

世界著名IT厂商认证系列培训教材

微软.NET认证 MCAD 70-310实战百题详解

张玉石 编著



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北京

MCAD 是微软认证应用程序开发专家 (Microsoft Certified Application Developer) 的简称。MCAD 的考试包括两门主要考试和一门选择考试, 第一门主要考试可以从 70-305、70-306、70-315 和 70-316 中任选其一, 第二门主要考试可以从 70-310 和 70-320 中任选其一。一门选择考试可以从 70-229、70-230 和 70-234 中任选其一。上述的主要考试也可以被用于选择考试, 就是说可以将 70-305、70-306、70-315 和 70-316 中的任何一门选出来作为选择考试, 但是 70-305、70-315 以及 70-306、70-316 都属于同类考试, 不能同时被选用。例如, 一个考生如果通过了 70-315、70-316 和 70-320 的考试, 那么该考生就取得了 MCAD 认证。考生如果通过了 70-305、70-320 和 70-234, 或者 70-306、70-310 和 70-315 也都取得了 MCAD 认证。

这样说, 可能有些拗口, 如果用如下的表格, 就清楚了:

	第一门主要考试	第二门主要考试	选择考试
方案一 (每格中任选一门)	70-305 70-315	70-310 70-320	70-229 70-230 70-234 70-306 70-316
方案二 (每格中任选一门)	70-306 70-316	70-310 70-320	70-229 70-230 70-234 70-305 70-315

本书以四章的篇幅描述了本考试所涉及的所有内容, 包括建立和管理微软视窗服务, 服务组件, .NET 遥控对象和 XML Web 服务; 调用和调控数据; 测试和调试程序; 部署视窗服务, 服务组件, .NET 遥控对象和 XML Web 服务, 共有 100 余题。每题都给出了详细的解答, 对于考生有着非常重要的指导意义。因为微软的考试是针对全世界考生的, 其全真试题是英文的, 所以本书的题目也采用以英文格式来写, 但为了更适合中国的考生, 在具体的解释内容上, 以中文表述。

关于微软的其他认证考试, 如 MCSE, MCDBA 等认证, 详见书后的微软认证总览。

尽管本书的署名只有作者一人, 但是如果没有许多人的辛勤劳动, 就不可能有本书的出版发行。

作者首先要感谢清华大学出版社的柴文强主任, 感谢他在百忙之中, 不惜乘坐一个多小时的公车约见作者, 充分肯定和支持作者的书稿, 给予作者极大的鼓励和鞭策, 并提出了许多宝贵的意见。同时感激父母对作者

本人的成长和教育所付出的无法估价的辛劳。特别需要指出的是，本书的创作动机来源于我的爱人，正是在爱的力量的鼓舞下，作者在工作之余抓住点滴时间，完成了本书的创作。

如果考生在考试之前，利用本书复习，并能取得比较好的成绩，作者将感到极大的欣慰。

对书中出现的错误和不足之处，恳请广大读者予以批评指正。

作 者

2004 年 8 月于美国西雅图

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建立和管理微软视窗服务， 服务组件，.NET 遥控对象和 XML Web 服务

(Creating and Managing Microsoft Windows Services, Serviced Components, .NET Remoting Objects, and XML Web Services, 共 42 题)

试题 1.1

You are creating an XML Web service named StockService. The service contains a Web method named RetrieveStockInfo.

RetrieveStockInfo takes as input a stock symbol and returns a DataSet object that contains information about that stock. You want to capture all incoming SOAP messages in RetrieveStockInfo and write the messages to a file for future processing.

What should you do?

- A. Enable sessions in RetrieveStockInfo
- B. Create a SOAP extension for RetrieveStockInfo
- C. Apply a SoapHeader attribute to RetrieveStockInfo
- D. Apply a SoapRpcMethod attribute to RetrieveStockInfo

Answer: B

正确答案为 B。使用 SOAP Extension 可以在服务器端或用户方检验处理处于不同状态下的 XML 信息。

答案 A 错误, 使用 Session 对象无法处理 XML 信息。答案 C 错误, SoapHeader 属性适用于 XML Web 服务。答案 D 错误, SoapRpcMethod 属性适用于 XML Web 服务, 无法满足试题要求。

试题 1.2

You are using Visual Studio .NET to develop an application to replace a COM-based application. You are assigned to write a .NET class that will be used by client applications as a COM object. Your class code is being moved and modified while development continues on the new application.

