# Конфигурации в .net

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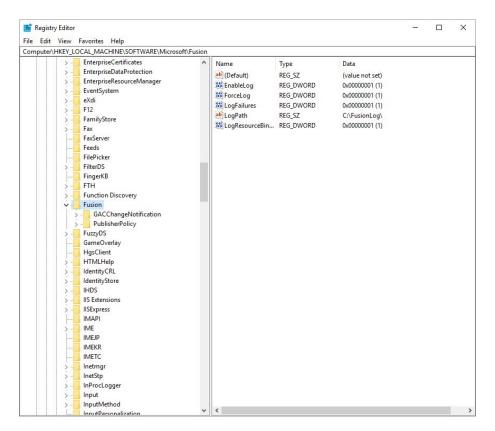
#### Как все начиналось

; last modified 20 April 2017 by Pavel Pritchin [owner]

name=Ivan Ivanov organization=Dodo Pizza.

#### [database]

; mysql connection server=192.0.2.62 port=3306 user="root" password="123"



#### Как все начиналось

- неудобно управлять, т.к. много настроек,
- нет хороших программных средств для работы,
- обновление версии требовало копирования,

# XML трансформации

Condition, Match, XPath, Replace, Insert, Remove, RemoveAttributes, SetAttributes,

```
1 ⊡<nlog xmlns="http://www.nlog-project.org/schemas/NLog.xsd"
         xmlns:xdt="http://schemas.microsoft.com/XML-Document-Transform">
       <targets>
         <target name="file" fileName="C:/inetpub/logs/DodoIS/auth.dodopizza.ru/${shortdate}.log"</pre>
 5
          xdt:Transform="SetAttributes" xdt:Locator="Match(name)"/>
        <target>
           <target name="elasticTarget"
             uri="http://10.0.5.4:9200,http://10.0.5.5:9200,http://10.0.5.6:9200"
             index="prod-auth-${date:format=yyyy.MM.dd}"
             xdt:Transform="SetAttributes" xdt:Locator="Match(name)"/>
10
11
         </target>
      </targets>
     </nlog>
```

# XML трансформации

- сложно,
- не избавляет от повторений,
- делаем ошибки

# ConfigurationManager

```
ILSpy
                                                                                                                                                                                                                                                                                                                                                                  П
File View Help
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                                                - 21 P
                                                                             ∧ Husing ...
        ConfigDefinitionUpdates

■ S ConfigPathUtility

                                                                                     namespace System.Configuration
        ■ ■ ConfigurationAllowDefinition
                                                                                            /// <summary>Provides access to configuration files for client applications. This class cannot be inherited.</summary>

⊕ ■ ConfigurationAllowExeDefinition

                                                                                           public static class ConfigurationManager
        ConfigurationCollectionAttribute

■ S ConfigurationConverterBase

                                                                                                 private enum InitState

■ S ConfigurationElement

                                                                                                        NotStarted.
        Started.

■ ■ ConfigurationElementCollectionType

                                                                                                        Usable,

    ★ ConfigurationElementProperty

                                                                                                        Completed

⊕ ♦ ConfigurationFileMap

■  ConfigurationLocation

                                                                                                 private static volatile IInternalConfigSystem s configSystem;

■ S ConfigurationLocationCollection

        private static volatile ConfigurationManager. InitState s initState;

■ ConfigurationLockCollectionType

                                                                                                 private static object s_initLock;
        ConfigurationManager
        ConfigurationManagerHelperFactory
                                                                                                 private static volatile Exception s initError;
        internal static bool SetConfigurationSystemInProgress
        ⊕ % ConfigurationProperty
        # % ConfigurationPropertyCollection
                                                                                                              return ConfigurationManager.InitState.NotStarted < ConfigurationManager.s initState && ConfigurationManager.s initState < ConfigurationManager.InitState.Completed

■ ■ ConfigurationPropertyOptions

⊕ 

■ ConfigurationSaveMode

        ★ SconfigurationSchemaErrors
        internal static bool SupportsUserConfig

■  
    ConfigurationSectionCollection

■ SconfigurationSectionGroupCollection

                                                                                                              ConfigurationManager.PrepareConfigSystem();
        ConfigurationStringConstants
                                                                                                              return ConfigurationManager.s configSystem.SupportsUserConfig:

■ ■ ConfigurationUserLevel

■ S ConfigurationValidatorBase

■ Sconfiguration Value

                                                                                                 /// <summary>Gets the <see cref="T:System.Configuration.AppSettingsSection" /> data for the current application's default configuration.</summary>

■ F ConfigurationValueFlags

                                                                                                 /// <returns>Returns a <see cref="T:System.Collections.Specialized.NameValueCollection" /> object that contains the contents of the <see cref="T:System.Configuration.AppS" />
        ★ Sconfiguration Values
                                                                                                 /// <exception cref="T:System.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.Configuration.
        ConfigXmlAttribute
                                                                                                 public static NameValueCollection AppSettings
        ★ ConfigXmICDataSection

■ SconfigXmlComment

        ★ SconfigXmlElement
                                                                                                              object section = ConfigurationManager.GetSection("appSettings");
        ■ the ConfigXmlReader
                                                                                                              if (section == null || !(section is NameValueCollection))

■ SconfigXmlSignificantWhitespace

■ SconfigXmlText

                                                                                                                    throw new ConfigurationErrorsException(SR.GetString("Config_appsettings_declaration_invalid"));

■ S ConfigXmlWhitespace

★ ConnectionStringSettings
```

