

# Module 9

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## Advanced Features: Simulation Engine

# Overview

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# Overview

- Test project configuration without connecting to real devices.
- Simulate asset states, commands, Workflow executions, etc.
- Enhance training and demonstration of the system.



The screenshot shows the Simulation Client software interface. The window title is "Simulation Client". The menu bar includes "File" and "Options". The main interface is divided into several sections:

- Systems:** A sidebar on the left with a tree view containing "Cameras", "Doors", "Intercom", and "Lights". "Cameras" is currently selected.
- Assets:** A central table with a search bar and columns for "ID", "Caption", "Logging Description", "Maps", and "Status Table". The table contains 20 rows of data, including entries for "Hall A" and "Hall E" with various camera station identifiers.
- Status:** A panel on the right showing "Current Status:" with a large empty box and a "Get Status" button below it.
- Logging:** A section at the bottom with a "Logging" header, a "Enable Logging" checkbox (checked), and an "Export Log" button. Below this is a log table with columns for "Date", "Message Origin", "Type", "Event", "Command/Status", and "Location". The log contains 14 entries, including "IPFusion Runtime: 127.0.0.1" and "Simulation Application" messages.

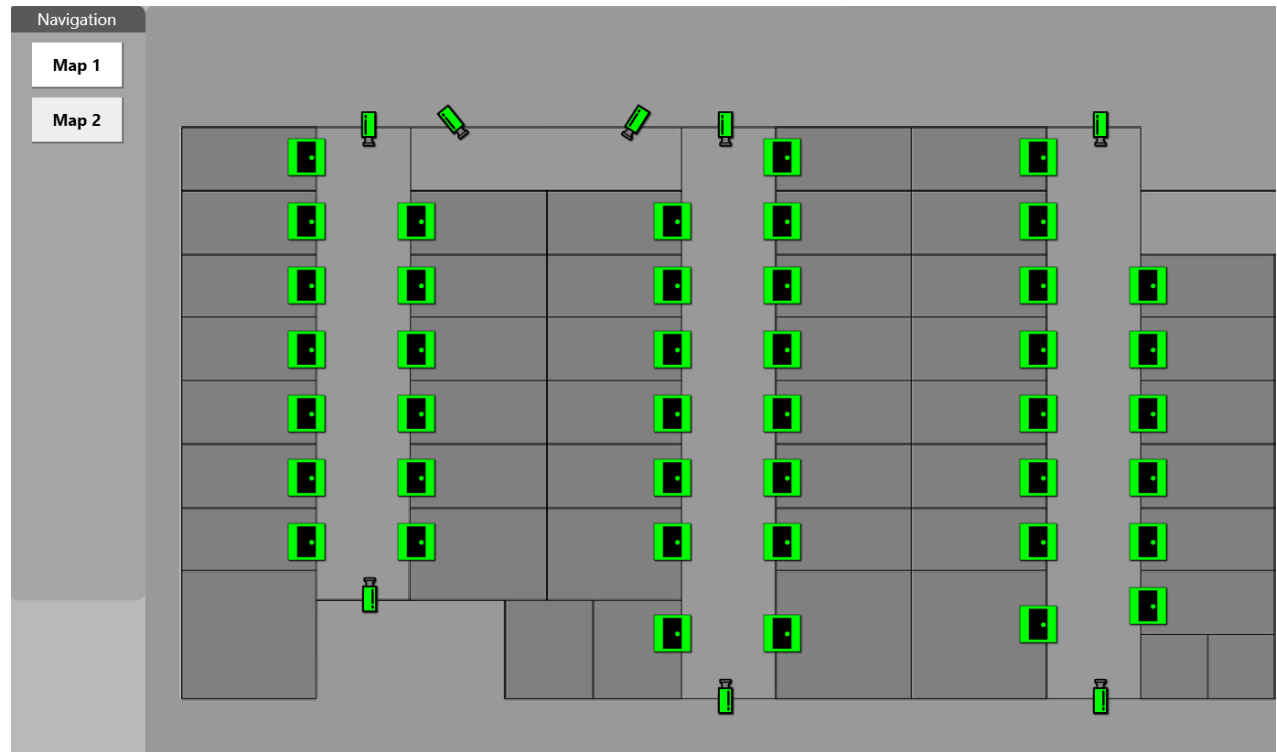
At the bottom of the window, a green status bar displays "Connected to: 127.0.0.1".

# Launching Runtime in Simulation Mode

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# Runtime Simulation Mode

- Select the **Simulation** option in the **Home** tab in the Designer.
- Project will open with assets simulating their connection states.



