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# What's New In Enterprise Library 5.0:

## 企业库 5.0 新特性

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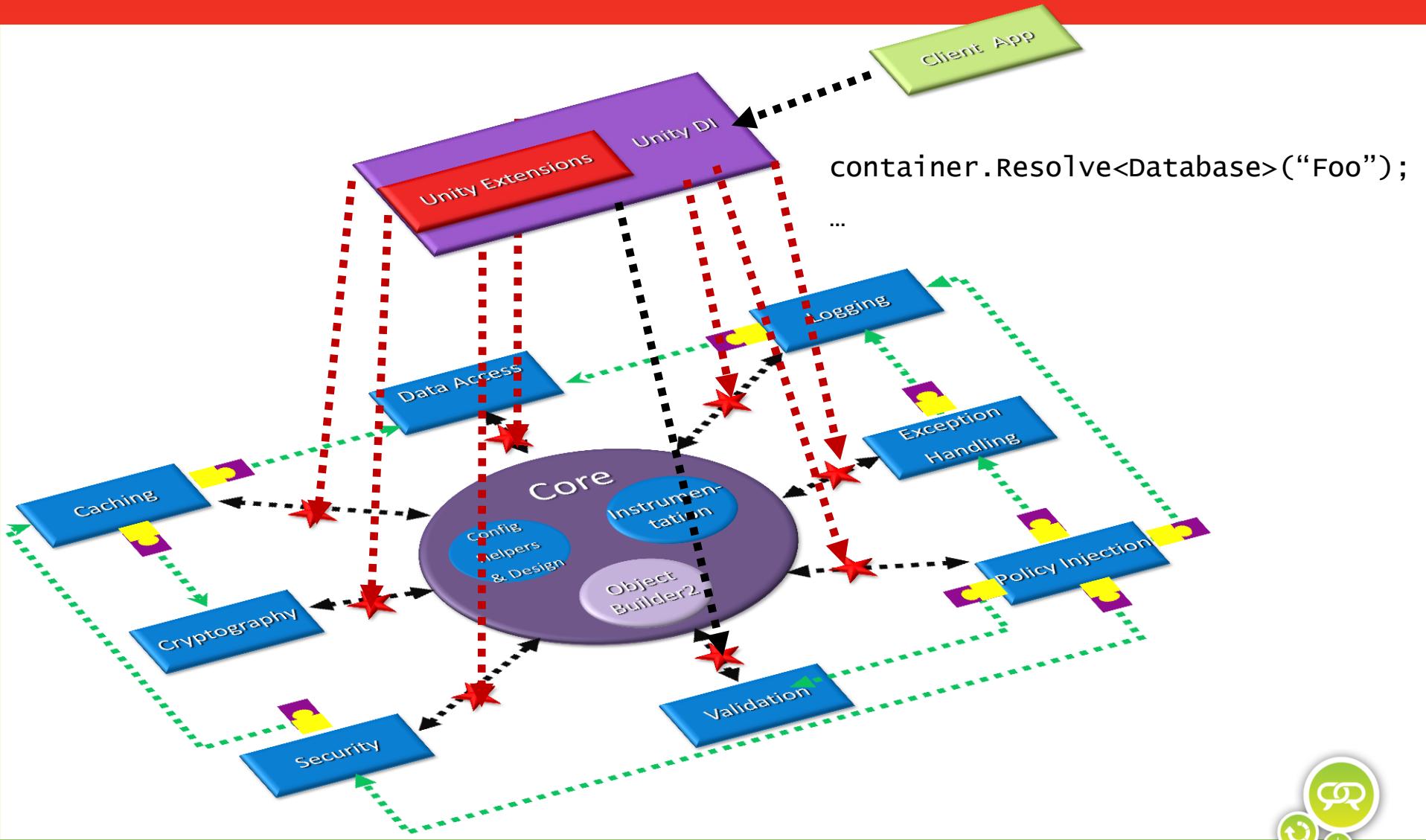
# Session Objectives and Takeaways