You want to minimize any possible disruption to the COM interface as a result of code changes.

Which code segment should you use?

A. <ClassInterface()>

```
Public Class MyClassToExpose
    Public Function Calc() As Integer
        'Implementation code goes here.
    End Function
End Class
```

B. <Guid("9ED54F84-A89D-4fcd-A854-44251E925F09")>

```
Public Interface IMyClassToExpose
    Public Function Calc() As Integer
End Interface
```

<ClassInterface [ClassInterfaceType.None]>

```
Public Class MyClassToExpose Implements IMyClassToExpose
    Public Function Calc() As Integer
        'Implementation code goes here.
    End Function
End Class
```

C. <Guid("9ED54F84-A89D-4fcd-A854-44251E925F09")>

```
<Comvisible(true)>
Public Class MyClassToExpose
```



```
Public Function Calc() As Integer
    'Implementation code goes here.
End Function
End Class
```

```
D. <ClassInterface(ClassInterfaceType.AutoDispatch)>
    Public Class MyClassToExpose
        Public Function Calc() As Integer
            'Implementation code goes here.
        End Function
    End Class
```

Answer: D

正确答案为 D。使用 `AutoDispatch` 属性表明当前的 `Class` 只支持对 COM 组件的延迟 `Binding`。为当前的 `Class` 而产生的 `Dispatch` 界面会自动暴露给 COM 组件, 保证了在程序源代码改变后, COM 界面受到最小程度的干扰。

答案 A 和 C 错误, `Class` 的界面将随着源代码的改变而改变。答案 B 错误, 关键词 `Public` 不可用于 `Interface` 前。

试题 1.3

You are using Visual Studio .NET to develop an application. You have a common business logic component that was created in COM that you want to use until you can replace it with Visual Studio .NET code.

You create the Visual Studio .NET solution for the new application. You want to use the COM component in your Visual Studio .NET solution. What should you do?

- A. Register the COM component by using `Regsvr32.exe`
- B. Run the Type Library Exporter (`Tlbexp.exe`) and pass the COM component as the filename parameter
- C. Use Visual Studio .NET to add a reference to the COM component
- D. Run the Assembly Registration tool (`Regasm.exe`) and pass the

COM component as the filename parameter

Answer: C

正确答案为 C。使用 Visual Studio .NET 来给 COM 组件加入 Reference, 提供了简洁的使用 COM 组件的方法。

答案 A 错误, Regsrv32.exe 工具用于 Visual Basic 6.0 或 Visual C++ 6.0 中的组件。答案 B 错误, Tlbexp.exe 工具产生 Type Library, 但是无法给 Type Library 登记注册。答案 D 错误, 使用 Regasm.exe 工具, 可以通过运行 .NET 汇编程序调用非 .NET 的 COM 组件, 与试题要求刚好相反。

试题 1.4

You are using Visual Studio .NET to develop a new application to replace an older COM-based application. The new application will use some of the old COM components until they can be replaced by Visual Studio .NET code.

Your application uses a COM DLL named OurCOM.dll. The Visual Studio.NET assembly for OurCOM.dll must be named OurDotNetCOM. You must use the name "ProjectX" for the namespace of the COM components. You must ensure that your application uses these naming guidelines. What should you do?

- A. Reference OurCOM.dll from Visual Studio .NET.
Change the assembly name in Solution Explorer.
Change the namespace name by editing the assembly
- B. Reference OurCOM.dll from Visual.NET.
Change the assembly name in Solution Explorer. Change the namespace name by using the Namespace property of a CodeNamespaceImport object
- C. Run the Type Library Importer (Tlbimp.exe) with the /namespace and/out options to create the assembly
- D. Run the Type Library Importer (Tlbimp.exe) with the /out option to create the assembly. Change the namespace by using the Namespace property of a CodeNamespaceImport object

Answer: C

正确答案为 C。使用 `Tlbimp.exe` 工具, 可以将 COM 中的 Type Library 定义转换为 .NET 汇编程序的定义, 通过使用 `/namespace` 选择来设定 .NET 汇编程序的 Namespace, 使用 `/out` 选择来设定输出文件。

答案 A 和 B 错误, 无法满足试题要求。答案 D 错误, 需要使用 `/namespace` 选择来设定 .NET 汇编程序的 Namespace。

试题 1.5

You are creating a serviced component named `CTComponent` that will be distributed to your customers. You are also creating a setup project that will register the component in the global assembly cache on each customer's computer.

