Recommended Practices for Solution Building

Pega® ACADEMY

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Chapter 2: Recommended Practices for Solution Building

OpenSpan lets you create solutions that integrate and automate desktop applications without writing code. When creating solutions, you go through many of the same logical steps and practices required in software programming. This chapter describes both general advice applicable to any programming project, and specific practices recommended for creating enterprise solutions with OpenSpan Studio.

Key Points to Consider when Designing Solutions Based on User Actions

- Capture the sequence of actions you want to automate in a series of screen shots and make a note of all your keyboard and mouse interactions. The more details you capture, the easier the design and testing process are.
- Base your solution design on the user interactions with the applications and processes you plan to automate.
- Each process that you are automating in your solution must begin with an event or entry point — user and system actions play an important role in solution design.
- Each project should contain only one adapter.

Key Points to Consider when Interrogating Applications

- Interrogating every application you need in the solution before building the automations is recommended. By doing this, you can uncover potential application integration issues before building the automation logic, and discover how to plan around them.
- Test applications in the OpenSpan environment by unit testing solutions.
- Follow recommended practices when finalizing match rules.

Key Points to Consider when Naming Controls

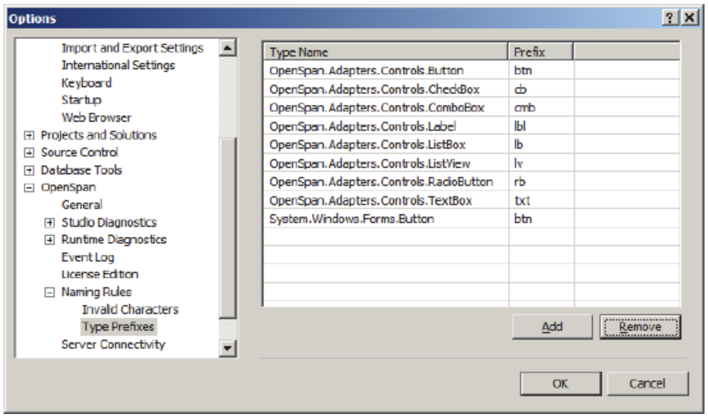
- Solutions and projects should be named in a way that helps you easily identify the high-level function they perform.
- Adapters should be named so you can easily identify the application they represent. Assign names to your adapters that identically match their current application shortcut names.
- Automations should be named in a way that helps you easily identify the action they perform. Automations should follow the same naming conventions as methods in their code counterparts.

Establishing standardized naming convention for controls and components is critical. Whether you are building an automation, debugging a solution, or troubleshooting match rules, having the ability to quickly identify the controls helps simplify the task.

Here are some examples of standardized naming convention prefixes for several common controls.

Common Control	Standard Prefix
Button	btn
Check Box	cbx
Combo Box	cmb
Label	lbl
List Box	lbx
List View	lv
Radio Button	rbtn
Text Box	txt
Toolbox	tb
Windows Form	frm

You can modify the default prefixes used by OpenSpan Studio for common controls by using the Auto-Naming Rules function. Access this function from the OpenSpan Studio Tools | Options | OpenSpan | Naming Rules | Type Prefixes menu option.



Type Name	Prefix
OpenSpan.Adapters.Controls.Button	btn
OpenSpan.Adapters.Controls.CheckBox	cb
OpenSpan.Adapters.Controls.ComboBox	cmb
OpenSpan.Adapters.Controls.Label	lbl
OpenSpan.Adapters.Controls.ListBox	lb
OpenSpan.Adapters.Controls.ListView	lv
OpenSpan.Adapters.Controls.RadioButton	rb
OpenSpan.Adapters.Controls.TextBox	txt
System.Windows.Forms.Button	btn

Key Points to Consider when Managing the Solution Hierarchy

- Keep the Solution Manager hierarchy organized. User folders to group related items based on Adapters and Events | Public and Private Automations.
- Recommend using the top-level folder to group items into systems. A system is defined as a group of related functionality surrounding an individual adapter (or multiple adapters) with the ability to share the entire contents of the system between different solutions.

Key Points to Consider when Working with Automations

- Add comments text as a header to all automations. This is helpful when working in multi-designer environments.
- Keep automations with the task or adapter to help make locating easier when you debug or edit your solution.
- Set the automation's ShowDesignCompName property to True, so OpenSpan Studio displays the full design name of the components in the automation design block.
- Before using the properties, events, or methods of a component in an automation, use a WaitForCreate or an IsCreated design block to confirm that the component is created and matched. Typically, only one design block of this type is needed per automation.
- All automation Boolean branches have a logical termination point.
- Set up Global Containers to store variables or components that can be called from multiple locations with the solution.
- Include an automation or a Miscellaneous Text file for storing notes and tracking any revisions to the solution.
- Run one connector line from a single design block execution point.

Note The order in which the connector links are created dictates the order in which they are executed during the running of the solution.

Key Points to Consider when Debugging

- Add MessageDialog components to automations while building and testing solutions to confirm event handling.
- Use error trapping around data entry. Be sure to provide the logic to check that the input is valid for use in your solution.
- Add diagnostic logging to set customized messages, using unique words or characters, to write to the diagnostic file for easy searching within the file. Consider for easy searching.
- Set up a Universal Diagnostic Automation that can be called from anywhere in the project for an efficient way to implement diagnostic logging in a larger, more complex solution.

Key Points to Consider when Deploying Solutions

- Use a single deployment location.
- Use a Common Extract Directory.
- Use error trapping around data entry. Be sure to provide the logic to check that the input is valid for use in your solution.

Note Please refer to the following Knowledge Base articles and Help for additional information about working with OpenSpan Recommended Practices:

- Building Solutions
- Establishing Coding Standards
- Understanding Threading
- Using ExceptionThrown Logic
- Using Match Rules
- Using Source Control