## 本课程目标和重点

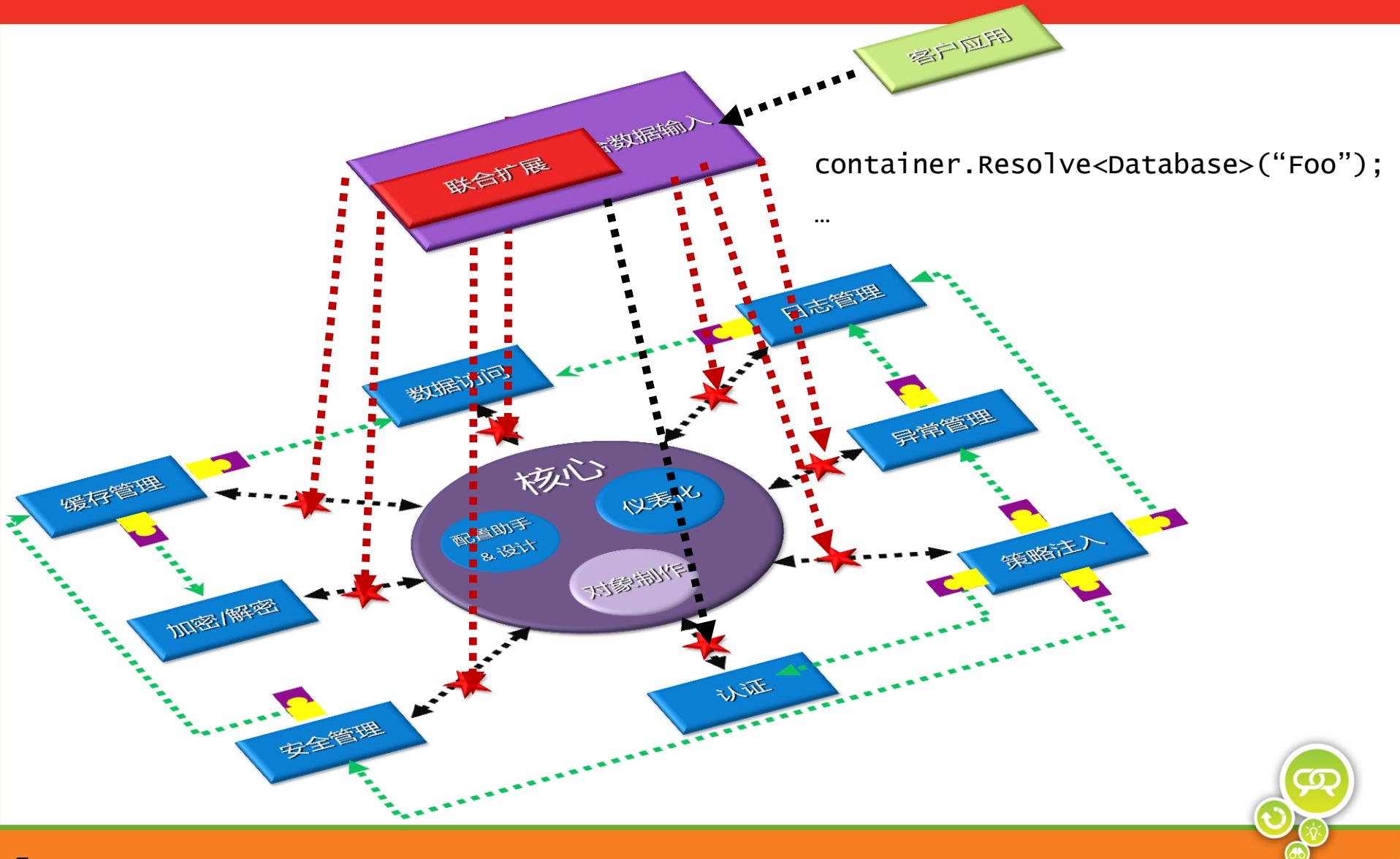
- **Session Objective(s) 本课程目标:**
  - Show what's new in Enterprise Library 5.0  
展示企业库5.0的新特性
- **Enhanced User Experience 增强的用户体验**
- **Simplicity for the Win! 使成功变得简单 !**
- **Learnability & Discoverability 易学性&发现力**
- **EntLib 5.0 released April 14<sup>th</sup> 于4月14日发布**