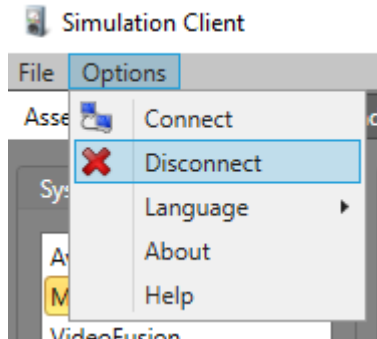
# Launching and Connecting the Simulation Client

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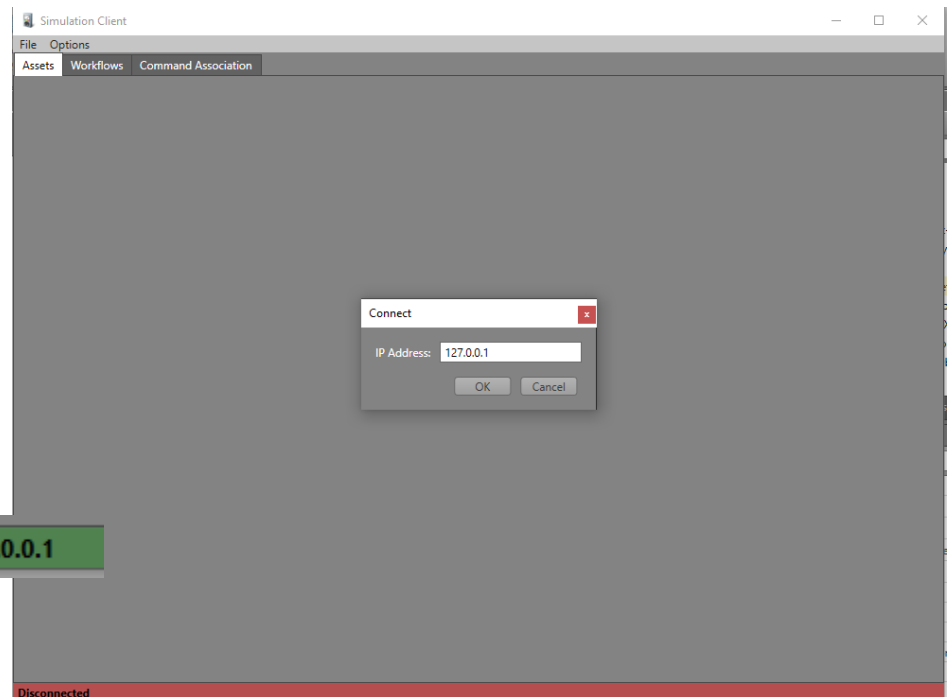


# Launching the Simulation Client

- Launching the application will prompt users to connect to a Runtime Simulation.
  - Can connect to local computer or a remote instance via IP Address or host name.
- Users can connect and disconnect anytime via Connection menu.



