Apply Dynamics to Controls Tutorials

Tutorial: draw vector graphics, create path animations, and animate control properties using the Dynamics panel.

Related: Concept | How-to Guide | Reference

This Tutorial Teaches you to:

- Draw vector graphics
- Create path animations
- Animate control properties
- Build interactive animations

This Tutorial Teaches you to:
1. Vector Drawing Basics
2. Create Animated Bargraph
3. Rotation Animation
4. Color Animations
5. Visibility Animations

Prerequisites

- Add Tags to UNS (Tutorial)
- Design Canvas Displays Tutorials

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1. Vector Drawing Basics

1. Open **Displays Draw**.
2. Use the drawing tools in the top toolbar.

Basic Shapes:

- Rectangle
- Ellipse
- Polygon
- Polyline
- Line
- Spline

Combine Shapes (in the top horizontal toolbar):

- Select multiple shapes.
- Use union, subtract, or intersect.
- See the combined result.

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2. Create Animated Bargraph

1. Draw a rectangle.
2. Double click it and go to **Dynamics**.
3. Choose **Bargraph**.
4. In Expression, add the Tank Level tag, for example `@Tag.TankFarm/Tank1/Level`.
5. Change the Bar Color to Blue.

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3. Rotation Animation

1. Draw a **blower** from the **Symbol Library**.
2. Double click it and go to **Dynamics**.
3. Add a **Rotate** dynamic:
    - Expression: `@Client.UI.SimulationAnalog`
    - Set the result range so the blower rotates at the desired RPM.

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4. Color Animations

1. Draw a **square**.
2. Double click it and go to **Dynamics**.
3. Add a **FillColor** dynamic:
    a. Change Color: Using Limits.
    b. Expression: `@Tag.TankFarm/Tank1/Level`
    c. Set color and value pairs, for example:
        i. Value: 0; Color: Green
        ii. Value: 25; Color: Blue

iii. Value: 50; Color: Red

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5. Visibility Animations

1. Draw a **square**.
2. Double click it and go to **Dynamics**.
3. Add a **Visibility** dynamic.
4. In **Visible** set:
    a. 1 = Visible
    b. 0 = Not Visible
    c. You can set an Expression to evaluate visibility, for example: `@Tag.TankFarm/Tank1/Level > 25`

In this section...
