Module 13

Advanced Features:
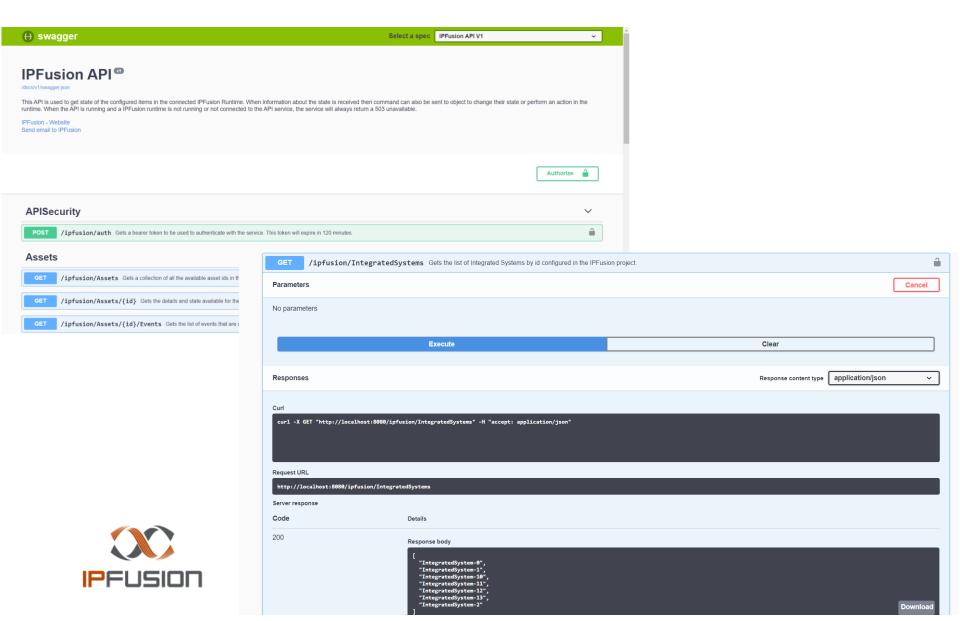
IPFusion API

IPFUSION

What is the IPFusion API?

- The IPFusion API is a web-service for interacting with an IPFusion Runtime environment.

- Allows the project items in Runtime to expose information for external access and interaction.

- Is a separate Windows service, different from the Runtime executable.

- Enable querying of states, setting of properties, and execution of commands remotely.

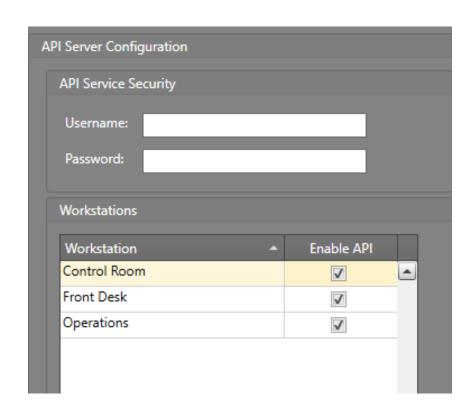- Allows for both HTTP (unsecured) and HTTPS (secured) connections

Self-documented

Installing and Enabling the API

- Run the API installer on the Workstation you want the API to access.
- In Designer, open the **Project Settings** and go to the **API** section.
- Check **Enable API Server** on each Workstation you want it to run on.
  - If you want to set login information, in **Service Settings** add a **Username** and **Password**.
  - Note: Security must be enabled in the API service configuration file

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Accessing the API

- The API has three core operations: **Get**, **Set**, and **Execute Command**
  - Depending on the Runtime entity, these can include additional parameters.
- These can be accessed via HTTP GET or POST methods
- Go here to view the available API commands:
  - Unsecured: http://localhost:8080/docs
  - Secured: https://localhost:8612/docs
- Obtain or change a runtime entity's data by inputting its type and ID in the GET links.
  - http://localhost:8080/ipfusion/IntegratedSystems/IntegratedSystem-1/Assets
    - This will retrieve the assets from the integrated system with an ID of IntegratedSystem-1

← → C ⓘ localhost:8080/ipfusion/assets/37

{"id":"37","type":"Lighting","properties":{"InAlarm":false,"CurrentStatusName":"Communication Error","AvailableStatuses":["On","Off","Masked","Acknowledge","Communication Error"],"LastAlarmInTimeForCameras":"0001-01-01T00:00:00","Categories":["/[IntegratedSystem-0:IntegratedSystem]/Assets/Light"],"Caption":"","LoggingDescription":"","IntegratedSystemOwnerId":"IntegratedSystem-0","TouchedCommand":"","AssetTypeName":"Light","IsSelected":false},"complexProperties":{"CustomProperties":[{"id":"0","type":"CustomProperty","properties":{"Name":"UserProperty1","Value":null,"ParentId":"37","ParentType":"Lighting"},"complexProperties":{}},{"id":"1","type":"CustomProperty","properties":{"Name":"UserProperty2","Value":null,"ParentId":"37","ParentType":"Lighting"},"complexProperties":{}},{"id":"2","type":"CustomProperty","properties":{"Name":"UserProperty3","Value":null,"ParentId":"37","ParentType":"Lighting"},"complexProperties":{}},{"id":"3","type":"CustomProperty","properties":{"Name":"UserProperty4","Value":null,"ParentId":"37","ParentType":"Lighting"},"complexProperties":{}}]}}

Example of an HTTP GET response for retrieving information about a specific asset.

All responses are provided in a standard JSON format.

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Capabilities of the API

- Change properties live during Runtime; changing their appearances, configured settings, etc.

- Execute Asset commands remotely

- Obtain current status and information.

- Use an external application to interact with IPFusion.

Module 13 Complete