

Module 13

Advanced Features:
IPFusion API

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

swagger Select a spec IPFusion API V1

IPFusion API ^{v1}

/docs/v1/swagger.json

This API is used to get state of the configured items in the connected IPFusion Runtime. When information about the state is received then command can also be sent to object to change their state or perform an action in the runtime. When the API is running and a IPFusion runtime is not running or not connected to the API service, the service will always return a 503 unavailable.

[IPFusion - Website](#)
[Send email to IPFusion](#)

Authorize

API Security

POST /ipfusion/auth Gets a bearer token to be used to authenticate with the service. This token will expire in 120 minutes.

Assets

- GET /ipfusion/Assets Gets a collection of all the available asset ids in the runtime.
- GET /ipfusion/Assets/{id} Gets the details and state available for the asset.
- GET /ipfusion/Assets/{id}/Events Gets the list of events that are associated with the asset.

GET /ipfusion/IntegratedSystems

Gets the list of Integrated Systems by id configured in the IPFusion project.

Parameters

No parameters

Execute Clear

Responses Response content type: application/json

Curl

```
curl -X GET "http://localhost:8080/ipfusion/IntegratedSystems" -H "accept: application/json"
```

Request URL

```
http://localhost:8080/ipfusion/IntegratedSystems
```

Server response

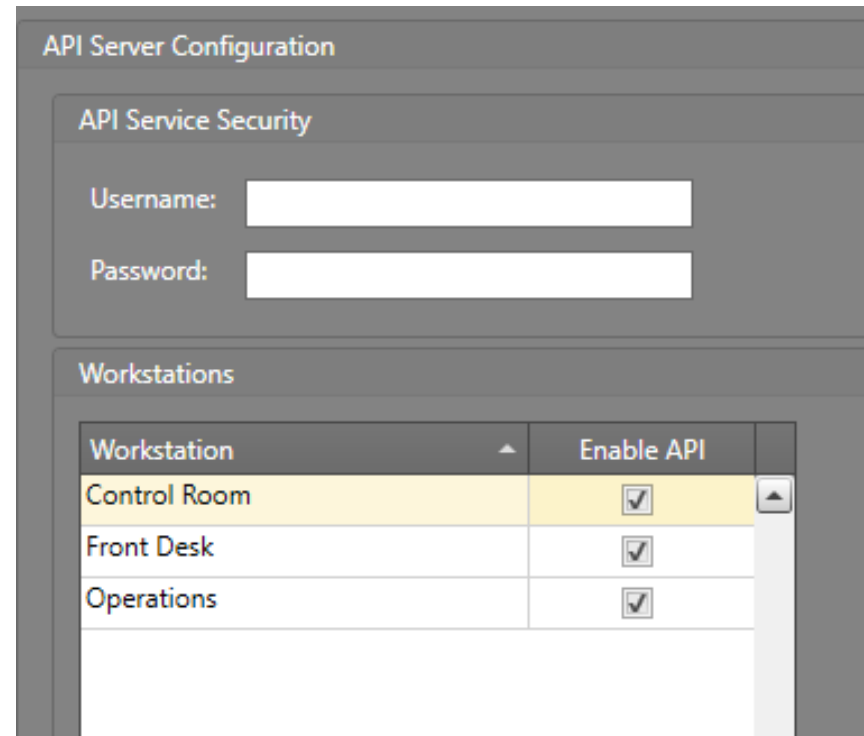
Code	Details
200	<p>Response body</p> <pre>["IntegratedSystem-0", "IntegratedSystem-1", "IntegratedSystem-10", "IntegratedSystem-11", "IntegratedSystem-12", "IntegratedSystem-13", "IntegratedSystem-2"]</pre>

Download



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



API Server Configuration

API Service Security

Username:

Password:

Workstations

Workstation	Enable API
Control Room	<input checked="" type="checkbox"/>
Front Desk	<input checked="" type="checkbox"/>
Operations	<input checked="" type="checkbox"/>

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



```
localhost:8080/ipfusion/assets/37 x +
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.



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