You anticipate that there will be future updates to `CTComponent` that you will provide to your customers. All updates to `CTComponent` will be backward compatible. You will create similar setup projects for each update of `CTComponent` that will register the updated assembly in the global assembly cache.

You need to ensure that any applications on your customers' computer that reference `CTComponent` use the most recent version of the component.

Which actions should you take? (Choose all that apply)

- A. Sign `CTComponent` by using a strong name
- B. Compile `CTComponent` as a satellite assembly
- C. Include a publisher policy file that is registered in the global assembly cache on your customer's computers
- D. Increment the assembly version for each update of `CTComponent`
- E. Add an application configuration file to `CTComponent` that includes assembly binding information that redirects prior

versions to the updated version

Answer: A, C, D

正确答案为 A, C 和 D。为了保证任何应用程序能够调用当前的服务组件 (Serviced Component), 首先需要使用 Sn.exe 工具来给服务组件完整命名, 否则 CLR (Common Language Runtime) 无法鉴别不同版本的服务组件。给服务组件加入已经在 GAC (Global Assembly Cache) 中注册的出版政策文件 (Publisher Policy File), 可以保证 CLR 使用新版本的服务组件。服务组件的版本只能由低到高。

试题 1.6

You create three Windows services named SR1, SR2, and SR3. You want to install all three services on a computer named Computer1 by using the Installer tool (Installutil.exe).

On the command line of Computer1, you enter and run the following command: `Installutil SR1 SR2 SR3`

During the installation process, SR3 throws an installation error. The installation process completes.

How many of the three services are now installed on Computer1?

- A. None
- B. One
- C. Two
- D. Three

Answer: A

正确答案为 A。使用 Installutil.exe 安装视窗服务时, 安装过程为交接程序过程 (Transaction)。三个视窗服务中, 一旦任何一个出现了问题, 整个安装程序都会自动终止, 并返回到初始未安装程序的状态。

试题 1.7

You have a .NET Remoting object named Promotions. The Promotions class allows remote client applications to add new product promotions to an online catalog application. The Promotions class is an assembly file named Fabrikam.dll.

You have an Internet Information Services (IIS) virtual directory named PromotionsObject. The Fabrikam.dll file is in the PromotionsObject\bin directory. You want to host the Promotions class in IIS.

What should you do?

- A. Create a Web.config file that includes the following code segment:

```
<appSettings>
  <add key="activation" value="wellknown"/>
</appSettings>
<httpHandlers>
  <add verb="*" path="Promotions.rem"
    type="Fabrikam, Promotions"/>
</httpHandlers>
```

- B. Create a Web.config file that includes the following code segment:

```
<appSettings>
  <add key="activation" value="wellknown"/>
  <add key="mode" value="SingleCall"/>
</appSettings>
<httpHandlers>
  <add verb="*" path="Promotions.rem"
    type="Fabrikam, Promotions"/>
</httpHandlers>
```

- C. Create a Web.config file that includes the following code segment:

```
<configuration>
  <system.runtime.remoting>
```

```
<application>
  <service>
    <wellknown mode="SingleCall"
      objectUri="Promotions.rem"
      type="Promotions, Fabrikam"/>
  </service>
</channels>
  <channel ref="http"/>
</channels>
</application>
</system.runtime.remoting>
</configuration>
```

D. Create a Web.config file that includes the following code segment:

```
<configuration>
<system.runtime.remoting>
  <application>
    <service>
      <wellknown mode="SingleCall"
        objectUri="Promotions.rem"
        type="Promotions, Fabrikam"/>
    </service>
  <channels>
    <channel ref="tcp" port="8080">
      <serverProviders>
        <formatter ref="soap"/>
      </serverProviders>
    </channel>
  </channels>
</application>
</system.runtime.remoting>
</configuration>
```