# EntLib 4.x



# EntLib 4.x 企业库 4.x

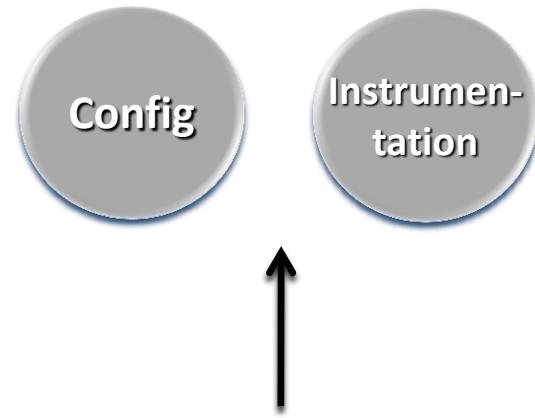
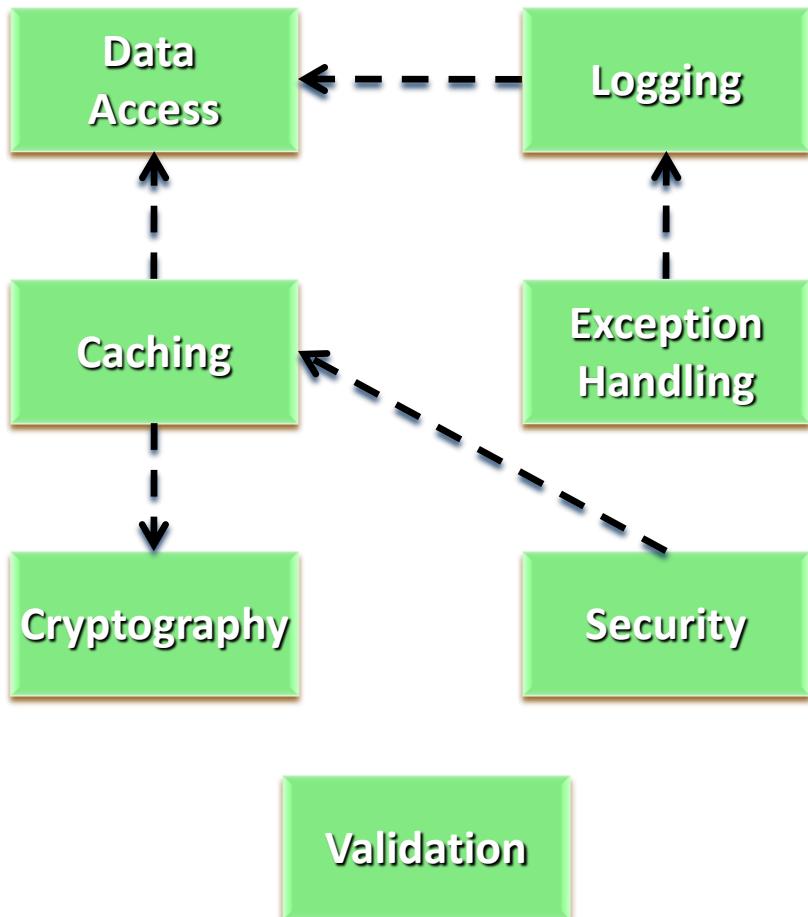