# ConfigurationManager

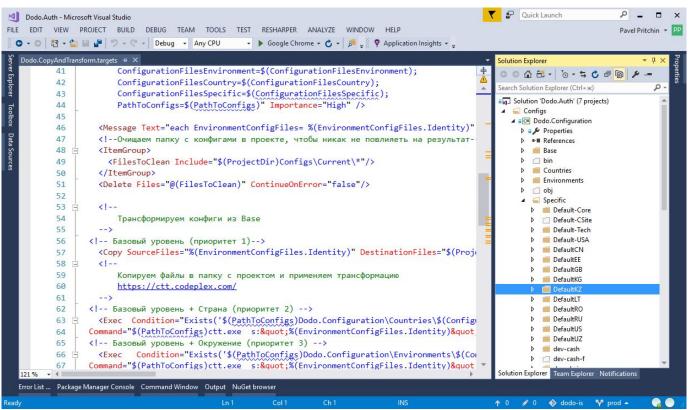
- Механизм трансформа зашит в msbuild,
- Статик класс, неудобно тестить, надо оборачивать
- Файлы

# Много веб проектов

```
Todo. EventProcessing
Dodo.Facade
□ □ Dodo.MotivationBoard
 ☐ Dodo.OfficeManager
 □ □ Dodo.Personnel
 □ □ Dodo.RestaurantBoard
 □ Dodo.RestaurantCashier
 ⊡ □ Dodo.Scheduler
 ⊕ ... Dodo.FairJobs
 □ □ Dodo.ShiftManager
 ⊕ ☐ Dodo.UnitProfile
```

# **Решение:** выносим во вне проектов

# Много веб проектов



### Много веб проектов

- храним в файлах все равно,
- их много,
- остаются трансформации,

### Микросервисы

Ожидание:





### Микросервисы

#### Проблемы:

- сервисы динамичные,
- сервисом много,

Решение: выносим во внешнее хранилище

# Система управления конфигурациями

**consul** (есть и другие Apache ZooKeeper, etcd, Chef etc):

- 1. KeyValue storage,
- 2. Service discovery,
- 3. Service monitoring (health check),
- 4. Distributed,

#### Итог

надежда есть, в .net есть понимание этих проблем и решений