

PROJECT ROSLYN

Brian Rasmussen
Microsoft

Project Roslyn

Brian Rasmussen, Senior SDET

brianras@microsoft.com

Project Roslyn

Compilers
Rich APIs
Extensibility
REPL
Scripting

CTP

VS2012 + N
where $N > 0$



Fixing Common Code Problems

Issue

Avoid `Count() > 0` on sequence

Fix

Change to `Any()`

How

Code Issue Provider and Code Action

Demo

Fixing Common Code Problems

Design Characteristics



Immutable

Efficient

Complete

Fault
Tolerant

Compiler Pipeline and APIs

Editor Services

Code Actions · Syntax Highlighting · Inline Rename

Language Services APIs

Workspace · Find References · Code Cleanup · Source Code Generation

Compiler APIs

Syntax · Semantic · Data and Control Flow Analysis · Scripting

Parser

Symbols
Metadata

Binder

IL Emitter

Exploring Code using the REPL

Diagnostics

Syntactic vs. semantic errors

Workspace

Loading a Solution

Examining Types and Symbols

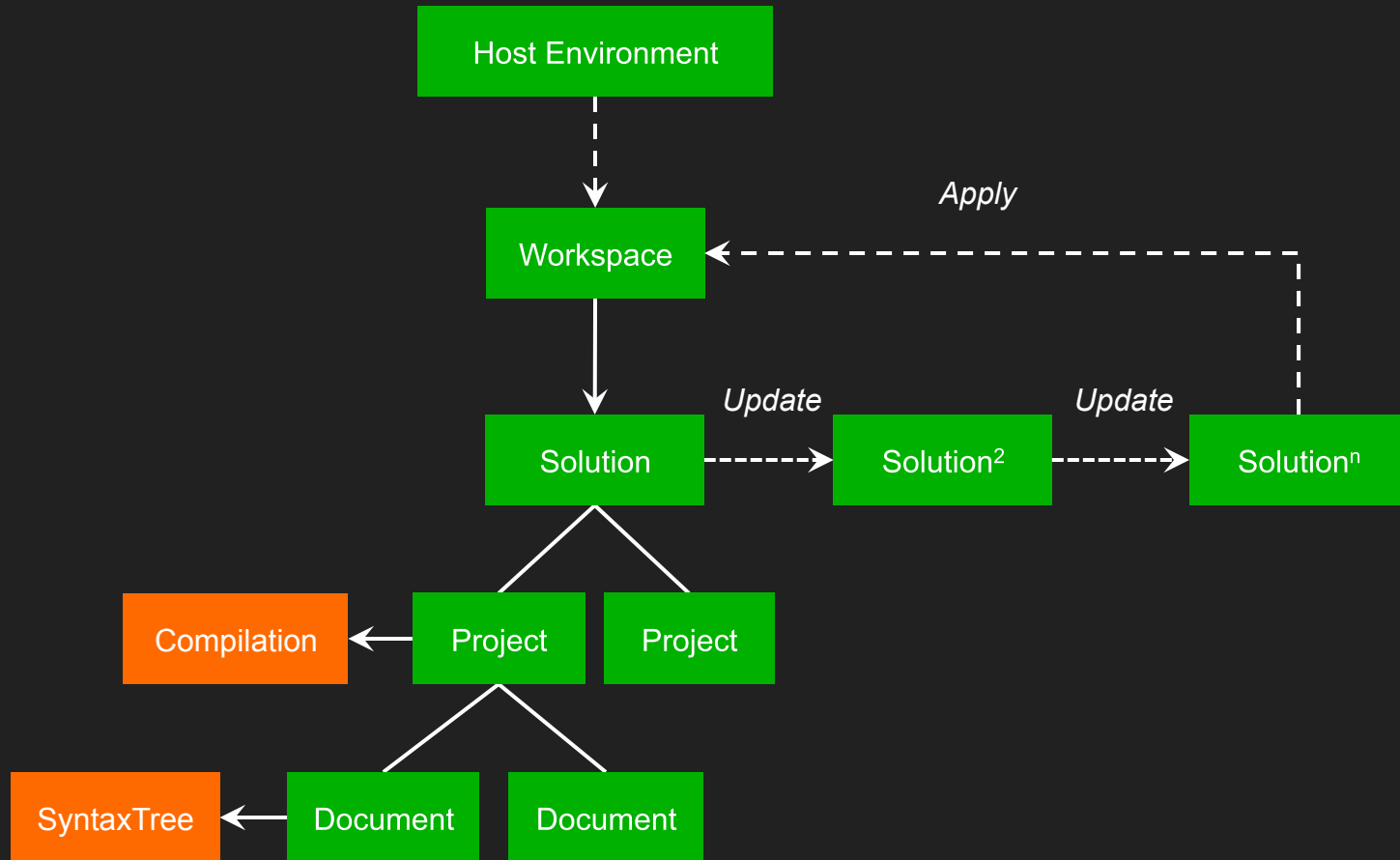
Looking up the type of a “var”

Find References

Demo

The Roslyn APIs and C# Interactive

The Bigger Picture



Application Scripting with C#

Application

XNAAnimation

Executing C# Script Code

ScriptEngine and Session

Host Object Model

Interface between application and script

Demo

Scripting

Projects

Compilify.net

Compile and run C# from the browser

Live C# (<http://screencast.com/t/dR0qobSLN>)

Immediate feedback

LearnParallelism.net

How developers use parallel libraries

Resources

Sites

Roslyn site (<http://msdn.microsoft.com/en-us/roslyn>)

C# FAQ (<http://blogs.msdn.com/b/csharpfaq/>)

Channel 9 (<http://channel9.msdn.com/search?term=roslyn>)

Questions

Roslyn CTP (<http://social.msdn.microsoft.com/forums/en-us/roslyn>)

Stackoverflow.com (http://stackoverflow.com/questions/tagged/roslyn*)

brianras@microsoft.com

Thank You!

Q&A



CTP

Feedback

Have Fun!