# Conceptual Architecture 概念上的架构

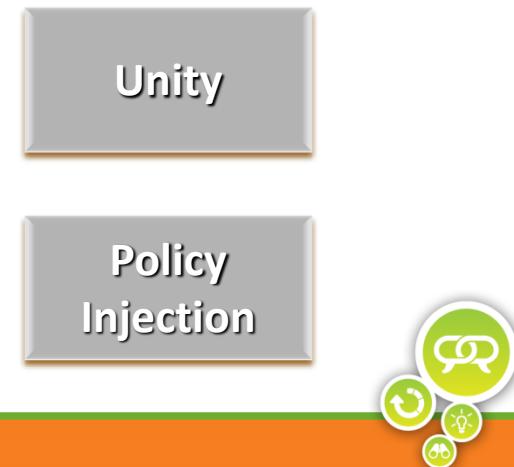


# Enterprise Library – Conceptual Architecture 概念上的架构

Functional blocks → Common Infrastructure



Structural/wiring blocks



# What's New?

# 新特性



# .NET 4.0 / VS 2010

- **Binaries**

- Target .NET 3.5 SP1
- Work unchanged in .NET 4.0 projects

- **Source**

- VS 2008 sln/proj targeting 3.5 SP1
- VS 2010 sln/proj targeting 4.0

- **Config tool**

- Fully integrated editor in VS 2008
- Launcher from VS 2010 (like WCF config tool)



# Processing Results from Sprocs

- Data Access block traditionally made it easier to call stored procedures (sprocs)

传统的数据访问模块使存储过程变得更简单

- Processing the results still means dropping back into classic ADO.NET code

处理结果意味着要退回到传统的ADO.NET代码

- Issue: how could we make it easier to consume the results of a sproc?

问题：我们怎样使得sproc处理结果变得简单呢？



# LINQ Style Result Processing

## LINQ 结果处理

- **Basic idea: 基本思想**
  - Instead of a datareader from a query, get back an `IEnumerable<T>`
  - Now we can do LINQ to Objects
- **Introduced Accessors 引进访问器**
  - provide a higher level abstraction that combines input mapping, output mapping, and result set management into a single object.
- **Note: Accessors are easily injectable**

**注意：访问器很容易注入**



# Demo

DAAB Accessors

# Async DAAB

- Database API addition
- Follows classic Begin/End async pattern
  - NonQuery
  - Scalar
  - Reader
  - XmlReader (SQL Server only)
- Not supported on all databases



# Async Data Access

```
var db = EnterpriseLibraryContainer.Current.GetInstance<Database>();  
if(db.SupportsAsync)  
{  
    db.BeginExecuteScalar("Get Top Ten Products",  
        CompletionMethod);  
}  
  
public void CompletionMethod(IAsyncResult async)  
{  
    int count = (int)db.EndExecuteScalar(async);  
    ...  
}
```



# Logging Performance 登录性能

- Originally, planned to implement async logging  
原先计划执行async登录
- Perf analysis of the lower level operations of the logging block (v4.1) showed:
  - The formatter took 54% of the total time
  - Of this, the most expensive operations are:
    - 11.76      Getting the machine name
    - 9.63      Computing Severity textual representation
    - 5.70      Undetermined mscorewks.dll work
    - 5.17      Computing DateTime textual representation
    - 4.46      StringBuilder.Append
    - 4.10      Getting the process name

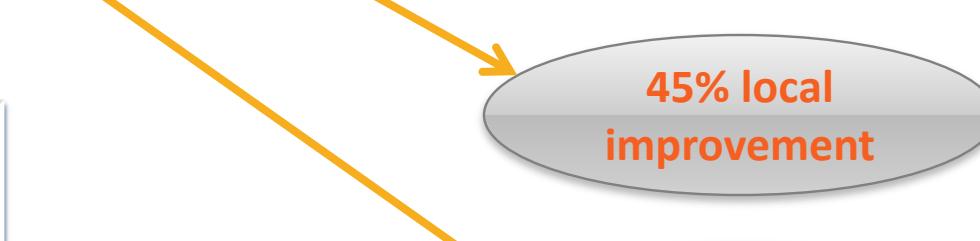


# Higher Performing Logging – Preliminary Results 初步结果

- Formatter responsible for ~50% of the execution time 格式化程序反应时间占执行时间的50%
- Improvements 改进

