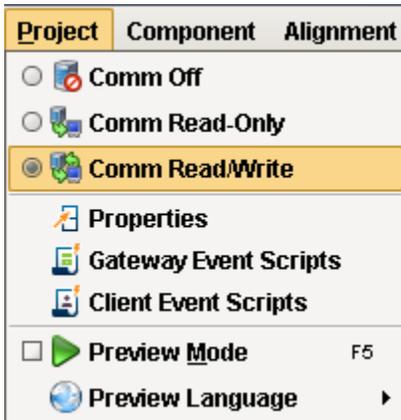# Communication Modes

Controlling Communication between the Designer and Gateway

The Designer offers three data communication modes for your projects: **Comm Off**, **Comm Read-Only**, or **Comm Read/Write**. Comm Read-Only is the default mode, which does not allow writing from the Designer to Tag or Database sources.

- **Comm Off**
  In this mode all database query traffic and Tag subscriptions and writes are blocked. Experts often use the **Comm Off** mode while designing a window to temporarily shut off data flow so that they can manipulate component's bound properties without the values being overwritten by the data bindings. This is useful to set the values that they want to serialize into the window. This can be important for windows with large datasets, clearing the datasets before saving the window can significantly reduce the size of the window, improving performance.
  Note: This setting does not affect the execution of a project's Transaction Groups, because Transaction Groups execute on the Gateway, not in the Designer.

- **Comm Read-Only** (default)
  Tag subscriptions and SELECT queries work, but Tag writes and UPDATE/INSERT/DELETE queries are blocked.
  The Designer starts up in **Comm Read-Only** mode as a safety mechanism so that you don't inadvertently write to a Tag as you are designing. You can customize the Designer's startup mode, see the Designer/General Properties section.

- **Comm Read/Write**
  All data is passed through to the Gateway. The mode can be switched at any time via the tri-state toggle selection in the main toolbar, or the radio buttons in the Project menu.
  A common beginner mistake is to forget to switch the mode to **Comm Read/Write** when at tempting to test a window's functionality in **Preview** mode.
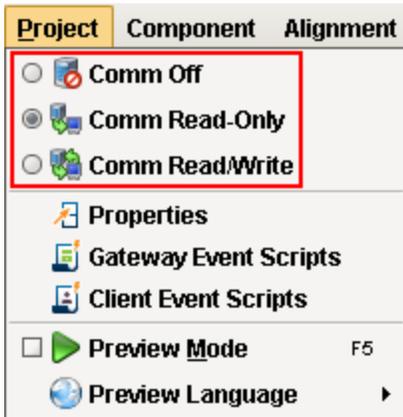
To set or change the communication mode

There are three ways to set or change the comm mode in the Designer:

- Using the **Project** menu
- The buttons located on the **Main Toolbar**
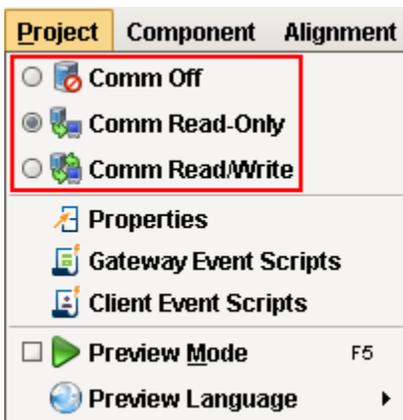- Using the **Project Properties** window

Using the Project menu

On the Designer toolbar, go to the **Project** menu and choose: **Comm Off**, **Comm Read-Only**, or **Comm Read/Write**.