Answer: C

正确答案为 C。IIS (Internet Information Server) 中包含了 HTTP Listener 对象, 较之 Custom Listener 对象, IIS 具有便于设置, 易延伸和循环处理的优点。在 IIS 中, HTTP 通道 (Channel)

不需要 Custom Listener 对象。在本题中, Promotions Class 在 IIS 中运行, 为服务器端激活的对象 (Server-Activated Object), 也称 Well-Known 对象。因为只有一个用户对 IIS 方的 Promotions Class 发出需求, 所以属于 SingleCall 激活状态。

答案 A 和 B 错误, 需要设置 IIS 方的 HTTP 通道。答案 D 错误, IIS 支持 HTTP 通道, 而非 TCP 通道。

试题 1.8

You are creating an XML Web service that processes credit card information. This service will be consumed by computers that run on Microsoft Windows operating systems, as well as computers that run on other operating systems.

You must ensure that client credentials passed to the service are secure and cannot be compromised. You are not as concerned with the length of time that Web method calls take to maintain this level of security. You need to configure authentication for this service.

Which type of authentication should you use?

- A. Basic
- B. Forms
- C. Client Certificate
- D. Integrated Windows

Answer: C

正确答案为 C。用户方证书 (Client Certificate) 可以被用于各种操作系统, 用以安全识别在 Internet 和 Intranet 上的用户。用户方证书来自信任度高的证书授权机构 (Certificate Authority)。

答案 A 错误, 基础安全设置 (Basic Authentication) 中的密码和用户名称都没有被加密, 故不安全。答案 B 错误, XML Web 服务不支持表格安全设置 (Form Authentication)。答案 D 错误, Integrated Windows 安全设置只能用于视窗操作系统。

试题 1.9

You are creating an XML Web service that provides a daily quotation from literary works to its customers. This quotation is requested in many different languages, thousands of times every day, and by thousands of Web sites operating many different platform.

A Web method named GetQuotes takes a languageID as input. GetQuotes uses this languageID to retrieve a translated version of the daily quotation from a Microsoft SQL Server database and to return that quotation to the customer.

You want to minimize the time it takes to return the translated version.

What should you do?

- A. Store each translated quotation by using the Cache object
- B. Store each translated quotation by using the Session object
- C. Set the BufferResponse property of the WebMethod attribute to false
- D. Set the CacheDuration property of the WebMethod attribute to an interval greater than zero

Answer: A

正确答案为 A。使用缓存 (cache) 对象, 可以使服务器端尽快地返回用户方的需求, 提高系统的运行效率。

答案 B 错误, Session 对象针对每一个单一的用户用于存储网页的状态信息。答案 C 错误, 将 BufferResponse 属性设置为 False 势必影响系统运行的效率。答案 D 错误, 将 CacheDuration 属性设置为大于零的值, 会激活互联网服务方法的缓存, 从某种程度上提高了系统的运行效率, 但是只对互联网服务中的方法进行缓存不能完全满足试题要求。

试题 1.10

You are creating a .NET Remoting object named Payroll. The Payroll class allows remote client applications to access payroll data for your company. Client applications are developed by using Windows Forms and Web Forms.

You must ensure that remote client applications are securely authenticated prior to gaining access to Payroll object. You want to accomplish this task by writing the minimum amount of code.

What should you do?

- A. Use a TcpChannel and a BinaryFormatter for the Payroll class
- B. Use an HttpChannel and a SoapFormatter for the Payroll class
- C. Host the Payroll class in Internet Information Services (IIS) and implement Basic authentication.
- D. Host the Payroll class in Internet Information Services (IIS) and implement Integrated Windows authentication

Answer: D

正确答案为 D。使 Payroll Class 在 IIS (Internet Information Services) 服务器中运行, 同时使用完整的视窗安全设置, 将保证用户端的应用程序在调用服务器端的 Payroll Class 之前, 受到完整的安全控制。

答案 A 和 B 错误, 与试题要求无关。答案 C 错误, 使用 Basic Authentication 将暴露未被加密的用户密码和用户名称, 不够安全。

试题 1.11

You create an XML Web service project that consists of three services named BronzeService, SilverService, and GoldService. All three services are located in the same virtual directory on a production computer. When customers subscribe to your service, they select only one of the three available services.