Function Name	Inclusive Samples	Exclusive Samples	Inclusive Samples %	Exclusive Samples %
FormatWithOriginalTemplate	6,686	14	48.18	0.10
FormatWithNewTemplate	3,680	9	26.52	0.06
FormatWithNewTemplateWithFixedDate	3,132	11	22.57	0.08

N=1M



# Config Experience 配置经验

- Programmatic config support

编程配置支持

- IntelliSense in XML editor

XML 编译器智能感知

- New configuration tool

新的配置工具



# Fluent Configuration Interface 流畅的配置接口

- **Motivation: 动机 :**

- Customer requested a better way to configure EntLib programmatically

客户要求更好地配置企业库

- Make our own test cases more readable

使我们自己的测试案例更具可读性

Ref: Martin Fowler, Eric Evans. <http://martinfowler.com/bliki/FluentInterface.html>



# Demo

## Fluent Interfaces

# Config Tool Stories 配置工具

- **Usability:** Improve intuitiveness & learnability 可用性：改进的洞察力和易学性
- **Simplicity:** Reduce the number of design time assemblies 简易性：减少了程序集设计次数
- **Extensibility:** Simplify the way config for custom handlers/providers/blocks can be plugged into the config tool

可扩展性



# Demo

## New Config Tool

# Hierarchical config 分层配置

- Split config into multiple physical files  
把配置分成多个物理文件
- Combine them at runtime  
在runtime中合成
- Allows master + override style of config
  - Runtime version of environmental overrides



# Demo

## Hierarchical config

# Validation Application Block 数据验证

- DataAnnotations support 数据注释支持
- WPF Validation
- MetadataType 元数据类型
- Polymorphic validation 多态验证
- Recursive Validation 递归验证



# DataAnnotations Interop 数据注释交互

- VAB API applies DataAnnotation validations
- DataAnnotation API applies VAB
- Note: server-side only (for now)
  - Use mixed model



# WPF Validation

- VAB validators hooked up to WPF validation system
- WPF only, not Silverlight



# MetadataType

- **Problem: Add Validation attributes to generated code**
  - Linq to SQL
  - EF
- **Honor MetadataType attribute**
  - Adds “buddy class” with validation attributes on it



# Demo

## Validation Block Improvements

# EntLib Internals



# Tackling External Complexity 处理外部复杂度

- Single entry point 单一接入点
  - EnterpriseLibraryContainer.Current
- Supporting testability in your code that uses EntLib
  - Using DI style with instances
- Container independence 模块独立性
  - Not tied to Unity
  - Can build your own adapters
- Preliminary performance is same as 4.1 or better
- Importantly: Existing user code still works



# Tackling Internal Complexity – Architectural Refactoring 架构重构

- **Cleanup 清除**
  - removed WMI
  - reduced # assemblies
    - EL 4.1 – 89
    - EL 5.0 – 33
- **Changed internals significantly 显著地改变了内部构件**
  - got rid of ~200 classes!
    - added ~120, but less complicated
  - removed design time assemblies
  - removed layers of indirection



# Custom Blocks 定制模块

- **We broke you, sorry!**
  - There are not that many of you (<2%)
- **Much easier to write 更容易写**
- **Pay attention to: 请注意 :**
  - Type registrations
  - Object lifetime
  - Config change support
  - Config tool