Using the Main Toolbar

If the Main Toolbar is enabled, go to **Project**, and you'll see the corresponding button for each Comm Mode. The currently selected Comm Mode will have its radio button filled in.
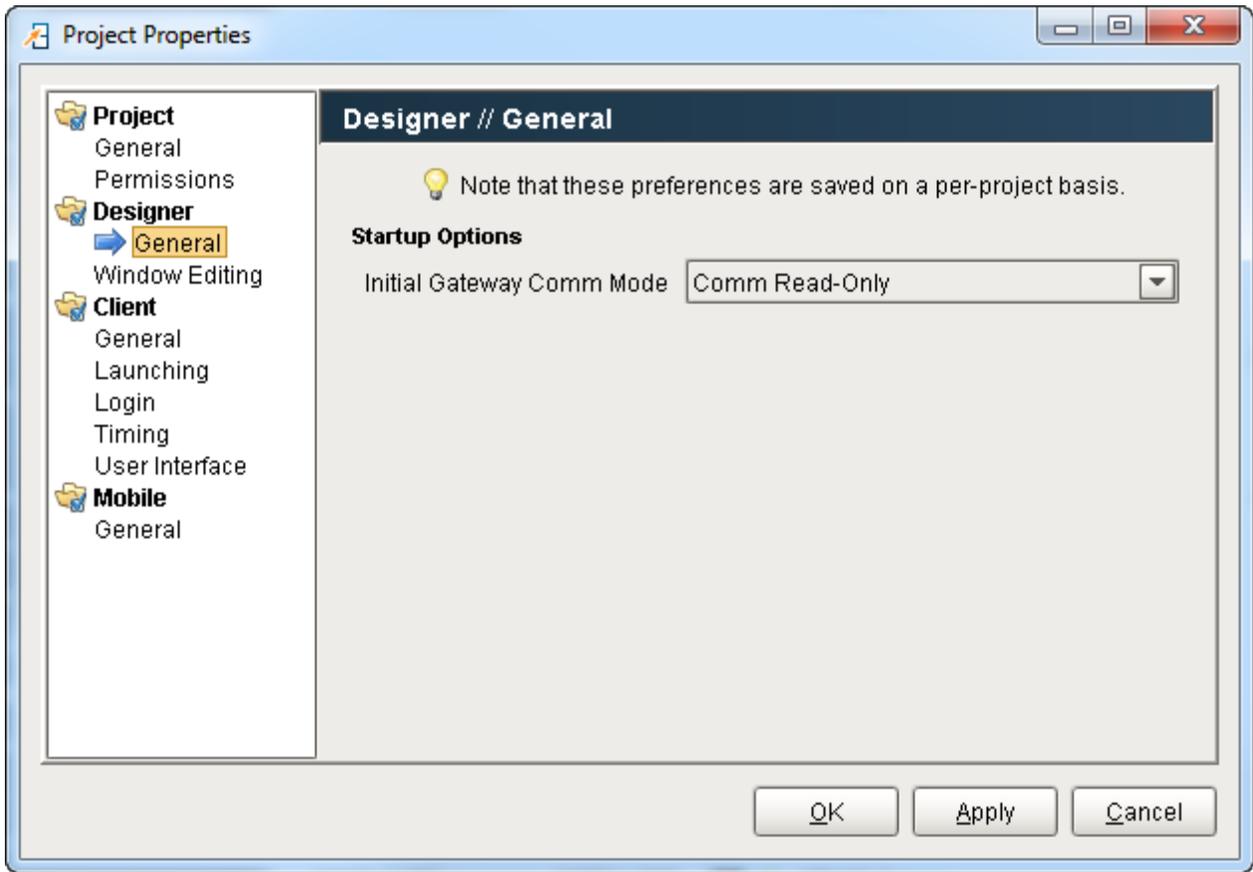

Using the Project Properties window

This will change the default Comm Mode that the designer starts up in for the current project.

1. In the Designer, either double-click on the **Project > Properties** node in **Project Browser**, or click on the **Project > Properties** command on the top menu.
   The **Project Properties** window is displayed.
2. Go to the **Designer > General** setting section.
3. Under **Startup Options**, for the **Initial Gateway Comm Mode**, choose from the dropdown **Comm Off**, **Comm Ready-only**, or **Comm Read/Write**.
   Note: These property settings are saved on a per-project basis.

Communication Error Message

If a user is attempting to write to a project in the Designer or from a Client, and the Comm Mode is not enabled for Read/Write, they will get an error message. There are a couple places to check:

- From Main Toolbar go to **Project,** and make sure the Comm Mode is set to Read/Write.
- If Comm Read/Write is checked, you may have a Client Event Script enabled that could be preventing you from writing to a project or a Tag, as shown in the example below. From the menubar, go to **Project > Client Event Scripts.** You may need to edit your Client Event Script.

Related Topics ...

- Previewing the Project