Connected to: 127.0.0.1



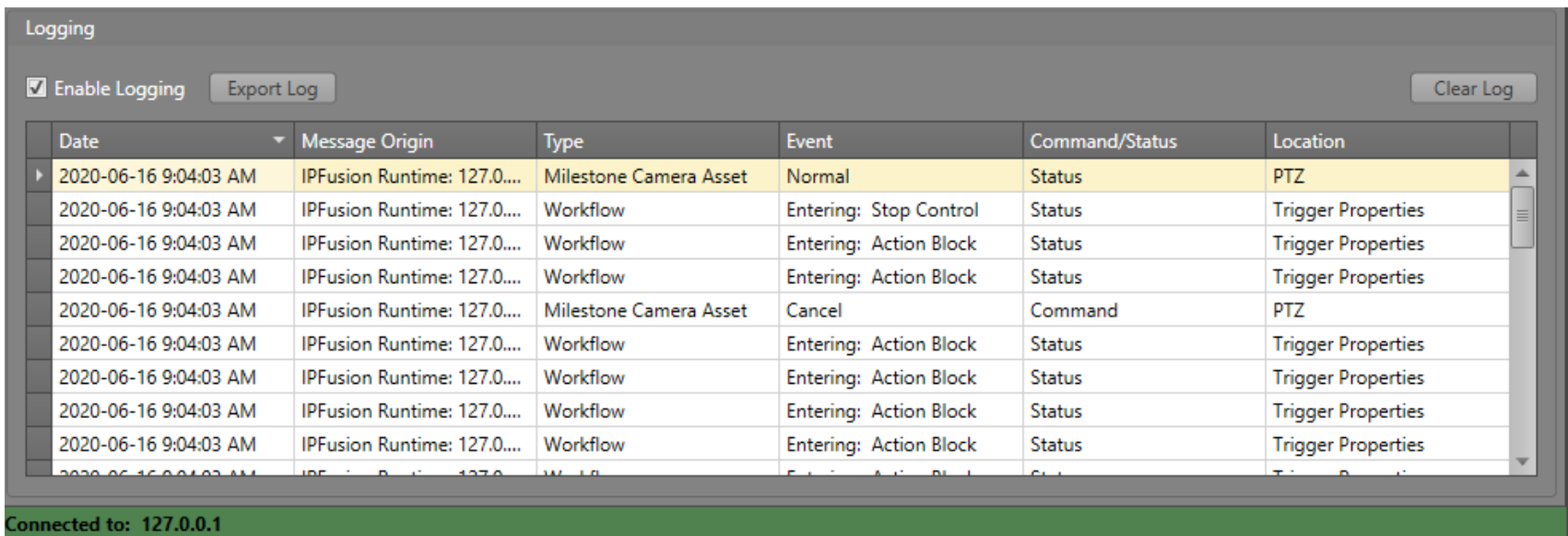
# Live Logging

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# Live Logging

- All actions done in the **Runtime Simulation** and the **Simulation Client** are logged and displayed live.
- Users can export the logs as a file.



The screenshot displays a 'Logging' window with a table of log entries. At the top left, there is a checked checkbox for 'Enable Logging' and an 'Export Log' button. At the top right, there is a 'Clear Log' button. The table has the following columns: Date, Message Origin, Type, Event, Command/Status, and Location. The first row is highlighted in yellow.

Date	Message Origin	Type	Event	Command/Status	Location
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Milestone Camera Asset	Normal	Status	PTZ
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Stop Control	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Milestone Camera Asset	Cancel	Command	PTZ
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties
2020-06-16 9:04:03 AM	IPFusion Runtime: 127.0...	Workflow	Entering: Action Block	Status	Trigger Properties

Connected to: 127.0.0.1



# Simulating Device Statuses

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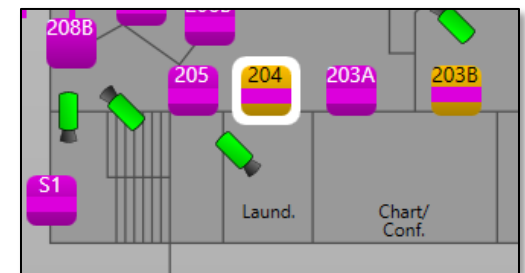
# Simulating Device Statuses

- All integrated systems and assets in the project will be listed.
- Search for the specific asset and select the state to simulate.

The screenshot displays a software interface for managing device statuses. It is divided into three main sections:

- Systems:** A sidebar on the left containing a list of system types. 'Lenel Doors' is currently selected and highlighted in yellow.
- Assets:** A central table with a search bar at the top. The table lists assets with columns for ID, Caption, Logging Description, and Maps. The asset with ID 10008 and Caption 204 is highlighted in yellow.
- Status:** A panel on the right showing a dropdown menu for 'Current Status:'. The menu is open, displaying various status options such as 'Secure', 'Unsecure', 'Fault', and 'Held Open'. A 'Set Status' button is located at the bottom of this panel.

ID	Caption	Logging Description	Maps
10003	201A	West PrairieView B...	-
10004	201B	West Prairie View B...	-
10005	202	West PrairieView B...	West Prairie View B
10006	203A	West PrairieView B...	West Prairie View B
10007	203B	West PrairieView B...	West Prairie View B
10008	204	West PrairieView B...	West Prairie View B
10009	205	West PrairieView B...	West Prairie View B
10010	206B	West PrairieView B...	West Prairie View B
10011	206C	West PrairieView B...	West Prairie View B
10012	207	West PrairieView B...	West Prairie View B



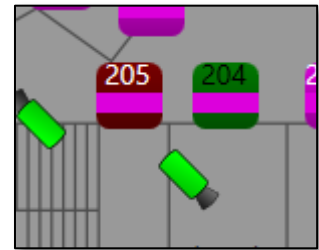
# Creating Command Associations

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# Command Associations

- By default, commands besides the built-in IPFusion ones do not change the asset status.
- Create **Command Associations** in order to simulate the integrated system specific state changes.

System	Command	Status
Lenel Doors	Lock	Secure REX Disabled
Lenel Doors	Unlock	Unsecure REX Disabled



Left door - Unlock  
Right door - Lock

# Executing Workflows

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# Executing Workflows

- Workflows can be triggered by selecting the **Workflows** tab, clicking the Workflow then **Trigger**.
- Allows you to see how a Workflow will execute in Runtime.



# Saving/Loading Settings and Associations

- Users can save the state of the simulated assets and load them for later observations and debugging.
- The same goes for the **Command Associations** declared.
- Saves them as csv files, so they can be edited outside the **Simulation App**.





# Module 9 Complete

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