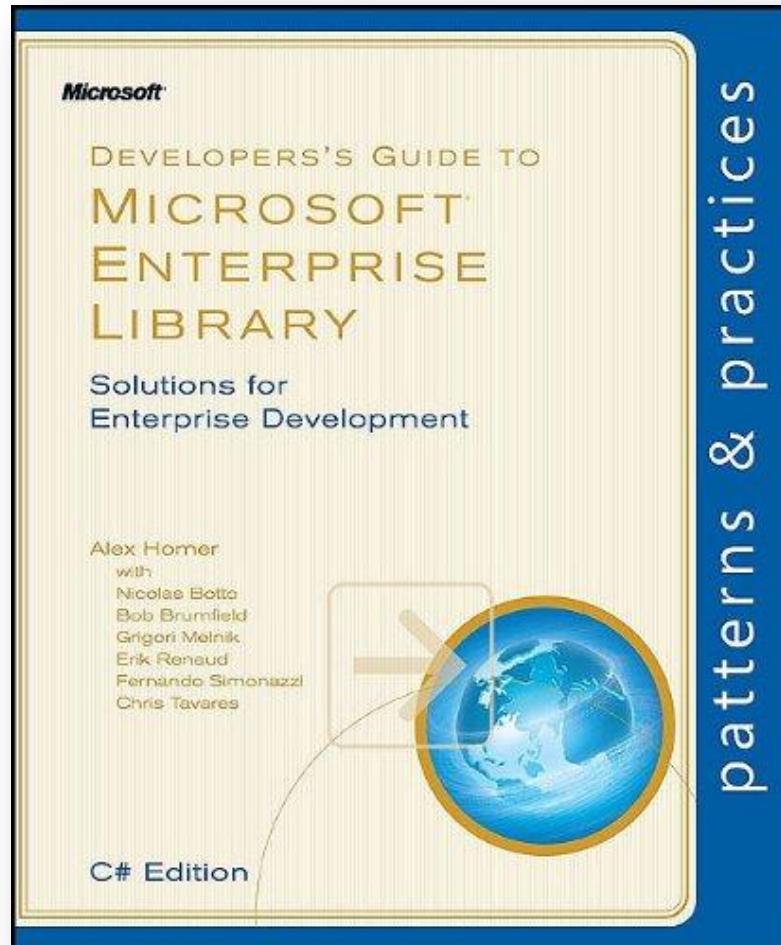
# Demo

Getting EntLib objects

# Learnability 易学性

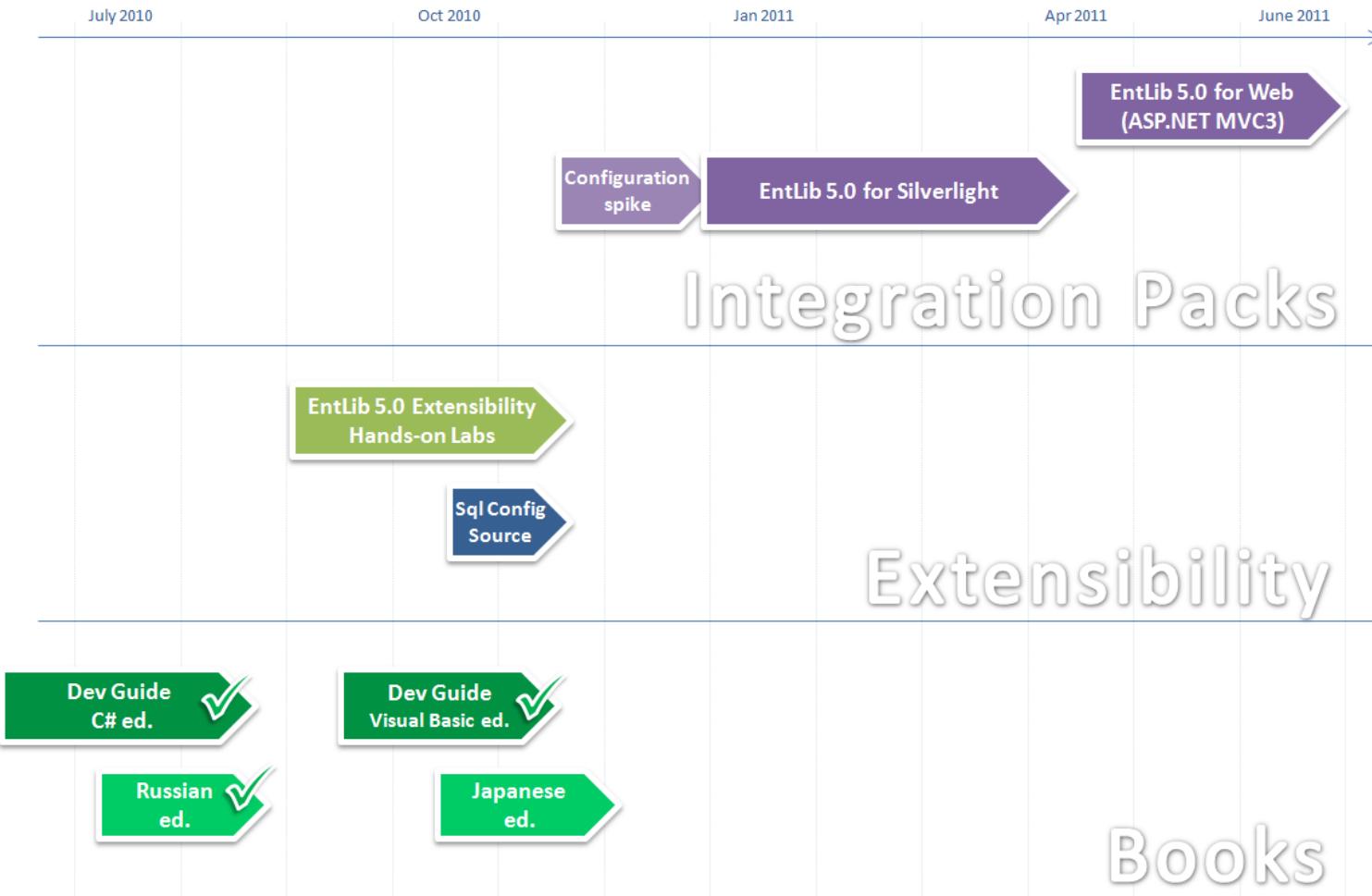
- **New Guides 新参考**
  - Your feedback is invited
  - [entlib.codeplex.com](http://entlib.codeplex.com)
- **Hands-On Labs**

**动手实验**



# What's Next for EntLib? 企业库的下一步

## Enterprise Library FY 11 Roadmap



# Key Takeaways 重点回顾

- EL 5.0 has released! 企业库5.0发布了！
- Improved user experience 改进的用户体验
- Simpler, more consistent code base 更一致的代码库
- Simpler to use 更容易使用
- Better support for DI-style of development  
更好地支持数据输入型的开发
- Focus on testability and maintainability  
专注在易测性和易维护性
- Engage with us! 请与我们联系！



# Call for Action 行动起来

- Download it 马上下载
- Provide feedback  
提供反馈
- Fill out a survey  
填写调查问卷
  - [tinyurl.com/entlib](http://tinyurl.com/entlib)



# Resources 学习资源

- All EntLib5 current bits:
  - [entlib.codeplex.com](http://entlib.codeplex.com)
  - [unity.codeplex.com](http://unity.codeplex.com)
- Released Enterprise Library and related resources:
  - [msdn.microsoft.com/practices](http://msdn.microsoft.com/practices)
  - [msdn.microsoft.com/entlib](http://msdn.microsoft.com/entlib)
- Enterprise Library Community Contributions:
  - [codeplex.com/entlibcontrib](http://codeplex.com/entlibcontrib)
- Enterprise Library team blogs:
  - Chris: [www.tavaresstudios.com](http://www.tavaresstudios.com)
  - Grigori: [blogs.msdn.com/agile/](http://blogs.msdn.com/agile/)
  - Bob: [blogs.msdn.com/bobbrum/](http://blogs.msdn.com/bobbrum/)



# Thank you!



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