ASP.NET MVC & ASP.NET Infrastructure

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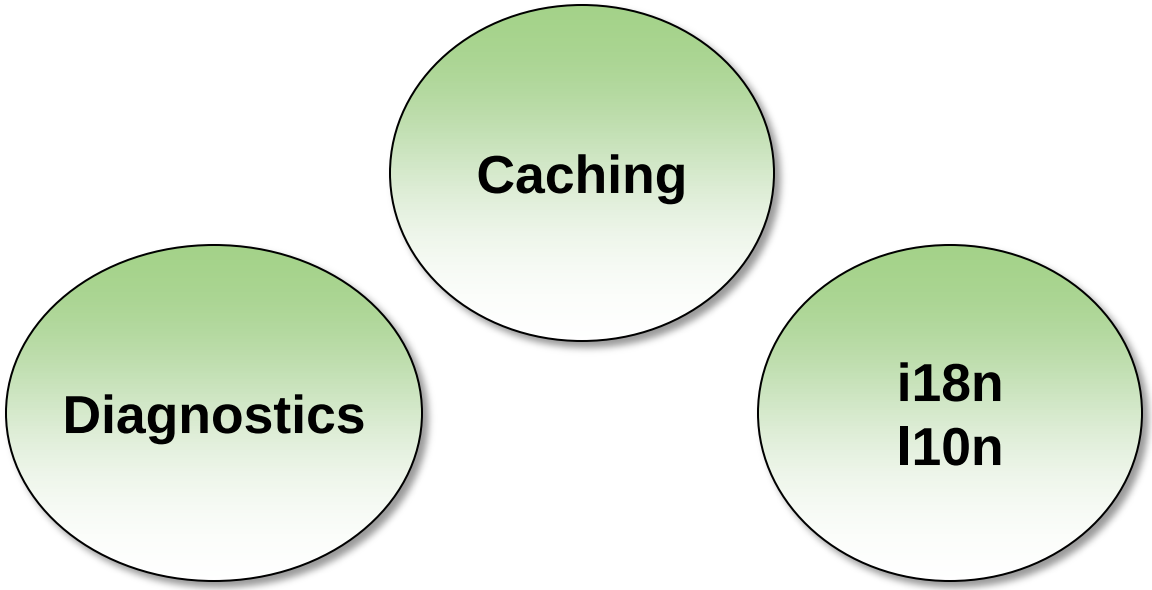
Overview



Output Caching

- [OutputCache] action filter
- Can also use on child actions

```
public class CachedController : Controller
{
    [OutputCache(Duration=60, VaryByParam="none")]
    public ActionResult Index()
    {
        return View();
    }
}
```

Output Cache Settings

- **VaryByParam**
  - Vary by “none” to always cache the same content
  - Vary by “name” to cache for every value of name parameter
  - Vary by “*” to cache for every permutation of all parameters
- **Location**
  - Cache on server, client, client and server
- **VaryByHeader**
  - Vary on an HTTP header, like Accept-Language
- **VaryByCustom**
  - Implement custom static method in global.asax
- **SqlDependency**
  - Cache until data in a SQL Server table changes

Cache Profiles

- Avoids repetition in cache attributes
- Easy to change during performance profiling

```
[OutputCache(CacheProfile="Aggresive", VaryByParam="firstName")]
public ActionResult Index(string firstName)
{
    // ...

    return View();
}
```

```
<caching>
  <outputCacheSettings>
    <outputCacheProfiles>
      <add name="Aggresive" duration="300" />
      <add name="Mild" duration="10"/>
    </outputCacheProfiles>
  </outputCacheSettings>
</caching>
```

Data Caching

- **ASP.NET Cache API**
  - Can access via HttpRuntime.Cache
  - Absolute and sliding expirations
  - Cache dependencies on file system and SQL Server data

```
List<Movie> topMovies = null;
if (HttpContext.Cache[TopMovieKey] == null)
{
        topMovies = (from m in ctx.Movies
                     orderby m.Reviews.Average(r => r.Rating) descending
                     select m).Take(10).ToList();
        HttpContext.Cache.Insert(TopMovieKey,
                                 topMovies,
                                 null,
                                 Cache.NoAbsoluteExpiration,
                                 TimeSpan.FromMinutes(10));
}
```

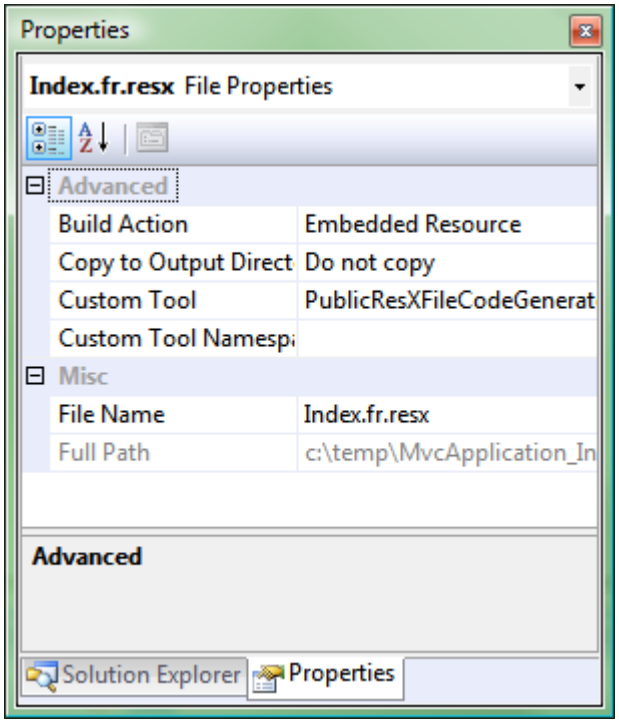
Localization & Culture

- **Thread.CurrentCulture property impacts formatting**
  - Example: DateTime.Now.ToString()
- **Thread.CurrentUICulture impacts resource loading**
- **ASP.NET can set cultures according to HTTP headers**
  - Accept-language header
  - Use <globalization> section in web.config

```
<system.web>
    <globalization culture="auto" uiCulture ="auto"/>
     …
<system.web />
```

Resources

- **Resx files can store localized text and binary assets.**
  - Strings.resx will store default resources
  - Strings.es.resx will store resource for Spanish culture
- **Resource manager will load appropriate file**
- **Visual Studio generates strongly-typed class**




```
@Resources.Strings.Greeting
```

```
[Required(ErrorMessageResourceName="BodyRequiredError",
          ErrorMessageResourceType=typeof(Resources.Strings))]
public virtual string Body { get; set; }
```

Diagnostics

- **Logging options**
  - ASP.NET Health Monitoring
  - log4net (http://logging.apache.org/log4net/index.html)
  - elmah (http://code.google.com/p/elmah/)
  - P&P Application Logging Block

```
<healthMonitoring enabled="true">
  <rules>
    <add name="All Events" eventName="All Events“
         provider="SqlWebEventProvider"/>
  </rules>
</healthMonitoring>
```

Summary