, Box, and more. Users can also choose from the system-specific connectors offered by partners in the ThingWorx Marketplace.

Standards-Based Connectors
ThingWorx provides OOTB connectors for systems that do not have a specific connector but support one or more standards, including SQL, OData, Swagger, HTTP, RAML, SOAP, and OSLC. A single standards-based connector can interface with multiple versions of the same system, mitigating compatibility challenges by discovering and exposing the attributes of each version.

Custom Connectors
When neither system-specific nor standards-based connectors are available, users can build a custom connector to a system using ThingWorx Flow connector development utilities. These utilities allow users to copy and reuse actions and expose custom connectors in the flow interface as if they were natively available.

Custom Connector Actions
If a system is supported out of the box, but the current connector does not support a particular action needed for the flow, users can create custom actions for existing connectors, enabling support for very specific use cases.

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